



# City of Stevenson Planning Department

7.b

(509)427-5970

7121 E Loop Road, PO Box 371  
Stevenson, Washington 98648

**TO:** City Council  
**FROM:** Ben Shumaker  
**DATE:** April 21st, 2016  
**SUBJECT:** Trail of the Gods Review

## Introduction

This memo is intended to close out City Council discussion on the construction phase of the Trail of the Gods between Skamania Lodge Way and Mallicott Road. The memo includes descriptions and lessons learned from the financial overview and the City’s delivery of the project, and a discussion of possible next steps/future phases for construction and amenities along the current route.

## Trail Project Engineering and Construction Finances

### Engineering

The engineering contract amount changed a total of 5 times. Four of these increases were unanticipated and increased design costs by more than 50% above the original contract amount. Most of that increase can be attributed to the City’s underestimation of the scope and costs of federal environmental reviews, but some of it can be considered “budget creep” based on the project’s delayed delivery.

The one anticipated increase added construction engineering/inspections tasks to the previous design contract. The amount of this not-to-exceed contract was intentionally high, building in time to train City staff and cover the majority of construction inspection if necessary. The intent, however, was to manage the contract to avoid most of those costs. This project management and the daily inspections conducted in-house saved the resulted in engineering fees \$53,476.75 less than contracted.

Original Design	Environmental	Wetlands/ Cultural	Structural Engineering	Wetlands/ Deviations	Construction Engineering	Total
\$70,794.20	\$78,658.37	\$89,774.52	\$94,073.50	\$111,589.06	\$233,395.42	\$179,918.67

### Construction

Construction costs were estimated twice by engineers, once by the contractor, and then changed 4 times based on conditions encountered during construction. The total cost increased at each stage, but the ~50% increase between the grant and final design estimates is the most noticeable and had the biggest impact on the City budget. Half of that increase can be explained by unnecessary staff intervention. The remainder is a combination of 1) changed bidding climates based on project delivery delays and 2) underestimation of the construction effort.

Grant-Level Estimate	Pre-Bid Engineering Opinion of Cost	Contract Bid Amount	Change Orders
\$491,000*	\$738,318	\$753,104	\$768,494.82

\*At the insistence of City staff the engineer’s grant-level estimate was reduced to ensure the project would be politically palatable to the City Council. The original estimate provided was \$573,750.

### Lessons

- 1) Do not place upper limits on the engineer’s grant-level estimation.

- 2) Ensure grant-level estimates fully incorporate environmental/cultural evaluations for federally funded projects.
- 3) Ensure grant-level estimates fully incorporate solutions to high-dollar obstacles.
- 4) Retain in-house construction inspection.

## **Project Delivery**

### Grant/Construction Timeline

The complete timeline for this project begins on August 17<sup>th</sup>, 2011 and is anticipated to end on April 30<sup>th</sup>, 2016. Additional dates are included for background.

April 2 <sup>nd</sup> , 2010	City submits Scenic Byways application for 1) new gateway monuments, 2) replacement pedestrian wayfinding kiosks, 3) a wayfinding signage plan, and 4) additional interpretive signs.
May 3 <sup>rd</sup> , 2011	After more than a year of uncertainty based on a federal budget stalemate, the Federal Highways Administration (FHWA) notifies the City that its project was not selected for funding.
May 6 <sup>th</sup> , 2011	FHWA issues notice of funding availability for 2011 Scenic Byways funding. The previous year's delays resulted in a protracted (21 day) turn-around time for application submittal. Grant guidelines refocus on "large-scale" projects.
May 27 <sup>th</sup> , 2011	City submits "large-scale" Scenic Byways application for 1) feasibility study for pathway addition to Bridge of the Gods, 2) trail construction to the western edge of city limits, 3) replacement pedestrian wayfinding kiosks, and 4) a wayfinding signage plan. Application includes financial partnerships with the ports of Cascade Locks and Skamania and letters of support from 14 agencies and organizations from both sides of the Columbia River.
August 17 <sup>th</sup> , 2011	FHWA notifies the City of a successful grant award.
September 28 <sup>th</sup> , 2011	FHWA approves Local Agency Agreement to begin work on the grant projects.
October, 2011 through April, 2012	City focuses on consultant selection for Wayfinding Plan and Bridge Feasibility portions of grant.
February 8 <sup>th</sup> , 2012 and April 24 <sup>th</sup> , 2012	City requests proposals and enters into contract for Trail Engineering portion of projects.
October 31 <sup>st</sup> , 2012 and December 28 <sup>th</sup> , 2012	City closes contracts on Wayfinding Plan and Bridge Feasibility projects.
July 19 <sup>th</sup> , 2013	FHWA approves environmental documentation for trail construction.
April 7 <sup>th</sup> , 2014	WSDOT certifies acquisition of right-of-way for trail route and wetland mitigation.
June 11 <sup>th</sup> , 2014	City advertises for bids on Trail Construction.
August 22 <sup>nd</sup> , 2014	City agrees to contract with lowest bidder.
September 15 <sup>th</sup> , 2014	Contractor begins construction on the 120-day construction phase.
December 24 <sup>th</sup> , 2014	Work suspended based on weather, 120 construction period suspended as well.
February 2 <sup>nd</sup> , 2015	Work resumes.
April X <sup>th</sup> , 2015	Substantial completion of project issued.
May 9 <sup>th</sup> , 2015	Ribbon cutting ceremony held.
January 11 <sup>th</sup> , 2016	Final punchlist items completed, engineering recommends Final Acceptance.
February 8 <sup>th</sup> , 2016	Notice of Completion submitted for final close-out.
May 9 <sup>th</sup> , 2016	Final Acceptance anticipated based on approval of State DOR, LNI, ESD.

### Project Delays

The biggest concern here is the 5 years between project initiation and delivery. Major delays resulted from:

- 1) Staff's prioritization of Wayfinding and Bridge Feasibility over Trail Engineering.
- 2) Staff's inability to complete critical path environmental documentation.
- 3) Time taken by private land owners to review, negotiate, and donate right-of-way.
- 4) Contractor's allocation of resources.

Of the four causes for project delays, the first two were clearly within the City's power to prevent, the third should be accommodated in future timelines, and the fourth could've been better influenced by City actions.

- 1) This grant was complicated by multiple projects and partners.
  - a. The reasons for prioritizing our partner's project for the Bridge Feasibility should be fairly clear; a great deal of momentum had been created around the Bridge of the Gods component, and if there were going to be delays, the City did not want to be the cause.
  - b. The reasons for prioritizing the Wayfinding component are less clear, but largely based in the City's desire to satisfy partners. In this case, the partners were the overall business community that was coming to grips with the July, 2011 update of the City signage regulations. Through the Wayfinding Plan and its implementation, the City was displaying its willingness to hold itself to the same or greater standards for sign quality as it was requiring through its regulatory efforts.

While projects with so many components will likely not occur in the future, our small staff's resources will always be stretched, and there will always be a balancing act to devote proper resources and ensure timely completion of projects.

- 2) Staff's partnership with consulting engineers to share duties has long been a goal of the City. This goal, intended to reduce engineering fees and build staff capacity, is getting harder and harder to attain for normal projects, and the difficulty is magnified for federally funded projects. For this project, staff was responsible for completion of critical path items like the "Environmental Classification Summary" and right-of-way negotiations. These efforts certainly built staff capacity, but the on-the-job learning delayed the project. The value gained by building staff-capacity in this way is also diminished because the City undertakes so few large-scale projects. The core reasons for sharing responsibilities with the consultant should rightly be questioned.
- 3) Ostensibly, right-of-way acquisition for this project should've been straight-forward. The Skamania Lodge, owners of property on the trail's route to Mallicott Road, was already subject to a bike/pedestrian easement in this area. The Columbia Gorge Interpretive Center, owners of property used for wetland mitigation, were solid City partners and not using the area where easement was requested. Both owners were in general agreement about the communal benefits of the project and willing to donate the easement areas for the City's use. However, fitting these negotiations into the delicate federal right-of-way acquisition requirements led to additional delays, especially for the easement over Skamania Lodge, for which corporate ownership and changes in local management led to barriers outside of the City's control.
- 4) The City's decision to bid the project in June meant that project construction could begin no earlier than late July. This opened the door for weather-based construction delays in the ~3-month construction period, and there was concern about rain impacting the contractor's ability to complete the retaining wall and fill slope on the project's western end. However, soon after awarding the bid, it became clear that the contractor was overextended by other projects. After several early delays, it was ice and snow, not rain, which would be the bigger factor in project delivery. A very cold December provided adequate justification for the City to delay construction until the spring. The City's agreement to suspend work until February was made after balancing 1) the short-term desire to complete the project, 2) the long-term quality of the project versus the man-hours required to ensure that quality, and 3) the even longer-term desire to influence future bids by creating a contractor-friendly environment.

### Lessons

- 1) Ensure staff resources are available before undertaking "large-scale" projects.
- 2) [Off-topic: When developing and implementing programs like the signage updates of 2010 and 2012, time the projects so the City is impacted before the regulated public.]
- 3) Reevaluate consultant-staff job-sharing and limit it to non-critical path tasks.
- 4) Overestimate the time it will take for property owners to respond in right-of-way negotiations.
- 5) Advertise for project bids earlier than June.
- 6) Continue balancing current project delivery goals with long-term City goals.

## Overall Evaluation/Next Steps

In the trail, the City has completed an action it began more than 25 years ago and reached its westernmost edge, surpassed an area that posed substantial construction barriers, and set the community up for future, lower cost extensions when needs and opportunities next meet.

In the Wayfinding Plan, the City created the means to refresh its appearance to the traveling public and developed consistent expectations of sign quality for itself and the regulated public.

In the Bridge Feasibility Study, the City built partnerships that still exist and helped create a tourism platform for our region to build upon. If one Portland-based travel-writer is any indication, the new moniker “The Trail of Gods” should provide hope that our efforts are appreciated.

In all, our community paid only 40% of the cost of these accomplishments, and the remaining 60% was funded by the federal government.

## Next Steps

Future additions to the pathway system to the Bridge of the Gods can focus on three main phases.

- 1) Mallicott Road-Monitor annexation requests for these Urban Area properties and include adequate width for a pathway in future improvement plans for the currently unpaved ~0.25 mile section of Mallicott Road.
- 2) Ash Lake Road-Build short-term partnerships with the County to sign/stripe the paved roadway. Build longer-term partnerships to consider roadway widening or other improvements for pedestrians over this ~1.5 mile area.
- 3) SR 14 Crossing- No pedestrian refuges, tunnels, crosswalks, or amenities of any kind exist on SR 14 in the vicinity of Ash Lake Road, the Bridge of the Gods, and the Pacific Crest Trail. Develop coalitions and partnerships with the City of North Bonneville, the Pacific Crest Trail Association, the Port of Cascade Locks, Skamania County, US Forest Service, and WSDOT to address pedestrian safety in that ~0.25 mile long corridor.

Future amenities for the recent construction can also focus on three main areas:

- 1) Retaining Wall Facing- See attached memo for background on this effort. Staff has approached several design partners to provide protocols and guidance on a design competition.
- 2) Signage- Areas for wayfinding and interpretive signage have been anticipated along the course of the trail. Unless prioritized within the City’s budget, installing these signs will await grant future opportunities.
- 3) Furniture, Trash Cans, Fencing, Etc.- Time will tell whether trash cans, doggy bags, fortified fencing, additional benches, or unanticipated amenities will become desirable along the trail’s course. Staff will monitor and evaluate these issues going forward.

Prepared by:



Ben Shumaker  
Planning Director

## Attachments

- June, 2015 Retaining Wall Memo



# City of Stevenson

## Planning Department

(509)427-5970

7121 E Loop Road, PO Box 371  
Stevenson, Washington 98648

**TO:** Planning Commission  
**FROM:** Ben Shumaker  
**DATE:** June 18<sup>th</sup>, 2015  
**SUBJECT:** Trail of the Gods Retaining Wall Options

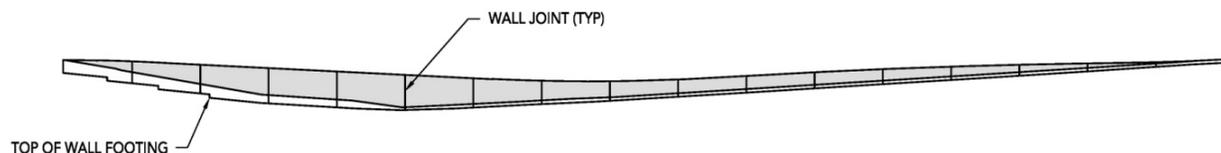
### Introduction

This memo introduces several options to provide a more pleasant facing on the retaining wall recently constructed along Rock Creek Drive as part of the Trail of the Gods pathway extension. Staff is asking for City Council direction or action in order to pursue one of the options presented or generate ideas for staff to pursue a different option.

### Background

Overcoming the elevation changes between Rock Creek Drive and Mallicott Road required either a great deal of earthwork outside of the right-of-way or installation of a retaining wall. The length and height of the wall were determined in order to meet standards associated with the Americans with Disabilities Act (ADA) and WSDOT specifications for multi-use trails.

Early designs for the face of the retaining wall included a basalt facing option to bring the design elements established downtown and along Rock Creek Drive farther out along the pathway system. The construction cost estimates for the basalt facing were \$125,000, and because the project was already over the grant-level cost estimate, staff chose to explore other options. Gabion walls were dismissed from consideration as was the type of fake basalt facing seen on the Second Street side of the County's jail. Reasons for dismissal ranged from concern for long-term durability to questionable levels of quality control for the lower-cost options. Ultimately staff and the contract engineers agreed to engineer the retaining wall to structurally hold the basalt facing if one could be established as part of a future project to provide additional finishing amenities in the area (basalt pillars, decorative fencing, interpretive signs, wayfinding signs, trash cans, etc.). In the meantime, native ivy has been planted at the face of the wall with the intent that it will grow to cover much of the western quarter to third of its length.



That decision has been questioned by many in the community, including the Planning Commission, who suggested holding a design competition to generate ideas about the future look of the area. This memo represents Staff's first return communications since the Council asked for the Planning Commission's suggestion to be explored.

### Low Cost Option

Simply painting the face of the wall may prove to be the lowest cost option to cover over the bare concrete face currently greeting visitors of our west end. City staff recently explored this option and was given a rough estimate of \$2,500-3,000 for materials and labor for one coat of masonry primary and two coats of colored paint (Staff would recommend the Olive Green color that serves as the Rock Cove District's designator in the City's *Wayfinding Master Plan*).

## Low Cost Option- Paint Wall Face

Total Cost Estimate	Benefits	Drawbacks
<ul style="list-style-type: none"> <li>\$2,500-\$3,000</li> </ul>	<ul style="list-style-type: none"> <li>Low Cost</li> <li>Completes project with little ado</li> </ul>	<ul style="list-style-type: none"> <li>May still not reflect desired quality</li> <li>May still be a vandalism target</li> </ul>

### Mid-Range Option: Budget-Dependent Design Contest

An option previously discussed includes the City hosting a design competition for community members, university students, and/or private design consultants to submit concepts for the City to complete. In this completion, the City could offer a financial incentive of ~\$3,000 for the winning design (Staff has consulted legal counsel and understands this incentive would be considered reimbursement for a service, not a gift of public funds). The design contest would ask participants to provide a design for the 1,481 square foot wall face that would project less than 6 inches, would place less than 63 pounds per square foot of pressure, and would be estimated to cost less than \$27,000 (or some other amount authorized by the Council). Additional costs are included in case engineering (design, structural, or construction) is necessary.

### Mid-Range Option- Budget-Dependent Design Contest

Total Cost Estimate	Benefits	Drawbacks
<ul style="list-style-type: none"> <li>\$40,000</li> </ul>	<ul style="list-style-type: none"> <li>Mid-Range Cost</li> <li>Builds community through inclusion in design/decision making</li> <li>Reflects desired quality in a direct, measureable way</li> </ul>	<ul style="list-style-type: none"> <li>May not generate enough interest</li> <li>Disconnect between design and construction may mean best designs cannot be completed under budget</li> <li>Staff is inexperienced in work of this type</li> </ul>

### High-End Option: Basalt Facing

Returning to the previous idea to add a basalt face to the wall represents the higher end of solutions staff would recommend. This option would adhere a 4" thick basalt veneer to the face of the wall. The cost estimate for this item is likely on the lower end because it is based on the now-old construction cost estimate of \$125,000. Additional costs are assumed for the current construction climate and the added contractor mobilization and construction engineering costs that would've been shared as part of the bigger project.

### High-End Option- Budget-Dependent Design Contest

Total Cost Estimate	Benefits	Drawbacks
<ul style="list-style-type: none"> <li>\$150,000</li> </ul>	<ul style="list-style-type: none"> <li>High quality of design expressed throughout community</li> </ul>	<ul style="list-style-type: none"> <li>High Cost</li> <li>Makes a second amenity phase unlikely</li> </ul>

### Decision/Guidance

After considering the above list of potential options, staff asks for Council direction on the best path forward. The Council is encouraged to think of this as a preliminary list only and provide other recommendations or solutions that may need to be further explored.

Prepared by:



Ben Shumaker  
Planning Director