AGENDA ITEM or FINAL CONTRACT REVIEW SUBMITTAL FORM

Agenda Item: Application for SHC Bridge Funding

Action Requested: Board of County Commissioners' Signature

Parties to the Agreement:

Term Begins: **Term Ends:** **Grant Contract #:**

Summary:

submittal for SHC bridge funding for the engineering/design of a structure over Slate River on the Gothic Road.

Fiscal Impact: $53,135.00

Submitted by: Marlene D. Crosby **Submitter's Email Address:** mcrosby@gunnisoncounty.org

Finance Review: (●) Required ( ) Not Required

Comments:
No concerns, is considered in the 2021 budget preparation. kw

Reviewed by: GUNCOUNTY1\kweak Discharge Date: 10/16/2020

County Attorney Review: (●) Required ( ) Not Required

Comments:
ok db 10/15/20

Reveiwed by: Discharge Date: 10/15/2020 Certificate of Insurance Required

Yes ( ) No (●)

County Manager Review:

Comments:

Reveiwed by: GUNCOUNTY1\mbirnie Discharge Date: 10/16/2020

( ) Consent Agenda (●) Regular Agenda ( ) Worksession Time Allotted: DCM Report

Agenda Date: 10/20/2020

Revised April 2015

Gunnison County
COLORADO

Public Works Department
195 Basin Park Dr., Gunnison, CO 81230
Phone: 970-641-0044
Fax: 970-641-8120

October 20, 2020

Mr. Eric Bergman
Colorado Counties, Inc.
1144 Sherman Street
Denver, CO 80203
ebergman@ccionline.org

RE: Submittal of Application for SHC Bridge Funding

Dear Mr. Bergman:

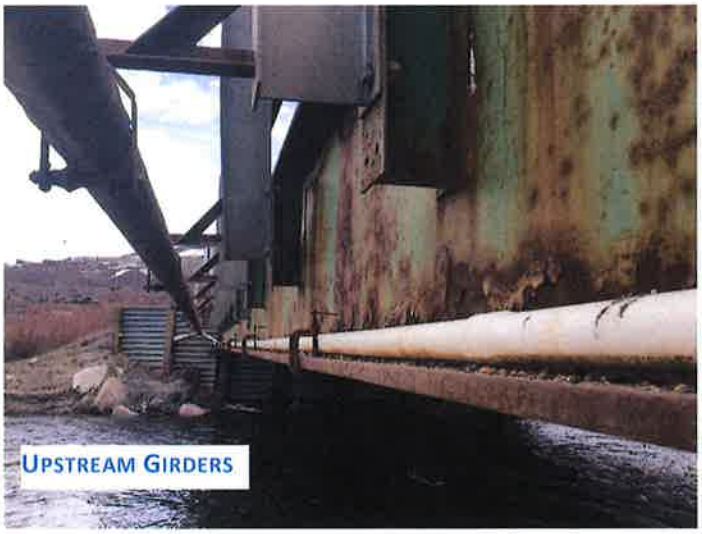
Gunnison County's application for State Highway Bridge funds for the design of an important structure in our county is included with this submittal letter. Gunnison County built many bridges under the previous bridge program, but we have not built a structure using this funding.

We appreciate the opportunity that this program presents for local governments to apply for funding for projects that we do not have the financial resources to complete.

Sincerely,

Jonathan Houck, Chairperson
Board of County Commissioners

Gunnison Bridge GUN317-00.40A – Project Photos



Gunnison County
COLORADO

Gothic Bridge Project
Narrative

Gunnison County Structure GUN317-00.40A carries the Gothic Road (County Road 317) over the Slate River. This route is critical to the County and local community from a public safety and economic standpoint. It is the only route that crosses the Slate River connecting the Town of Crested Butte and the Town of Mt Crested Butte. The Gothic Road, and the Slate River Bridge not only connects the towns, but provides access to the Crested Butte Mountain Resort which is an important economic driver in our valley. It also provides access to thousands of acres of public land held by the Forest Service and the Bureau of Land Management. The Gothic Road provides access to Rocky Mountain Biological Lab which is a world-renowned education and research facility. An unanticipated closure of this bridge at any time of the year would be severely impactful to the county and the communities

This structure GUN317-00.40A has been on the select list for many years and prior to the recent changes to the program was previously listed as functionally obsolete with a sufficiency rating of 44 and in Poor condition per the 2017 Colorado Off-system Structure Eligibility List. The classification of functionally obsolete was due to the narrow deck width of 27.8' and high ADT (9394 vehicles per day in 2018). *At that time, the bridge was eligible for SHC replacement funding due to sufficiency rating below 50 and it being classified as functionally obsolete. Why is this in italics?*

Since the off-system bridge program adopted new classification criteria, the 2020 Colorado Off-system Structure Eligibility List identifies GUN317-00.40A as Fair condition, although no improvements were made to the bridge. The revised criteria specify that the structure is eligible for rehabilitation only, unless the cost of rehabilitation is greater than the cost of replacement.

Gunnison County, in preparation for SHC grant funding, hired a professional engineering firm (SEH) to perform a Feasibility Study to determine if replacement or rehabilitation might be the best course of action (See attached). The study's conclusion determined that the rehabilitation costs are only slightly lower than a replacement cost, but also indicates that the hydraulic capacity of the rehabilitated bridge does not fully comply with current CDOT design parameters. In other words, the freeboard during high flood events does not meet current CDOT design criteria to pass debris which could hang up on the girders and create significant issues. Rehabilitation would not raise the bridge or allow for additional hydraulic capacity. Replacement of the bridge will include increasing the hydraulic capacity to meet current standards and making the bridge more resilient during high flow events. This is especially important should this bridge be closed, as there is no detour route around this crossing with over 9000 vehicles per day. By meeting the current, higher design standards, the replacement costs are somewhat higher, roughly 15%. A replacement structure will also have a longer service life than a rehabilitated structure, which will likely offset the slightly higher initial cost. The County believes that the best investment is the replacement of the structure for these reasons and is requesting replacement funding.

Gunnison County is requesting *engineering design funding only*. The design only engineering cost is anticipated to be $265,675 which is based upon the Feasibility Study anticipated construction costs as shown in the attached calculations including a side-by-side comparison using the estimate shown in Chapter 5 of the Structure Management Manual. The County is prepared to move the design forward immediately should funds be awarded. Gunnison's 20% match is $53,135 and we are committed to this amount with anticipation of FY 2021 funding. Gunnison is not requesting construction engineering/administration funding as this would be more advantageous to be included with construction funding.

Gunnison County has done a great deal of preliminary work to enhance the application and to make sure we are prepared for this project. A survey was done of the right-of-way to determine private property lines, and property owners were notified of potential needed easements. It is not anticipated that any acquisition will be needed. The bridge is at the confluence of Coal Creek and Slate River and some adjacent wetland areas have been damaged during high water. We have had a preliminary wetland survey, and worked with the Crested Butte Land Trust to identify future construction techniques that will enhance the adjacent wetlands.

We recognize that stream flow data is available, but the scenery at the bridge site looks different when we have a heavy winter with high flows in the streams and during a drought. Gunnison County hired Nathan Bilow, a well-known local photographer, to do a drone flight during a recent summer when there was very little water in the stream, and a look-alike flight during a recent high-water event. Those images are available if you would like to receive the videos. This information will be invaluable to the firm doing the bridge design, especially if it is done during the winter months.

We respectfully request your consideration of our application for design funding for GUN317-00.40A. This bridge has been included in our Strategic Plan for a number of years, and match funding will be available.

COLORADO SPECIAL HIGHWAY COMMITTEE **Off-System Bridge Program Application Data**	Structure Number: GUN317-00.40A	Application Date: 10/2020
	Structure Location: 0.5 Mi. North of Crested Butte	County / Municipality: Gunnison

CDOT Engineering Region: Region 3	CDOT Local Agency Coordinator: Jason Consulted Prior to Application Date ☑
Project type: Replacement	Request type: Original
Design level completed at time of application:	No Design
Work phase to be funded by this grant application:	Design Only
Estimated total project cost (Design + Construction):	$2,377,925
Year the total project cost estimate was created:	2020
20% minimum local match amount:	$475,585
Local overmatch amount:	0
Proposed total local match amount:	$475,585
Local match commitment documentation:	TBD
SHC grant amount requested:	$265,675
Colorado fiscal years when funding will be required:	2021-2022
Anticipated start date: January 2021	Anticipated completion date: January 2022

Work description:

The County proposes to replace the existing bridge and use SHC grant funds for only the design of the new bridge. The County has completed a feasibility study will a professional consulting engineer to help document the best course of action regarding rehabilitation vs replacement which is included with this application. This application request is for design engineering estimated to be $265,675 total and therefore the County's 20% match would be $53,135 and the grant funding the remaining 80% or $212,540.

Gunnison County Cost Summary Details
CDOT Structure Management Manual Section 5.5.3.5 vs Feasibility Study
GUN317-00.40A
Date: 10/14/2020

	*BRO Estimate		Feasibility Study Estimate
Bridge Length	65	ft	75
Bridge Width	27.8	ft	41
Proposed Deck Area	1807	ft2	3075
Deck Growth Factor (2.2)	3975.4	ft2	NA
Bridge Only SIN	174	$/Sqft	NA
Bridge Only Cost	$ 691,720		$ 994,250
Colorado Cost Factor	2.74		NA
Other project costs	$ 1,203,592		$ 776,900
Total CDOT equation construction cost	$ 1,895,312		$ 1,771,150
Design Engineering Cost Factor	1.15		1.15
Design Engineering Cost	$ 284,297		$ 265,675
Consruction Engineering Cost Factor	1.17		1.17
Construction Engineering Cost	$ 322,203		$ 301,100
Estimated Total project cost CDOT	$ 2,501,811		$ 2,337,925.00

*BRO estimate based upon CDOT Structural Management Manual cost estimate equation.
Feasibility Study uses site specific information to better refine overall costs

1. Project Management and Administration
2. Data Collection
3. Preliminary Design/FIR
4. Final Design/FOR
5. Permitting
6. ROW Services (If needed)
7. Final Project Documents

A detailed description of each of task is provided below.

1. Project Management and Administration
    a. Project Progress Meetings
    b. Project Coordination and Communication
    c. Project Financial Management
2. Data Collection
    a. Design Criteria Memorandum
    b. Subsurface Utility Engineering – Phase 1 Horizontal Locating, Phase 2 Vertical Locating
    c. Environmental Survey – If needed (only to supplement work that has already been performed)
    d. Topographic Survey – If needed (only to supplement work that has already been performed)
    e. Existing ROW Mapping – If needed (only to supplement work that has already been performed)
    f. Geotechnical – If needed (only to supplement work that has already been performed)
3. Preliminary Design/FIR
    a. Engineering Design
    b. Reports – Structure Selection Report (SSR) and Preliminary Drainage Report
    c. FIR Submittal – Plans and Cost Estimate
    d. FIR Meeting
4. Final Design/FOR
    a. Engineering Design
    b. FOR Submittal – Plans, specifications, and cost estimate
    c. FOR Meeting
5. Permitting
    a. Floodplain permitting in accordance with County and/or FEMA requirements
    b. Environmental Permitting in accordance with NEPA and/or CDOT requirements
6. ROW Services (if needed)
    a. ROW plans in accordance with CDOT
    b. ROW Acquisition services in conformance with CDOT/Uniform Act
7. Final Project Documents
    a. Bid Documents – Plans, Specifications, and Cost Estimate
    b. Final CDOT clearance documentation
        i. Utilities
        ii. Environmental
        iii. ROW
        iv. Major Structure Design Documentation
        v. Independent Design Review (Performed by others)