

FINAL REPORT

Gilbert Mill Site Redevelopment Plan Menasha, Wisconsin

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GILBERT MILL SITE REDEVELOPMENT PLAN FINAL REPORT

PROJECT BACKGROUND

The City of Menasha engaged Vierbicher Associates, Inc., to help evaluate development opportunities for a 12-acre site along the Fox River known locally as the Gilbert Mill Site. The City also has entered into development agreements with private developers to facilitate site clearance and support various improvement opportunities for this site.

Collaboratively, this public and private team investigated development options including shoreline naturalization and trail development, creation of fishing and passive recreational opportunities, establishment of a free-flowing bypass channel with future options for whitewater recreation. Also explored were options for future private reinvestment to include office, retail, housing and commercial recreation and housing, and other improvements that would draw business and visitors to the site and into the City. Encouraged by the potential feasibility of various site improvement options, the City is now poised to move forward with implementation.

The proposed site redevelopment plans addressed many significant challenges that include existing buildings and bridges, in-stream raceway/by-pass channel equipment, flow limitations, and vehicle and pedestrian access. The development team also considered regulatory agencies concerns with the project; and plans were developed with an understanding of current regulations.

PROJECT ACTIVITIES

Topographic Survey

The project began with a topographic survey of the project area using technical staff from the City of Menasha under the direction of a Registered Land Surveyor from Vierbicher. The survey incorporated existing utility and boundary information provided by the City. The topographic survey included collection of the physical details of the by-pass channel so an evaluation of the potential for a whitewater recreational features could be evaluated.

Building and Race Equipment Observation

After the survey was completed, a visual observation of the general condition of the bypass channel and the in-stream mill race equipment was conducted by a licensed professional engineer. This general observation also included a review of available engineering plans for the buildings and bypass channel, the adjacent building foundations and the race equipment. This plan review and observation helped determine how these facilities will be incorporated or removed in relation to the potential for creating whitewater recreational features and site redevelopment. Another result of this site, building, and equipment review is that it helped determine the optimal route to reconnect the by-pass channel to the main channel of the Fox River.

Flow and Hydraulics Review

Discharge and water level data from Lake Winnebago, available from the US Army Corps of Engineers (USACOE) and the US Geological Survey (USGS), was collected and reviewed with respect to the availability of flow for the proposed whitewater recreational feature development. Using topographic survey data that describes the geometry of the by-pass channel and river flow data, a hydraulic model of the by-pass channel was developed. The model was used to estimate water levels and water velocities in the channel during various rates of flow (see attached water course map).



The preliminary hydraulic modeling indicates the by-pass channel width, depth, and velocity would support a riffle and pool channel configuration that would support a Class II+ whitewater recreational course. Optimal flows for the whitewater course would be between 200-350 cubic feet per second (CFS) which represents far less water than is typically available in the Fox River, even in the drier summer months.

Based on review of USACOE long term flow data, it is conceivable that sufficient flow for fish habitat and whitewater recreation could be maintained year around. A water level control structure that included a gate which could be closed to reduce flow into the channel would likely be required by regulatory agencies so that the level of Lake Winnebago could be specifically regulated. Preliminary review of by-pass channel modifications by officials from both USACOE and WDNR appears to be favorable. It is envisioned that the water control structure and the by-pass channel would be designed to allow for fish passage and incorporate natural rock, slow pools and other specifications desired by WDNR fishery experts.

Site Redevelopment Plans

Plans for the proposed site improvements describe shoreline restoration features to protect the adjacent waterfront areas from erosion and to provide aquatic habitat. The waterfront development plans also provide the public access to the site for recreational activities such as fishing, biking, walking, or observing whitewater recreation activities (see attached plans).

The potential development of a whitewater course was identified in the City's 2007-2011 Open Space and Recreational Facilities Plan. Many communities both statewide and nationally have embraced such an amenity as part of their riverfront development plans. The most notable example in Wisconsin can be found in Wausau, which has seen a noticeable upswing in use through competitive events, instructional camps, recreational paddling days, and swift water rescue training. This does not include the thousands of visitors that spectate at these events and the significant impact this has on the local economy.

The site redevelopment plans also include the private developer's concepts for future building construction, measures for passive, on-site stormwater management, innovative sustainability features, provisions for shoreline stabilization and park development, vehicle parking and access, a whitewater course, recreational trails, and integration of City utilities.

The collaboratively prepared plans depict possibilities for the reuse of existing site buildings, foundations, and infrastructure when appropriate. The plans were developed considering neighboring land uses and structures, the existing vehicle parking and traffic routes, emergency vehicle access, the orientation of waterfront views, and the protection of water quality.

The final size of proposed buildings and the required parking areas remain somewhat uncertain due to current economic conditions. The site will likely support commercial retail sales or dining, business offices and multi-story residential housing. The combination of local employment, shopping, and housing with diverse recreational activities along the water front makes this a very attractive development site. Redevelopment on the south side of the Fox River will create a business synergy with existing and future Main Street businesses. Public and private investment in this site will help change it from an abandoned industrial site to a unique destination and prosperous development site.



Project Phasing

The planned major site features such as the whitewater course, shoreline enhancements, and potential buildings are shown in perspective and detailed on the plans and depicted in several 3-D renderings. The probable construction costs for the proposed improvements, some of which contemplate the use of City staff and equipment for construction, have been included near the end of this report.

The prospects for receiving a Brownfields Grant to complete site clearance and related actions will be substantially enhanced if commitments are made to funding either site improvements for public use or private investments are made in site redevelopment. In short, the Wisconsin Department of Commerce is looking for some assurance that their investments in the site will create significant public benefit – either in the form of improved recreational opportunities for the public, or through increased employment/income opportunities and/or an expanded tax base.

It is likely that the project will be implemented in phases as a result of funding cycles, permit review requirements, and local market forces. For example, the shoreline trail and park development can precede the whitewater course development because there will likely be a longer permit review period for reopening/restoring the bypass channel. Similarly, building development may be delayed as suitable tenants may be difficult to solicit in the current economy.

Regulatory Permit Requirements

It is anticipated that there will be substantial effort required to obtain regulatory agency approval of this project's numerous components. Initial project permit discussions with State and Federal regulatory agency staff indicated their review of permits for improvements along the existing bypass channel route would be more time consuming. The proposed improvements on the Fox River waterfront that include installation of shoreline erosion control and pedestrian access measures will be easier and quicker to review and approve.

With a modest level of engineering design development, the site redevelopment plans for the shoreline improvements along the Fox River will have sufficient detail for review by regulatory agency staff. Plans for buildings, parking lots, bypass channel restoration, and vehicle access need further architectural/engineering detailing to support permitting submittals.

RECOMMENDATIONS

- Obtain public input on site improvement plans (2010).
- Explore funding opportunities for specific site improvements (annual grant cycles)
- Schedule site improvement construction to take advantage of available funding sources and to allow for adequate regulatory agency permit review.
- Consider current economic conditions that might influence the size and type of future building construction that would be preferred on this site.

SCHEDULE AND FUNDING

This waterfront planning project began in October 2008 and the current project plans have had substantial input from City staff and the private development team. In 2010, public input to the plans for site improvements will be solicited. Once public input is received, the preferred development plans will be implemented considering available funding sources and regulatory agency approvals.



Step 1

Fox River waterfront improvements including a recreational trail, fishing platforms, and bank stabilization/naturalization will likely be implemented first using primarily public funds such as the WDNR Stewardship grant program. Applications for Stewardship funding are due May 1, of each year and funding, if awarded, would be available for use in the fall or the next spring. At the current pace of site demolition, the earliest application date for this funding source would be May, 2011.

Key to the City's Stewardship application is the willingness of the owner/developer to donate land for public use along the main river channel and throughout the site. The value of this land donation will be determined by a WDNR appraisal process. This donated land value will help the City leverage a higher percent of State grant funds.

Additionally, City staff have identified several interested organizations and individuals that may be willing to step forward (in combination with grant funding) to make this project viable. It is also contemplated that labor performed by City crews can be used as part of a matching grant. When all these funding sources are taken into consideration, it is conceivable that the City would need to allocate little or no taxpayer funding for starting this project

Step 2

The buildings covering the bypass channel water course and any remaining water control structures will be removed and the existing water course will be open for viewing. This water course uncovering would be completed in conjunction with site demolition. The likely schedule for this activity could be as early as 2012.

The City of Menasha created Tax Increment District (TID) #11 and entered into development agreements to facilitate private redevelopment efforts. The site developers have met their contractual obligations under the development agreements and the city has met its obligation for allocating tax increments as contemplated by the TID #11 Project Plan. Depending on the nature and scope of future private investment in the site, additional Tax Increment Financing (TIF) resources may be sought to overcome gaps in project financing. Also, if resources are needed to support public infrastructure improvements or amenities, TIF financing may be considered to support certain public investments. Any new TIF-funded initiatives will likely require amendments to the TID #11 Project Plan and will be subject to future actions by the Plan Commission, Common Council, and TIF Joint Review Board.

Step 3

Engineering plans for a final route for the water course and the required water level control structure will be prepared. The water course will be constructed after regulatory agency approval. This water course plan preparation and regulatory agency review is expected to take a couple years to complete. As a result the water course construction is not expected to begin until about 2013 or 2014.

As the local economy improves, plans for buildings, parking and vehicle access will be finalized. Then private investment in these site improvements will be warranted and this will provide greater incentives for the site's popularity and use.



COSTS

The preliminary engineer's opinion of the probable costs for the riverfront recreational trail is about \$ 715,000 (see attached spreadsheet). These costs include an extensive wooden boardwalk along the Fox River behind the existing Mill site buildings and a new wooden bridge with viewing platforms over the renovated by-pass channel. This trail system uses innovative bio-engineered shoreline stabilization techniques, creative passive stormwater management systems such as rain gardens, and sustainable materials such as recycled asphalt on the trail surface. In addition, the shoreline trail incorporates a lighting design similar to the Trestle Trail. The trail construction costs include all labor, materials and engineering costs as well as a 10 percent contingency estimate. Labor expenses are expected to be about 60 to 70 percent of the total. If city crews would perform 40 percent of the maximum labor allowance, the project cost of this portion of the project would be reduced by about \$200,000.

The whitewater course is expected to cost approximately \$921,000, which again includes all labor, materials and engineering costs as well as a 10 % contingency estimate. The major costs for this portion of the site improvements include a new water control structure (\$250,000), and for boulder and stone placement in the by-pass channel to create adequate whitewater course conditions and fish habitat (\$175,000). Again about 60 to 70 percent of the total cost will be manpower or labor expenses (see attached spreadsheet). If city crews would perform 40 percent of the maximum labor allowance, the project cost of this portion of the project would be reduced by about \$258,000.

Other significant site support facilities are anticipated to cost as much as \$696,000 and include a new vehicle bridge (\$300,000) and a public restroom (\$200,000) (see attached spreadsheet).

The costs for building and parking improvements are difficult to estimate at this time due to uncertainty in the final configuration. However, a range of about \$10 to \$25 million would be required to construct buildings and parking to provide adequate site attractions such as a restaurants, offices, and retail centers.

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Cost Spreadsheet

**PRELIMINARY ENGINEER'S OPINION OF PROBABLE COST
GILBERT MILL SITE
CITY OF MENASHA**

Item #	Description	Unit of Measure	Estimated Quantity	Unit Price	Item Total
Gilbert Mill Trail (2805') 300 feet Raised Boardwalk					
1	Mobilization	LS	1	\$5,000.00	\$5,000.00
2	Tracking Pad Installed and Removed	EA	2	\$2,000.00	\$4,000.00
3	Inlet Protection Installed and Removed	EA	3	\$600.00	\$1,800.00
4	Silt Fence, Installed and Removed	LF	2,805	\$2.25	\$6,311.25
5	Clearing & Grubbing	LS	1.00	\$5,000.00	\$5,000.00
6	Remove Existing Railroad Support Beams	LS	1.00	\$8,000.00	\$8,000.00
7	Unclassified Excavation	LS	1	\$20,000.00	\$20,000.00
8	Crushed Aggregate Base Course (2500' x 6"x11' wide)	TON	950	\$15.00	\$14,250.00
9	Geotextile Subgrade Fabric Assume 250' x 12'	SY	350	\$3.50	\$1,225.00
10	Rip Rap along Trail or Bioengineered bank stabilization	LS	1	\$50,000.00	\$50,000.00
11	Asphaltic Concrete Pavement (2'x 2500' x 10')	TON	315	\$70.00	\$22,050.00
12	Wooden Bridge	LF	40	\$1,500.00	\$60,000.00
13	Boardwalk over Railroad Piers	LF	430	\$275.00	\$118,250.00
14	Erosion Mat Class 1, Type A	SY	2,950	\$2.50	\$7,375.00
15	Seed, Mulch, & Fertilize	LS	1	\$5,000.00	\$5,000.00
16	Landscape (Trees, shrubs, storm water features etc)	LS	1	\$25,000.00	\$25,000.00
17	Signs	EA	10	\$450.00	\$4,500.00
18	Bump Out for fishing	EA	4	\$5,000.00	\$20,000.00
19	12" RCP Endwall W/O Pipe Gate	EA	2	\$660.00	\$1,320.00
20	12" RCP Culvert Pipe	LF	18	\$68.00	\$1,224.00
21	Decorative Lighting (posts, wiring and bulbs)	EA	28	\$4,000.00	\$112,000.00
22	Fish Habitat and shoreline vegetation improvements	LF	400	\$100.00	\$40,000.00
23	Bioengineered Bank Stabilization Material (BioLog or Coirlog)	EA	26	\$1,250.00	\$32,500.00
Subtotal - All:					\$564,805.25
Contingency - 10%:					\$56,480.53
Engineering design&construction 15%:					\$93,192.87
Total:					\$714,478.64

Item #	Description	Unit of Measure	Estimated Quantity	Unit Price	Item Total
Gilbert Mill Whitewater Course					
1	Mobilization	LS	1	\$10,000.00	\$10,000.00
2	Tracking Pad Installed and Removed	EA	1	\$2,000.00	\$2,000.00
3	Inlet Protection Installed and Removed	EA	1	\$600.00	\$600.00
4	Silt Screen, Installed and Removed	LF	80	\$25.00	\$2,000.00
5	Clearing & Grubbing	LS	1.00	\$10,000.00	\$10,000.00
6	Unclassified Excavation Place Recycled Fill in Channel	CY	12,000	\$5.00	\$60,000.00
7	Water Control Structure to Facilitate Fish Passage and Control Flow	LS	1	\$250,000.00	\$250,000.00
8	Rip Rap and Boulders in Channel	CY	3,500	\$50.00	\$175,000.00
9	Viewing Platforms or Bleachers	LS	2	\$20,000.00	\$40,000.00
10	Sidewalk or Trail along course 1800 x 5	SF	9,000	\$6.00	\$54,000.00
11	Erosion Mat Class 1, Type A	SY	1,800	\$2.50	\$4,500.00
12	Seed, Mulch, & Fertilize	LS	1	\$20,000.00	\$20,000.00
13	Landscape (Trees, shrubs, storm water features etc)	LS	1	\$45,000.00	\$45,000.00
14	Misc Stormwater Outfall Repairs	LS	1	\$15,000.00	\$15,000.00
15	Decorative Lighting (Posts, wiring and bulbs)	EA	10	\$4,000.00	\$40,000.00
Subtotal - All:					\$728,100.00
Contingency - 10%:					\$72,810.00
Engineering design&construction 15%:					\$120,136.50
Total:					\$921,046.50

Item #	Description	Unit of Measure	Estimated Quantity	Unit Price	Item Total
Gilbert Mill Site Support Facilities					
1	Concrete Vehicle Bridge (40 ft long x 32 ft wide)	LS	1	\$300,000.00	\$300,000.00
2	Restroom Facility	LS	1	\$250,000.00	\$250,000.00
Subtotal - All:					\$550,000.00
Contingency - 10%:					\$55,000.00
Engineering design&construction 15%:					\$90,750.00
Total:					\$695,750.00

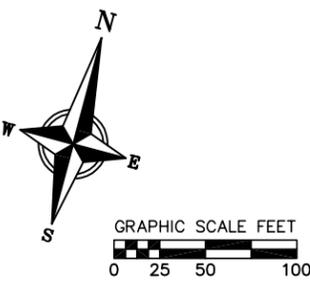
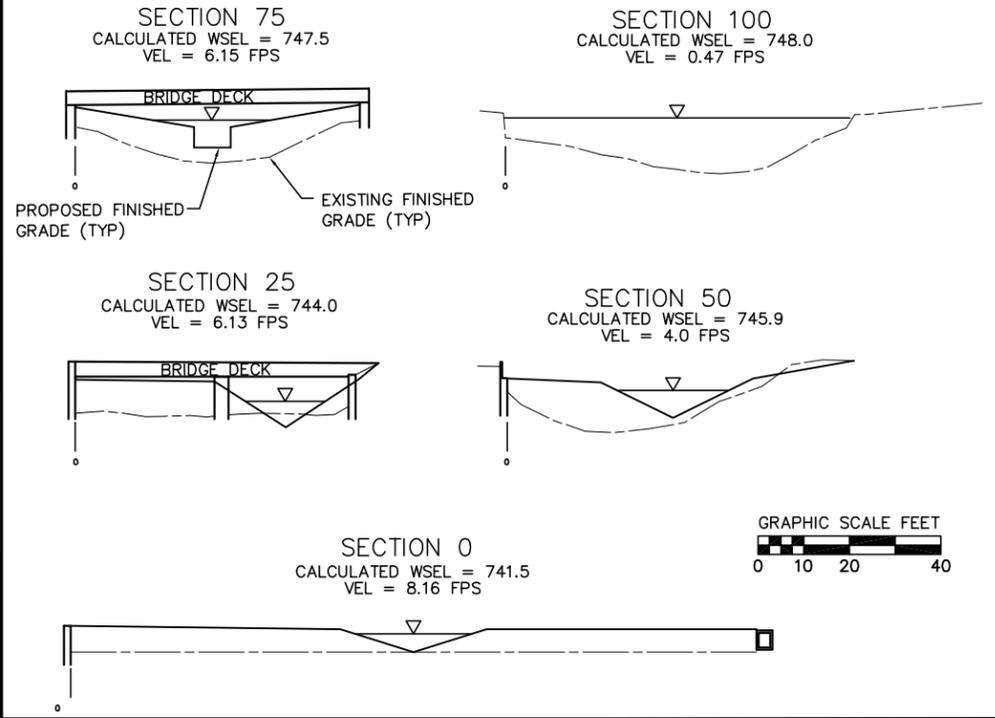
Site Plan



River Cross-Sections

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PROPOSED CROSS SECTIONS WITH WATER SURFACE ELEVATIONS CALCULATED AT 300 CFS



BACKUP WATER TO 748.0

THE FOX RIVER
WATER LEVEL - 741.5

WATER CONTROL STRUCTURE

PROPOSED RETAIL &/OR HOUSING (43,000 SF)

PROPOSED RETAIL &/OR HOUSING (17,000 SF)

STORM WATER DETENTION

ONE WAY

VIEWING AREAS (TYP)

PROPOSED OPEN CHANNEL FLOW ROUTE TO MEANDER THRU NARROW CHANNEL

WATER CONTROL STRUCTURE

EVENT PARKING

RACINE ST. BRIDGE

EXISTING BRIDGE

AHNAIP ST.

STEADY WATER LEVEL - 748

EXIT ONLY

NAYMUT ST.

CHANNEL

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PROPOSED WHITE WATER CHANNEL
 GILBERT MILL REDEVELOPMENT
 CITY OF MENASHA
 WINNEBAGO COUNTY, WISCONSIN

REVISIONS	NO.	DATE	REMARKS

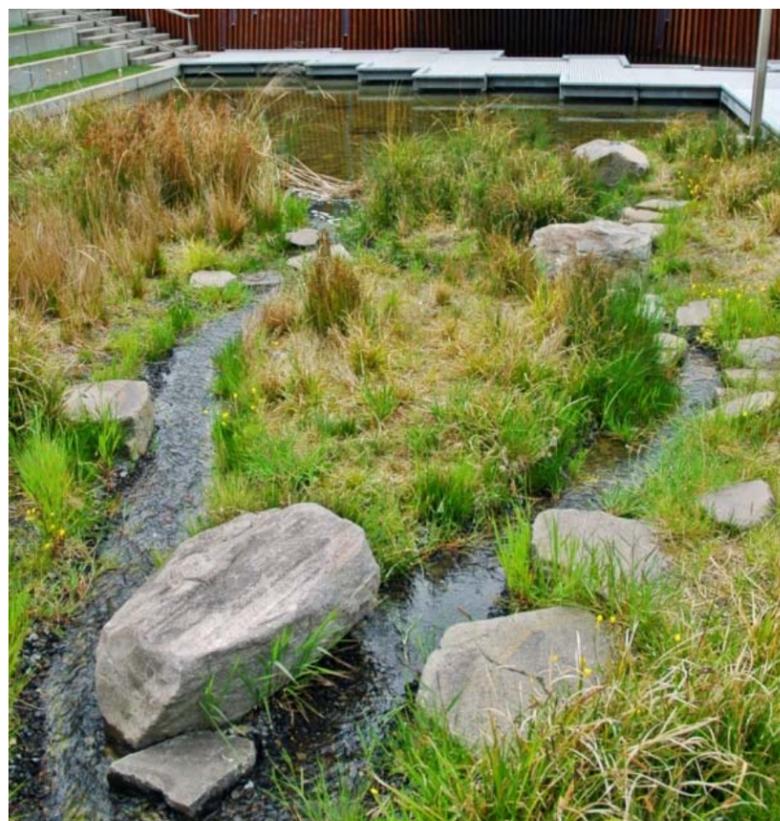
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 SHEET 1 OF 1
 DWG. NO. 14ME-1-2



Streambank Restoration Example



Stormwater Infiltration Examples

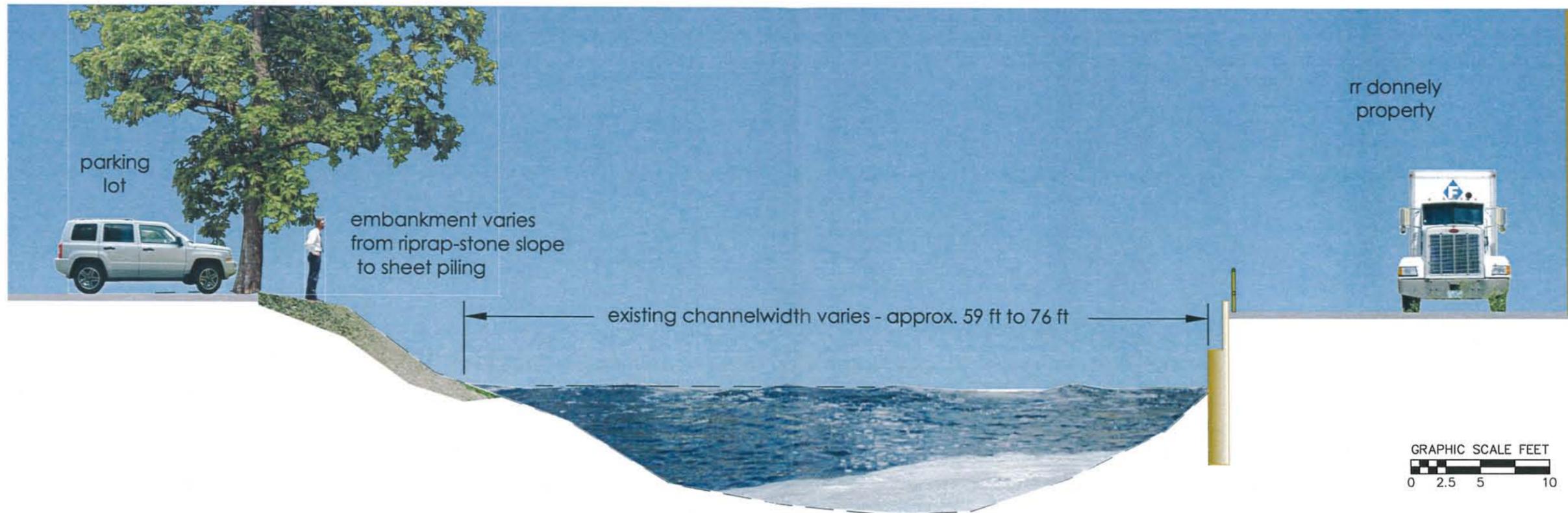


Stormwater Recharge Example

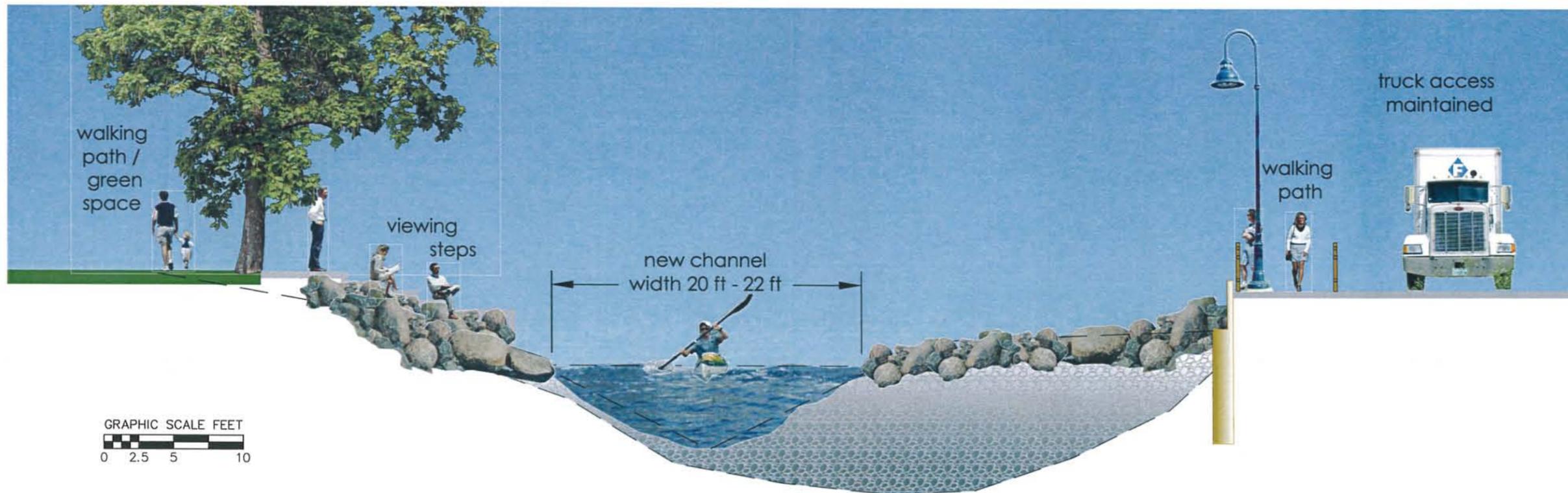


Typical Site Restoration Details Gilbert Mill Redevelopment city of menasha, wisconsin



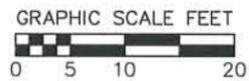
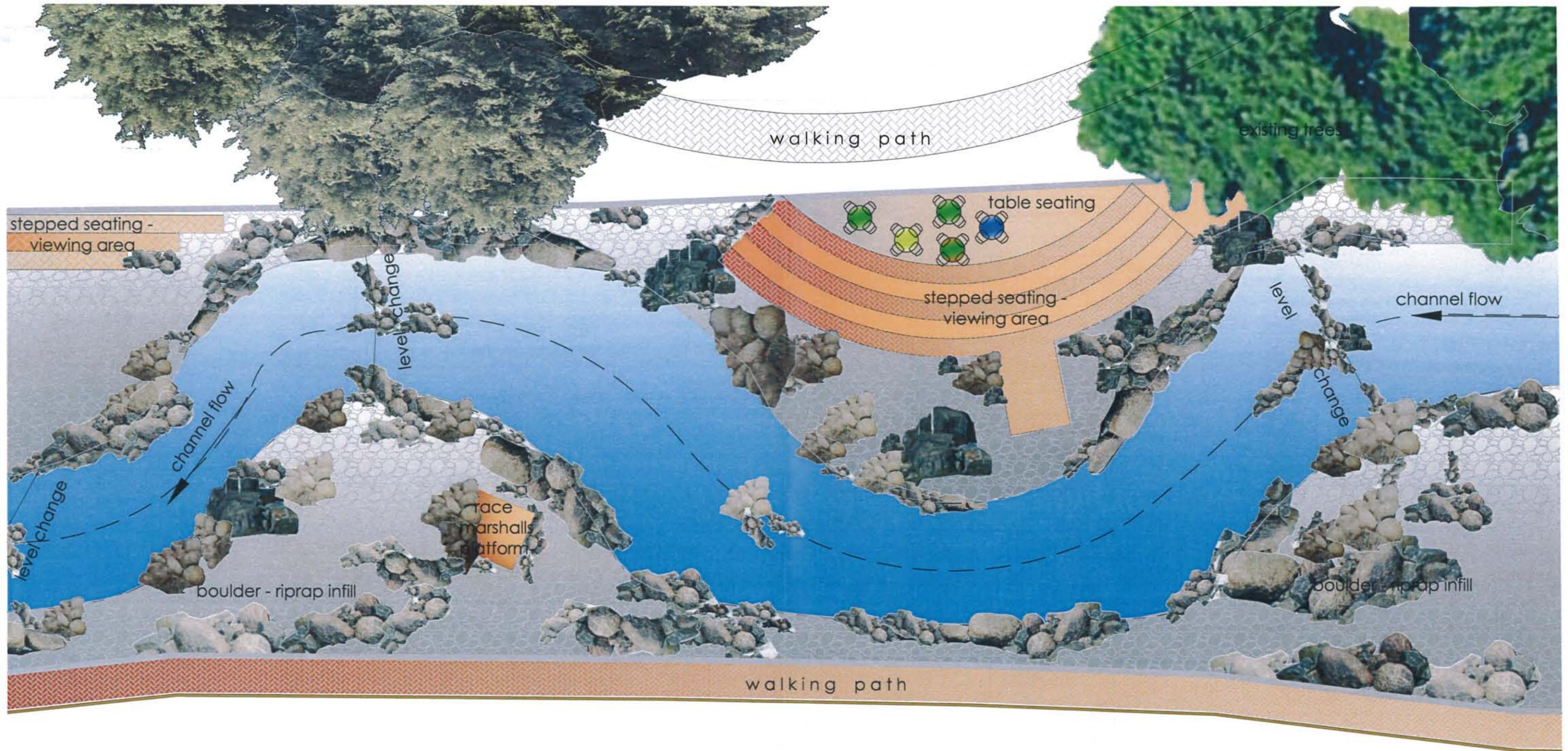


Existing Typical Channel Section



Proposed Typical Channel-Course Section

Gilbert Mill Redevelopment
city of menasha, wisconsin



rr donnelly property

Proposed Channel-Course Plan Detail
 Gilbert Mill Redevelopment
 city of menasha, wisconsin

Renderings (1-3)





