QUAD CITIES, IOWA/ILLINOIS

MISSISSIPPI RIVER CORRIDOR DESIGN PRINCIPLES

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January 1996

"The River has not beginning or end. In its beginning, it is not yet the River; in its end it is no longer the River.

What we call headwaters is only a selection from among the innumerable sources which flow together to compose it.

At what point in its course does the Mississippi become what the Mississippi means?"

- T.S. Eliot

Preface

The Quad Cities recognizes the value and importance of the Mississippi River as a tourist attraction, commercial and environmental resource and a panoramic wonder. Treasuring this significant natural feature, the people of the Quad Cities ***envision a Mississippi River Corridor to be vital, distinctive and accessible, coordinated in its use, integrated through good design, and cared for by all of us.*** This vision requires a commitment to a shared respect for the river, improved and new access to, from and along the river, good river corridor design and interpretation of its geography, history, culture and points of interest.

The Quad Cities Mississippi River Corridor Design Principles document results from the need to achieve this community vision. It was created to provide planners, zoning officers, recreation interests, developers, businesses, agencies, local community groups and the general public with a reference for improving and enhancing the aesthetic quality of the Quad Cities Mississippi River Corridor. ***It is intended to be used during the creation of architectural, landscaping, wayfinding and/or site plans for riverfront development. Its purpose is to enhance good riverfront design in cooperation with other decisions of land use and location.***

The development of the Design Principles involved diverse riverfront interests from government, business, natural resources and the public to create a comprehensive sourcebook for river edge design. It contains ***suggestions for river access, signage and graphics, landscaping, riverfront art, outdoor furnishings, lighting, architecture and resource enhancement along the Mississippi River.*** It also offers the ***framework for linking the River Corridor region-wide.*** The Design Principles embraces the Quad Cities "image" as a desirable place to live, work and visit.

Acknowledgments

Quad Cities Mississippi River Corridor Planning Participants

This document is the evolution of an on-going riverfront planning process with participation from a variety of groups and organizations in the Quad Cities Mississippi River Corridor. Special thanks goes to the River Corridor Design Principles Steering Committee which developed the original draft and concepts for this document. The Steering Committee was comprised of:

- Bi-State Regional Commission
- The Lakota Group (Chicago)
- Putnam Museum
- Quad City Arts
- Quad City Conservation Alliance
- River Action (Facilitator)
- Community Planners
- Local Businesses

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With additional input and participation from:

- City of Bettendorf, Iowa
- City of Buffalo, Iowa
- City of Davenport, Iowa
- City of East Moline, Illinois
- City of LeClaire, Iowa
- City of Moline, Illinois
- City of Riverdale, Iowa
- City of Rock Island, Illinois
- Davenport Levee Commission
- Rock Island County, Illinois
- Rock Island County Metropolitan Mass Transit District
- Scott County, Iowa
- Village of Andalusia, Illinois
- Village of Hampton, Illinois
- Village of Port Byron, Illinois
- Village of Rapids City, Illinois

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- Deere & Company
- East Moline Citizens Advisory Committee
- Great River Trail Council
- Illinois Arts Council
- Illinois Department of Natural Resources
- Illinois Environmental Protection Agency (Planning Division)
- Iowa Department of Natural Resources
- Izaak Walton League, Davenport Chapter
- Modern Woodmen of America
- Moline Consumers
- Quad City Civic Center Authority
- Quad Cities Convention & Visitors Bureau
- Quad City Marine
- Quad City Riverfront Council
- Quad City Waterfront Master Planning Committee
- Renaissance Rock Island
- Renew Moline
- Riverboat Development Authority
- U.S. Army Corps of Engineers, Rock Island District
- U.S. Fish & Wildlife Service
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Quad Cities Mississippi River Corridor

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Mississippi River Corridor

SECTION 1

1. Mississippi River Corridor

1.1. Quad Cities Civic Setting

The Davenport-Moline-Rock Island Metropolitan Area or Quad Cities Area (QCA) is nestled between eastern Iowa and western Illinois on the shores of the Mississippi River, 165 miles (266 km) west of Chicago. The metropolitan area embodies Scott County, Iowa and Rock Island County, Illinois and part of Henry County, Illinois. The Quad Cities Metropolitan Area flourishes with a current population over 350,800. A population of 362,000 is projected for 2010.

The Quad Cities offers a vast number of quality of life amenities. These range from 143 parks, 5 public swimming pools, 17 public golf courses, regional recreational trails, 3 regional shopping centers, a minor league baseball stadium, an indoor ice/soccer complex, 2 convention centers, a civic center, 16 area museums and galleries, 4 daily newspapers, 21 radio stations and 5 television stations.

The Mississippi River, however, is the community's greatest resource. The River is the central selling point used by the Quad Cities Convention and Visitors Bureau. Their slogan highlights our river location, "Midwest Magic on the Mississippi River".

"The great Mississippi, the majestic, magnificent Mississippi, rolling its mile-wide tide along, shining in the sun; . . . a sort of sea, and withal a very still and brilliant and lonely one."

- Mark Twain

The natural river setting provides winter habitat for bald eagles, as well as unique wetland environments for a variety of wildlife. A myriad of historic resources are interspersed with cultural and natural features. The river also provides a great commercial resource to the region, transporting goods locally, regionally, nationally and internationally. It is an asset which commands respect for the magnitude of its natural forces, economic vitality and great beauty.

1.2. Quad Cities River History

The Mississippi River is a dominant feature of the Quad Cities landscape and has been a major factor in its history, influencing economic, social and cultural activities. Many historically important sites and industries are located along or are visible from the river. It offers numerous opportunities to explore and interpret the Quad Cities' rich history.

SETTLEMENT AND INDUSTRIAL GROWTH

From precontact period to the present, the Mississippi as a natural resource and means of transportation has attracted people who built homes, cities, businesses and industries. Native American cultures and tribes found the river valley rich in resources and desirable for living. Their trade alliances brought French, British and Americans to the area. America's westward expansion forced the Native Americans from the region and prompted the establishment of the Quad Cities by these immigrants.

Davenport, platted by Antoine LeClaire and George Davenport, became an important steamboat port and springboard for the settlement of Iowa. Originally called Stephenson, Rock Island was founded by

families from southern Illinois and southern states. The City of Moline was founded by men involved in the lumber mills and farm implement factories being built at the east end of Arsenal Island because of access to river transportation and water power. In the early 20th Century, Bettendorf took its name from and grew because of the Bettendorf Company, which made wheel assemblies for railroad cars. East Moline was incorporated to attract factories and residents to the land east of Moline.

TRANSPORTATION

The QCA holds a unique place in the development of regional and national transportation systems. As the nation's transportation systems evolved from steamboats to railroads to automobiles, the area attracted a variety of industries, some directly related to transportation and others which capitalized on the local facilities.

Because of the Rock Island Rapids at LeClaire, Iowa and Fort Armstrong at Arsenal Island, Davenport and Rock Island were early steamboat stops as river pilots navigated their cargo and passengers through the perilous channel. The U.S. Army Corps of Engineers removed rocks from the rapids in the 1800's and constructed the lock and dam system in the 1930's, making the river more passable for barges and steamboats. Today, the river continues to be an important avenue of transportation for barge and pleasure boat traffic alike.

Its geographic features and location west of Chicago and north of St. Louis on the Mississippi River have made the Quad Cities a major crossroad for railroad and highway transportation systems. Because of Arsenal Island's federal ownership and the narrowness of the river, the first railroad bridge across the Mississippi was built between Davenport and Rock Island, making it a crossroad between north-south and east-west travel and commerce. Many immigrants and settlers, heading for the Iowa prairie and points west, passed through the Quad Cities.

With its location on the Mississippi River and the railroad connections, Davenport became a rallying and training center for Union troops and site for Camp McClellan in East Davenport. The advent of state and interstate highway systems and their connection with the river and railroad terminals continued the area's role as a major intersection in the nation's transportation system.

Putnam Museum

Downtown Davenport riverfront in 1930 with W.D. Petersen Music Pavilion and Davenport Municipal [John O'Donnell] Stadium.

URBANIZATION, SOCIAL, AND CULTURAL TRENDS

During the 20th Century, the Quad Cities' relationship with the river has changed with the economic, social and cultural trends and opportunities. The Davenport Levee Commission conducted levee improvements dating from 1915 including the construction of LeClaire Park's W.D. Petersen Music Pavilion bandshell in 1924. Depression-era federal programs included further improvements in this vicinity with the construction of John O'Donnell Stadium. These levee improvements shaped future cultural and recreational activities within the Quad Cities River Corridor.

After the World Wars, economic and population growth prompted the construction of housing projects, subdivisions and outlying shopping areas, diverting development away from riverfront and downtown areas. After the decline in the region's extensive farm implement industry in the 1980's, renewed interest in downtown and riverfront redevelopment brought the establishment and growth of shopping and historic districts, riverboat gambling, convention and civic centers, riverfront parks and cultural events.

1.3. River Corridor Context

GEOLOGY

As the Mississippi River flows east to west along its present course, its waters bisect the Iowa/ Illinois Quad Cities Area. Geological forces of uplift and erosion created the ancient river valley. During the Pleistocene Epoch, the river valley was further defined by the four major glacial advances and subsequent recessions. With the retreat of the last glacial event some 10,000 years ago, the present streams have been widening their valleys and forming broader floodplains as the growing Mississippi River carries sediment to the Gulf of Mexico.

Present day lowlands are the remnants of the ancient pathways of the river now occupied by smaller rivers or streams. These lowlands, very level and poorly drained, include the Meredosia Bottomlands on the eastern boundary of Rock Island County, the Wapsipinicon River Valley on the northern border of Scott County, the Rock River Valley in central and eastern Rock Island County, Pleasant Valley in Scott County east of Bettendorf, Iowa and the Drury Bottomlands in western Rock Island County.

Bluffs flank the River Corridor, 100 to 200 feet (30 to 60 m) in height, which drain into the basins. The bluffs are capped by unconsolidated sand and gravel, forming alluvial terraces which rest on sedimentary bedrock including sandstone, limestone, shale and dolomite. Many underground aquifers in the river valley region produce high groundwater yields from the existing bedrock.

ECOLOGY

The Mississippi River is critical to the Quad Cities for both humans and wildlife. From a human standpoint, the river provides the water supply for a majority of the riverfront communities. It is also a major transportation artery for conveying goods and services. From a wildlife perspective, the Mississippi River is recognized as being a "Nationally Significant Ecological Resource" by the U.S. Congress.

Wetlands are among the Nation's most endangered habitat types. The few remaining wetlands in the Quad Cities provide increasingly sparse habitat for a variety of wildlife. Other habitats include both prairies and forests. In some cases, development has created habitat or attracted wildlife. For example, Locks and Dams 14 and 15 attract bald eagles because fish can be found in the open water downstream of the dams during winter months, when the river and other water bodies may be ice covered.

Terrestrial wildlife may include beaver, chipmunks, coyote, fox, muskrat, opossum, otter, rabbits, raccoon, skunk and squirrels. The only big game animal in the area is the white-tailed deer.

The River Corridor hosts a variety of waterfowl and shorebirds. Located within the Mississippi Flyway, the river biannually sees the migration of millions of ducks, geese and other migratory birds. Waterfowl use the river and its backwaters, sloughs and wetlands for resting and feeding en route either north for breeding or south for wintering. Shorebirds

inhabit the marshes, sloughs and sandbars of the river and woodlands.

A significant population of eagles can be seen wintering in the QCA. A designated eagle sanctuary (Elton Fawks Eagle Refuge) is located along the river between Hampton and Rapids City, Illinois near Lock and Dam 14. Bald eagles provide the region with a unique natural asset attracting the interest of residents and visitors. In addition to this sanctuary, there is another area offering protection located west of the Interstate 280/Illinois Route 92 interchange near the confluence of the Rock and Mississippi Rivers. This area is owned by the U.S. Army Corps of Engineers and managed by the Mark Twain National Wildlife Refuge of the U.S. Fish and Wildlife Service.

Illinois Department of Natural Resources

Bald eagles wintering in the Quad Cities attract a variety of visitors and residents to the riverfront.

The Mississippi River proper is home to a tremendous variety of aquatic organisms. Extensive sport and commercial fishing opportunities are available, with at least 70 species of fish. Important sport fish include channel catfish, flathead catfish, walleye, sauger, largemouth bass, white bass, carp, northern pike and a variety of panfish. The river contains over 30 species of freshwater mussels including the federally listed endangered Higgin's eye pearly mussel. A variety of snakes, turtles, amphibians and other aquatic organisms also live in and along the river.

The federally listed endangered Higgin's eye pearly mussel and threatened bald eagle have already been mentioned above, however, there are other endangered species in the Quad Cities Mississippi River Corridor. Other federally listed endangered species occurring in Rock Island County, Illinois include at least 8 plants, 5 fish, 8 mussels, 5 birds, 2 mammals and 1 reptile. In Scott County, Iowa, the endangered species include at least 2 plants, 5 fish, 4 mussels, 2 insects, 1 reptile, 2 birds and 3 mammals. More information on these species is available from the Illinois Department of Natural Resources (formerly Department of Conservation), Iowa Department of Natural Resources and the U.S. Fish and Wildlife Service offices, respectively, listed in Appendix D.

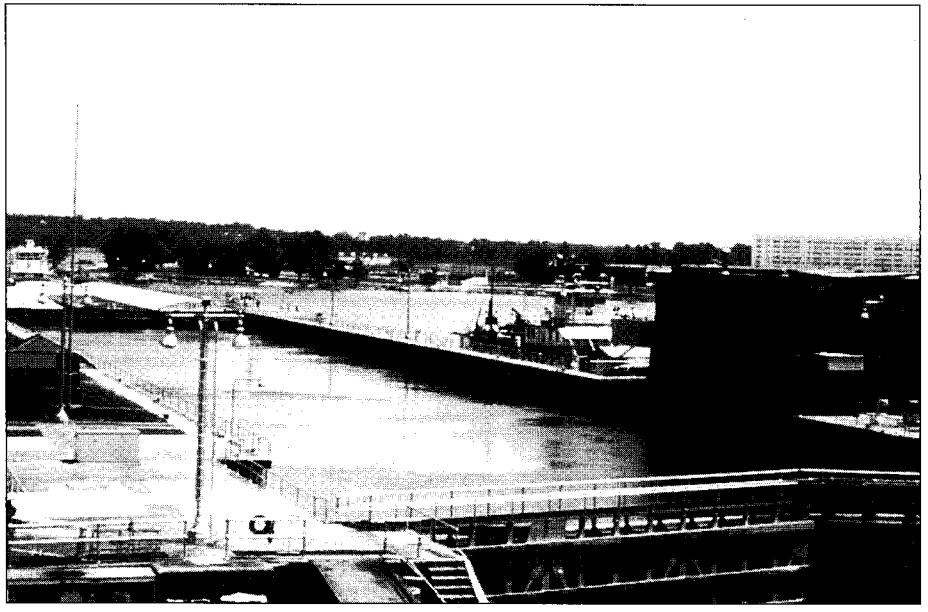
ECONOMY

The Quad Cities is known worldwide as a manufacturer of a variety of industrial products. The 17 largest employers in the area provide over 34,000 jobs, varying from manufacturing to health care and retail to utilities. Area employment for 1993 was 172,900. The high productivity of the work force and low cost of doing business combine to make the area one of the most cost effective manufacturing centers in the United States.

The Quad Cities is located midway between Minneapolis to the north and St. Louis on the south. The largest contiguous cities comprising the metropolitan area include Bettendorf and

Davenport, Iowa and East Moline, Moline and Rock Island, Illinois. The Quad Cities area is bounded by two interstate highways, I-80 and I-280, and split by I-74. The entire River Corridor is served by four interstate highways, five U.S. highways, ten state highways, five railroads and five major air carriers with thirty-one departures per day. The bi-state metropolitan area is connected by five bridges over the Mississippi River, three interstate and two local.

The Mississippi carries significant commercial and recreational waterway traffic. In 1992, the Corps of Engineers reported that 30.4 million tons (27.6 million metric tons) of freight passed through Lock and Dam 15, based on traffic within the Corps' Rock Island District. Records show the historic tonnage has been steadily increasing since the 1950's. The Corps is currently investigating navigational capacity of the river in a major feasibility study. Eighteen barge terminals are featured in the River Corridor. Seventeen are served by rail connections. The Mississippi provides a 9-foot (2.7 m) channel with a 10-month navigation season, not withstanding flood occurrences. A U.S. Customs Port of Entry and Foreign Trade Zone serve as economic gateways into the Quad Cities.



Bi-State Regional Commission

The Mississippi River, a working river, supports a variety of commercial and recreational traffic. View at Lock and Dam 15.

Mississippi River Vision

SECTION 2

2. Quad Cities' Mississippi River Vision

2.1. River Significance

The Mississippi River conjures up a variety of visual and mental images. Its dramatic natural forces of flowing waters eroding bedrock and soils have created the current landscape. The river is a life force for humans and wildlife. The U.S. Congress recognized the Mississippi's importance by designating it a nationally significant ecological resource. Literature has heralded its spectacular and dynamic characteristics, transforming the Mississippi River into a cultural icon. The river has also played a significant role in our Quad Cities area development and in the westward expansion of our nation. The river provides a valuable economic resource as well. As a working river, the Mississippi is an essential corridor for commerce, serving as the life blood of transportation for industry and community alike. It also provides a host of recreational and tourist opportunities. The river is the heart and soul of the Quad Cities, the foundation for our economy, the center of our culture, and our greatest natural treasure.

2.2. River Vision

Recognizing the significance of the Mississippi River to the Quad Cities, the Waterfront Master Planning Committee, on behalf of the people of the Quad Cities, developed a vision of the Quad Cities Mississippi River Corridor.

Quad Cities' River Vision states:

"We envision Our Mississippi River Corridor, the River and its Riverfront, to be vital, distinctive and accessible, coordinated in its use, integrated through good design and cared for by all of us."

This vision statement is founded on the following ideas developed at a public workshop with its emphasis on riverfront development in a floodplain held in January, 1994:

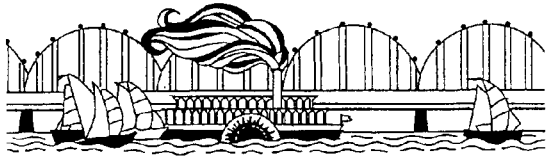
- The river will be acknowledged and accepted as the Quad City area's greatest asset and its most prominent unifying element, linking the downtowns, neighborhoods, cultural and historic sites and natural habitats.
- It will be respected for its role in the history and development of this area, and for its continuing importance for industry, commerce and recreation, for the image of our cities, for public use and private enjoyment, and for the flora and fauna.
- The river will be accessible to everyone - to be enjoyed from the river's edge or vantage points - from the streets surrounding it, from the water, and from preserved and protected views along the river or on the bluffs above it.
- It will be an active river at all times of the year throughout the four seasons.
- The Quad Cities Mississippi River Corridor will be linked by a variety of methods - a water transportation system, a series of interpretative learning trails (history, natural resource, culture, mileage and wayfinding) and walking/jogging or bicycling trails.
- The river corridor from Buffalo and Andalusia to LeClaire and Port Byron will be set apart by its use of art as an underlying, unifying element through good design and creative,

aesthetically pleasing solutions to development concerns and issues.

This enhanced waterfront, as envisioned above, would include a series of interpretative learning trails which incorporate historical, natural resource, usage and artistic components. A coordinated wayfinding/signage system extending throughout the corridor would link the interpretative trails, bike trails and points of interest.

In the future, pedestrians, bicyclists and boaters traveling along the trail will be able to stop at special points of interest or activity nodes. At these river nodes, they can picnic, enjoy elements of art and culture, gaze upon scenic vistas, understand the industrial significance of a working river and learn about the region's history and geography.

The future envisioned for our riverfront calls for imaginative, creative development, for honoring special places, for remembering the past, for promoting reflection and for establishing lasting collaborations between a variety of interests.



2.3. Components of River Vision

Quad Cities' river vision calls for a conscious effort to coordinate riverfront planning and design. Four components of the vision are paramount to furthering its successful achievement. They include a commitment to a shared respect for the river, access, river corridor design, and interpretation. Defining these issues and considering them together in the larger context of the River Corridor is recognized as extremely important to future riverfront development by government, business, and community leaders. The River Corridor Framework Plan and Design Principles, presented later in this document, establish the first region-wide approach for addressing these issues in a cooperative and comprehensive manner.

"The River can be loved; it must be respected."

- **Jane Curry,**
  The River's in My Blood: Riverboat Pilots Tell Their Stories

RESPECTING THE RIVER

To achieve the river vision, there must be a community commitment to a shared respect for the river that incorporates river usage, history, art and natural resources. Appropriate use, conservation and enhancement of the river requires an acknowledgment that there is an inherent relationship between human use of the river (transportation, industrial, commercial, residential and recreational uses which must achieve their own balance) and the river's role as a natural element. This relationship between human use and nature requires thoughtful nurturing and respectful stewardship of the river's past, present and future. The Design Principles set forth parameters to secure the appropriate balance of this relationship. It is hoped that all persons connected with our River Corridor will recognize the universal benefits these principles can contribute to our pride in the Quad Cities, our future development, our sense of place and our quality of life.

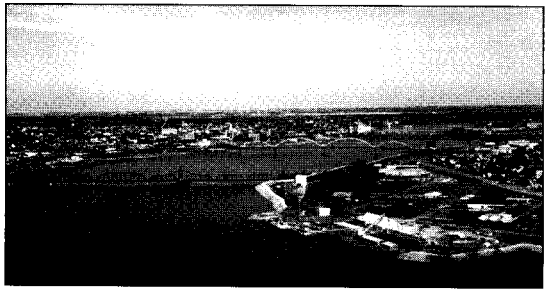
In general, shared respect for the river calls for:

- Consideration of the river as our communities' "front yard";
- Improvement and conservation of the river's environmental health;
- Beautification of unsightly structures, views or locations;

- Clean-up or securing of unsafe areas;
- Physical access, where appropriate;
- Visual access, where physical access is not appropriate;
- Enhancement of all riverfront areas;
- Coordinated uses; and
- Respectful development and sensitivity to the natural river environment including floodplains, wetlands and water quality.

RIVER ACCESS

The river is a shared resource. On any summer day, tugs and barges, sailboats, motorboats, rowboats, windsails, kayaks and rowing sculls can be seen between the locks. Its shoreline is a collection of public and private ownership with a variety of uses from industrial/commercial to residential to recreational. Its waters are regulated by a number of government agencies, the U.S. Army Corps of Engineers being the lead regulatory agency when development involves the river, riverfront, floodplain and all wetlands within the River Corridor. This multitude of uses, ownership and regulatory authority is part of what makes the Mississippi River this area's greatest asset.



Ill. Dept. of Natural Resources

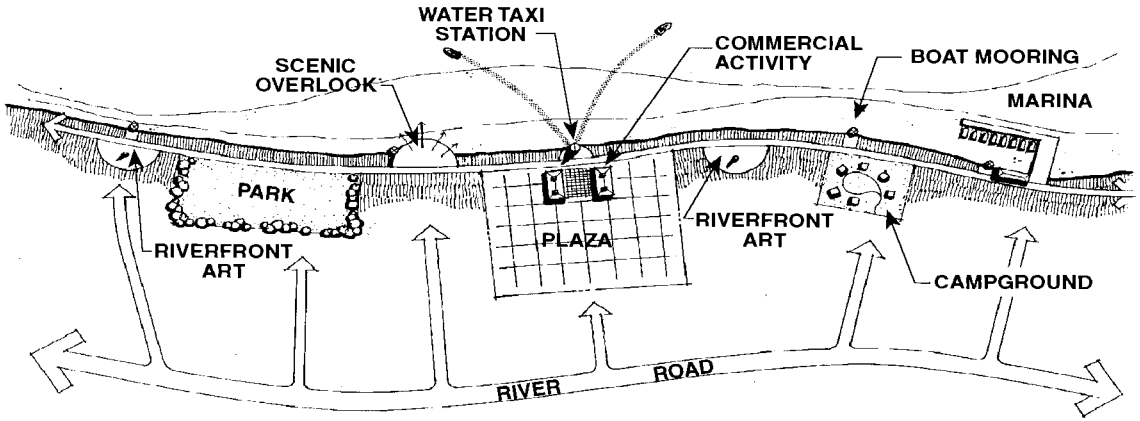
As our communities' "front yard", opportunities for coordination of uses and integration of good design exist. Lower pool at Centennial Bridge.

The vision calls for public access to the entire riverfront. However, the design principles recognize, in some cases, that this is not possible where there are safety and site concerns of an industrial operation, reluctance of the property owner for whatever reason, or an environmental concern for sensitive areas like a bird rookery or fish spawning location. In these cases, the principles call for access around such areas to complete connections of river edge trails or paths. One of the River Corridor goals is to provide where land uses permit continuous open space and/or access along the riverfront.

Access to, along and across the river is a major concern for pedestrians and bicyclists. Access is frequently limited by obstructions like buildings, walls, streets, bridges and/or levees or by ownership. Pedestrian activity is often curtailed because of steep levees, deteriorated physical conditions and the absence or lack of improved walks and paths. Private properties, especially large industrial sites, are located along the river. They often preclude the opportunity for continuous river edge paths and walks.

Access must balance the needs of industrial, residential, commercial and recreational users, wildlife and property ownership rights with the need to provide connections to the river. However, some riverfront locations should remain inaccessible or have limited access due to their conservation value. These areas need to be identified and clearly delineated by the natural resource community to ensure their viability. Alternative pedestrian and bike paths should be developed around such sites if these uses are incompatible and/or safety and security concerns are considerable. Additionally, more opportunities for bicyclists and pedestrians to cross the river should be sought. Few appropriate locations currently exist for these types of crossings. Currently, three of the five Mississippi River bridges prohibit bicyclists and pedestrians due to their design for high speed vehicular traffic.

Access to the river from the region's arterial road system also needs to be improved. There is a lack of direct street connections from arterial



Lakota Group

VARIOUS FORMS OF RIVER ACCESS: VEHICULAR, PEDESTRIAN, BOAT, VISUAL, ETC.

roads to the waterfront. Several existing streets leading to the river are in poor physical condition and/or must cross railroad lines. Rail lines often parallel the river edge, creating access and safety problems for motorists, bicyclists and pedestrians. Rail crossings need to be physically improved, with special consideration for bike and pedestrian paths.

River access between land and water can be improved. There appears to be a lack of marina space in view of the general demand for slips and the significant boating activity which exists along the river. Further study of the market demand for new marinas or their expansion and environmentally acceptable locations is needed.

Programs and facilities for sailing, sculling and rowing club activities are also needed. There is also a need for more opportunities for boaters to launch or dock boats at recreation areas and near commercial downtown areas. There is also a lack of fishing piers or docks. In several popular fishing spots, residents and visitors must stand on rocks, old piers or steep slopes to fish. Not only are there safety concerns in this situation, there are also barriers to handicapped accessibility.

Visual access to the river is an alternative to physical accessibility. Several beautiful views of the Mississippi River exist throughout the Quad Cities from the bluffs flanking the corridor, the bridges crossing it and the open space which exists at its edge. However, in some locations, scenic vistas are restricted by buildings and levees or inhibited by the lack of access to the river's edge. New development should be sensitive toward the need to preserve and enhance river viewing opportunities.

RIVER CORRIDOR DESIGN

Good design can unify and harmonize the Corridor, allowing each community to express its own identity yet participate, visually, in the wider river context. It can raise the level of appreciation and awareness of the river and its river edge developments. It can create an inviting place, drawing people to the riverfront for any number of reasons. There are two primary elements to good design: usability and visual effectiveness.

Public improvements and private development along or near the river have historically occurred in a haphazard, isolated or site specific manner. An overall vision for these improvements and developments maximizes the river's potential, either through community comprehensive land use plans, a riverfront master plan or well-defined design principles. Buildings set too close to the river reduce the potential for

waterfront paths, walks and open space. Buildings, oriented so entrances, activity areas, and open spaces are located toward the river, invite access and exemplify good design.

All waterfront developments would be improved through consideration of their river setting. Signing, landscaping, lighting, outdoor furnishings, architecture and art should be examined in relation to the river. The river's history, usage and culture should be taken into consideration in the design of projects. The numerous parks, forest preserves, and open spaces located along the river lack amenities which would enhance enjoyment of the river - benches, tables, restrooms, appropriate play areas, boat launches and moorings and food concessions.

To achieve an aesthetically and visually cohesive riverfront setting, attention toward architecture that does not turn its back to the river, but respects its site and uses materials and landscaping that enhance the river setting is encouraged. It will also need a corridor-wide signage system where consistency, placement and content are thoughtfully and creatively incorporated within the context of the individual riverfront communities and the River Corridor. Other enhancements such as outdoor furnishings and lighting add cohesive elements to the river setting.

RIVER INTERPRETATION

An often neglected feature in riverfront development is the issue of interpretation and education. Consideration of the river as a physical and symbolic link between communities, counties and states rather than a physical or geographic barrier can ensure its commercial and environmental health and continuing care. The river needs to be thought of as a shared amenity. River interpretation addresses the need for education in science and humanities through active and passive story telling, programming and visual presentation.

There is a general lack of awareness by residents, business owners, property owners and visitors of the waterfront's existing assets and its future potential. Public education programs are needed to promote the river's history, ecology, geography, land uses and importance to Quad Cities residents.

A cooperative marketing program is also needed to promote the river experience to visitors, tourists, developers, property owners and conservationists.

The River Corridor needs a cohesive wayfinding system with coordinated mapping, information and signage. Such a system needs to be established to facilitate safe, efficient and coordinated movement to and through the River Corridor and also to promote river activities and integrated development.

Existing signage directing motorists to the riverfront or pedestrians and bicyclists along the river is often confusing, deteriorated and/or

"The lesson of Baltimore for other cities is that, as soon as you see success happening on the waterfront, you must start looking beyond it and plan for the long term if you want to control quality. You must have a vision, and a plan. Our success in the future will rely on fulfilling the original vision and ensuring a strong planning process."

- David Benn, architect

competing with other signage. Many of the roads which parallel the River are cluttered with signs and it is difficult to determine appropriate places to access the river.

Signs identifying the Great River Road, for example, are placed at only a few locations along the route. There is no consistent or regular placement of signs and motorists eventually become confused as to which road is the Great River Road or whether they are still traveling on the route.

2.4. Achieving The Vision

Achieving the vision of a River Corridor that is vital, distinctive and accessible, coordinated in its use, integrated through good design and cared for by all of us needs a commitment from local government, business and citizens. It will take a concerted effort to clearly and concisely state what the Quad Cities River Corridor is and how its future is envisioned, both often and accurately. This document is the beginning--a sourcebook for defining river respect, access, design and interpretation, and a reference book to be used for guidance in the early stages of riverfront design, after land usage and location issues have been decided.

The objectives listed below outline a framework for addressing the above needs as part of implementing river planning and design for the Quad Cities Mississippi River Corridor. These objectives provide the foundation for the development of River Corridor design principles.

- Promote a shared respect for the river which educates and sensitizes the region to the geographic, historical, cultural, natural resource and industrial/commercial value of the River Corridor and its principles for development.
- Use art and design as corridor-wide tools to unify our communities, create positive images and build enthusiasm between users and nonusers of the river and its riverfront.
- Provide safe, integrated and improved river access for all users.
- Improve and enhance vistas to, from and along the river.
- Improve the physical setting and transitions between land uses of the River Corridor by offering design principles for existing and future river edge development.
- Enhance existing river attractions and create new opportunities for waterfront activities, using sites identified along the river for special design focus and treatment.
- Promote coordinated interpretative way-finding system for the river and its riverfront with logical connections along the River Corridor.
- Encourage the formulation of public/private partnerships to enhance existing development and natural areas, and encourage future development in the context of coordinated, planned design.
- Promote the protection and wise use of existing natural areas, sanctuaries, refuges and wetlands, and encourage conservation or enhancement of other similar areas.
- Accommodate all users, particularly bicyclists and pedestrians, at river crossings through convenient and safe access to/from bridges, water taxi stations or ferry landings.

River Corridor Planning

SECTION 3

3. River Corridor Planning

3.1. River Planning Process

After the 1965 flood, the Quad Cities turned its attention away from the river's edge. Floodwalls and levees were put up in three communities to insulate them from further damage. In the subsequent two decades, attitudes slowly began to change as memories of the '65 flood faded and major flooding seemed to have subsided. In 1983, the combined Chambers of Commerce and the Junior League launched "Joined By A River", a celebration of our river history, ecology, industry and design opportunities. This was followed by the Quad Cities' hosting of the Midwest Urban Waterfronts in 1984, which brought national attention to the development opportunities of the area.

The recognition of the Mississippi River as a unifying regional asset resulted in the creation of individual community riverfront task forces and the formulation of the Quad City Riverfront Council in 1985. Riverfront planning and development progressed independently among the communities as riverfront parks, trails and civic centers were built or improved.

Simultaneous to the planning activities, trail development began in the 1980s, with the opening of the Ben Butterworth Parkway trail along Moline's Mississippi Riverfront and the Duck Creek Bicycle Path in Davenport. In 1987, the Great River Trail Council was formed to develop a 62 mile (100 km) bicycle trail from Rock Island to Savanna, Illinois along the Mississippi River. These efforts have spurred many cooperative planning and implementation activities and continue to do so.

"Make no little plans. They have no magic to stir men's blood. Make big plans, aim high in hope and work, remembering that a noble logical diagram once recorded will never die, but after we are gone will be a living thing asserting itself with growing intensity."

- Daniel Burnham

Regional riverfront recreation trails have provided a logical opportunity for linking communities and uses and have the ability to provide a medium for artistic, historical and natural resource interpretation and creating river access where none existed before. Within the planning context, trails provide an ideal means to integrate the Quad Cities Mississippi River Corridor. Important riverfront trails include:

Great River Trail *- The Great River Trail (GRT) through Illinois and Iowa is an 80 mile (129 km) recreational trail along the Mississippi River that is planned from Savanna south to Rock Island in Illinois, then from Davenport north to LeClaire, Iowa. The trail is primarily for walkers and bicyclists. Because it is to be hard surfaced, the trail is ideal for other recreational activities, such as in-line skating, running, river viewing, etc. Much of the funding for the GRT is in place for its completion within the next five years.*

Hennepin Canal State Parkway *- The Hennepin Canal State Parkway is currently an active recreational trail which extends from the mouth of the Rock River at the Mississippi River to Milan, Illinois to the east. The parkway picks up again near Colona and extends 70 miles*

(113 km) to LaSalle, following the Hennepin Canal. The trail has a crushed limestone surface and is used for walking and mountain bicycling.

***American Discovery Trail** - The American Discovery Trail (ADT), proposed by the National Park Service as part of a feasibility study approved by Congress in 1993, is a transcontinental recreational trail which is intended to extend from Cape Henlopen, Delaware to Port Reyes near San Francisco. The ADT is proposed to enter the Quad Cities River Corridor via Buffalo, Iowa along Iowa Route 22 to the existing Davenport recreation trail on the Mississippi River. Crossing the river between Davenport and Rock Island, the ADT would proceed into Illinois along the Great River Trail through Moline and into East Moline. From East Moline, the trail is planned to be routed south through Silvis and Carbon Cliff along abandoned railroad right-of-way to its connections with the Hennepin Canal State Parkway in Colona. The ADT exits the region, following the Hennepin Canal for over 70 miles (113 km) to LaSalle-Peru, Illinois. Eighty percent of the proposed ADT in the Quad Cities will be completed in 1995, using existing state and local trails.*

With the advent of riverboat gambling in the early 1990s, a renewed interest for the Mississippi River Corridor in the region evolved. Through a series of workshops and waterfront planning efforts, the Quad Cities along with other organizations (River Action, Bi-State Regional Commission, Quad City Arts, Putnam Museum, Quad City Conservation Alliance among others) have joined together to recognize and improve "that which unites them"... the mighty Mississippi River.

Bi-State Regional Commission

Bike and recreation trails provide an opportunity for linking communities and creating riverfront access.

PLANNING WORKSHOPS

Workshops were held in September, 1992 and January, 1994, involving numerous participants from several QCA organizations and agencies. The 1992 workshop included national experts from The Waterfront Center, who helped participants generate new ideas for river edge improvements and development. The 1994 workshop included national representatives from the natural resources field who helped participants envision riverfront development compatible with flood-prone areas in the aftermath of the 1993 flood.

WATERFRONT MASTER PLANNING

In 1993, River Action, an advocacy group focused on enhancing the regional riverfront, spearheaded the formation of a master planning subcommittee of the Riverfront Council to more specifically address waterfront improvement. Through a series of meetings, the downtown plans of the various cities were inventoried and reviewed as they related to the river. They included proposals associated with casino boats, a sports complex, a botanical center, new housing, bike trails and open space. These plans were then organized into a Waterfront Master Plan for the downtowns of the five largest

Bi-State Regional Commission

Waterfront planning has involved a variety of community groups over a period of years to bring projects to completion.

Quad City communities. The plan outlines future riverfront projects by describing their location and purpose, their estimated costs, and their time schedule. Many projects will be implemented as funding becomes available. The Waterfront Master Plan was completed in May, 1994. It is on file at Bi-State Regional Commission and copies are available through River Action, Inc.

RIVER CORRIDOR CONTEXT

In early 1994, River Action, Quad City Arts, the Putnam Museum and conservation representatives took the next step to expand this collaborative "river thinking". The Lakota Group, a Chicago planning and urban design firm, was commissioned to view the downtowns within the larger river context and organize a corridor-wide framework plan which identified regional assets and river opportunities, and suggested connections between these locations. This larger context or corridor extends 26 miles (42 km) from the Cities of LeClaire and Port Byron on the north to the Cities of Buffalo and Andalusia on the south between the bluffs located along the river. These communities, along with Hampton and Rapids City, were also invited to participate as the scope of river planning was expanded.

RIVER CORRIDOR FRAMEWORK PLAN

Based on information collected from the workshops, downtown waterfront plans and Lakota's corridor-wide land use assessment, a framework plan was developed. The Framework Plan outlines special attributes of the River Corridor including existing river features, planned improvements and potential improvements. It was presented in map form at a riverfront town meeting held in September, 1994. Numerous municipal, county and state agencies and local interest groups had the opportunity to review the plan.

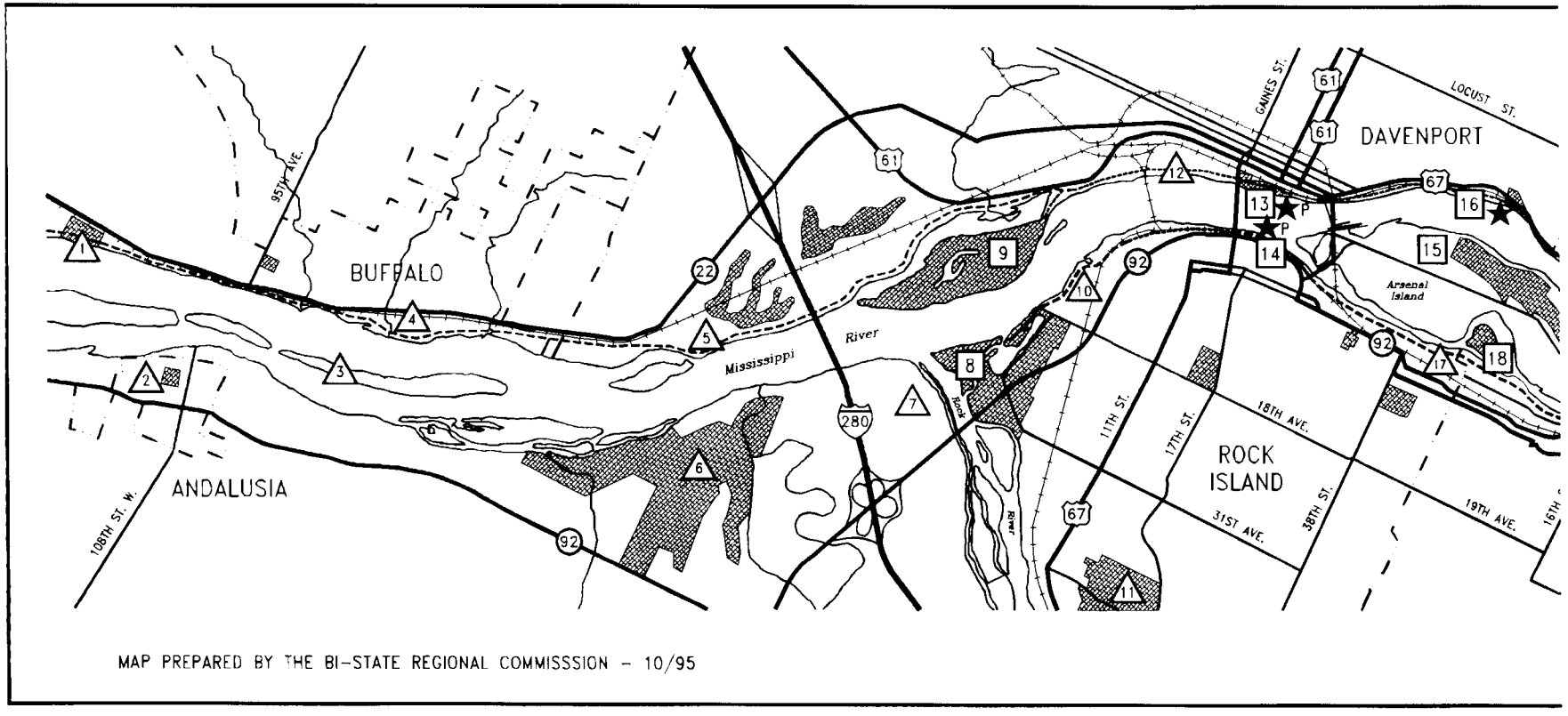
The River Corridor Framework Plan establishes important connections between river roads, bicycle trails, paths, cultural and historic sites and natural resources. The Framework Plan map on the following pages outlines the components of the plan while supporting text is located in Appendix B. The following are the components of the plan:

Great River Road System - The Great River Road follows the Mississippi River in both Illinois and Iowa and is intended to be a scenic link between communities. The road is difficult to recognize because of a lack of signage and its confusion with other parallel river edge arterial roads. In many instances, the roadsides are in poor condition, with unattractive landscaping and buildings. New signage and a beautification program to improve the visual quality and clearly establish the Great River Road is needed. It is recommended that this signage bear one name throughout the corridor to denote the Quad Cities River Corridor along the Great River Road.

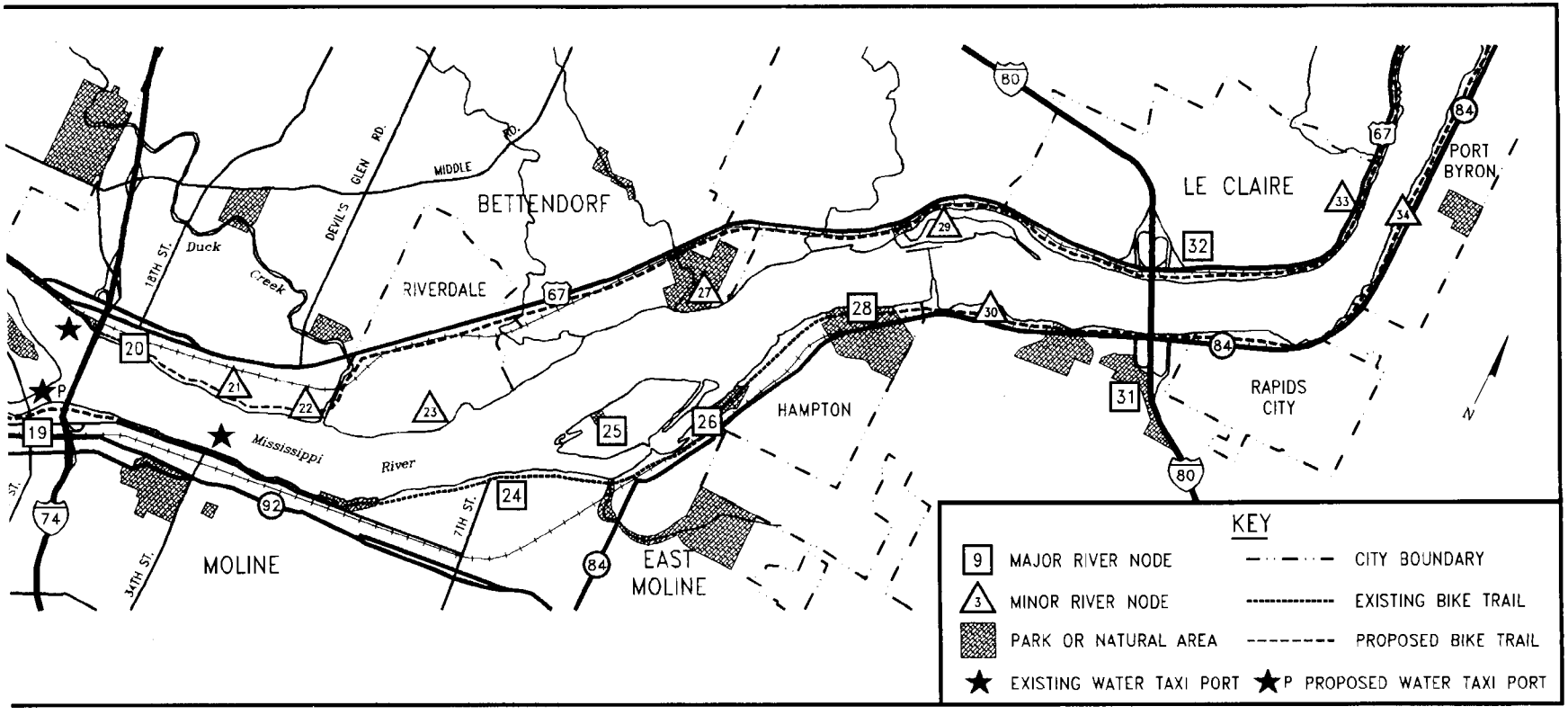
Trail System - Bicycle and recreation trails provide another linear connection between communities along the waterfront. The plan establishes one interconnected bicycle and recreation trail for both sides of the river. In some areas, such trails do not exist, while in others, they need to be connected to nearby paths and

River Corridor Planning

River Planning Process



The River Corridor Framework Plan is an inventory collected and compiled to outline existing river features, planned improvements, and potential improvements. It was presented in September, 1994 with subsequent updates to accompany the design principles document. See Appendix B for river node details.



Bi-State Regional Commission

trails not located along the river's edge. The trail system encourages ancillary development such as scenic overlooks, fishing piers, riverfront art and an integrated interpretative trail.

Water Transportation - Understanding differences between the industrial/commercial and recreational uses of the river and river safety are critical issues in water transportation. Enhancing the river's recreational aspects with new marinas, additional public boat launches, water taxis and new tour and cruise boating experiences are encouraged. Coordinating these recreational aspects of water transportation with the industrial/commercial aspects is valuable to the "working" river as an important economic resource. It is recommended that, wherever possible and appropriate, locations for transient moorings be improved to encourage "river hopping" by recreational boaters. "River hopping" encourages full use of river edge activities as boaters migrate from place to place within the River Corridor. Such locations should be near river activity centers or nodes.

Conservation - Natural resources abound in the Quad Cities. Water quality, wildlife habitat enhancement, floodplain and wetland management and environmental education should be carefully incorporated into the decision-making process for future development along the river. A balance between the working, recreational and conservation aspects of the river should be achieved to enhance the quality of the riverfront.

River Nodes - The Framework Plan identified 34 river activity nodes. A river node is a site or area with special features or attributes and future development potential. These nodes provide the basis for an integrated interpretative trail through their connection. They are categorized as primary or secondary emphasis areas according to the existing or future level of activity. For example, one area may represent an opportunity to simply enhance existing conditions such as adding picnic benches, while other nodes may have extensive development potential for housing, restaurants or shops. The plan intends to establish more places to stop along the waterfront for boaters, pedestrians, bicyclists and motorists. (See Appendix B for a list of the river nodes.) An example of the Sylvan Island River Node, as described in the Framework Plan, is shown below.

Gateways - The Framework Plan also identified gateways into the Quad Cities Mississippi River Corridor. The two interstate welcome and visitors centers along I-80 provide existing and excellent points of entry into the eastern end of the corridor. The Mississippi Valley Welcome Center in LeClaire, Iowa, operated by the Quad City Convention and Visitors Bureau, and the Mississippi Rapids Visitors Center near Rapids City, operated by the Illinois Department of Transportation, offer not only scenic panoramas of the river, but a host of visitor information. The Framework Plan calls for a gateway downriver into the corridor from Buffalo, Iowa and/or Andalusia, Illinois. Whether the downstream gateway is similar in size and scope to the

FRAMEWORK PLAN RIVER NODE:

17. Sylvan Island

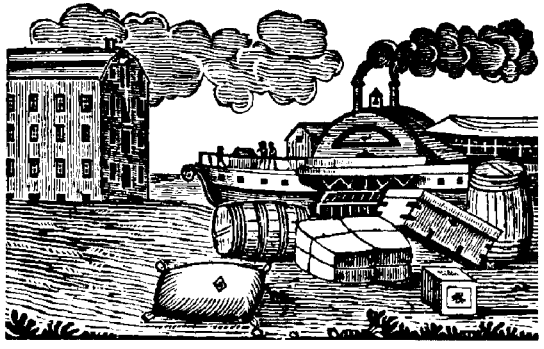
River Features
- Nature trail
- Fishing pier
- Wildlife habitat

Planned Improvements
- Bike trail
- Historical marker
- Picnic area

Potential Improvements
- Interpretative features
- Boat stop/moorings

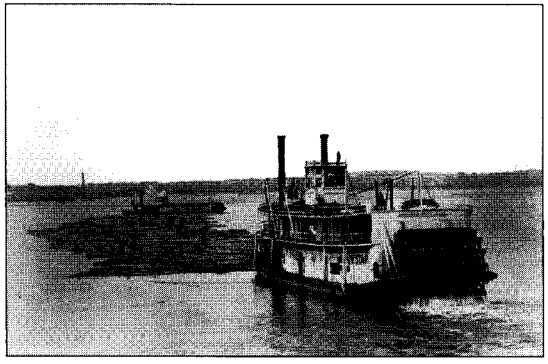
upstream gateways will be a function of visitor need and funding availability.

River Story - A river story emerged after examination of the river's assets and land use. The western portion of the Corridor illustrates the river's natural history through existing wetlands, sloughs, floodplain forests and various wildlife and habitats. Moving eastward along the river, the story continues with the Native American habitation and the first European settlements. Arsenal Island illustrates the story of the Civil War, military and channelization of the Mississippi River. Progressing further upstream, past and present are intermingled with the lumber and the farm implement industries, recreation trails, civic centers, riverboat casinos and parkways. To tell this story the Framework Plan calls out the advantages of this natural geographic and cultural progression which can be conveyed through a variety of mediums and methods.



History/Nature/Art Interpretative Trail - An integrated interpretative trail system incorporating art and culture, history and natural resources, is recommended to provide geographic reference and special educational experiences for the region. This trail will help create another unique amenity for the Quad Cities area. Artwork integrated with parks and trails and located at river nodes is strongly encouraged, because it attracts people to our riverfront. Art can be as simple as an aesthetically pleasing bench, playground or wildflower garden or as imposing as a large monument. Along this trail, people could stop at special river nodes to enjoy art and culture, industrial activities, scenic vistas, or to learn about the river's history and culture. This interpretative trail is intended to tell the "river's story" and highlight its many historical, geographic, cultural and natural features.

Wayfinding/Signage System - The Framework Plan strongly recommends that a comprehensive and uniform system for wayfinding throughout the corridor be established to improve safe and efficient movement to and along the waterfront. The system should easily convey information on special locations, history, natural resources and culture, as well as unify the overall corridor through a shared design.



Putnam Museum

Incorporating the "working river" history into the trail system, as shown in this early 1900's photo of a log raft, adds to the area's originality.

ARTISTS' INITIATIVE

Quad Cities' vision for the riverfront is based on the use of good design and art, not only as unifying elements for the Corridor, but also to make the Quad Cities unique along the Mississippi River. Following the public unveiling of the River Corridor Framework Plan in September 1994, Quad City Arts selected two artists with experience in public art to consider the work to date and provide the Waterfront Master Planning Committee with ideas to

"Let your watchword be order

and your beacon be beauty."

- Daniel Burnham

incorporate in and along the river. Jon Pounds of Chicago and Hu Hung Shu of Iowa City spent two weeks in the Quad Cities and developed preliminary riverfront art concepts. The artists presented their ideas to the general public in November, 1994, and to a focus group representing a broad cross-section of Quad Citians. Many of their riverfront art concepts were discussed and later incorporated into the design principles.

3.2. Planning for Good Design

The Waterfront Master Plan outlines river-oriented projects of the larger Quad Cities communities, and the Framework Plan summarizes in map form corridor-wide land uses, and the regional potential of the riverfront. (See Section 3.1 and Appendix B for details of the Framework Plan.) The Waterfront Master Planning Committee felt that it was important to go beyond these plans and prepare well-defined principles to improve existing conditions and encourage quality development along the river.

A Steering Committee was established to oversee the development of these design principles. Representatives of this committee were chosen from the Waterfront Master Planning Committee who were originally appointed by Quad City mayors and county board chairs and subsequently expanded as the River Corridor context developed. The Steering Committee includes River Action, Quad City Arts, Putnam Museum, Quad City Conservation Alliance, planners and businesses, with assistance from Bi-State Regional Commission and Lakota Group. Their directive was to develop the Quad Cities Mississippi River Corridor Design Principles. The Design Principles, presented in this document, create a visual picture of how projects may be designed to reflect the character of and vision for the Quad Cities Mississippi River Corridor.

River Design Principles

SECTION 4

4. River Design Principles

4.1. Overview

As the region's greatest asset, the Mississippi River requires special attention and care with respect to its future improvement and development. The following design principles were prepared to identify specific considerations for good design as it may apply to all forms of land use and development on and along the river.

PURPOSE

The river vision for the Quad Cities Mississippi River Corridor is to be ***"vital, distinctive and accessible, coordinated in its use, integrated through good design and cared for by all of us".*** The purpose of the design principles is to outline important features of development that should be recognized during the design stage of a project prior to construction or implementation in order to achieve this vision.

The Design Principles document offers recommendations for river access, river setting (signing, landscaping, lighting, outdoor furnishings, architecture and art), resource enhancement and special features for the River Corridor. It confirms and reinforces our commitment to respecting the river, access, river corridor design, and interpretation.

INTENDED USE

The design principles have been created for community planners, zoning officers, recreation interests, developers, businesses, conservation/ natural resource agencies and local community groups in reviewing design elements of proposed development, and for the general public interested in the enhancement of the Quad Cities Area riverfront. It is intended to be used during the architectural, landscaping, wayfinding and site plan development process as a means to consider a variety of options in riverfront design and a project's relation to the River Corridor. Land use, ownership and location issues should be determined prior to the use of this document.

Section 4, River Design Principles, is divided into four subsections including river access, river setting, resource enhancement and special features. Each subsection begins with a design intent which reiterates the needs outlined in Section 2.3, Components of River Vision, and how these needs can be addressed through good design to attain the river vision. Following each design intent is a list of design elements by subsection, which define terms and offer recommendations where applicable. For example, Section 4.2, River Access, describes the need for access in its "Design Intent", then lists "Pedestrian Access" with definitions and recommendations for Riverwalks, Recreation Trails, etc.

REGULATORY CONSIDERATIONS

The design principles are intended to work as a companion document to various local, state and federal requirements regulating development. In each local community, these regulations may include zoning, landscaping or signage ordinances. Federally, the following laws may apply:

- Rivers and Harbors Act (1899),
- National Historic Preservation Act (1966),
- National Environmental Protection Act (NEPA) (1970),
- Flood Disaster Protection Act (1973),
- Endangered Species Act (1973),
- Clean Water Act (1977),
- Farmland Protection Policy Act (1981), and/or
- Americans with Disabilities Act (1990).

Similar state and local laws and regulations may

also be relevant and must be considered. A table of local ordinances and a list of state and federal regulatory agencies are included in Appendixes C and D, respectively. Interaction with these regulatory bodies will facilitate good design and reduce project delay due to lack of compliance.

A first step in project development, when plans include construction, enhancement or modification of areas along, near, by or on the Mississippi River, is to contact the U.S. Army Corps of Engineers. The Corps must be consulted to ensure compatibility with state and federal laws and regulations.

4.2. River Access

Design Intent - Access to the river, whether publicly or privately owned, should be improved and enhanced where appropriate. New opportunities for connecting trails, walks, and street corridors from the Great River Road and other important arterial roads to the river should be incorporated into all future improvement and development projects. Residential, commercial and special use areas along with open spaces can be enhanced through boat access to these sites.

Where access is not feasible due to safety, physical barriers or incompatibility of uses, visual access to the river should be maintained or developed. Where access along the river is interrupted, for whatever reason, the appropriate directions to take to return to the river at the nearest point of access should be indicated. With any river access, safety with respect to the main channel (water velocity and depth), flooding, ice flows, river traffic and proximity to locks and dams should be incorporated into the design.

- **Separate, where possible, trails, paths and open spaces meant for different uses**
- **Use materials, color, design elements to indicate variations in trails, paths, open space, speed, etc.**
- **Use at grade pavement warning system when trails cross trails, roads, or railroads**
- **Refer to Section 4.3, River Setting, for landscaping, signage, lighting, outdoor furnishings and riverfront art details**

PEDESTRIAN ACCESS

Riverwalk - Riverwalk, also known as promenade, along the waterfront provides an open space which encourages leisurely walking and river viewing. Riverwalks differ from other paths/trails by the larger walking area, integration with commercial activity and urban setting (e.g. stairs and ramps, sheltered seating, decorative lighting and landscaping like planters or gardens). Along the river, they encourage greater pedestrian activity when associated with cafes, restaurants and shops. Riverwalks located at the river's edge may incorporate stairs or ramps in their design which descend to the

River Action

New Orleans Riverwalk allows pedestrians to access the water's edge.

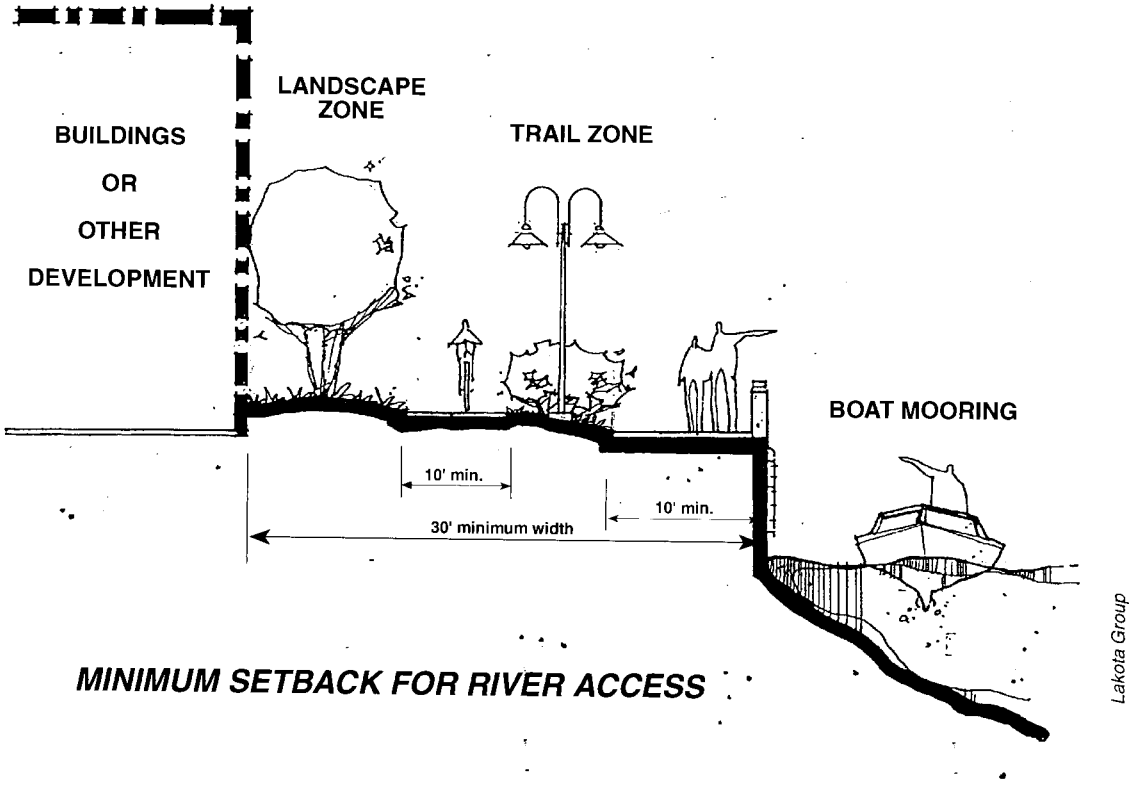
river and allow moorings for boaters.

- Provide minimum riverwalk of 30 feet (9m) in width
- Made of concrete, stone, tile or wood
- Use artwork, performance space or scenic overlooks as points of interest or visual focal points
- Provide multiple access points from street, river and trail to the riverwalk

Recreation Trails - Recreation trails are single linear paths providing access along the river for single or multiple uses. Recreation trails can include: walking/jogging trail, fitness trail and/ or bicycling/in-line skating trail. Where these use-specific types of trails are combined due to spatial constraints, American Association of State and Highway and Transportation Of ficials (AASHTO) Guidelines for bicycle trails should be followed.

1. Walking/Jogging Trail: *A smooth and unobstructed route strictly designated for walkers and joggers only. Walking/jogging trails accommodate pedestrians and runners traveling at various speeds.*

- *Made of asphalt or concrete*
- *Provide minimum width of 10 feet (3m), minimum vertical clearance of 8 feet (2.4m), and grades of less than 5%*
- *Consider physical separation from bicycle/ in-line skating and nature trails*
- *Consider outdoor furnishings (e.g., sheltered benches for resting and viewing river)*
- *Provide turnouts from trail for viewing and resting*
- *Connect with other trail systems*
- *Include restrooms, mileage markers and small regulatory or interpretative signs*

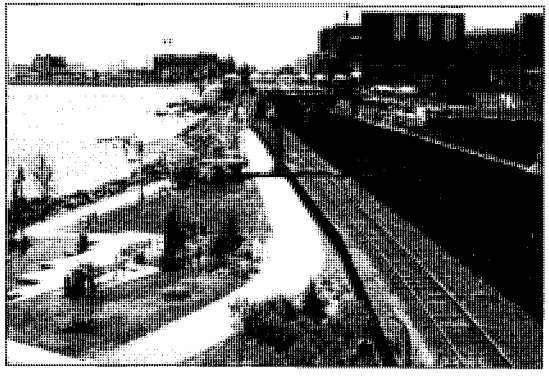


MINIMUM SETBACK FOR RIVER ACCESS

2. Fitness Trail: *A hard-surfaced walking/ jogging trail with a series of outdoor exercise stations. Walkers and joggers can stop at these locations to stretch and exercise. Exercises, for example, include sit-ups, leg stretches and pull-ups. Fitness trails could help draw people to river paths, while promoting healthy lifestyles. They should be developed along the river wherever there is enough land area and potential pedestrian activity.*

- *Construct stations of durable wood, metal or plastic materials*
- *Place stations at 1/4 mile (402m) intervals*
- *Include signage describing each exercise and distance interval*

3. Bicycle/In-line Skating Trail: *A smooth, hard-surfaced path physically separated from motorized vehicles and pedestrians by an open space to accommodate bicycles and in-line skaters traveling at various speeds. AASHTO Guidelines for bicycle trails should be followed. Spurs to walking/jogging, fitness or nature trails can be combined with a bike trail, along with benches and overlooks to provide rest areas for weary bicyclists or in-line skaters.*



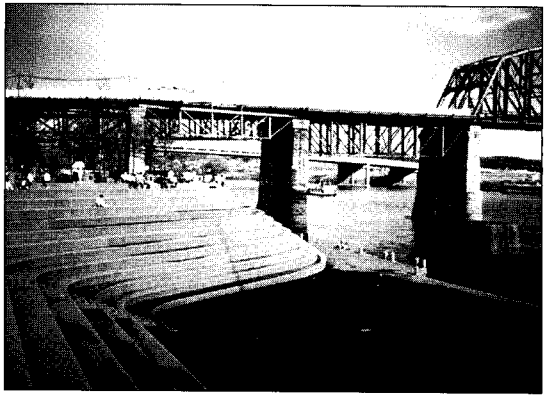
C. Rayburn

Pedestrian access Lake Superior, Duluth, Minnesota

- *Provide minimum trail width of 10 feet (3m), shoulder clearance of 2 feet (0.6m), and overhead clearance of 10 feet (3m)*
- *Consider outdoor furnishings at regular intervals including bicycle racks at activity nodes*
- *Provide turnouts from path for viewing and resting*

Nature Trail - A physically separated walking path which extends into or along natural areas. They provide for controlled pedestrian access, while allowing observation and photography of natural settings/conditions and provide opportunities to learn about the river's ecosystem. Such trails may spur off from bicycle/in-line skating or walking/jogging trails.

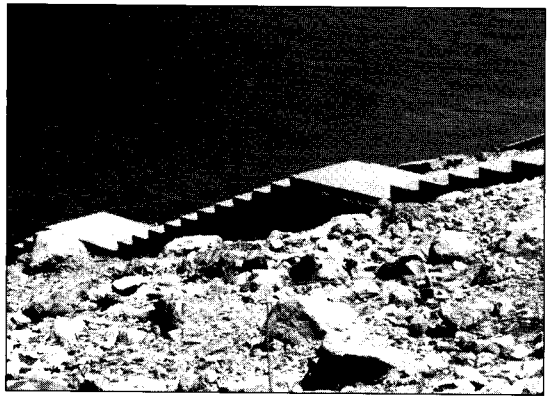
- Use pliable surface typically of wood, bark chips or crushed limestone
- Provide maximum width of 5 feet (1.5m) for wood trails in wet areas
- Support wood structures by flotation devices for wetland boardwalks to accommodate fluctuations in water level
- Provide maximum width of 8 feet (2.4m) for bark or stone trails located in woodlands and prairies
- Minimize environmental impact from construction
- Include benches, viewing towers and small signs which describe local geography, vegetation and wildlife



Waterfront Center

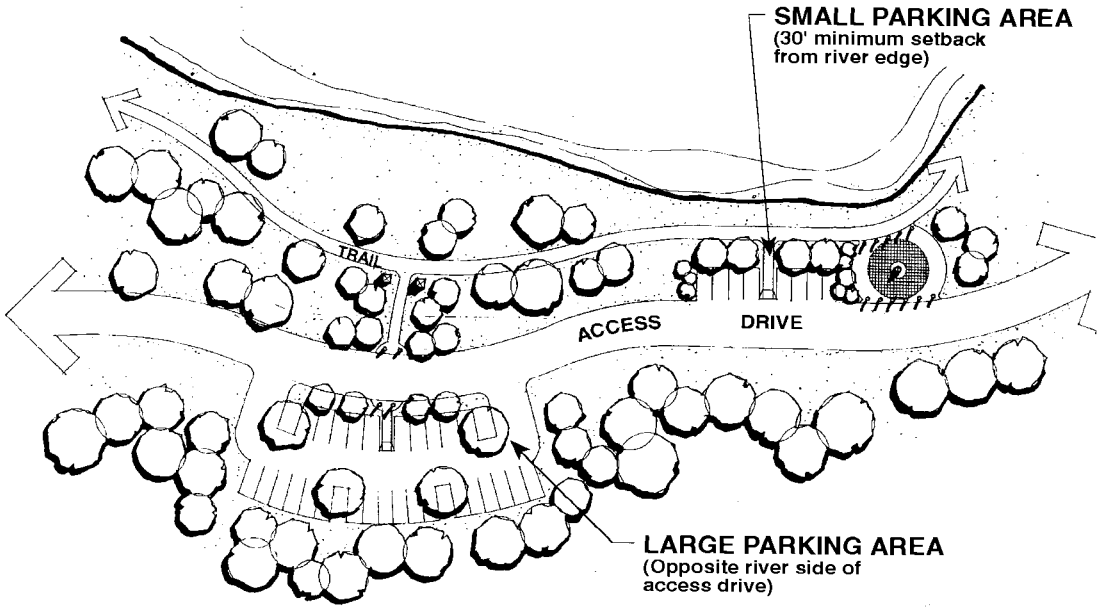
Example of steps as a gathering place: Cincinnati, Ohio.

Stairs/Ramps - Stairs and ramps provide ideal access to the river's edge when the gradient of the land prevents direct contact. Attractive stair/ramp designs can be incorporated into a variety of river edge developments. Creating an amphitheater of stairs to the waterfront provides gathering or performance space, or with a riverwalk, stairs encourage public contact with the river. A ramp and stair combination eases the physical effort of reaching the river and creates a variable and interesting path. Appropriately designed ramps provide access to the disabled and invite bicycles along the same path.



Bi-State Regional Commission

Steps in Rock Island, Illinois provide limited access to the riverfront.



Lakota Group

MINIMUM SETBACK FOR VEHICULAR ACCESS

- Use stair/ramp combinations to vary and reduce steep gradients
- Include ramps for ADA accessibility
- Ramp gradients of equal to or less than 5% grade
- Incorporate railings for safety and use attractive materials which do not obstruct views

River Crossings - Pedestrians and bicyclists have limited opportunities to move from one side of the river to another except by motor vehicles.

- Incorporate safe, convenient pedestrian and bicycle access into new bridge designs or rehabilitation of existing structures
- Encourage water taxis and ferries which accommodate pedestrians and bicyclists

VEHICULAR ACCESS

Parking - All parking along the river should accommodate paths/trails and be landscaped with screens and buffer areas. Massive parking lots along the riverfront, although commonly used for flood loss prevention, are discouraged. Landscaping should not obstruct views of the river for the motorist. Lighting should be included which enhances the security and attractiveness of the parking lot. (See Section 4.3, River Setting, Architecture, Parking Structures/Garages, for other specifications.)

- Provide minimum setback of 30 feet (9m) for small parking area of less than 15 stalls
- Prefer large parking areas be located on the

opposite side of a riverfront road away from the river
- Create access/connections to paths/trails from parking areas
- Use turnouts or loading areas for visual access to river
- Create ADA accessible loading areas with good traffic circulation
- Include bicycle racks near parking areas
- Refer to Section 4.3, River Setting, for landscaping, signage, lighting and outdoor furnishings details

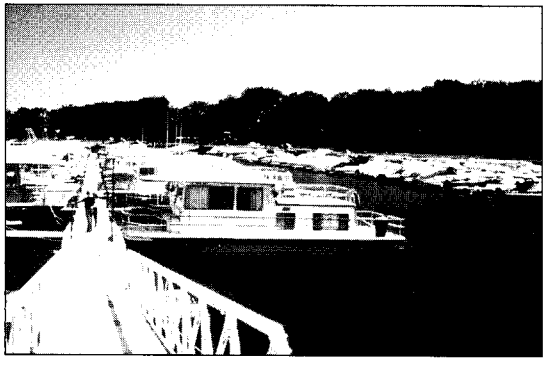
BOAT ACCESS

Marinas - A marina is a facility for storing, servicing, fueling, berthing and securing pleasure boats and may include eating, sleeping and retail facilities for owners, crews and guests. A marina provides an excellent land/water link and should be encouraged, particularly in residential and commercial developments located along the shoreline.

- Provide minimum setback of 30 feet (9m) for marina access to trails, streets, drives or parking
- Provide physical connections to riverwalks, trails and roads
- Include parking for boat trailers, and provide bicycle racks
- Erect fences, if necessary, with visual access and attractive design
- Refer to Section 4.3, River Setting, for landscaping, signage, lighting and outdoor furnishings details

Boat Launch/Ramp - A boat launch or ramp provides an inclined surface for boats to be placed in the water from a trailer. They provide an excellent land/water link. Few boat ramps exist in the corridor and should be developed wherever physically and environmentally appropriate based on channel characteristics, street access and adjacent land and river use.

- Provide minimum width of 30 feet (9m)
- Include parking for boat trailers, and provide bicycle racks in the vicinity

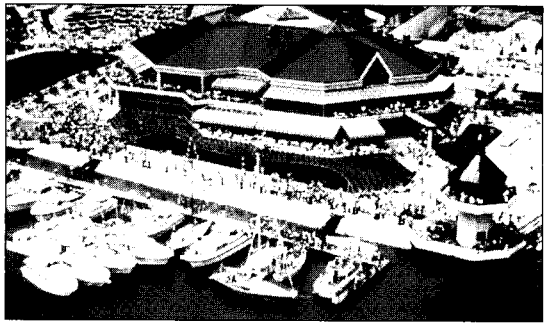


Quad Cities Convention & Visitors Bureau

Sunset Marina, Rock Island, Illinois.

Docks/Piers/Moorings - A dock is a temporary floating structure built to extend from land out into water. Piers are permanent structures built on pylons which extend from land into a waterway. A dock, pier and mooring are used to temporarily secure a boat or access land. A mooring can be as simple as a cleat. Each of these features are examples of land/water links, which can encourage "river hopping".

Piers and docks offer an opportunity for fishing, viewing river activity and walking, giving the user a sense of being "in" the river. Pier railings with sections capable of being opened or removed, along with boat ladders, offer land access to pleasure craft such as motorboats, canoes, rowing shells and floating docks. When building docks, piers and moorings, consider the



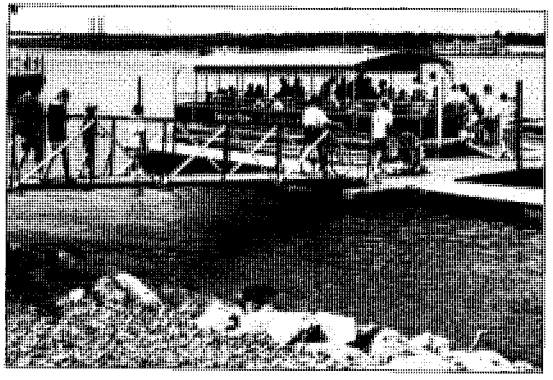
Waterfront Center

Festival Market Place, Toledo, Ohio, encourages "river hopping".

following items for a quality design and usage:

- Match adequate water depth to water craft (e.g., sculls need very little water depth, while barges require deep water)
- Match location and the type of water craft with respect to the main channel and water velocity (e.g., recreational craft with calm water vs. barges with higher velocity flows)
- Locate off-channel structures which provide year round access to the main channel
- Select durable materials with sound base and skid resistant surface for docks, piers and moorings and provide railings for safety
- Locate Coast Guard approved safety equipment in emergency boxes at appropriate locations
- Match water craft to use (e.g., low draft = low flow = less danger = less restricted use as compared to greater draft = greater flow = greater danger = more restricted use)

Water Taxi Stations - Water taxi stations may be docks or piers which can accommodate a water taxi. One location in each city may act as a taxi terminal, while intermediate locations may act as taxi stops. The number of water taxi stations may increase with the frequency of river activities, such as riverfront cafes with docks/ moorings, and the quantity of water taxis. This will also encourage "river hopping". See "River



W. Taylor

Passengers boarding the Channel Cat water taxi, shown here at Ben Butterworth Parkway, Moline, Illinois.

Corridor Framework Plan Map, Section 3.1, River Planning Process" for existing and proposed water taxi stations.

- Provide bicycle, pedestrian and ADA accessibility
- Make parking provisions for motorists and bicyclists by locating near existing parking areas
- Consider a covered waiting area with seating for the taxi users and passenger loading zone with vehicular access (See Section 4.3, Outdoor Furnishings, Seating)

Boat Service Facilities - Boat service facilities are businesses catering to boaters' fueling, eating, sleeping and retail needs. The number of these facilities should be increased to attract people to the waterfront and encourage "river hopping".

Commercial Terminals - Commercial terminals are sites developed for the loading and unloading of water-transported freight. Commercial terminals should attempt to integrate the existing land use with the overall river setting. (See Other Access, Industrial and Commercial Access.)

- Accommodate path/trail connections, either through or circumventing the sites
- Provide visual access to the river as well as to the commercial activity where feasible
- Provide a well-maintained and landscaped site
- Refer to Section 4.3, River Setting, for landscaping, signage, lighting, outdoor furnishings and architectural details

VISUAL ACCESS

Vistas - A vista is a scenic or visually appealing view.

- Maintain, enhance and develop river views from streets, paths/trails and developed areas
- Consider slopes, street orientation and walls

River Design Principles

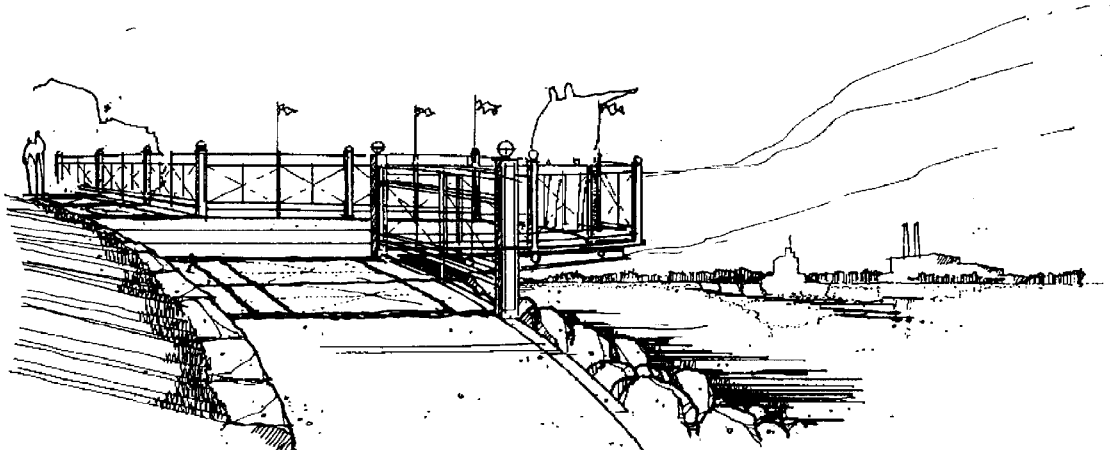
River Access - Open Space

River Action

Scenic overlook at Sunset Park, Rock Island, Illinois provides visual access to the river.

with regard to visual access to the river in building design and orientation

- Remove existing obstacles to more fully reveal the river



Lakota Group

Scenic overlooks with panoramic views or specific focal points such as industries or historic sites allow viewers to appreciate the value of our River Corridor.

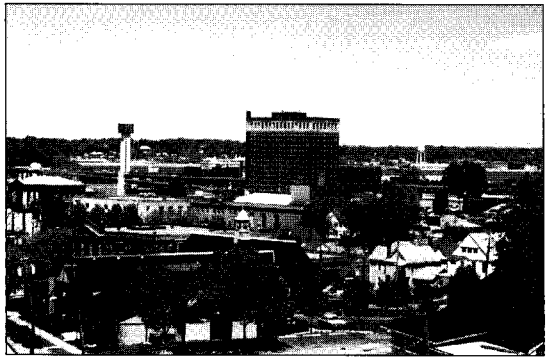
Scenic Overlooks - Scenic overlooks provide specific locations for motorists, bicyclists and pedestrians to stop and look at vistas. They may be located on or along the river's edge or along the bluffs. Well-designed towers or platforms can enhance a scenic overlook.

- Incorporate at appropriate locations along the river
- Designate visual access points to the river for industrial, commercial and natural resource areas
- Incorporate outdoor furnishings such as benches and informational/educational signs describing the scene or vista (e.g., low stone and cement walls provide seating and safety)

OPEN SPACE

Plazas - Plazas provide open space opportunities for passive recreation. They are often enclosed by either landscaping or buildings. Plazas with outdoor furnishings and natural landscaping are encouraged on the riverfront to compliment existing land uses. Tiles lining the plaza may be artistically designed in a mosaic to tell our river history. Plazas also provide opportunities to break up building massing and walls which inhibit visual access to the river.

- Consider as central features of riverfront development projects



Bi-State Regional Commission

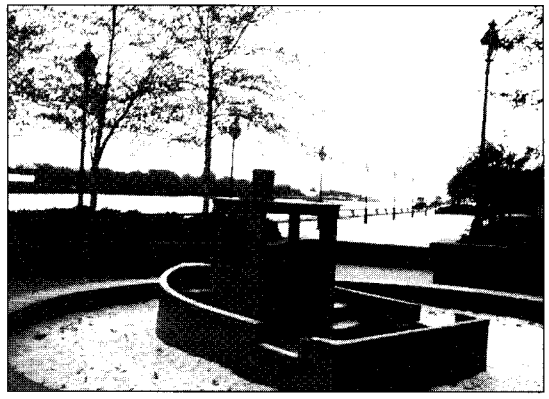
Bluff view in Moline, Illinois offers opportunities for vistas and scenic overlooks.

- Consider using for musical or theatrical performances or festivals
- Consider sheltered seating and focal points (e.g., art, outdoor cafes, fountains, etc.)
- Refer to Section 4.3, River Setting, for landscaping, signage, and lighting details

Parks, Passive - Where feasible, passive parks should be located along the waterfront to improve river access and allow for quieter activities such as reading, resting, walking, birdwatching and table games. Passive parks can be woodland, prairie, open grassy or landscaped areas. Such parks can encourage preservation and protection of the natural environment. Specially designed parks provide unique attractions along the river and should consider including sculpture or flower gardens and wildlife or nature parks.

- Consider parks with nature study, conservation or restoration of nature, reflective contemplation, etc.
- Include meandering walks, sheltered seating, shade and a variety of open and closed spaces
- Limit forms of access through guided nature trails, perimeter parking/trails, designated canoe moorings and docks and scenic overlooks
- Create passive parks using native hardwood and other plant species indigenous to the location, floodplain forest, prairie, etc.
- Refer to Section 4.3, River Setting, for landscaping, signage, lighting and outdoor furnishings details

Parks, Active - Wherever possible, active parks should be located along the waterfront. Active parks can be in quiet open spaces or higher use areas to improve public access and attract people to the river. Such parks provide a range of play opportunities for children and adults. Imaginative forms, climbing structures and segregated play areas for toddlers and older children are all important and can be integrated within a riverfront park. Playgrounds afford an opportunity to utilize local artists and folklorists



Waterfront Center

Playground fashioned after a tugboat in Savannah, Georgia riverfront park.

for their design. Capturing children's imagination with a playground fashioned after a fort, Indian village or a paddleboat, for example, can generate excitement, activity and education. Specially designed parks providing a unique attraction along the river should be considered including interactive sculpture, developmentally disabled accessible and boaters parks.

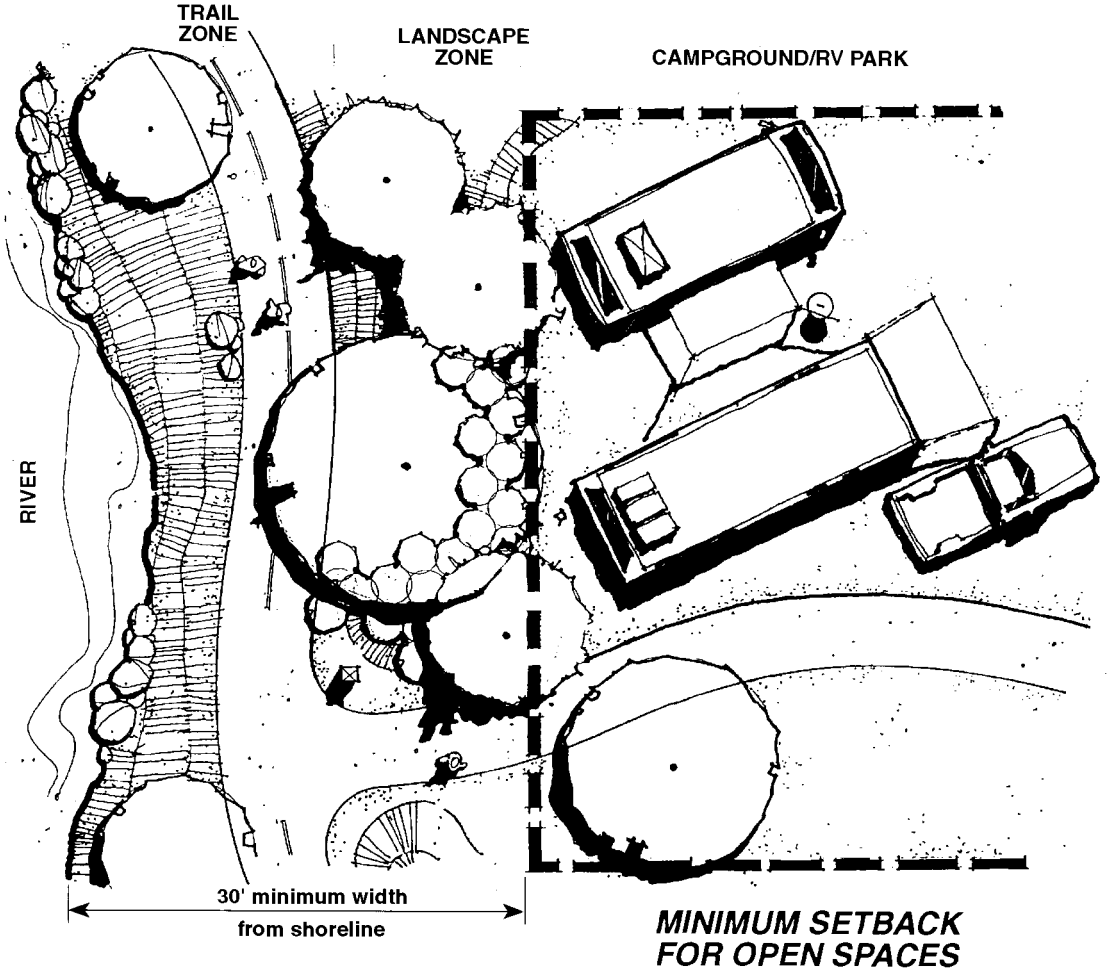
- Provide diverse activities such as court games, fishing, large scale chess/checkers playing, etc.
- Include performance areas (e.g., low stone wall in simple semi-circle, scattered tree trunks for seating, or a small amphitheater)
- Refer to Section 4.3, River Setting, for

River Design Principles

River Access - Open Space

Waterfront Center

Beaches offer direct access to water's edge. Example from Portland, Oregon.



Lakota Group

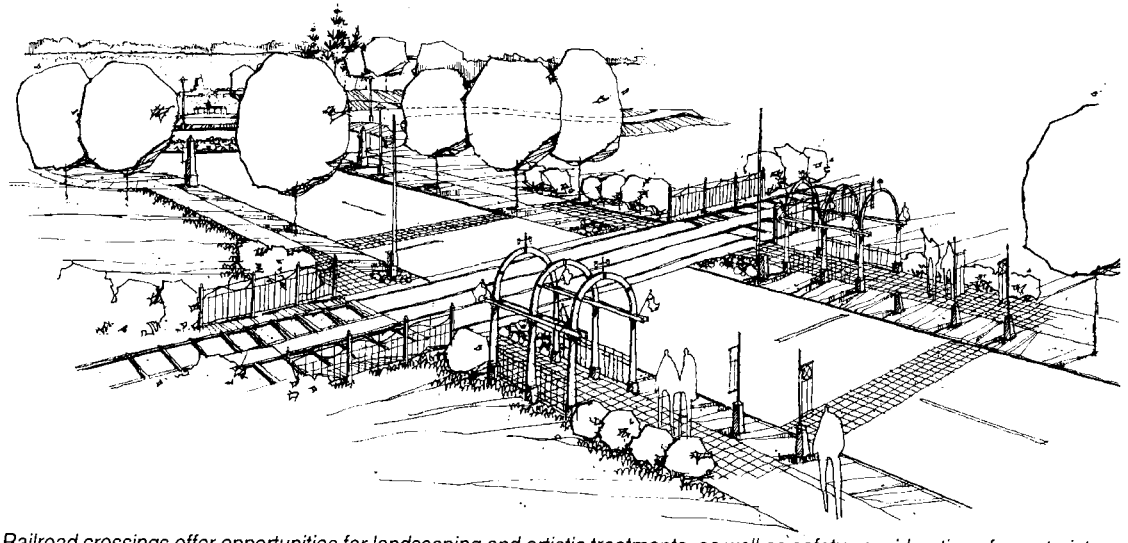
landscaping, signage, lighting and outdoor furnishings details

Natural Areas - Wherever possible, locations currently dedicated to the natural setting should be conserved and protected where consistent with private/public property rights. This may include wetlands, wildlife refuges, sloughs, marshes, woodlands and prairies. Where priority for protection exists, access should be limited to these natural areas. Natural open spaces play important environmental roles in the ecology of the river system.

Beaches - Beaches allow direct access to the river and may be made of sand, pebbles or gravel, or dredge material from the Corps of Engineers' dredging operations. Due to currents, gradient of the riverbed and proximity to the main channel, significant design and safety considerations should be recognized prior to beach development.

- Consider conservation of natural beaches for river access

Campgrounds/Recreational Vehicle (RV) Parks - Campgrounds/RV parks create open



Lakota Group

Railroad crossings offer opportunities for landscaping and artistic treatments, as well as safety considerations for motorists, bicyclists, and pedestrians.

Waterfront Center

Pedestrian access across railroad lines should emphasize safety and access, as shown at this crossing in New Orleans.

space and can improve access to the river's edge. They provide a site for temporary overnight accommodations for recreation, education or vacation purposes involving tents, travel trailers, campers and motor homes.

- Locate in rustic areas outside urban setting
- Provide minimum setback of 30 feet (9m) from the river's edge to accommodate walks, paths and trails
- Provide restroom facilities with running water, and a picnic table and firepit at each campsite
- Provide electrical utilities and sanitary sewer disposal at RV parks (campgrounds optional)
- Incorporate trail connections, public picnic areas, parking and boat access
- Accentuate the river view from campsites, as well as minimize the impact on or development of the natural river environment, through well-designed vehicle circulation

INTERSECTIONS

Intersections - Pedestrians, bicyclists and motorists must cross streets, railroad tracks, bridges and trails to access the river or its shoreline. Proper warning signs and pavement markings should be incorporated at intersection locations for safety purposes. Blending the connecting surfaces at a common level, so there is no abrupt vertical surface change, can assist in the transition and also improve access for bicycles and wheelchairs. Creating "crosswalks" using different surfaces or pavement markings can enhance an intersection.

River Design Principles

River Access - Other

Bi-State Regional Commission

Coordinating street, rail and trail crossings can enhance intersections. Davenport's Mound Street and River Drive, shown here, lacks safe and convenient access for bicyclists and pedestrians.

Intersections are also an opportunity to intensify the image of key locations through signs, landscaping, artwork and gateway architectural features. Sight distance considerations to view oncoming pedestrian, bicycle and vehicular traffic should also be considered. Refer to Section 4.3, River Setting, for details on landscaping, signage, lighting and outdoor furnishings.

1. Rail Crossings -

- *Position other modes of transportation at right angles to railroad crossings to enhance sight distances and reduce crossing conflicts*
- *Provide street and path/trail approaches to railroad crossings at the same elevation as the rails*
- *Consider materials of the crossing surface and flangeway depth/width according to AASHTO Guidelines (commercially available compressible flangeway fillers can enhance bike and pedestrian safety)*
- *Install warning signs and pavement markings per the Manual of Uniform Traffic Control Devices (MUTCD)*
- *Consider decorative gateways at railroad crossings on streets leading to the river*

2. Street Crossings -

- *Provide approaches from sidewalks or paths/trails at the same grade as streets to create smooth crossings (curbs inhibit wheelchair and bicycle crossings)*
- *Install warning signs and pavement markings to enhance the safety features of the crossings*
- *Allow sufficient crossing time for pedestrians at crosswalks (3.5 seconds per foot)*
- *Consider pedestrian island at roadway crossing of four or more lanes*
- *Design crossings at right angles to increase visibility and safety for both directions*
- *Enhance key intersections with signs, landscaping, art, lighting, etc.*

3. Trail Crossings -

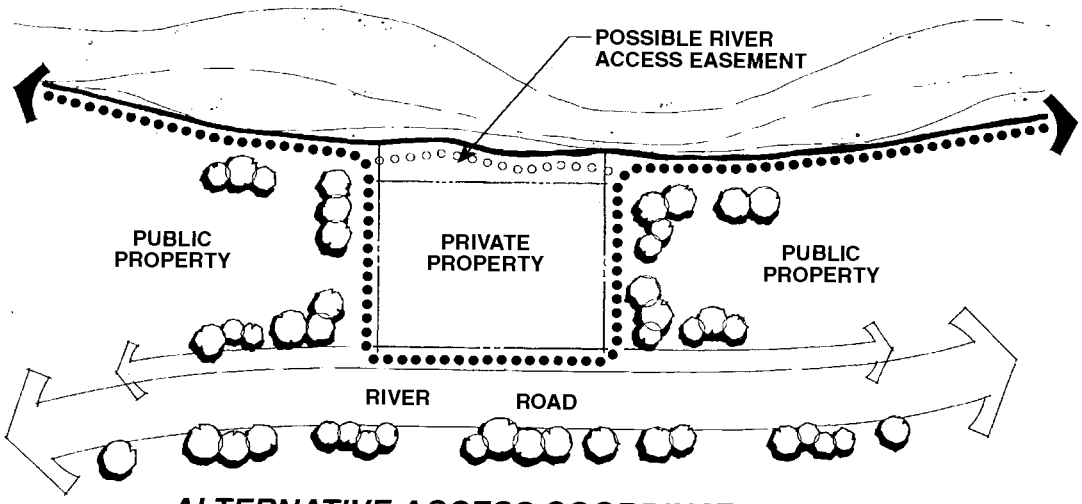
- *Install warning signs and pavement markings to enhance the safety features of the crossings*
- *Consider informational signs on local geography, history and culture at trail crossings*
- *Provide bicycle racks near trail crossings to allow bicyclists to walk nature trails or other paths*

4. River Crossings -

- *Provide convenient and safe access for bicycles and pedestrians to and from bridges, water taxi stations and/or ferry landings*
- *Consider bicycle carriers on all transit routes at river crossings*
- *Incorporate multimodal river crossings into wayfinding signage system*

OTHER ACCESS

Alternative Access - Public and private property development along the riverfront should be coordinated wherever possible.



ALTERNATIVE ACCESS COORDINATED WITH PROPERTY OWNERSHIP AND LAND USE

Lakota Group

Quad Cities Convention & Visitors Bureau

Unique "river hopping" opportunities exist in the River Corridor as illustrated by this seaplane mooring on the Rock River.

- Consider coordinating easements through private property fronting the river to allow for interconnecting paths/trails, with minimum easement of 30 feet (9m) in width
- Consider small signs to indicate the change from public to private land as a courtesy to the landowner
- Consider easement for paths/trails along the perimeter of private property when not feasible to be located along the river's edge
- Consider extending paths/trails around private property with signage when easements cannot be obtained

Seaplane Moorings - Moorings for seaplanes should be considered along the River Corridor where appropriate. Allowing for a secure place to dock a seaplane can encourage "river hopping" from the air.

Industrial and Commercial Access - The Mississippi River is a great commercial resource for the Quad Cities River Corridor, transporting goods and facilitating trade locally, regionally, nationally and internationally. Industrial and commercial access to this important transportation corridor should be maintained and enhanced. Businesses using the River for transportation are restricted by their location due to needs for adequate water depth, sound river bottom, proximity to the main channel and local zoning restrictions. Whenever possible, promote respect for the multi-layered uses of the River and encourage understanding of the "working river", fully and safely integrated within the River Corridor and individual communities.

- Locate with respect to the main channel and its safety considerations
- Integrate, where possible, pedestrian and recreation access in a safe and least disruptive manner
- Consider including recreational uses and paths/trails in new development
- Encourage intersections of uses as opportunities for goodwill, understanding and respect within the community for the "working river"

Bi-State Regional Commission

Ramps provide an effective method to access the riverfront. Ramps should incorporate designs that maintain continuous access and are free of debris.

ADA Provisions - The Americans With Disabilities Act (ADA) requires that provisions be made for disabled persons to access facilities used by the general public. A unique space where there is no other alternative for the disabled should be made accessible where possible. For example, an elevator may be required for another level of a building if that level offers information or opportunities not available on the main level. A reference for information regarding ADA requirements can be found in Appendix D, see Access Center.

- Consider ramps rather than stairs, ramped curbs and sidewalks, wider parking spaces, trails with surfaces passible by wheelchairs, etc., whenever possible
- Incorporate interpretative signs using braille format for the visually impaired or other formats for other disabilities
- Encourage river access for all citizens

4.3. River Setting

This section examines ways to improve the aesthetic quality of the river setting through signs, graphics, landscaping, riverfront art, outdoor furnishings, architecture, etc. These features play an important role in respecting the river by considering the river as the region's "front yard" or "main street". Good design in the river setting can create connections along trails and streets or within parks, plazas and river nodes by giving the corridor a sense of continuity and harmony. Good design can also raise the level of appreciation and awareness of the river and its river edge developments.

SIGNAGE/GRAPHICS

Design Intent - Signage and graphics need to be significantly improved throughout the Quad Cities River Corridor. Existing signage directing motorists to the river or pedestrians and bicyclists along the river is often confusing, deteriorated or competing with other signage. The Great River Road or the regional trail systems afford a perfect opportunity for unified and cohesive signage. Little has been done to tell the river story, its history and culture. The following elements need consideration when planning river improvement and development projects.

Wayfinding System Planning - A comprehensive and uniform system for wayfinding to and within a site, community and the overall corridor should be considered. A wayfinding system is planned by delineating distinct areas and community edges, identifying key locations or points of interest and effectively routing pedestrians and vehicles.

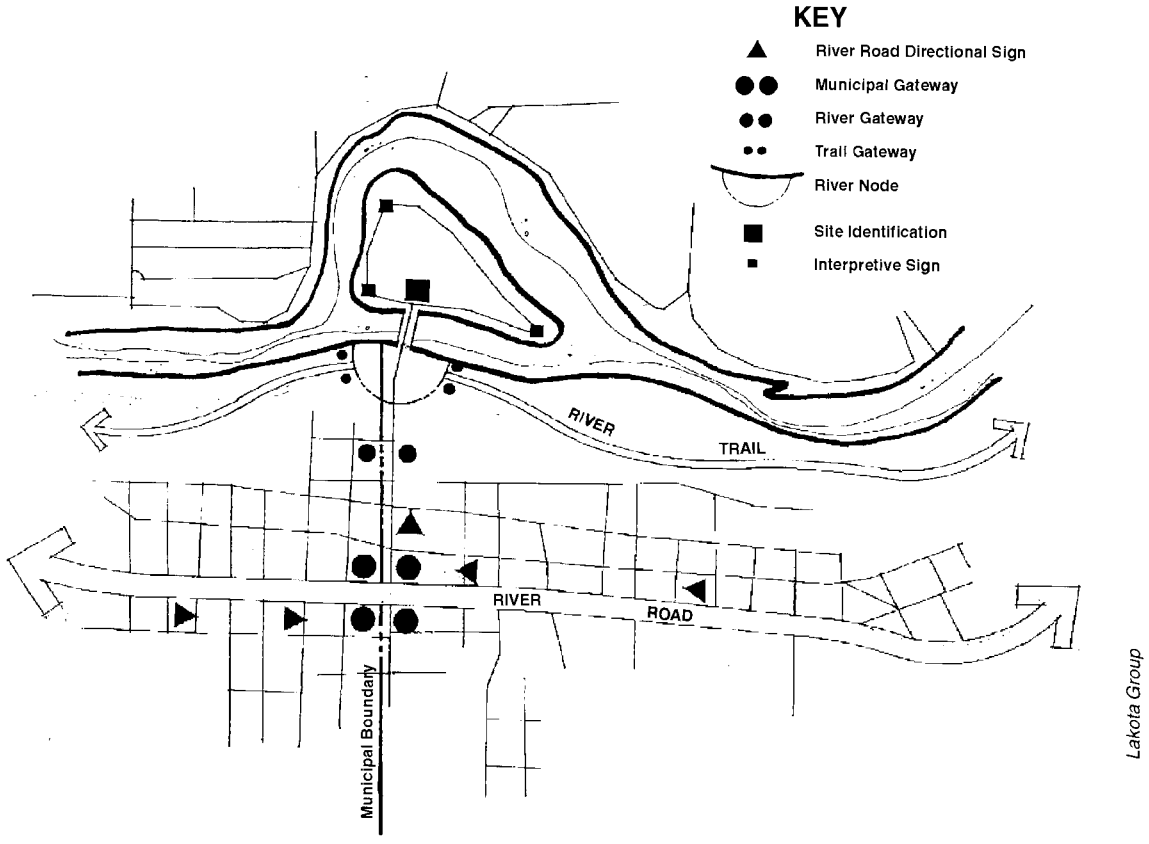
- Convey information on special locations, historical features, natural resources and art throughout the River Corridor
- Identify key locations and approximate routes to facilitate travel to and through an area
- Provide appropriate directional and identity information within and to the system in a coordinated manner
- Reflect a uniform design concept involving shape, outline, color, text design or an artistic visual element for all signs specific

to the river corridor

- Use, where appropriate, the established logo for the Great River Trail as an important part of the unified riverfront trail system signage

***1. Vehicular Circulation** - Vehicular circulation in the River Corridor is enhanced by signs. Directional and identity signs assist motorists in finding their destination.*

- *Consider placing new signs along streets which guide motorists toward the Mississippi River from major arterial streets*
- *Design directional signs at regular intervals along roadways in accordance with the Manual of Uniform Traffic Control Devices (MUTCD)*
- *Create simple wayfinding system to prevent sign pollution and distractions to the driver*



EXAMPLE OF POSSIBLE WAYFINDING SYSTEM SIGNAGE AND GATEWAYS
(Sylvan Island, Moline, Illinois)

- *Provide consistent street naming within a community and between communities to enhance efficient vehicular circulation*

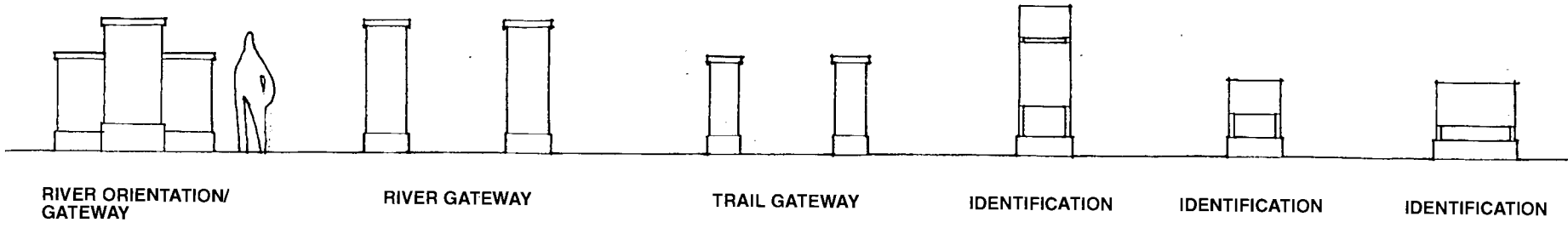
***2. Pedestrian Circulation** - Pedestrian circulation is also enhanced by appropriate signage. Pedestrians travel at slower speeds and may stop more frequently.*

- *Provide information about local geography and distance to the next river node*

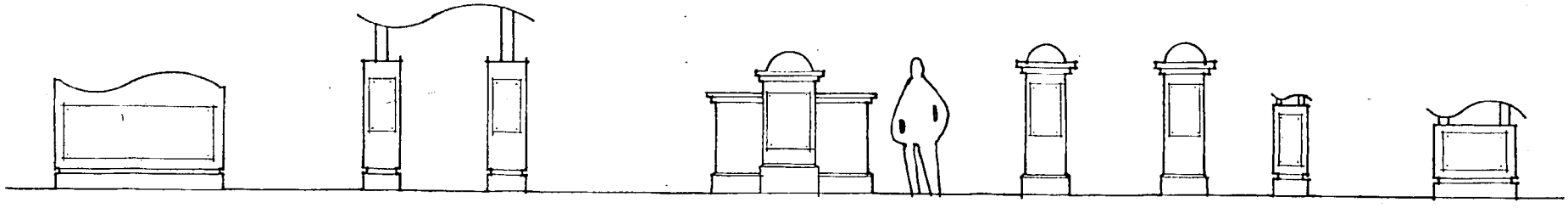
River Design Principles

River Setting - Signage/Graphics

EXAMPLE OF SIGN HIERARCHY



VARIATION OF SIGN DESIGN IN SIGN HIERARCHY

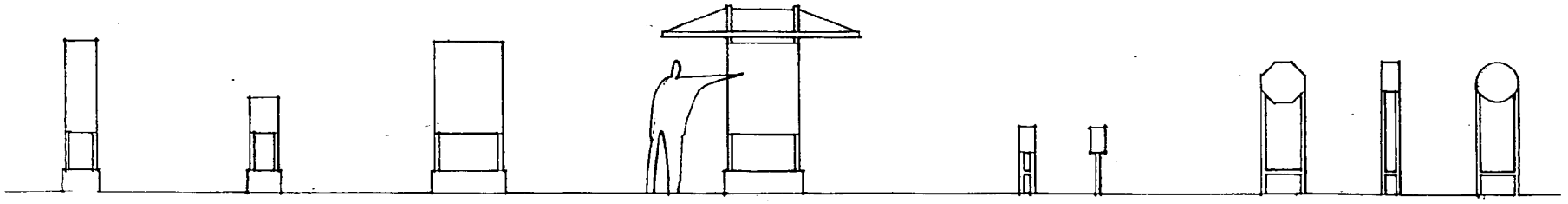


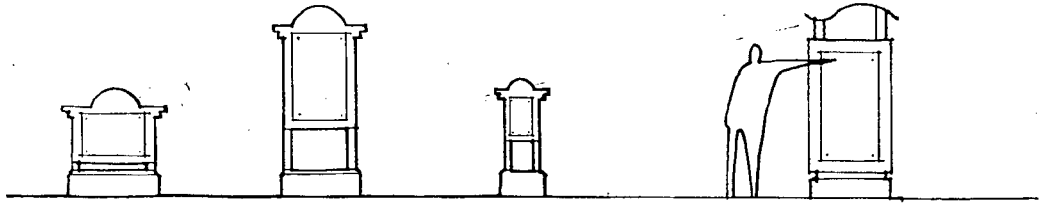
3. Points of Interest *- Points of interest should be integrated into a wayfinding system.*

- *Provide directional and distance information*
- *Consider including information on specific activities at a location, such as an explanation of a lock and dam operation or the historical significance of an island in view*
- *Provide direction to and explanation of nearby art, monuments or scenic vistas related to the River Corridor*

Sign Hierarchy - To unify the waterfront, an easy to understand sign hierarchy is recommended based on a common wayfinding system. A hierarchy reflects a uniform design concept and incorporates signs containing simple to complex information. It should include: directional signs, river orientation signs, mile markers, interpretative signs, community identity signs, building signs, historical markers, icons/ symbols and temporary signs.

1. Directional Signs *- Directional signs provide simple and specific information to assist in reaching a destination.*





- *Install to improve access to and along the river and activity nodes*

***2. River Orientation Signs** - A river orientation or identity sign helps pedestrians, bicyclists or motorists identify their location in relation to the river. If motorists or bicyclists are traveling the Great River Road which may be some distance from the shoreline, river orientation signs placed along roadways should indicate distance and direction to the river.*

- *Incorporate a symbol or identity for the overall River Corridor as a unifying graphic element*

***3. Mile Markers** - Mile markers identify the distance from one location to another.*

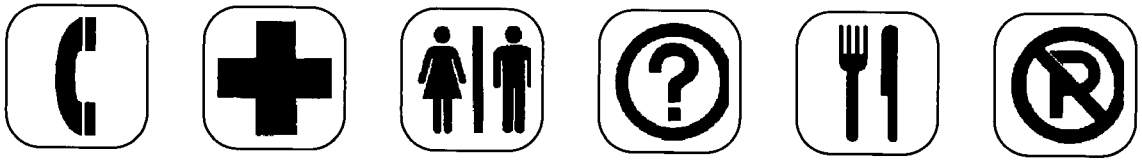
- *Incorporate into path/trail systems and the Great River Road*
- *Consider creative design, e.g., inlaying marker into trail surface or using a series of channel buoys for distance measurement*

***4. Interpretative Signs** - Interpretative signs provide information on educational, historical, geographical, ecological or artistic features. Interpretative signs on nature trails may educate hikers on vegetation or wildlife. Such signs may explain the operations of a quarry or lock and dam system.*

- *Design interpretative signs according to the setting or as a component of a*

River Design Principles

River Setting - Signage/Graphics



Pictorial icons/symbols to identify services or activities on the river can encourage access and provide easily understood messages for international visitors.

wayfinding system (e.g., a nature trail sign may be made of natural materials like wood or stone and may explain the historical significance of the location)

***5. Community Identity Signs** - A community identity sign conveys image or identity for a city.*

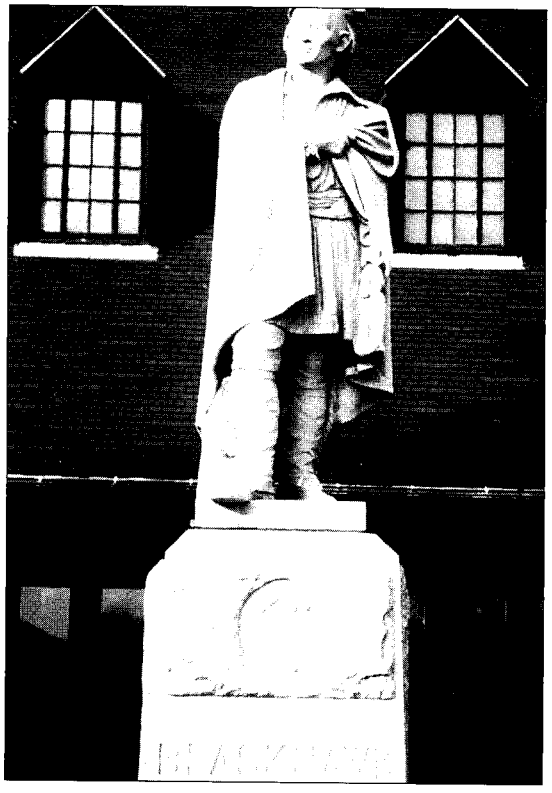
- *Place at major roadways and entrances to welcome visitors and thank them for visiting*
- *Coordinate with common wayfinding system to identify the community along interconnected paths/trails*

***6. Building Signs** - Building signs are typically either wall-mounted, free standing, projecting, or located on a roof or in a window.*

- *Orient signs toward river in conjunction with an entrance or consider an additional sign when the entrance is opposite the river*
- *Follow the local municipal sign ordinance in which the building is located*

***7. Historical Markers** - Historical markers identify specific locations for their historical significance. For example, a historic battle may have been fought along the Mississippi River or a famous person may have lived in the vicinity. Natural historical events such as an ancient Mississippi River channel may also be incorporated into a historical marker.*

- *Made of durable material, e.g. stone or metal, in the shape of a monument or plaque*
- *Place in as many locations as possible to celebrate river history and draw people to the waterfront*
- *Honor the working men and women who played a role in developing the River Corridor*



Quad Cities Convention & Visitors Bureau

Statues like this of Blackhawk, a Sauk Indian, are one type of historical marker which commemorates our unique past.

***8. Icons/Symbols** - Signs along the river should be designed to incorporate pictorial icons/symbols to identify services, concessions, processing activities, businesses, etc. Sign may include the international pictorial symbol for no parking or no smoking, a standardized symbol for restrooms or boat access or pictures of*

people fishing, eating ice cream cones, etc.

- *Follow guidelines developed by the American Institute of Graphic Arts in cooperation with the U.S. Department of Transportation*
- *Incorporate signs with symbols to indicate dangerous location in or along river or commemorate loss of life due to river-related accidents*

***9. Temporary Signs** - A temporary sign is a display, interpretative sign, banner or other advertising device intended for a limited period of display, including decorative displays for holidays or public demonstrations. Temporary signs accentuate the River Corridor and promote special events. They should be carefully placed.*

- *Incorporate elements of permanent sign hierarchy including shape, color, text design and/or artistic elements*
- *Construct with cloth, canvas, fabric, wood or temporary materials, with or without a structural frame*
- *Follow local municipal sign ordinance in which the sign is to be located*

Color/Material/Typeface - Sign colors, materials and typeface should be compatible with the surrounding river setting.

- Use natural materials such as wood or stone in rustic areas
- Use materials in an urban area as composed of durable plastics, metal, concrete, glass, etc. or may incorporate reflectivity and illumination
- Display simple, legible typeface where a great deal of information is being conveyed, such as interpretative signs
- Display typeface for building and identity signs which are more stylistic and convey less information
- Minimize the number of words in all signs if possible

Sign Control - Sign control is the ultimate responsibility of the municipality. Signs placed strategically along the River Corridor accentuate and identify the waterfront as part of a coordinated wayfinding system.

- Limit the number of signs per linear area
- Limit the use of protruding, flashing and moving signs
- Consider lighting for interpretative signage at river activity nodes
- Consider vandal proofing in the design
- Limit the use of billboards along the riverfront which prevent visual access to the river

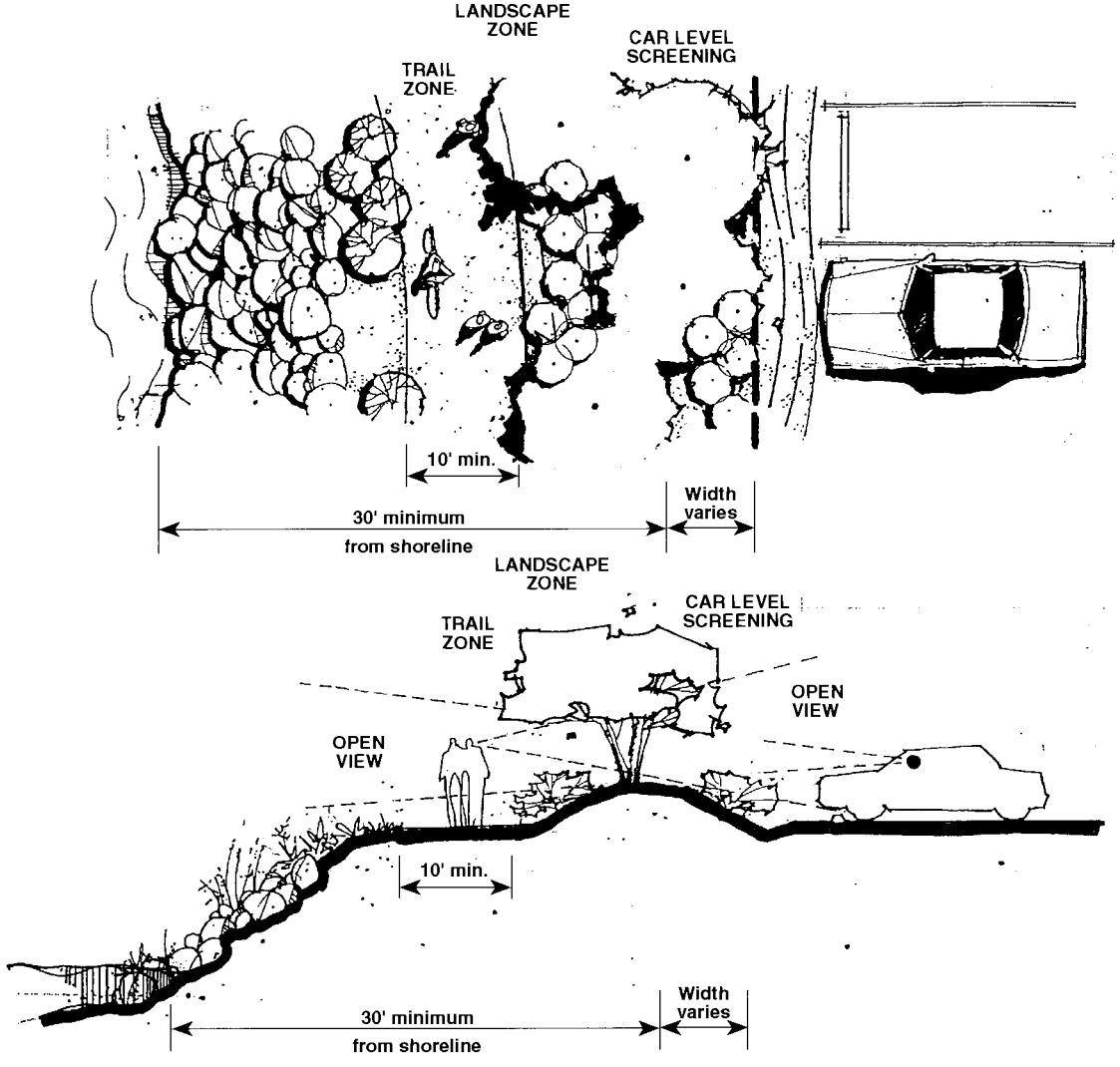
River Action

A variety of landscaping elements are shown here at Leach Park in Bettendorf, Iowa including beautification, shading, and erosion control.

LANDSCAPING

Design Intent - Landscaping contributes to the abatement of heat, glare, noise and erosional effects, and can promote percolation of storm water, air quality and quality of life elements. It adds color and interest to any river setting. Landscaping can provide a buffer between incompatible uses and may conserve the value of property and the riverfront. It provides a focal point and unifying element in the river setting.

- **Consider size and scale in relation to surrounding features and to visual access**



LANDSCAPING TREATMENTS ALLOWING VISUAL ACCESS IN RIVERFRONT SETBACK

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to the river

- **Use to create unique gateways to a site or in the River Corridor**
- **Use for artistic purposes (aesthetically and/or through design)**
- **Include the following components of landscaping, where appropriate:**

1. Screening - *Screening shields, conceals or hides a view from one site to an adjacent site. Screening techniques include fences, walls, hedges, berms or other features. Screening can also be used to hide storage areas, loading facilities, waste receptacles, transformers or air conditioners, and other similar uses. Maintaining visual access to the river is important. Screening should be used selectively to accommodate views.*

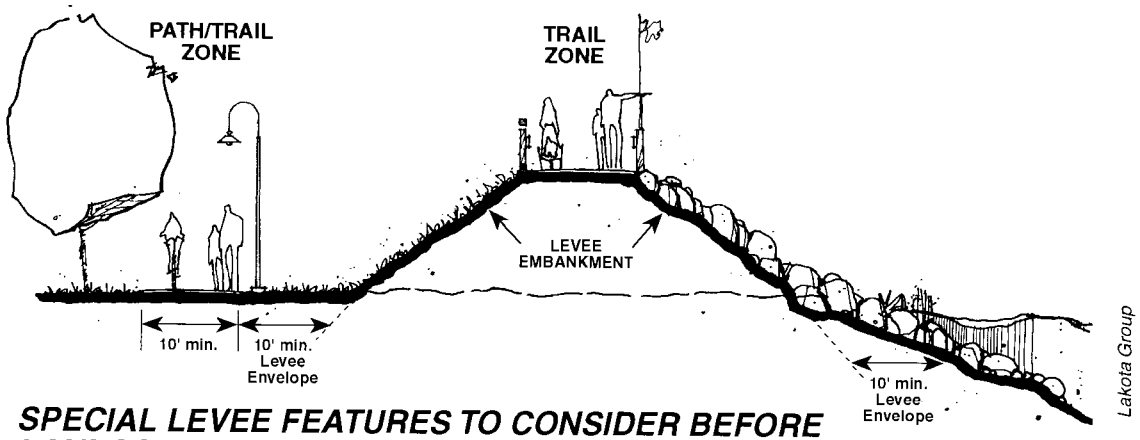
2. Beautification - *Vegetation should be designed to enhance a riverfront development. Incorporating greenspace along street right-of-way or buffers along common lot lines, alleys, streets or railroad right-of-way is suggested.*

3. Shading - *The use of vegetation for shade reduces urban heat and noise and improves air quality. Surface areas with extensive spans of concrete or asphalt should include native and flood tolerant shade trees around*

the perimeter and interspersed within the area. Vegetation should be selected for resistance to disease, pests, floods and drought, and minimum maintenance requirements.

4. Wind Breaks- *Wind breaks create impediments to the wind, reducing dust and other blowing objects into a site. Trees provide natural wind breaks. Tree species native to the floodplain or upland environment are also valuable wildlife habitat. Walls and fences also provide wind breaks.*

5. Erosion Control - *Measures to control soil erosion and offsite flooding and sediment runoff should be examined. Consideration may be given to shallow sloped drainageways which will not increase erosion onsite or downstream.*



SPECIAL LEVEE FEATURES TO CONSIDER BEFORE LANDSCAPING OR PROVIDING RIVER ACCESS

Natural Areas - Natural areas along the River Corridor should be preserved where the landscape provides shelter for wildlife and vegetation, or contains significant wetland areas including floodplains, prairies and woodlands. Preservation, enhancement or conservation are encouraged in all riverfront improvements and development projects.

Plazas/Parks/Open Space - Plazas, parks and open space provide extensive opportunities to preserve existing vegetation or enhance the riverfront with additional landscaping.

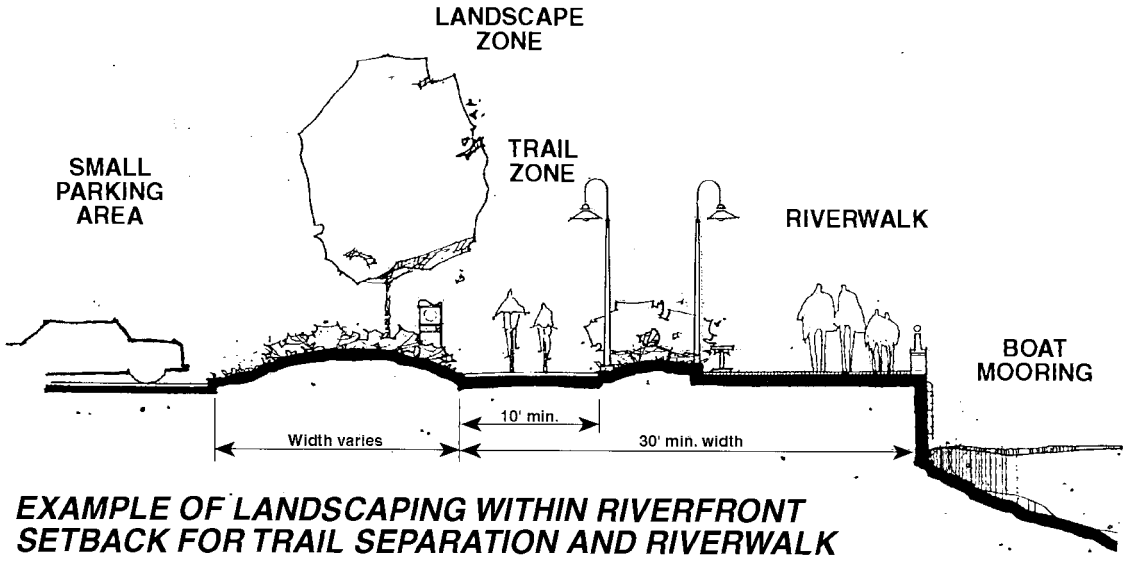
- Incorporate artistic landscaping into a river setting with ornamental gardens, walls of native stone or berming to create a variable landscape
- Use plantings to create shade and interest, and to slow pedestrian traffic within plazas and parks
- Incorporate low walls, decorative fences or landscaped plantings as a way to delineate the plaza/park/open space boundaries

Levees/Walls - Levees and walls may be landscaped, where allowable. As flood control structures, the Corps of Engineers must be consulted prior to attempting to landscape or alter levees and flood walls along a waterway. Levees and flood walls can create visual and physical barriers to the river; therefore, consideration to the land/water connection is extremely important including visual access where feasible. Landscaping may provide this connection. For example, the use of a stair amphitheater on the Davenport levee creates an interesting landscape, and provides greater access to the river.

- Require that improvements not puncture the levee envelope
- Prohibit trees on levees, other plantings may be approved on an individual basis

River Design Principles

River Setting - Landscaping



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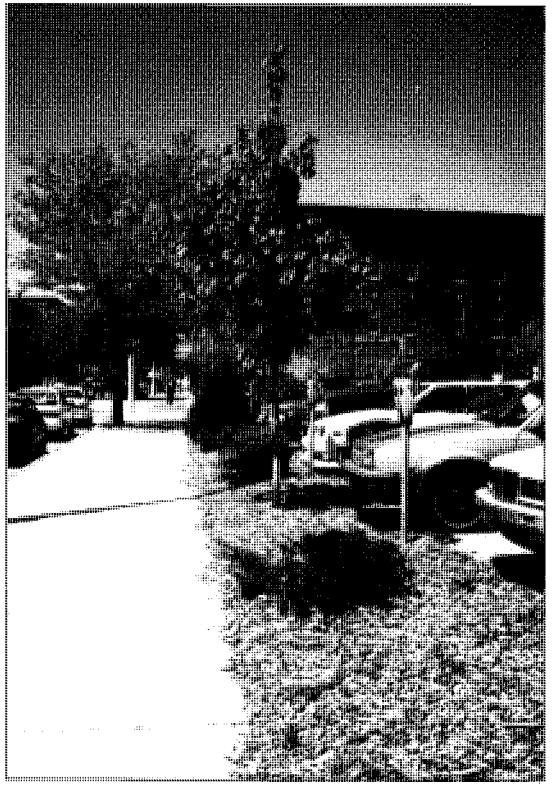
EXAMPLE OF LANDSCAPING WITHIN RIVERFRONT SETBACK FOR TRAIL SEPARATION AND RIVERWALK



Bi-State Regional Commission

Example of landscaped parking near riverfront, Rock Island, Illinois.

Grading/Berming - Grading and berming along the River Corridor can contribute to erosion control and provide visual screening of unattractive views along the river.

- Use gradual slopes rather than steep ones to maintain visual access to the river
- Berm to add relief to the landscape, making it more visually appealing

Buildings - Landscaping of buildings and their surrounding property can enhance the region's waterfront.

- Use landscaping along a building's street right-of-way and river side as a gateway
- Screen service and utility areas from view
- Use to delineate a transition in property rights, private vs. public, or use

Storage/Equipment/Trash Areas - Storage, equipment and trash areas should use screening techniques to conceal unsightly views, particularly where they are on the riverfront side of a property or prominently visible in an otherwise attractive view of the river.

- Landscape to conceal these activities and enhance the image of a facility, whether it is associated with a building or a park
- Orient storage/equipment/trash areas of new development away from the river's edge
- Place utility lines underground, where feasible, to increase the visual quality of the river landscape

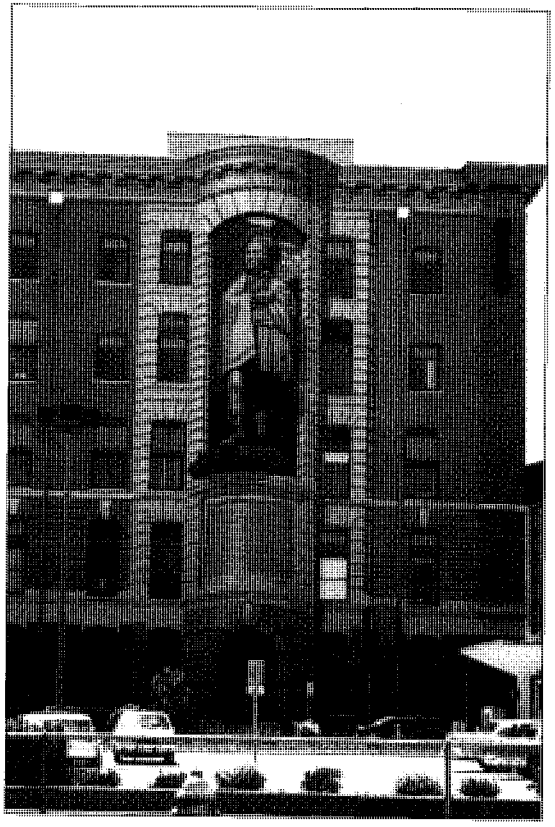
Riverwalks/Paths/Trails - Landscaping of riverwalks/paths/trails at or near the river's edge

should vary according to the surrounding uses.

- Minimize environmental impact through natural areas
- Screen in or around industrial sites except when educational aspects of the industry are incorporated into the pedestrian/bicyclist access
- Minimize landscaping along bicycle trails or at intersections for clearance and visibility purposes, including appropriate site distance for safety
- Provide sufficient shade and wind breaks
- Use plantings to separate riverwalks/paths/ trails

Parking Lots/Structures - Landscaping is suggested to be reasonably dispersed throughout the parking lot.

- Provide minimum setback of 30 feet (9m) for small parking lots of less than 15 stalls to accommodate landscaping and inter-connected paths/ trails
- Prefer large parking lots/structures be located on the opposite side of a riverfront road away from the river to allow riverfront beautification
- Provide landscaping of at least 5% of the total parking surface area for areas over 4,000 square feet (1,200 square m)



Bi-State Regional Commission

"Face The River" program in Rock Island, Illinois integrates history and art into a wall mural of Black Hawk, a Sauk Indian leader in the early 1800's.

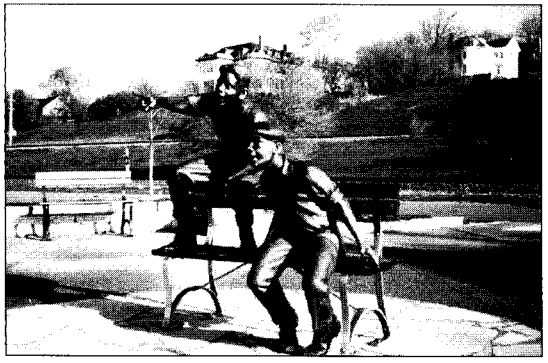
RIVERFRONT ART

Design Intent - The vision for our River Corridor calls for art to take a leading role in unifying the riverfront and developing it into a unique and special place. Art should be thought of in the broadest terms. Well designed buildings, creative landscaping, eye-catching banners, are all a part of an artistic approach to the riverfront. Calling upon artists at the beginning of a project can frequently lead to low-cost design solutions that are pleasing to the eye, imaginative, playful or imposing and always a welcome addition to the built environment.

Art can be used to create a sense of place, ensure continuous use through desirable form and provide the important element of aesthetics in the planning and design process. Art will create images of the riverfront for residents and visitors that will heighten their awareness and encourage river stewardship. Shared images for each community are encouraged. See Section 4.3, River Setting, Architecture, Ancillary Structures, Focal Point Structures, as examples of potential common elements for the riverfront.

Art can also be used in the following ways:

- Provide focal points for plazas, street ends, gateways, entrances, trail heads, intersections, marinas, etc.
- Tell our stories, honoring both places and people, by interpreting our history, marking



Quad Cities Convention & Visitors Bureau

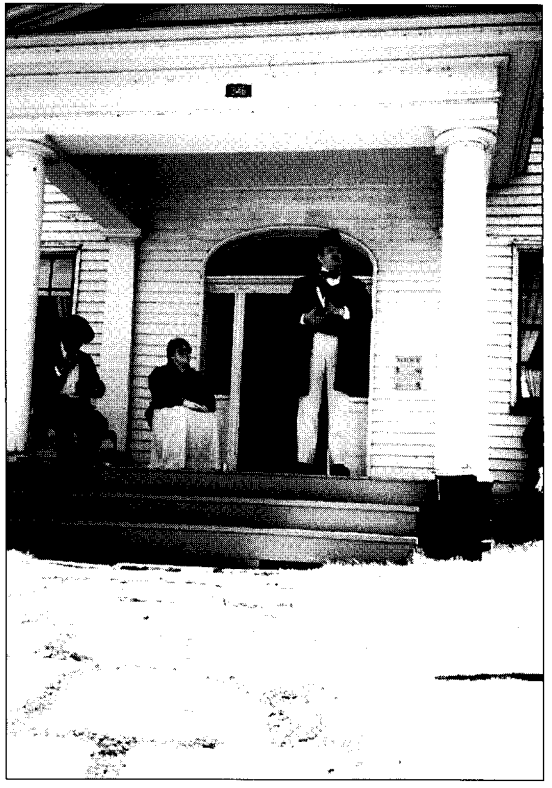
Incorporating art, like this John Bloom sculpture on Davenport's riverfront, into the public landscape is encouraged.

sites where the river tragically claimed lives, identifying the trailblazers of our evolving River Corridor

- Accent Quad Cities' assets by marking open spaces along the river and providing methods to interpret the industry (i.e. quarry museum or schematics on the outside of a factory) and the environment (i.e. "window" to the river displaying its aquatic life or schematic of a wetland and its ecology)
- Heighten the communities' relationship with the river by urging us to look and contemplate, by providing the directness of touch and by encouraging us to stop and listen
- Beautify unsightly structures by creatively painting storage tanks, concealing wires and visually enhancing warehouses (See Section 4.3, River Setting, Architecture, Ancillary Structures)
- Examine non-traditional art forms and materials (found objects, crafts, textiles, environmental art, installation art, lighting, etc.)
- Utilize the many resources in the Quad Cities area to assist in identifying artists and funding to help in public or private developments (See Appendix D for references)

Public Art Program - Public art can take many forms. Sculpture, wall murals and mosaics are the most commonly thought of public art. It can also involve what we usually consider to be strictly functional forms. Outdoor furnishings and landscaping, for instance, can be used to bring art to the riverfront.

Public art can be created in many ways, such as requesting site-specific proposals from internationally known artists, commissioning a local artist to create a particular design, using the work of school children, or hiring an artist to supervise the work of community groups, are all possible approaches to take. The last two examples are "Community-Built Art." This type of art requires the cooperation of governmental agencies, local administrations, school districts, community groups and the art community. This may be accomplished by involving many citizens in the birth of the river vision through the process



Bi-State Regional Commission

Riverfront art can involve performances of historical events of our river history as shown at the Colonel Davenport House on Arsenal Island.

of Community-Built Art.

- Dedicate areas to temporary art, like holiday decorations, sculpture exhibitions, lighting displays, performances, environmental installations, etc.
- Restore or call attention to natural areas in

design for aesthetic and practical purposes (e.g., stagnant lagoons have been restored by incorporating sculptural forms to increase aeration with the added benefit of providing access and beauty to the lagoon)

- Consider small and large performance areas with dual purposes where seating also act as steps or low walls or where barges act as performance stages when riverfront staging is at a premium
- Use lighting effects (both natural and artificial) to bring drama and beauty to any riverfront site

Private Art Program - It is strongly recommended that each private development along or near the river, new or long-standing, consider incorporating the above discussion on Public Art Program for application to their own property.

- Consider planting prairie grasses, adding lights, painting wall murals, etc. as relatively inexpensive ways to participate in community-wide movement to bring art to the riverfront
- Incorporate elements of art into the design criteria from the onset of a project when private developments or renovations are considered
- Budget art and enhanced design into the total project cost

C. Rayburn

Signs can be used artistically to create a sense of place as shown in Superior, Wisconsin.

OUTDOOR FURNISHINGS

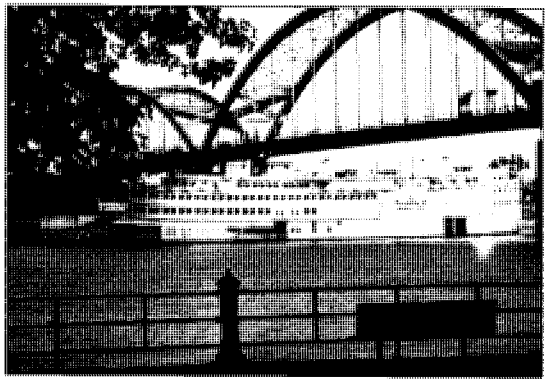
Design Intent - The river setting can be enhanced through the use of outdoor furnishings. Outdoor furnishings are objects such as benches, tables, grills, shelters, drinking fountains and waste receptacles. Outdoor furnishings provide amenities which can attract people to the riverfront. They can also be a unifying element in existing and future development. Outdoor furnishings should be designed consistently throughout a community's riverfront.

Seating/Tables - When considering seating and tables, think in broader terms such as the use of low walls for seating, tree stumps as tables or ground lights that double as seating.

- Place and anchor benches along paths/trails/plazas/riverwalks in settings that offer some shelter or opportunity to allow users to pause, view the scenery, rest or enjoy the riverfront activity
- Incorporate seating within or on the perimeter of riverwalks or plazas to provide an invitation to sit and enjoy the activity of the open space
- Consider construction of benches with art blended into their design
- Incorporate tables as another means to enjoy the riverfront (picnic tables or cafe tables along the river at various developments are encouraged and they could incorporate game boards)
- Made of durable materials including steel, treated wood, stone, concrete, plastics, etc. with consideration to vandal-proofing

River Design Principles

River Setting - Outdoor Furnishings



Quad Cities Convention & Visitors Bureau

Outdoor furnishings like the railing and bench shown here at LeClaire Park, Davenport, enhance the scenic and contemplative aspects of the river setting.

Walls/Fences/Railings - Decorative and attractive walls, fences and railings may be considered along the waterfront, either as part of landscaping or as a security measure. Walls and fences can be used to aesthetically separate incompatible uses or to transition uses. A decorative wall may isolate a plaza from vehicular traffic or may direct pedestrian traffic to a riverwalk from a walking/jogging trail.

- Use as safety features (walls/fences/railings along the river's edge permits viewing of the river without direct contact, particularly adjacent to restaurant or other high-traffic uses)
- Design intermittent gate openings in walls/fences/railings to the river for boat access at the river's edge
- Maximize views by designing relatively open, see-through or transparent structures
- Design aesthetically when these features are part of flood control

Trash Receptacles - Trash receptacles discourage littering and are an important aspect of a public space.

- Place trash receptacles along riverfront parks/plazas/marinas/ riverwalks/trails where they will be used to the greatest extent as well as regularly maintained
- Visually screen all containers within a durable, non-combustible, nondefaceable enclosure or landscaping
- Use construction material with finishes and colors that are harmonious with river setting

Flagpoles - Flagpoles may be used to draw attention to a location. Nautical flags displayed on a pole at a marina may add colorful character to a river location.

- Harmonize flagpole heights and sizes with surrounding building heights (moderately sized flags and flagpoles draw attention to plazas, riverwalks or other focal points)

River Action

Bike racks, as shown here at Ben Butterworth Parkway in Moline are encouraged not only at parks, but also at plazas, marinas, river nodes, etc.

Kiosks/Directories - Kiosks and directories are structures of varying shapes and forms created to display information. Kiosks and directories create an effective form of visual communication. These signs provide an opportunity to blend art creatively into the river landscape.

- Made of a variety of material including plexiglass, glass, concrete, stone, metal, etc.
- Consider the surrounding architecture or landscape in harmony with the kiosk or directory

Bicycle Racks - Bicycle racks provide storage opportunities for bicycles, insuring their security and inviting bicyclist to other activities along the riverfront.

- Provide bicycle racks with all development to encourage community and recreation interests including at marinas, campgrounds, plazas, river nodes, riverfront parking areas, etc., as well as manufacturing, retail and service establishments along the riverfront
- Made of metal or in combination with wood or durable plastic
- Design to prevent theft and allow easy access to the bicyclist
- Visually screen without jeopardizing security and safety

Newspaper Racks - Newspaper racks located in the vicinity of the riverfront provide an amenity for urban parks, riverwalks, plazas, campgrounds/RV parks, marinas, river nodes, etc.

- Place in durable enclosures which reflect the architectural design of an area and screen them from view
- Place near buildings or kiosks

Telephones - Telephones located in the vicinity of the riverfront provide security and another amenity for public use.

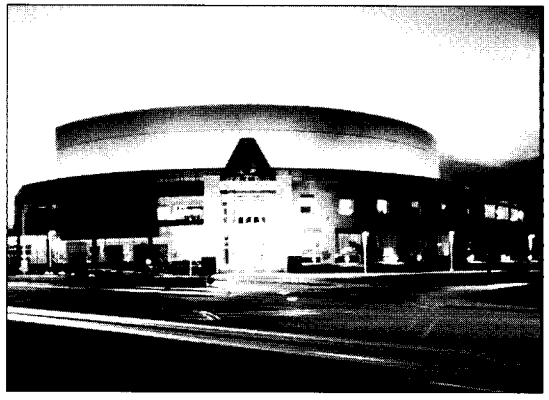
- Place in durable, nondefaceable enclosures which provide security and shelter from the elements, but use artistic design elements (e.g., the distinctive look of the red telephone booths of London)
- Locate at high use activity areas or river nodes

Drinking Fountains - Drinking fountains are especially important along trails or at river nodes where exercise or physical activity may create a need for potable water.

- Consider locating drinking fountains at parks, plazas, riverwalks, marinas, trails, etc.
- Incorporate artistic elements into their design (e.g., mosaic stone for the fountain's pedestal or interesting shapes)

LIGHTING

Design Intent - Along with enhancing architecture, landscaping and signage, consideration should be given to decorative lighting, both natural and artificial. The lighting of the Centennial Bridge, for example, has made this landmark a major nighttime focal point. Sensitively lighting other prominent structures will further establish a dramatic and unique night setting for the Quad Cities. Using sunlight and shadows, dramatic daytime effects can also be created.



Quad Cities Convention & Visitors Bureau

Interesting lighting elements can be added to a building's design to improve the riverfront as displayed by The Mark of the Quad Cities.

Lighting along the river landscape provides illumination for designated activity areas or river nodes and provides an added safety feature after dark for these higher density use locations. Lighting can be permanent or seasonal. Lighting which discourages the attraction of insects is desirable. All electrical equipment should be screened from views and placed above the 100-year flood elevation.

Buildings - A building's architecture can be enhanced with proper lighting design. Decorative lighting can be achieved at low cost.

- Showcase window patterns and building

River Design Principles

River Setting - Lighting

structures with interior lighting

- Frame a building, highlight its unique characteristics or a special features or create an artistic impression using exterior lighting
- Use colored as well as white lights to display buildings in dramatic ways
- Consider adding decorative lamps to enhance riverfront dining at restaurants and cafes with outdoor seating
- Create decorative shadows on building walls using metal forms attached at right angles to the building or placed on the lawn

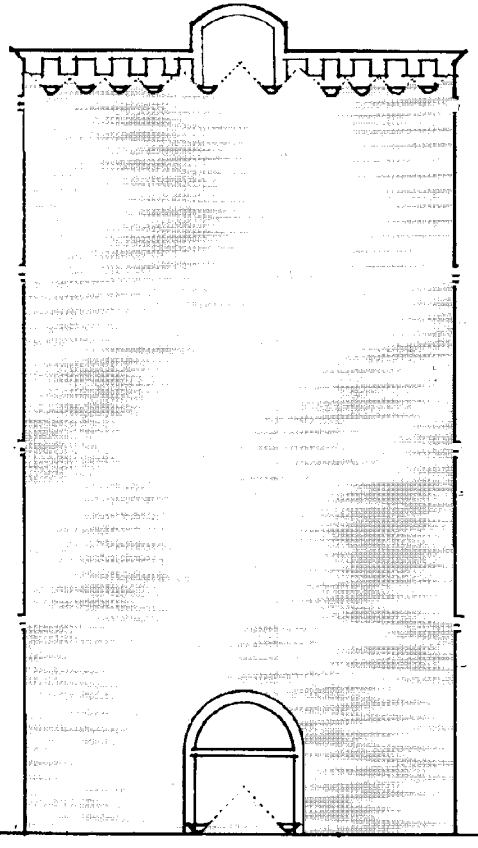
Signage - Lighting can improve sign security and visibility, and allows the presentation of more complex messages.

- Showcase interpretative signs at river nodes with decorative lighting
- Consider the shape and form of signs to cast interesting shadows on the landscape and to create riverfront art

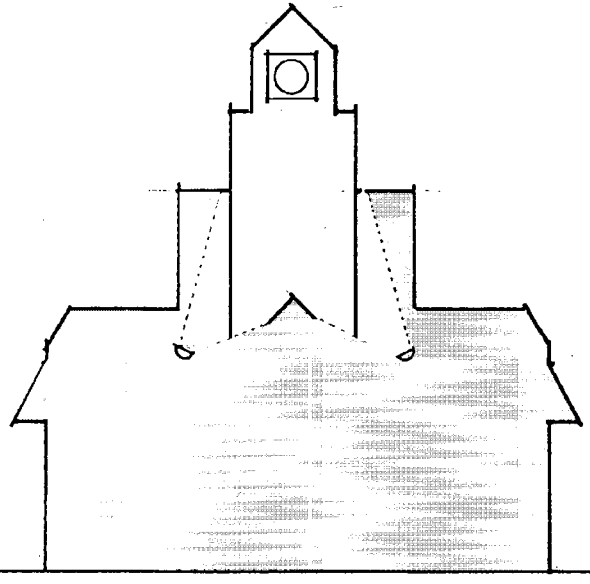
Stairs/Ramps - For safety and aesthetics, lighting may be incorporated into the design of a series of stairs and ramps.

Bridges/Locks and Dams - Lighting provides a connecting medium when incorporated into their design.

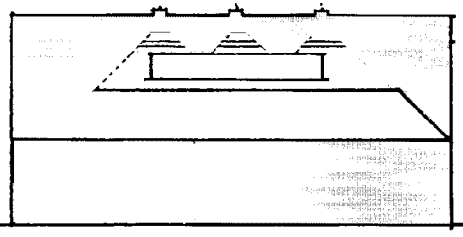
LIGHTING FOR DETAIL



LIGHTING FOR FOCAL POINTS



LIGHTING FOR HIGHLIGHTING



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Proper lighting design can enhance exterior or interior building features while creating a dramatic night skyline.

Quad City Times

Bridges provide an excellent medium for lighting treatment enhancing the riverfront, as shown in this photo of the Centennial Bridge between Rock Island and Davenport.

- Consider lighting bridges on trails, particularly near an activity node
- Consider lighting Lock and Dam 15 from the top of the Iowa-Illinois Gas and Electric Company building or other building of similar height

Riverwalks/Paths/Trails - The lighting of riverwalks/paths/trails is only recommended at activity nodes or in developed settings. To ensure a pedestrian scale, the combined height of the light pole plus the lumination should not exceed 15 feet (4.6m).

Special Features - There are a variety of other physical elements that could benefit from lighting treatments along the river. Parks, plazas and riverwalks decorated with holiday lights year-round creates a festival atmosphere.

- Create unusual images by back lighting industrial or commercial structures such as towers or storage tanks for riverside viewing
- Add period lighting for ambience in historic districts
- Add decorative lighting to parking lots in harmony with the surroundings and for illumination and safety
- Avoid utility lighting that casts harsh light on the riverfront

ARCHITECTURE

Design Intent - Buildings have a major impact on waterfronts, and special consideration should be given to structures at the river's edge. The placement, setback, orientation form and material of buildings are important to enhancing/improving access and views, as well as creating an active and attractive river. Historic buildings, because they reflect the history and evolution of our River Corridor, should be retained, if possible. Excellent riverfront development opportunities exist with cafes and shops, as well as other enterprises. Outdoor dining areas and courtyards allow dual enjoyment of a riverfront building and the riverfront atmosphere.

Building Form - Architectural design of buildings or structures can provide important connections or unifying elements to the riverfront. These features are extremely important in creating a sense of place and giving distinction to our River Corridor.

- Incorporate historical elements of local industries including milling, railroads, farm implements, or draw from the area's diverse natural resources, such as eagles, catfish, limestone quarries, hydroelectric power into building design

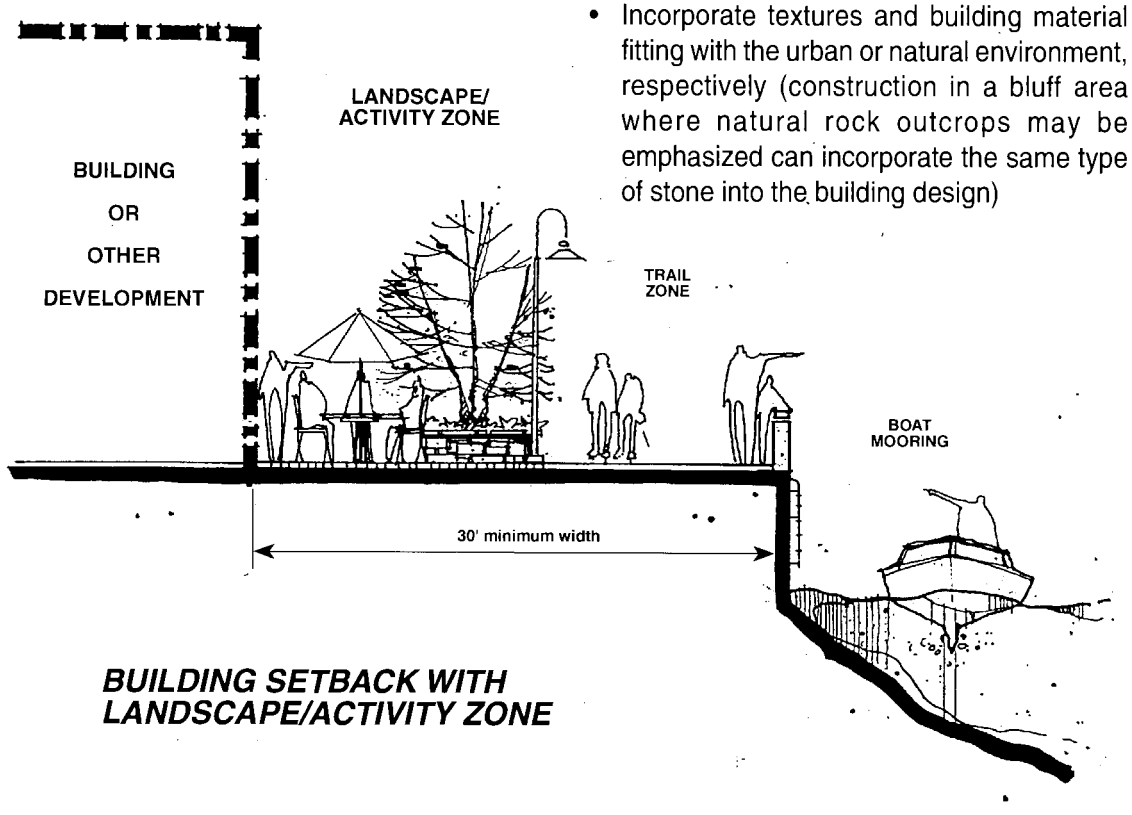
River Design Principles

River Setting - Architecture

- Create private plazas or overlooks using furnished or landscaped building tops/roofs
- Design entrances which create gateways into buildings and draw from the river setting
- Emphasize windows, porches, balconies, facade treatments, etc. that compliment the river setting and divide larger buildings into "smaller" pieces for aesthetics
- Include public open spaces such as plazas, riverwalks, docks/piers/moorings, etc. into the development

Finishes/Materials - Selection of finishes and materials to give a building or structure more visual interest is encouraged.

- Incorporate textures and building material fitting with the urban or natural environment, respectively (construction in a bluff area where natural rock outcrops may be emphasized can incorporate the same type of stone into the building design)



BUILDING SETBACK WITH LANDSCAPE/ACTIVITY ZONE

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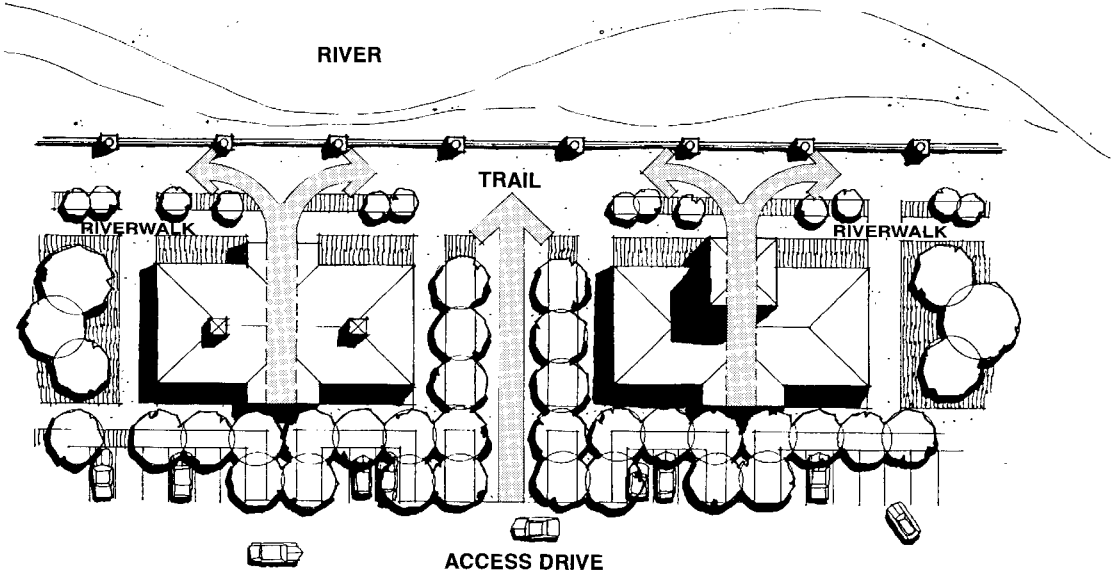
- Consider decorative roofing material or treatments such as cornices, articulated rooflines, mosaic tiling, etc. with respect to its visibility from other taller buildings or structures
- Avoid blank facades in areas with older, more detailed buildings or ornamentation

Building Orientation/Siting - Using the river as the focal point, buildings should be oriented, where feasible, toward the river's edge.

- Think of the riverfront as the community's "front yard" or "main street"
- Site the prominent side of a building and its main entrance toward the river, if feasible, to capitalize on views and provide public access
- Determine the building's impact on views upslope and downslope during the siting process and develop designs with these views in mind
- Include windows facing the river whenever possible
- Screen or enclose loading/service/trash areas and avoid their placement on the riverside of a building or along the main street and/or trail

Building Setbacks/Massing - Buildings set back from the river's edge allow for the development of paths/trails, plazas, riverwalks, etc.



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BUILDINGS ORIENTED WITH RIVER AS "FRONT YARD" AND VISUAL/PEDESTRIAN ACCESS THROUGH AND ALONG STRUCTURES

- Vary distance between buildings, building shape or the height of buildings to add visual interest and distinction to the riverfront
- Provide minimum setback of 30 feet (9m) in width from the river's edge
- Consider open space between buildings to increase river access, visually and physically
- Consider strategies that break up the mass of a building using offsets or articulation of rooflines or other surfaces

Terracing - Above grade terracing of buildings in architectural design encourages viewing at a variety of levels and breaks up the mass of buildings directly on the river's edge. The Mark of the Quad Cities or Modern Woodmen of America display excellent examples of terracing with their architectural design.

- Incorporate riverwalks and plazas, when appropriate, in terraces
- Blend with landscaping at ground level to create a park-like atmosphere
- Observe caution when terracing within the floodplain where the ground surface may be altered and lead to increased flood flows, velocity, etc.

Retrofitting/Rehabilitation - Retrofitting and rehabilitation of existing buildings is highly recommended, where needed. Many of the existing structures in the Mississippi River Corridor are part of the history and development of the region.

- Consult local historians to ensure authenticity and assist with rehabilitation of older structures
- Recognize the importance and influence of historic buildings on the River Corridor and develop restoration/rehabilitation plans and design that encourage suitable adaptive reuse

Support Facilities - These buildings or structures provide services at specific locations. They support a development by allowing vendors to set up carts or stands for the sale of merchandise or food, or to provide amenities for public needs and/or safety. Using art to beautify these facilities by masking, screening or ornamenting their facades is encouraged.

1. Restrooms - *Restrooms for the public are recommended in riverfront parks, trails and major activity centers.*

- *Prefer restrooms with running water in urban setting*
- *Consider facilities for natural areas not requiring sewer and water connections, and consider the quantity of usage and*

environmental impact

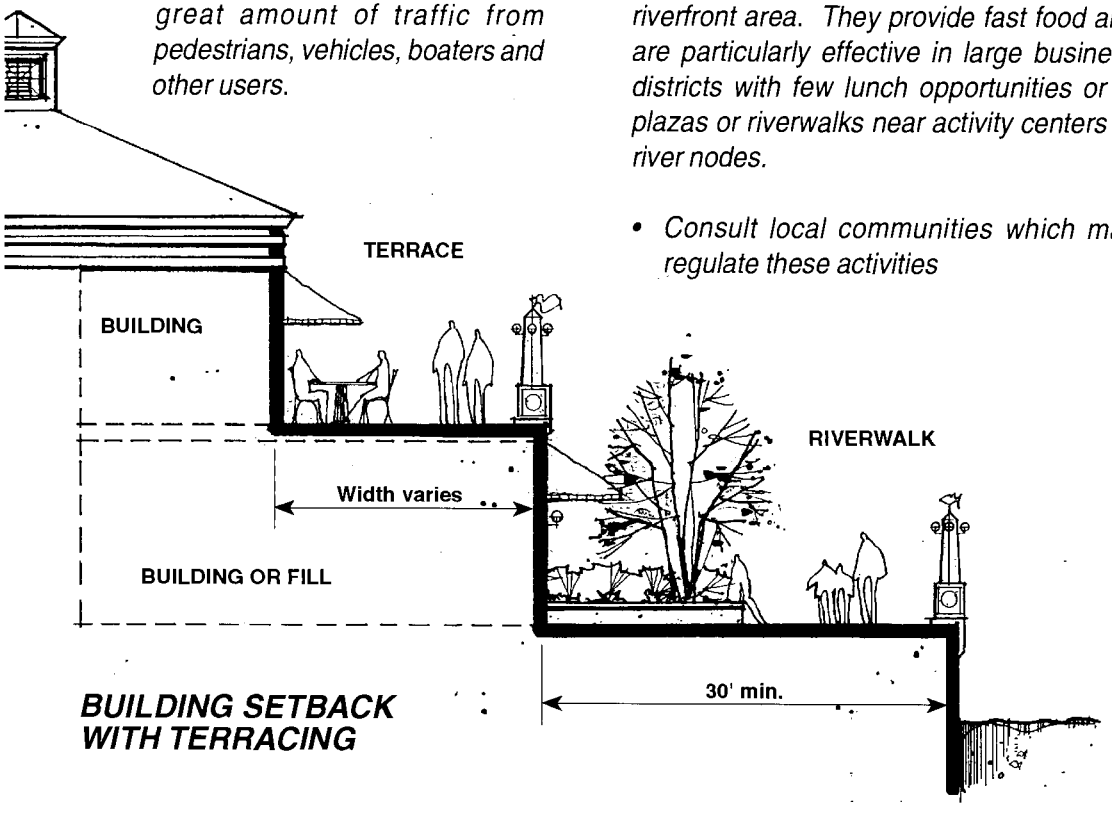
- *Accommodate winter usage with portable toilets if activity node caters to users throughout the year*

2. First Aid Stations - *First Aid Stations may be incorporated into developments, particularly if the area receives a great amount of traffic from pedestrians, vehicles, boaters and other users.*

- *Provide safety equipment accessible by local police or sheriff departments, including a telephone for emergency calls*
- *Consider its visibility, security and location to emergency vehicles, if necessary*

3. Concession Stands/Carts - *Concession stands and carts may add character to a riverfront area. They provide fast food and are particularly effective in large business districts with few lunch opportunities or in plazas or riverwalks near activity centers or river nodes.*

- *Consult local communities which may regulate these activities*



BUILDING SETBACK WITH TERRACING

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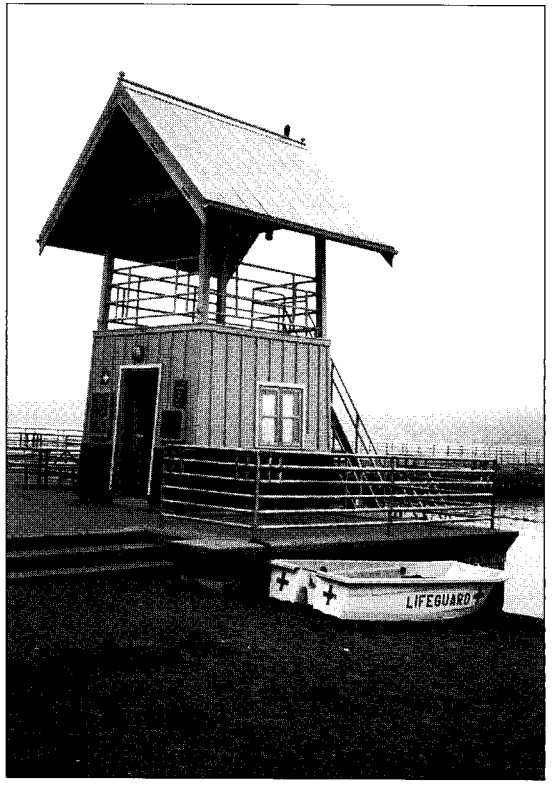
Ancillary Structures - Ancillary structures are facilities closely associated with other facilities. For example, a parking garage associated with a hotel development. The design of ancillary structures should be in character with the overall development. Using art to beautify these

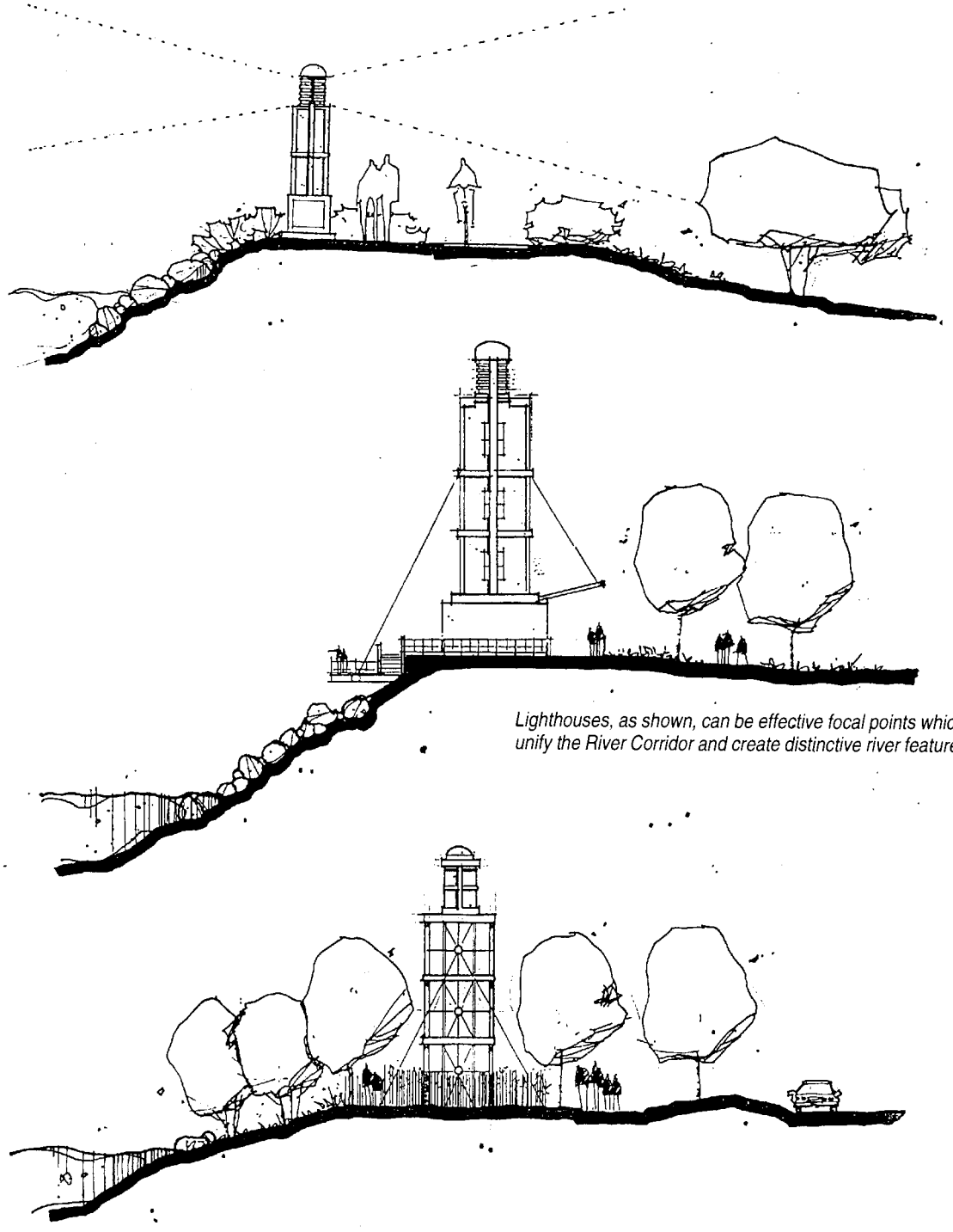


C. Rayburn

Example of a support facility at this lifeguard station in Bellevue, Washington.

River Design Principles

River Setting - Architecture



Lighthouses, as shown, can be effective focal points which unify the River Corridor and create distinctive river features.

Lakota Group

structures by concealing, screening or ornamenting their facades is encouraged.

1. Focal Point Structures *- Ancillary structures may be built to provide focal points for street ends or other important sites. Lighthouses have been suggested for this purpose.*

- *Consider lighthouse structures as towers for river viewing or other multiple purposes (shelter, restrooms, information center, etc.) along the trail system*
- *Utilize fountains to bring the "river to the bluffs"*
- *Use as shared community structures to unify image of the River Corridor while creating unique landmarks*

2. Parking Structures/Garages *- Parking structures or garages provide important vehicle storage for downtowns or specific developments such as shopping centers, civic centers, office buildings, hotels, etc.*

- *Incorporate directly into the design of the associated buildings*
- *Site structures a minimum of one city block from the riverfront or on the opposite side of a riverfront road away from the river's edge when land use permits*

- *Consider visual impact upslope and downslope, particularly when multiple levels are being considered*
- *Encourage design with open views from the facility to the river*
- *Beautify using art to blend the facility into the river setting*

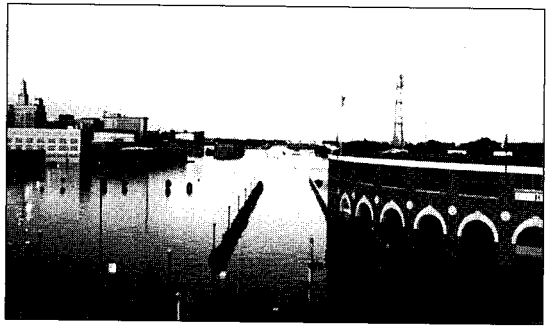
***3. Non-Commercial Barges** - Consideration may be given to the use of a barge structure other than for commercial transportation uses. In all cases, safety and environmental issues require special attention.*

- *Utilize to construct a floating restaurant or other waterfront business*
- *Develop a swimming or fishing facility using a barge shell*
- *Consult the Corps of Engineers and U.S. Coast Guard prior to project design*

4.4 Resource Enhancement

Design Intent - All development in the Mississippi River Corridor should seek to preserve or enhance the health of the waterway and its shoreline. Project design is encouraged to treat the river landscape with sensitivity to minimize environmental impacts. Natural physical constraints of the river, such as water level, currents, ice flow and sedimentation, may dictate a project design. With creativity and forethought, development can be blended with the environment to enhance the overall river corridor. However, there are some areas where preservation and limited access are preferred. Consultation with the appropriate environmental contacts is urged prior to project design (see Appendix D for references).

Floodplain - A floodplain or special flood hazard area is land which is subject to inundation by the base flood. Flooding occurs when generally dry lands are temporarily inundated by the overflow, the unusual or rapid accumulation or the runoff of surface waters from any source.



River Action

The 1993 Flood on Mississippi River emphasized the importance of floodplain management. Shown is Davenport's John O'Donnell Stadium at River Drive and Gaines Street.

- Base flood, a flood event having a 1% probability of being equalled or exceeded in any given year (also known as the 100-year flood)
- Floodway, a portion of the special flood hazard area required to store and convey the base flood

Development in both the floodplain and floodway are permitted; however, there are regulations outlining what is permissible and how development can occur. Community floodplain ordinances should be consulted prior to development in a floodplain or floodway, and the appropriate permits must be obtained from local, state and federal agencies prior to construction.

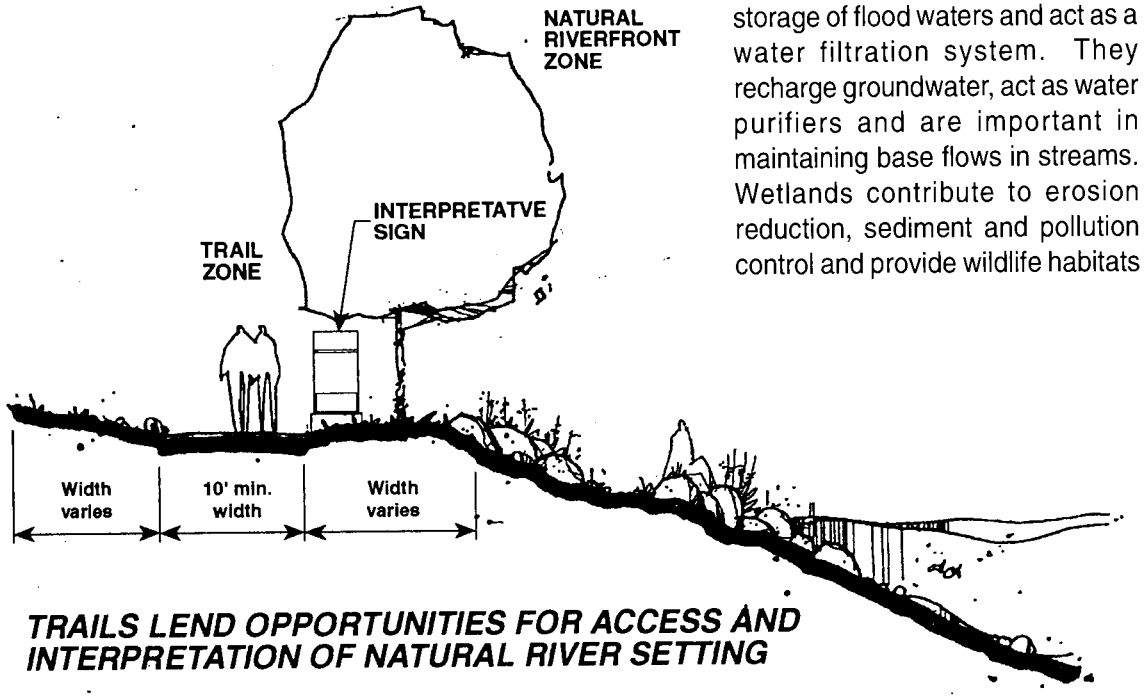
Floodplains are regulated for the following reasons:

1) to prevent unwise developments from increasing flood or drainage hazards;
2) to protect new buildings and major improvements from flood damage;
3) to protect human life and health from the hazards of flooding;
4) to lessen the burden on the taxpayer for flood control projects, repairs to flood-damaged facilities and utilities; and

5) to maintain property values and a stable tax base by minimizing the potential for creating flood blighted areas.

Development of a floodplain should consider the following:

1) minimize fills;
2) provide adequate flow circulation;
3) use minimum grading and reduce compaction;
4) relocate nonconforming structures;
5) use natural contours of site;
6) preserve free natural drainage when designing and constructing bridges, roads, fills and large built-up centers; and
7) prevent intrusion or destruction of beach and estuarine ecosystems and restore damaged dunes and vegetation.



TRAILS LEND OPPORTUNITIES FOR ACCESS AND INTERPRETATION OF NATURAL RIVER SETTING

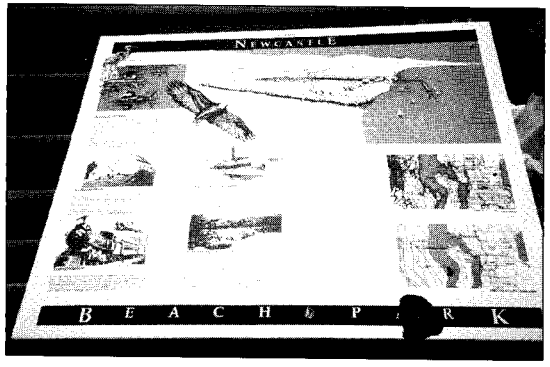
Lakota Group

Wetlands - Wetlands provide for the storage of flood waters and act as a water filtration system. They recharge groundwater, act as water purifiers and are important in maintaining base flows in streams. Wetlands contribute to erosion reduction, sediment and pollution control and provide wildlife habitats and recreational and educational benefits.

- Over 50% of threatened and endangered bird species are ones associated with wetland habitats
- Identify using data on soils, vegetation and hydrology (Federal wetland inventory maps may be viewed at county Soil and Water Conservation District offices)

In the past, wetlands were treated as barriers to expansion and settlement. However, vital wetlands have been drained and developed, often with government assistance. This drainage provided substantial economic growth, but it also has resulted in significant environmental effects. Cumulatively, these drainage practices have resulted in major habitat losses which have affected many native species. Recognizing these impacts, federal legislation has been passed that tightly controls wetland fill and drainage activities. In almost all cases, permits and/or mitigation are required in order to undertake construction activities in a wetland.

- Contact the U.S. Army Corps of Engineers, Rock Island District (See Appendix D) prior to development of a wetland
- Consider buffering the development from adjacent sensitive areas
- Replace those wetlands that have been



C. Rayburn

Interpretative signs can encourage conservation or enhancement of natural areas. Bellevue, Washington.

developed and provide for adequate flow circulation

In addition to their biological importance and beneficial effects on water quality, wetlands provide an educational opportunity.

- Use perimeter boardwalks or trails as potential avenues for interpretative signage or construct a nature center
- Educate young and old on the importance of wetlands which can aid in future sensitivity to their use and well-being
- Maintain natural systems including the conservation and long term productivity of existing vegetation and wildlife, species and habitat diversity and stability, hydrologic utility and other resources contained within wetlands

Woodlands - Woodlands, thick stands of trees, provide habitat for wildlife, reduce air and noise pollution and enhance the visual character of the landscape.

- Minimize the removal of trees and plants by confining development to less forested sites or selectively removing vegetation based on a maximum setback of 30 feet (9m) from the building or structure
- Develop ingress and egress from the site through woodlands with maximum width of 20 feet (6m)

Prairie - A prairie is a large, grassy, level or slightly level rolling area of land distinguished by its vegetation and wildlife. Virgin prairies are not commonly associated with the river's edge, but may be located along the bluff areas of the Mississippi River Valley. Virgin prairie grasses are also commonly located in railroad right-of-way, which has seen little disturbance since the original trackage has been laid.

- Consider developing plots of native prairie as part of a park or landscaping treatment
- Purchase abandoned railroad right-of-way for greenway development and prairie conservation

Wildlife Habitat - Wildlife habitat provides the natural environment where animals live. The two most common causes for decline in species are loss and degradation of habitat. Noise and human activity can disrupt wildlife courtship, reduce successful rearing of young and increase vulnerability to predators. Development can also reduce the size and quality of habitats which may contribute to decreased diversity of the species found in developed areas. In some cases, development may attract wildlife, such as the locks and dams attracting eagles during the winter when ice-free waters allow easy fishing by these predators.

Archeological Sites - Burial grounds and sites of significant prehistoric/historic activity are abundant in the Mississippi River Corridor.

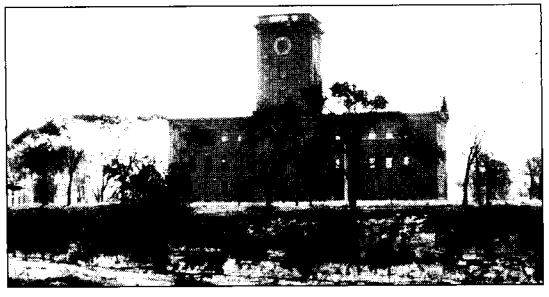
- Consult state archeological/historic preservation agencies prior to project development (sites may require a preliminary archeological survey to assess the significance of the land with past cultures while land already substantially disturbed by existing development, excluding agriculture, may be able to pursue development without a survey)
- Obtain necessary signoffs from the

appropriate federal/state historic preservation agencies (see Appendix D for references)

4.5 Special Features

Design Intent - Certain features of the river landscape may require special attention and consideration when developing facilities for public use. Again, the importance of river access, whether encouraged through pedestrian, vehicle, boat or visual access, is preferable for design intent.

River Nodes - Thirty-four river nodes were identified in the Framework Plan as interesting or significant centers of activity (see Appendix B). These nodes offer existing opportunities and advantages for future development. The river node identifying the Village of East Davenport, for instance, shows a vital and unique shopping opportunity rich with history and cultural activities.



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The Clock Tower, U.S. Army Corps of Engineers Rock Island District headquarters, at the historic Arsenal Island offers excellent material for historic interpretation.

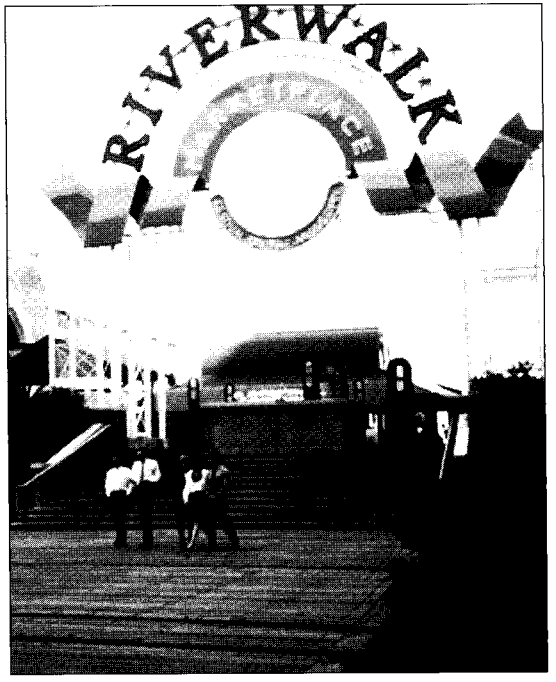
- Develop using history, art, and the natural resources to enhance an already interesting and diverse river nodes

Historic Sites - Historic sites offer a view into our river history. Their themes can be recreated in a variety of development from riverboat casinos to restaurants designed with a frontier trader theme.

- Develop adjacent to or in the vicinity of historic sites
- Incorporate historic information or architecture into building design, signage, landscaping, lighting, etc.

Gateways - A gateway can be a structure or landscape element announcing the entry into a special place, whether it is a town, park, district, etc. Specific river gateways are identified in the Framework Plan (see Appendix B).

- Use signs, architectural structures, outdoor furnishings or landscaping (e.g., gazebos or shelters, a stand of lilac trees or a sculptural element) to create a gateway
- Incorporated into a trail or wayfinding system to signify entry into the River Corridor
- Use at park entrances to announce that a visitor is entering park grounds or transitions from private/public property
- Design to imitate existing structures with historical, economic or natural resource significance in the River Corridor



Waterfront Center

This gateway at the New Orleans Riverwalk announces the special uniqueness of the location to a visitor.

Orientation Centers - Orientation centers can be incorporated into a integrated interpretative system using kiosks, directories, signage, etc.

- Located at key river nodes or gateways into the corridor

Quad Cities Convention & Visitors Bureau

Mississippi Valley Welcome Center in LeClaire, Iowa offers scenic views and tourist information, as well as acting as a gateway into the River Corridor.

- Consider placement along the Great River Road, portions of the future American Discovery Trail or existing Great River Trail as recreational and educational opportunities

Visitor Information Centers - Visitor Information Centers placed at high activity areas, gateways, trails, etc., encourage visitors to explore the Mississippi River Corridor and invite them to stay awhile. The Mississippi Valley Welcome Center is an excellent example of a full-service visitor information center.

- Integrate art, history and natural resources into these facilities to lend interest and increase the curiosity to venture through the River Corridor. The Mississippi Valley Welcome Center is an excellent example of this integrated approach.

4.6 Future Projects

The Waterfront Master Planning Committee, with its broad cross-section of representatives, has selected areas of special importance to emphasize the integration of design into the natural landscape which can contribute to their enhancement and continuing care. The following summaries outline these areas for future projects.

Bi-State Regional Commission

Lagoon at western tip of the Arsenal Island provides an important pre-spawning habitat for a variety of fish and offers many interpretative opportunities.

Western Tip of Arsenal Island - A wetland located west of and bounded by the Rock Island viaduct to Arsenal Island and Rock Island Avenue, Lock and Dam # 15 at the Government Bridge and the Mississippi River main channel and Sylvan Slough. The western tip forms a triangle, with the area of interest located in the southeast corner. It is uniquely located within the Mississippi River and represents a Quad City Area natural treasure. An inlet feeds the wetland and lagoon contained at the southeast corner. The property is under the jurisdiction of the U.S. Army Corps of Engineers. The wetland has been studied by the U.S. Fish and Wildlife Service and Illinois Department of Natural Resources. During the Spring, the lagoon

provides an important pre-spawning area for a variety of fish due to the warmer temperatures created by the sheltered waters. Over the years, the flow to the inlet has been reduced due to sedimentation, particularly during low-flow which threatens this important fish habitat. In addition to the fish habitat, the tip of Arsenal Island is also a wintering site for eagles.

Project Description: *It is proposed that the inlet will be dredged to increase the flow into the lagoon. The project is a cooperative effort between the U.S. Army Corps of Engineers, Illinois Department of Natural Resources, U.S. Fish and Wildlife Service, Quad City Conservation Alliance and River Action. In addition, the area is proposed to be an interpretative site where description of the wetland, wildlife habitat and history of Arsenal Island can be displayed. With its proximity to the Mississippi River Visitors Center at Lock and Dam 15, the site would be easily accessible to local residents and visitors.*

River Action

Nahant Marsh in Davenport is important to the River Corridor's wildlife and water quality.

Nahant Marsh - The Nahant Marsh encompassess approximately 513 acres (207.7 hectares) along the southwest border of Davenport, Iowa. It is bordered on the north and east by an industrial park and the City of Davenport waste water treatment plant and compost facility. On the south by the Mississippi River, the marsh is bordered by railroad lines, light industrial land and riverfront residential property. On the west, lowland agricultural land creates the border. The marsh is split into two sections by Interstate 280, running north/south. The wetland is a former oxbow lake of the Mississippi River and is considered one of the higher quality wetlands in the region, despite the encroachment by development. It is one of the few remaining natural marshes on the Mississippi River.

Project Description*: It is proposed that experts from Iowa State University, in cooperation with the Iowa Geological Survey, Iowa Department of Natural Resources, U.S. Army Corps of Engineers and the U.S. Fish and Wildlife Service, will assist with defining the project area, conduct necessary hydrological and biological surveys and establish minimum goals for restoration and preservation of the wetland area. There is a strong interest from the nonprofit conservation organizations, area colleges and universities, City of Davenport and associated federal and state agencies to initiate this project. Planning monies are being sought for this project.*

Bi-State Regional Commission

Sylvan Island provides a link between the past and present as a natural park. Moline, Illinois.

Sylvan Island - A 38-acre forested, island park located in Sylvan Slough, south of Arsenal Island in Moline. The island was created in 1871 when a tailrace for power production was dredged across a small peninsula. It has had a history of industrial, commercial and recreational uses.

It is presently an underdeveloped natural park.

Project description: *The park has received special attention and revitalization from an organized group of concerned citizens, Sylvan Island Dreamers. Their emphasis is to highlight the history and recreational opportunities for the island, and to provide open space for lower income neighborhoods in the vicinity of the island. As well as acting as an important river node and tying into the trail system, the site offers significant interpretative opportunities for history, working river and wildlife.*

Bi-State Regional Commission

Winter view of the Mississippi River from Pigeon Creek Park, Bettendorf, Iowa.

Pigeon Creek Park - A 45-acre (18.2 hectares) natural, passive park located at U.S. 67 and Marigold Lane and confluence of Pigeon Creek and the Mississippi River in southeastern Bettendorf, Iowa. The location is managed by the Bettendorf Park Board. Within the parks irregular boundary lies woodlands, wetlands and important wildlife habitat, including an eagle roosting area.

Project Description: *The park will be used for passive recreation and educational activities, such as walking/nature trails, scenic overlooks and interpretative signage. Short term plans include development of a parking area, nature trail, interpretative trail, public fishing area, restroom and drinking fountain. Long term plans include an interpretative center, expansion of the trail system, shelters, access improvement and additional restrooms and drinking fountains* Restoration of native woodlands is also a development goal.

Appendixes

APPENDIX

Appendix A

Design Principles Checklist

The following checklist was developed to provide a quick reference to the basic design principles recommended for river corridor development.

NOTE: Land use and location decisions should be determined prior to the use of the Design Principles. This document should be consulted prior to the completion of architectural, landscaping, wayfinding and site plans.

When developing or improving the riverfront, consideration may be given to:

- **River Access**
  (See Section 4.2)
  - ☐ Pedestrian
  - ☐ Vehicular
  - ☐ Boat
  - ☐ Visual
  - ☐ ADA Provisions
  - ☐ Public/Private Property Considerations

- **River Setting**
  (See Section 4.3)
  - ☐ Signage/Graphics
  - ☐ Landscaping
  - ☐ Riverfront Art
  - ☐ Outdoor Furnishings
  - ☐ Lighting
  - ☐ Architecture

- **Resource Enhancement**
  (See Section 4.4)
  - ☐ Floodplain
  - ☐ Wetlands
  - ☐ Woodlands
  - ☐ Prairie
  - ☐ Wildlife Habitat
  - ☐ Archeological Sites

- **Special Features**
  (See Section 4.5)
  - ☐ River Nodes
  - ☐ Gateways
  - ☐ Orientation/Visitor Information Centers
  - ☐ Historic Sites

Resource Checklist

There are several federal and state regulatory requirements that may apply to riverfront development:

- ☐ Air Quality
- ☐ Endangered Species
- ☐ Farmland Protection
- ☐ Historical Resources
- ☐ Man-Made Hazards
- ☐ Noise
- ☐ Solid Waste Disposal
- ☐ Water Quality

Appendix B

Quad Cities Iowa/Illinois Mississippi River Corridor Framework Plan

The following reference identifies thirty-four river nodes located in the Mississippi River Corridor compiled by the Lakota Group, Chicago for the Quad City Waterfront Master Planning Committee. This framework plan outlines river features, planned improvements, and potential improvements at each river node. A map locating the river nodes can be found in Section 3.1.

1. Buffalo Shores Park

River Features
- Boat launch
- Park/open space

Planned Improvements
- Bike trail extension

Potential Improvements
- River gateway feature with specific corridor-wide information
- Public boat stop/moorings
- Riverfront art site
- Shops and restaurants

2. Andalusia

River Features
- Andalusia Harbor (45 slips)

Potential Improvements
- Public boat stop/moorings
- Interpretative features (markers/ signs)
- Riverfront art site
- Further research needed on history/natural conditions/property ownership
- River orientation center

3. Andalusia Islands

River Features
- Natural island setting
- Wildlife habitat

Potential Improvements
- Public boat stop/moorings (on public islands #318 & #319)
- Interpretative features
- Nature trails (if appropriate, on public land)
- Further research needed on history/natural conditions/property ownership

4. Buffalo Industrial Area

River Features
- Large quarries, LaFarge and Linwood

Planned Improvements
- Bike trail extension

Potential Improvements
- Beautification of river edge of adjacent industrial sites
- Special lighting of selected buildings visible from river
- Overlooks along road or bike trail viewing river and quarry operations
- Riverfront art sites

5. South Concord Street (near Enchanted Island)

River Features
- Natural island setting
- Wildlife habitat
- Davenport Harbor
- Restaurant
- Boat launch

Planned Improvements
- Bike trail extension

Potential Improvements
- Interpretative features
- Nature trail
- Boat stop/moorings
- Small marina

6. Untitled area of Mark Twain National Fish & Wildlife Refuge

River Features
- Large natural setting
- Wildlife habitat

Potential Improvements
- Interpretative features
- Nature trail (if possible)
- Bike trail connection (if possible)
- Wildlife viewing station
- Nature center
- Boat stop/mooring

7. Big Island-Hennepin Canal Parkway State Park

River Features
- Large natural setting
- Bike trail linking river with 104 mile long historic Hennepin Canal

Potential Improvements
- Interpretative features
- Nature trail
- Boat stop/moorings
- Canoe launch
- Riverfront art site

8. Pettifer Island-Sunset Park-Skafidas Parkway

River Features
- Sunset Marina (335 open/ 126 covered slips)
- Scenic overlook
- Walk/jog path
- Boat launch
- Boating exhibition area
- Fishing pier

Planned Improvements
- Bike trail extension

Potential Improvements
- Interpretative features
- Nature trail
- Boat stop/moorings
- Riverfront art site
- River orientation center

9. Credit Island

River Features
- Natural areas
- Nahant Marsh conservation area (near Wapello Street)
- Eagle roost
- Boat launch
- Golf course/club house
- Picnic/playground facilities
- Ball diamonds

Planned Improvements
- Bike trail connection
- Golf course improvements
- Floodplain reclamation

Potential Improvements
- Floodplain/wetlands reclamation
- Interpretative features
- Nature park with trails and environmental center
- Large marina with restaurant
- Playground equipment
- Ball fields
- Fishing piers
- Bicycle/canoe rental center
- Winter ice skating program

Framework Plan
River Nodes

- Observation towers/scenic overlooks
- Boat stop/moorings
- Beautification of overall island
- Beautification of river edge of adjacent sewer treatment plant
- Special lighting of sewer plant building if visible from river
- Plans should be coordinated with large underdeveloped site to the north

10. Industrial Area (west of downtown Rock Island)

Planned Improvements
- Bike trail extension

Potential Improvements
- Beautification of bike trail
- Beautification of industrial properties
- Riverfront art along levee

11. Black Hawk State Historic Site

River Features
- Historic site/buildings/art
- Hauberg Museum
- Park/open space
- River mill building
- Scenic overlook
- Nature trails

Potential Improvements
- Canoe launch (with access through dam area)
- Mill renovation

12. Levee Showgrounds Area (west of downtown)

River Features
- Bike trail on Beiderbecke Drive
- Linear park/fishing area

Potential Improvements
- Mixed-use development
- Public park
- Boat yard
- Boat stop/moorings
- Boat launch
- Riverfront art site

13. Davenport

River Features
- The President casino boat
- LeClaire Park
- W.D. Petersen Music Pavillion bandshell
- John O'Donnell Stadium, Quad City River Bandits baseball team
- Adjacent commercial area with parking, shops and hotels, including RiverCenter convention site
- Visitors information center at Union Station
- Fishing steps/access structure
- Quad City Sports Center (indoor ice rink and soccer fields)
- Bike trail

Planned Improvements
- Water taxi station

Potential Improvements
- Bike trail connection and ramp to Government Bridge/Arsenal Island
- Residential/retail development
- Restaurants
- Boat stop/moorings

14. Rock Island - Sylvan Slough

River Features
- Casino Rock Island boat
- Vacant armory
- Bike trail
- Adjacent commercial area with shops, restaurants and hotel
- Eagle roost
- QCCA Exposition Center

Planned Improvements

- Bike trail extension and connection to Arsenal Island
- Armory Building reuse
- Parking
- Park/open space
- Railroad switch relocation
- Train depot renovation
- Water taxi port
- Quad Cities Botanical Garden
- "Face the River" mural art for buildings

Potential Improvements

- Mixed-use development
- Beautification of parking lots
- Entrance gateway feature at casino boat
- Museums
- Visitors information center
- Fishing steps/piers
- Sculpture garden
- Park/open space at Centennial Bridge

15. Rock Island Arsenal

River Features

- U.S. Army Corps of Engineers Mississippi River Visitors Center at Lock & Dam #15
- Historic Colonel Davenport House
- Eagle roost/viewing turnout from Rock Island viaduct
- Wetlands
- Confederate and National Cemeteries
- Historic/interesting Arsenal buildings
- Arsenal Museum
- Lock and Dam #15, first lock on Mississippi for the nine foot channel
- Old Fort Armstrong

Planned Improvements

- New river bridge (in 2005 Long-Range Plan of Bi-State Regional Commission, bridge study underway which may revise location)

Potential Improvements

- Bike trail extension/connections
- Interpretative features
- Picnic grove
- Scenic overlooks
- Riverfront art site
- River orientation center

16. East Davenport

River Features

- Lindsay Park Boat Club (123 slips) and water taxi station
- Lindsay Park
- Prospect Terrace Park
- Prospect Park Historic District
- Lake Davenport Sailing Club
- Quad City Marine Company
- Historic Village of East Davenport commercial area with shops and restaurants
- Bike trail

Potential Improvements

- Beautification of river edge along water treatment plant
- Special lighting of plant building if visible from river
- Marina renovation
- Boat stop/moorings
- Boathouse at Lindsay Park with food/rental/service facilities

17. Industrial Area (between Rock Island & Moline

River Features

- Large industrial buildings

Framework Plan
River Nodes

Planned Improvements
- Bike trail extension (Cities of Rock Island & Moline)

Potential Improvements
- Beautification of industrial sites/ parking lots along the river
- Special lighting of selected large buildings visible from the river

18. Sylvan Island

River Features
- Nature trail
- Fishing pier
- Wildlife habitat

Planned Improvements
- Bike trail
- Historical marker
- Picnic area

Potential Improvements
- Interpretative features
- Boat stop/moorings

19. Moline

River Features
- Ben Butterworth Parkway and bike trail
- The Mark convention center and water taxi station
- Bass Street (Boat) Landing
- Sightseeing cruise boat landing and water taxi station
- Marquis Harbor (150 slips)
- Visitors information center at old train depot

Planned Improvements
- Bike trail extension
- Residential/retail/hotel development
- Transportation center
- Widening of 34th Street to river (in 2005 Long-Range Plan of Bi-State Regional Commission)
- Wayfinding/signage system
- River orientation center

20. Bettendorf Downtown

River Features
- Leach Park
- Riverside Park Marina
- Lady Luck casino site and water taxi station

Planned Improvements
- Bike trail extension
- Boat dock

Potential Improvements
- Bike trail extension through Lady Luck Casino site
- Beautification of river edge
- Boat stop/moorings
- Beautification of rail lines/crossings
- Mixed-use development
- New downtown
- RV park
- Indoor theme park
- Waterfront show seating
- Winter ice skating program
- Hotel
- Factory outlet center
- Riverfront art along levee

21. Oil Storage Tanks (south of Bettendorf downtown)

Potential Improvements
- Beautification of river edge
- Special lighting of tanks and structures visible from river
- Riverfront art visible to passing boats

22. Mississippi Point Park-Duck Creek

River Features
- Park/open space

Planned Improvements
- Bike trail extension

Potential Improvements
- Boat stop/moorings
- Riverfront art site

23. ALCOA Davenport Works and Riverside Power Plant (east of Bettendorf downtown)

Planned Improvements
- Bike trail extension
- Extension of Tanglefoot Lane to Route 67 (in 2005 Long-Range Plan of Bi-State Regional Commission)

Potential Improvements
- Beautification of river edge adjacent to facilities
- Special lighting of building facades visible from river
- Riverfront art visible from river
- Additional picnic areas

24. East Moline

River Features
- Case and Deere Plants
- 7th Street pedestrian stop at bike trail
- Water intake plant
- Bike trail

Planned Improvements
- Bike trail connection to downtown
- Nature preserve
- Outdoor agricultural equipment/ machinery display area
- Information/service center
- Mixed-use development at 7th Street and river
- Extension of Great River Road along 12th Avenue
- Industrial sculpture
- Tour boat landing
- Water taxi station
- 7th Street boulevard

Potential Improvements
- Beautification and special lighting of water intake plant
- Riverfront art along levee and at 7th Street terminus

25. Campbell's Island

River Features
- Campbell's Island Marina (40 slips)
- Campbell's Island State Memorial Site
- Residential development

Planned Improvements
- Marina expansion to full service facility
- Restaurant/lighthouse

Potential Improvements
- Residential/recreational improvements
- Bike trail extension
- Interpretative features
- Boat stops/moorings
- Public boat launches
- Landscaping of Memorial Site
- River orientation center

26. East Moline's Mississippi Park - Hampton's Riverfront Park (adjacent city parks)

River Features
- Parks/open space
- Bike trail
- Public boat launch

Framework Plan
River Nodes

- Picnic shelters
- Playground
- Rolle Bolle court
- Lorraine Mabis Memorial Overlook
- Restrooms
- Parking

Planned Improvements
- Winter ice skating program
- Nature trail and prairie restoration area

Potential Improvements
- Boat stop/moorings

27. Pigeon Creek Park

River Features
- Park/open space
- Public boat launch

Planned Improvements
- Bike trail extension
- Wetlands reclamation
- Eagle roost
- Public boat launch
- Nature trail

Potential Improvements
- Boat stop/moorings
- Interpretative Center
- Riverfront art site

28. Illiniwek Forest Preserve

River Features
- Public boat launch
- Campground (60 RV pads)
- Picnic areas/shelters
- Playground
- Scenic overlook
- Ballfields
- Restrooms/showers
- Disposal station

Planned Improvements
- Bike trail extension
- Campground improvements

Potential Improvements
- Boat stop/moorings
- Environmental art pocket

29. Smith's Island peninsula at Lock & Dam #14

River Features
- Nature trail
- Picnic area/shelters
- Public boat launch
- Foot bridge
- Eagle viewing area

Potential Improvements
- Bike trail connection
- Boat stop/moorings
- River orientation center

30. Fisherman's Corner - Elton Fawks Eagle Refuge

River Features
- Public boat launch
- Fishing piers
- Campground
- Wildlife habitat/viewing area
- Lock & Dam #14

Planned Improvements
- Bike trail connection

Potential Improvements
- Boat stop/moorings
- Riverfront art site

31. Mississippi Rapids Welcome Center (Illinois): River Gateway

River Features
- Visitor information center
- Scenic overlook
- Picnic area

Potential Improvements

- River gateway feature with specific corridor-wide information
- Bike trail connection (trail head/ start)
- Bike tour center
- Riverfront art site

32. Mississippi Valley Welcome Center (Iowa): River Gateway

River Features

- Visitor information center, full service facility
- Gift shop
- Scenic overlook
- Picnic area

Potential Improvements

- River gateway feature with specific corridor-wide information
- Bike trail connection
- Bike tour center
- Riverfront art site

33. LeClaire

River Features

- Buffalo Bill Museum
- Restaurants
- Shops
- Public boat launch
- Green Gables Boat Harbor (68 open/8 covered slips)
- Tour boat
- Great River Tug Site

Potential Improvements

- Boat stop/moorings
- Interpretative features
- Riverfront art site
- Bike trail extension (trail head/start)

34. Port Byron

River Features

- Great River Tug Site
- Public boat launch
- Memorial Park
- Shops
- Restaurants

Planned Improvements

- Bike trail extension
- Public boat launch improvements

Quad Cities' Ordinances Table

Appendix C

Quad Cities Ordinances Table

RIVERFRONT COMMUNITY	ZONING	SUBDIVISION	FLOOD	LANDSCAPING/ SITE PLAN	PARKING	SIGN
Andalusia, IL	✣		✣			
Bettendorf, IA	✣	✣	✣	✣	✓✣	✓✣
Buffalo, IA	✣	✣	✣		✣	✣
Davenport, IA	✣	✣	✣	✣	✓✣	✣
East Moline, IL	✣	✣	✣	✣	✣	
Hampton, IL	✣	✣	✣		✓✣	
LeClaire, IA	✣	✣	✣		✓✣	✓✣
Moline, IL	✣	✣	✣	✣		
Port Byron, IL	✣	✣	✣		✣	✣
Rapids City, IL	✣		✣			
Rock Island, IL	✣	✣	✣	✣	✓✣	✣
Rock Island County, IL	✣	✣	✣		✓✣	✓✣
Scott County, IA	✣	✣	✣	✓✣	✓✣	✓✣

✓✣ = Part of Zoning Ordinance

Appendix D

Resource Reference and Contacts

When any activity including construction, rehabilitation, restoration, etc. occurs in, along or near the river, floodplain and all wetlands in the River Corridor, the U.S. Army Corps of Engineers must be consulted to review regulatory requirements and issue permits where necessary.

U.S. Army Corps of Engineers,
Rock Island District
Clock Tower Building, ATTN: OD-S
P.O. Box 2004
Rock Island, Illinois 61204-2004
(309)794-5274 (Public Affairs Office)
(309)794-5380 (Permitting)

. . . . . .

- **Access Center**
  518 West Locust Street
  Davenport, IA 52803
  (319)383-8998

- **Bi-State Regional Commission**
  P.O. Box 3368
  1504 Third Avenue
  Rock Island, IL 61204-3368
  (309)793-6300

- **Illinois Department of Agriculture**
  State Fairgrounds
  P.O. Box 19281
  Springfield, IL 62794-9281
  (217) 782-2172

- **Illinois Department of Natural Resources (formerly Illinois Department of Conservation)**
  Lincoln Tower Plaza
  524 South Second Street
  Springfield, IL 62701
  (217)782-6302

  - Region I Office, Sterling
    (815)625-2968

- **Illinois Environmental Protection Agency**
  Public Affairs Office
  2200 Churchill Road
  Springfield, IL 62706
  (217)782-3397

  - Division of Air Pollution Control
    (217)782-7326
  - Division of Land Pollution Control
    (217)782-6761
  - Division of Water Pollution Control
    (217)782-1654

- **Iowa Department of Agriculture and Land Stewardship and Division of Soil Conservation**
  State Capitol Complex
  Des Moines, IA 50319
  (515)281-5851

  - Scott County Conservation District/Soil Conservation Service
    (319)391-1403

- **Iowa Department of Natural Resources**
  East Ninth Street and Grand Avenue
  Wallace Building
  Des Moines, IA 50319-0034
  (515)281-5145

  - Region 6, Washington, IA
    (319)653-2135

- **Putnam Museum**
  1717 West 12th Street
  Davenport, IA 52804
  (319)324-1933

APPENDIX D

Resource References and Contacts

- **Quad City Arts**
  1715 Second Avenue
  Rock Island, IL 61201
  (309)793-1213

- **River Action, Inc.**
  P.O. Box 964
  Quad Cities, IA 52805
  (319)322-2969

- **Rock Island County Soil and Water Conservation District/Soil Conservation Service**
  Suite 3-A
  4900 38th Avenue
  Moline, IL 61265
  (309)793-5840

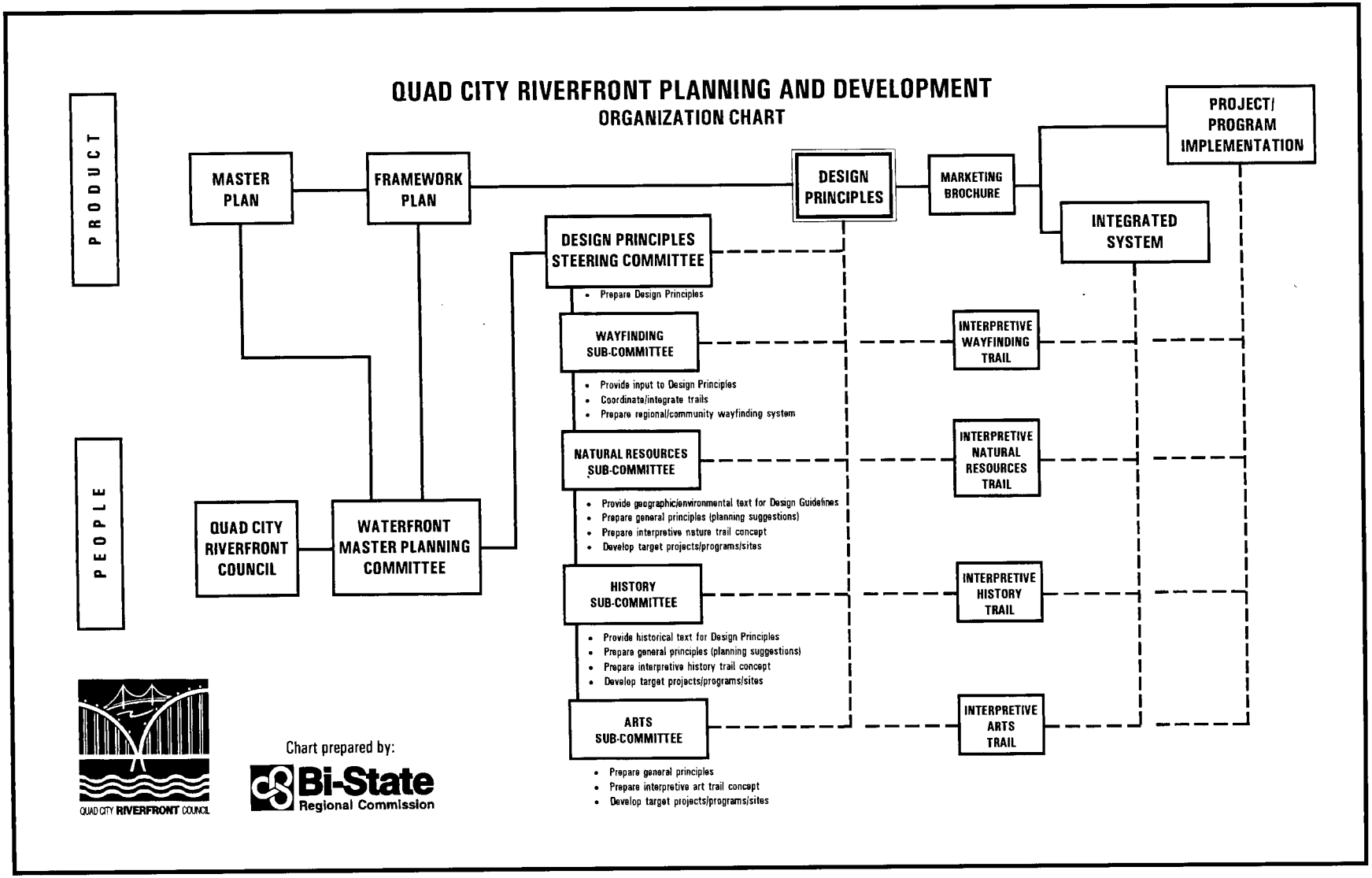
- **U.S. Environmental Protection Agency**
  401 M Street S.W.
  Washington DC 20460
  (202)-260-2090

  - Region V Office, Chicago
    (includes Illinois)
    (312)353-2072
  - Region VII Office, Kansas City
    (includes Iowa)
    (913)551-7000

- **U.S. Fish and Wildlife Service**
  1849 C Street N.W.
  Washington, DC 20240
  (202)208-5634

  - Rock Island Field Office (includes Illinois and Iowa)
    4469 48th Avenue Court
    Rock Island, IL 61201
    (309)793-5800

Organization Chart



People and products related to riverfront planning in the Quad Cities.

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