

## **Amendment Request**

### **Grant: G1400651, *Shaw Creek Flood Mitigation Project: Wide Hollow Creek Bridge Conveyance***

#### **Requested Changes**

The City of Yakima requests an amendment to Floodplain by Design (FbD) grant No. G1400651 to accomplish the following objectives:

1. Amend the grant's scope of work from bridge design and replacement, to the design of box culverts and right-of-way acquisition for part of the Shaw Creek relocation channel.
2. Amend the scope of Task 2 to design of box culverts.
3. Amend the scope of Task 3 to right-of-way acquisition for part of the Shaw Creek relocation channel.
4. Amend the cost share rate to 80% State share and 20% City of Yakima share, up to a maximum eligible project cost of \$250,000.
5. Extend the grant agreement effective date to December 31, 2019

#### **Background**

In (2012), the City of Yakima partnered with Yakima County to complete the Shaw and Wide Hollow Creek Flood Control Project to reduce flood risk to residences and infrastructure in the Cottonwood Grove, Westbrook and Clinton Way subdivisions in Yakima, WA. Flood modeling by the FEMA consultant indicated that flooding out of Shaw Creek would flood a part of the Cottonwood grove subdivision and neighboring residential areas. In 2016 and 2017, actual flooding did occur from Shaw Creek into the Cottonwood grove subdivision and Wide Hollow flooding also occurred along a number of areas in the Wide Hollow drainage. To accomplish the goal of reducing flooding in the above-mentioned residential areas, the proponents will re-route Shaw Creek through a relocation channel following South 92nd Avenue until it joins Wide Hollow Creek at its intersection with Wide Hollow Road. The completion of the project will facilitate the removal of residences and infrastructure in the subdivisions from the regulatory floodplain.

The City of Yakima obtained Floodplains by Design (FbD) Grant No. G1400651 to provide its cost share as match to a FEMA Pre-Disaster Mitigation Grant awarded to Yakima County. The intent of this grant was to design and replace City of Yakima bridge #80 on Wide Hollow Road and City of Yakima bridge #449 on South 80th Avenue. The existing bridges will not be capable of passing the 100-year flood once Shaw Creek is relocated into Wide Hollow Creek, so new structures are needed to increase conveyance capacity at these points.

#### **Need for amendment**

A recent design and cost estimate to replace City of Yakima Bridge #80 and #449 exceeds available project funds at a cost of over \$2,000,000. The original grant estimated a cost of \$500,000 for the replacement of one bridge, while providing adequate funding for the remainder of the project. During design, the modeling indicated the need to replace two bridges. The bridge designs were 30% complete and the engineer's estimate for one bridge came in at \$1,600,000. Updated

engineering and modeling studies indicated that installing box culverts as high flow bypass channels parallel to the existing bridges rather than replacing the bridges would increase conveyance capacity to pass the 100-year flood and be constructed within the project's budget. Two box culverts were estimated to cost approximately \$600,000. It took a year to pursue additional funding, and get the appropriate approvals from FEMA and the permitting agencies to change the scope to box culverts, and initiate a modified contract with the bridge designer. The new scope was modeled and the channel was re-designed.

Following the determination to install box culverts adjacent to the existing City of Yakima bridges instead of replacing the existing bridges, Task 2 of the FbD grant needs to be amended to box culvert design. In December of 2018, the scope of the professional services agreement with KPFF Consulting Engineers was modified to perform the design of box culverts instead of bridge replacements. This work should be completed by KPFF by November of 2019. Hydraulic modelling will continue to be completed by Yakima County in support of this task.

Spending the FbD grant in a timely manner has been difficult due to delays caused by the environmental documentation process, as well as, changing the scope from bridges to box culverts, and pursuing additional funding. Permitting and the acquisition process has also delayed the project. In acknowledgement of these delays, it is necessary to change the scope of Task 3 to right-of-way acquisition for part of the Shaw Creek relocation channel. The current project schedule estimates box culvert construction beginning in May of 2019 which is significantly after the current end of the FbD agreement. After analyzing the project, right-of-way acquisition was identified as a critical next step in the overall Shaw and Wide Hollow Creek Flood Control Project. Right-of-way acquisition is needed prior to the construction of the Shaw Creek relocation channel and the ultimate re-routing of Shaw Creek into Wide Hollow Creek. Eligible expenses for this task would include appraisal, review appraisal and right-of-way acquisition and other supporting documents.

The grant's cost share rate has also slowed spending because the City of Yakima is reimbursed for eligible expenses at a rate of 25% match to the PDM grant, up to a maximum eligible project cost of \$800,000. Changing the cost share rate to 80% state share and 20% City of Yakima share up to a maximum eligible project cost of \$250,000 would allow the City of Yakima expend the grant more efficiently.

In support of the changes outlined above, the City of Yakima requests FbD Grant No. G1400651 be extended to December 31, 2019 to complete the required work and close out the grant.

### **Budget**

The spreadsheet that details how the FbD Grant will be spent has been modified.