Green Infrastructure & Stormwater Management CASE STUDY

Steamer Landing Park and Shoreline Trail

Location: Petaluma, CA
Client: City of Petaluma, California
Design Firm(s): WRA
Landscape architect/Project contact: George Salvaggio, ASLA
Email: salvaggio@wra-ca.com
ASLA Chapter: Northern California

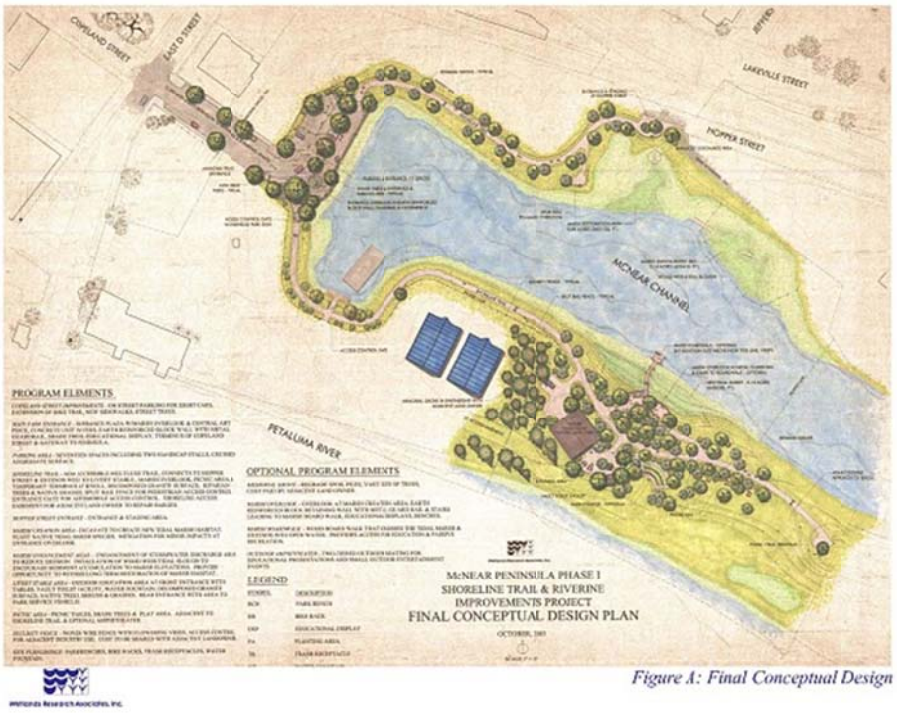

Figure A: Final Conceptual Design

Project Specifications

Project Description: WRA prepared the conceptual design and construction documents for a public park and marsh restoration project located adjacent to the Petaluma River. The park includes a reconfiguration of Copeland Street to provide on-street parking and pedestrian sidewalks, a park entrance with a river overlook and central area for a public sculpture, a parking area, an extension of the Bay Area Ridge Trail, a multi-use shoreline trail that provides

access to the open space on the peninsula, the relocation of a historic livery stable, an outdoor educational area, an outdoor amphitheater, an expansion of the tidal marsh, a marsh overlook and board walk, and a picnic area. Runoff from rainfall is conveyed via vegetative swales and passes through seasonal wetlands prior to discharging into the river. In addition, permeable materials such as porous concrete and porous pavers are used in the parking lot and sidewalks.

Project Type:
Government complex
Part of a new development

Design features: Bioretention facility, bioswale, porous pavers, curb cuts, porous concrete, and stormwater treatment wetlands.

This project was designed to meet the following specific requirements or mandates: Not applicable

Impervious area managed: 5,000 sq/ft to 1 acre

Amount of existing green space/open space conserved or preserved for managing stormwater on site: 5,000 sq/ft to 1 acre

The regulatory environment and regulator was supportive of the project.

Did the client request that other factors be considered, such as energy savings, usable green space, or property value enhancements? No.

Cost & Jobs Analysis

Estimated Cost of Stormwater Project: $500,000-$1,000,000 (Public funding: State, regional, local - The Rotary Club donated some money also)

Was a green vs. grey cost analysis performed? No

Cost impact of conserving green/open space to the overall costs of the site design/development project: There was no effect for this project.

Cost impact of conserving green/open space for stormwater management over traditional site design/site development approaches (grey infrastructure)? Slightly increased. The porous concrete used for the project is more expensive than asphalt, and the

porous pavers are more expensive than concrete. However, the porous concrete was donated to this project to promote the use of this material in Northern California.

Number of jobs created: 25

Job hours devoted to project:

Planning and Design: 1,200 hours
Construction: 960 hours
Annual Maintenance: 35 hours

Performance Measures

Stormwater reduction performance analysis:
Approximately 80-100% of the 2-year storm is retained and treated on site.

Community & economic benefits that have resulted from the project: This project is the first part of a new 80-acre downtown park. This park will improve the value of the surrounding commercial and residential developments. The space created by this project is used by the local community to host annual outdoor public festivals. It's also the site of a new "River Heritage Center" which provides facilities to build small boats for recreational use on the Petaluma River.

Additional Information

Links to images:
https://picasaweb.google.com/103559108606811437745/SteamerLandingParkAndShorelineTrail?authkey=Gv1sRgCMv7p8rmh7KhRg&feat=directlink

http://www.wra-ca.com/projects/srv06_prj16.html