

ID: CIP 101

Name: Bagan Park Stream Restoration & Water Quality Enhancement

Study Area: Ash Creek

Location: Bagan Park Between Hwy 217 and SW Greenburg Road

## Problem Summary

Most development in the Ash Creek basin occurred before stormwater management policies were in place. There are no stormwater detention or treatment facilities in the area surrounding Bagan Park.

Urbanization in the large upstream basin has caused channel incision (steep banks)

in the park. The banks are nearly vertical.

Channel migration could eventually threaten a sanitary sewer line. The riparian corridor is dominated by invasive reed canary grass.

Ash Creek provides habitat to threatened steelhead.

## Project Description

The project will install pre-settling manholes upstream of outfalls at Hwy 217 and SW Greenburg Road to improve water quality in Ash Creek.

Light touch grade control will stop further channel degradation and help aggrade (add material back to) the stream bed.

A new water quality and/or detention facility will be constructed at the western end of Bagan Park.

There are likely opportunities to

coordinate tree planting and riparian restoration recommended in the proposed Greenway Restoration, Establishment & Maintenance Program. Costs for this item are not included in this project.

The benefits of this project include:

- Prevent further channel degradation
- Protect sanitary sewer main
- Improve water quality for threatened steelhead



## Cost Estimate

### Design & Permitting

Design (@ 25% of Construction)	\$80,000
Permitting, Basic + Enhanced	\$25,000
Project Administration (@ 15% Construction)	\$45,000
<b>Total Design &amp; Permitting</b>	<b>\$150,000</b>

### Construction

Tool Kit	Qty	Unit	Unit Price	Amount
Aboveground Storage	26,041	CF	\$3.50	\$92,000
Light Touch Grade Control	353	FT	\$55	\$20,000
Pre-settling Basin, Manhole	4	EA	\$6,000	\$24,000
<b>Subtotal</b>				<b>\$136,000</b>

### Construction Administration

Mobilization (@ 10% of Construction)	\$35,000
Erosion & Sediment Control (@ 2% of Construction)	\$6,000
Temporary Water Management, Large	\$10,000
Construction Contingency (@ 40% of Construction)	\$125,000
<b>Subtotal</b>	<b>\$176,000</b>

**Total Construction \$312,000**

### Other Implementation

Easement or Property Acquisition	\$40,000
Environmental Mitigation	\$50,000
<b>Total Other Implementation</b>	<b>\$90,000</b>

**Total Project Cost (Rounded) \$575,000**

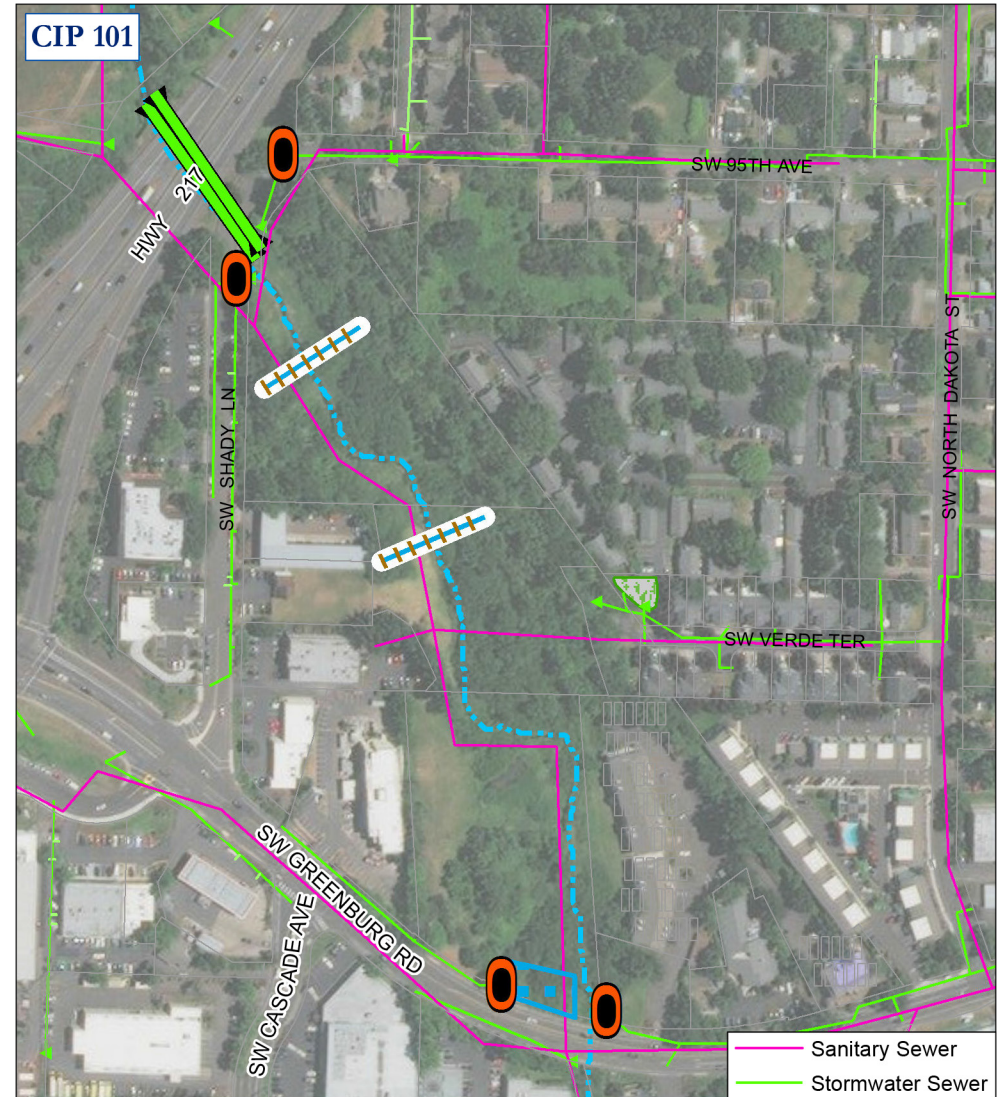
### Funding Source

Stormwater Fund

### Annual Operation & Maintenance

Operation and maintenance costs will be budgeted within the following programs:

- Ongoing routine stormwater facility maintenance program
- Proposed greenway O&M program



- 1, Above Ground Storage
- 5, Light Touch Grade Control
- 12, Settling Basin

