



Conceptual Planning for:
Beloit Riverbend Site
Beloit, Wisconsin

Prepared for:
City of Beloit
March 4, 2004

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1. Introduction

In 1902, the Beloit Gas Light and Coke Company built the City's Manufactured Gas Plant on this site. The plant was acquired by Wisconsin Power and Light in 1926. Most of the gas plant was razed in the late 1950s and early 1960s. The City of Beloit acquired 23 percent of the ownership of the site in 1956 and the remaining 77 percent in 1966, and constructed a wastewater treatment plant on the property. The plant ceased operations after 1991. All site buildings have been demolished.

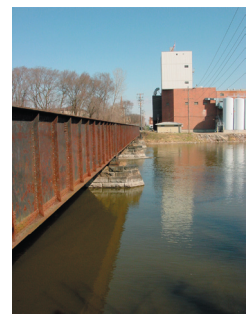
While the geographic location of the site makes it a prime spot for development, potential development has been inhibited by longstanding environmental concerns. Several phases of investigation have been completed at the site primarily by Wisconsin Power and Light. The results of these investigations were summarized and evaluated in ARCADIS document entitled, "**Feasibility Study, Former Beloit Manufactured Gas Plant Site.**" Required remediation of the site has been undertaken and in September 2002, ARCADIS prepared a **Summary of Remediation Activities and Request for No Further Action/Closure**, which was submitted to the Wisconsin Department of Natural Resources for their review. It is expected that we will receive clearance to move forward with development of the site, with the condition that the southwestern portion of the site be capped.

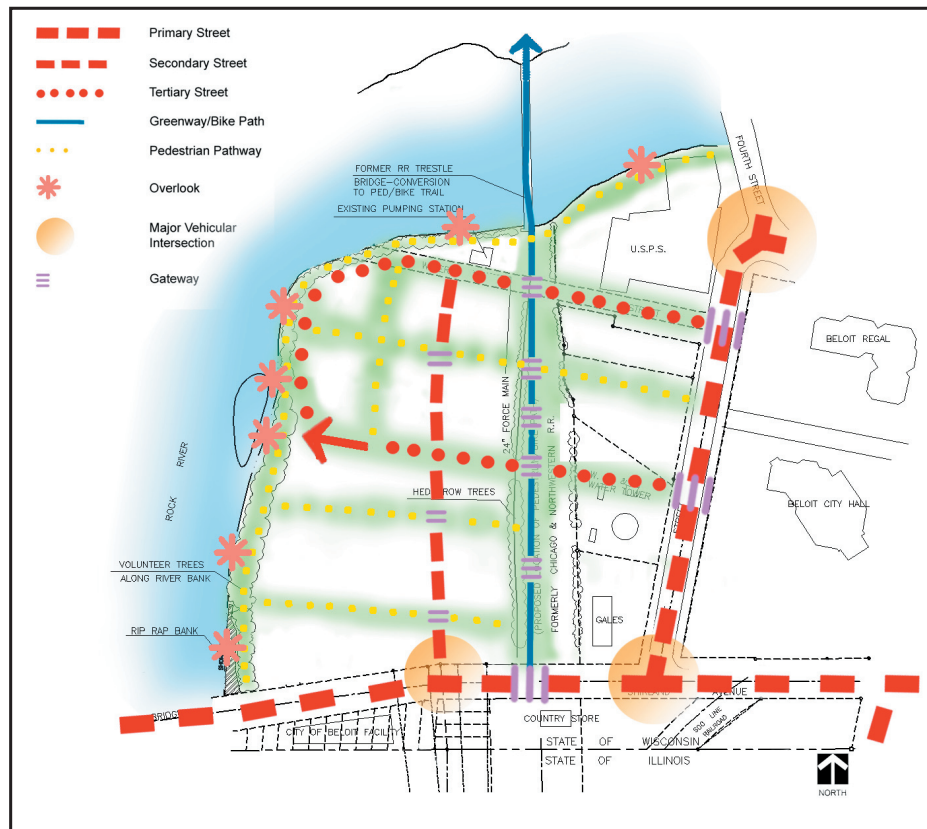
This report illustrates the design process undertaken by the Design Team. The site plans shown herein are the result of meetings with the City of Beloit staff, elected officials, Plan Commission members and neighborhood stakeholders. The site plans are intended to assist interested development teams as they consider the merits of the Riverbend site.



2. Existing Conditions

The Riverbend site is approximately 9 acres in size and is located approximately 150 feet west of an abandoned right-of-way of the Chicago and Northwestern Railroad Company, the future location of a bike path. It contains approximately 1,300 feet of river frontage, and is bounded by Shirland Avenue to the south, the Rock River to the north and west, and Mill Street to the east. It is located near downtown Beloit and nearby land uses include the U.S. Postal Office, Regal-Beloit's corporate headquarters, Beloit City Hall, and an assortment of small commercial uses. The site is easily served by all utilities. The Riverbend site is a prime spot for development as it is the last piece of undeveloped land along the Rock River in the City of Beloit.





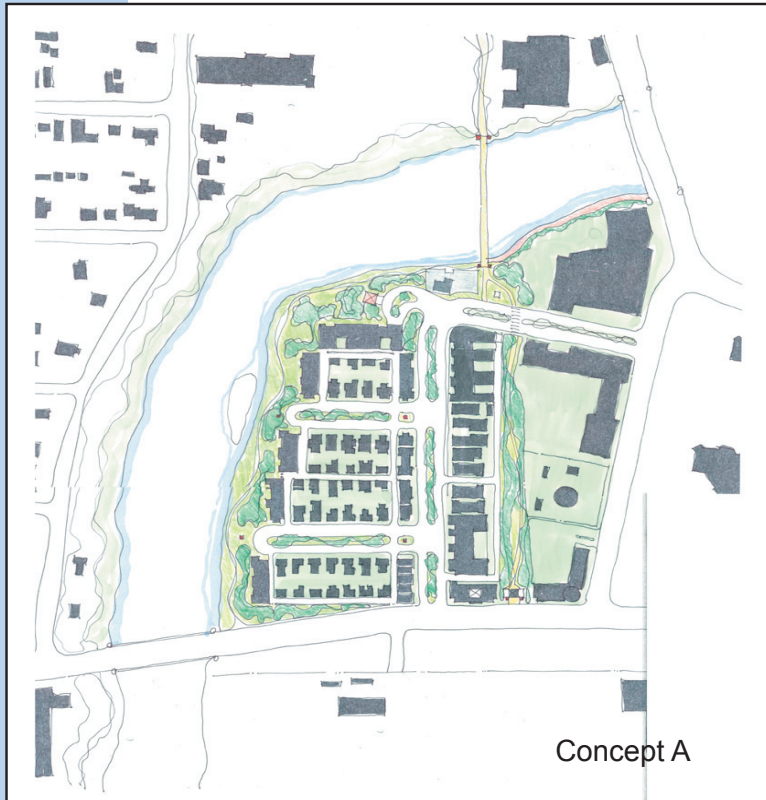
3. Programming: Site Circulation

A number of guiding principles have been established regarding pedestrian and vehicular circulation. The proposed bike path within the abandoned railroad right of way is a given, as is the existing Water Street right of way. Access to and from Shirland Avenue is desirable, given the size of the site and its possible densities, the visibility afforded from Shirland as well as its substantial volume of traffic.

Tertiary streets and pedestrian pathways began to develop in an east-west pattern for a number of reasons. Referencing the historic grid in the neighborhood across the river is an initial response (see Development Patterns.) The desirability of river access and views was initially established by the City as part of the project. Orienting views to the river will benefit residents and visitors alike.

A tertiary east-west roadway may be desirable if it can be aligned with the access to Beloit City Hall. This roadway would skirt along the northerly edge of the City-owned water tower, although the boundary of this facility may require site walls and buffer landscaping.

Finally, the success of pedestrian access along the river will be maximized if a link to the bike path is established so that the two paths do not exist separately.



Concept A



Concept B

4. Development Pattern

The preliminary sketches shown on this page preceded the generation of the more hardline conceptual schemes that follow. The City of Beloit desires that the site develop in accordance with the principle of new urbanism. If this is to be successfully realized, the rhythm of streets and buildings should mimic the patterns of the adjacent historic neighborhood located to the west, across the Rock River as well as reference its downtown location. The development pattern needs to reflect the unique location of this site and the influences of the city and adjacent residential neighborhood. The patterns in the two schemes also reference the layout of the more historic Beloit neighborhoods.



5. Site Plan A

Site Planning for the Riverbend parcel begins with the assumption that the lots shown may be altered in dimension to allow development based on market assessment. The lots are typically 38' in width, with minimum depths of 105'. Lots may be combined for development of larger single-family homes or for multifamily attached. Site planning reflects the notion that the risk of development needs to be accompanied by planning flexibility, while incorporating the objectives of the City of Beloit.

The site plan concept features a spine road that provides ingress/egress at Shirland Avenue at the southern end of the site and connects with Water Street at the northern end. The alignment of the Water Street right-of-way has been moved slightly south to facilitate easier parking and circulation for the existing USPS facility and the proposed surface parking for Regal-Beloit's parcel at Mill Street, south of Water Street.

A series of cul-de-sacs extend westward from the spine road, forming a series of pods. The east-west alignment of the pods is critical to open views onto the river valley and certainly does not propose to close off views with housing at the end of the cul-de-sac bulb. The typical cul-de-sac occupies an 80' right of way, which eliminates

5.Site Plan A (cont'd.)

the need for a “bulb” alignment at the terminus and allows for a wide landscaped median along its length. In these pods a variety of housing types may be developed, although the initial preference calls for single family homes, which may be phased in based on market absorption.

Lots are also sited along the western edge of the spine road. As with the cul-de-sac pods, these lots may be combined in order to develop alternatives to single family homes on 38' wide lots.

The site plan features 16' wide alleys within the pods and west of the lots fronting on the spine road. The City of Beloit has gotten away from including alleys in residential developments and will insist that alley maintenance be the responsibility of the homeowners association.

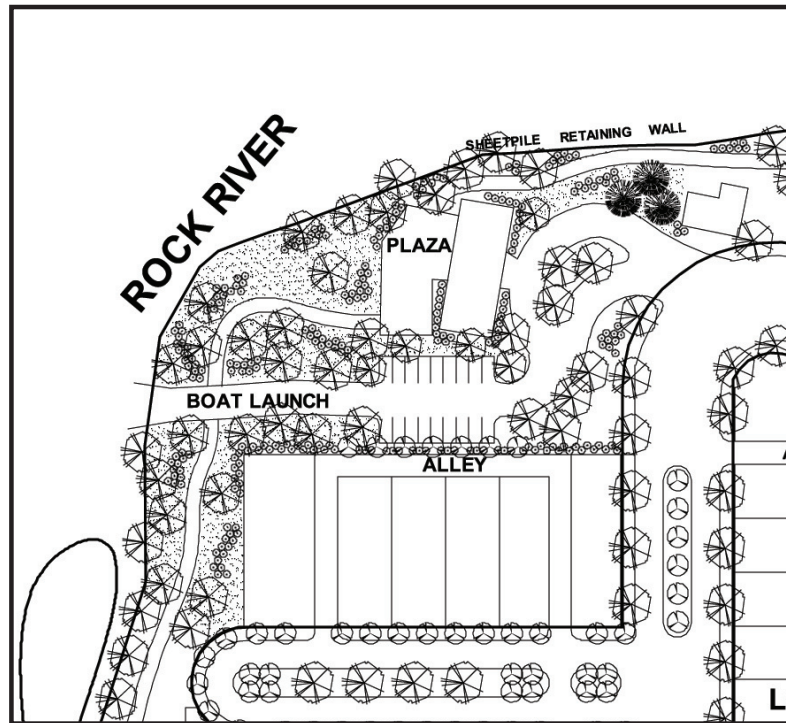
The open space opportunities on the Riverbend site offer two very significant amenities, both for residents and for Beloit citizenry. The western and northern edge of the site along the Rock River will include a riverwalk and open space that will allow public access along this stretch of the river. The riverwalk open space area will run the length of the river's frontage with a typical width of 75'. The maintenance of the site will be the responsibility of the City of Beloit.

The other significant amenity is a bike path proposed to be located within the former railroad right of way that courses north-south through the site. This is part of the city's bike trails program and will be installed by the city. The developer of the site will be responsible for enhancing the area with landscape treatments, however maintenance of the park will be the responsibility of the city.

Other aspects of the site's development potential include the existing auto repair operation located at the northwest corner of Mill Street and Shirland Avenue. Due to its proximity to Beloit City Hall, and the prominence of the location itself, this site should have a commercial/ office mixed use type of development. A building on this site should be located close to the property lines and should be higher than one-story, but will depend on the amount of available parking.

Finally, Regal-Beloit has expressed its desire to develop their parcel as surface parking lot to handle overflow parking needs at its headquarters on the east side of Mill Street. The site plan has addressed this objective, and has attempted to resolve circulation and access problems at the existing USPS facility. However, future development opportunities for this parcel may include a mixed-use building that continues to provide the parking required by Regal-Beloit. Taller buildings along Mill Street will establish a better response to the existing buildings on the west side of Mill Street as this portion of Mill is an important gateway into the downtown area.



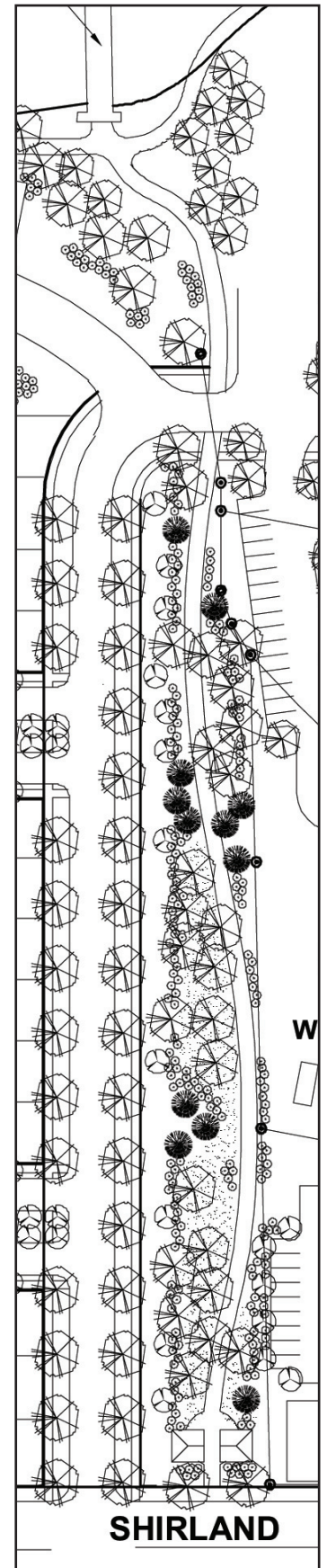


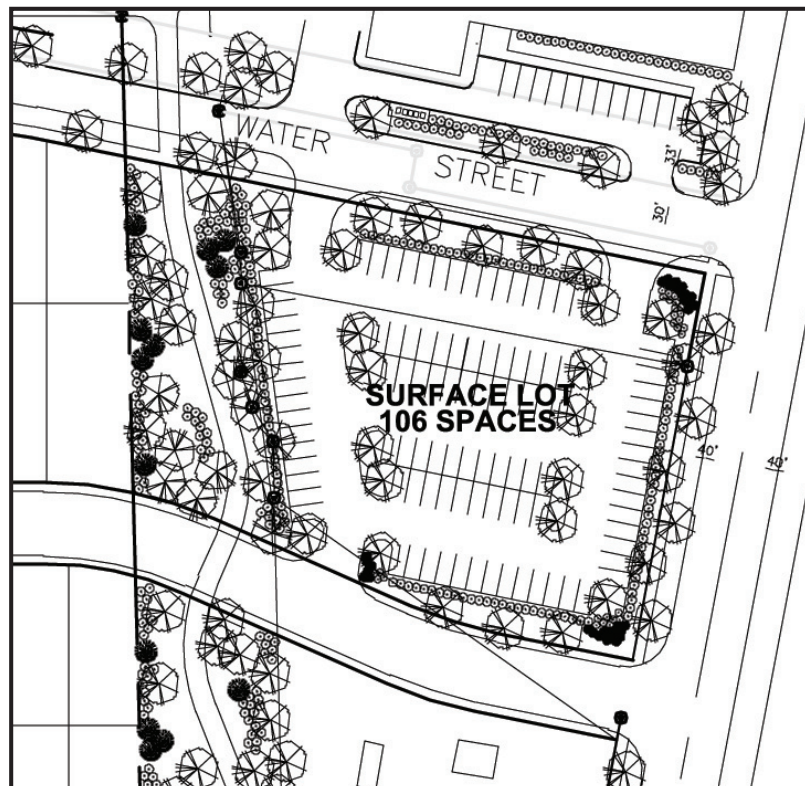
5. Site Plan A Riverwalk

The riverwalk proposed for this scheme also incorporates a possible structure, gathering area and boat launch. The structure may be open air, a commercial entity or a clubhouse for residents. The riverwalk area landscape approach will feature riparian trees (Swamp White Oak, Bald Cypress, Hackberry, etc.), native shrubs and no-mow turf (Bighorn Sheep's Fescue) interspersed with clumps of native grasses and perennials. The asphalt path will be 12' wide.

5. Site Plan A Bike Trail

The bike path is interrupted only once by Water Street on the north. A structure is proposed for the southern terminus, which will act as a gateway for a possible connection to a future Illinois bike trail. The proposed bike trail will be a 12' wide asphalt path. Landscape treatments in the area will include shade trees (Oak, Ash, and Hackberry), native shrubs and a no-mow turf (Bighorn Sheep's Fescue) interspersed with clumps of native grasses.





5. Site Plan A Parking Lot

The properties belonging to Regal-Beloit and the City of Beloit have been proposed for consideration as a surface parking lot to handle parking needs for the corporation and other users of the bike path. The parking layout shown includes the Regal-Beloit property and the Water Street right-of-way. Additionally, access to the USPS facility has been reconfigured, allowing increased parking in front of the post office and a relocation of the drop boxes. The northernmost parking bays in the surface lot may also be used by USPS patrons. The proposed lot has extensive perimeter landscape buffering.

The future direction for development of this area (as well as for the Riverbend site as a whole) may be best served by investigating the use of this site for a multi-story building that includes parking with the upper stories dedicated to office, residential or senior housing.



6. Site Plan B

The site planning for the Riverbend parcel begins with the assumption that the lots shown may be altered in dimension to allow development based on market assessment. The lots are typically 38' in width, with depths between 90'-110'. Lots may be combined for development of larger single-family homes or multifamily residences. Site planning reflects the notion that the risk of development needs to be accompanied by planning flexibility, while incorporating the objectives of the City of Beloit.

The conceptual site plan proposes a spine road that courses along the frontage of the Rock River and connects with the extension of the Water Street right of way. Two additional east-west roadways are proposed connecting the spine road with Mill Street. The east-west alignment is critical to ensure that views onto the river valley are maintained and emphasized.

All lots will face the street, including the southernmost row of lots, which face Shirland Avenue. This aspect may have important ramifications for potential building types. This concept underscores the importance of buildings facing the street, and it was felt that having buildings backing on Shirland Avenue would be less effective, given the amount of

6. Site Plan B (cont'd.)

daily traffic on Shirland and the resultant visibility of the site from this roadway. Multifamily housing might be the better choice for this area because of the high volume of traffic on Shirland Avenue.

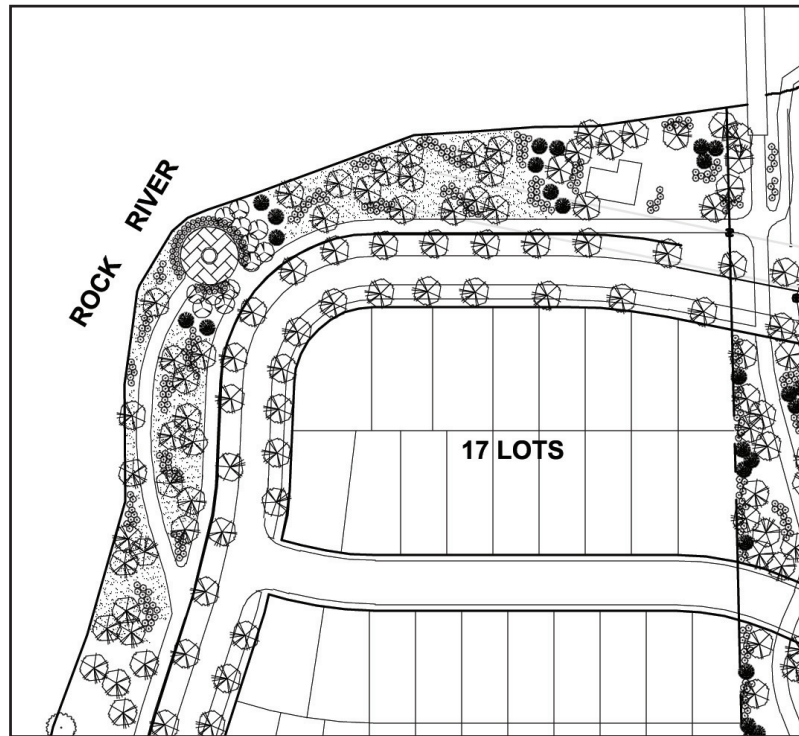
The open space opportunities on the Riverbend site offer two very significant amenities, both for residents and for Beloit citizenry. The western and northern edge of the site along the Rock River will have a riverwalk and open space program flanking the west edge of the spine road, allowing public access along this stretch of the river. This treatment places a premium on the notion of public access for both pedestrians, bicyclists and vehicular traffic. The riverwalk open space area will run the length of the river's frontage and has a typical width along the river of approximately 130'. The maintenance of the site will be responsibility of the City of Beloit.

The other significant amenity is a bike path proposed to be located within the former railroad right-of-way that courses north-south through the site. This is part of the city's bike trails program and will be installed by the city. The developer of the site will be responsible for enhancing the area with landscape treatments; however, maintenance of the park will be the responsibility of the city.

Other aspects of the site's development potential include the existing auto repair operation located at the northwest corner of Mill Street and Shirland Avenue. Due to its proximity to Beloit City Hall and the prominence of the location itself, this site should have a commercial/office mixed use type of development. A building on this site should be located close to the property lines and should be higher than one-story, but will depend on the amount of available parking.

Finally, Regal-Beloit has expressed its desire to develop their parcel as surface parking lot to handle overflow parking needs at its headquarters on the east side of Mill Street. The site plan has addressed this objective, and has attempted to resolve circulation and access problems at the existing USPS facility. However, future development opportunities for this parcel may include a mixed-use building that continues to provide the parking required by Regal-Beloit. Taller buildings along Mill Street will establish a better response to the existing buildings on the west side of Mill Street as this portion of Mill is an important gateway into the downtown area.





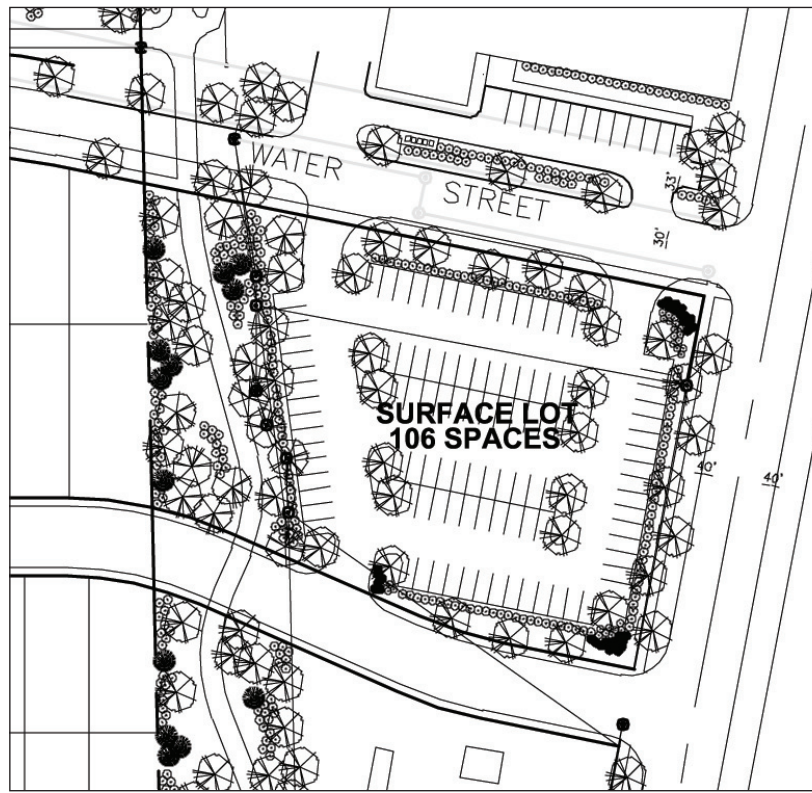
6. Site Plan B Riverwalk

This plan establishes a gathering area overlooking the Rock River. This overlook may include a seatwall and a small water feature in the center to celebrate the riverfront location. The paths along the river are proposed to be 12 feet wide. The area between the road and the river should have a naturalized landscape treatment. Trees should be riparian in nature (Swamp White Oak, Ash, Bald Cypress, Maple, and Hackberry) and shrubs should be native to Rock Country. Rather than a lawn, a no-mow treatment should be pursued with Bighorn Sheep's Fescue predominant and clumps of native grasses including Bluestems, and Switchgrass along with perennials.

6. Site Plan B Bike Trail

The bike trail on the former railroad right of way will feature a 12' wide asphalt path. It is intended to have winding alignment and should have a perpendicular approach at the road edges. Landscape treatments will feature shade trees (Oak, Ash, Linden and Hackberry) and large shrub massings (Viburnum, Chokeberry, Shrub Rose) and a no-mow turf (Bighorn Sheep's Fescue interspersed with clumps of native grasses.) Vehicular caution signs and painted crossings should occur at the intersections with roadways.





6. Site Plan B Parking Lot

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The future direction for development of this area (as well as for the Riverbend site as a whole) may be best served by investigating the use of this site for a multi-story building that includes parking with the upper stories dedicated to office, residential or senior housing.

7. Single-Family

From the initial meetings with staff and stakeholders, it was understood that the single-family residential development would feature smaller homes on smaller lots. There are many larger single-family homes on larger lots in other neighborhoods throughout the city. On a site such as this, given the context of the area, larger homes and larger lot sizes will not make economic sense, nor shall the demand be present.

The design of the homes originates from a study of the historic neighborhoods in Beloit. The architecture is honest and balanced. Houses should have porches. Front yards are shallow, increasing opportunities for interaction with neighbors. The houses range in size from 1,600 SF to 2,400 SF. Garages can be attached or detached (see 9. Siting Strategies), and are preferably sited in the back yard rather than appending the house. All elevations of the building should be articulated, not just the front.



8. Multi-Family

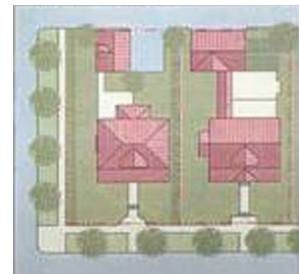
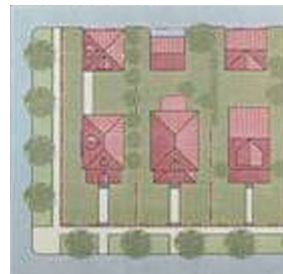
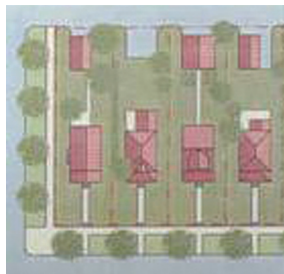
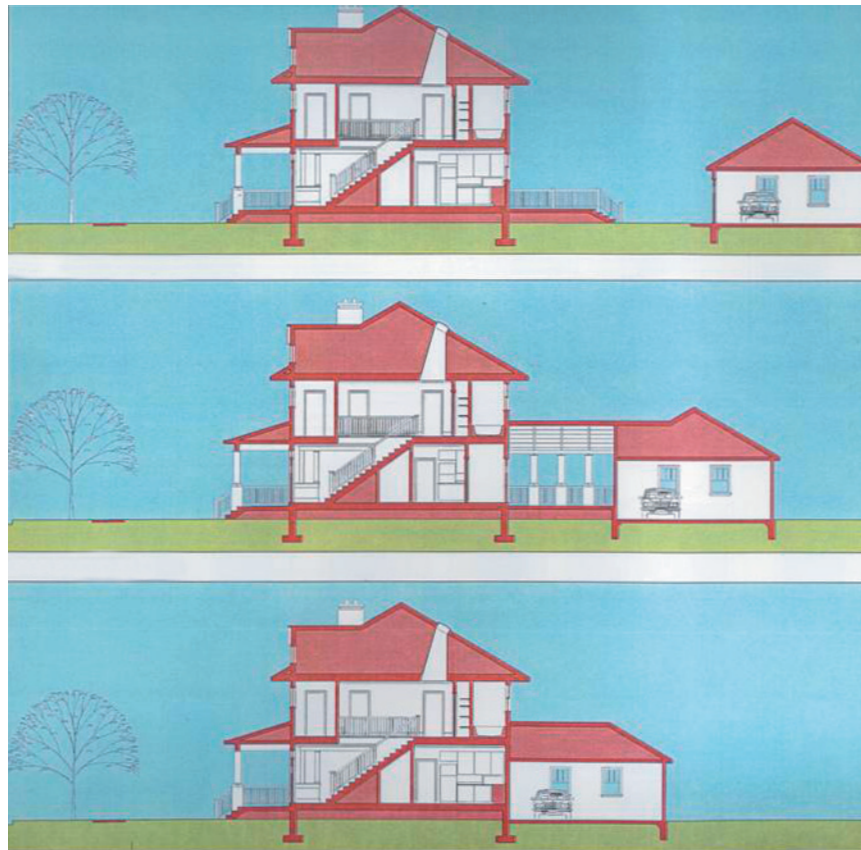
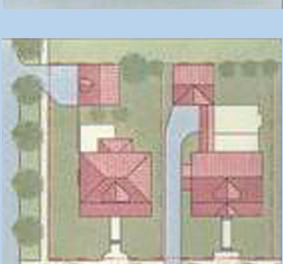
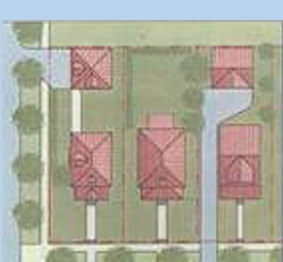
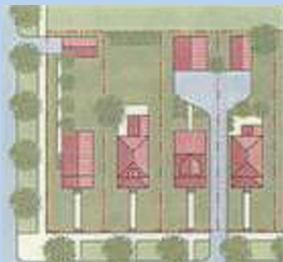
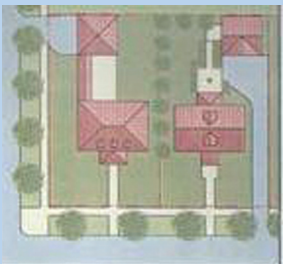
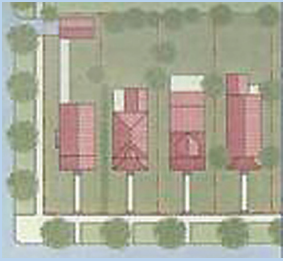
Multi-family building types, including townhomes, duplexes, low and mid-rise condominiums and the like have potential for the Riverbend site. Density is not discouraged for this site. However, a mixture of uses and building types is also encouraged.

The optimum siting for multi-family residential building types may be along Shirland Avenue and along the proposed bike trail. A building whose design references the typology common along railroads may provide a sense of authenticity that can assist in the marketing of the site. There was a consensus that the project may be most successful should the design effort attempt to capture a historic feel and sensibility.



9. Siting Strategies

As mentioned in the section on Single Family Residential, the preference for garage siting is in the rear yard. The garage may be attached or detached. This strategy is best realized through the use of alleys or service drives. This also reduces the presence of drives and curb cuts along the street front, which maximizes the neighborhood feel and allows for lesser lot width with the resultant increase in density. As shown in the smaller images on this page, there are a number of strategies to pursue when considering the placement of driveways and garages. Front yard drives can be accommodated; however, their use is discouraged within the Riverbend development.



Beloit Riverbend

Conceptual Plan

Development and Infrastructure Costs

CONCEPT PLAN "A"		
	ITEM	SUBTOTAL
1	MOBILIZATION	\$75,000.00
2	EROSION CONTROL	\$10,800.00
3	COMMON EXCAVATION	\$48,000.00
4	6" STANDARD CONC. CURB	\$100,800.00
5	GRANULAR BASE	\$51,000.00
6	ASPHALT FOR TACK COAT	\$301,000.00
7	STREET LIGHTS	\$110,000.00
8	SANITARY SEWER	\$46,800.00
9	STORM SEWER	\$62,400.00
10	WATER LINE (6")	\$46,800.00
11	HYDRANTS w. TAP	\$36,000.00
12	ELECTRIC	\$80,000.00
13	GAS	\$78,500.00
14	LANDSCAPE	\$75,000.00
15	AMENITIES & MISC.	\$180,000.00
	SUBTOTAL	\$1,302,100.00
	CONTINGENCY	\$130,210.00
	DESIGN/ENGINEERING	\$130,210.00
	SPECIAL CONDITIONS	\$130,210.00
	PROJECT TOTAL "A"	\$1,692,730.00
CONCEPT PLAN "B"		
	ITEM	SUBTOTAL
1	SITE PREPARATION	\$75,000.00
2	EROSION CONTROL	\$10,800.00
3	COMMON EXCAVATION	\$48,000.00
4	6" STANDARD CONC. CURB	\$84,800.00
5	GRANULAR BASE	\$49,000.00
6	ASPHALT FOR TACK COAT	\$294,000.00
7	STREET LIGHTS	\$66,000.00
8	SANITARY SEWER	\$40,950.00
9	STORM SEWER	\$57,200.00
10	WATER LINE (6")	\$72,800.00
11	HYDRANTS w. TAP	\$32,000.00
12	ELECTRIC	\$88,000.00
13	GAS	\$72,500.00
14	LANDSCAPE	\$75,000.00
15	AMENITIES & MISC.	\$180,000.00
	SUBTOTAL	\$1,065,750.00
	CONTINGENCY	\$106,575.00
	DESIGN/ENGINEERING	\$106,575.00
	SPECIAL CONDITIONS	\$106,575.00
	PROJECT TOTAL "B"	\$1,385,475.00

Both site plans developed during this study are relatively similar. As stated above, the two alternative schemes, their difference driven by circulation studies, are intended to be flexible objectives – allowing potential developers to craft a market-driven response in terms of density and housing type. Developers will need to engage in a PUD submittal process with City Staff to determine densities and final site design.

However, potential developers will need to examine closely the initial outlay for site development and infrastructure costs. The accompanying calculations on this page are intended to provide “ballpark” assumptions of cost for this effort. Assumptions include the following:

- There will be no remediation costs borne by the developer
- The costs for the bike path area upgrades will not be borne by the developer
- Adequate capacity exists in the utilities surrounding the site realizing typical costs of connection
- There will be no riverbank stabilization costs to be borne by the developer
- Costs associated with the development of surface lot parking and realignment of the drives and parking at the Post Office on Water Street will not be borne by the developer

During programming and concept design, such costs will need to be reviewed and refined by the developer’s design team. The calculations do give a sense of the improvements that will need to be provided, and can be examined on “per lot” basis, or as a percentage of total project return.