

George Rogers Park | **Master Plan**
Lake Oswego, Oregon | Plan Implementation

Prepared for the City of Lake Oswego
June 2002

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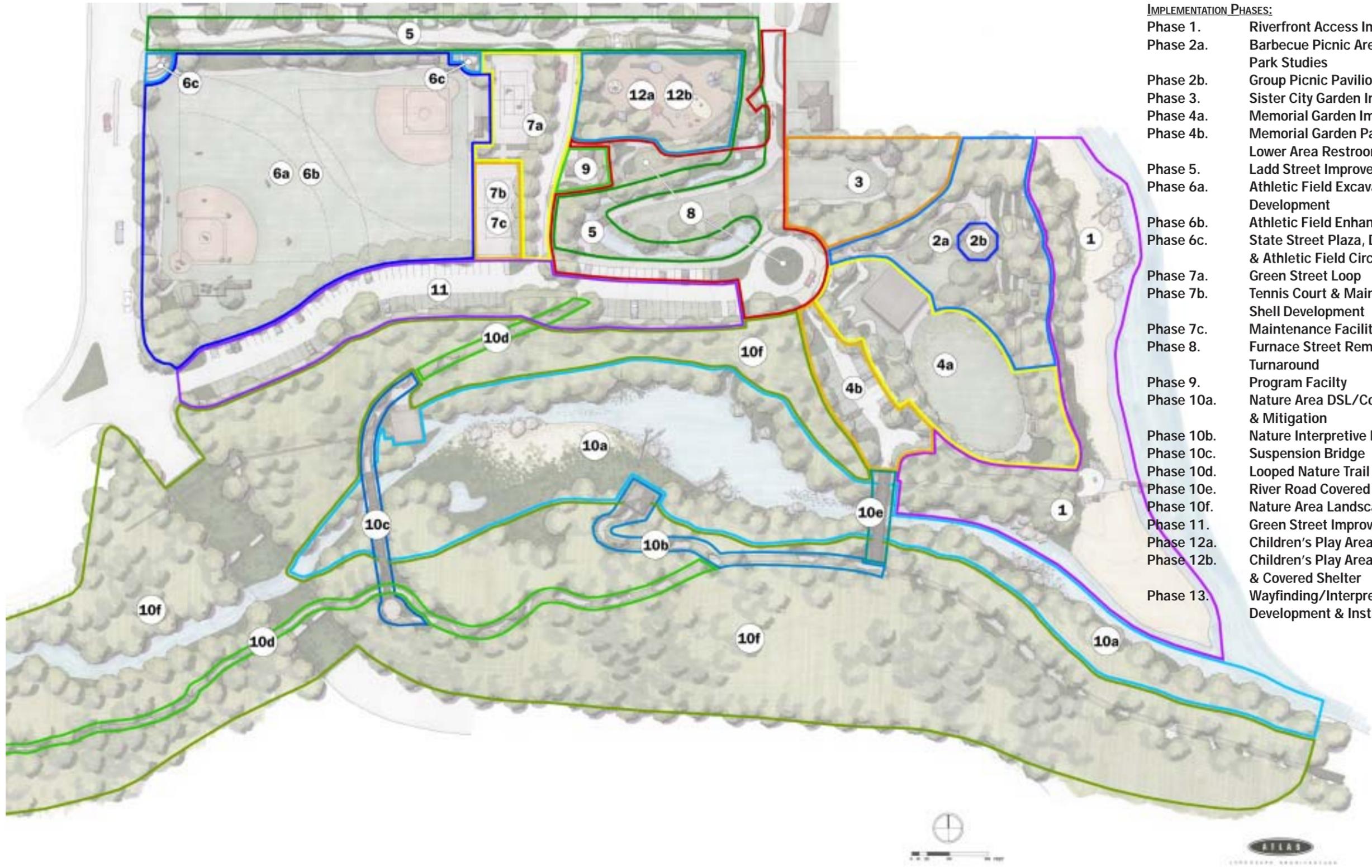
Introduction | Master Plan Process



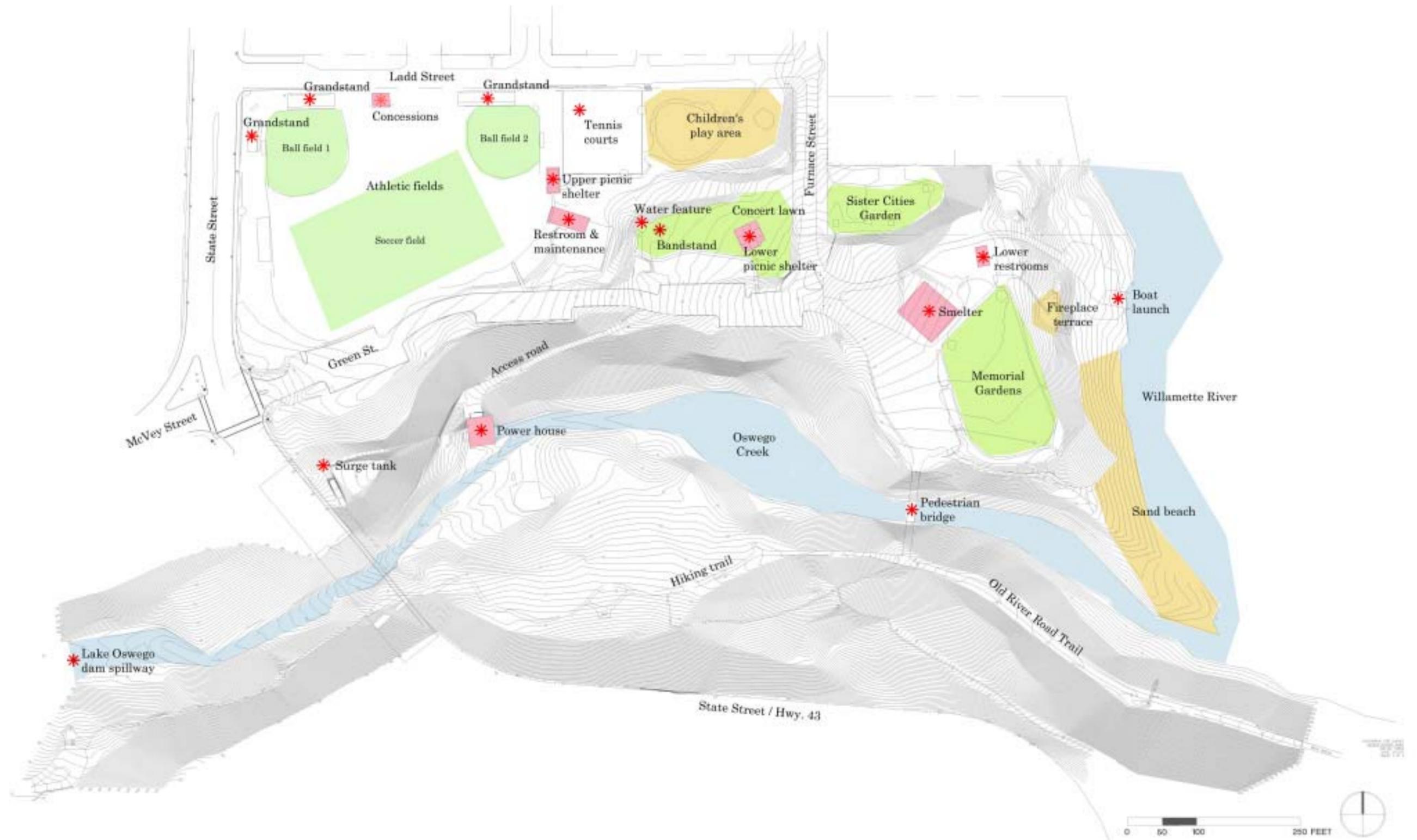
The George Rogers Park Master Plan is a long-term vision for the development of the park. The plan is intended to be implemented over a period of 25 years, with development phases designed to fit within yearly budget parameters. These phases and the proposed improvements are illustrated in Figure 1 and are described in the following pages as a summary of improvements and associated costs. Figure 2 illustrates the existing conditions of George Rogers Park as the starting point for master plan implementation.

Phases are sequenced by areas, and are not intended to be developed in the order described. Some phases are dependent on other phases being developed first, and these first phases are described with a * notation. Susequent related phases that are dependent on the first phase are indicated with a *2a notation. This sequencing typically involves infrastructure development that has been phased to minimize individual phase improvement costs and to avoid inefficiencies in development sequences.

Three studies have been identified that are related to park improvement projects, but would require



- IMPLEMENTATION PHASES:**
- Phase 1. Riverfront Access Improvements
 - Phase 2a. Barbecue Picnic Area Development & Park Studies
 - Phase 2b. Group Picnic Pavilion
 - Phase 3. Sister City Garden Improvements
 - Phase 4a. Memorial Garden Improvements
 - Phase 4b. Memorial Garden Parking Area & Lower Area Restrooms
 - Phase 5. Ladd Street Improvements
 - Phase 6a. Athletic Field Excavation & Base Field Development
 - Phase 6b. Athletic Field Enhancements
 - Phase 6c. State Street Plaza, Durham Street Stair, & Athletic Field Circulation
 - Phase 7a. Green Street Loop
 - Phase 7b. Tennis Court & Maintenance Facility Shell Development
 - Phase 7c. Maintenance Facility Office Improvements
 - Phase 8. Furnace Street Removal & Green Street Turnaround
 - Phase 9. Program Facility
 - Phase 10a. Nature Area DSL/Corps Permitting & Mitigation
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 - Phase 10d. Looped Nature Trail & Connections
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 - Phase 13. Wayfinding/Interpretive Signage System Development & Installation

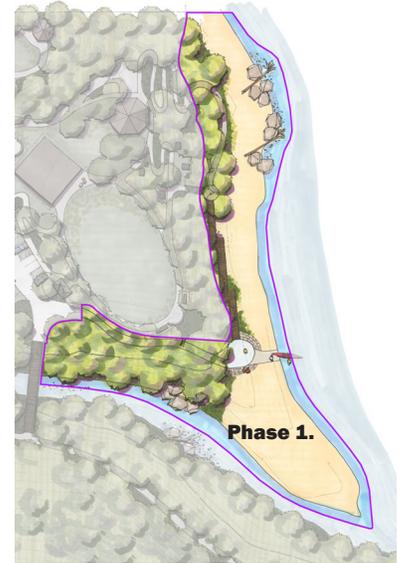


Phased Improvements | Implementation Phases

The following summarizes the implementation phases for the George Rogers Park Master Plan and provides phase cost estimates.

Phase 1. Riverfront Access Improvements

Riverfront improvements will require Corps of Engineers and Division of State Lands permitting. Phase improvements would remove the existing boat launch up to the jurisdictional elevation of ordinary high water, and develop a canoe launch access path, stone revetment, boardwalk, and pathway connections from the beach to the lower park garden terrace. Beach restoration and habitat enhancement are intended to mitigate access improvements, and should be done concurrently with proposed development.



Phase 1. Riverfront Access Improvements							
Item Description	Quantity	Unit	Cost/Unit	Item Total	Subtotal	Total	
Demolition							
1. Boat Launch	148	cy	\$107.00	\$15,836.00			
					\$15,836.00		
Sidewalks & Pathways							
1. Canoe Launch	1	ls	\$12,000.00	\$12,000.00			
2. Stone revetment	1,275	sff	\$30.00	\$38,250.00			
3. Boardwalk	1,600	sf	\$40.00	\$64,000.00			
4. Launch Access Pathway							
a. Gravel base (12")	115	cy	\$1.20	\$1,526.00			
b. Asphalt (4")	3,120	sf	\$2.40	\$7,488.00			
c. Gabions							
i. Gravel	87	cy	\$32.00	\$2,784.00			
ii. Gabion baskets (6' x 9')	30	ea	\$200.00	\$6,000.00			
5. Landings							
a. Gravel base (12")	65	cy	\$32.00	\$2,080.00			
b. Asphalt (4")	1,275	sf	\$3.00	\$3,825.00			
6. Pathway	2,880	sf	\$2.50	\$7,200.00			
					\$145,153.00		
Structures							
1. Boulders for clusters	8	ea	\$750.00	\$6,000.00			
2. Large woody debris groups	4	ea	\$150.00	\$600.00			
					\$6,600.00		
Landscape							
1. Clearing & replanting	82,880	sf	\$1.00	\$82,880.00			
					\$82,880.00		
Construction Subtotal							\$250,469.00
Consultant Design Services and Permitting							
		0.12	%		\$250,469.00	\$30,056.00	
Wetland delineation & DSL Permitting							
1. Consultant Services	1	ls				\$40,000.00	
Phase 1. Total							\$320,525.00

Phase 2a. Barbecue Picnic Area Development and Park Studies*

Redevelopment of the historic Barbecue Picnic Area is the first of two phases to provide group picnicking activities on the park's lower terrace. The picnic area development will remove the existing boat access road to the jurisdictional elevation of ordinary high water and redevelop the road to provide more uniform grade access to the lower terrace for catering and pathway access. Complete removal of the boat launch below the ordinary high water elevation is not recommended until the Riverfront Access Improvements phase, to consolidate required permitting activities. The lower restroom building would also be removed to accommodate future development of the Group Picnic Pavilion.

The stone barbecue fireplaces are restored and supplemented with picnic tables, pathways connecting the area to the Memorial Garden and Smelter are developed, and the surrounding landscape improved by opening up vistas through existing vegetation and supplementing with ornamental shrubs, trees and lawn.

Archaeological Investigation

Due to the historical significance of the park site in the industrial development of the region and the community of Lake Oswego, as well as the proximity of an identified prehistoric cultural resource, archaeological site 35CL96, it is recommended that a comprehensive investigation of the park be done to identify and preserve any potentially significant historical information that might still be located on the site from several historical periods. This study is intended to identify any areas of the park that might require more detailed investigation or sensitive development during phased implementation of the park master plan. Site specific research from the comprehensive investigation will provide a basis for development of a park interpretive system for the historic and cultural resources of the park. The comprehensive archaeological investigation of the park is recommended prior to implementing any improvements that will impact the existing park terrain.

Park Facility Design Guidelines/Resource Interpretive Master Plan

The phased redevelopment of park structures and facilities in the context of a unified design aesthetic and as an opportunity for artistic expression in the park would best be achieved with a comprehensive plan for park design guidelines. The guidelines would recommend an architectural style, materials, site furnishings, and design details for proposed facilities, and should be

developed in the context of the Arts Commission to identify opportunities and priorities for art installations in conjunction with the phased park improvements. A Resource Interpretation Master Plan would identify the significant historic, cultural, and natural features that could be developed into a comprehensive interpretive program for the park, developing a common design vocabulary for signage, way-finding, and information/story telling. Developing design guidelines early in the implementation process will facilitate the phased development of the park within a common design framework, making the park experience more cohesive.

Phase 2b. Group Picnic Pavilion*^{2a}

Once the base improvements to the Barbecue Picnic Area are developed to provide access and service, the Group Picnic Pavilion can be developed as a subsequent phase.



Phase 2a. Barbecue Picnic Area Development and Park Studies							
Item Description	Quantity	Unit	Cost/Unit	Item Total	Subtotal	Total	
Demolition							
1. Removal of Boat Access Road	400	sy	\$6.50	\$2,600.00			
2. Removal of Lower Area Restrooms	5,400	cf	\$0.31	\$1,674.00			
3. Path Removal	150	sy	\$6.50	\$975.00			
					\$5,249.00		
Subgrade							
1. Fine grading & soil amendment (6")	28	cy	\$15.00	\$420.00			
					\$420.00		
Roads, Sidewalks & Pathways							
1. Paths	3,840	sf	\$2.50	\$9,600.00			
2. Service Road							
a. Gravel (12" base)	127	cy	\$32.00	\$4,064.00			
b. Asphalt (4")	3,450	sf	\$5.00	\$17,250.00			
					\$30,914.00		
Structures							
1. Picnic tables	4	ea	\$2,400.00	\$9,600.00			
2. Restored Stone Bar-b-que	4	ea	\$4,000.00	\$16,000.00			
					\$25,600.00		
Landscape							
1. Lawn	21,200	sf	\$2.50	\$53,000.00			
2. Shrubs and Trees	10,282	sf	\$4.50	\$46,269.00			
3. Clearing & replanting	20,566	sf	\$1.00	\$20,566.00			
					\$119,835.00		
Construction Subtotal							\$182,018.00
Consultant Design Services and Permitting							
	0.12	%		\$182,018.00	\$21,842.00		
Archaeological Investigation							
1. Cursory investigation	1	ls			\$10,000.00		
Park Facility Design Guidelines and Resource Interpretation Master Plan							
1. Design Services	1	ls			\$40,000.00		
Consultant Services Subtotal							\$71,842.00
Phase 2a Total							\$253,860.00
Phase 2b. Group Picnic Pavilion							
Item Description	Quantity	Unit	Cost/Unit	Item Total	Subtotal	Total	
Structures							
1. Pavilion	1,963	sf	\$100.00	\$196,300.00			
					\$196,300.00		
Construction Subtotal							\$196,300.00
Consultant Design Services and Permitting							
	0.12	%		\$196,300.00	\$23,556.00		
Phase 2b. Total							\$219,856.00

Phase 3. Sister City Garden Improvements

Improvements in the Sister City Garden will provide a small group picnic shelter with river views from the bluff, develop a perimeter pathway around the garden, improve picnic table facilities, and enhance the existing landscape with ornamental shrubs and trees, and thinning of existing vegetation to provide exterior views from the garden.



Phase 3. Sister City Garden Improvements							
Item Description	Quantity	Unit	Cost/Unit	Item Total	Subtotal	Total	
Subgrade							
1. Fine grading & soil amendment (6")	717	cy	\$15.00	\$10,755.00			
					\$10,755.00		
Roads, Sidewalks & Pathways							
1. Paths	2,040	sf	\$2.50	\$5,100.00			
					\$5,100.00		
Structures							
1. Pavilion	900	sf	\$150.00	\$135,000.00			
2. Picnic tables	3	ea	\$2,400.00	\$7,200.00			
					\$142,200.00		
Landscape							
1. Lawn	816	sf	\$2.50	\$2,040.00			
2. Shrubs and Trees	18,544	sf	\$4.50	\$83,448.00			
					\$85,488.00		
Construction Subtotal							\$243,543.00
Consultant Design Services and Permitting							
	0.12	%		\$243,543.00	\$29,225.00		
Phase 3. Total							\$272,768.00

Phase 4a. Memorial Garden Improvements

Improvements in the Memorial Garden are intended to open up views to the Willamette River and Oswego Creek through existing vegetation and to improve pedestrian access to the Garden and lower terrace area with accessible pathways, a perimeter promenade, and overlook. Improvements will be made at the base of the historic smelter, providing an ornamental iron fence for security and removing existing unhistorical vegetation. Garden improvements will reconfigure the western edge of the existing parking lot, but will not affect the overall functionality or capacity of the parking area.

Phase 4b. Memorial Garden Parking Area & Lower Area Restrooms

The lower parking area adjacent to the Memorial Garden will be removed and redeveloped with reinforced grass paving and subsurface stormwater treatment. A restroom facility for the lower park areas will supplement the development.



Phase 4a. Memorial Garden Improvements							
Item Description	Quantity	Unit	Cost/Unit	Item Total	Subtotal	Total	
Demolition							
1. Asphalt removal, paths and parking	537	sy	\$6.50	\$16,690.00			
					\$16,690.00		
Subgrade							
1. Fine Grading	304	cy	\$15.00	\$4,560.00			
2. Mass Excavation	423	cy	\$2.50	\$1,058.00			
					\$5,618.00		
Roads, Sidewalks & Pathways							
1. Concrete curb	360	lf	\$9.00	\$3,240.00			
2. Asphalt walks (8' wide)	7,040	sf	\$2.50	\$17,600.00			
					\$20,840.00		
Structures							
1. Overlook retaining walls	700	sff	\$40.00	\$28,000.00			
2. Benches	2	ea	\$2,000.00	\$4,000.00			
3. Ornamental Fence	320	lf	\$100.00	\$32,000.00			
					\$64,000.00		
Landscape							
1. Lawn	23,440	sf	\$2.50	\$58,600.00			
2. Shrubs and Trees	23,616	sf	\$4.50	\$106,272.00			
					\$164,872.00		
Construction Subtotal							\$272,020.00
Consultant Design Services and Permitting							
	0.12	%		\$272,020.00	\$32,642.00		
Phase 4a. Total							\$304,662.00

Phase 4b. Memorial Garden Parking Area & Lower Area Restrooms							
Item Description	Quantity	Unit	Cost/Unit	Item Total	Subtotal	Total	
Demolition							
1. Asphalt	1,644	sy	\$6.50	\$16,690.00			
					\$16,690.00		
Subgrade							
1. Fine grading	1,644	cy	\$15.00	\$24,660.00			
2. Utilities							
a. Water	400	lf	\$2.50	\$1,000.00			
b. Sewer	400	lf	\$11.15	\$4,460.00			
c. Electric	400	lf	\$4.41	\$1,764.00			
d. Gas	400	lf	\$3.41	\$1,364.00			
					\$33,248.00		
Roads, Sidewalks & Pathways							
1. Driveway & Parking gravel base							
a. Gravel base	350	cy	\$32.00	\$11,200.00			
b. Asphalt surfacing	3,400	sf	\$5.00	\$17,000.00			
c. Reinforced turf	1,755	sy	\$5.00	\$8,775.00			
d. Concrete curb	580	lf	\$13.00	\$7,540.00			
2. Asphalt paths	1,120	sf	\$2.50	\$2,800.00			
					\$47,315.00		
Structures							
1. Restroom	600	sf	\$150.00	\$90,000.00			
					\$90,000.00		
Landscape							
1. Shrubs and Trees	12,496	sf	\$4.50	\$56,232.00			
					\$56,232.00		
Construction Subtotal							\$243,485.00
Consultant Design Services and Permitting							
	0.12	%		\$243,485.00	\$29,218.00		
Phase 4b. Total							\$272,703.00

(Ladd Street Public Design Process)

The George Rogers Park Master Plan proposes redevelopment of Ladd Street using “green street” engineering, similar to the SEA Streets Program in Seattle, Washington. The development of the public street right of way is outside of the scope for park improvement funds, except as an adjoining property owner. The proposed Ladd Street design would be a prototype for other street renovation projects in the City of Lake Oswego and is suggested to be funded with special projects, transportation or environmental services budgets.

Redevelopment of Ladd Street is anticipated to require three separate phases of study: a public design process, transportation engineering design, and a stormwater management study. The public design process will be necessary to develop a street improvement plan with adjacent neighborhood support, to resolve residential parking needs, and develop a clustered parking strategy to accommodate stormwater swales.

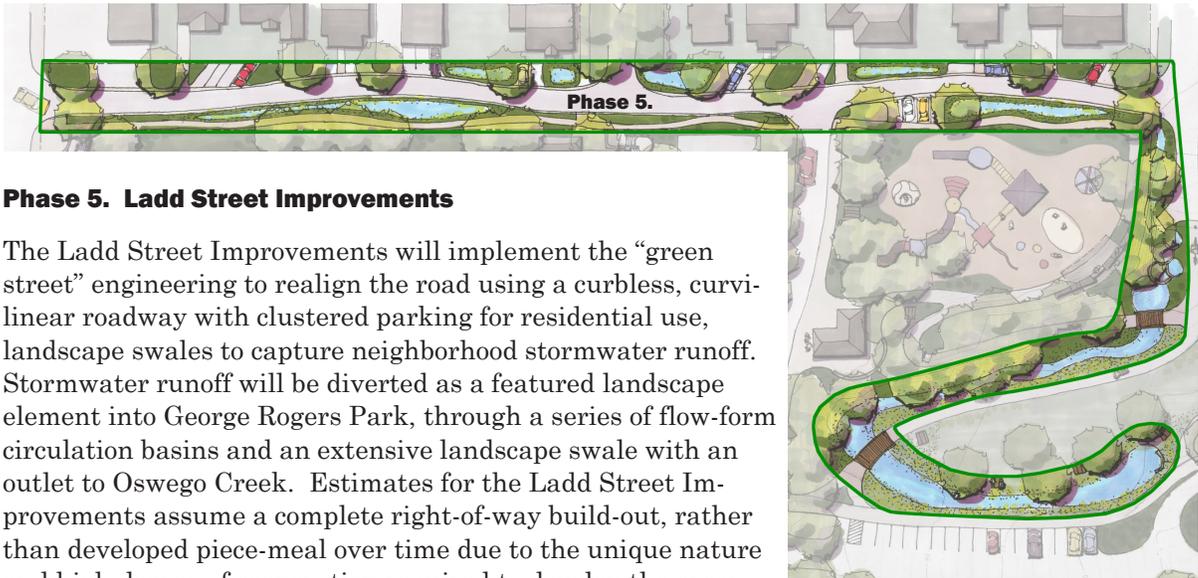
(Ladd Street Transportation Engineering Design)

Following a public design process, detailed technical drawings for right of way improvements including road profiles, cross-sections, and alignment will need to be prepared. Stormwater management methods and calculations from a concurrent neighborhood stormwater study will need to be incorporated into the street design to accommodate required capacities.

(Neighborhood Environmental Stormwater Study)

Concurrent with the transportation engineering design of the Ladd Street Right of Way Improvements, a stormwater study for neighborhood runoff towards Ladd Street will need to be done to assess stormwater requirements for capacity and to design management techniques.

Neighborhood/Ladd St. Stormwater Study				
	1	ls		\$50,000.00
Ladd Street Public Design Process				
	1	ls		\$50,000.00
Ladd Street Engineering Design				
	1	ls		\$100,000.00



Phase 5. Ladd Street Improvements

The Ladd Street Improvements will implement the “green street” engineering to realign the road using a curbless, curvilinear roadway with clustered parking for residential use, landscape swales to capture neighborhood stormwater runoff. Stormwater runoff will be diverted as a featured landscape element into George Rogers Park, through a series of flow-form circulation basins and an extensive landscape swale with an outlet to Oswego Creek. Estimates for the Ladd Street Improvements assume a complete right-of-way build-out, rather than developed piece-meal over time due to the unique nature and high degree of cooperation required to develop the green street concept. Right of way improvements could be financed through joint department budgets, including Transportation, Environmental Services, and Parks and Recreation.

Phase 5. Ladd Street Improvements							
Item Description	Quantity	Unit	Cost/Unit	Item Total	Subtotal	Total	
Demolition							
1. Bandstand	3,600	cf	\$0.24	\$864.00			
2. Picnic Shelter	7,200	cf	\$0.24	\$1,728.00			
3. Asphalt Removal	2,240	sy	\$6.50	\$14,560.00			
					\$17,152.00		
Subgrade							
1. Storm Drainage System							
a. Double Inlets	8	ea	\$750.00	\$6,000.00			
b. Drain line	800	lf	\$5.75	\$4,600.00			
					\$10,600.00		
Sidewalks & Pathways							
1. 2' concrete Curb Strip, each side	1,600	lf	\$15.75	\$25,200.00			
2. Gravel Road Base	415	cy	\$32.00	\$13,280.00			
3. Paving							
a. Road	11,200	sf	\$5.00	\$56,000.00			
b. Parking	4,140	sf	\$5.00	\$20,700.00			
4. Concrete Walk	4,800	sf	\$3.00	\$14,400.00			
5. Flow forms	20	ea	\$1,000.00	\$20,000.00			
6. Headwall 30" with 3' wing walls	1	ls		\$2,000.00			
					\$151,580.00		
Structures							
1. Lights	6	ea	\$2,000.00	\$12,000.00			
					\$12,000.00		
Landscape							
1. Landscaping swales	5,760	sf	\$4.50	\$25,920.00			
2. General landscaping	4,000	sf	\$5.50	\$22,000.00			
					\$47,920.00		
Construction Subtotal							\$239,252.00
Consultant Design Services and Permitting							
	0.12	%		\$239,252.00	\$28,710.00		
Phase 5. Total							\$267,962.00

Phase 6a. Athletic Field Excavation and Base Development*

Relieving neighborhood pressures from the impacts of the athletic fields is a primary concern in the George Rogers Park Master Plan. To this end, the fields are reoriented towards Green Street, with major excavation to lower the grade barrier at Green Street to be flush with the parking area. This will increase the slope divide at Ladd Street, and necessitate the resurfacing, irrigation, and relocating of the in-fields and backstops. The resulting athletic fields will be playable, but without the extra amenities that are to be developed in subsequent phases.

Phase 6b. Athletic Field Enhancements*^{6a}

The proposed athletic field enhancements will develop the athletic fields with dugouts, bleachers, and a storage/concession building.

Phase 6c. State Street Plaza, Durham Street Stair, and Athletic Field Circulation*^{6a}

Pedestrian access improvements will be developed to provide access into the park from State Street and Ladd Street in the form of the State Street Plaza, a staircase aligning with Durham Street, and a loop path system around the athletic fields.



Phase 6a. Athletic Field Excavation and Base Development							
Item Description	Quantity	Unit	Cost/Unit	Item Total	Subtotal	Total	
Demolition							
1. Bleachers							
a. Wood	8,640	cf	\$0.24	\$2,074.00			
b. Concrete	29,120	cf	\$0.31	\$9,028.00			
2. Concessions Building	5,600	cf	\$0.31	\$1,736.00			
3. Storage Booth	1,000	cf	\$0.31	\$310.00			
4. Dugouts	1,600	cf	\$0.31	\$496.00			
5. Existing irrigation for Fields	11,808	sf	\$0.30	\$3,543.00			
6. Field Lights (salvage & relocate)	11	ea	\$3,000.00	\$33,000.00			
7. Paths	580	sy	\$6.50	\$3,770.00			
8. Stairs	12	sy	\$107.00	\$1,284.00			
9. Site Furniture	1	ls		\$2,000.00			
7. Boy Scouts Christmas Pad	130	sy	\$6.10	\$793.00			
					\$58,034.00		
Subgrade							
1. Mass excavation to grade	15,266	cy	\$2.50	\$38,165.00			
2. Drain System	11,200	lf	\$7.15	\$80,080.00			
a. 18" depth gravel	622	cy	\$32.00	\$19,904.00			
3. Irrigation	137,392	sy	\$0.65	\$89,305.00			
4. Fine grading & seeding	2,594	cy	\$3.00	\$7,782.00			
					\$235,236.00		
Structures							
1. Back Stop (30' with 2 overhangs)	2	ea	\$3,050.00	\$6,100.00			
					\$6,100.00		
Construction Subtotal							\$299,370.00
Consultant Design Services and Permitting							
	0.12	%		\$299,370.00	\$35,924.00		
Phase 6a. Total							\$335,294.00

Phase 6b. Athletic Field Enhancements							
Item Description	Quantity	Unit	Cost/Unit	Item Total	Subtotal	Total	
Structures							
1. Dugouts	4	ea	\$15,000.00	\$60,000.00			
2. Bleachers (3 with 240 people each)	720	per sea	\$120.00	\$86,400.00			
3. Storage/Concession	400	sf	\$200.00	\$80,000.00			
4. Utilities							
a. Water	60	lf	\$2.50	\$150.00			
b. Electric	60	lf	\$4.41	\$265.00			
c. Gas	60	lf	\$3.41	\$205.00			
					\$227,020.00		
Construction Subtotal							\$227,020.00
Consultant Design Services and Permitting							
	0.12	%		\$227,020.00	\$27,242.00		
Phase 6b. Total							\$254,262.00

Phase 6c. State Street Plaza, Durham Street Stair, and Athletic Field Circulation						
Sidewalks & Pathways						
1. State Street Plaza and Ramp	1	ls		\$75,000.00		
2. Durham Street Stair	1	ls		\$40,000.00		
3. Sidewalks/asphalt	960	sf	\$2.50	\$2,400.00		
4. Green St. Concrete sidewalk (N)	3,000	sf	\$3.00	\$9,000.00		
					\$126,400.00	
Landscape						
1. Shrubs and Trees	15,088	sf	\$4.50	\$67,896.00		
					\$67,896.00	
Construction Subtotal						\$194,296.00
Consultant Design Services and Permitting						
	0.12	%		\$194,296.00	\$23,316.00	
Phase 6c. Total						\$217,612.00



Phase 7a. Green Street Loop*

The Green Street Loop Road will provide vehicular circulation through the park between Ladd Street and Green Street. Phase improvements will remove the existing tennis courts and part of the Maintenance Facility service yard, install the road and sidewalk, and redevelop the northern tennis court. Renovations are estimated to reorient building access and to maintain overall functionality of the Maintenance Facility.

Phase 7b. Tennis Court and Maintenance Facility Shell Development*^{7a}

The existing maintenance facility and upper area restroom will be removed and replaced with a consolidated elevated tennis court and subterranean maintenance facility structure. Phase improvements will develop the building shell of the maintenance facility with the southern tennis court located on the facility's roof. Tenant improvements for the maintenance facility will be developed in a subsequent phase.

Phase 7c. Maintenance Facility Office Improvements*^{7b}

The maintenance facility shell will be built out with tenant improvements to include office space, public/private restrooms, and storage.

Phase 7a. Green Street Loop							
Item Description	Quantity	Unit	Cost/Unit	Item Total	Subtotal	Total	
Demolition							
1. Tennis court removal	1,533	sy	\$6.50	\$9,964.50			
2. Maintenance yard	135	sy	\$6.50	\$877.50			
3. Concrete wall	20	cy	\$107.00	\$2,140.00			
4. Asphalt path	88	sy	\$6.50	\$572.00			
5. Upper Picnic Shelter removal	6,300	cf	\$0.24	\$1,512.00			
					\$15,066.00		
Subgrade							
1. Mass excavation	3,444	cy	\$2.50	\$8,610.00			
					\$8,610.00		
Roads, Sidewalks & Pathways							
1. Paths	603	sf	\$2.50	\$1,507.50			
2. Stairs	1	ls		\$2,500.00			
3. Loop Road							
a. Gravel (12" base)	267	cy	\$32.00	\$8,544.00			
b. Asphalt	7,200	sf	\$5.00	\$36,000.00			
c. Concrete curb	600	lf	\$13.00	\$7,800.00			
4. Concrete sidewalk	1,800	sf	\$3.00	\$5,400.00			
5. Asphalt path	603	sf	\$2.50	\$1,507.50			
					\$63,259.00		
Structures							
1. Tennis Court (on grade)							
a. Asphalt base (3")	800	sy	\$17.05	\$13,640.00			
2. Surfacing (rubber-acrylic)	800	sy	\$17.65	\$14,120.00			
3. Posts & nets	1	ea	\$611.00	\$611.00			
4. Markings	1	ea	\$222.00	\$222.00			
5. Fencing 12' high, vinyl coated	360	lf	\$24.50	\$8,820.00			
6. Gates	1	ea	\$222.00	\$222.00			
7. Lights (4 each court)	4	ea	\$2,000.00	\$8,000.00			
8. Maintenance Facility renovations	1	ls		\$125,000.00			
					\$170,635.00		
Construction Subtotal							\$257,570.00
Consultant Design Services and Permitting							
	0.12	%		\$257,570.00	\$30,908.00		
Phase 7a. Total							\$288,478.00

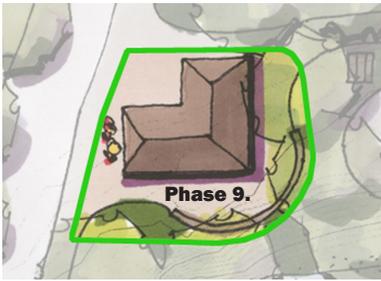
Phase 7b. Tennis Court and Maintenance Facility Shell Development							
Item Description	Quantity	Unit	Cost/Unit	Item Total	Subtotal	Total	
Demolition							
1. Upper Restroom / Maintenance	1	ls		\$7,000.00		\$7,000.00	
						\$7,000.00	
Subgrade							
1. Mass excavation	3,444	cy	\$2.50	\$8,610.00			
						\$8,610.00	
Structures							
1. Wall panels arch precast 8'x16'x4"	5,760	sf	\$14.70	\$84,672.00			
2. Slab, roof (4")	7,200	sf	\$6.75	\$48,600.00			
3. Floor	7,200	sf	\$5.00	\$36,000.00			
4. Beams 20' spans	18	ea	\$1,175.00	\$21,150.00			
5. Utilities							
a. Water	280	lf	\$2.50	\$700.00			
b. Sewer	280	lf	\$11.15	\$3,122.00			
c. Electric	280	lf	\$4.41	\$1,235.00			
d. Gas	280	lf	\$3.41	\$955.00			
6. Surfacing (rubber-acrylic)	800	sy	\$17.65	\$14,120.00			
7. Posts & nets	1	ea	\$611.00	\$611.00			
8. Markings	1	ea	\$222.00	\$222.00			
9. Fencing 12' high, vinyl coated	360	lf	\$24.50	\$8,820.00			
10. Gates	1	ea	\$222.00	\$222.00			
11. Lights (4 each court)	4	ea	\$2,000.00	\$8,000.00			
						\$228,429.00	
Landscape							
1. Shrubs and Trees	4,500	sf	\$4.50	\$20,250.00			
						\$20,250.00	
Construction Subtotal							\$264,289.00
Consultant Design Services and Permitting							
	0.12	%		\$264,289.00	\$31,715.00		
Phase 7b. Total							\$296,004.00
Phase 7c. Maintenance Facility Office Improvements							
Item Description	Quantity	Unit	Cost/Unit	Item Total	Subtotal	Total	
1. Office improvements	3,600	sf	\$100.00	\$360,000.00			
						\$360,000.00	
Construction Subtotal							\$360,000.00
Consultant Design Services and Permitting							
	0.12	%		\$360,000.00	\$43,200.00		
Phase 7c. Total							\$403,200.00

Phase 8. Furnace Street Removal and Green Street Turnaround*^{7a}

With the development of the Green Street Loop Road, the functionality of Furnace Street as a connection between Ladd and Green Street is redundant and the road can be removed to better connect the park areas. A circle turnaround is developed at the end of Green Street to facilitate traffic circulation back towards State Street and to serve as a drop-off area in the park. Pathway connections are completed to integrate the Sister City Garden across the removed Furnace Street and to connect with the Memorial Garden and lower park areas.



Phase 8. Furnace Street Removal and Green Street Turnaround							
Item Description	Quantity	Unit	Cost/Unit	Item Total	Subtotal	Total	
Demolition							
1. Furnace Street removal	1643	sy	7	\$10,679.50			
					\$10,679.50		
Subgrade							
1. Fine Grading	1,500	cy	\$15.00	\$22,500.00			
					\$22,500.00		
Roads, Sidewalks & Pathways							
1. Paths	9,450	sf	\$2.50	\$23,625.00			
3. Road							
a. Gravel (12" base)	111	cy	\$32.00	\$3,552.00			
b. Asphalt	3,000	sf	\$5.00	\$15,000.00			
c. Concrete curb	1,020	lf	\$13.00	\$7,800.00			
4. Concrete sidewalk	1,800	sf	\$3.00	\$5,400.00			
5. Asphalt path	603	sf	\$2.50	\$1,507.50			
6. Pedestrian bridges (2)	1,200	sf	\$65.00	\$78,000.00			
					\$134,884.50		
Landscape							
1. Lawn	19,200	sf	\$2.50	\$48,000.00			
2. Shrubs and Trees	4,000	sf	\$4.50	\$18,000.00			
					\$66,000.00		
Construction Subtotal							\$234,064.00
Consultant Design Services and Permitting							
	0.12	%		\$234,064.00	\$28,088.00		
Phase 8. Total							\$262,152.00



Phase 9. Program Facility and Restrooms

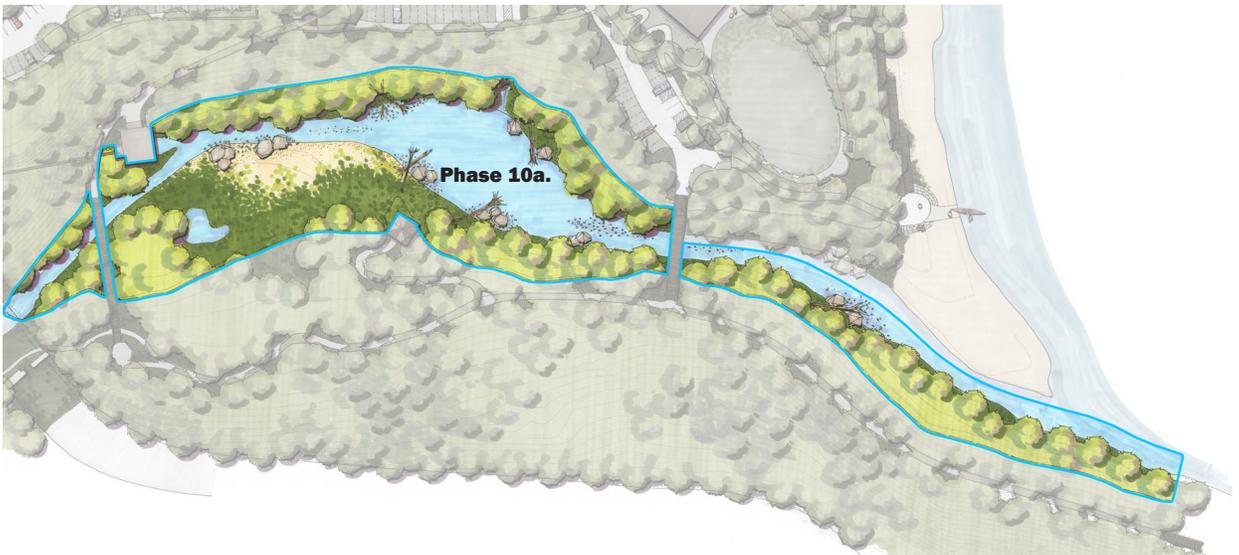
The program facility and restrooms will be developed adjacent to the Children's Play Area.

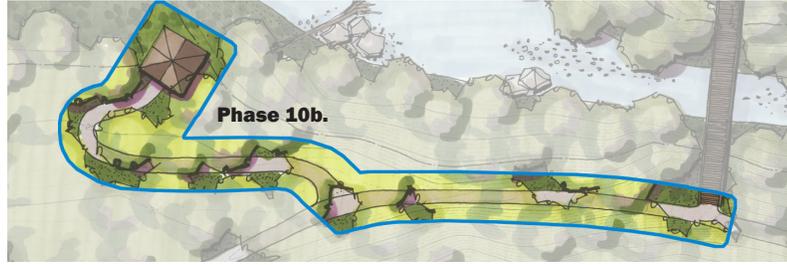
Phase 9. Program Facility and Restrooms							
Item Description	Quantity	Unit	Cost/Unit	Item Total	Subtotal	Total	
Sidewalks & Pathways							
1. Pathway	1,500	sf	\$1.20	\$1,800.00			
					\$1,800.00		
Structures							
1. Program Facility & Restrooms	1,500	sf	\$200.00	\$300,000.00			
2. Utilities							
a. Water	170	lf	\$2.50	\$425.00			
b. Sewer	170	lf	\$11.15	\$1,896.00			
c. Electric	170	lf	\$4.41	\$750.00			
d. Gas	170	lf	\$3.41	\$580.00			
					\$303,651.00		
Landscape							
1. Landscape & irrigation	2,000	sf	\$4.50	\$9,000.00			
					\$9,000.00		
Construction Subtotal							\$314,451.00
Consultant Design Services and Permitting							
	0.12	%		\$314,451.00	\$37,734.00		
Phase 9. Total							\$352,185.00

Phase 10a. Nature Area DSL/Corps Permitting & Mitigation*

With the Master Plan of proposed improvements for the George Rogers Park Natural Area, it is recommended that a comprehensive permit be obtained from the Corps of Engineers and Division of State Lands to mitigate the impact of developments in the Oswego Creek corridor. The initial phase of implementation in the natural area would improve habitat conditions in the Creek, below the jurisdictional elevation of Ordinary High Water, with boulder clusters, large woody debris deposits, gravel beds, eradication of invasive plant species and diversified habitat plantings.

Phase 10a. Nature Area DSL/Corps Permitting & Mitigation							
Item Description	Quantity	Unit	Cost/Unit	Item Total	Subtotal	Total	
Structures							
1. Boulders for clusters	27	ea	\$750.00	\$20,250.00			
2. Large woody debris groups	8	ea	\$150.00	\$1,200.00			
3. Gravel bars	150	cy	\$35.00	\$5,250.00			
					\$26,700.00		
Landscape							
1. Clearing & replanting (below OHW)	196,850	sf	\$1.00	\$196,850.00			
					\$196,850.00		
Construction Subtotal							\$223,550.00
Consultant Design Services and Permitting							
	0.12	%		\$223,550.00	\$26,826.00		
Wetland delineation & DSL Permitting							
	1	ls			\$40,000.00		
Phase 10a. Total							\$290,376.00





Phase 10b. Nature Interpretive Pavilion*^{10a}

Development of the Nature Interpretive Pavilion will locate the structure and make path improvements from the foot of the River Road Bridge to provide access to the facility. Landscape restoration in the vicinity of the pavilion will eradicate invasive plant species and diversify habitat plantings.

Phase 10c. Suspension Bridge*^{10a}

The suspension bridge will be constructed with an overlook landing on the south shore of Oswego Creek and connect to the access road for the Lake Corporation's surge tank facility.

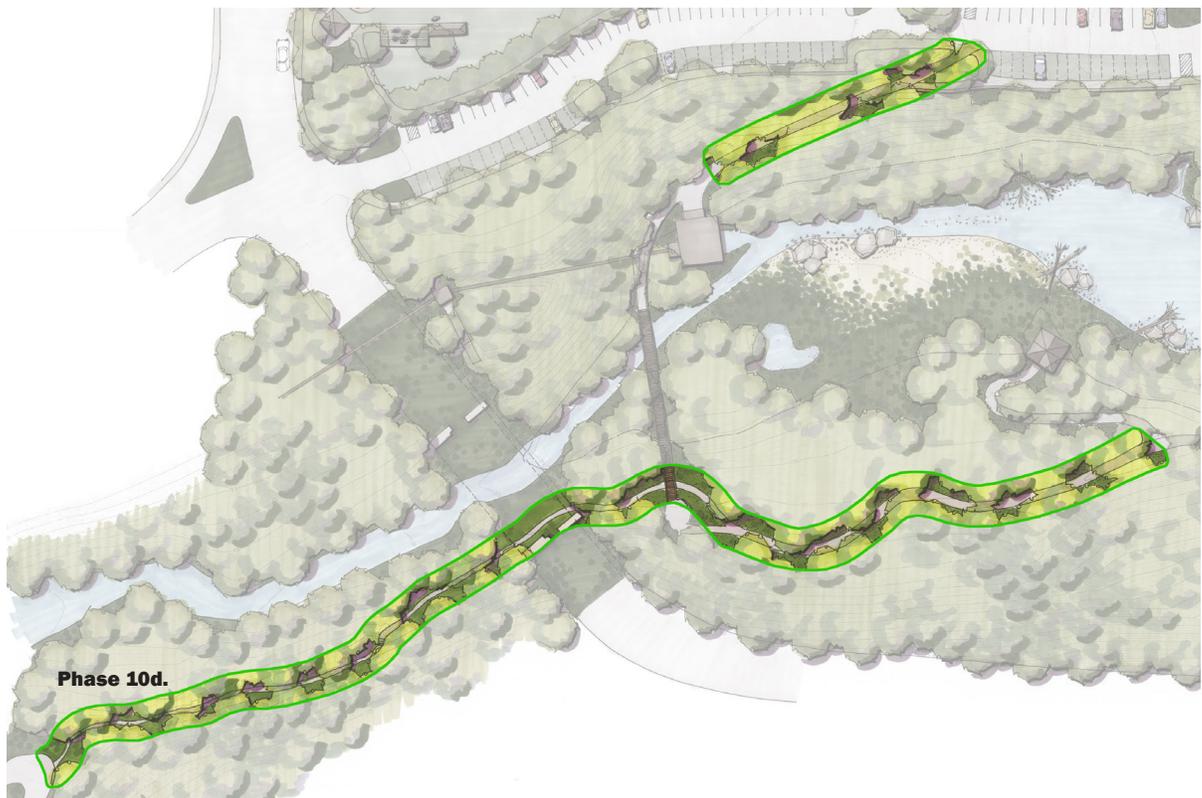
Phase 10b. Nature Interpretive Pavilion							
Item Description	Quantity	Unit	Cost/Unit	Item Total	Subtotal	Total	
Structures							
1. Nature Pavilion	900	sf	\$150.00	\$135,000.00			
2. Utilities							
a. Electric	280	lf	\$4.41	\$1,235.00			
					\$136,235.00		
Sidewalks and Pathways							
1. Asphalt paths, 8' wide	4,500	sf	\$2.50	\$11,250.00			
					\$11,250.00		
Landscape							
1. Clearing & replanting	1	ls		\$100,000.00			
					\$100,000.00		
Construction Subtotal						\$247,485.00	
Consultant Design Services and Permitting							
	0.12	%		\$247,485.00	\$29,698.00		
Phase 10b. Total						\$277,183.00	

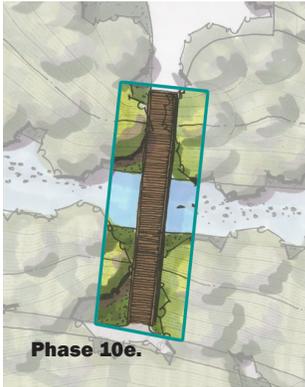
Phase 10c. Suspension Bridge							
Item Description	Quantity	Unit	Cost/Unit	Item Total	Subtotal	Total	
Structures							
1. Bridge Arch Span Steel	2,240	sf	\$88.00	\$197,120.00			
2. Overlook wall and platform							
a. Stone wall	690	sff	\$40.00	\$27,600.00			
b. Gravel fill	181	cy	\$32.00	\$5,792.00			
c. Asphalt landing	490	sf	\$2.50	\$1,225.00			
					\$231,737.00		
Construction Subtotal						\$231,737.00	
Consultant Design Services and Permitting							
	0.12	%		\$231,737.00	\$27,808.00		
Phase 10c. Total						\$259,545.00	

Phase 10d. Looped Nature Trail and Connections*^{10a}

Trail connections will improve and complete circulation and access through the nature area with gravel paths and developed asphalt trails. Landscape improvements adjacent to the trail routes will eradicate invasive plant species and diversify habitat plantings.

Phase 10d. Looped Nature Trail and Connections						
Item Description	Quantity	Unit	Cost/Unit	Item Total	Subtotal	Total
Roads, Sidewalks & Pathways						
1. Asphalt path	4,800	sf	\$2.50	\$12,000.00		
2. Gravel path	66	cy	\$32.00	\$2,112.00		
3. Road						
a. Gravel (12" base)	160	cy	\$32.00	\$5,120.00		
b. Asphalt	4,320	sf	\$5.00	\$21,600.00		
					\$40,832.00	
Landscape						
1. Clearing & replanting (above OHW)	1	ls		\$100,000.00		
					\$100,000.00	
Construction Subtotal						\$140,832.00
Consultant Design Services and Permitting						
	0.12	%		\$140,832.00	\$16,900.00	
Phase 10d. Total						\$157,732.00





Phase 10e. River Road Covered Bridge*^{10a}

The floor of River Road Bridge will be removed, and a covered bridge system will be developed on the existing structure of the bridge.

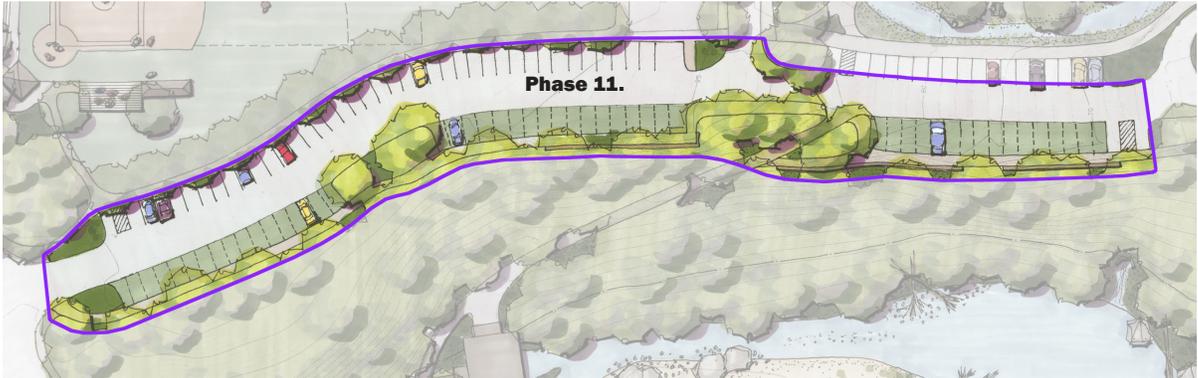
Phase 10f. Nature Area Landscape Restoration*^{10a}

A comprehensive effort to eradicate invasive plant species and to restore diverse habitat plantings will be completed throughout the remaining Oswego Creek Nature Area.

Phase 10e. River Road Covered Bridge							
Item Description	Quantity	Unit	Cost/Unit	Item Total	Subtotal	Total	
Demolition							
1. River Road Wood Bridge (floor only)	4,375	cf	\$0.24	\$1,050.00			
					\$1,050.00		
Structures							
1. River Road Covered Bridge	1,250	sf	\$120.00	\$150,000.00			
					\$150,000.00		
Construction Subtotal							\$151,050.00
Consultant Design Services and Permitting							
	0.12	%		\$151,050.00	\$18,126.00		
Phase 10e. Total							\$169,176.00

Phase 10f. Nature Area Landscape Restoration							
Item Description	Quantity	Unit	Cost/Unit	Item Total	Subtotal	Total	
Landscape							
1. Clearing & replanting (above OHW)	1	ls		\$250,000.00			
					\$250,000.00		
Construction Subtotal							\$250,000.00
Consultant Design Services and Permitting							
	0.12	%		\$250,000.00	\$30,000.00		
Phase 10f. Total							\$280,000.00

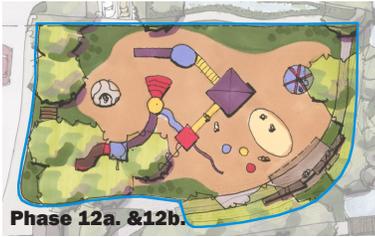




Phase 11. Green Street Improvements

Green Street improvements will include the removal and replacement of existing street and parking areas to be expanded and redeveloped with gabion retaining walls, reinforced grass paving, and subsurface stormwater detention lines on the south side of the street. Sidewalks will parallel the parking areas providing access into the park from State Street.

Phase 11. Green Street Improvements							
Item Description	Quantity	Unit	Cost/Unit	Item Total	Subtotal	Total	
Demolition							
1. Catch Basins	4	ea	\$100.00	\$400.00			
2. Asphalt removal	4,500	sy	\$6.10	\$27,450.00			
					\$27,850.00		
Subgrade							
1. Stormceptors	2,000	lf	\$12.00	\$24,000.00			
					\$24,000.00		
Sidewalks & Pathways							
1. Reinforced turf	10,000	sf	\$5.00	\$50,000.00			
2. Asphalt Road & Parking							
a. Gravel base (12")	1,271	cy	\$1.20	\$1,526.00			
b. Asphalt (4")	34,320	sf	\$1.20	\$41,184.00			
3. Concrete sidewalks	11,160	lf	\$4.50	\$50,220.00			
4. Concrete curb	1,440	lf	\$13.00	\$18,720.00			
					\$161,650.00		
Structures							
1. Gabion Retaining Walls							
a. Gravel	600	cy	\$32.00	\$19,200.00			
b. Gabion baskets (6' x 9')	70	ea	\$200.00	\$14,000.00			
					\$33,200.00		
Landscape							
1. Shrubs and Trees	10,008	sf	\$4.50	\$45,036.00			
					\$45,036.00		
Construction Subtotal							\$291,736.00
Consultant Design Services and Permitting							
	0.12	%		\$291,736.00	\$35,008.00		
Phase 11. Total							\$326,744.00



Phase 12a. Children’s Play Area Expansion Improvements*

The Children’s Play Area will be expanded to encompass the entire terrace and will include path circulation improvements, picnic tables and landscape improvements.

Phase 12b. Children’s Play Area Structure Replacement and Covered Shelter*^{12b}

The play equipment will be replaced and a covered shelter developed for the Children’s Play Area.

Phase 12a. Children's Play Area Expansion Improvements						
Item Description	Quantity	Unit	Cost/Unit	Item Total	Subtotal	Total
Demolition						
1. Salvage Concrete Sculpture	1	ls		\$2,500.00		
2. Remove sidewalk	415	sy	\$6.50	\$2,697.50		
					\$5,197.50	
Sidewalks & Pathways						
1. Play surfacing						
a. Gravel (6")	367	cy	\$32.00	\$11,744.00		
b. Rubber surface & mat	14,800	sf	\$10.00	\$148,000.00		
c. Concrete curb	520	lf	\$13.00	\$6,760.00		
2. Pathway	1,920	sf	\$1.20	\$2,304.00		
					\$168,808.00	
Structures						
1. Picnic tables	2	ea	\$2,400.00	\$4,800.00		
					\$4,800.00	
Landscape						
1. Shrubs and Trees	4,200	sf	\$4.50	\$18,900.00		
					\$18,900.00	
Construction Subtotal						\$197,705.50
Consultant Design Services and Permitting						
	0.12	%		\$197,705.50	\$23,725.00	
Phase 12a. Total						\$221,430.50

Phase 12b. Children's Play Area Structure Replacement and Covered Shelter						
Item Description	Quantity	Unit	Cost/Unit	Item Total	Subtotal	Total
Demolition						
1. Children's Play Structure	1	ls		\$10,000.00		
					\$10,000.00	
Structures						
1. New Playground	1	ls		\$200,000.00		
2. Covered Shelter	900	sf	\$100.00	\$90,000.00		
					\$290,000.00	
Construction Subtotal						\$300,000.00
Consultant Design Services and Permitting						
	0.12	%		\$300,000.00	\$36,000.00	
Phase 12b. Total						\$336,000.00

Phase 13. Wayfinding/Interpretive Signage System Development and Installation

A comprehensive signage system will be developed for the park to provide overall wayfinding and interpretation of the historic, cultural, and natural resources of George Rogers Park.

Phase 13. Way finding/Interpretation Signage System Development and Installation							
Item Description	Quantity	Unit	Cost/Unit	Item Total	Subtotal	Total	
Structures							
1. Way finding/Interpretive Signage Syst	1	ls		\$150,000.00		\$150,000.00	
Construction Subtotal							\$150,000.00
Consultant Design Services and Permitting							
	0.12	%		\$150,000.00	\$18,000.00		
Phase 13. Total							\$168,000.00



Phased Improvements | Summary

Summary of Master Plan Implementation Phases	
	Phase Total
Phase 1. Riverfront Access Improvements	\$320,525.00
Phase 2a. Barbecue Picnic Area	\$253,860.00
Phase 2b. Group Picnic Pavilion	\$219,856.00
Phase 3. Sister City Garden Improvements	\$272,768.00
Phase 4a. Memorial Garden Improvements	\$304,662.00
Phase 4b. Memorial Garden Parking Area & Lower Area Restrooms	\$272,703.00
Phase 5. Ladd Street Improvements	\$267,962.00
Phase 6a. Athletic Field Excavation and Base Development	\$335,294.00
Phase 6b. Athletic Field Enhancements	\$254,262.00
Phase 6c. State Street Plaza, Durham Street Stair, and Athletic Field Circulation	\$217,612.00
Phase 7a. Green Street Loop	\$288,478.00
Phase 7b. Tennis Court and Maintenance Facility Shell Development	\$296,004.00
Phase 7c. Maintenance Facility Office Improvements	\$403,200.00
Phase 8. Furnace Street Removal and Green Street Turnaround	\$262,152.00
Phase 9. Program Facility and Restrooms	\$352,185.00
Phase 10a. Nature Area DSL/Corps Permitting & Mitigation	\$290,376.00
Phase 10b. Nature Interpretive Pavilion	\$277,183.00
Phase 10c. Suspension Bridge	\$259,545.00
Phase 10d. Looped Nature Trail and Connections	\$157,732.00
Phase 10e. River Road Covered Bridge	\$169,176.00
Phase 10f. Nature Area Landscape Restoration	\$280,000.00
Phase 11. Green Street Improvements	\$326,744.00
Phase 12a. Children's Play Area Expansion Improvements	\$221,430.50
Phase 12b. Children's Play Area Structure Replacement and Covered Shelter	\$336,000.00
Phase 13. Way finding/Interpretation Signage System Development and Installation	\$168,000.00
Total All Park Development Phases	\$6,807,709.50

Related Development Studies and Processes	
Neighborhood/Ladd St. Stormwater Study	\$50,000.00
Ladd Street Public Design Process	\$50,000.00
Ladd Street Engineering Design	\$100,000.00