PORTLAND WHARF PARK
MASTER PLAN

Louisville, Kentucky

Prepared for:

Metro Parks
1297 Trevilian Way
Louisville, KY 40233-7280

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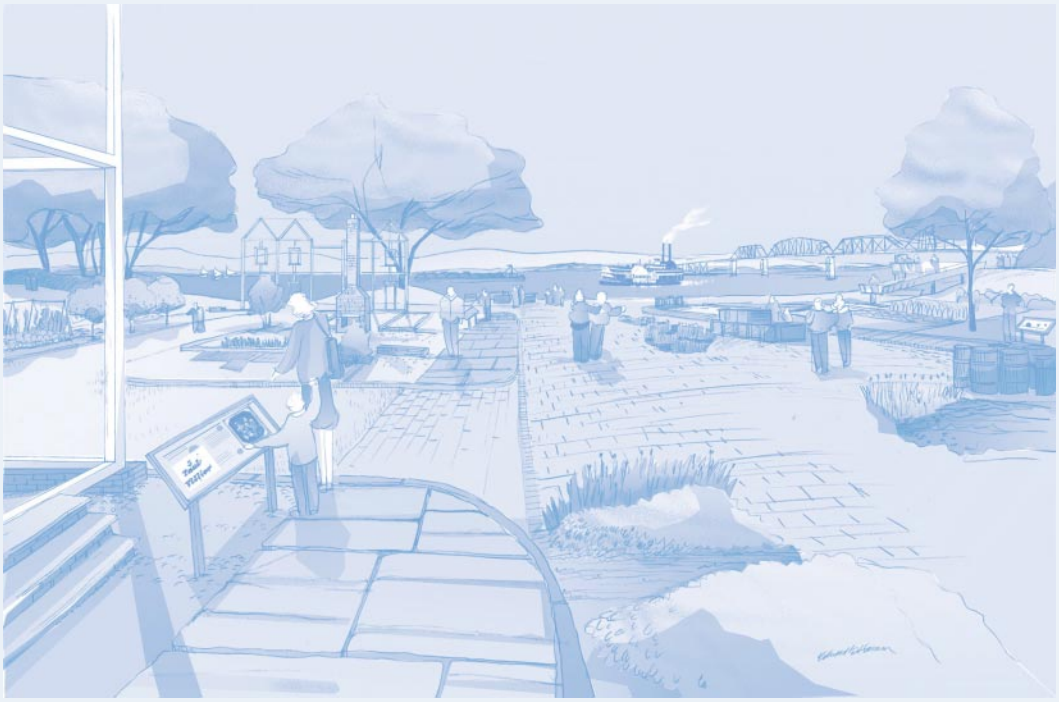

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Prepared by:

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CHAPTER 1
BACKGROUND AND SITE HISTORY

A. LOCATION

Portland Wharf Park is located on the banks of the Ohio River in Louisville, Kentucky, two miles west of downtown. The fifty five acre site is owned by the Louisville-Jefferson County Parks Department (Metro Parks), and is bordered on the north by the Ohio River, on the south by a flood levee and Interstate 64, on the east by the Kentucky and Indiana Railroad Bridge and the McAlpine Locks, and on the west by Shawnee Golf Course. The site spans the riverfront area between approximately 32nd and 37th Streets in the existing Portland neighborhood. Existing access to the site, both vehicular (service vehicles only) and pedestrian, is via the RiverWalk trail entrance at the corner of 31st Street and Northwestern Parkway.

B. DESCRIPTION

Although the Portland Wharf Park site was once a thriving commercial wharf with warehouses, shops, and residences, the area as it exists today is an urban wilderness with very few man-made, but many natural, features (Figure 1). Perhaps the most prominent feature is the earthen flood levee, constructed by the U.S. Army Corps of Engineers, that forms the southern boundary of the site. On top of the flood levee is another prominent visual feature: Interstate 64, which connects downtown Louisville with New Albany, Indiana via the Sherman Minton Bridge. The Kentucky and Indiana (K&I) Railroad Bridge, which carries heavy train traffic, marks the eastern edge of Portland Wharf Park as both a property and a visual boundary. Like Interstate 64, it serves to link Louisville with the state of Indiana.

Figure 1: Aerial perspective of Ohio River and Louisville, KY.

The majority of Portland Wharf Park's 55 acres is made up of mown turf and dense thickets of vegetation that dominate the interior portion of the site (Figure 2). The open grasslands are present on the eastern part of the site, and are what visitors first encounter as they enter on the RiverWalk trail and descend into the park from the top of the flood levee. The dense thickets of vegetation in the central and western parts of the interior, that are encountered as visitors walk further into the site, are made up of weedy pioneer species, primarily Asian mulberry and shrub honeysuckle. These are accompanied by an emergent understory of native species like American Elm, Hackberry, Box Elder, Black Locust, and Willow. The entire northern edge of the site along the river consists of a broad woodland canopy containing bands of large Cottonwood and Silver Maple trees, which offer filtered views of the river. Large Cottonwood trees and Maple trees are also present in clusters within the grassy areas of the site.

A prominent feature that weaves its way through the entire park is the paved RiverWalk trail, which enters the park on top of the flood levee at 31st Street and Northwestern Parkway and continues through the interior and riverside portions of the park before exiting the site at the western boundary with Shawnee Golf Course (for a detailed description of RiverWalk, see Surrounding Land Use: RiverWalk). There are also a series of informal dirt paths throughout the entire central portion of the property.

The only existing structural remains that can be seen on the site are the remnants of a stone building foundation in the central portion of the site and a pair of well or drainage structures nearby. Also significant, a layer of street or wharf cobbles / pavers can be seen exposed in the bluff along the river. Nearby, a line of exposed cut stones form a line parallel to the bluff.

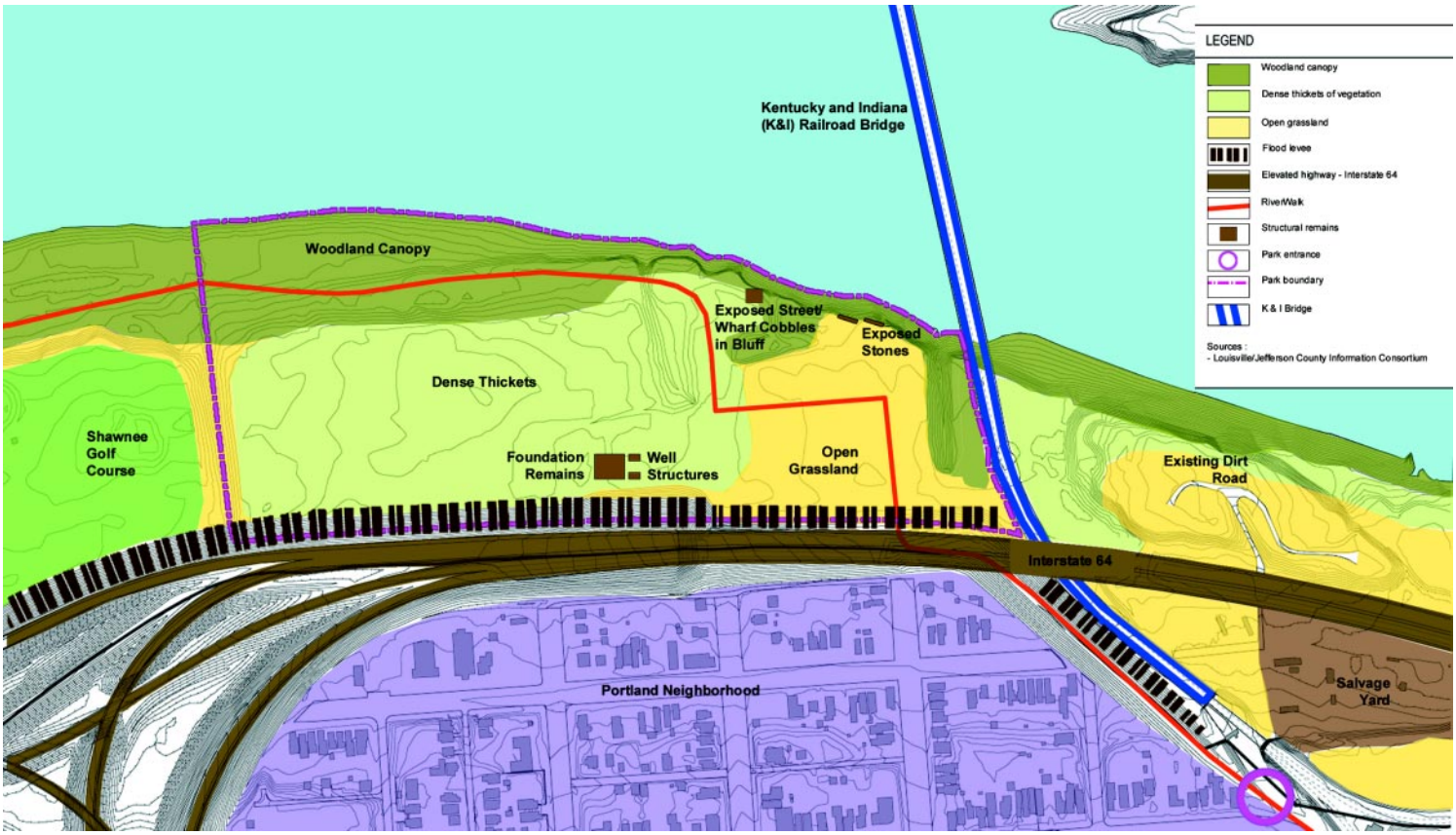


Figure 2: Existing Site Features.

C. SITE HISTORY

1. Prehistoric Context

In order to begin to understand the nature and complexity of prehistoric and historic archaeological resources that exist at the Portland Wharf Park site, a brief review of the history of human occupation in the Falls of the Ohio region is necessary. The cultural history of Kentucky is divided into temporal contexts based upon environmental and cultural changes that have occurred since the first human occupations in the region beginning roughly around 12,000 years ago. The temporal divisions and cultural manifestations of these periods are discussed below.

Each of the cultural periods represented in Kentucky has associated research themes that are used to guide future research. These questions are intentionally broad because of the lack of current knowledge of the age, type, cultural affiliation, integrity, and extent of prehistoric archaeological sites in the Portland Wharf Park area. It should be understood that future research and excavation at Portland Wharf Park would undoubtedly lead to a refinement of research themes, as cultural components are identified in the deep sediments of the Ohio River floodplain.

Much of this information discussed herein is taken directly from The Archaeology of Kentucky: Past Accomplishments and Future Directions, Volumes I and II, published by the Kentucky Heritage Council in 1990.

Paleoindian Period (10,000-8,000 B.C.)

Although people probably lived in Kentucky before 10,000 years B.C., the evidence of such occupation and utilization is yet to be found. Kentucky had a cooler and wetter climate during this period. Subsistence involved a focus on hunting and gathering of the abundant natural resources. The material culture of Paleoindians is most often represented by high-quality lithic tools, with the fluted projectile point recognized as the most diagnostic of the Paleoindian period. These projectile points were hafted onto long spears, which were used in hunting the mega-fauna that roamed Kentucky as the late Pleistocene glaciers receded north at the beginning of this cultural period.

The only archaeological sites in Kentucky that have produced datable Paleoindian contexts are the Enoch Fork Shelter and Big Bone Lick. No Paleoindian sites have been identified in the Louisville area.

Archaic Period (8,000-1,000 B.C.)

The Archaic Period is distinguished by technological and social changes associated with the retreat of the last Pleistocene glacier, around 8,000 B.C. This glacial retreat caused significant regional climatic and environmental changes including the replacement of coniferous forests with mixed deciduous forests, and the replacement of the Pleistocene mega-fauna with modern species (i.e., deer, rabbit, etc.).

It was during the Archaic Period that an increase in regionalization of cultures is noticeable. This cultural shift is recognized by changes in a variety of technological, settlement, subsistence,

and social traits. Specialized tool assemblages found on Archaic sites reflect the exploitation of a wide array of natural resources. The presence of intentional human burials suggesting special treatment of certain individuals during the Late Archaic provides important clues about social organization.

Woodland Period (1,000 B.C. – A.D. 1000)

During the Woodland Period, the trend toward greater regional specialization and adaptation initiated during the Archaic Period continued. It was during the Middle Woodland Period that two distinct cultural adaptations, the Adena and Crab Orchard Cultures, are identifiable in the archaeological record.

Perhaps the most recognized cultural adaptation occurring during the Woodland Period is the use of pottery. The appearance of burial mounds also distinguishes the Woodland Period from earlier cultural contexts. Habitation sites during this period range from large base camps in western Kentucky to smaller more dispersed settlements in northern and central Kentucky. Toward the end of the Woodland Period, the archaeological record indicates possible shifts to increased nucleation of local populations and a more sedentary lifestyle. Late Woodland subsistence patterns reflect a hunting-gathering-cultivation strategy similar to that of the Middle Woodland, but with increased use of local cultigens (Pollack et al. 1990:5). By the end of the Woodland Period, corn becomes fully incorporated into local diets.

Mississippi and Fort Ancient (A.D. 900 – A.D. 1750)

Mississippi Period

The Mississippi Period is represented by numerous archaeological sites mostly occurring the western one-third of Kentucky.

The Mississippi Period is characterized by shell-tempered pottery and a hierarchical settlement system of sites ranging from farmsteads to planned towns or "ceremonial centers" that featured plazas flanked by substructure mounds (Pollack et al. 1990:5). Political organization of the Mississippi Period is comparable to that of a chiefdom society.

Subsistence became more focused on agricultural production, including surplus acquisition, of maize, beans, and squash. Local cultigens and wild plants continue to be exploited during this period. In general, the Mississippi Period is characterized by more complex social organization and subsistence changes.

Fort Ancient Period

Fort Ancient sites are restricted to roughly the eastern one-third of the state. Shell tempered pottery also marks the appearance of the Fort Ancient cultural tradition. Fort Ancient represents a response by populations living in north and central Kentucky to an increased reliance on corn and beans coupled with a more sedentary lifestyle characterized by permanent villages (Pollack et al. 1990:5). Fort Ancient groups lacked the settlement system hierarchy and ranked society observed in Mississippi Period archaeological sites further to the west.

2. Historic Context

The Falls of the Ohio are a spectacular natural feature located on the Ohio River between Portland and Louisville. Formed nearly 500 million years ago by geologic forces, the falls are the only obstacle in navigation on the Ohio and Mississippi Rivers between Pittsburgh and New Orleans. The rocky rapids fall approximately 26 feet over a 2-mile span.[1] The falls are depicted on an 1806 map (Figure 4) prior to Portland's founding and are described in 1819 by Dr. Henry McMurtrie in *Sketches of Louisville and Its Environs*:

> *The falls of the Ohio are caused by a body of Limestone that stretches across its bed, operating like a dam upon the river above, which finding its course uninterrupted, continues to swell, until rising superior to the obstruction, it rushes down the declivity by a thousand different passages . . .*[2]

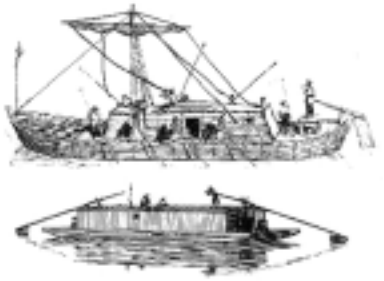


Figure 3: Image of keelboat (top) and flatboat.

Portland developed primarily because of its location on the Ohio River, which was the principal route of transportation during the great migration across the Appalachian Mountains in the late eighteenth and early nineteenth centuries. The treacherous falls created an impassable obstacle for boats, so travelers and cargo disembarked above the falls then traveled on land (portaged) to Portland where they resumed their journey on separate ships. Goods were carried first by canoe, then by flatboat and keelboat (see Figure 3), and later by steamboat. The treacherous falls created a dangerous obstacle to river navigation. Boats which braved the passage through one of three chutes either emerged from the falls with great relief or crashed

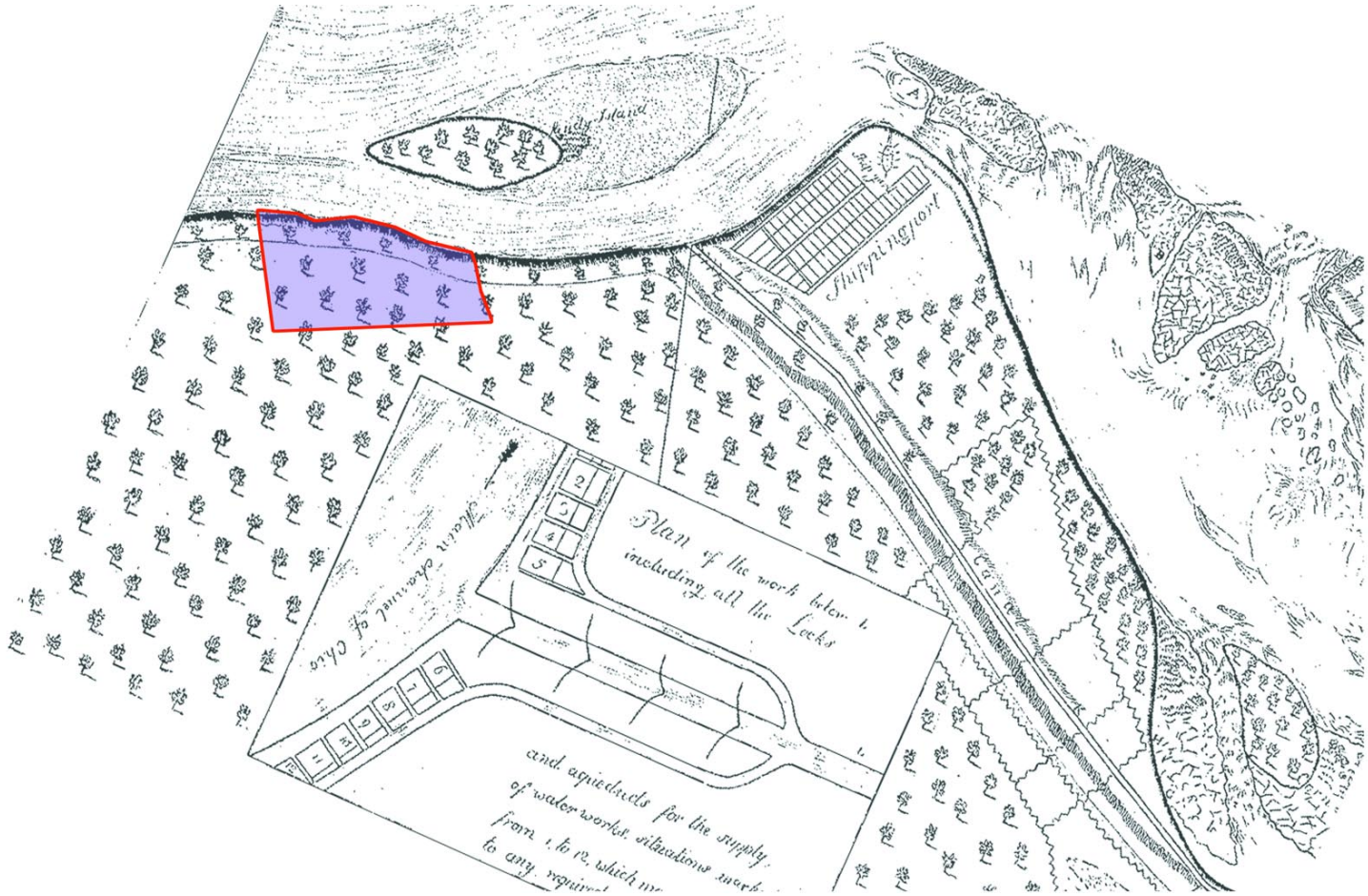


Figure 4: *A Map of the Rapids of the Ohio River*, drawn by J. Brooke, 1806.

upon the rocks. Such risk often necessitated portaging - the transportation of travelers and cargo over land - that made the road from Louisville to Shippingport a busy route. Portland eventually outstripped Shippingport as a preferred portage terminus, and although its growth coincided with the rise of steamboat trade, early river craft like keelboats and flatboats also moored along its wharf.

The acclaimed naturalist and artist John James Audubon wrote of flatboats:

> *. . . a boat thirty or forty feet in length, by ten to twelve in breadth . . . contained men, women, and children, huddled together, with horses, cattle, hogs and poultry . . . while the remaining portion was crammed with vegetables and packages of seeds [.] The roof or deck of the boat was not unlike a farmyard, being covered with hay, ploughs, carts, wagons, and various agricultural implements [and] spinning wheels. Even the sides of the floating mass were loaded with the wheels of different vehicles, which themselves lay on the roof.*[3]

Since flatboats could only travel downstream, they were dismantled upon arrival in New Orleans, and the lumber sold or used for building. Common goods sent from the east to Kentucky were glass and cabinetwork, chairs, millstones, nails, and other imported items. Products sent on to New Orleans included salt, cured pork, hemp, tobacco, corn, cherry and walnut planks, ginseng, flour, apples, cider, peach and apple brandy, and whiskey (which aged on the trip). During the late eighteenth and early nineteenth century, keelboats, which could travel–with difficulty–upriver as well as downriver, were used along the Ohio.[4]

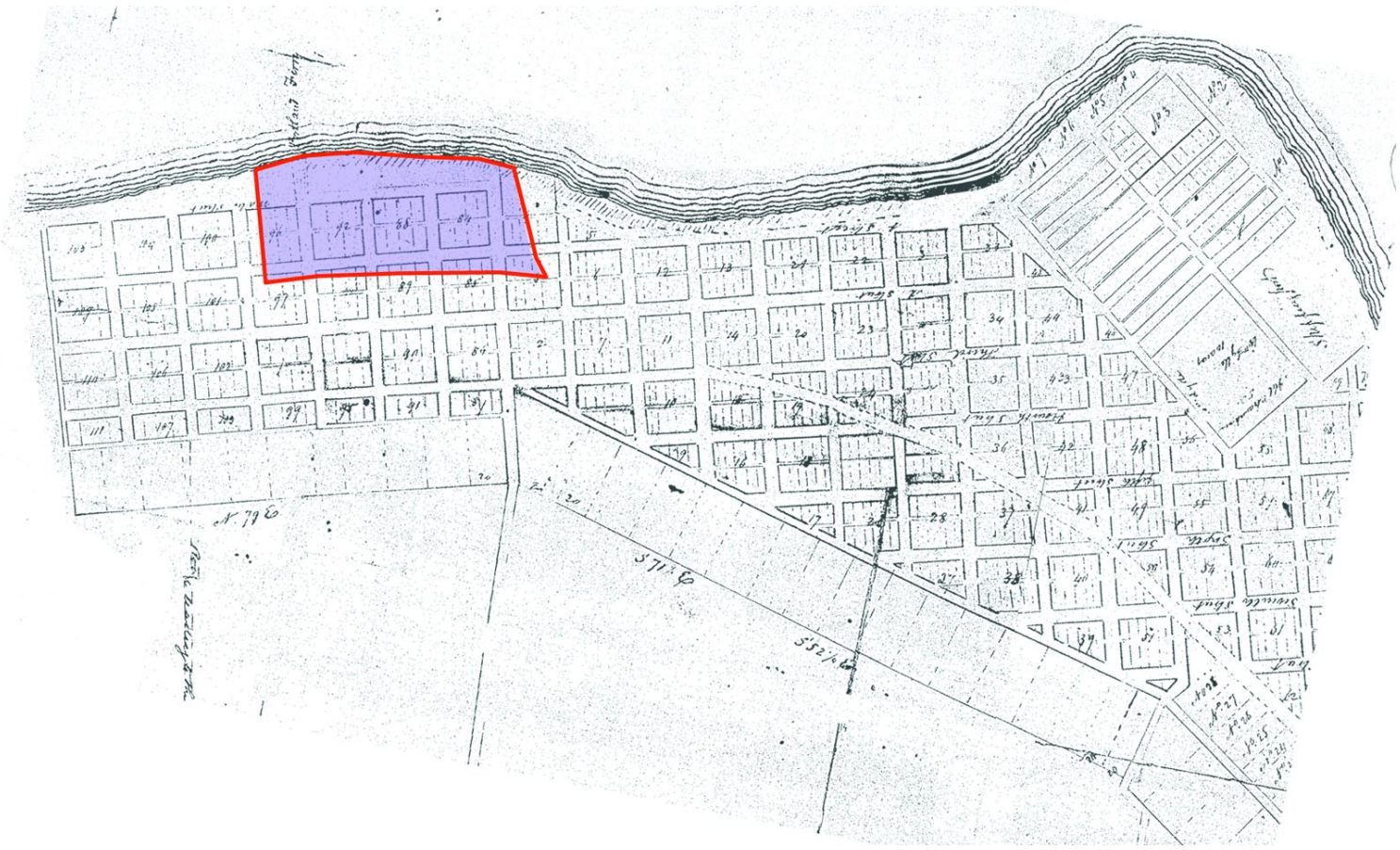


Figure 5: *Plan of the Town of Portland*, 1814, devised by William Lytle.

Figure 6: Inset of 1824 map, showing buildings along Water Street facing the Ohio River.

Because the area lent itself to commercial enterprises related to river traffic, General William Lytle of Cincinnati, surveyor general of the Northwest Territory, sent his agent Joshua Barclay and a surveyor, Alexander Ralston to lay out the town of Portland on part of 3,000 acres of land Lytle bought from Henry Clay and Fortunatus Cosby. Ralston's 1811 plan included wide streets set in a grid pattern. An extension to the town was surveyed in 1817 by Joel Wright.[5] An 1819 description of Portland states that:

> *But a small portion of this extensive place is as yet occupied by houses; some very handsome ones, however, are now erecting in Portland proper, and among them a very extensive brick warehouse, belonging to Captain H.M. Shreves (sic). The property in this place has lately attracted the attention of wealthy men, who seem determined to improve to the utmost every advantage it possesses . . . its future destinies may be considered as those of a highly flourishing and important town.*[6]

The first commercial building in Portland, a warehouse, was constructed in 1812. Soon after, the town featured a wharf, warehouses, wholesaling establishments, and drayage. The town grew to meet the needs of travelers and those engaged in water- and wharf-related enterprises, taverns, and hotels were established in Portland as river traffic increased and the area flourished. An 1824 map (Figure 7) of Portland shows a small number of buildings on Water Street, located closest to the Ohio (see Figure 6).

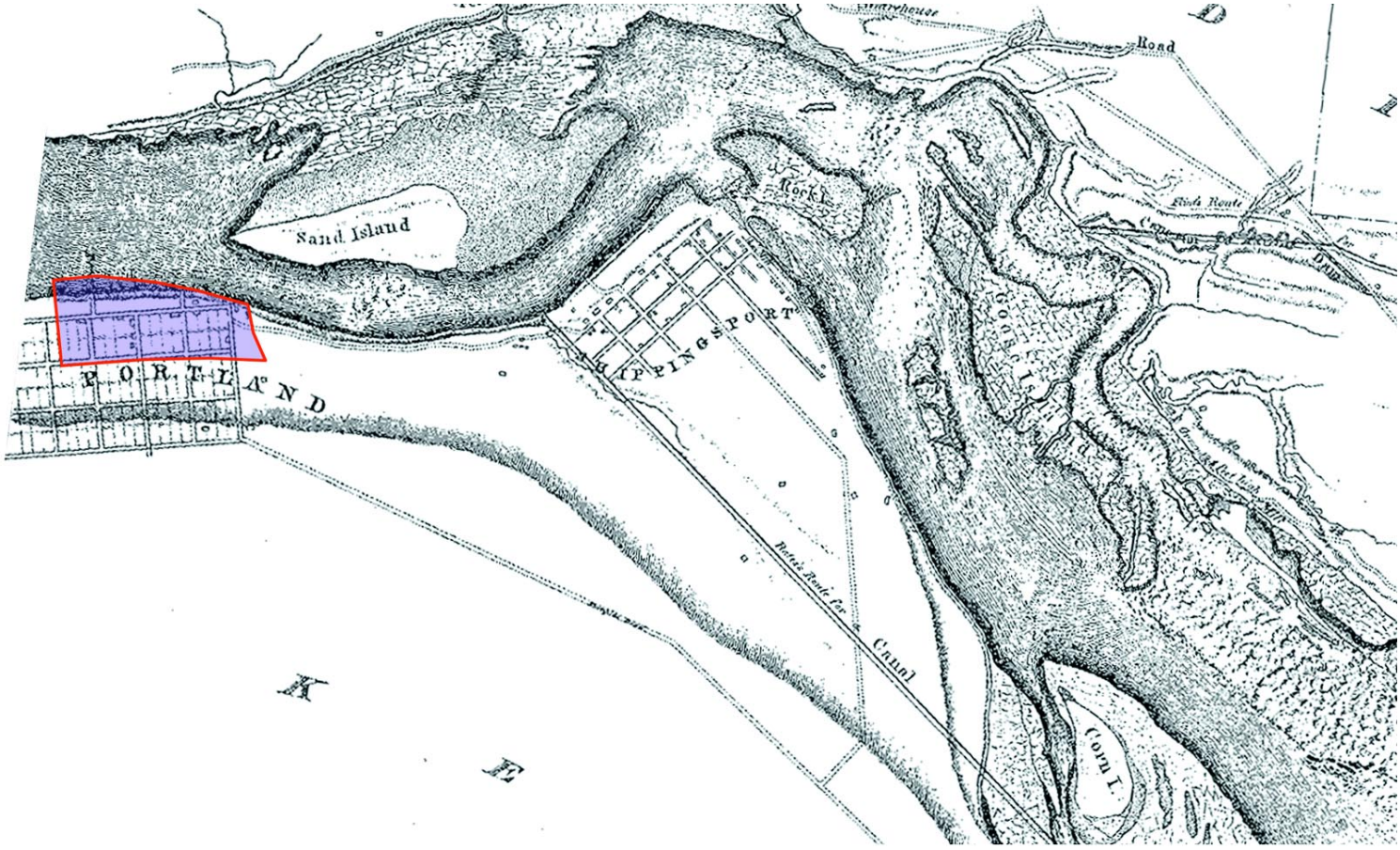


Figure 7: *Map of the Falls of the Ohio*, 1824, from actual survey, drawn by J. Flint. Adapted from "Mapping the Falls," written and produced at the Portland Museum by Nathalie Andrews, Greg Kleone, and Betty Stokes, 1987.

Figure 8: River trade along the Ohio River.

Figure 9: Louisville and Portland Canal.

Figure 10: Railroad advertisement.

Figure 11: Reprint from the1857 Portland Business Directory.

A ferry, which left Portland at the wharf at the foot of Ferry (35th) Street, ran across the Ohio River to New Albany, Indiana, from 1812 to 1886. It provided a vital link between the states in the era before bridges spanned the Ohio. The Portland Turnpike (first built in 1818) provided an important land route from Louisville to Portland, making it easier for passengers and goods to travel between the two towns.

During the 1820s, steamboats replaced flatboats and keelboats as the primary form of river traffic and Portland and Louisville grew rapidly during the years between 1840 and 1860. A trip by keelboat upriver from New Orleans to Portland previously had taken over 100 days, but steamboats could make the trip in as little as 25 days. River trade all along the Ohio flourished (see Figure 8).[7]

In 1830, to avoid the transfer and overland journey between the two towns, the Louisville and Portland Canal was opened (see Figure 9). Three feet in depth and 50 feet wide, the canal accommodated only smaller vessels. Since steamboats continued to grow larger and could not use the canal, the heavy transfer traffic on land endured and Portland continued to grow.[8]

The railroad first came to Portland in 1838 when a line connected Portland to Louisville (see Figure 10). As depicted on several historic maps, it and subsequent lines ran directly to the wharf area. After this setback, the economy of Portland was boosted by a steady shipbuilding business. Various parts of steamboats were constructed in Portland, Shippingport, New Albany, Jeffersonville, and Louisville. In 1843, approximately 35 steamboats were constructed in the Falls area.[9]

As steamboat traffic increased, Portland grew. Compared to the 1824 map which depicts a scattering of buildings, the 1857 Portland Business Directory lists numerous businesses–most concerned with river trade or local commerce–spread throughout the town. Listings for steamboatmen, ferrymen, carpenters, nail manufacturers, grocers, and tailors abound (see Figure 11). Water Street, located adjacent to Portland Wharf, was the commercial heart of Portland, with many businesses located there along the edge of the Ohio.[10]

Portland has long had a reputation for independent thought, and resisted a being incorporated in Louisville until 1837, although they seceded in 1843 only to be reincorporated into Louisville's city limits in 1852. In 1860, Portland reportedly seceded from the nation seven days before South Carolina did the same, making Portland the first community to do so. At the heart of Portland's complaint was the collection of tolls and taxes by a new sheriff's administration in Louisville. Although records are vague, it appears that Portland's secession was peacefully resolved a week to ten days later.[11]

Just before and during the Civil War, Portland Wharf played an important role in the Underground Railroad. Many slaves attempted to escape through the town of Portland, as shown in contemporary newspaper accounts and advertisements for escaped slaves (see Figure 12). Some slaves used forged "free papers" or disguises to pass as free persons and cross the Ohio River on the Portland Ferry. Other slaves, who had been hired out on steamboats, escaped from these boats while docked at the Portland Wharf. Still others attempted to cross the river on skiffs. On 15 May 1855, the *Louisville Morning Courier* published an account of an escaping slave named Henry, who had planned to take his family on a skiff to New Albany.

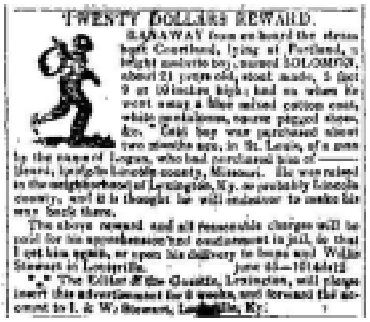


Figure 12: Runaway slave advertisement.

Figure 13: The *E.H. Fairchild* at Portland Wharf.

> *They drove to Portland in a carriage and soon after reaching the river bank the attention of the watchmen at Portland was attracted to the carriage, and the whole party, with the exception of Henry, was promptly arrested. At this juncture a skiff was seen rapidly nearing the Kentucky shore, apparently from New Albany. The occupant, unfortunately, became alarmed and fled back again before any effort could be made to catch him.*

Research indicates that there were persons living in Portland who provided aid to escaping slaves. The identities of most of these people are unknown today, due to the secret nature of their activities. Two notable exceptions were Milton Clark and James Cunningham, free African Americans who were arrested for helping slaves to escape, although neither was convicted.[12]

Another important aspect of Portland's Civil War history is the way commercial boats were forced into wartime use. This included the Louisville-New Orleans packet the *E.H. Fairchild*, built in New Albany in 1857. A historic image shows the Fairchild at the Portland Wharf (see Figure 13).

> *With the advent of the Civil War, the Fairchild was taken over by the Union Army. She is included in the list of vessels of the Mississippi squadron and apparently spent most of her war years transporting troops for General U.S. Grant.*

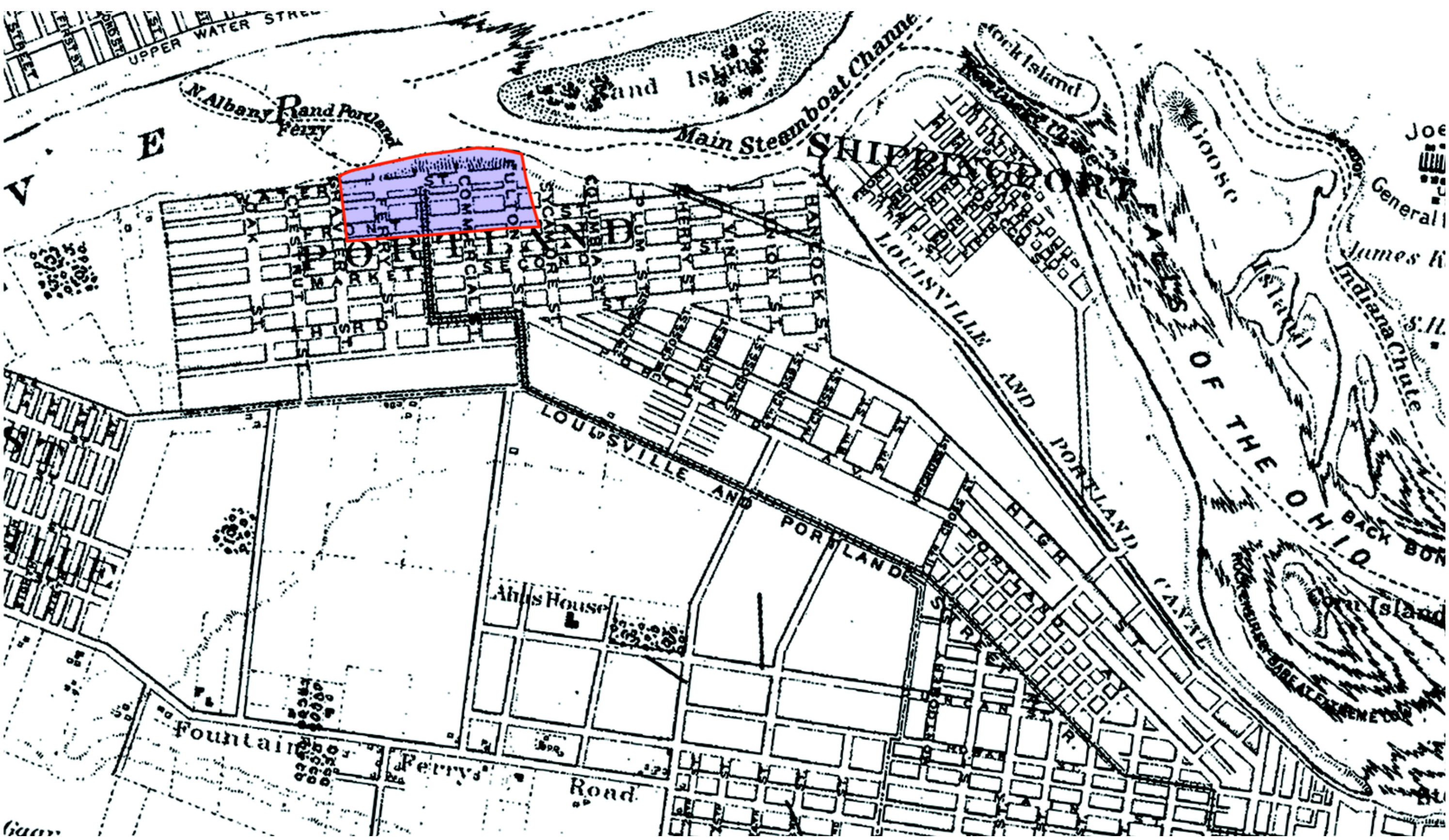


Figure 14: *Louisville and Its Defenses*, 1865. Office of U.S. Engineers, Cincinnati, Ohio.

Figure 15: Canal widening.

The E.H. Fairchild was one of the great fleet of 153 packets and 14 gunboats that ascended Tennessee River in late March 1862, conveying federal troops to Shiloh. That alone assures this boat an imperishable position in United States history.[13]

An 1865 map of Portland (Figure 14) depicts Civil War defenses, but is also relevant for showing the original street grid of the waterfront area and the ferry route across to New Albany. Other important features are the Louisville and Portland Canal and the Louisville and Portland Street Railroad.

In the years directly following the Civil War, Portland continued to thrive. A period account indicates that boats tied up to the Portland banks were "so thick that sterns stuck straight out into the river instead of being swept inshore by the current. The levee [wharf] was of cobble stones…"[14] In addition to the excitement that the river traffic generated, French settlers, Irish laborers, German merchants, and a well-established African-American community combined to make Portland a bustling maritime town complete with shops, taverns, and other businesses lining the streets.[15]

Figure 16: 1883 bird's eye view of Portland.

In 1870, as steamboat traffic and steamboats themselves continued to grow, the canal was widened to the extent that it accommodated all river traffic (see Figure 15). Travelers who formerly were shuttled through Portland could now pass through the area without disembarking. Coupled with the rise of passenger rail travel, Portland's commercial base weakened and it became a residential neighborhood of Louisville rather than the commercial center it once was.

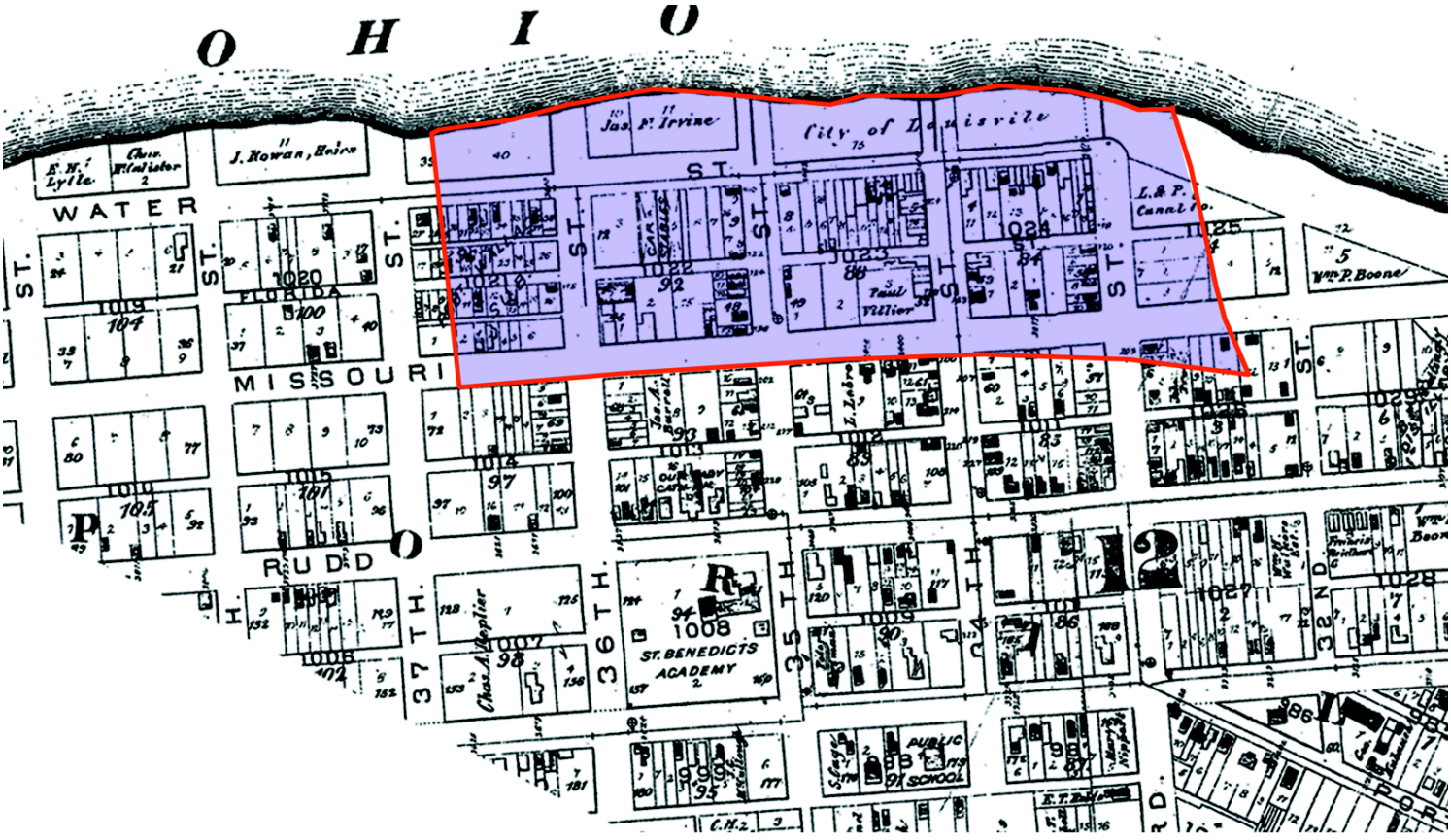


Figure 17: *Map of Portland*, 1884. Produced by the Portland Museum, 1984, from the 1884 atlases in the collections of the Filson Club and the Jefferson County Archives (funded by the National Trust for Historic Preservation).

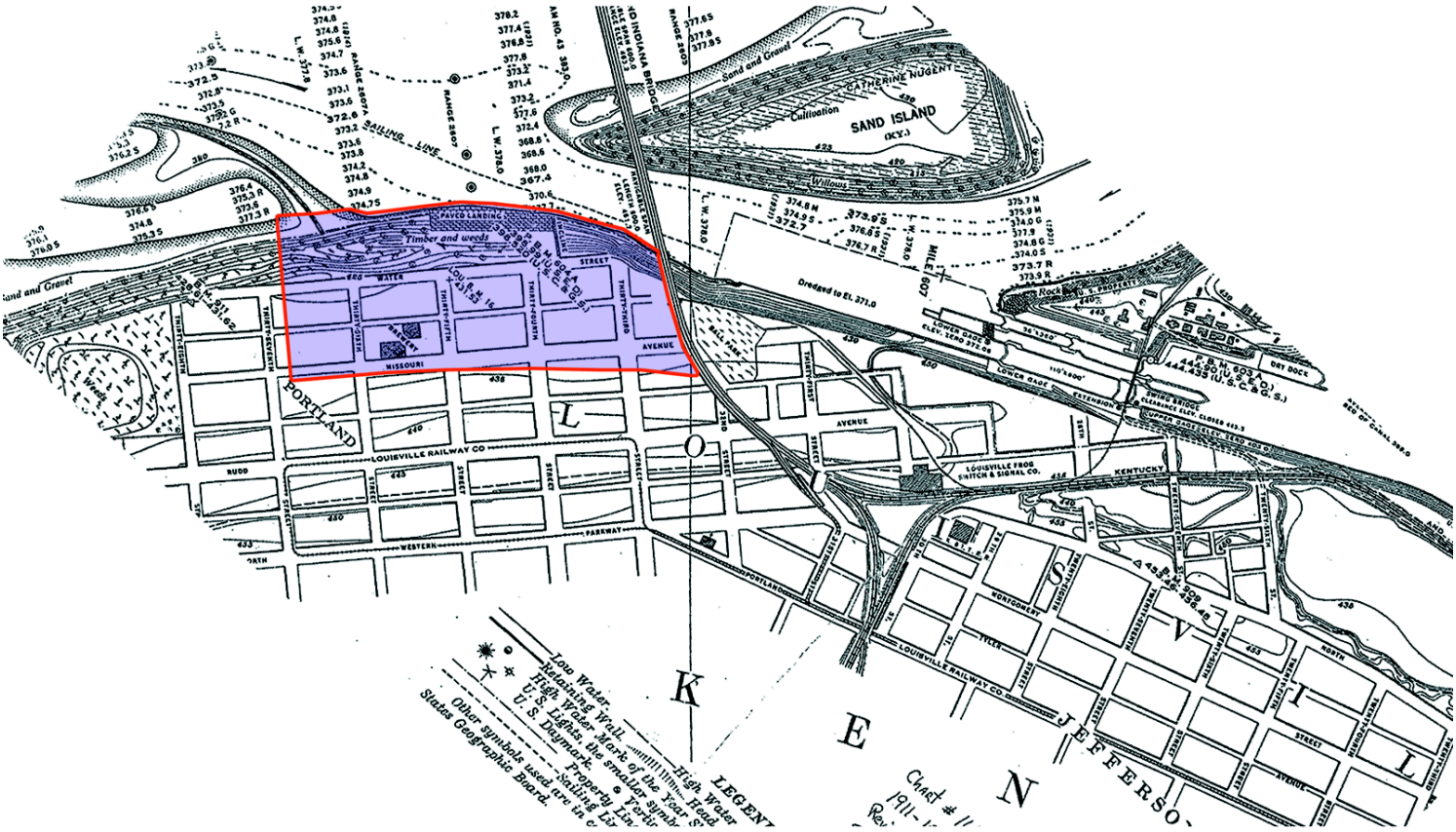


Figure 18: 1932 Navigational Chart #168, U.S. Army Corps of Engineers.

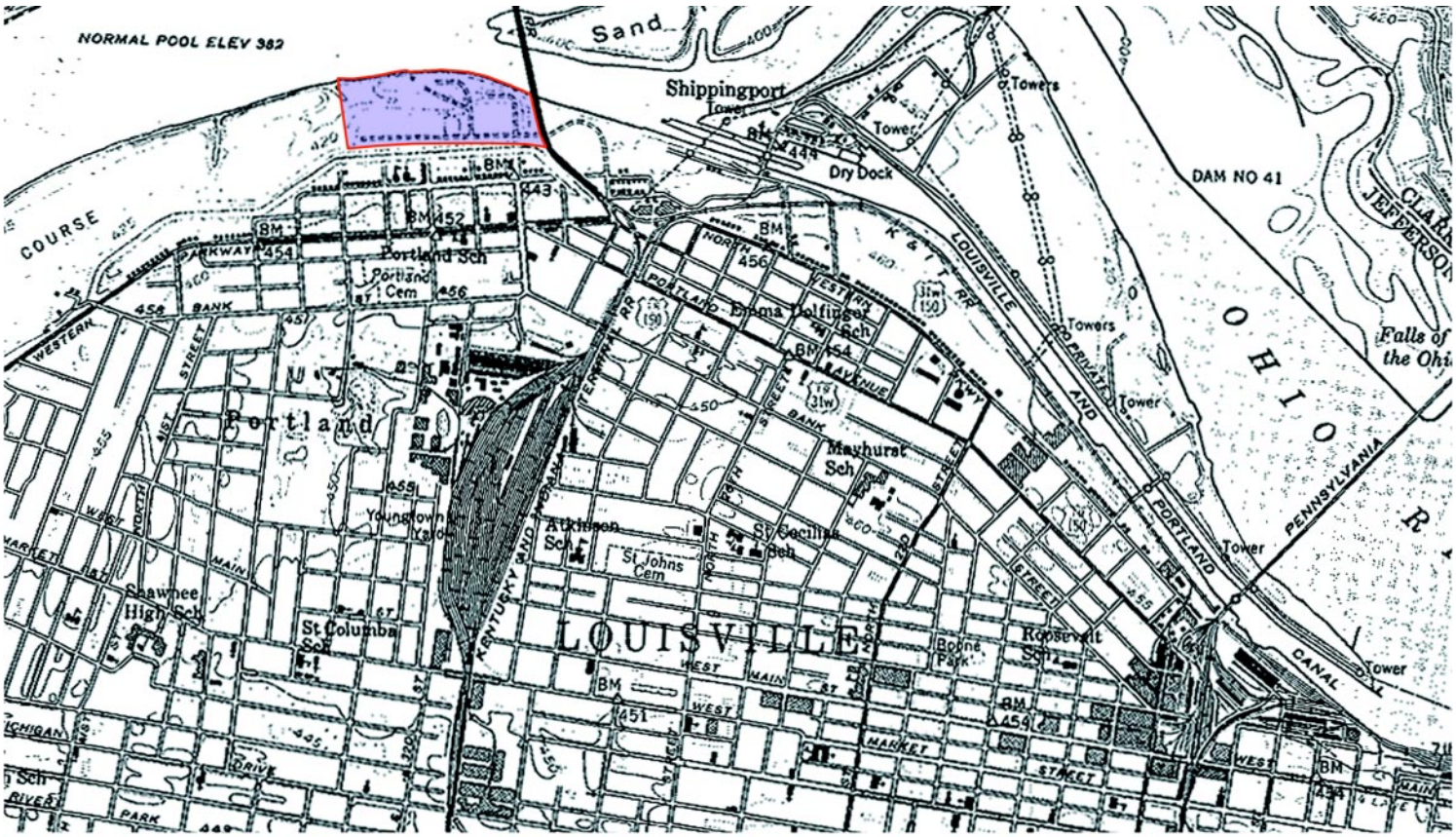


Figure 19: *Louisville and Vicinity, Kentucky and Indiana*, 1950. United States Geological Survey.

Figure 20: Photo of 1937 flood showing devastation along Rudd Avenue.

An 1883 birds-eye view (see Figure 16) and an 1884 map (Figure 17) show numerous buildings likely constructed during Portland's prosperous years prior to the canal enlargement. The residential architecture in Portland that survives from this era as well as earlier periods is an interesting mix of mansions that were the dwellings of the riverboat captains, prominent businessmen, and civic leaders, and the shotgun houses that were home to the many workers who labored on the wharf. Some of the houses display a style referred to as "riverboat gothic" which incorporates decorative motifs based on items commonly found on steamboats.

Flooding was frequent in Portland. Some degree of flooding occurred at least once a year, and large floods were not uncommon. The extreme amount of precipitation that occurred in January 1937 remains unmatched in Kentucky's history, resulting a catastrophic flood. Portland was struck hard and the streets closest to the waterfront wharf area were devastated (see Figure 20). In response to this flood, several blocks closest to the water were demolished and between approximately 1947 and 1954, a flood levee was built to protect the area from future disasters.[16] While the levee has served its purpose, it has also cut the Portland neighborhood off physically and psychologically from the river (Figure 19).

ENDNOTES FOR HISTORIC CONTEXT

1. More complete histories of Portland exist in various forms. In addition to sources cited here, *The Story of Louisville Neighborhoods* (published by the *Louisville Courier-Journal* and the Louisville Times Company in 1955) contains a chapter by John C. Rogers on Portland.

2. John E. Kleber, editor. *The Kentucky Encyclopedia*, Entry for "Falls of the Ohio" by George H. Yater. Lexington, Kentucky: University Press of Kentucky, 1992, p. 305.

3. Dr. Henry McMurtrie, *Sketches of Louisville and Its Environs*, p. 13.

4. George H. Yater. *Two Hundred Years at the Falls of the Ohio: A History of Louisville and Jefferson County*, Louisville, Kentucky: The Heritage Corporation, 1979, p. 19.

5. John E. Kleber, editor. *The Kentucky Encyclopedia*, Entry for "Flatboats" by Gail King. Lexington, Kentucky: University Press of Kentucky, 1992, p. 324.

6. *Sketches of Louisville and Its Environs*, pp. 164-165.

7. Ibid., p. 165.

8. John E. Kleber, editor. *The Kentucky Encyclopedia*, Entry for "Keelboats." Lexington, Kentucky: University Press of Kentucky, 1992, pp. 483-484.

9. Barbara Freda. "Greeting from Portland! . . . A brief history of a once-bustling river town." In *Business First*. Week of December 30, 1996. n.p. Copy from the University of Louisville Archives.

10. Kenny Karem. *Portland: Crossroad of Transportation*. Excerpts from *Discover Louisville*, n.d. Copy from the University of Louisville Archives.

11. Reprint of the 1857 Portland Business Directory from the University of Louisville Archives. Publications of the Portland Museum, out of print.

12. John S. Gillig. "Awful! Terrible! Grand! Gloomy! And Peculiar!: Kentucky Records the Startling History of the Confederacy of Portland" in the *Register of the Kentucky Historical Society*. Spring 1984, pp. 172-175.

13. From text provided to Robinson & Associates, Inc., by Pen Bogert, Reference Specialist at the Filson Club, Louisville, Kentucky.

14. "Louisville-New Orleans Packet E.H. Fairchild At Portland Landing." *The Waterways Journal*, August 7, 1954, p. 11.

15. "In the Good Old Days When Steamboats Plied the Bosom of the Mighty Ohio." *Louisville Courier-Journal*. July 6, 1918, p. 4.

16. Barbara Freda. "Greeting from Portland! . . . A brief history of a once-bustling river town." In *Business First*. Week of December 30, 1996. n.p. Copy from the University of Louisville Archives.

17. John E. Kleber, editor. *The Encyclopedia of Louisville*, Entry for "Floods and Flood Control" by Charles E. Parrish. Lexington, Kentucky: University Press of Kentucky, 2000, p. 297.

CHAPTER 2
SURROUNDING LAND USE

Figure 21: Historic homes in Portland.

A. DESCRIPTION OF PORTLAND NEIGHBORHOOD

The official area presently designated by the city as being the "Portland neighborhood" is a large area bounded roughly by 10th Street to the east, 38th Street to the west, Market Street to the south, and the Ohio River to the north. While the entire Portland neighborhood retains much of its original 19th and early 20th century architecture, the area closest to the Portland Wharf Park contains many of the features (such as homes, churches, and businesses) that relate most closely to the historic framework of the area (Figure 22). Indeed, much of the Portland neighborhood immediately adjacent to the park is part of a National Register Historic District.

Because of the construction of the flood levee by the U.S. Army Corps of Engineers in the 1940's, many of the streets in Portland, including 32nd, 33rd, 34th, 35th, and 36th Streets, are cut off from direct access to the riverfront. In addition, east-west streets such as Rudd Avenue have also been cut by the flood levee into discontiguous segments. Most of these streets, however, still retain their original width and feel, with homes (many of them historic) and businesses facing the streets in a traditional urban grid pattern.

Some of the more prominent buildings in Portland near the project site include the Portland Branch Library (on the corner of 33rd Street and Northwestern Parkway), Portland Elementary School (on Northwestern Parkway), Notre Dame du Port Catholic Church (on Rudd Avenue), and the Squire Jacob Earick House (on 34th Street), which may have been built in 1811 and is owned by the Portland Museum. Other prominent structures relate directly to Portland Wharf Park and will likely play roles in the future of the site. These include the Portland Museum (on

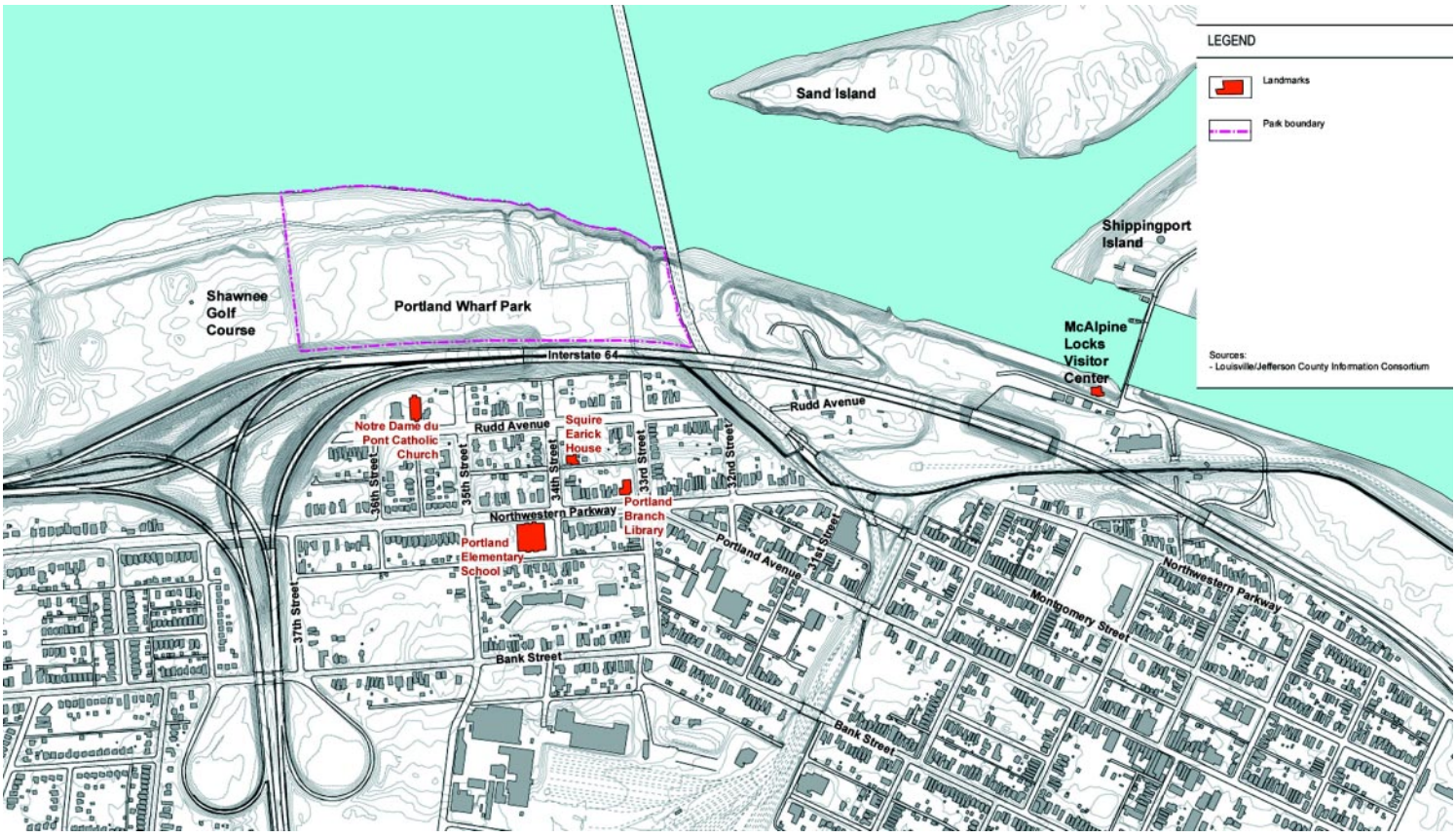


Figure 22: Neighborhood Context.

Figure 23: Shawnee Golf Course

Portland Avenue), and the U.S. Marine Hospital (a National Historic Landmark - on the corner of Portland Avenue and 23rd Streets), which was built in 1852 to serve river boatmen and is awaiting adaptive reuse.

B. ADJACENT LAND USE

For the most part, the land directly adjacent to Portland Wharf Park is open space. Abutting the park on the west is Shawnee Golf Course, which is owned by the city and where the land use is open space/recreational. To the east of the park on the other side of the K & I Bridge, the majority of the land is undeveloped, underutilized open space, with some industrial use (Sadler's Auto Salvage Yard) south of Interstate 64. These open spaces both east and west of the park are part of a string of parks and open areas that stretch from downtown Louisville all the way to Chickasaw Park, to the southwest of the city (Figure 24).

South of the flood levee, in the Portland neighborhood, the land use is primarily residential, with commercial uses concentrated along Northwestern Parkway and Portland Avenue.

Transportation uses also predominate in the vicinity of the park, with Interstate 64 and the K&I Railroad Bridge forming important boundaries to the site on the south and the east.

C. ADJACENT OWNERSHIP

The majority of the land directly abutting Portland Wharf Park is publicly owned. As mentioned in the previous section, Shawnee Golf Course to the west is a public facility owned by the City of

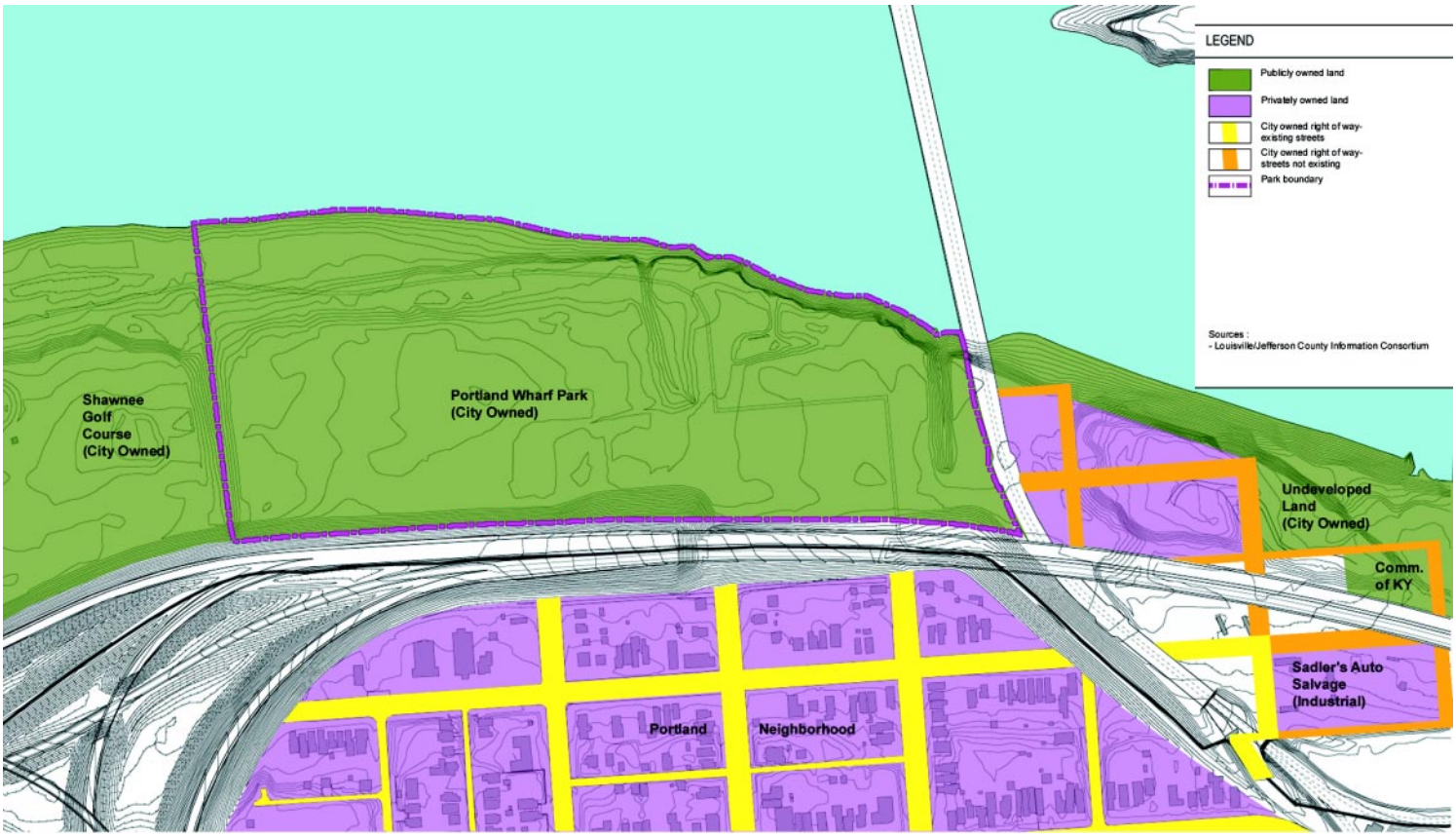


Figure 24: Existing Land Use and Ownership.

Louisville. Much of the land to the east is also publicly owned, either by the city or the Commonwealth of Kentucky. Further east than is shown in Figure 24 is land owned by the U.S. Army Corps of Engineers that is associated with the McAlpine Locks.

Perhaps most interesting, however, is the fact that the City of Louisville still owns the right of way for the streets east of the site, many of which no longer exist. These streets were once part of the original street grid for the Portland neighborhood and Portland Wharf, and the city's ownership of these rights of way may prove important when considering potential access to the park from the east.

D. EXISTING ZONING

Zoning for the Portland Wharf Park site and the surrounding neighborhood can be seen on Figure 25. All of the park, and some of the area south and east of the site, is zoned R-1 Residential, with "parks" being a permitted use in this zoning category. The majority of the Portland neighborhood falls within the R-5A (with some R-6) zoning category. This area of R-5A zoning is known as a Residential Multi-Family District, and is intended to provide the opportunity for land in the medium density residential land development range to be used for single family dwellings, row houses, and multiple family dwellings. The areas of existing commercial zoning (C-1 and CN) can be seen at the intersection of Northwestern Parkway, Portland Avenue, and 33rd Street.

The large area of (Figure 25) labeled EZ-1 refers to "Enterprise Zone," and is intended as a specialized district for the location of commercial and industrial uses.

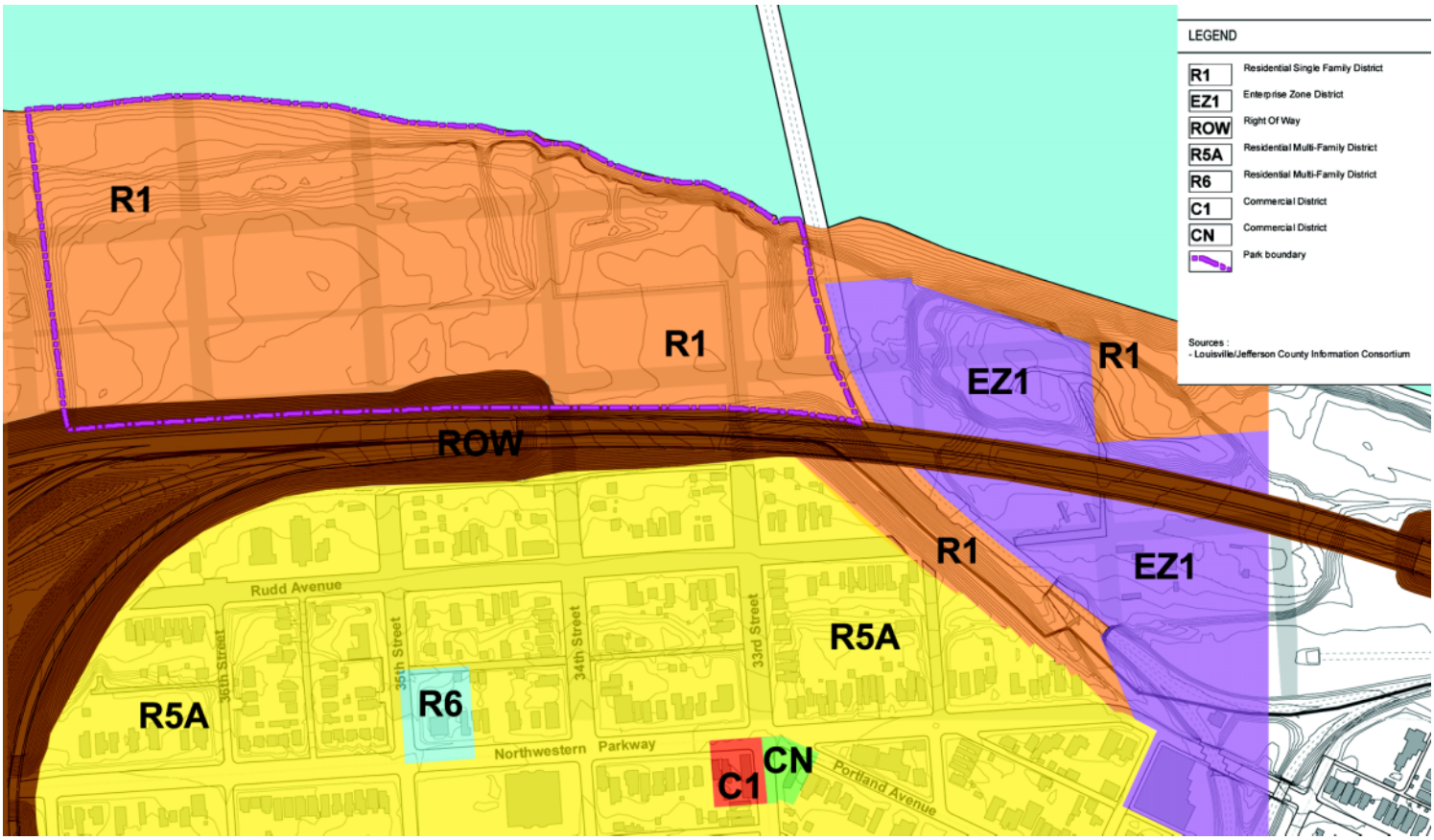


Figure 25: Existing Zoning

Figure 26: RiverWalk at the entrance to the park (Northwestern Parkway and 31st Street).

E. RIVERWALK

RiverWalk is one of the most significant recreational and open space resources in Louisville, and passes directly through Portland Wharf Park. This paved trail, which is seven miles long, begins downtown at Waterfront Park and continues west along the river to Chickasaw Park. Along the way, it provides walkers, bikers, skaters, and sightseers with scenic views and access to the McAlpine Locks, the Portland Canal, and Lanaan, Portland Wharf, and Shawnee Parks. In several areas in Portland, the trail moves away from the river's edge and actually parallels the road (Northwestern Parkway). This is the case where RiverWalk enters Portland Wharf Park from the east, at Northwestern Parkway and 31st Street.

Most significant is the fact that part of RiverWalk as it passes through the eastern section of Portland Wharf Park, follows the old street grid pattern of Portland Wharf (where Fulton, Florida, and Commercial Streets used to be). Additionally, sections of RiverWalk as it passes through the park have been inscribed with words, terms, and phrases that evoke the history and feeling of the wharf, the boats, and the people who lived and worked there.

The city does have tentative plans to create an extension of RiverWalk east of the park, a loop that would allow users to stay close to the river in the vicinity of the McAlpine locks, rather than having to come up to Northwestern Parkway to continue along the trail. This trail would tie in with the new McAlpine Locks Visitor's Center that is now being constructed outside the U.S. Army Corps of Engineers offices at the locks. Most importantly, the city's tentative plans include having this RiverWalk loop tie into Portland Wharf Park from the east, under the K&I Bridge.

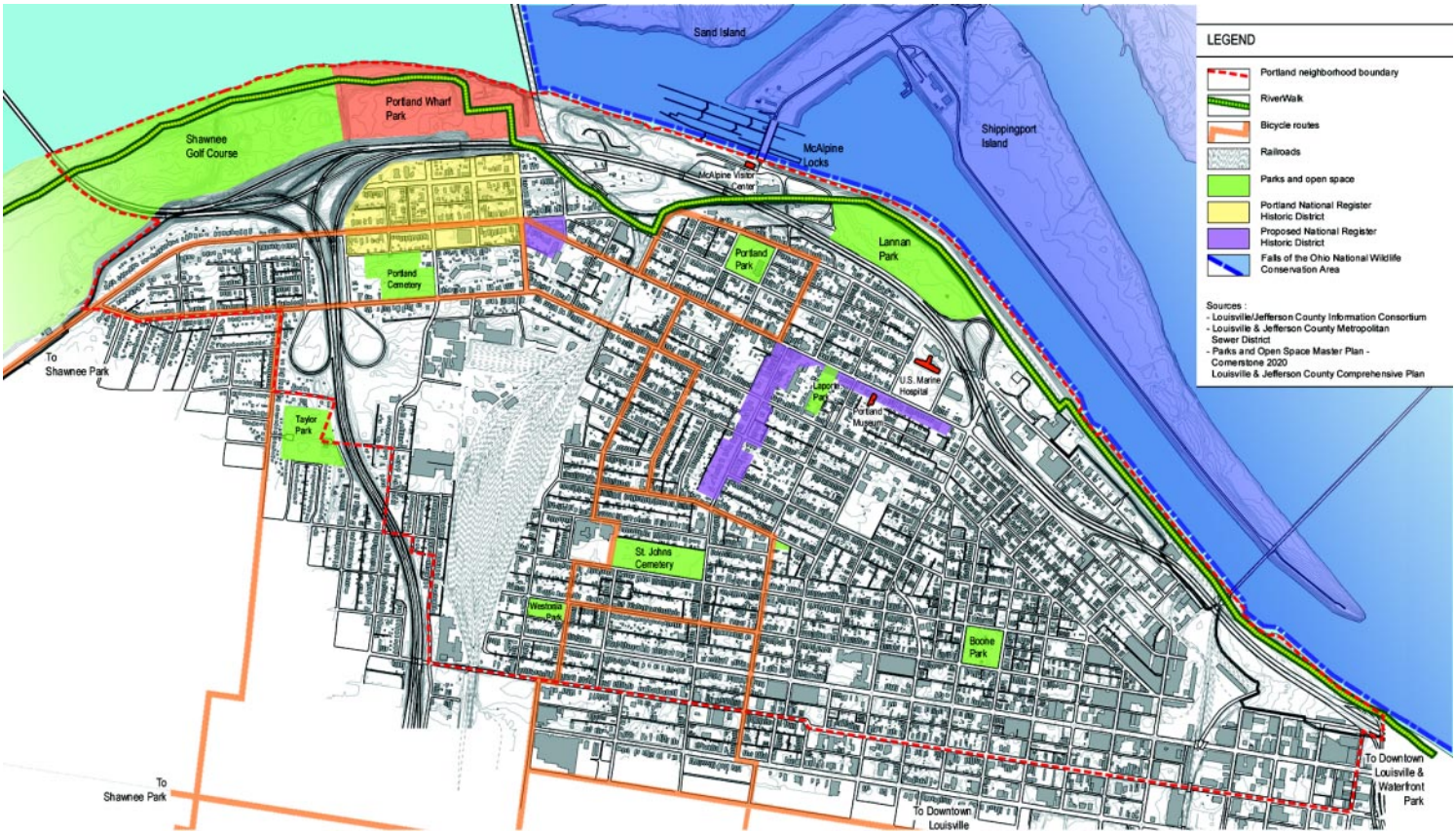


Figure 27: Public Facilities in the Vicinity of Site.

Figure 28: The Portland Museum.

Figure 29: The Portland Branch Library at Northwestern Parkway and 33rd Street.

F. PUBLIC FACILITIES, PARKS, AND OPEN SPACES

Figure 27 shows many of the important features in the Portland neighborhood, including parks, cemeteries, open spaces, city-designated bicycle routes, and the location of RiverWalk along the river and through Portland Wharf Park. It also shows the official boundary of the Portland neighborhood, as well as the boundary of the Falls of the Ohio National Wildlife Area, the Portland National Register Historic District, and the Proposed National Register Historic District in Portland (which currently exists only at the conceptual level). Other very significant resources, including the Portland Museum, the McAlpine Locks, and the U.S. Marine Hospital, are also pointed out on the map. Most importantly, this figure identifies the many green spaces, historical sites, and cultural resources that already exist in the vicinity of Portland Wharf Park, and the many linkages that can be made between the park, the Portland community, downtown Louisville, and the State of Indiana.

Figure 30 further reinstates the importance of Portland Wharf Park as a part of a series of connected parks and open space system along the Ohio River in both Kentucky and Indiana.

G. OHIO RIVER CORRIDOR PLANNING CONTEXT

Figure 31 (the Ohio River Corridor Planning Context map) is an overview of the recent Ohio River corridor and Portland neighborhood planning proposals. This information was drawn from the *Ohio River Master Plan 2020* and the *Portland Discovered Plan* documents. The intent of many of the long range proposals mapped here are eventually link the various existing and potential

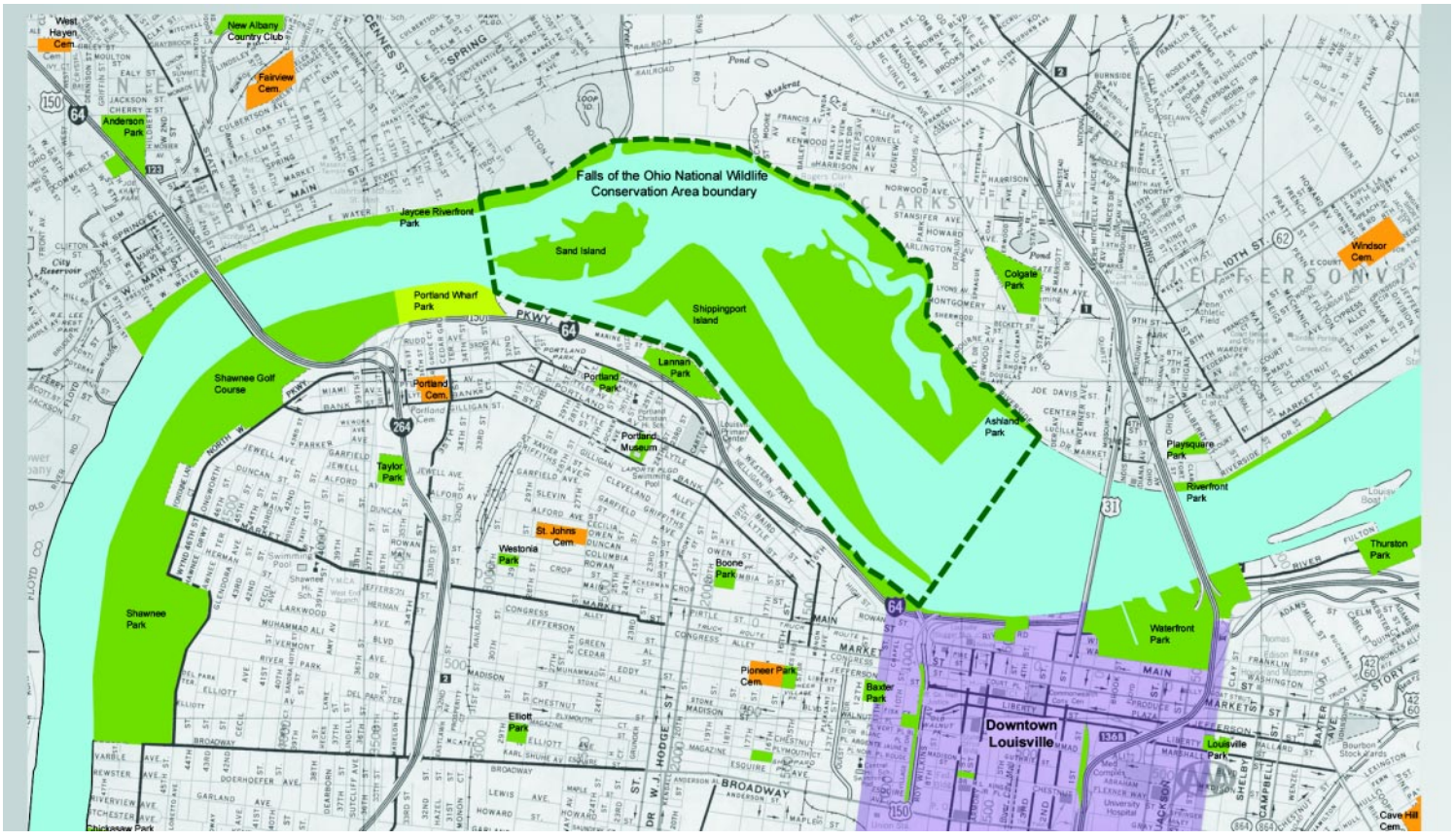


Figure 30: Public Parks and Open Spaces.

cultural heritage attractions for this part of the Falls of the Ohio and the surrounding communities together into a coherent and connected user experience. These various proposed attractions are shown with the different proposals for historic and entertainment districts, also taken from the aforementioned planning documents. A key feature taken form the Ohio River Master Plan 2020 proposal is the 16 mile tourist tram route and multi-use trail (shown in orange) which would utilize the existing historic railroad bridges to link the heritage attractions on the Kentucky and Indiana sides of the river. This conceptual line was drawn to illustrate the potential linkage described in the 2020 plan. The Portland Wharf Park and adjacent Portland National Register Historic District occur at a key connection point in this possible visitor experience.

H. LINKAGES

There are many important linkages currently existing between Portland Wharf Park and the rest of the neighborhood and city (Figure 32). Two of the most important street linkages are Northwestern Parkway and Portland Avenue, which link the park to downtown Louisville and to the neighborhoods east and west of the site. Portland Avenue also serves to link the U.S. Marine Hospital, the Portland Museum, and the proposed National Register Historic District to the existing historic district and the park. Northwestern Parkway is also significant because it bisects all of the numbered streets (32nd, 33rd, 34th, 35th, and 36th) that terminate at the southern boundary of the park, and therefore forms the spine of the street grid adjacent to the site. The numbered streets, which are potential access routes, reach northward toward the park but are prevented from connecting to the park by the flood levee.

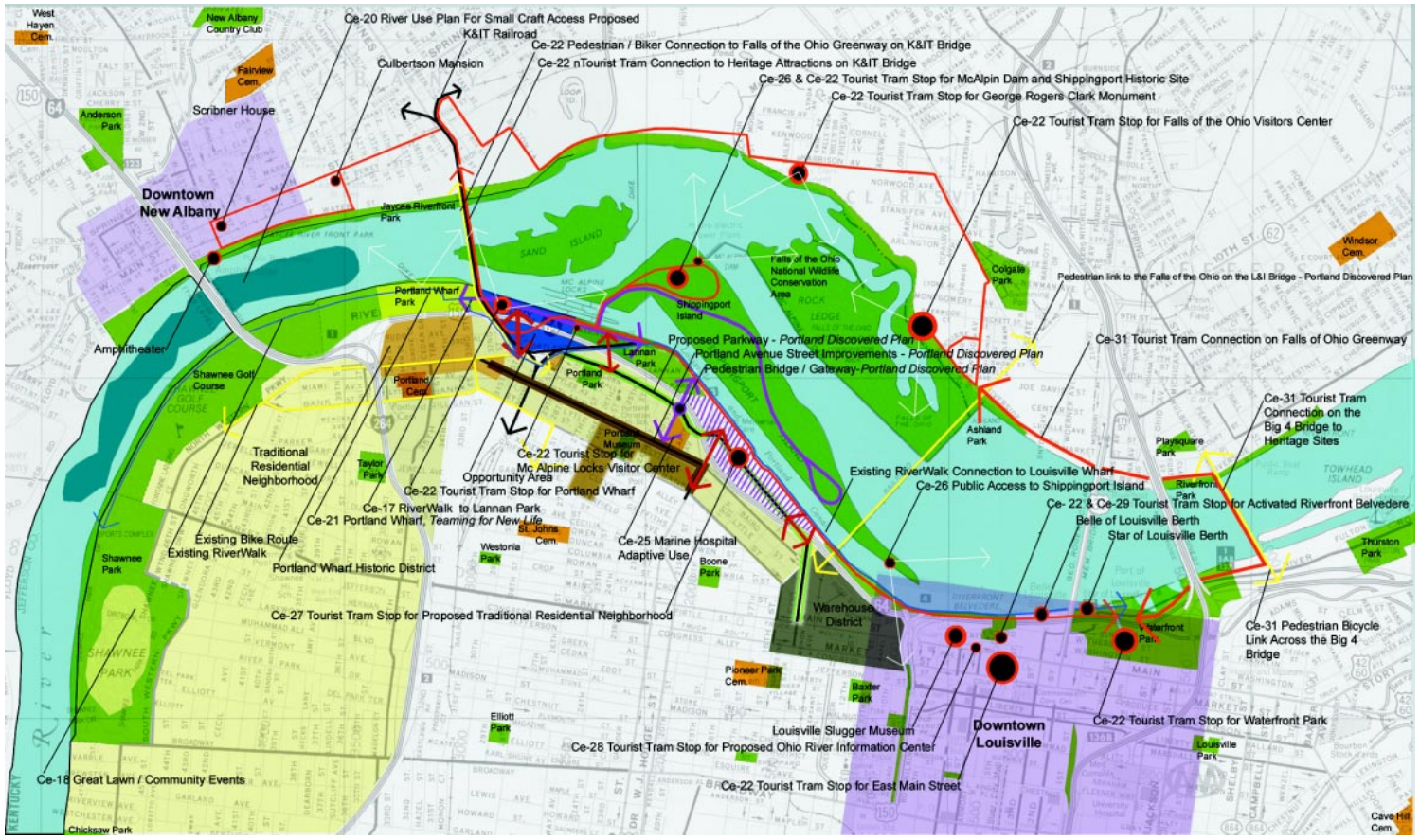


Figure 31: Ohio River Corridor Planning Context.

Figure 32 also shows the importance of RiverWalk as a direct pedestrian and bicycle connection to downtown Louisville, Lannan Park, and Waterfront Park on the east, and to Shawnee Golf Course, Shawnee Park, and Chickasaw Park on the west.

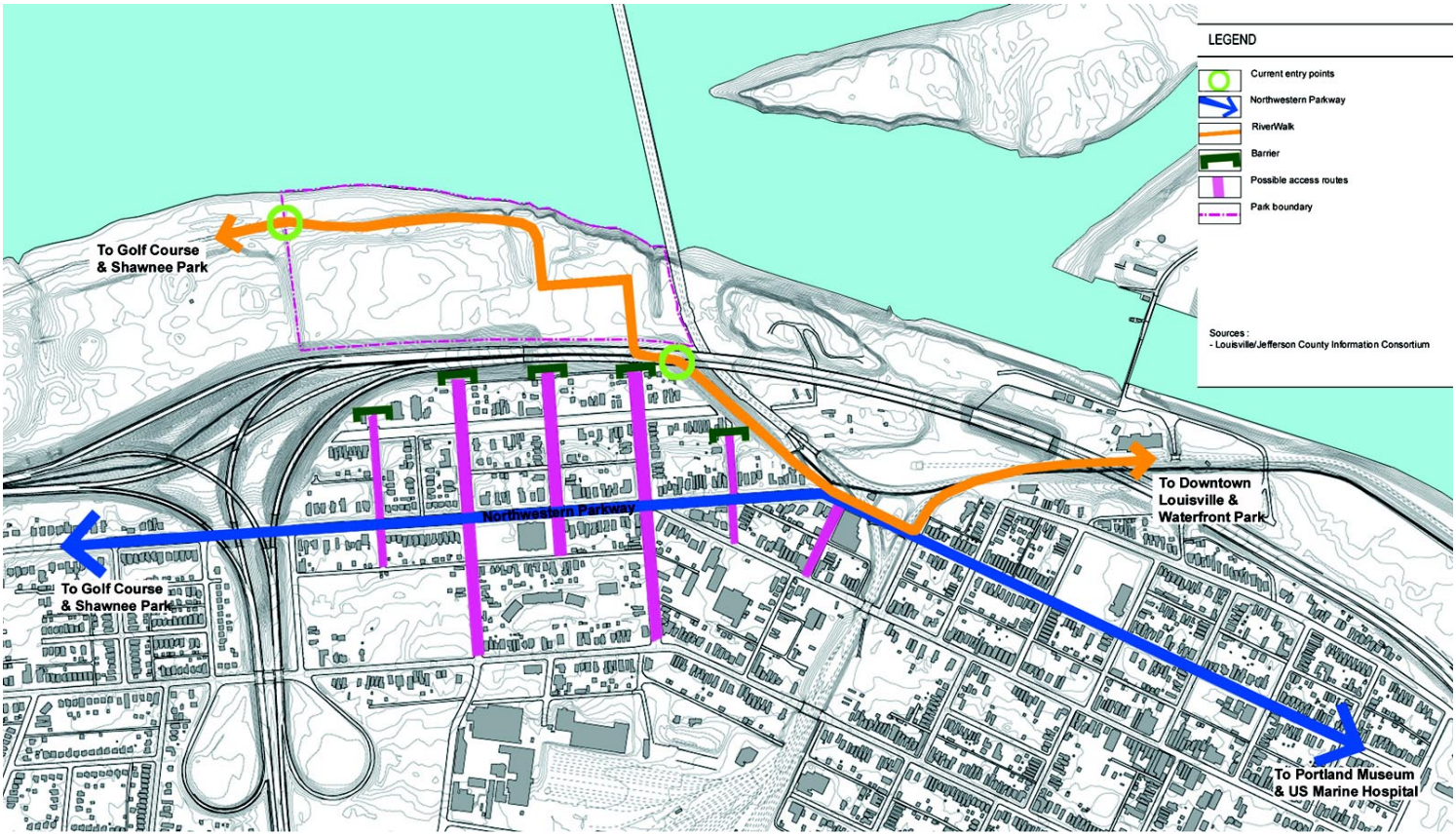


Figure 32: Existing Linkages.

CHAPTER 3
OHIO RIVER HYDROLOGY

Figure 33: View of Ohio River under the K&I Bridge.

A. SIGNIFICANCE OF THE RIVER

The past, present and future of the Portland Wharf site is directly linked to the Ohio River. As described in the Site History section, access to the river for basic natural resources and later, for the ability to support commerce, made the Ohio River and this site in particular, attractive for human use and settlement. However, the river has also made continued habitation and commercial use of this site a virtual impossibility.

Repetitive flooding has destroyed and damaged improvements to this property to the point that barely a trace of these improvements persists on the surface. As development of facilities to enable the recreational and interpretative use of the site are considered as part of this Master Planning process, it is important to understand the potential impacts for any new improvements as well as the implications for on-going archeological investigations.

B. FLUCTUATIONS IN THE RIVER

Figure 34: The McAlpine Locks - looking south toward the K&I Bridge.

Records exist about the hydrology of the river and how the river "behaves" over time. Just downstream from the McAlpine Dam, the US Army Corps of Engineers (USACE) maintains a gage that continuously records the river water surface elevation or "stage". Figure 35 shows the recorded maximum, average and minimum stages for each day of a typical year, with "Day 0" representing January 1st,

This information is based on 70 years of data from 1930 through November 2000 and reveals that river stage levels at the Portland Wharf site have varied significantly over recorded time. River levels range from a historic low of 380' above sea level up to nearly 460' during the infamous flood of 1937 – a difference in height equal to an eight story building!

Figure 35 also indicates that there are predictable variations in the river elevations over the

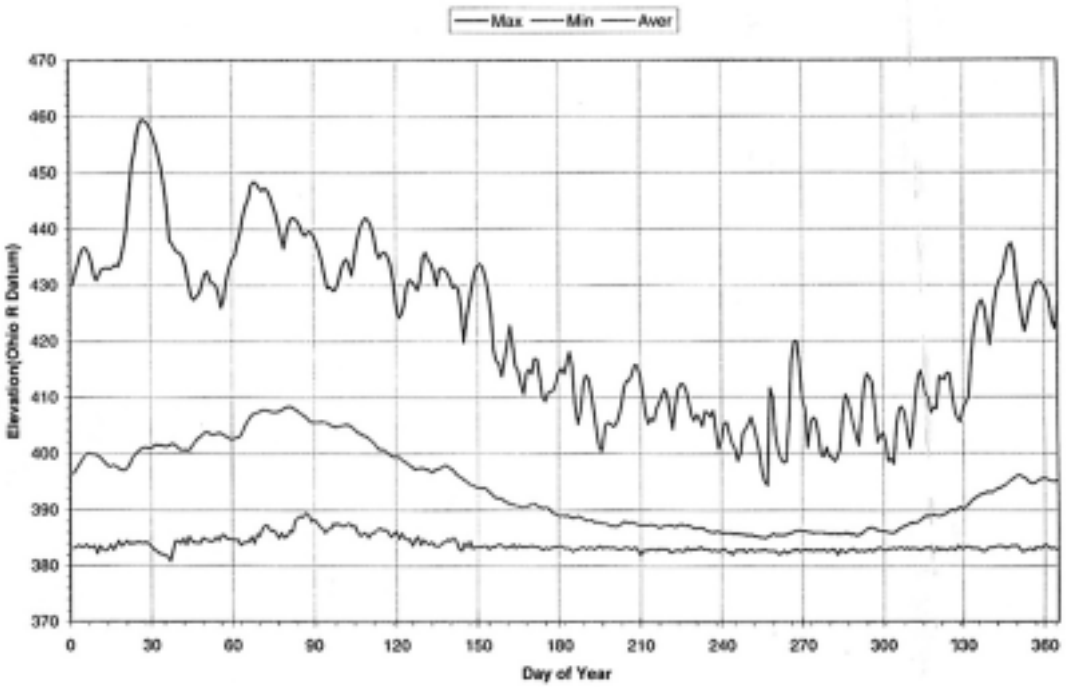


Figure 35: Record Stages at McAlpine Lower Gage.

course of the year. Not surprisingly, higher river stages are experienced from late November through mid June when rainfall and stormwater runoff in the Ohio River Watershed are more frequent. Lower stages are usually found in the late summer and early fall dry periods.

C. RELATIONSHIP TO GROUND ELEVATIONS IN PORTLAND

Historic flood elevations relate to the ground elevations within Portland Wharf. The ground surface elevations of the study area vary from less than 400' above sea level at the river bank, to nearly 480' in elevation on the road surface of Interstate 64. However, most of the site is a relatively flat terrace between the flood levee and a steep embankment near the river. This terrace has surface elevations that range from approximately 420' to 440' above sea level.

Therefore, since Figure 35 shows there are days when the water level can reach as high as 460 feet in elevation, virtually all of the study area is subject to flooding at some point in time.

D. FLOODING ON THE PORTLAND WHARF PARK SITE

The remarkable record of river stage elevations available along the Ohio River makes it possible to predict how often flooding at various elevations may occur. Traditionally, engineers make these determinations in terms of the river stage that is expected for a given frequency or recurrence interval. For example, based on past gauge data, it is possible to determine the highest river stage elevation that is likely to occur on an annual basis (i.e., a 1-year recurrence interval flood), or any time interval of interest (e.g., 2-year, 5-year, etc.). These elevations can also be thought of in terms of the probability of occurrence, (i.e., the annual % chance of a flood of a particular elevation).

There is a simple direct relationship between the frequency / recurrence interval and the probability. The probability of a flood occurring in a given year is the inverse of the recurrence interval. For example, the probability of a flood with a recurrence interval of 1-year is equal to (1/1)*100 or 100%. Similarly, the 2-year flood has a probability of occurring in any particular year of (1/2)* 100 or 50% and so on.

Both of these determinations – recurrence intervals and probability - have proven to be useful for many purposes including planning, design and regulation of facilities in and near the river banks. Figure 36 shows the recurrence intervals, probabilities and Ohio River stage elevations for a full range of flood events at the Portland Wharf site including the highest flood on record.

It is very important to understand that the "recurrence interval" designation does not mean this will be the actual time period between floods of this magnitude. These designations are based on statistical determinations and only represent what should be considered as an average. For example, it is possible to experience multiple floods at a level corresponding to 100-year events much more frequently than every 100 years; in some unfortunate locations, people have been subjected to flooding of this magnitude more than once in a single year!

Finally, we can relate these flood elevations to the corresponding areas of the site that would be flooded for each recurrence interval.

Figure 38 (showing Hydrology) approximates the areas of the site that would be affected by each of the flood events identified in Figure 36. The map shows that the lowest terraced area in

Recurrence Interval	Probability (i.e., % annual chance)	Elevation
1 Year	100%	416.25
2 Year	50%	423.50
5 Year	20%	431.75
10 Year	10%	437.00
25 Year	4%	442.25
50 Year	2%	445.25
100 Year	1%	448.00
500 Year	0.20%	453.75
1937 Flood of Record	< 0.2 % (not determined)	458.75

Figure 36: Portland Wharf Flood Elevations.

Note: Elevations in the table are expressed in feet above sea level at Ohio River Station 608 miles below Pittsburgh relative to datum of 1929.

the northwest portion of the study area would be expected to be inundated every year. It also shows that virtually all of the site would be inundated by floods with a recurrence interval of from 5 to 10 years, a relatively short time frame in hydrologic terms.

What this means is that the flood recurrence interval is shorter than the useful life of any significant building and that there is a high probability that any excavated area for archaeology would be subject to inundation on an annual basis.

Figure 38 also indicates a limit for what is referred to as the "Floodway," as defined by the National Flood Insurance Program that is administered by the Federal Emergency Management Agency. For all practical purposes, all construction is prohibited with this regulatory boundary.

Figure 37: Looking southeast toward 32nd Street from the top of the flood levee.

E. THE FLOOD LEVEE

There are two features along this section of the Ohio River that are of particular importance to Portland Wharf: the flood levee and the McAlpine Locks and Dam. The flood levee along the south perimeter of the site protects significant potions of Portland. The devastation and damage of the 1937 flood worried Louisville for years. Many of these worries were confirmed just eight years later, in March 1945, when Louisville's second-highest flood occurred.

The need for a major flood protection system became obvious in 1937, and planning began not long afterward. But World War II intervened, and major civil works projects were delayed. Construction finally began in 1948, under the U.S. Army Corps of Engineers.

The system is designed to deal with a crest that is three feet higher than that of the 1937 flood. Protection is offered by concrete walls in congested areas, and by earthen levees elsewhere. Street openings through the floodwall can be sealed by special closures when the river rises above flood stage. Figure 39 shows the area (designated as Zone X) that would otherwise be flooded if the levee were not in place.

Where creeks and storm drains pass through the floodwall, gates can be closed to keep the river from flowing up the streams, and large pumps are used to lift the water from the creeks into the river. Additional gates and pumping stations keep the river from backing up through storm

drains, and pump the stormwater into the river.

The first section of floodwall, about 17 miles was completed in 1957. It protected the area from Beargrass Creek to just south of Rubbertown.

A major extension was begun in the late 1960s and completed in the late 1980s. It protects the rest of southwest Jefferson County, from Rubbertown south to Pond Creek.

The latest addition is a new pumping station located between Second Street and Interstate 65 in Louisville's downtown Riverfront area. This station was completed and ready for operation in 1994.

As each section of the flood protection system was completed, the Corps of Engineers turned it over to local government to operate and maintain. The City of Louisville and Jefferson County government were responsible for the system until 1987. That year, MSD became responsible under the comprehensive drainage and flood protection program.

To keep the system ready for action, MSD employees:

- Maintain and mow 24.4 miles of earthen levee;

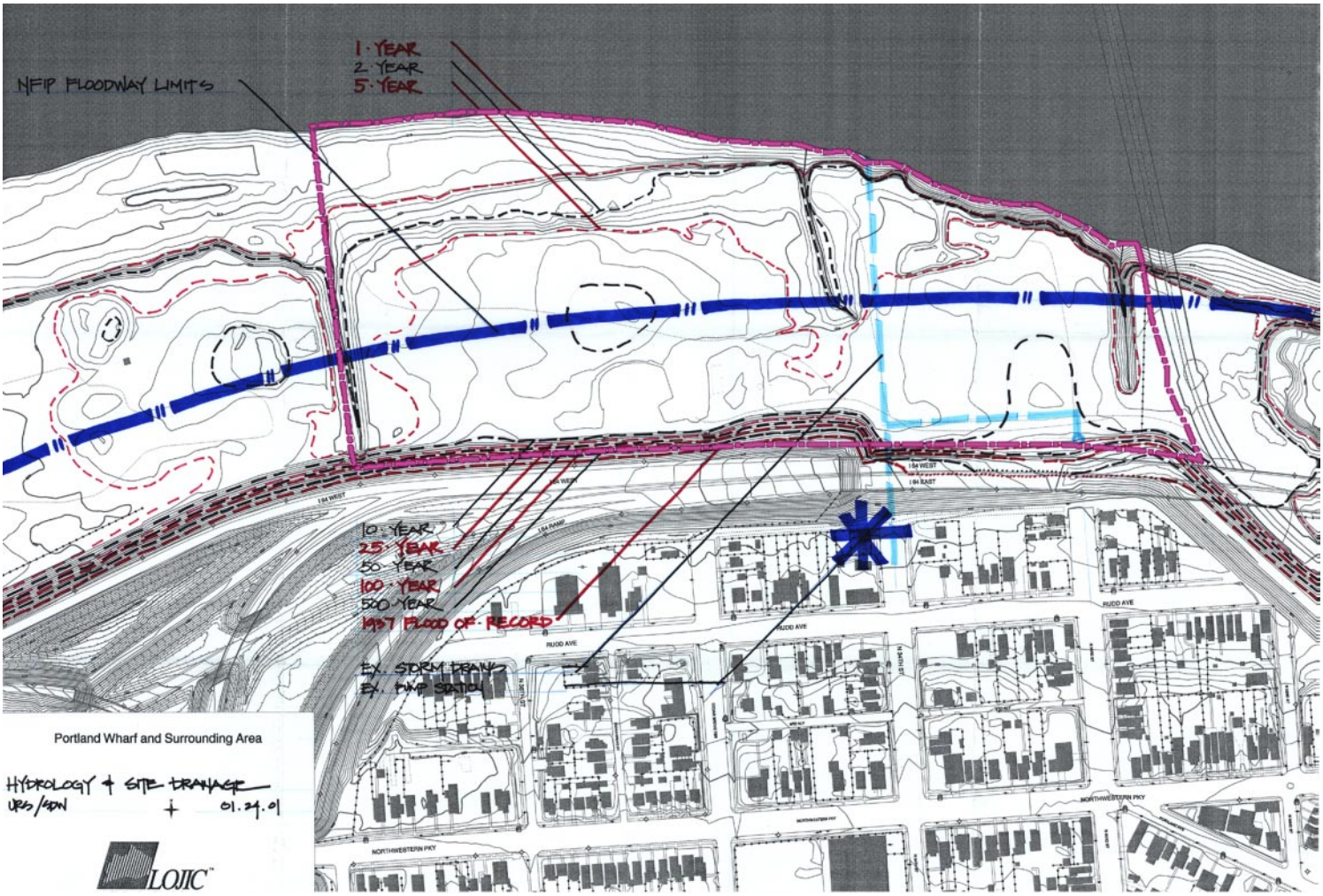


Figure 38: Hydrology.

- Maintain 4.5 miles of concrete floodwall;
- Maintain, inspect and test the 15 pumping stations, including the Riverfront station when it goes into operation this year;
- Install and dismantle the 45 movable street closures as part of a regular training cycle;
- Service 148 control gates plus more than a dozen service openings in the floodwall.

In the late1960's, Interstate 64 was constructed over the flood levee in the vicinity of Portland Wharf.

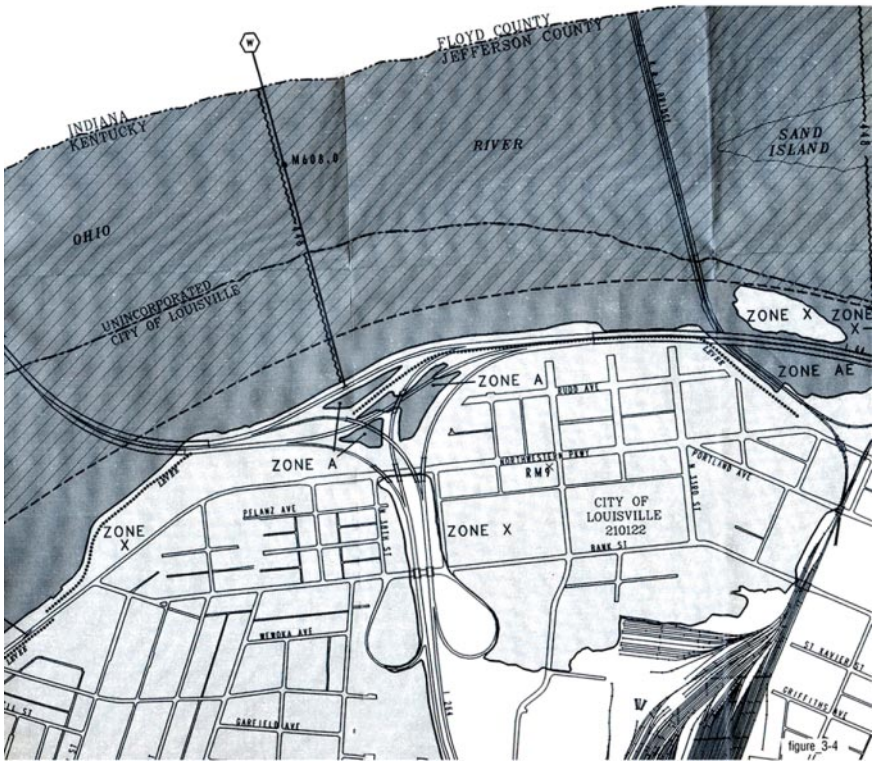


Figure 39: Flood zone map.

F. THE MCALPINE LOCKS AND DAM

The Ohio River is still used extensively for commercial transportation. Located a few hundred feet upstream of the Portland Wharf Park site, the McAlpine Locks and Dam are an important part of the Ohio River system of navigation.

The navigation locks are located on the left descending bank of the river, with access off 27th Street at Northwestern Parkway. The dam pools water a distance of 75 miles upstream to Markland Locks and Dam. As early as 1801, Army engineers were considering the need for a safe passage around the treacherous Falls of the Ohio, where in a distance of two and one-half miles, the river level dropped about 26 feet.

The Louisville and Portland Canal, with the original 3-flight lock system, was completed in 1830 and provided the first improvements to navigation at the Falls, the most critical impediment on the 981 mile-long river. That project was built by a stock company chartered by the Commonwealth

Figure 40: The McAlpine Locks.

of Kentucky, in which the Federal Government became the largest stockholder. Army engineers assisted with construction of improvements in the Canal and new locks in the 1860's and 70's, actually completing the project for the company. The Federal government assumed jurisdiction at the Falls in 1874 and the Army Corps of Engineers was charged with operation and maintenance. Since then, the Corps has undertaken several projects to provide safe and dependable navigation at the Falls.

In the 1920's the Canal was widened and a 600' x 110' lock chamber was constructed as part of the canalization of the River, a massive project resulting in 50 locks and dams. The hydroelectric generating station was built by the Louisville Gas and Electric Company in that same era. As part of the river navigation system, the project at Louisville was designated Lock and Dam No. 41, and consisted of the locks and moveable wicker dam.

In the 1950's the Corps began a navigation modernization program for the entire Ohio River to replace the old wicker dams. At the Falls, construction of a lock chamber measuring 110' x 1200' was begun in 1958 and completed in 1961. Work on a new dam started in 1961 and was completed in 1964. The Canal was widened to 500' during that era. The dam is non-navigable, meaning all river traffic must pass through the locks. In 1960, the name was changed to McAlpine Locks and Dam in honor of William H. McAlpine, the only civilian to serve as District Engineer at Louisville, and who later held key positions in the office of the Chief of Engineers. The 1200' lock at McAlpine has the highest lift (37 feet) of any of the Ohio River locks. At McAlpine there are three locks; the oldest is the remains of a project completed in the 1880's that is no longer operable; the 110' x 600' chamber built in the 1920's and used only as a backup to the main 1200' x 110' chamber.

Annually, approximately 60 million tons of cargo move through the locks at McAlpine. To meet projected increases in commercial barge traffic over the next 25-50 years, the Corps of Engineers has begun construction of a multi-phased lock improvement program with an anticipated budget of $268 million.

The project will be constructed in phases. The initial phase was completed in 1998 with a visitor overlook, support facilities and a construction office (which will become a new visitor center when the project in completed in 2007). Currently in progress is the wharf expansion in the canal's surge basin on Shippingport Island. The most recent contract was awarded in May 2000 to construct a coffer dam, demolish the two old locks and expand the visitor area. A subsequent contract will be awarded for constructing the locks. The second 1200' lock, to be completed by 2007 will make the McAlpine project the second navigation structure in the world to have twin 1200' lock chambers.

Currently, there are no navigational buoys defining a channel at the approach to the lock system. While buoys are used to mark the navigable channel up and downstream from the locks, on the downstream end of the locks adjacent to Portland Wharf, a wider area is used by barges (many of which are linked together to form units longer than 1,000') which are either waiting to gain access to the lock or positioning to enter the lock itself. As the locks are expanded, this activity will occur closer to the shoreline in the vicinity of Portland Wharf as the new lock is located along the bank just upstream of the site.

G. IMPLICATIONS OF HYDROLOGY ON THE PORTLAND WHARF SITE

The Ohio River will continue to exert its influence on the Portland Wharf Park site but it also presents a number of interesting opportunities for interpretation.

There are limits to what can be done at the Park site. The influence of the river will be manifested in the following ways:

- Flooding from the Ohio River within Portland Wharf Park is anticipated with regularity and within relatively short time intervals, i.e., 5 to 10-year recurrence intervals. Generally, any structure built within the Park site (and outside of the floodway) will either need to be constructed so that it can be inundated and then easily cleaned or elevated so that the first floor level is positioned above a flood stage that is considered an acceptable risk (e.g., the 50 or 100-year flood elevations). Currently, the Metro Parks Department maintains a few park facilities with this same situation.
- In addition, recent proposals for use of the Portland Wharf site have included increased access and utilization of the waterfront for launching and / or mooring boats that have their own peculiar considerations relative to the Ohio River.
- Construction of a boat launch to the Ohio River, which would consist of a concrete ramp and a staging area, would have its own peculiar considerations relative to the Ohio River and the operation of the lock. There is an established ramp on the Indiana side of the river, roughly on the opposite bank. However, a desire has been expressed by some for a similar facility on the Kentucky side. However, commercial boat traffic near the locks is already heavy and will increase significantly with the expansion of the lock system. A determination will need to be made, working in cooperation with the Coast Guard and the Corps of Engineers, regarding how far downriver such a launch could be installed to limit potentially dangerous interactions between recreational and commercial boats (the Coast Guard is generally responsible for assuring safe navigation for commercial and recreational boats on the Ohio River while the Corps of Engineers is tasked with maintaining adequate water depth in the channel by managing with releases from the dam or by dredging the channel). It may well be that the distance required would place such a ramp farther downstream than the area designated for this project as "Portland Wharf."
- In addition, the Ohio River levels fluctuate widely in the vicinity of this site due to the nature of the river and the fact that water from the dam is periodically released to ensure navigable depths are maintained in the "sailing line" or navigational channel of the river. Therefore, the ramp would need to be unusually long to accommodate these fluctuations and provide service during the majority of a normal boating season. In addition, such a ramp will need to be protected to withstand the unusual scouring conditions that exist in such close proximity to the locks and dam.
- Construction of a mooring point for excursion boats (such as the Spirit of Jefferson) and ferries at this property has also been discussed in recent times and is somewhat less problematic. It is assumed that this type of facility would include a platform for mooring boats and loading / unloading passengers. The platform should be attached to piers sunk into the river and / or the bank with as little obstruction to flood flows as possible. The platform would provide access to the site by means of a ramp. The potential conflicts with commer-

cial navigation would probably be less, solely because the amount of traffic generated at the mooring point would be less than a public access boat ramp. However, it is still probable that the Coast Guard would prefer to see such as facility located as far downstream as possible from the McAlpine facility for safety and navigational reasons. Unfortunately, this may require that a mooring be positioned a distance away from logical access points for the site between 32nd and 33rd Streets.

- Any extensive excavation for archeological investigations will need to make allowances for seasonal increases in flooding during the winter and spring and also be prepared to accommodate and recover from a flooding event.
- Any structure or significant amounts of fill placed within the 100-year floodplain will have to be permitted by the USACE. If the fill is placed as an addition to the flood levee, MSD approval will also be needed. To receive permits for development within the floodplain, it will be necessary to prove that the proposed improvements do not pose a risk to down stream properties and will not cause an increase in flood stage elevations for upstream users.
- While providing essential protection for adjacent neighborhoods, the flood levee has disconnected Portland from the river and limits access for the use and interpretation of the site's natural and historic resources. The construction of the flood levee and the support structures for Interstate 64 do not necessarily preclude the concept of cutting into the embankment to provide access through flood gates. The provision of adequate flood gates requires the approval of MSD.
- Expansion of the McAlpine Locks and Dams are integral to the successful use of the Ohio River for commercial river traffic. The expansion should not create any perceptible differences in the water elevations at the Portland Wharf Park site as the volume of water released when barges are lowered through the lock system is insignificant when compared to the volume of the Ohio River at this point. However, increased proximity of barges to the shoreline of the Ohio River at the Portland Wharf Park site will result as pilots line up their barges with the new lock chamber to be located on the far left descending bank of the River. The expansion is designed to accommodate anticipated increases in the number of pilot boats, which in turn will increase the churning effects near to the shoreline, potentially increasing shoreline erosion.
- Erosion of the shoreline, especially at the upstream end of the Portland Wharf site has resulted over time from the periodic discharges from the dam system to maintain navigational water depths and to a lesser degree, from the turbulence created by the pilot boat propellers. The steep bank is very unstable and the increased activity from the lock system expansion will likely exacerbate the situation.

CHAPTER 4
NATURAL FEATURES

Figure 41: Steep bluff along the river's edge.

A. TOPOGRAPHY/LANDFORMS

Figure 42 identifies the major topographical features and landforms on the site. Although most of the site is relatively flat or gently sloping, there are a number of prominent features that need to be considered when planning for the future of the park. Most notable is the flood levee, which serves as a man-made ridge that separates the park, both physically and visually, from the heart of the Portland neighborhood. Also important are the various river terraces and terrace walls that make up the northwestern portion of the site. These terraces were formed by fluctuations in the water level of the river over time.

The steep, high bluff along the river's edge (Figure 41) is another feature that will help dictate what sorts of activities or elements can be considered for the park. Extending along the shoreline in the central and eastern areas of the site, this bluff limits access to the water's edge. The bluff is advantageous in one way, though, because the elevation provides visitors on top of the bluff with a splendid view of the river, without having to actually contact the water.

Other significant topographical features include the swales, which may be the remnants of former creek channels or sewer outlets that run perpendicular to the shoreline in several areas of the park. Particularly important are the large swale that forms the western edge of the park property and the deep swale on the eastern edge of the property (next to the K&I Bridge). This eastern swale is a physical barrier that must be considered when addressing vehicular, bicycle, or pedestrian access to the site from the east.

Another important landform is the large elevated plateau east of the K&I Bridge. It is not known

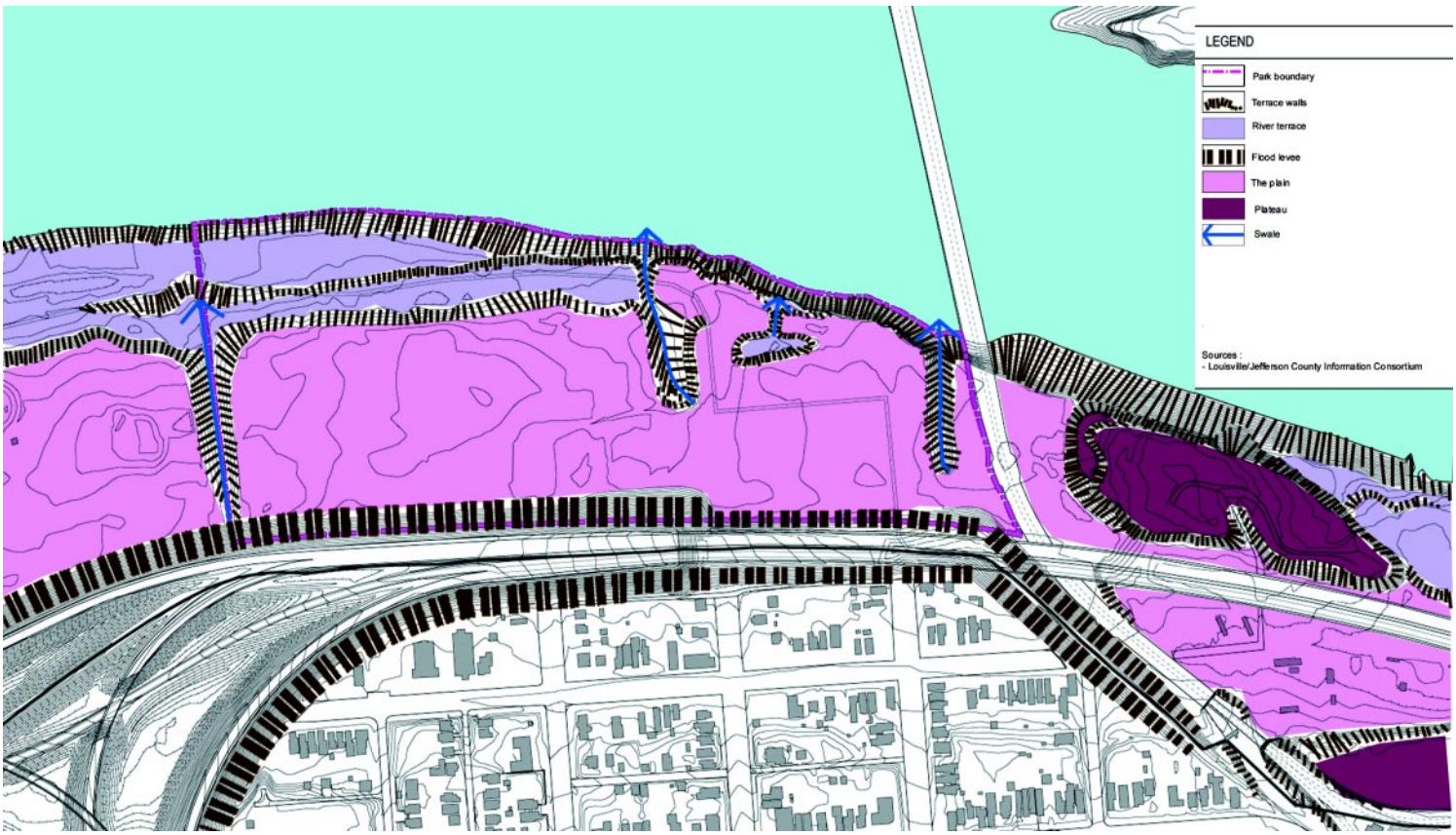


Figure 42: Topography and Landforms.

whether this is a natural or a man made feature, but regardless, it is a prominent feature that provides an elevated vantagepoint of the river and the park. The elevation change it represents, however, could be an obstacle that would need to be overcome to provide access to the site from the east.

Figure 43 provides a topographic overview of the landforms by breaking down the site into areas of gentle, moderate and severe slope. Besides being features that must be considered for any physical planning on the site, these landforms help tell an interesting story about Ohio River hydrology that could be highlighted in the interpretive program for the park.

B. SOILS / GEOLOGY

Figure 45 illustrates the soils / geology that make up the project site, and is obtained from the Geological Map for Jeffersonville, New Albany, and Charlestown Quadrangles (produced by the United States Geologic Survey). As can be seen from the map, almost the entire project site is underlain by alluvium deposits, which have been laid down by the river itself, and are a mixture of silt, clay, sand, and gravel 10 to 30 feet thick. The Portland neighborhood south of the flood levee, however, is underlain by outwash deposits of clay, silt, sand, and gravel that are glacial in origin and therefore older than the alluvium deposits. The outwash deposits generally lie between elevation 455 and 465 feet. The Geological Quadrangle does not highlight any engineering or development constraints for either the alluvium or outwash deposits, indicating that there are no major problems with building on either of these geological types. As can be seen from map, the Geological Quadrangle also shows the areas on the project site made up of artificial fill, but does not give an explanation of the origin or makeup of this fill.

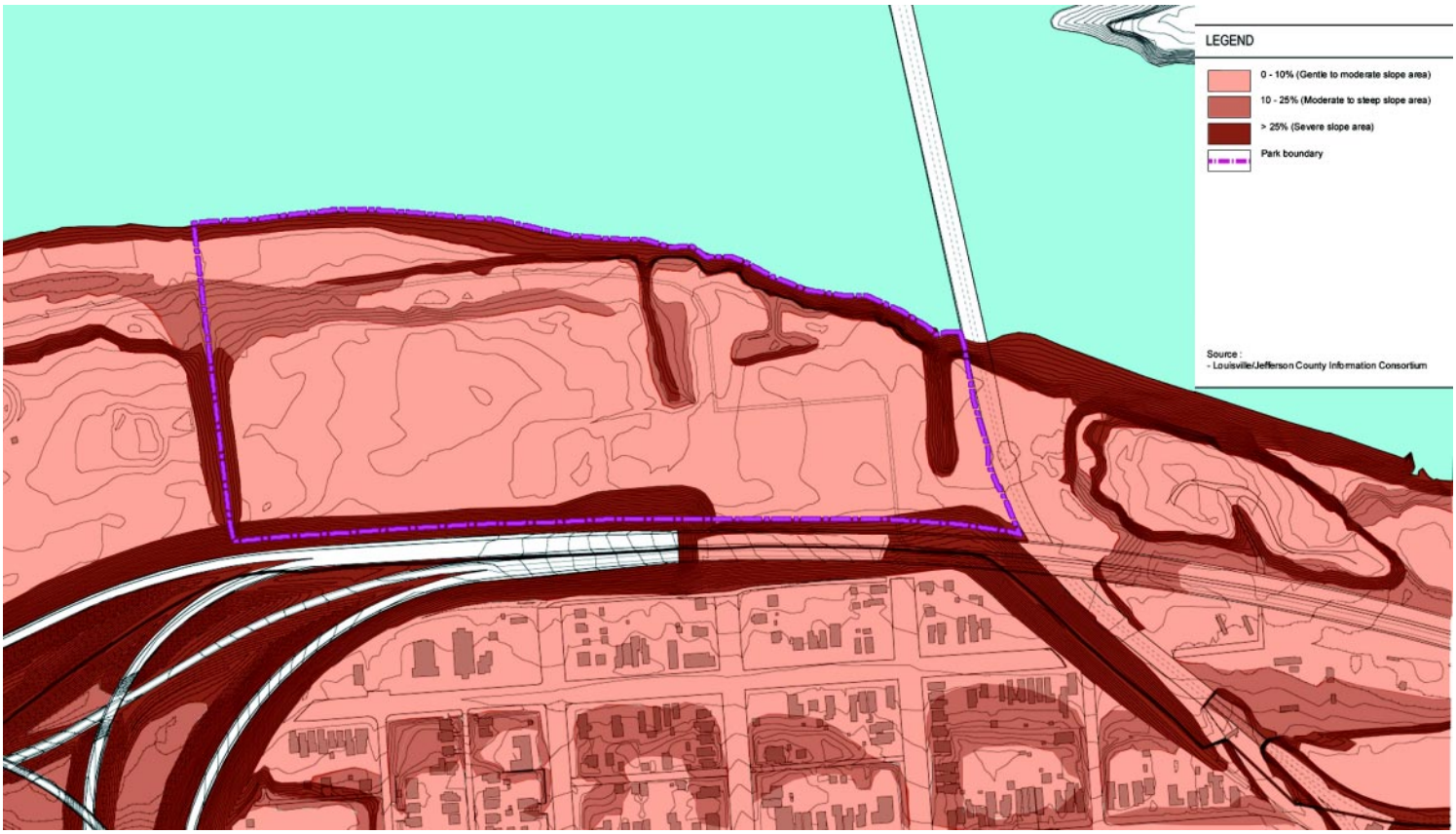


Figure 43: Slope Analysis.

Figure 44: Northern edge of the site, where RiverWalk is shaded by a woodland canopy.

A second source, the U.S. Soil Conservation Service Soil Survey for Jefferson County, Kentucky, also gives an explanation of soils on the project site. The Soil Survey, however, indicates that the urban areas of Jefferson County (including the project site) have never actually been surveyed, but does give a general description of the soils in the area. All of the soils in the project site are from the Wheeling-Weinbach-Huntington association, and are generally level to sloping soils on terraces and bottoms along the Ohio River. More than half of Louisville falls within this association. The Wheeling, Weinbach, and Huntington soils each cover about 25 percent of this soil association, with other minor soil types making up the remainder. Wheeling soils are deep, well, drained soils on terraces, and Weinbach soils are moderately deep, somewhat poorly drained soils on terraces. Huntington soils are deep, well drained soils on bottoms. All of these soils developed in a mixed alluvium that washed from the upper part of the Ohio River drainage basin, and are underlain (as noted in the paragraph above) by stratified silt, sand, clay, and gravel below a depth of four to eight feet. The Soil Survey does not show any engineering or development constraints associated with the Wheeling, Weinbach, and Huntingon soil types, or for the minor soil types in this association, except that poorly drained areas should probably be avoided.

C. VEGETATION

There are three distinct types of vegetative cover on the site (Figure 47). The vegetation type that visitors encounter upon entering the park from the main entrance, and that covers a large portion of the eastern end of the site, is open grassland. The area of open grassland is dominated by low grasses and shrubs, but also contains clusters of both small and large trees and specimen

Figure 45: Soils and Geology Analysis.

Figure 46: Cottonwoods along the river edge.

Cottonwood trees (some of which are 50' in height or taller). Much of RiverWalk, as it traverses the historic grid pattern of the site, leads through this grassland area and affords some of the best views of the site and of the river.

The second vegetation type, dense thickets, covers the largest portion of the site in the central, western and southern parts of the park. These areas contain a dense understory of woody plants and young trees that is very hard to penetrate. This region of the park likely remained developed until the U.S. Army Corps of Engineers built the flood levee and cleared the land in the 1940's, and the exiting vegetation has grown up and taken over since that time. The dominant species in these areas include American Elm, Hackberry, Box Elder, Black Locust, Willow, and Hawthorn. Areas of the thicket closest to the woodland canopy on the northern edge of the site are less dense, and are mixed with grasslands in several areas.

Perhaps the most distinctive, and ecologically significant, vegetation on the site is the woodland that spans the entire northern edge of the site along the river. This lush canopy also extends to Shawnee Golf Course to the west of the site as well as the area east of the K&I Bridge. In fact, this riparian woodland is a more or less continuous buffer along most areas of the river outside of downtown Louisville. In the park, this woodland contains bands of large Cottonwood and Silver Maple trees, and offers filtered views of the river from the northerly section of RiverWalk that traverses it. The understory of the woodland is marked by shrubs and ground cover plants.

It is also important to note that a portion of the woodland canopy, along a lower river terrace in the western area of the site, contains palustrine wetlands (see next section for a more detailed description of these wetlands).

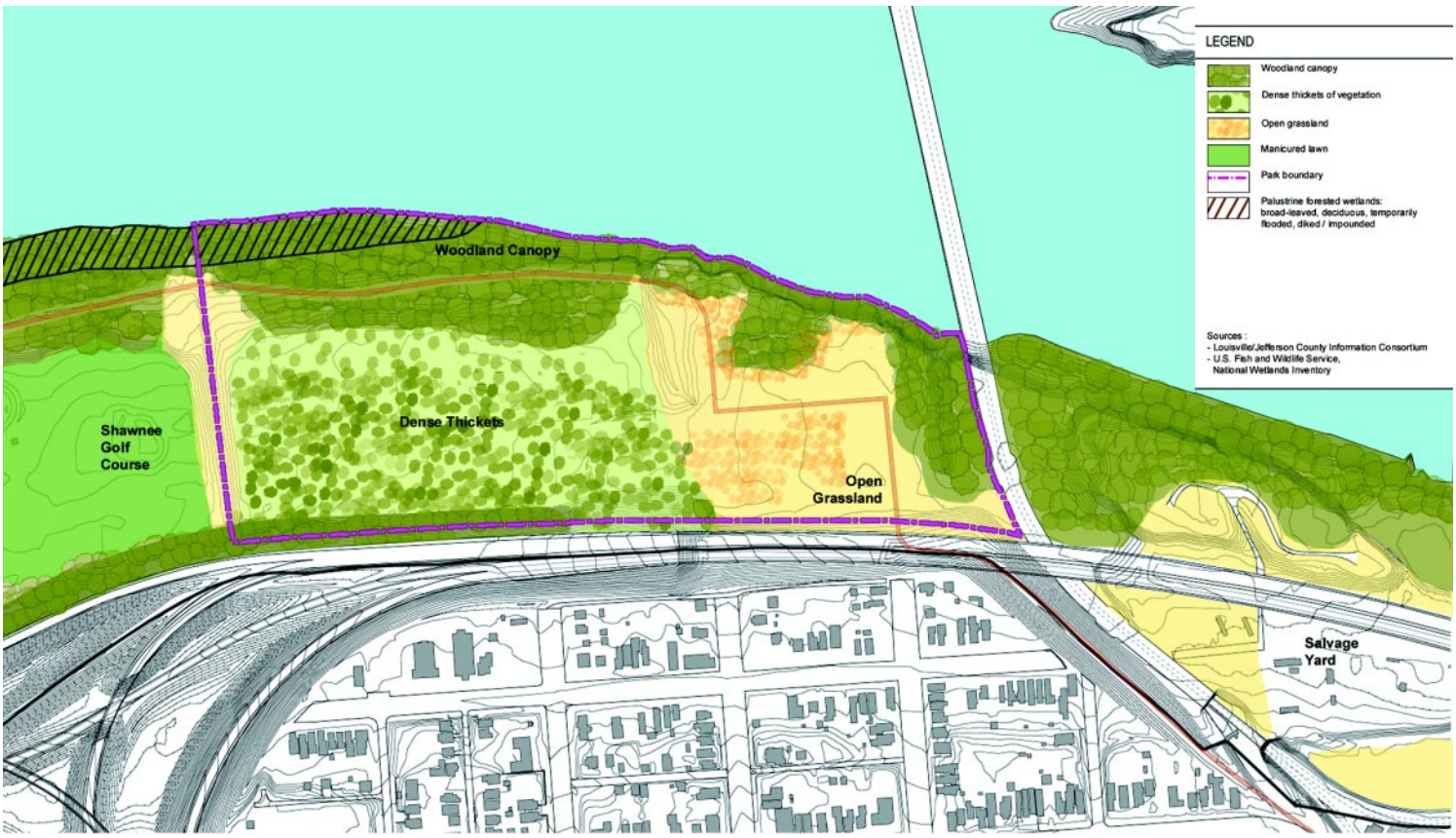


Figure 47: Vegetation.

Figure 48: Thickets of black locust.

D. WETLANDS

A data search of the U.S. Fish and Wildlife Service's National Wetlands Inventory revealed that there is an area of wetlands in the northwest corner of the project site (Figure 47). The area of wetlands on the site is defined by the inventory as a palustrine, forested, broad-leaved deciduous, temporarily flooded, diked or impounded wetland. In short, it is a wetland that is common along river shorelines or in river floodplains, and is characterized by woody vegetation that is six meters tall or taller, which means that the wetland is made up of plants and trees. The wetland trees are broadleaf deciduous trees, and the area is temporarily flooded, meaning that surface water is present for brief periods during the growing season, but the water table usually lies well below the surface (plants that grow in both uplands and wetlands may be characteristic of this environment). In addition, this wetland is created or modified by a man-made barrier or dam that obstructs the inflow or outflow of water. Therefore, the existence of this wetland is due to the flood levee itself.

As a next step to the Master Plan, a detailed field analysis of the character and extent of this wetland (and the entire site) should be performed, in order to determine the implications that this wetland has on any proposed physical development in this area.

E. WILDLIFE

A data search of the Natural Heritage Program Database of endangered, threatened, and special concern plants and animals was conducted by the Kentucky State Nature Preserves Commission, the state agency responsible for maintaining this database. The Commission's search revealed that while no specific sightings, or "occurrences" of endangered, threatened, or special concern plants and animals, or exemplary natural communities, have been recorded for the project site itself, six occurrences have been recorded within the area of New Albany, Indiana and Louisville, Kentucky. (The project site falls within the New Albany – Louisville United States Geological Survey quadrangle, the unit of measure used by the Commission to record occurrences).

Figure 49: Woodland understory.

Of the six occurrences recorded within the area of the project site, two are fishes (the Alabama Shad, *Alosa Alabamae*, and the Burbot, *Lota Lota*); one is a bivalve (the Orangefoot Pimpleback, *Plethobasus Cooperianus*); one is a bird (the Black-Crowned Night Heron, *Nycticorax Nycticorax*); and two occurrences are the same species of snake (the Kirtland's Snake, *Clonophis Kirtlandii*). The "Standard Occurrence Report" that details the findings of the Program Database search also states that there are three "managed areas" in the vicinity of Portland Wharf Park to be aware of: Shawnee Park, Falls of the Ohio National Wildlife Conservation Area, and Shippingsport Island Rookery State Natural Area.

It is important to note that in the Standard Occurrence Report, the Commission stresses that the absence of any species on the project site may be due to the fact that the area has never actually been surveyed. For this reason, the Commission states that "[the Standard Occurrence Report] should never be regarded as a final statement on the elements or areas being considered, nor should they be substituted for on-site surveys required for environmental assessments."

In other words, while no endangered, threatened, or species of special concern are currently known to exist in Portland Wharf Park, it does not mean that those species detailed in the report,

Figure 50: Medium to large shrub and tree massing along eastern boundary of existing park site.

or others, do not exist on the site, and that several have been recorded in the vicinity of the site. For that reason, an environmental assessment of the entire site should be performed as a next step before implementation of the master plan. In addition, disturbance of the extensive wooded areas, open areas, and shoreline that exist in the park should be kept to a minimum, because of the potential wildlife habitat that they represent.

A consultant / biologist in Louisville, who was contacted as part of the existing conditions inventory, also stressed the importance of the Cottonwood trees on the site as potential habitat for the endangered Indiana Bat, which has been identified in areas of Jefferson County containing similar habitat. Therefore, efforts should be made to retain these trees, as much for the bats as for the migrating songbirds that are known to move through the area every spring and fall.

In the Standard Occurrence Report, the commission also encourages the use of native Kentucky plants in any revegetation and restoration activities, both for their ecological as well as aesthetic benefits.

CHAPTER 5
ARCHAEOLOGICAL RESOURCES

A. POTENTIAL FOR ARCHAEOLOGICAL RESOURCES

The Portland Wharf project area contains the potential for both prehistoric (Native American) and historic (post-1800) archaeological resources. For prehistoric archaeological resources, this part of the Ohio River has a high to moderate potential for containing artifacts and cultural features (i.e. hearths, storage pits, structural remains, and possible human burials). The potential for prehistoric resources within the Portland Wharf project area is depicted on Figure 51. Prehistoric resources are expected to date from the Archaic through Woodland Periods (ca. 8,000 B.C. to A.D. 1000).

In addition to a high to moderate potential for prehistoric archaeological resources, the project area has a high potential for historic archaeological resources dating from the initial development of Portland (ca. 1811) through the mid twentieth century. Historic archaeological resources will include a variety of foundation and structural remains, as well as other features including privies, cisterns, wells, street and wharf remains, and refuse middens containing extensive artifact deposits.

Additional information on the predictive models for prehistoric and historic archaeological resources is presented in the Appendix.

As a next step to the master planning process, archaeological surveys and a geomorphological evaluation should be performed on the Portland Wharf Park site. An initial transit survey of the park is recommended to identify street alignments, specific building locations, wharf and pier

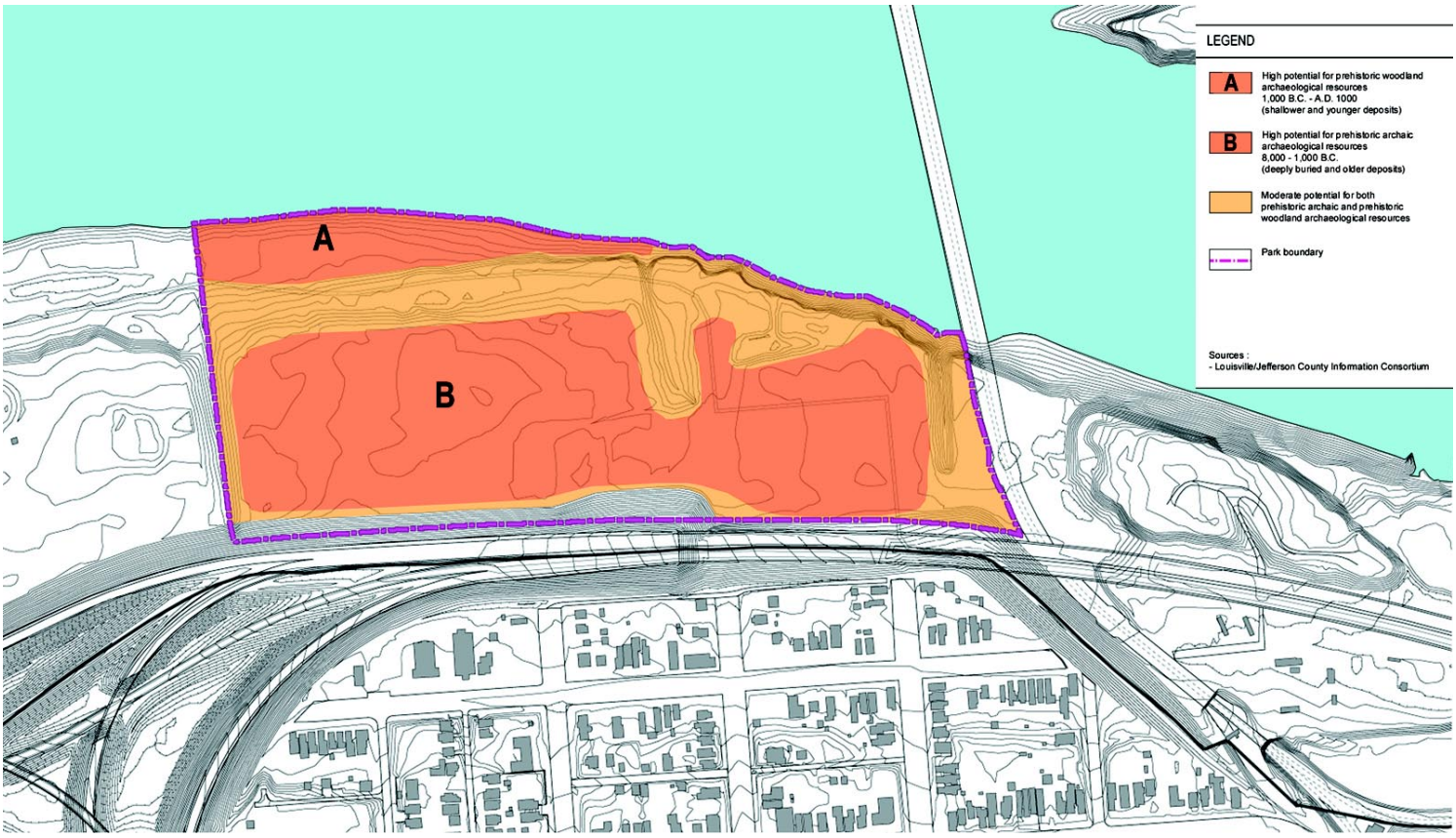


Figure 51: Prehistoric Archaeological Resources.

areas, and other landscape features that can be identified on historic maps for the initial implementation. Establishing a base grid will also enable the production of precise mapping of future excavation areas, identified cultural landscape features, and other archaeological components that will be encountered or excavated later in the project.

Also, an archaeological survey involving trenching and smaller excavation units is recommended to identify specific structures, depth of historic deposits, depth of prehistoric deposits, site integrity, nature of artifact assemblages at the site, and any other pertinent details. Excavation units will be placed judgmentally across the site.

An essential part of understanding the nature and integrity of archaeological resources should involve a geomorphological evaluation of the site. Geomorphological evaluations consist of excavation of trenches or use of soil probes to gather data on the composition and matrix of the soil within the project area. This type of evaluation will provide essential data on the nature of flood events (i.e., high vs. low-energy), rate of alluvial sedimentation, effect on pre-existing archaeological remains, and general information on the geology of the project area. This evaluation will help to determine the depth of cultural deposits, as well as aid in environmental reconstruction.

Figure 52: Exposed foundation remains near Interstate 64.

B. CONDITIONS AFFECTING ARCHAEOLOGICAL RESOURCES

1. Historical Development of Portland Wharf

The intensive development of the project area during the nineteenth century has undoubtedly obliterated or obscured (i.e., buried) prehistoric cultural remains that were deposited prior to the arrival of European and American settlers in the late-eighteenth century. Thus, previous activities such as the physical development of Portland since 1811, which includes the construction of roads, structures, and utilities, must be fully understood in order to predict the nature and integrity of potential prehistoric archaeological resources.

2. Previous Land Use

Land use is also an important factor when considering the development of Portland during the nineteenth and twentieth centuries. An example of land use that may have adversely affected historic and prehistoric archaeological remains includes the manner in which the U.S. Army Corps of Engineers constructed the floodwall between 1947 and 1954. Design plans from 1950 indicate that some of the fill material used to construct the floodwall was excavated from an area of the former Portland neighborhood that is within the current project area. The design plan for borrow areas (e.g., areas where fill material was excavated for use in constructing the floodwall) clearly shows that an area north of Missouri Avenue and west of 34th Street was used for borrow. Shippingport Island was also the site of intensive borrow activities. Since no other records can be found to substantiate the information on borrow being taken from Portland, the extent to which this type of activity affected historic and prehistoric archaeological resources remains unknown. Thus, it will be important to verify these, and other, disturbances in future archaeological investigations.

Construction projects by the Louisville Metropolitan Sewer District (MSD) since the late nineteenth century to improve the city's sewer system have resulted in varying levels of ground disturbance.

The routine maintenance of such urban utilities has impacted archaeological sites from the prehistoric through early historic periods. At the same time, however, brick storm drains dating from the mid nineteenth century may be an interesting subject of future study. Thus, a full understanding of how the activities that occurred on the urban landscape, such as the construction of sewers, have affected the evidence of previous human activities, such as a Native American campsite, will enable a more precise understanding of the nature of the archaeological record at Portland Wharf Park.

3. Flooding

The effects of natural processes, such as flooding, are also an important factor when determining the potential for archaeological resources in the Portland project area. It is already clear that annual floods that occur in the area have deposited deep alluvium across the terraces along the Ohio River. The high banks within the project area are the results of overbank deposition of alluvial sediments caused by annual flooding.

The occurrence of intensive or prolonged floods usually results in the deposition of large, but varying amounts of alluvial sediment. Flood events are characterized by ranging levels of intensity: High-energy floods, which are characterized by rapidly rising, fast-moving water, generally result in the displacement and destruction of surface materials and structures, while low-energy floods are characterized by rising water levels that are slow-moving. Low-energy floods do not usually result in displacement of surface materials, and thus affect archaeological resources to a lesser degree than high-energy floods that may totally displace or destroy archaeological materials or features. Low-energy and prolonged floods may also result in the deposition of deeper alluvium that remains after the floodwaters have receded to normal levels.

CHAPTER 6
EXISTING BUILT FEATURES

A. VEHICULAR AND PEDESTRIAN ACCESS/CIRCULATION

Figure 53 shows the major highways, streets, and trails that provide access to Portland Wharf Park from downtown Louisville and from the Portland neighborhood. Highlighted on the map is Interstate 64, which provides access to Portland from Louisville and from New Albany, Indiana (via the Sherman Minton Bridge west of the park). Directional arrows on the map also show the off-ramps that provide access to Portland streets from I-64 and from I-264. Major arterial roads in Portland (as defined by the City) are also shown on the map, and include Northwestern Parkway, Portland Avenue, Bank Street, and West Market Street. City-designated bicycle routes along these roads and minor roads are also important connections between the city and the park, and are shown along with the RiverWalk trail.

B. UTILITIES

1. Stormwater Management

Currently, any precipitation that falls on the project site either infiltrates the ground surface or runs off directly to the Ohio River. There are no surface or subsurface drainage structures that collect or convey this water. There are a few depressions on the site where runoff collects until it infiltrates or evaporates. There are also a few drain lines that come from Interstate 64 that discharge on the surface near the base of the flood levee and then run overland or are connected to underground storm drain lines.

Figure 53: Vehicular and Pedestrian Access.

There is a significant underground storm drain line that passes through the site, carrying stormwater from the Portland neighborhood (Figure 54). This conduit is maintained as part of the Louisville and Jefferson County Metropolitan Sewer District (MSD). The conduit is an unusually large diameter (11'-6" transitioning to 7" by 6'-8") brick masonry conduit supported by piling that was constructed in the early 1900s. The conduit runs under the flood levee, entering the Portland Wharf property in line with 34th Street and discharging at the Ohio River. Care will need to be taken during any excavation or fill activities in the vicinity of this conduit to avoid damage to the line. At the same time, the line itself is unusual in terms of size and construction and may present its own opportunities for interpretation.

There are also two concrete structures on the "wet-side" of the flood levee, approximately in line with 32nd and 34th Streets, that apparently house valves which are capable of blocking storm drain lines. These valves are used to close the storm drain lines so that flood waters do not back-up into the Portland neighborhood during major flood events.

It is assumed that any development on the site (for structures or parking) would be constructed so that stormwater would be collected and conveyed directly to the Ohio River, independent of the existing storm drain line. This is due to the potential difficulty of tying into such an old and unusual type of pipe, the depth of the pipe as it traverses the site and the relatively low volume of stormwater that would likely need to be managed from any future development within Portland Wharf.

Since the site is located within the floodplain, there is no reason to provide stormwater detention

Figure 54: Existing Utilities.

or other quantitative management facilities. However, it may be possible to address the quality of any stormwater runoff (e.g., oil and grit from parking lots and roads) before water reaches the Ohio River by means of standard oil and grit separators or by more innovative means such as discharging storm runoff through vegetated areas that can act as natural filters.

2. Sewer

Sewage from the Portland neighborhood currently is collected in trunk lines within the street right-of-ways which drain by gravity to the existing pump station located at the north end of 34th Street, at the dry-side base of the flood levee. The pump station then moves the collected sewage via force main to the north on 34th Street and then west on Rudd Avenue, eventually reaching treatment facilities down river.

Any sewage that may be generated by development of facilities within the Portland Wharf site can be handled by means of a small scale grinder pump or lift station which would move sewage from any development on the wet-side of the levee through a small diameter (in all likelihood, no more than a 4" diameter line) force main over the levee and to the existing pump station. At that point, the force main would discharge into the existing pump station sump and be pumped away via force main for treatment with the flow from Portland.

It should be noted that there appears to be a shunt from the sewage pump station to the existing stormwater drain line which runs from 34th Street, under the levee and to the Ohio River. It is assumed that this shunt is intended for use under emergency conditions to directly discharge sewage to the Ohio River through the storm drains when there is a problem with either the pump station or the existing force main.

3. Water

Existing water lines running in the main streets of Portland are assumed to be adequate to provide water service to the Portland Wharf site. Whether one tap point will be sufficient or if a loop main would need to be installed (tapping into the Rudd Avenue line at two or more points such as 33rd and 34th Streets) cannot be determined until more specific development plans are produced.

4. Electric Service

The pump station at the north end of 34th Street, at the dry-side base of the flood levee, is served by overhead high voltage lines (most likely providing three phase, 440 volt service). Depending on the level of service required for potential development of the property, this may be adequate. When specific development proposals are available, electric utility representatives will be contacted to determine capacities and the most economical method to provide the requisite service levels.

CHAPTER 7
SITE CHARACTER

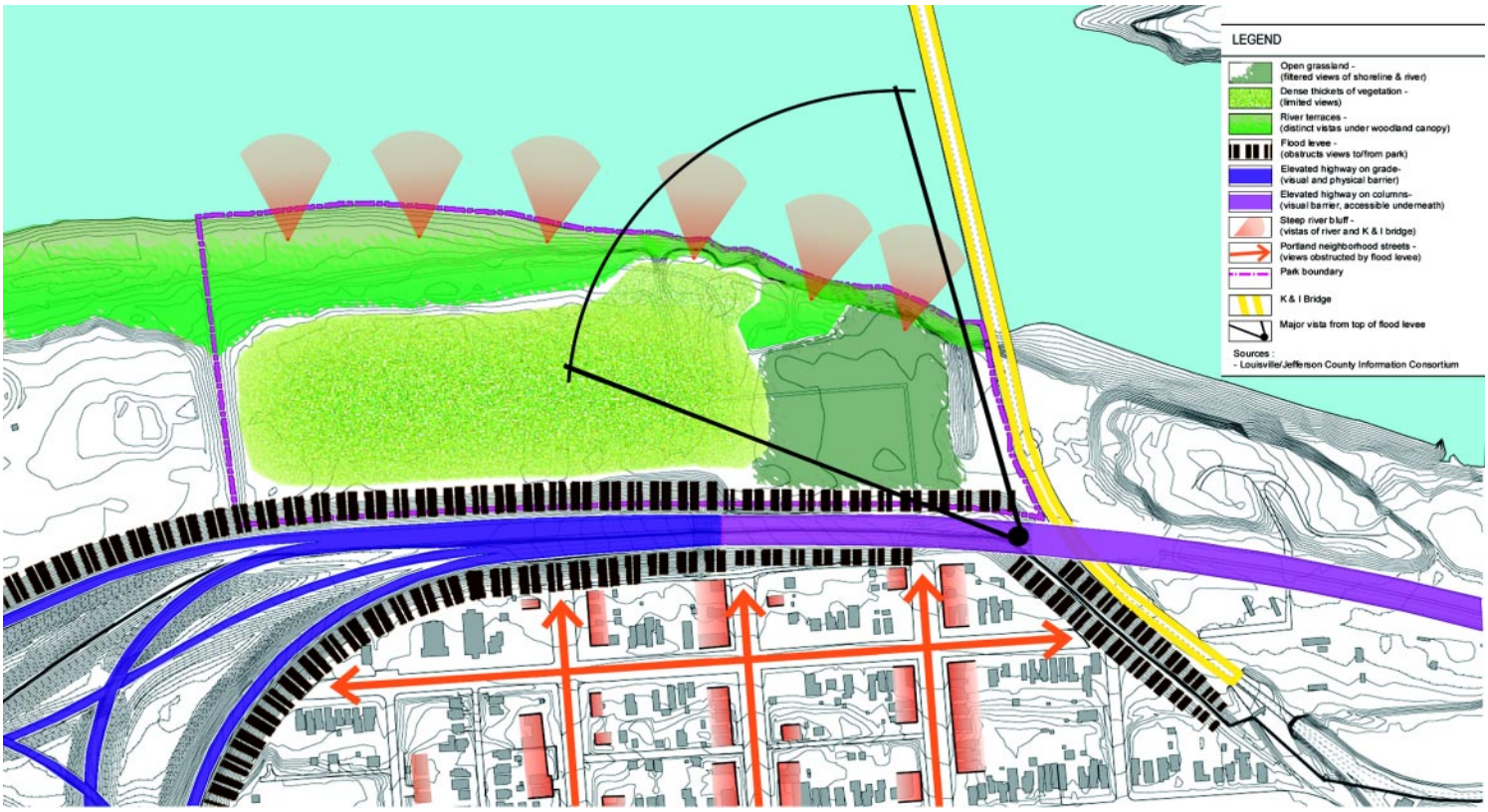
Figure 55: View of open grassy area, the river, and the K&I Bridge.

A. VISUAL CHARACTER

An analysis of the visual character of Portland Wharf Park is of critical importance. It is important because the site has many positive visual conditions, including a variety of vegetation types, views of the K&I Bridge, and vistas of the river. Unfortunately, it also has several negative visual attributes that must be addressed so that the site can reach its potential as a public park and visitor destination. Figure 56 is a summary of the visual character of the site, and shows both the positive visual attributes (major vistas from top of levee, views of the river from the shoreline, and views throughout the site and of the various vegetation types) as well as the negative visual characteristics that limit the existing potential of the site. The most obvious, and obtrusive, visual obstacle is the flood levee, which acts as both a physical and a visual barrier between the Portland neighborhood and the site. Shown on the map are the north-south streets adjacent to the park (32nd, 33rd, 34th, and 35th Streets) whose views have been cut off from the park by the flood levee. In summary, there are really two separate issues to be dealt with concerning the visual character of the site. The first issue is how to improve the visual character inside the park, and the relationship of the site to the river. The second issue is how to improve the visual connection between the park and the surrounding neighborhood, so that residents and visitors can once again experience the vital connection between Portland and the river.

B. URBAN DESIGN FRAMEWORK

Figure 57 is an analysis of the urban design framework of the Portland neighborhood and Portland Wharf Park. This analysis illustrates the importance of Portland and its character, as



Map 56: Visual Character.

well as the role that it can play in influencing the design of the park. Most evident on the analysis is the traditional grid structure of the streets in Portland, with houses, civic structures, and businesses facing the streets in typical urban form (the commercial center of Portland is also highlighted on the map. Indeed, many of these structures are part of the existing Portland National Register District, which emphasizes the importance of Portland Wharf Park and its place in this unique and historic neighborhood. Significant to the design of the park is the fact that these streets once extended into the park site and up to the water's edge, but were covered over with fill and cut off from the neighborhood by the construction of the flood levee. This historic street grid even existed to the west and to the east of the Portland Wharf Park site. Significant is the fact that the City still maintains ownership of these historic right of ways east of the park, which could prove very important in designing access to the park or expanding the park in the future.

Also important to the design framework of the neighborhood is the prominence of the K&I Bridge, and the railroad lines that connect to the large freight yard in the south end of Portland and to downtown Louisville. The railroad is a very prevalent part of the Portland neighborhood, and along with riverboat traffic, can help influence the design of the park.

Another important element is the wooded shoreline that extends along the entire riverfront. The wooded shoreline also represents important wildlife habitat and helps to connect Portland Wharf Park (along with RiverWalk) with nearby open spaces such as Lannan Park and Shawnee Park. Also shown are the perceptual gateways to the Portland neighborhood on both the east and west ends of Northwestern Parkway.

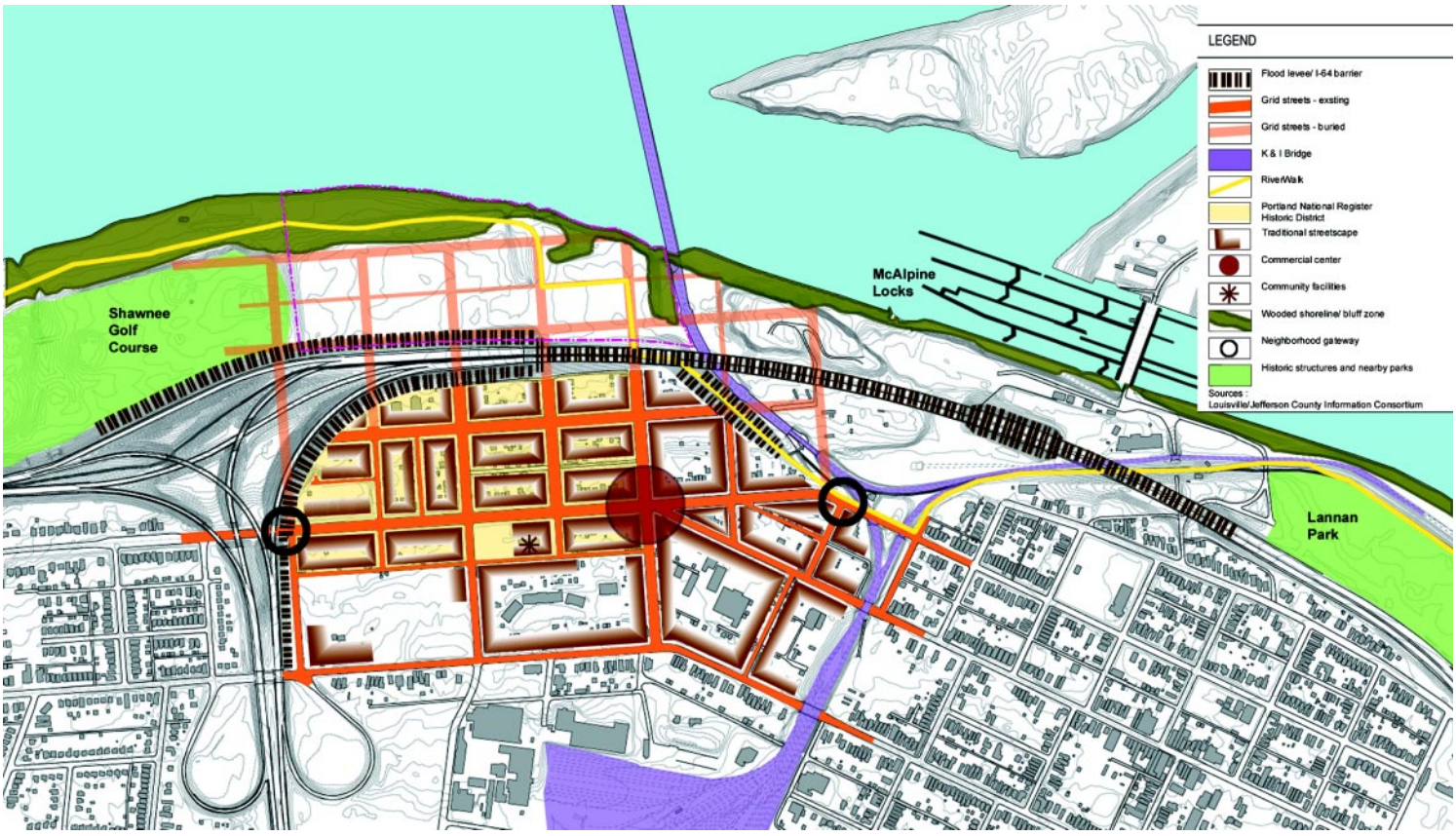


Figure 57: Urban Design Framework.

CHAPTER 8
OPPORTUNITIES & CONSTRAINTS

Figure 58: Commercial buildings at the corner of Northwestern Parkway and 33rd Street.

A. OPPORTUNITIES

1. Physical Opportunities

Portland Wharf Park presents many wonderful design opportunities, which are illustrated in Figure 59. Opportunities center around reconnecting the site with the Portland neighborhood, improving access to the river, uncovering or interpreting the site's archaeological resources, improving pedestrian and vehicular access to the site, and possibly expanding the park boundaries to the east and west. One of the most significant opportunities for reconnecting Portland to the waterfront and creating a visual connection between the neighborhood and the park is the possibility of accessing the site through floodgates constructed in the flood levee at either 33rd or 34th Street.

Other access opportunities include a new pedestrian/bicycle ramp up to the top of the flood levee at the end of 32nd Street, and maintaining the existing pedestrian/bicycle access at 31st Street and Northwestern Parkway. Perhaps the greatest opportunity, however, for creating new access to the property (for both vehicles and pedestrians) is to use the former street grid or city-owned "paper streets" east of the site, where the city has retained ownership of the rights of way. This creates a tremendous opportunity for using 31st Street to access the property east of the K&I Bridge, and then using the right of way of the former Missouri Street to cross over into Portland Wharf Park. Expanding upon this idea, there is also an opportunity to expand the boundaries of the park to include the undeveloped property (some of which is city-owned) to the east, all of which offers superb views of the river and some of which is outside both the 100 and

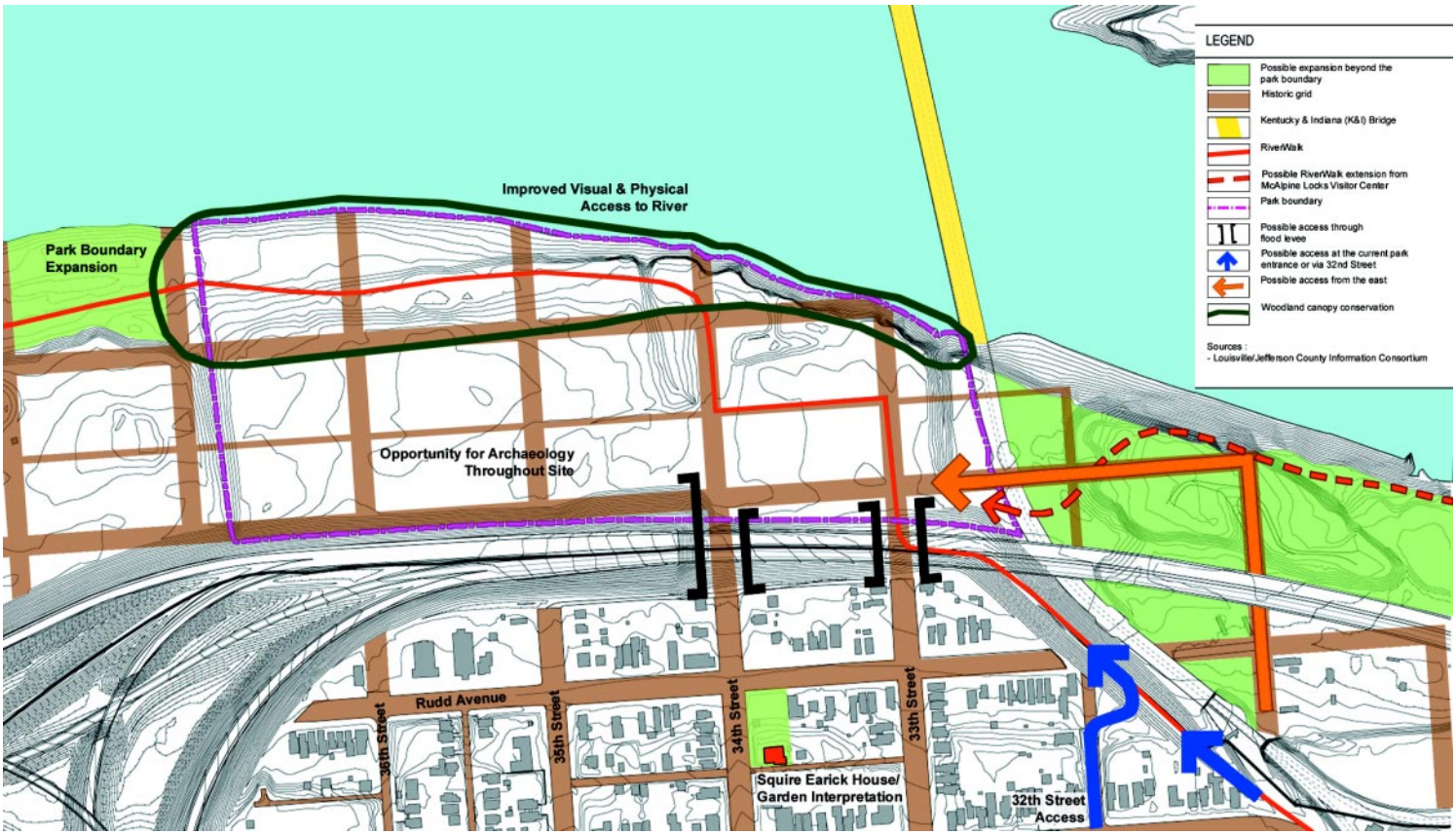


Figure 59: Opportunities.

Figure 60: Limestone benches along RiverWalk.

500 year floodplains. Park boundary expansion is also an opportunity to the west of Portland Wharf Park along the waterfront adjacent to Shawnee Golf Course, on city land that is already traversed by RiverWalk.

The most potent opportunity that exists throughout the park is to capitalize on the history of the site and tell the story of the Portland waterfront. This includes exploring the archaeology of the site, including the building foundations, wharf remains, and bricked/cobbled streets that may exist (wholly or partially) beneath the surface. Although much of the commercial activity is thought to have been centered on the eastern portion of the site, archaeological opportunities exist throughout the entire property for both prehistoric and historic artifacts. These historical aand archaeological interpretive themes are explored in the next section: Opportunities for Interpretation.

Another significant opportunity exits to improve access to the river, both in the physical and the visual sense. Opportunities to improve physical access might include paths or ramps down to the water's edge, which is most feasible in the western portion of the site where the bluff is not as steep. Improved visual access to the water is possible throughout the site, and can be accomplished through selective thinning or pruning of vegetation along the shoreline.

Other opportunities include expanded pedestrian and bicycle connections, including the proposed RiverWalk extension east of the site, and the possibility of adding a pedestrian/trolley connection across the K&I Bridge into Indiana.

Within the Portland neighborhood, there also exists the opportunity to link the Squire Earick House to the site, and to use this property (owned by the Portland Museum) as a visitor's center, interpretive center, historic house and garden, or other use related to the park and activities that take place there.

2. Opportunities for Historical Interpretation

Details of the vivid nineteenth-century river-front activity of the Portland Wharf Park site are extensive and can be provided for synthesis into the interpretive program. The busy wharf activity and associated commercial and residential infrastructure provide a strong framework for interpretation. Themes and topics rich with potential include:

- The Ohio River, a significant topographic feature and major portal for westward expansion and commerce;
- Portland Wharf, the bustling commercial center at the Falls of the Ohio;
- shipping and goods delivery on the Ohio River;
- the industrial/agrarian context and goods for sale;
- flatboats, keel boats, steamboats, and packets;
- canals, railroads, roads, turnpikes, and overland links for trade;
- traditional building for river town commerce/warehouses, wharves, mills, schools, and dwelling units;
- the social and cultural context of Portland Wharf/steamboat captains, drayage overseers,

Figure 61: View of unused auto lanes on each side of the K&I Bridge that could be used for pedestrian/trolley connections across the river.

shoemakers, ferrymen, hotel proprietors;

- frontiersmen, militiamen, watermen, tradesmen, notable settlers, and typical families;
- wartime impact on the steamboat culture and commerce;
- Underground Railroad activity at Portland Wharf;
- flooding and land-shaping natural events;
- the mapping and development of the Portland Wharf environs.

Portland Wharf site features particularly critical to interpretation include:

- The wharf structure itself, originally a wooden structure replaced by an inclined cobblestone surface on the bluff at water's edge, the position of which is indicated on the 1865 map.
- The early nineteenth-century shoreline, which historic maps indicate may have been inland of the current shoreline.
- The historic street grid of Portland proper, once in the Portland Wharf project area but no longer extant.
- Water Street as the busy commercial hub, running parallel to the wharf and the water's edge, with primary access points to the wharf at Commerce and Ferry Streets.
- Primary commercial buildings and structures, such as the Commercial Exchange Hotel, the St. Charles Hotel, the brewery, etc.
- The important residential building component, such as the homes of ferrymen, carpenters, and business owners.
- Other features which evolving research and documentation prove reliable.

Figure 62: Historic rendering of Portland as seen from the Ohio River.

Because of Portland Wharf's long history, a broad period of interpretation is possible. Ranging from the time of the formation of the Falls of the Ohio to the construction of the flood levee, aspects of Portland Wharf could be interpreted based on the amount of historic information available. Bringing this interpretive content to the full body of work required for alternative interpretive schemes will require making full use of the resources of the Portland Museum and its key staff, and selectively using an unexplored mass of existing documentation at other primary repositories such as the Filson Club, the Louisville Free Public Library, the University of Louisville and University of Kentucky libraries and archival collections, the *Courier Journal* photographic archives, U.S. Army Corps of Engineers records, the Jefferson County Department for Historic Preservation and Archives, the Kentucky State Historic Preservation Office/Kentucky Heritage Council, the KentuckyHistorical Society, the National Archives and Records Service, the Library of Congress, and the like. Future tasks will consist of: 1) culling most relevant historical data and shaping previously uncatalogued and/or unevaluated data into a solid historic context, and 2) continuing the identification of stellar visual images and quotations to incorporate into display.

For maximum effectiveness of interpretation and public education, focus should be placed on the following: strong visual images (historic maps, photographs, signage, etc.), vivid language and text (period newspaper quotations, advertising, circulars, etc.), and important historic contexts and historical events (see above). Systematic comparison of data sources such as city

directories, census information, historic illustrations and photographs, historic maps, etc., would allow for accurate and concrete interpretations such as that found in the Portland Museum diorama depicting a portion of Water Street and the wharf. Most insightful and educationally productive information from the historic context definitions will be evaluated during the alternatives concepts workshops and factored into the preparation of a solid interpretive program The result will be an interpretive program that is both academically correct and provides a clear window to the past.

It is the specific recommendation of this report that interpretive opportunities be targeted directly at the Portland Wharf site and site features themselves – taking advantage of the rich information available and linking directly to those features and historic themes rather than the larger town of Portland and surrounding region. Other aspects of life in Portland and themes related to the Louisville waterfront and the Ohio River have been thoroughly covered using excellent research techniques and interesting interpretive materials at the Portland Museum, the Falls of the Ohio State Park, the Farnsley-Moremen Landing (Riverside), and other facilities.

This report embraces and incorporates the exploration of historic themes provided by *Louisville's Portland Neighborhood; Realizing Its Heritage Development Potential* and the *Ohio River Corridor Master Plan*, and advances those tenets considerably by the research focus on the Portland Wharf site.

3. Opportunities for Archaeological Interpretation

The following programs are presented as options that can be successfully implemented for the Portland Wharf project. Much of this information comes from concepts that have been successfully implemented at other similar historical and archaeological parks across the United States and Europe.

On-Site Programs

- Site Tours. Allowing the public to observe archaeology in action is one of the most effective tools for educating visitors.
- Gazebo / Pavilion on Site with Displays / Photos. This kind of on-site exhibit can show the visitor significant parts of the site and explain its history without an excavation in progress.
- Self-Guided Walking Tour of the Park. The tour could include a short companion brochure that the visitor would read as they proceed around the park, would include additional maps, photos, and more in depth-historical information.
- Automatic / Acoustical Presentations. Some exhibits make use of pre-recorded presentations to present information to visitors. This may be a particularly useful option for Portland Wharf, to bring to life the sounds of this town during the steamboat and other eras.
- Interpretive Signage. Simple, easy-to-read signs that focus on various aspects of Portland Wharf's history can be placed along the trails or streets.
- Archaeological Field School and Volunteers. An archaeological field school is an effective choice to complement a long-term research project conducted at Portland Wharf. Such a program – usually with strong academic or local government, financial and administrative

support – is an excellent way to involve the visiting public in on-going field investigation. The "Archaeology In Annapolis" is but one example of this type highly effective program.

- Partial Reconstruction of Structures and Streets. There are several partial reconstruction options that would help the visitor to understand the physical form and layout of this site. The site's physical layout is as important to our understanding of the past as are the artifacts recovered there. One option is to build the walls of the uncovered foundations up 2-3 feet, delineating the extent of the structure without the expense or maintenance of completely rebuilding. "Ghosting" or framing the walls of the structures, without building complete walls, gives visitors an idea of the height and layout of buildings without the cost of rebuilding completely. Layout of the street grid above the ground surface could be done with rope or chain connected to poles at street intersections, possibly even with street signs.

Off-Site Programs

- Museum (or Interpretive Facility) Exhibits. Exhibits can tell a story of the site, highlighting important or interesting features of the excavation. In addition to standard exhibits such as those found at many heritage sites, newer exhibits now utilize the capabilities of computer-aided design and 3D visualization software. Such technologies provide the visitor a better understanding of changes in physical form (for example, by overlaying historic maps from different periods) and even show what the building or buildings would look like, based on archaeological and historical evidence. They are also easily accessible by the public.
- Brochures and Pamphlets. These small publications provide written material for visitors to take home with them. Short, folded pamphlets can be stocked at the museum and / or the gazebo for free distribution.
- Volunteer Curators and Docents. Often considered to be the backbone of archaeological lab work, volunteers are an important part of public programs, and are usually a successful way to reach the public.
- A "Friends of Portland Wharf" Organization. Many parks of this type have established a "Friends" organization separate from but associated with the administration center. The Friends of Portland Wharf, for example, could be set up as a tax-exempt charitable group that accepts donations for continued maintenance of the park.

Programs with Broader Link to Community and Beyond

- Portland Wharf Website. A website is perhaps the strongest possibility for public access of the research and would be relatively easy to establish and maintain.
- Travelling Lectures for Schools or Other Interest Groups. Park educational staff could visit local schools as part of a public outreach program.
- Lecture Series or Televised Appearances. Having a staff member spend some of their time each month or few months giving a short presentation at a local television station.

Figure 63: Interstate 64 and the flood levee.

B. CONSTRAINTS

Despite the tremendous possibilities presented by the site, there are numerous physical and environmental constraints that limit the types of activities that can be undertaken in the park. One of the greatest obstacles is the physical barrier to the site that is created by the flood levee and Interstate 64. Together, these two obstacles create a virtual "wall": a physical, visual, and psychological barrier between the Portland neighborhood and the park. As it exists today, without the "eyes" of the neighborhood on the park, this physical barrier raises questions about safety in the park and, therefore, about what types of activities are appropriate for the site. The best way to make a truly successful Portland Wharf Park is to find a way to create a direct physical and visual connection between it and the surrounding neighborhood. The site is also limited because it only has one primary entrance, at 31st Street and Northwestern Parkway, which presently limits the types of connections that can be made to the neighborhood. In addition, there is limited access to the park from the west, with RiverWalk as the only connection. In general, the site is also constrained by the fact that there is no vehicular access, with the exception of emergency and maintenance equipment using the RiverWalk alignment. Potential expansion of the park to the west is also limited by the fact that Shawnee Golf Course already comes right up to the western boundary of the site. Indeed, golf course officials have already asked Metro Parks if a small expansion of the course onto Portland Wharf Park property would be a possibility.

Environmental constraints include the forested wetlands in the northwest corner of the site, and the mature woodland canopy that is present along the entire waterfront. While there are no

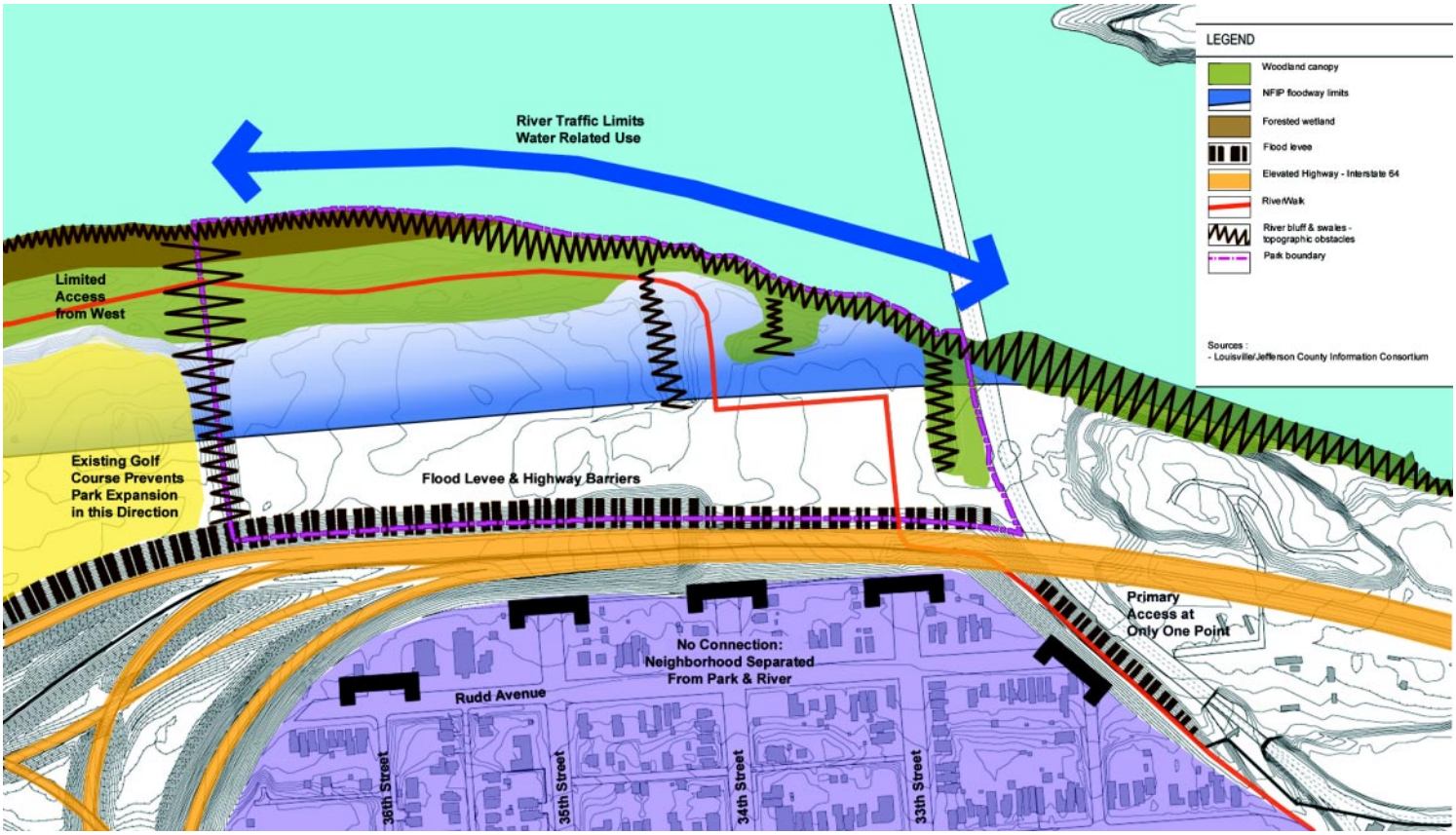


Figure 64: Constraints.

regulations directly prohibiting the removal of the mature tree canopy, indications are that these trees provide important habitat for birds, bats, and other wildlife, and their removal should be carefully assessed. Regarding the forested wetlands, a detailed field analysis of the character and extent of these areas would be required, as a next step to the Master Plan, to determine the implications on clearing or building in this vicinity. Perhaps the most significant environmental constraint on the site, however, is the extent of the designated floodplain. As can be seen in Figure 64, most of the park falls within the 100-year floodplain, which has a major effect on determining the types of activities that can be undertaken and the structures that can be built on the site. It is known that portions of the site flood on a regular yearly basis, and that silt from the river is deposited during these flood periods. Therefore, any structures built within the 100-year floodplain of the river, which includes all but the highest areas of the site, must be able to withstand regular inundation and soil / mud deposition.

Another constraint, in regards to the river, is that the present boat / barge traffic limits the types of activities that can take place on the water or right on the shoreline. Because there is almost constant barge traffic on the river, and the fact that the designated river channel is so close to the shoreline of the park (leading into the McAlpine Locks), it is probably not possible to build piers, boat ramps, or other structures that would extend out into the river or to have activities on the river that would interfere with boat / barge traffic. In addition, it may not be possible to tie boats up to the shoreline, or to encourage the public to tie their boats up along the shore.

Although most of the site is flat or gently sloping, topography does represent a constraint because of the steep bluffs along much of the shoreline (especially in the central and eastern portions of the site), and the deep swales that run perpendicular to the shoreline in several locations.

CHAPTER 9
COMMUNITY WORKSHOP & PRELIMINARY ALTERNATIVES

Figure 65: Project team presentation of existing conditions on Friday evening.

Figure 66: Reviewing options for the park on Saturday.

A. INTRODUCTION

As part of the master planning process for Portland Wharf Park, a community workshop (also known as a "Charrette") was held on January 2nd and 3rd, 2001, at the Portland Community Center. The purpose of the workshop was for the consultant team to present their findings on the existing conditions of the park site, for the public to express their ideas and concerns for the project, and for the community and the project team to work together to develop a "preferred plan" for the site, which will be used to guide the final plan for the park.

On the first day of the two-day workshop (Friday evening), the consultant team presented its findings to a crowd of over 100 people. On the second day (Saturday), a large and dedicated group of participants gathered for an all-day discussion about the project and various options for the park plan. As part of the discussion, participants responded to three preliminary concepts for the park that were developed by the project team (shown on the following pages). Then, participants were broken into four smaller groups, each of which held detailed discussions and developed their own preliminary plans for the park and the area surrounding it . Following the small group discussions, the entire group reconvened, and each of the four small group plans was presented. After a lengthy discussion of the merits of each small group plan, one "preferred plan" was developed that incorporated all of the ideas and comments that participants felt were the most important points brought out in the small group discussions. This preferred plan, which is also shown on the following pages, is to be used by the consultant team to guide the development of the final master plan for the park. Shown below are summaries of each small group discussion, as well as the preliminary concepts and alternatives that went into developing a preferred plan for Portland Wharf Park.

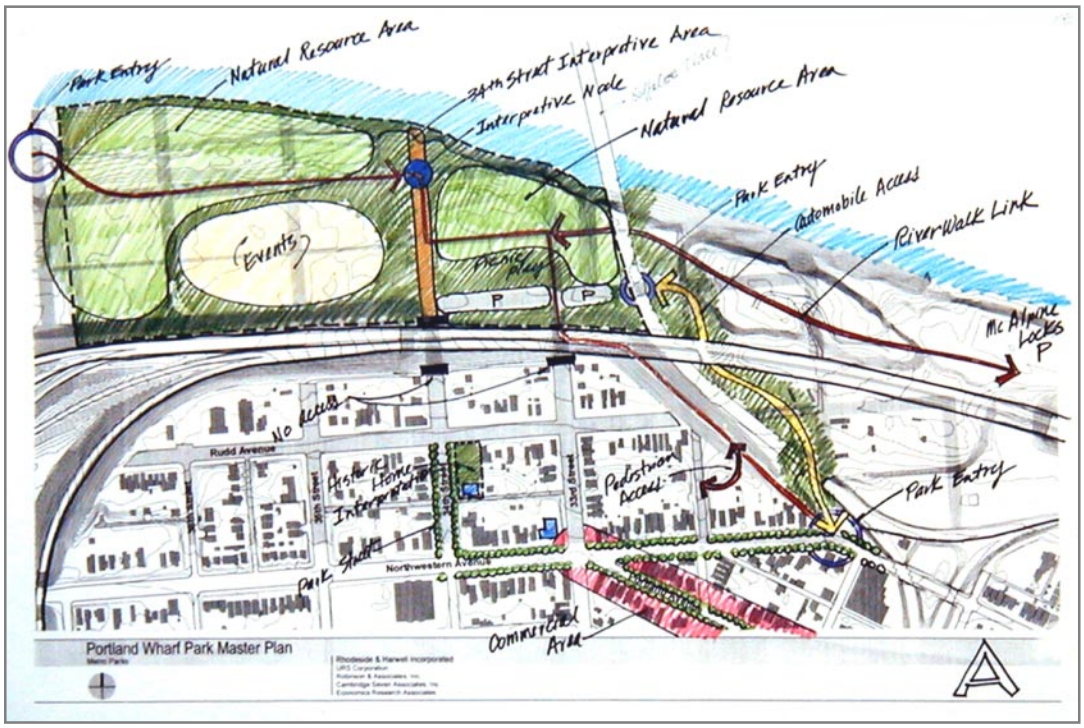


Figure 67: Preliminary Concept A.

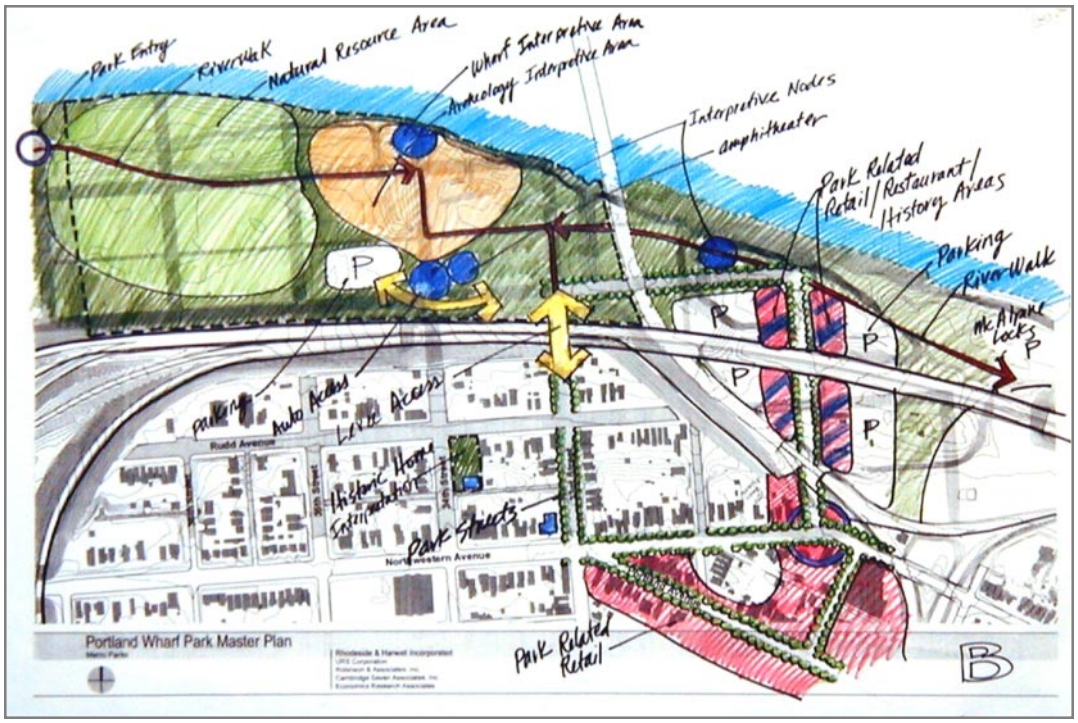


Figure 68: Preliminary Concept B.

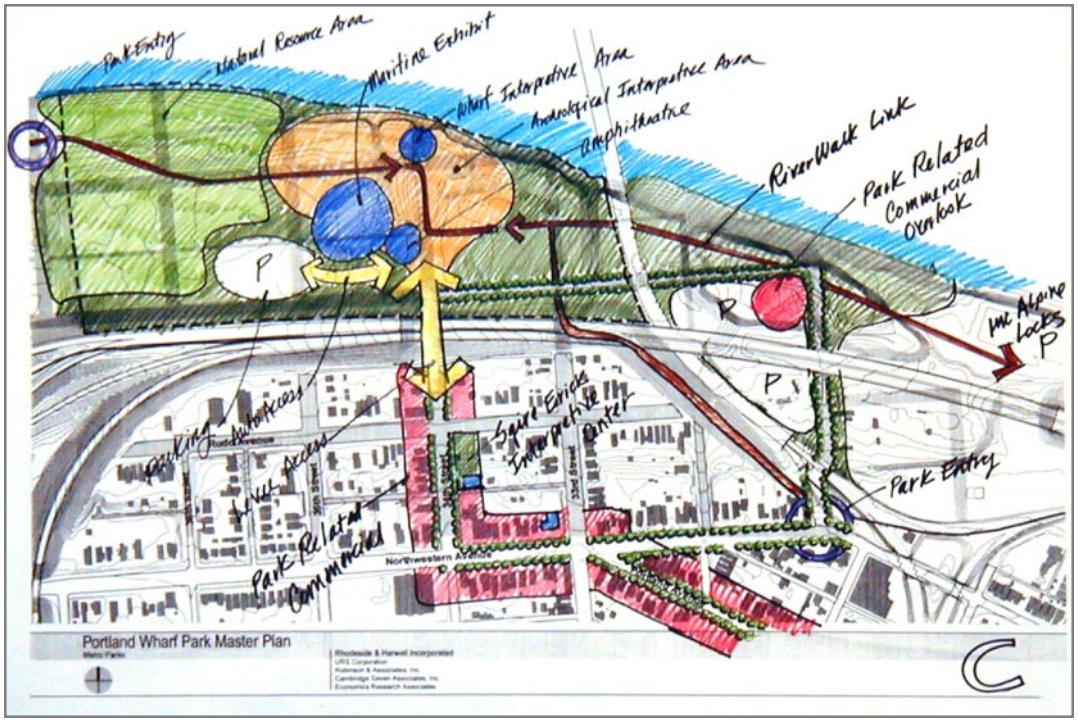


Figure 69: Preliminary Concept C.

Figure 70: Discussion over lunch on Saturday, with the Portland Museum's banner as a backdrop.

B. SUMMARIES OF SMALL GROUP DISCUSSIONS

1. Small Group One

- Automobile access to the park should be restricted to 31st Street only, with parking located in the area just east of the K&I Bridge.
- Pedestrian access to the park should occur at both 33rd and 34th street, without cutting through the flood levee. Access could be via ramps over the top of the levee. In addition, the top of the levee could be notched to lessen the height of the ramps (this approach would be a compromise between cutting through the flood levee and going over the top).
- Visitor / interpretive center should be located on 34th Street, either at Squire Earick House or one block further north closer to the park entrance.
- Archaeological research should be conducted in the park in the area between 33rd and 35th Streets, as this is where the majority of the building remains and streets exist.
- The street grid should be uncovered in the park along 34th Street and Water Street.
- Archaeological research should be conducted by excavating one small area at a time and then covering it back over.
- An archaeological and historical field school should be established for high school kids and others. The school would also be a way of offering on the job training for young archaeologists and historians.
- School children should be brought in to the park to learn about the history of the area.
- Some of the building foundations that are uncovered should be stabilized for permanent display.
- Information kiosks along 34th Street could inform visitors about the history of the site and ongoing research projects.
- The vegetation on the western portion of the site (west of 35th Street) should be preserved for resident / migratory birds and other wildlife.
- The plan should include the possibility that Shawnee Golf Course might actually expand into the western portion of Portland Wharf Park.
- Fishing should be allowed in the river. There could also be a trail leading from Riverwalk down to the river, to be used for picnicking and fishing access.
- The K&I Bridge should be refurbished and utilized as a light rail, bike, and pedestrian link to Indiana (Falls of the Ohio State Park, etc.)
- There should be a light rail connection between Portland Wharf Park and downtown, with stops along the way.
- The "overlook" area east of the park should be used as a platform to view the river and the McAlpine Locks. In addition, the story of Shippingport could be told here, through historical information and dioramas.
- An additional overlook should be established on top of the levee adjacent to Riverwalk. This

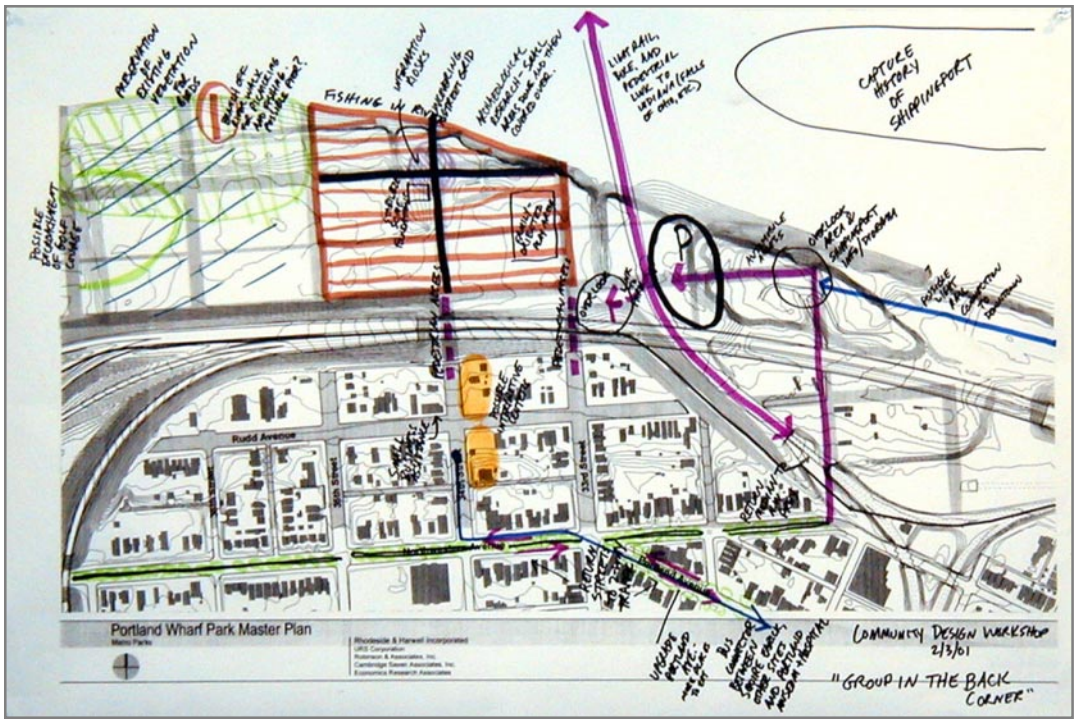


Figure 71: Plan drawn by Group One.

overlook would provide tremendous views of the park and the river.

- Two-way traffic and the median should be returned to Northwest Parkway, as per the original Olmsted Plan.
- Portland Avenue and Bank Street should also be returned to two-way traffic.
- The appearance of Portland Avenue should be upgraded (more street trees, etc.)
- Small business assistance should be offered should be made available to those along Portland Avenue, Northwestern Parkway, 34th Street, and Rudd Avenue. Appopriate businesses to encourage might include bait & tackle shops, antique stores, restaurants, ice cream parlors, and sovenier shops.
- A bus connector should be established that links the Squire Earick House, the Portland Museum, the Marine Hospital, and other sites in Portland.

2. Small Group Two

General

- Locate entrance after defining the park's image.
- Park focus should be wharf life reconstruction.
- Look at Conner's Prairie in Indianapolis for historic interpretation.
- 34th Street is the best existing image for the old Portland Wharf and levee access should be made off that street. 34th Street puts the community's best face forward.
- Levee access should be as open and spacious as possible. Levee access will increase safety, allow ease access for the most people.

- Entrance needs to draw you into the park.
- One person said " park was designated a nature preserve, and has been damaged by newer uses."
- One person said "no vehicular access; pedestrians only."
- One person said " ramps for access"
- One person said, " make grand entrance at 34th, 33rd, or 31st Street."
- Plan should provide for shuttle access.
- 31st Street good for commercial and park support, 34th Street should have friendly atmosphere.
- Connections? Methodist Church? Carnegie Library?
- Look into ramps for park access.
- Use Missouri Ave. only for trolleys and pedestrians, no cars.

Figure 72: Developing a plan for the park on Saturday.

Park Comments

- We like the idea that there is an active accessible archeology park and it's teaching possibilities.
- We like the idea of "ghost framing"
- We like the ideas of recreating the street grid.
- Build on the historic district's strength w/ wide access at 34th street.
- Public access for fishing is important.
- Worry: impact of sound from interstate, leave buffer, sound barriers?
- Opportunity: use sound to re-create 19th century wharf life. Example: Blue Heron- 19th century coal mining town.
- Steamboat access wanted – the city owns 2 steamboats.
- Don't put any commercial in park, commercial OK on dumpsite at 31st Street.

***Recommended Uses by Area**: Park*

- Like historical emphasis.
- Create 'loops' for circulation walking (1 mile or less).
- Children's playground with sprinkler.
- Historical information built low for kids.
- 38th street boat access & interpretive opportunities.
- Boat access at 38th street would need to be dredged yearly, expensive.
- Stabilize shoreline with vegetation techniques over walls, etc wherever possible.

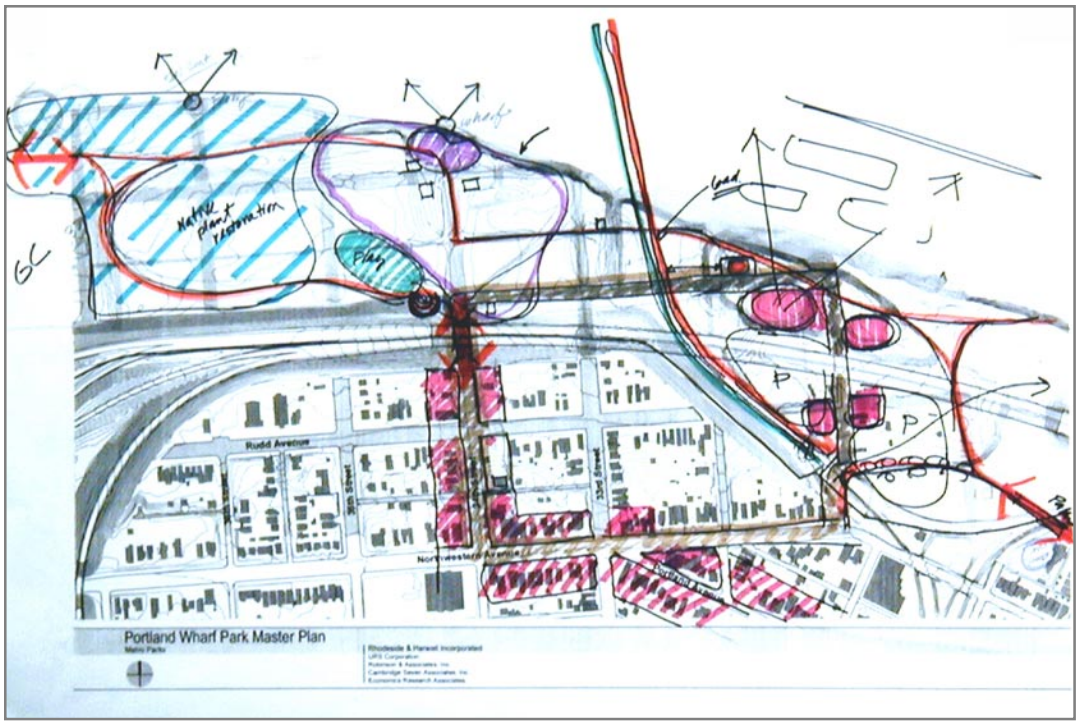


Figure 73: Plan drawn by Group Two.

- Increase access to shoreline where it will not de-stabilize bank.
- Extend park to west.
- Build observation area(s) on river.
- Pier for ferry and at wharf? (may also allow shallow draft boat).
- Do historical re-enactment of portage, boat loading and unloading.
- Build amphitheater into interstate embankment and floodwall.
- Clear trees along riverbank to improve views, stabilize bank with low plantings.

***Recommended Uses by Area**: Neighborhood*

- Metro Arts Branch should be located in neighborhood.

***Recommended Uses by Area**: Support / Commercial Area (junk yards)*

- Make link, (tunnel, bridge) to Java House.
- Link Java House to new East-West RiverWalk link.

3. Small Group Three

- Connect the park with other cultural / historic sites in the Region.
- Community access should be on 34th Street. Visitors access should be from the eastside.
- 34th Street flood gate access way should be as wide as the street.

- Consider going up and over flood wall at 34 Street.
- Consider a bridge over floodwall.
- Tie into Squire Earick House supports 34th Street access.
- 31st Street is the best place for parking plus shuttle / bus or light rail access.
- Develop parking for disabled on 34th Street. Major parking areas should be east of the park.
- Develop overlook on high ground east of the park with interpretation opportunities.
- Remove junk yard.
- Preserve nature to greatest extent possible.
- Restore old streets.
- Prohibit athletic fields.
- Archaeology
  - Reveal archeology / restore old streets
  - Consider archeology in partnership with Professional entity such as U of L or with another educational entity.
  - Major issue: how to handle periods of flooding.
- Develop a maritime interpretation / exhibit area or a maritime-oriented museum.
- Develop opportunities for fishing.
- Study feasibility of in or west of the park boat landing.
- Prohibit golf course expansion

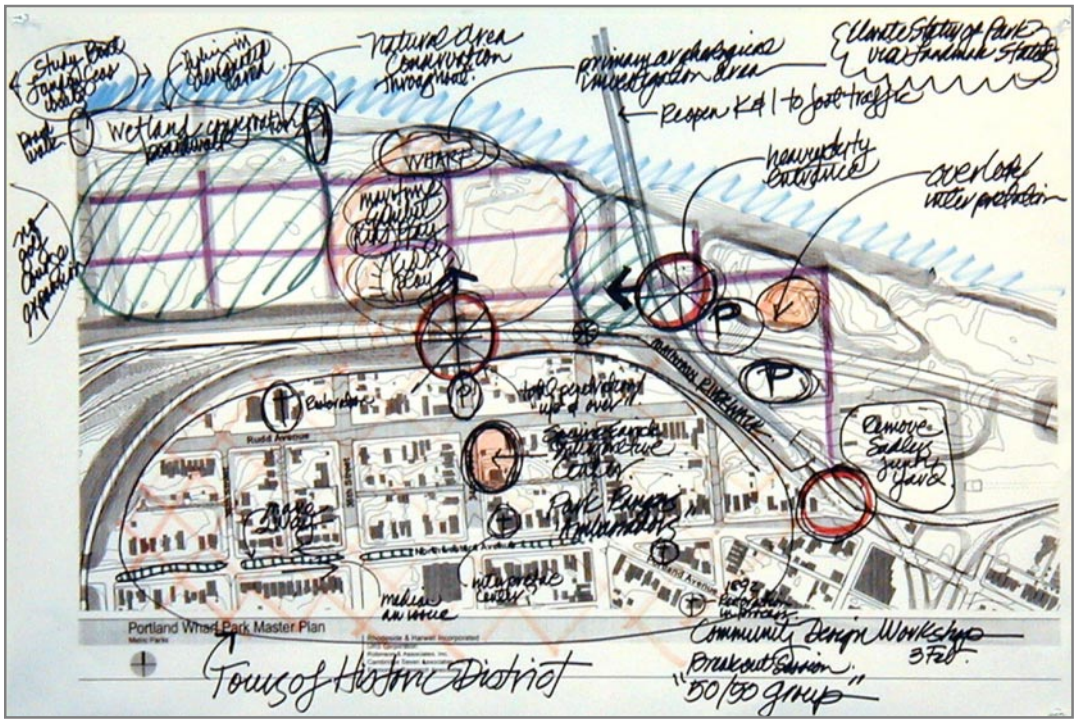


Figure 74: Plan drawn by Group Three.

- Develop boat shuttle or ferry and trail to Indiana and other parks along Ohio River.
- See park from different view vantage point.
  - K & I Bridge
  - Trolley
  - Ferry
- Consider river boat racing and pleasure activities.
- Establish a Park Rangers program for maintenance and interpretation.

4. Small Group Four

Figure 75: Small group discussion.

Access

- The Group was unanimous in its view that there should be two means of access into the Park: one at 31st Street (existing) and one at 34th Street.
- With regard to means of access at 34th Street, the Group was divided, with the majority (90%) favoring a wide floodwall penetration that will allow for clear visibility, and the remaining 10% recommending a ramp system over the wall with an elevator for use by those with physical limitations.
- Access by various transit options is to be encouraged, including a bus drop-off loop that enters the Park at limited points, and a trolley tour that would run along Portland Avenue to 33rd Street, and would cross at Rudd Avenue to 34th Street, entering the Park at 34th Street.
- Street access should be analyzed in order to determine the best routes to the Park. Maximize opportunities to create linkages and establish a multiple-street road network to the Park (e.g., linking Northwestern Parkway to Algonquin Parkway).

Interpretive Opportunities

- The Group listed the following existing structures as possibilities to include in an interpretive plan for the Park: Squire Earick House, the former Methodist Church on 34th Street and Northwestern Parkway, the Modern Living warehouse on 31st Street.
- In addition, it was felt that a possible site for a new interpretive facility in the Park might be located along the 34th Street access line.
- The Group defined a preliminary "archeological zone" roughly between 33rd and 35th Streets within the Park, but felt that it will be critical for the City to carry out more detailed Phase 1 and Phase 2 archeological investigations in order to determine the most appropriate zone over the longer term.
- Additional, follow-on studies should include an historic structures inventory throughout the Portland area in order to identify building resources that could become part of the interpretive fabric of the area.
- The City should look at ways to provide low interest loans for historic preservation activities throughout Portland, in order to encourage owners to preserve and restore their historic structures.

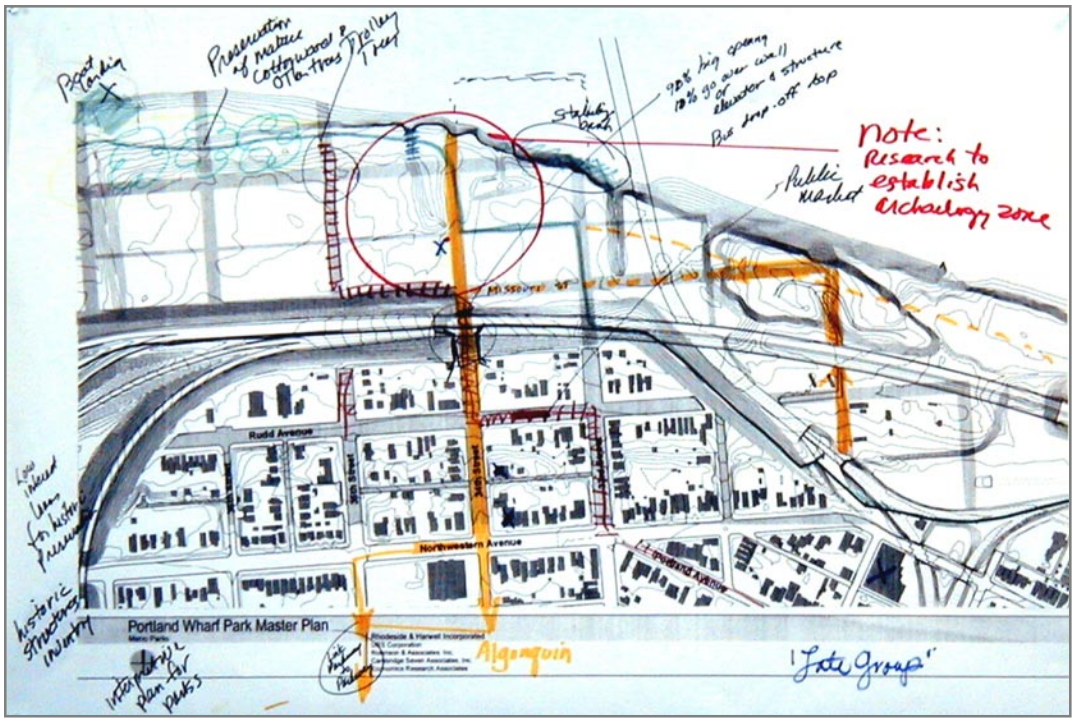


Figure 76: Plan drawn by Group Four.

Natural Area Preservation and Restoration

- The area of the Park west of 35th Street was designated by the Group as one that should be dedicated for natural area preservation.
- Included in this would be the preservation of the site's mature cottonwood trees and other mature specimen trees.
- The need to stabilize the riverbank, particularly between 33rd and 34th Streets, was also mentioned as a high priority.

Other Elements

- The Group wanted to explore the feasibility of including a boat landing somewhere in or near the Park. Based on concerns regarding existing boat traffic from the McAlpine locks, and ensuing safety issues, the Group located a possible boat landing site at the far western part of the Park, but recognized that further work would need to be carried out with regard to this location.
- It was felt that a public market (e.g., a Farmers' Market) might be established along Rudd Avenue, between 33rd and 34th Streets.

Figure 77: Mayor Armstrong addressing the participants.

C. CHARRETTE CONSENSUS PROGRAM, OR "PREFERRED PLAN"

(Based on Group Discussion on February 3, 2001 following small group discussions)

1. Access

a. There should be at least two primary access points into the Park. Possibilities include:

- Entrance at 31st Street (where it is now) and associated with an entrance on the east side of the Park.
- Entrance at 34th Street.
- In addition, explore the possibility of a secondary entrance at 33rd Street.

b. How to achieve access:

- Explore the feasibility of breaching the floodwall at 34th Street.
- Alternatively, consider ramping over the floodwall at 34th Street (and perhaps at 33rd Street).
- At-grade access already exists and needs to be improved at 31st Street.

c. Vehicular access:

- Cars and other private vehicles should not be allowed in the Park, except perhaps at a designated drop-off point on the east side.
- There should be no parking allowed in the Park.
- Park access must be provided, however, for maintenance and emergency vehicles.
- Consider siting car parking on eastern edge of Park (outside Park boundaries – explore land ownership implications).
- Consider a visitor transit system that could make a loop through a portion of the park (for example, a tram, trolley, horse-drawn dray); this system could link with other cultural attractions on both sides of the River.

d. Pedestrian access:

- The entrance on 34th Street (and also on 33rd if that happens) would be pedestrian-oriented to minimize impact on the neighborhood and on the resources in that area of the Park.
- The entrance on the east side would provide pedestrian as well as vehicular and bicycle access.

2. Archaeological / Historic Interpretation

a. Options for an Interpretive Center, to be explored, might include:

- Reuse of one of the existing Portland structures, such as Squire Earick House (may be too small for this purpose), "Modern Living" warehouse building on 31st Street, or the former Methodist Church building at 34th Street and Northwestern Parkway.
- A new structure, located at the eastern end of the site, on the bluff.
- Interpretive center should be able to accommodate, at a minimum, exhibits, classrooms, an archeological field office, field staff accommodations, and a shop.

b. Consider whether the Portland Library might be able to house an archival / information facility about the Portland Wharf Park and adjacent area.

c. Interpret, and consider recreating, the original wharf area at the end of the 34th Street corridor.

d. The "core" area for archeological interpretation appears to be between 33rd and 35th Streets, from the River to the floodwall. This assumption should be verified by further, systematic archeological investigation.

e. Consider telling the story of Shippingport from the bluff area on the eastern edge of the Park.

3. Natural Resource Conservation

a. Retain the western portion of the site – from 35th Street west – as a natural resource area, while allowing for the possibility of future archeological exploration in that area should additional studies indicate the likely presence of artifacts there.

b. Stabilize the riverbank in areas which are currently eroding, particularly along the northeast riverbank.

c. Interpret the natural landscape in this area; consider the area as an opportunity for education regarding ecological issues.

4. Making Connections

a. The entrances to the Park should extend into the Portland community via:

- Landscape / streetscape treatments.
- Considering the possibility of extending the interpretive opportunities to the 34th Street corridor, perhaps with the possibility of restoring some of the older structures for interpretive purposes (e.g., the Squire Earick House as an example of an early period home, or the commercial structure at 34th and Rudd Streets).

b. Encourage the use of low interest loans for building restoration / preservation.

c. Consider the completion of a historic structures inventory for the Portland community, particularly within the corridors leading to the park.

d. Retain and extend Riverwalk east of the Park along the bluff to the McAlpine Lock Visitor Center.

e. Assure physical and interpretive linkages to Java House.

f. Connect Portland Avenue revitalization activities to Northwestern Parkway and the 34th Street corridor leading to the Park.

g. Consider restoration of Northwestern Parkway per the original Olmsted plan.

h. Consider restoring two-way traffic status to Portland Avenue, Montgomery Avenue, Bank Street, and Northwestern Parkway.

5. Other Programmatic Elements

a. The Park should include an exciting play setting for children, perhaps related in a thematic

way to the interpretive program in the Park (for example, around a maritime / archeological theme).

b. Commercial activities

- There should be no commercial activities in the Park (unless they are of a mobile, transient nature).
- Commercial activities should be focused outside the park, in the Portland community along 34th Street, Northwestern Parkway and Portland Street.
- Consider the 31st Street corridor as an additional economic opportunity / "interpretive zone" leading to the Park.
- Consider the creation of a Farmers' Market along Rudd Avenue, approximately between 33rd and 35th Streets.

c. Boat docking facilities

- Study the feasibility of creating a boat docking facility on the western edge of the Park site or west of the Park.

d. Ensure that careful consideration is given to the logical placement of public amenities such as restroom facilities and drinking fountains. (The siting of such facilities must consider ease of access, safety, security, and maintenance issues).

e. Access for disabled persons must be accommodated via compliance with all ADA requirements.

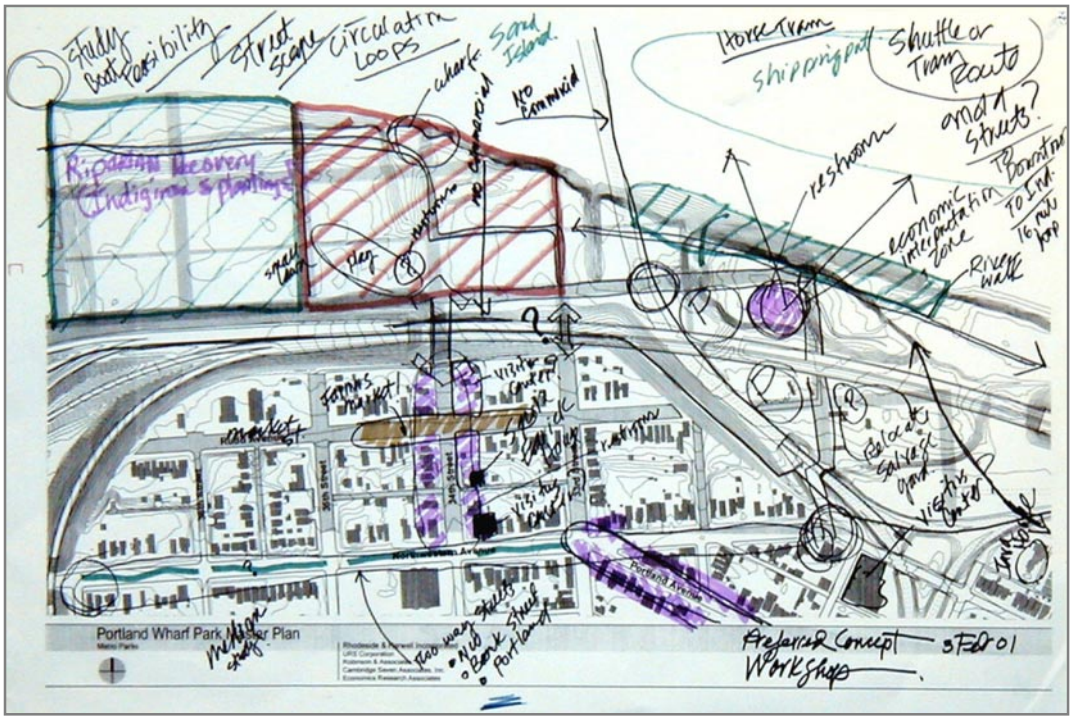


Figure 78: "Preferred" plan for the park, as drawn at the community workshop, which incorporates elements from all four small group discussions / plans.

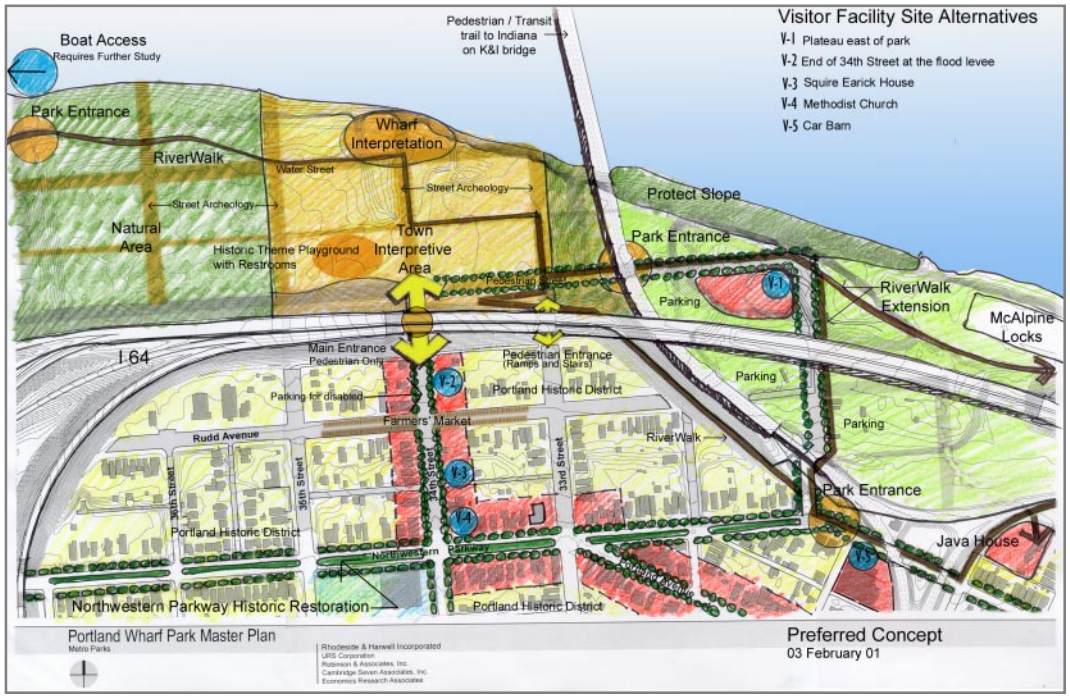
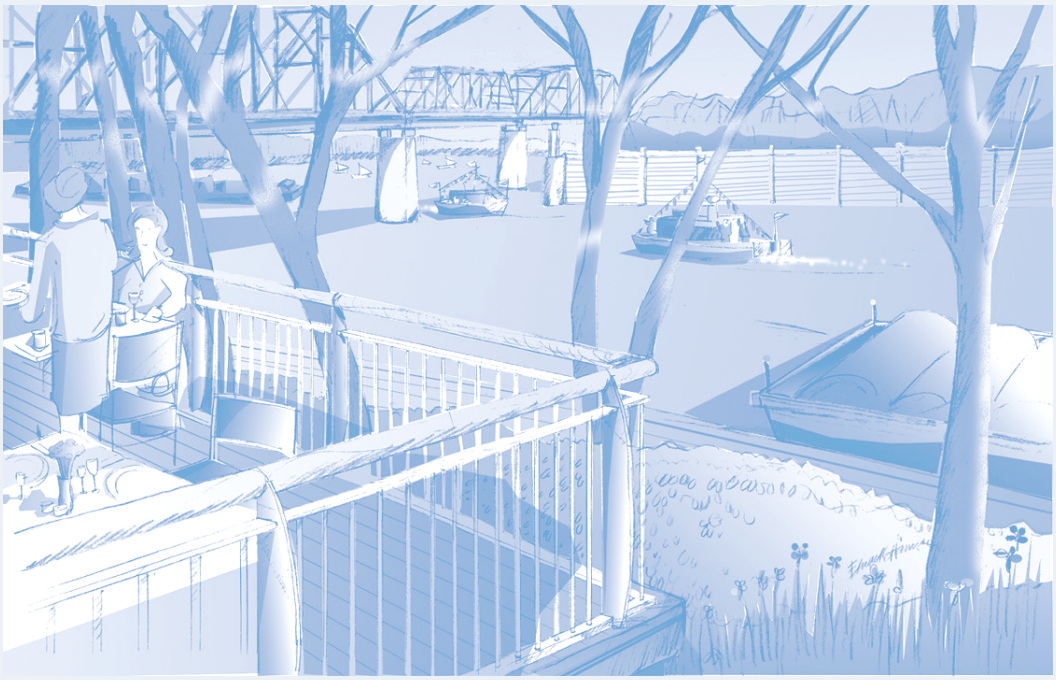


Figure 79: "Preferred" plan for the park, as drawn by Rhodeside & Harwell.

CHAPTER 10
THE MASTER PLAN



A. GENERAL DESCRIPTION OF PLAN

As described in detail in the Master Plan Summary at the beginning of this report, the master plan for Portland Wharf Park builds upon the visions of the community and the desire of the City to extend the benefits of the park out into the community. As a result, the master plan encompasses not only the existing boundaries of Portland Wharf Park (between Shawnee Golf Course and the K&I Bridge), but also a 31-acre "visitor orientation area" east of the park. A portion of the Portland Historic District, immediately south of the park and outside the main entrance, is also included in the plan. Again, elements of the plan are described in the Master Plan Summary, and a key to the phasing of these elements is outlined in Section C of this chapter.

B. FINAL COMMUNITY MEETING

Based on comments received at a first presentation to the Mayor and Steering Committee in May 2001, the master plan evolved into its current form outlined in the above section and detailed in the Master Plan Summary at the beginning of this report. This plan was presented again to the Mayor, Steering Committee, and the public at a meeting held in August, 2001, along with the phasing and interpretive plans shown in the later sections of this chapter. All of the plans, including the master plan, phasing plan, and interpretive plan, received the unanimous approval and support of the Mayor, Steering Committee, and the public. This unanimous approval allowed the master plan to be finalized and this report to be completed.

C. KEY TO PHASING OF SPECIFIC MASTER PLAN ELEMENTS

1. Short Range Plan Recommendations

Area #1 – Portland Wharf Park

- **Flood Gate & Wall –** Install floodgate as shown in attached sketch. Floodgate walls to incorporate mosaic mural, stone veneer base, and cap and brick paving to match side-

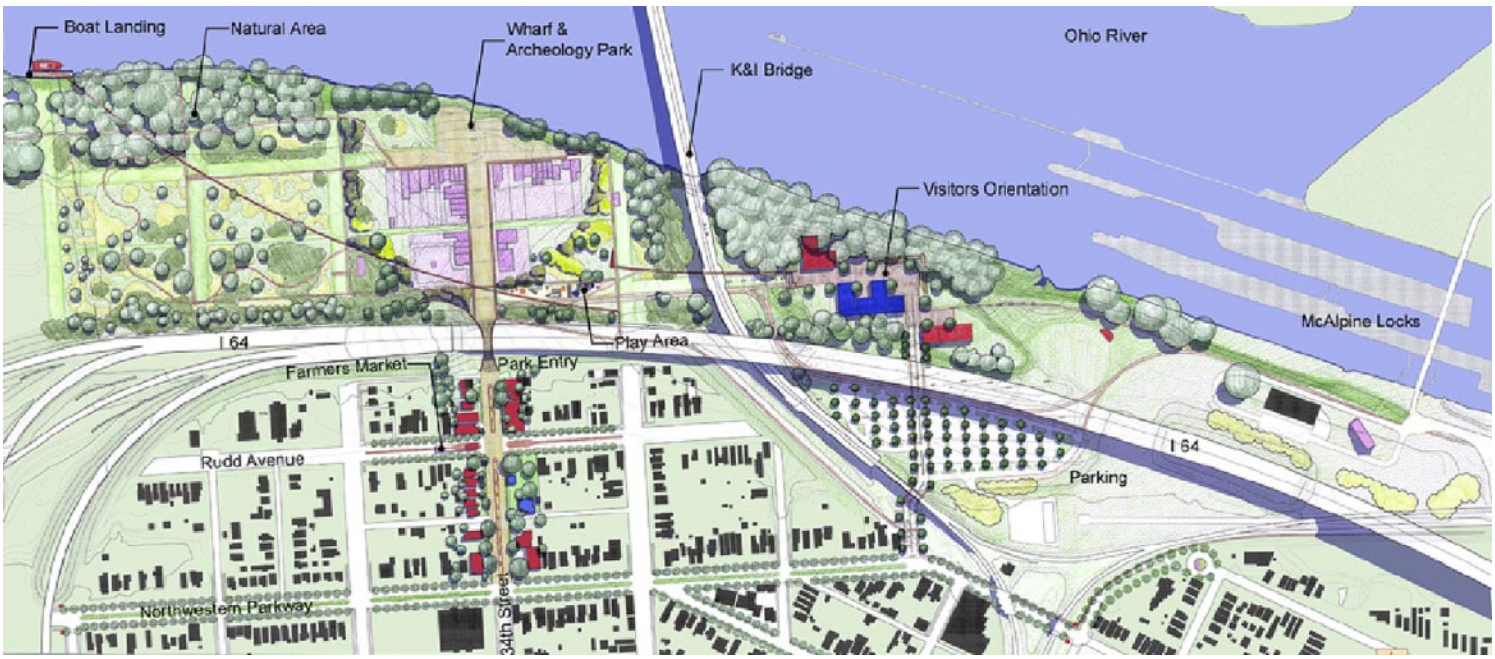


Figure 80: Long Range Master Plan.

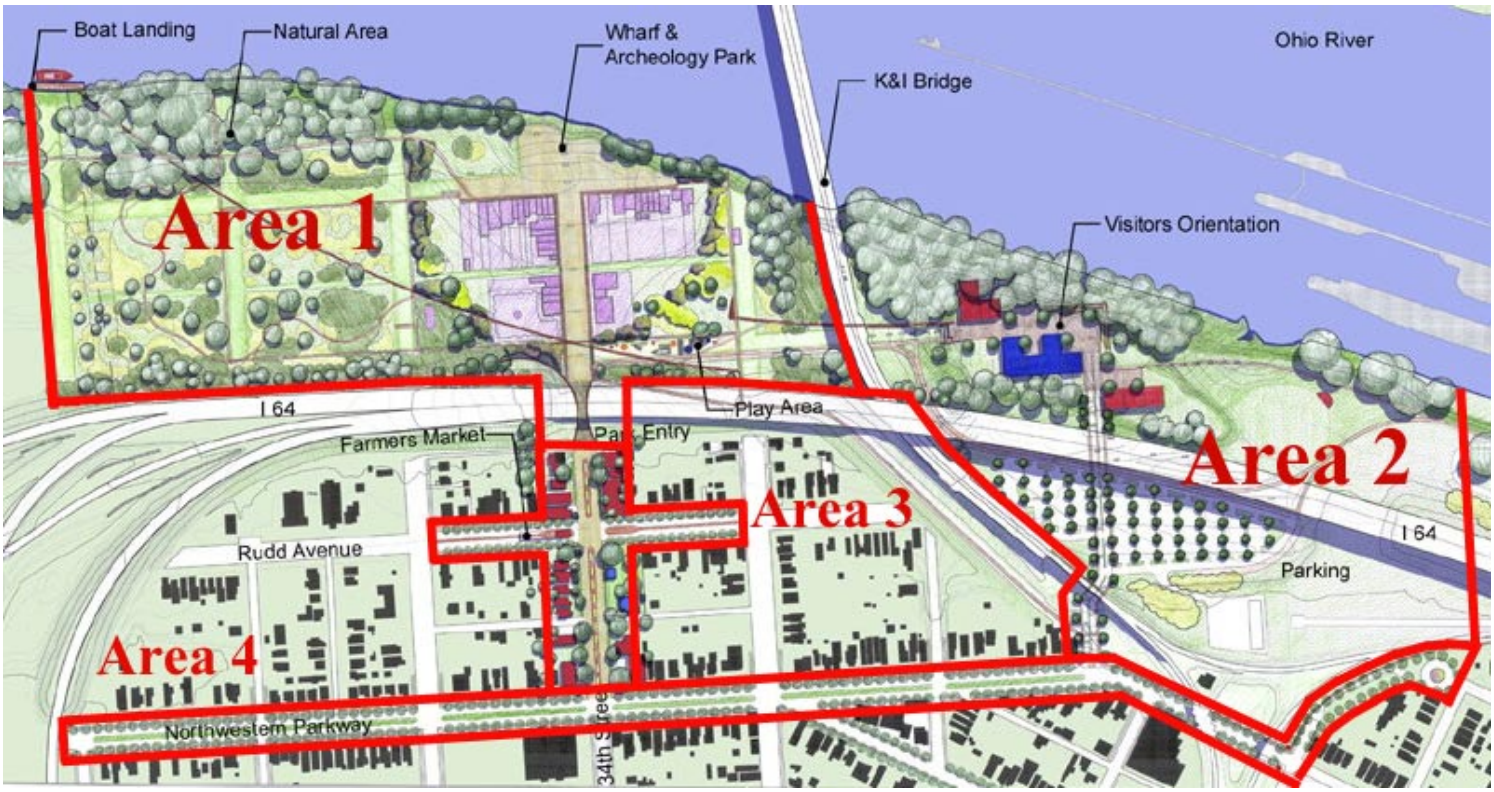


Figure 81: Master Plan key to program areas.

walks on street. Floodgates to be made of steel, with decorative steel elements incorporated into the gates. Floodgate to include metal arch sign announcing Portland Wharf Park.

- **Clearing & Grading -** Clear and grade site as shown in the Short Range Plan, including clearing for all historic road alignments. Allow for extensive selective clearing and limbing-up of major trees to open views.
- **Play Area –** Play area to include custom play equipment with historical river and wharf theme. Playground to have different areas for three age groups: tots; 1st through 3rd graders; and seven to twelve year olds. Provide shade structures for children and adults. Provide integrally colored play safety surface. Play area to have 36" contemporary custom fence made of stainless steel, with a gate.
- **New Sidewalks –** New walk (arcing through site) to be made of stone veneer on concrete slab. Curving nature walk to be made of exposed aggregate concrete. Orthogonal walks to be made of integrally colored concrete with sandblasted granite interpretive inserts.
- **RiverWalk Attachments -** Asphalt path to match existing RiverWalk
- **Historic Streets–** Allow for [worst case] full reconstruction of Commercial (34th) Street and Water Street using granite cobbles.
- **Historic Sidewalks –** Allow for [worst case] full reconstruction of historic sidewalks on Commercial and Water Street using stone slabs.
- **Historic Curbs –** Allow for [worst case] full reconstruction of historic curbs using granite.
- **Portland Wharf –** Allow for [worst case] full reconstruction of Wharf using granite cobbles.

Figure 82: Sketch of proposed park entrance through floodwall at 34th Street.

- **Storm Drainage –** Allow for storm drainage improvements in sensitive archeological zones as part of Commercial Street (34th), Water Street and Wharf archeological preservation and/or [worst case] reconstruction program.
- **River Bank Stabilization –** Allow for shoreline stabilization using both plants and gabions.
- **Signage –** Allow for interpretive signage program for building lots, streets, wharf, and river, including building sites along cleared (but unreconstructed) streets.
- **Ruin Stabilization –** Allow for stabilization of exposed ruins.
- **Street Interpretation –** Allow for interpretive elements, such as cast metal and painted 19th century supplies stacked in road, as well as full color signage.
- **Wharf Interpretation –** Allow for interpretive elements, including a "ghost boat" tied up to the wharf made of painted steel on sonitube footings, cast metal wagon wheels, crates, barrels, and other 19th century supplies. Full color signage is also to be included.
- **Building Interpretation –** Allow for interpretation of St. Charles Hotel as shown on plan, with ghost structures made of painted steel and crushed stone/brick "floors". Include full color signage for hotel interpretation.
- **Industrial Area Interpretation –** Allow for stone paved plaza with full color interpretive signage for industrial uses in the west portion of the park site.
- **Garden Reconstruction-** Allow for full reconstruction and interpretation of St. Charles

Figure 83: Sketch of 34th Street in Portland Wharf Park. Sketch shows the intersection of 34th (formerly Commercial Street), Front Street, and Water Street at the wharf's edge.

Hotel garden (from written documentation). Include allowance for 19th century fountain. Allow for paths, arbors, and planting beds, as wll as plant bed edgings. Allow for full color interpretive signage.

- **Lighting –** Allow for historic type light fixtures along Commercial (34th) and Water Streets. Allow for decorative lighting at floodgate and allow for spot and flood lighting on ghost structures and at wharf. Allow for area lighting at play area. Lighting must be able to withstand periodic flooding.
- **Archaeology –** Allow for complete archaeological investigation of Commercial (34th) Street, Water Street, the wharf, and St. Charles Hotel site as shown on plan. Allow for full archaeology along shoreline for those areas changed due to shoreline stabilization.
- **Furnishings -** Allow for twenty four (24) contemporary stone backless benches within park.

Area #2 – Visitor's Area East of K&I Bridge

- **Land Aquisition -** Initiate land and easement aquisition process with area land owners and utilties.
- **Sandstone -** Collect and stockpile McAlpine Locks sandstone blocks for future park construction (see Figure 87).

Figure 84: Cross-section through proposed park at 34th Street, looking west.

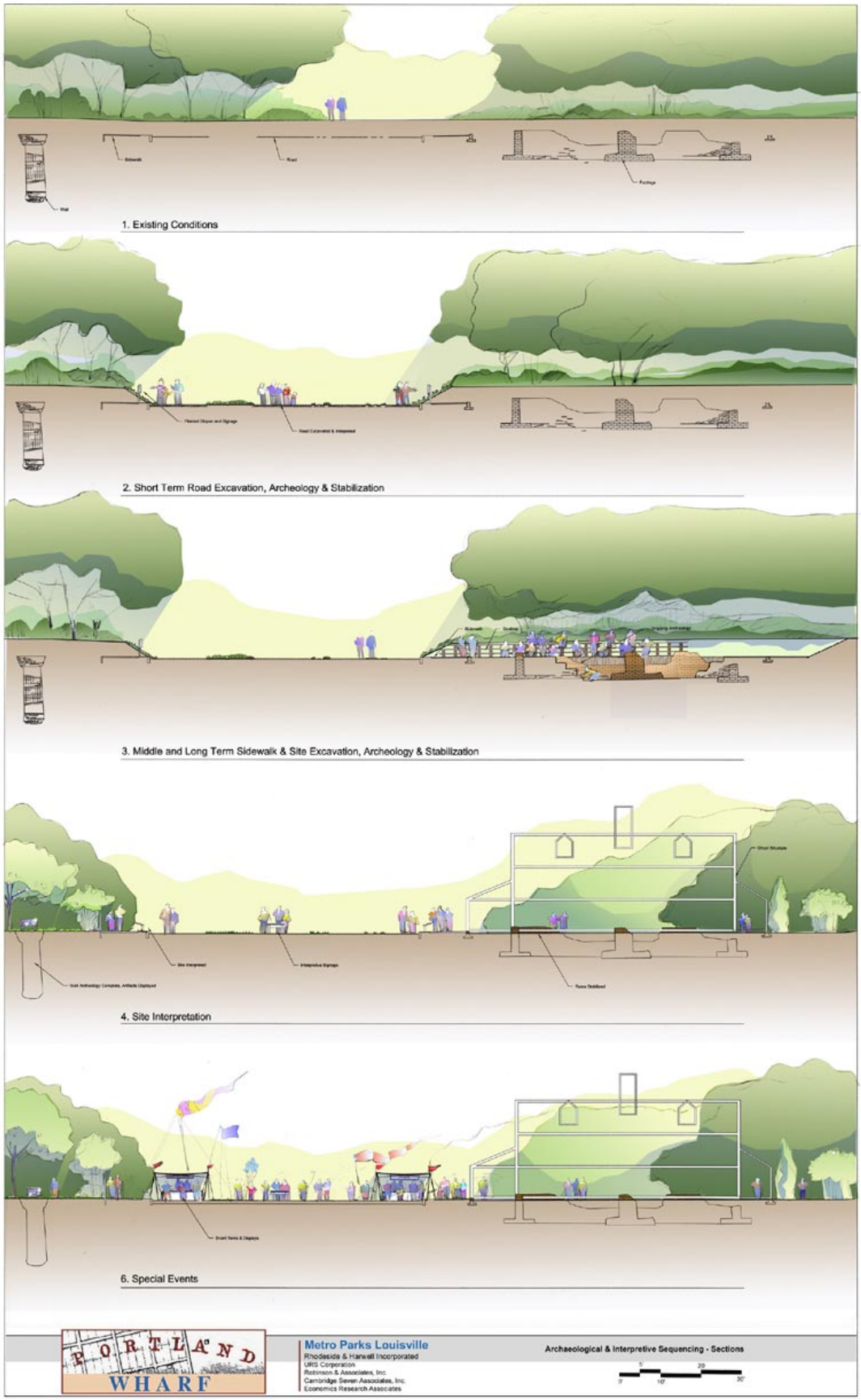


Figure 85: Rendering showing how archaeological investigation, foundation stabilization, building simulation, and interpretation can be phased in the park over time.

Figure 86: Rendering showing how ongoing archaeological work can be combined with visitor interpretation.

- **Cleanup -** As land comes under city control, clean up dumping areas and remove brush to open up views and improve area visibility.

Area # 3 - Improvements at Rudd Avenue and 34th Street

- **Lighting-** Underground overhead utilities and install traditional street lighting, as well as power outlets for farmers market.
- **Fencing –** Install 36" height Victorian-style metal fence along sidewalks on both 34th Street and Rudd Avenue. Install 12" height Victorian-style metal fence around planters on new 34th Street raised central median.
- **Curbs & Medians –** All new curbs to be granite (to match existing curbs); Create raised islands on Rudd Avenue and 34th Street as shown.
- **Sidewalks –** Replace existing sidewalks, build new sidewalks, and pave new central islands with brick pavers.
- **Signage –** Allow for two metal, lighted entry elements to be incorporated into the fencing at 34th Street and Northwestern Parkway. Install traditional street signs. Install historical signs at five locations to match park signage.
- **Market Building –** Recreate historical farmers' market building on Rudd Avenue at intersection with 34thStreet (from written descriptions). Building to include public restrooms for use on market days.
- **Furnishings –** Allow for twenty four (24) 6' long period metal benches along both 34th Street and Rudd Avenue.
- **Road Surface –** (Worst Case) Repave road with brick to match 33st Street.

Figure 87: Sandstone blocks from Civil War-era McAlpine locks. The sandstone is now available for use in Portland Wharf Park.

Area # 4 – Northwestern Parkway Historic Restoration

- **Lighting –** Underground overhead utilities and install traditional street lighting.
- **Curbs & Medians –** Install raised irrigated islands with granite curb as part of Olmsted parkway restoration.
- **Signage –** Allow for four metal and stone lighted entry elements to be installed at the historic district entries on Northwestern Parkway. Install traditional street signage. Install historical signage to match park signage at ten locations.

Figure 88: View of restored Commercial Street (along present day 34th Street) in the Portland Historic District. Sketch shows reconstructed market at intersection of 34th Street and Rudd Avenue.

- **Furnishings –** Allow for twenty four (24) 6' long metal benches along Northwestern Parkway Restoration.
- **New Turn Around & Irrigation –** Allow for grading, irrigation, and new turn around adjacent to the Java House. Allow for construction of 16 parking spaces at end of turn-around. Allow for planted island in turn-around. Allow for granite curbs.

2. Medium Range Plan Recommendation

Area # 1 – Portland Wharf Park

- **Clearing & Grading -** Clear and grade additional areas of the site as shown in the Medium Range Plan, including clearing for all additional historic road alignments east of Commercial St. (34th Street) Allow for additional selective clearing and limbing-up of major trees to open views.
- **RiverWalk Realignment –** Allow for removal of existing soil berm and asphalt RiverWalk connection up to top of levee at 33rd Street. Allow for new RiverWalk connection to be made with a 200LF X 8' width wood ramp and landing system from floodgate entrance to top of levee. Allow for new 33rd Street connection made with a C.I.P. stair with metal rail.
- **Play Area –** Play area to be extended on its east side after removal of RiverWalk berm.
- **New Sidewalks –** New sidewalks and stairs to be made with C.I.P. integrally colored

concrete. Concrete stairs will have custom stainless steel railings.

- **New Ramps –** Allow for new metal ramp connections at east and west ends of Water Street. Ramps are to be 8' wide, incorporate interpretive signage, and connect historic street pavement to middle range sidewalks.
- **River Overlooks –** Allow for three new river overlooks (metal) that extend past top of stabilized riverbank. Overlooks are 8'wide and 30' long.
- **Signage –** Allow for interpretive signage program for each possible building lot, streets, wharf, and river including building sites along cleared but unreconstructed streets.
- **Ruins Stabilization –** Allow for stabilization of exposed ruins.
- **Building Interpretation –** Allow for interpretation of additional building sites along Water and Commercial (34th) Street with ghost structures made of painted steel and crushed stone and brick "floors". Include full color signage for building interpretation.
- **Garden Reconstruction-** Allow for full reconstruction of rear yards and work yards on all lots adjacent to building sites. Yard reconstruction to include paths and outbuildings.
- **Railroad Area Interpretation –** Allow for stone paved plaza with full color interpretive signage for railroad history on 35th street . Allow for the reconstruction of a piece of track along 35th Street.

Figure 89: Proposed panorama from the visitor area northeast toward the McAlpine Locks and downtown Louisville.

Figure 90: Existing view of area depicted above.

- **Interpretive Signage –** Allow for open air interpretive stations with full color interpretive signage.
- **Lighting –**Allow for spot and flood lighting on ghost structures and in rear yards.
- **Archaeology –** Allow for full archeology for buildings and yards along Water and Commercial (34th) Streets as shown on middle range plan. Allow for full archeology along 33rd Street within the park and those areas between 33rd street and the K&I Bridge. Allow for full archeology at historic ferry landing at end of 36th Street at the river. Allow for full archeology of Railroad Tracks on 35th street.
- **Furnishings -** Allow for twelve (12) contemporary stone backless benches within park.

Area # 2 – Visitor Area East of K&I Bridge

- **Re-aligned 31st Street – New Park Entrance –** Allow reconstruction of existing flood wall (drop in walls), and construction of new entry road with median as shown on plan. Allow for reconstruction of RiverWalk (asphalt path) through the new 31st Street Park Entrance.
- **Utilities –** Allow for construction of primary (water, storm sanitary, and telecommunication) utilities in this area. Utilities to be sized for long range 25,000SF enclosed visitor's center and two 10,000SF restaurants.
- **31st Street Upgrade -** Allow for the improvement of 31st Street as shown on plan with granite curbs, asphalt paving, central planted median and concrete sidewalks. Street to be lighted with period fixtures to match historic district. Allow for re-grading of street in mid range plan (as shown on long range plan).
- **Turn Around and Parking Areas (On Bluff) –** Allow for construction of turn around with central planted island (permanent – granite curbs) and parking (temporary – concrete curbs) on bluff. See long range plan for grading concept.
- **Pedestrian Plaza –** Allow for construction of pedestrian plaza with stone paving as shown on middle range plan.
- **Retaining Walls –** Allow for construction of retaining walls for turn around area as well as stair and ramp park access area. Retaining walls to be faced with large (36"X48") sandstone blocks salvaged from McAlpine Locks upgrading project.
- **Stair and Ramp Park Access –** Allow for concrete stair and with stainless steel hand rail into park from bluff parking. Allow for 290 length X 8' wide elevated ramp @ 4.9% slope (no landings) to be made of painted steel with concrete filled metal pan and a stainless steel handrail. Note: this ramp is elevated and not on fill.

Figure 91: Section illustrating the proposed visitors area and restaurants at the end of 31st Street overlooking the Ohio River. The visitors area will contain an expanded Portland Museum with new archeological facilities as well as a gift shop.

Figure 92: View underneath the K&I Bridge toward the proposed visitors' center and museum.

- **Visitors' Center –** Allow for 10,000 SF open air, covered visitor's center, constructed on wood piles over edge of bluff as shown on plan. Visitor's center to have full color interpretive displays. Visitor's center to incorporate restroom facilities. Visitor's center to have overlook deck. Pile supports to be designed to carry future enclosed restaurant facility.
- **Interpretive Signage –** Allow for two open air interpretive stations with full color interpretive panels.
- **Site Lighting –** Allow for lighting of all parking, plaza, ramp and stairs. Allow for night lighting of both sides of the K&I Bridge within the park and visitor's area.
- **General Grading –** Allow for rough and fine grading for all areas around 31st Street and the K&I railroad bridge and between the park visitors area and the McAlpine Locks visitor center north of the elevated interstate. Allow for re-grading and installation of river gravel beneath the K&I Bridge and the elevated interstate in this area.
- **Irrigation –** Allow for irrigation of planted areas as shown on plan.

3. Long Range Plan Recommendations

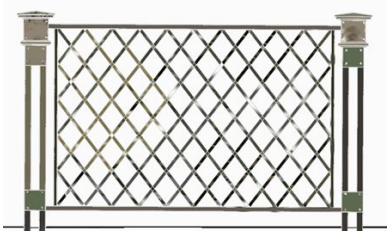


Figure 93: Drawing of existing railing on the unused automobile lanes on the east and west side of the K&I Bridge.

Area #1– Portland Wharf Park

- **Boat Landing –** Allow for installation of floating dock, including necessary dredging and shoreline stabilization to allow for city-owned river boats to dock at landing and allow users to visit the site.
- **Boat Landing Access –** Allow for 200 LF of movable ramp access from end of arced walk. Ramp to have maximum slope of 4.9%. Allow for extension of stone arced walk to end of movable ramp. Ramp to land on floating dock.

Figure 94: Rendering of Louisville from Alexis du Toquville's, *Democracy in America*, 1831.

- **Building Interpretation –** Allow for interpretation additional building sites along Commercial (34th) Street with ghost structures made of painted steel and crushed stone and brick "floors". Include full color signage for building interpretation.
- **Garden Reconstruction-** Allow for full reconstruction of rear yards and work yards on all lots adjacent to building sites. Yard reconstruction to include paths and outbuildings.
- **Farm Interpretation –** Allow for reconstruction of small working farm (2 acres) with active agriculture, ghosted steel farm buildings and full color interpretation.
- **Lighting –**Allow for spot and flood lighting on ghost structures and in rear yards. Allow for lighting along arced path to boat landing and lighting on boat landing.
- **Archaeology –** Allow for full archeology for buildings and yards along Commercial (34th) Streets as shown on middle range plan. Allow for full archeology of farmstead in extreme western end of park site.
- **Furnishings -** Allow for seating to be incorporated into boat landing.

Area #2 – Visitor Area East of K&I Bridge

- **Parking –** Build parking facilities (and storm water management) on either side of 31st Street as shown on the long range plan.
- **Sidewalks –** Build integrally colored sidewalk connections between parking and park and bluff as shown on long range plan.
- **Visitors Center –** Build 25,000 SF enclosed visitor's center with display space, archaeology facilities, museum quality exhibit space, staff offices and gift shops.
- **Tram Route–** Build tram route / emergency access route of 12' width asphalt from 34th Street Floodgate beneath the K&I Bridge and elevated interstate to the parking facility and

Figure 95: View of dining area overlooking boat traffic on the Ohio River and the McAlpine Locks.

31st Street as shown on the long range plan.

- **RiverWalk –** Allow for cost of construction for Riverwalk Connection from the visitors center drop off to the McAlpine Locks visitors center.
- **Park Maintenance & Storage –** Public/private financing for receiving, maintenance and storage facility co-developed with private restaurants and public sector museum/visitors center. Allow for 50/50 split, and include 50% in estimate.
- **Restaurants –** Restaurants to be privately funded.

D. INTERPRETIVE PROGRAM

Figure 96: Detail of Watercolor of Portland Wharf, Sand Island and the main steamboat channel by Karl Bodmer (from the 1830's).

The interpretive program for Portland Wharf Park is organized around the best viewing locations from which its history can be told. This story can be told in any number of abstract ways in an museum based setting, but the physical evidence found on the site (whether existing or found during archeological investigation) is the best way to bring the history alive for visitors. The interpretive program is organized around the full development of the master plan, and makes some broad assumptions about what the archaeology will reveal and where the best places are to tell the story of Portland. The final locations for best telling the story (as well as unknown chapters of the story) are yet to be determined. However, enough is known about the site from oral, written, and map research to out line the key places and events that will remain important parts of the Portland Wharf history. The map on the next page denotes the key viewing / interpretive locations identified in the master plan, also known as the "interpretive framework" of the plan. The key locations, or "stations" of the interpretive plan are as follows:

Station 1, with its high view overlooking the Ohio River, McAlpine Locks, Sand and Shippingport Islands, and the skyline of downtown Louisville, will be the best location to interpret the origions of Portland. Topics interpreted here will include the late18th century portages, the various proposed and constructed lock and canal systems, the Civil War lock and canal, and the current McAlpine Locks reconstruction. The role of Shippingport in the history of both Portland and Louisville can also be told from this vantage.

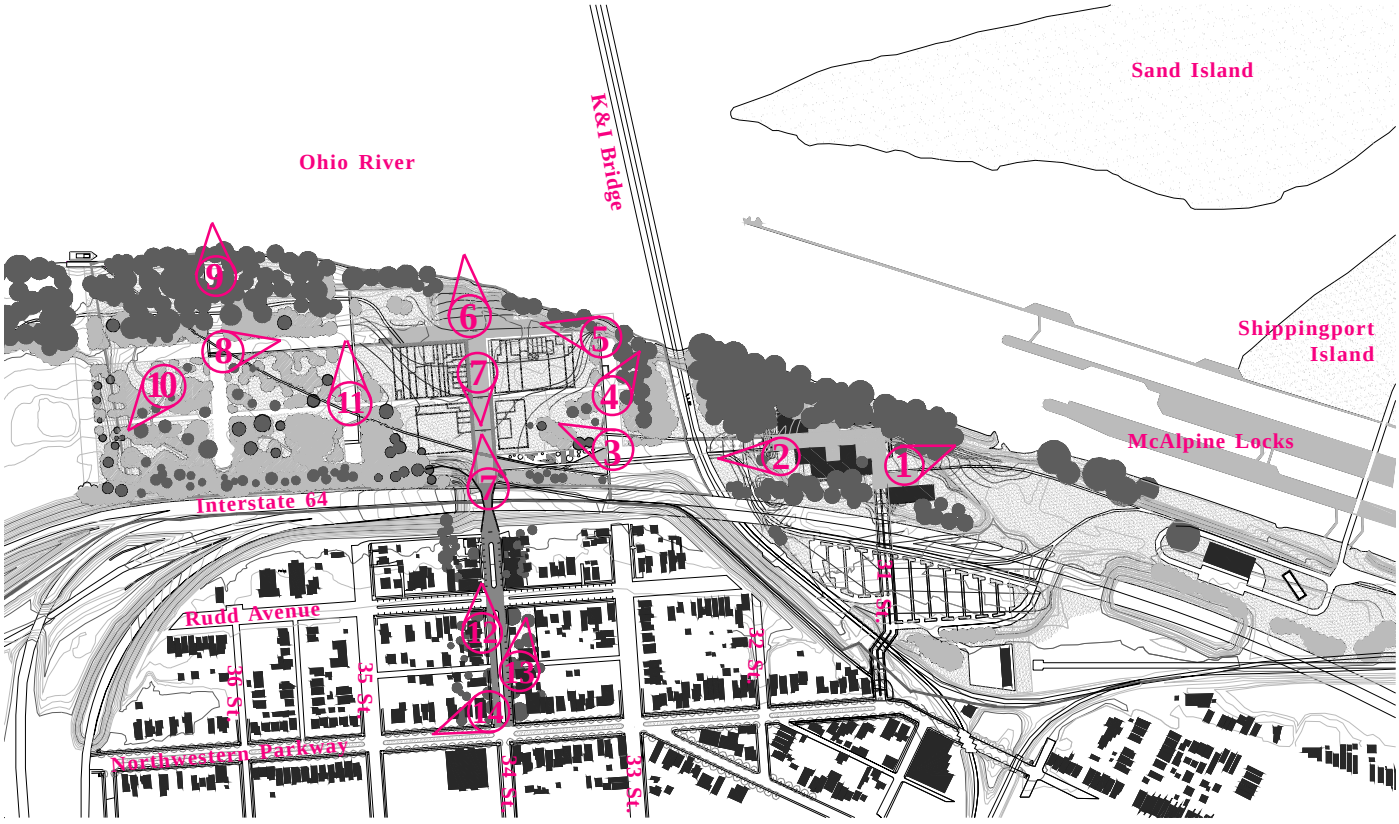


Figure 97: Interpretive Framework for Portland Wharf Archaeological Park and Historic District. Each location would include interpretive signs (full color) with text, maps and historic photos. Several locations would have interpretive elements such as reconstructed gardens, roads, and rails, as well as more abstract structure 'outlines' to convey the scale and texture of the past.

Figure 98: Historic photograph of Villier family members, part of a significant group of French immigrants that settled Portland in the19th century.

Station 2, with its views of the K&I Bridge, Interstate 64, and face of the floodwall, will be the best location to introduce visitors to the various modes of transportation used in Portland and their effects on the history of the area. The extent of Ohio River flooding and the 1937 flood and subsequent abandonment of the Portland waterfront can also be told from this unique vantage point.

Station 3, which is the first that visitors will encounter upon descending the ramp beneath the K&I Bridge from the visitor area, will focus on the older portion of Portland, including the possible sites of early 19th century warehouses (as indicated in the 1830's watercolor of the Portland by Karl Bodmer). This location near [historic] Front and Fulton (now 33rd) Streets will afford views of ongoing and interpreted archeological sites. This will be an ideal location to give an overview of the archeological process as well as an introduction to early settlement and wharf activity.

Station 4, from Fulton (33rd) Street towards the river, will continue the story of the early site history. It is located at an area of potential early 19th century archeological sites.

Station 5, located at the intersection of [historic] Water Street and Fulton (now 33rd) Street, will offer visitors an overview of the Ohio River and Portland Wharf. This will be the best location to begin telling the story of the wharf's long history and the types of boats, cargo and people the moved across its surface.

Station 6, located at the intersection of Commercial (now 34th) Street, [historic] Water Street and the [historic] wharf site, will be the key interpretive location within the archaeological portion of the park. This will be the ideal site for creative interpretive element installations to bring the activity of the wharf alive for visitors. Reenactments and events on the reconstructed wharf will also bring this site alive. This location is framed by the location of [historic] Water Street with its commercial frontage adding another element for archeological research and interpretation.

Station 7 is shown at two locations on Commercial (34th) Street. This key street links the Portland historic district with the Wharf and will be the site for an interpretive overview of life and activity on this broad street , and will feature interpretive sites along the street that describe the types of buildings (i.e. the Villier's Hotel) that lined it during different periods of history.

Station 8, located at the intersection of Ferry (36th) Street and [historic] Water Street, will afford

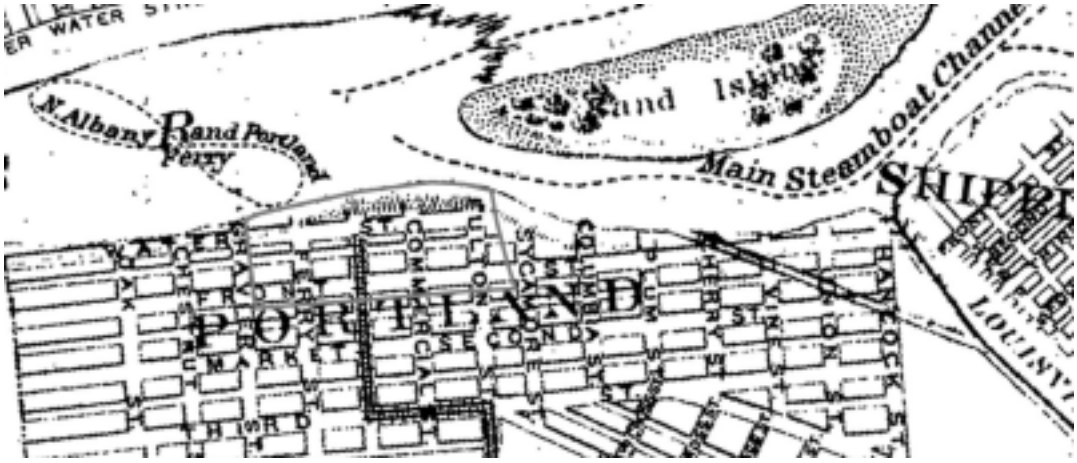


Figure 99: Detail of 1865 map of Portland and Louisville showing historic street names.

Figure 100: Historic photograph of the Portland waterfront at Ferry Street, with the K&I Bridge in the distance.

a panorama of both the Ohio River and the former location of the New Albany and Portland Ferry. It will also offer views back to the wharf and will be the interpretive location for the various industrial activities that may be uncovered or identified in this part of the site.

Station 9, located at the foot of Ferry (36th) Street and the Ohio River, at the site of a long time ferry operation to Indiana, will be an ideal place to discuss the operation of the ferry as well as the types of people and goods it transported. A discussion of the ferry's role in the Underground Railroad may also be appropriate at this location.

Station 10 is the possible location of 19th century farmstead that belonged to freed slaves. These farmsteads may be identified in archeological investigations and interpreted through the reconstruction of a working farm.

Station 11, at the intersection of the alley between [historic] Water and Front Streets and 35th Street, has long been known as the location for the railroad tracks that led from Portland to Louisville. An interpretive station identifying the types of activities that occurred in this key transportation area (serving Portland Wharf, Commercial (34th) Street and the ferry), as well as a possible reconstruction of tracks, would be appropriate for this area.

Station 12, located within the Portland Historic District at the intersection of Commercial (34th) Street and Rudd Avenue, will focus on the farmers' market that once existed on the site and the possible reconstruction of this market in the future.

Station 13 will focus on the Squire Earick House and interpret early 19th century life in Portland.

Station 14, at the intersection of Commercial (34th) Street and Northwestern Parkway, will interpret the historic relationship of Portland to Louisville, as well as Frederick Law Olmsted's open space plan for Louisville and the historic restoration of his design for Northwestern Parkway.

This interpretive framework, in general, focuses on the archaeological portion of Portland Wharf Park and its immediate connections to the Portland Historic District. An interpretive program for the historic district itself, including signage and other interpretive elements, should be developed to dovetail with the interpretive program for the park.

E. CIRCULATION

Portland Wharf' is located at a key juncture of several existing and proposed tourist and recreation circulation routes.

The existing alignment of the Louisville RiverWalk has been modified in the master plan to continue through the park along a slightly different path. The RiverWalk has been expanded to the east through the visitor area and adjacent to the McAlpine Locks and the river's edge to Shippingport Island and downtown Louisville.

The *Ohio River Masterplan Cornerstone 2020* plan has called for a heritage tourist route using the [eastern] unused automobile lane on the K&I Bridge to complete a tram route between downtown Louisville and the Falls of the Ohio in Indiana. Portland Wharf Park should be incorporated into this overarching vision for connecting and featuring the historic, natural, and

cultural sites along the Ohio River in Kentucky and Indiana. Portland Wharf Park, with its museum, waterfront restaurants, and archaeological areas could become a major heritage tourism destination, along with the surrounding Portland neighborhood.

To serve the park and historic district, this study is recommending a tram loop system connecting the visitor area parking facilities with the historic district and the 34th Street commercial restoration. The tram would drop vistors off at the archaeological area, and would feature a turn around on the restored wharf at the edge of the river. This route could also be connected to a larger system that would take visitors down Portland Avenue to the Portland Museum and the Marine Hospital (as recommended in the *Portland Discovered* plan). The tram itself could take many forms; one idea is to recreate the horse drawn cabs of the Portland-Louisville Railroad.

The *Ohio River Masterplan Cornerstone 2020* plan also calls for a regional bike trail be in-

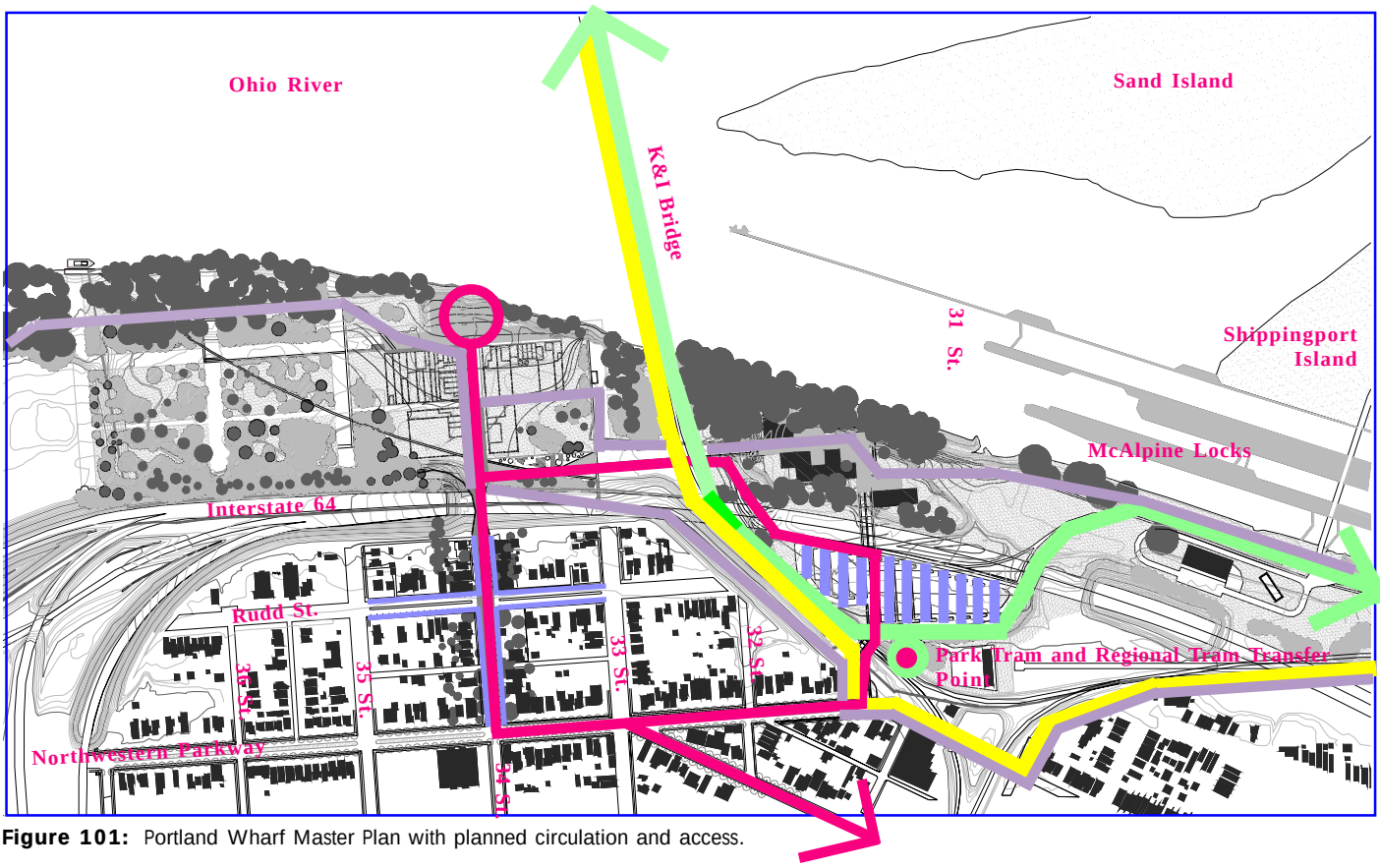


Figure 101: Portland Wharf Master Plan with planned circulation and access.

Regional tour route over unused east automobile lane of K&I Bridge. This loop, as recommended in the Ohio River Heritage Tourism Plan, would connect the Falls of the Ohio with downtown Louisville and Portland.

Portland Wharf Park internal tour loop with possible connections down Portland Avenue.

Automobile parking areas

Regional bike trail connection across the unused west automobile lane of the K&I Bridge as recommended in the Ohio River Corridor Heritage Tourism Plan.

Existing and proposed RiverWalk

stalled on the [western] unused automobile lane of the K&I Bridge. This regional bike trail connection would integrate well with the master plan for Portland Wharf Park.

Automobiles are able to access Portland Wharf Park from many directions and routes. Two key parking areas are recommended for the park. On-street parallel parking is recommended as part of the streetscape improvements along 34th Street and Rudd Avenue just outside the park entrance at 34th Street. A larger parking facility is recommended along 31st Street, a section of which could be placed under the elevated portion of Interstate 64. This parking lot could serve not only the park and historic district, but could also be a key access and staging area for the heritage tour trams.