



Montana Department of Transportation

2701 Prospect Avenue
PO Box 201001
Helena MT 59620-1001

Jim Lynch, Director
Brian Schweitzer, Governor

December 13, 2010

Kevin McLaury
Division Administrator
Federal Highway Administration
585 Shepard Way
Helena MT 59601



RECEIVED
DEC 16 2010
ENVIRONMENTAL

**Subject: Programmatic Categorical Exclusion (PCE) Concurrence Request
STPHS 7(36)
2001-Sun River-2 km S Vaughn
Control Number: 5031000**

Dear Kevin McLaury:

This submittal requests approval of the above-mentioned proposed project as a Categorical Exclusion under the provisions of 23 CFR 771.117(d) and the Programmatic Agreement as signed by MDT and FHWA on April 12, 2001. This proposed action also qualifies as a Categorical Exclusion under ARM 18.2.261 (MCA 75-1-103 and MCA 75-1-201).

The following form provides documentation required to demonstrate that all of the conditions are satisfied to qualify for a Programmatic Categorical Exclusion. A copy of the Alignment and Grade Review Report, dated December 6, 2010, and a project location map are attached. In the following form, "N/A" indicates not applicable; "UNK" indicates unknown.

NOTE: A response in a large box will require additional documentation for a Categorical Exclusion request in accordance with 23 CFR 771.117(d).

	<u>Yes</u>	<u>No</u>	<u>N/A</u>	<u>UNK</u>
1. This proposed project would have (a) significant environmental impact(s) as defined under 23 CFR 771.117(a).	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2. This proposed project involves (an) unusual circumstance(s) as described under 23 CFR 771.117(b).	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
3. This proposed project involves one (or more) of the following situations where				
A. Right-of-way, easements and/or construction permits would be required.	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
1. The context or degree of the right-of-way action would have (a) substantial social, economic, or environmental effect(s).	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2. A high rate of residential growth exists in the area of the proposed project.	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
3. A high rate of commercial growth exists in the area of the proposed project.	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
4. Work would be on and/or within approximately 1.6 kilometers (1± mile) of an Indian Reservation.	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

	<u>Yes</u>	<u>No</u>	<u>N/A</u>	<u>UNK</u>
5. Parks, recreational, or other properties acquired/improved under Section 6(f) of the 1965 National Land & Water Conservation Fund Act (16 USC 460L, <i>et seq.</i>) are on or adjacent to the proposed project area.	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
The use of such Section 6(f) sites would be documented and compensated with the appropriate agencies (MDFWP, local entities, etc.).	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
6. Sites either on, or eligible for the National Register of Historic Places with concurrence in determination of eligibility or effect under Section 106 of the National Historic Preservation Act (16 USC 470, <i>et seq.</i>) by the State Historic Preservation Office (SHPO) would be affected by this proposed project.	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
7. Parks, recreation sites, school grounds, wildlife refuges, historic sites, historic bridges, or irrigation that might be considered under Section 4(f) of the 1966 US Department Of Transportation Act (49 USC 303) are on or adjacent to the project area.	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
a. The proposed project would not impact the site(s), so a 4(f) evaluation is not necessary.	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b. A de minimis finding has been secured for this project.	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
c. Nationwide Programmatic Section 4(f) Evaluation form for the Sun River Bridge is attached.	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
d. This proposed project requires a full Section 4(f) Evaluation.	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
B. The activity would involve work in a streambed, wetland, and/or other water body (ies) considered as "waters of the United States" or similar (e.g., "state waters").	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
1. Conditions set forth in Section 10 of the Rivers and Harbors Act (33 USC 403) and/or Section 404 of the Clean Water Act (33 USC 1251-1376) codified at 33 CFR 320-330 would be met.	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2. Impacts in wetlands, including but not limited to those referenced under Executive Order (EO) #11990, and proposed mitigation would be coordinated with the US Army Corps of Engineers and other Resource Agencies (Federal, State, and Tribal) as required for permitting.	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
3. A 124SPA would be obtained from the MDFWP.	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
4. A delineated floodplain exists in the proposed project area under FEMA's Floodplain Management criteria.	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
The water surface at the 100-year flood limit elevation would exceed floodplain management criteria due to an encroachment by the proposed project.	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
5. A Tribal Water Permit would be required.	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
6. Work would be required in, across, and/or adjacent to a river that is a component of, or proposed for inclusion in Montana's Wild and/or Scenic Rivers system as published by the US Department of Agriculture, or the US Department of the Interior.	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

	<u>Yes</u>	<u>No</u>	<u>N/A</u>	<u>UNK</u>
The designated National Wild and/or Scenic River systems in Montana are:				
a. Middle Fork of the Flathead River (headwaters to South Fork confluence).	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b. North Fork of the Flathead River (Canadian Border to Middle Fork confluence).	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
c. South Fork of the Flathead River (headwaters to Hungry Horse Reservoir).	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
d. Missouri River (Fort Benton to Charles M. Russell National Wildlife Refuge).	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
In accordance with Section 7 of the Wild and Scenic Rivers Act (16 USC 1271 – 1287), this work would be coordinated and documented with either the Flathead National Forest (Flathead River), or US Bureau of Land Management (Missouri River).	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
C. This is a "Type I" action as defined under 23 CFR 772.5(h), which typically consists of highway construction on a new location or the physical alteration of an existing route which substantially changes its horizontal or vertical alignments or increases the number of through-traffic lanes.	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
1. If yes, are there potential noise impacts?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2. A Noise Analysis would be completed.	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
3. There would be compliance with the provisions of both 23 CFR 772 for FHWA's Noise Impact analyses and MDT's Noise Policy.	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
D. Substantial changes in access control would be associated with the proposed project.	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
If yes, would they result in extensive economic and/or social impacts on the affected locations?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
E. The use of a temporary road, detour, or ramp closure having the following conditions when the action(s) associated with such facilities:				
1. Provisions would be made for access by local traffic, and be posted for same.	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2. Adverse effects to through-traffic dependant businesses would be avoided or minimized.	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
3. Interference to local events would be minimized to all possible extent.	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
4. Substantial controversy associated with this pending action would be avoided.	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
F. Hazardous wastes /substances, as defined by the US Environmental Protection Agency (EPA) and/or the Montana Department of Environmental Quality (MDEQ), and/or (a) listed "Superfund" (under CERCLA or CECRA) site(s) are currently on and/or adjacent to this proposed project.	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

	<u>Yes</u>	<u>No</u>	<u>N/A</u>	<u>UNK</u>
All reasonable measures would be taken to avoid and/or minimize substantial impacts from same.	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
G. The Stormwater Discharge conditions (ARM 17.30.1101-1117), including temporary erosion control features for construction would be met.	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
H. Permanent desirable vegetation with an approved seeding mixture would be established on exposed areas.	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
I. Documentation of an invasive species review to comply with both EO #13112 and the County Noxious Weed Control Act (7-22-2152, MCA), including directions as specified by the county(ies) wherein its intended work would be done would be conducted.	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
J. There are "Prime" or "Prime if Irrigated" Farmlands designated by the Natural Resources Conservation Service on or adjacent to the proposed project area.	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
If the proposed work would affect Important Farmlands, then an AD 1006 Farmland Conversion Impact Rating form would be completed in accordance with the Farmland Protection Policy Act (7 USC 4201, <i>et seq.</i>).	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
K. Features for the Americans with Disabilities Act (PL 101 336) compliance would be included.	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
L. A written Public Involvement Plan would be completed in accordance with MDT's Public Involvement Handbook.	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
4. This proposed project complies with the Clean Air Act's Section 176(c) (42 USC 7521(a), as amended) under the provisions of 40 CFR 81.327 as it is either in a Montana air quality:				
A. "Unclassifiable"/attainment area. This proposed project is not covered under the EPA's September 15, 1997 Final Rule on air quality conformity.	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
and/or				
B. "Nonattainment" area. However, this type of proposed project is either exempted from the conformity determination requirements (under EPA's September 15, 1997 Final Rule), or a conformity determination would be documented in coordination with the responsible agencies (Metropolitan Planning Organizations, MDEQ Air Quality Division, etc.).	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
C. Is this proposed project in a "Class I Air Shed" under 40 CFR 52.1382(c)(3)?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
5. Federally listed Threatened or Endangered (T/E) Species:				
A. Recorded occurrences, and/or critical habitat are in the vicinity of the proposed project.	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
B. Would this proposed project result in a "jeopardy" opinion (under 50 CFR 402) from the Fish and Wildlife Service on any Federally listed T/E Species?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

The proposed project would not induce significant land use changes, nor promote unplanned growth. No significant effects on access to adjacent property or to present traffic patterns would occur.

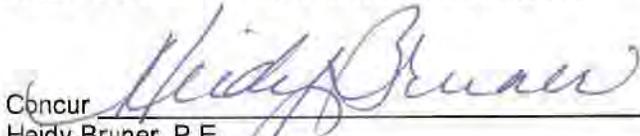
This proposed project would not create disproportionately high and/or adverse impacts on the health or environment of minority and/or low-income populations (EO #12898). The project also complies with the provisions of Title VI of the Civil Rights Act of 1964 (42 USC 2000d) under FHWA regulations (23 CFR 200).

In accordance with the provisions of 23 CFR 771.117(a), this pending action would not cause significant individual, secondary, or cumulative environmental impacts. FHWA concurrence that this proposed project is properly classified as a Categorical Exclusion is requested.



Date: 12/13/10

Eric Thunstrom
Environmental Services Bureau
Great Falls District Project Development Engineer



Date: 12/13/10

Concur
Heidy Bruner, P.E.
Environmental Services Bureau
Engineering Section Supervisor



Date: 14 DEC 2010

Concur
Federal Highway Administration

Attachment

electronic copies without attachment:

Tom Martin, P.E.	Environmental Services Bureau Chief
Heidy Bruner, P.E.	Environmental Services Bureau Engineering Section Supervisor
Michael P. Johnson	Great Falls District Administrator
Kent Barnes, P.E.	Bridge Engineer
Paul Ferry, P.E.	Highways Engineer
Robert Stapley	Right-of-Way Bureau Chief
David W. Jensen	Fiscal Programming Section Supervisor
Stephanie Brandenberger, P.E.	Bridge Area Engineer
Christie McOmber, P.E.	Great Falls District Projects Engineer
Suzy Price	Contract Plans Bureau Chief
Steve Prinzing, P.E.	Great Falls District Engineering Services Supervisor
Stacy Hill, P.E.	Great Falls District Environmental Engineering Specialist
Walt Scott	Right-of-Way Bureau Utilities Section

electronic copies with attachment:

Montana Legislative Branch Environmental Quality Council (EQC)

copies with attachment:

File Environmental Services Bureau

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Montana Division – Federal Highway Administration

“Nationwide” Programmatic Section 4(f) Evaluation for Historic Bridges

Project Name: 2001-Sun River-2 km S Vaughn

Date: December 13, 2010

Project Number: STPHS 7(36)

Control Number: 5031000

Location: Sun River Bridge (also known locally as “Pearson Bridge”), 24CA981, Cascade County

The proposed project requires use of a historic bridge structure that is on, or eligible for listing on the National Register of Historic Places. A description and location map of the proposed bridge replacement project is attached. Any response(s) in a large box will require additional information and may result in an individual evaluation/statement. Consult the Nationwide Section 4(f) Evaluation procedures.

	YES	NO
1. Is the bridge a National Historic Landmark?	<input type="checkbox"/>	<input checked="" type="checkbox"/>
2. Have agreements been reached through the procedures pursuant to Section 106 of the <i>National Historic Preservation Act</i> with the following:		
State Historic Preservation Office (SHPO)?	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Advisory Council On Historic Preservation (ACHP)?	<input checked="" type="checkbox"/>	<input type="checkbox"/>
3. Any other agencies with jurisdiction at this location?	<input checked="" type="checkbox"/>	<input type="checkbox"/>
a. If “YES” will additional approval(s) for this Section 4(f) application be required?	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b. List of agencies with jurisdiction at this location:		
US Army Corps of Engineers (CWA Section 404 Permit)	<input checked="" type="checkbox"/>	<input type="checkbox"/>
USDA – Forest Service	<input type="checkbox"/>	<input checked="" type="checkbox"/>
USDA – Natural Resources Conservation Service (FPPA)	<input type="checkbox"/>	<input checked="" type="checkbox"/>
FEMA Regulatory Floodway (Permit)	<input checked="" type="checkbox"/>	<input type="checkbox"/>
MDFWP – Parks Division (Fishing Access Site)	<input type="checkbox"/>	<input checked="" type="checkbox"/>
MDFWP – Wildlife Division (Wetlands)	<input type="checkbox"/>	<input checked="" type="checkbox"/>
MSFWP – Fisheries Division (SPA 124)	<input checked="" type="checkbox"/>	<input type="checkbox"/>
MDNRC – (Navigable Rivers Under State Law)	<input type="checkbox"/>	<input checked="" type="checkbox"/>
MDEQ – Water Quality Bureau	<input type="checkbox"/>	<input checked="" type="checkbox"/>
MDEQ – Other: _____	<input type="checkbox"/>	<input checked="" type="checkbox"/>
MDNRC (irrigation systems)	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Other: _____	<input type="checkbox"/>	<input type="checkbox"/>

ALTERNATIVES & FINDINGS

Each of the following alternatives for this proposed project have been evaluated to avoid the use of the historic bridge:

1. "Do Nothing."
2. Rehabilitate the existing bridge without affecting the historic integrity of the structure in accordance with the provisions of Section 106 in the NHPA.
3. Construct the proposed bridge at a location where the existing historic structure's integrity will not be affected as determined by the provisions of the NHPA.

The above alternatives have been applied in accordance with this Programmatic Section 4(f) Evaluation and are supported by each of the following findings.

		YES	NO
1.	The "Do Nothing" alternative has been evaluated and has been found to ignore the basic transportation need at this location.	<input checked="" type="checkbox"/>	<input type="checkbox"/>
This alternative is neither feasible nor prudent for the following reasons:			
a.	Maintenance: This alternative does not correct the structurally deficient condition and/or poor geometrics (clearances, approaches, visibility restrictions) found at the existing bridge. Any of those factors can lead to a sudden catastrophic collapse and/or a potential injury including loss of life. Normal maintenance will not change this situation.	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b.	Safety: This alternative does not correct the situation that causes the existing bridge to be considered deficient. Because of the deficiency, the existing bridge presents serious and unacceptable safety hazards to the traveling public and/or places intolerable restrictions (gross vehicle weight, height, and/or width) on transport.	<input checked="" type="checkbox"/>	<input type="checkbox"/>
	A copy of the MDT Bridge Bureau Inspection Report is attached.	<input checked="" type="checkbox"/>	<input type="checkbox"/>
2.	The rehabilitation alternative has been evaluated with one or more of the following findings:		
a.	The structural deficiency of the existing bridge is such that it cannot be rehabilitated to meet minimum acceptable load and traffic requirements without adversely affecting the historic integrity of the structure.	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b.	The geometrics (height, width) of the existing bridge cannot be changed without adversely affecting the historic integrity of the structure.	<input checked="" type="checkbox"/>	<input type="checkbox"/>
c.	This alternative does not correct the serious restrictions on visibility (approach geometrics, structural requirements), which also contributes to an unsafe condition at this location.	<input checked="" type="checkbox"/>	<input type="checkbox"/>
	Is this rehabilitation alternative therefore considered to be feasible and/or prudent based on the preceding evaluations?	<input type="checkbox"/>	<input checked="" type="checkbox"/>
3.	The relocation alternative (i.e., the new bridge is relocated to a site that presents no adverse effect upon the existing structure) has been considered under the following findings:		
a.	Terrain and/or local geology: The present structure is located at the only feasible and/or prudent site for a bridge on the existing route. Relocating to a new site (either up- or downstream of the preferred location) will result in extraordinary bridge/approach engineering and associated construction costs.	<input type="checkbox"/>	<input checked="" type="checkbox"/>
	The preferred site is the only prudent location due to the terrain and/or geologic conditions in the general vicinity.	<input checked="" type="checkbox"/>	<input type="checkbox"/>
	Any other location would cause extraordinary disruption to existing traffic patterns.	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b.	Significant social, economic and/or environmental impacts: Locating the proposed bridge in other than the preferred site would result in significant social/economic impacts such as the displacement of families, businesses, or severing of prime/unique farmlands.	<input type="checkbox"/>	<input checked="" type="checkbox"/>
	Significant environmental impacts such as the extraordinary involvement in wetlands, regulated floodplains, or habitat of threatened/endangered species are likely to occur in any location outside the preferred site.	<input type="checkbox"/>	<input checked="" type="checkbox"/>
c.	Engineering and economics: Where difficulty/ies associated with a new location are less extreme than those listed above, the site may still not be feasible and prudent where costs and/or engineering difficulties reach extraordinary magnitudes. Does the alternate location result in significantly increased engineering or construction costs (i.e., a longer span, longer approaches, etc.)?	<input type="checkbox"/>	<input checked="" type="checkbox"/>

	YES	NO	NA
d. Preservation of existing historic bridge may not be possible due to:			
the existing structure has deteriorated beyond all reasonable possibility of rehabilitation for a transportation or alternative use;	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
no responsible party can be located to maintain and preserve the historic structure.	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Therefore, in accordance with the previously listed findings, it is neither feasible nor prudent to locate the proposed bridge at a site other than the preferred alternate as described.	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

MEASURES TO MINIMIZE HARM

This Nationwide Programmatic Section 4(f) Statement applies only when the following measures to minimize harm have been assured. (A check in a larger box might void the Programmatic application. If so, a full Section 4(f) Evaluation will be required.)

	YES	NO
1. Is the bridge being rehabilitated under this proposed project?	<input type="checkbox"/>	<input checked="" type="checkbox"/>
If "YES", is the historic integrity of the structure being preserved to the greatest extent possible; consistent with unavoidable transportation needs, safety, and load requirements?	NA	<input type="checkbox"/>
If "NO", refer to item 2 below to determine Programmatic applicability.		
2. The bridge is being replaced or rehabilitated to the point where historic integrity is affected. Are adequate records being made of the existing structure under Historic American Engineering Record standards, or other suitable means developed through consultation with SHPO and the ACHP?	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Please see the attached correspondence from the United States Department of the Interior, National Park Service dated December 11, 2007 and November 20, 2009.		
3. If the bridge is being replaced, is the existing structure being made available for alternative use with a responsible party to maintain and preserve same?	<input checked="" type="checkbox"/>	<input type="checkbox"/>
MDT will advertise the Sun River Bridge in accordance with the Montana Adopt-A-Bridge Program.		
4. If the bridge is being adversely affected, has agreement been reached through the Section 106 process of the <i>National Historic Preservation Act</i> on these measures to minimize harm (which will be incorporated into the proposed project) with the following:	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Montana State Historic Preservation Office (Date: December 18, 2006 and October 1, 2007)	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Advisory Council on Historic Preservation (Date: February 1, 2007)	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Montana Department of Transportation (Date: January 8, 2007)	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Federal Highway Administration (Date: December 12, 2006)	<input checked="" type="checkbox"/>	<input type="checkbox"/>
The Programmatic Memorandum of Agreement signed/approved by those agencies is attached.	<input checked="" type="checkbox"/>	<input type="checkbox"/>

COORDINATION

Additional coordination with the following agencies has taken place regarding this proposed project (other than those listed previously):

 City/County government: Cascade County is interested in receiving the trusses from the bridge.

Copies of letters from those agencies regarding this proposed project are attached. This proposed project is also documented as a Categorical Exclusion under the requirements of the *National Environmental Policy Act* (42 USC 4321, et seq.).

SUMMARY & APPROVAL

The proposed action meets all criteria regarding the required alternatives, findings, and measures to minimize harm that will be incorporated into this proposed project. This proposed project therefore complies with the July 5, 1983, Programmatic Section 4(f) Evaluation by the US Department of Transportation Federal Highway Administration. This document is submitted pursuant to 49 USC 303 and in accordance with the provisions of 16 USC 470f.

Eric Thunstrom Date: 12/13/10
Eric Thunstrom
Environmental Services Bureau
Great Falls District Project Development Engineer

Heidy Bruner Date: 12/15/10
Concur Heidy Bruner, P.E.
Environmental Services Bureau
Engineering Section Supervisor

Stan W. [Signature] Date: 14 DEC 2010
Approved Stan W. [Signature]
Federal Highway Administration

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Attachments

electronic copies without attachments:

Tom Martin, P.E.	Environmental Services Bureau Chief
Heidy Bruner, P.E.	Environmental Services Bureau Engineering Section Supervisor
Michael P. Johnson	Great Falls District Administrator
Kent Barnes, P.E.	Bridge Engineer
Paul Ferry, P.E.	Highways Engineer
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Stacy Hill, P.E.	Great Falls District Environmental Engineering Specialist
Walt Scott	Right-of-Way Bureau Utilities Section

electronic copies with attachments:

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copies with attachment:

File Environmental Services Bureau

Alignment and Grade Report

2001-Sun River-2 KM S Vaughn STPHS 7(36)
Project Manager : Stephanie Brandenberger, PE

Page 2 of 8

Introduction

This report was developed from the alignment and grade meeting and field review on November 4, 2010. The following people were in attendance:

Mick Johnson	District Administrator
Steve Prinzing	District Preconstruction Engineer
Christie McOmber	District Projects Engineer
Jerilee Weibel	District R/W Supervisor
Doug Wilmot	District Construction Engineer
James Combs	District Traffic Engineer
Jeania Cereck	District Design Supervisor
John Sharkey	Helena Geotechnical Specialist
Stephanie Brandenberger	Bridge Engineering Manager
Paul Sturm	District Biologist
Gretchen Hedrick	District Hydraulics Specialist
Eric Thunstrom	District Environmental Project Development Engineer
Ray Sacks	Constructability Reviewer
Dustin Rouse	District Design Project Manager
Laci Bogden	District Road Designer

Scope of Work

The proposed project was nominated to replace the existing single-lane, two-span steel pony truss structure over the Sun River. The existing bridge will be replaced with a three-span, prestressed concrete structure located on an alignment located slightly downstream.

This project was also nominated to address a safety concern with the existing roadway alignment. The horizontal curve on the south approach to the bridge has been a source of many crashes, including three recent fatalities.

Bridge replacement, rather than rehabilitation, is proposed due to the narrow width, age, and condition of the structure.

Project Location and Limits

The proposed project is located on Cascade County Local Route L-07530, approximately 2 miles south of Vaughn where it crosses the Sun River. This road is locally known as the Ulm to Vaughn road. The structure is located in Section 30, T. 21 N., and R. 2 E. at reference post 9.28. Reference posts begin at Ulm and increase to the north. The route is functionally classified as a Rural Minor Collector. The posted speed limit is 45 mph with a decrease to 5 mph over the existing bridge for trucks and 25 mph warning signs on the preceding curves. A 60 mph design speed was selected for this project based on the design criteria for a rural collector in level terrain; therefore, the project will be designed to the Geometric Criteria for Rural Collector Roads (Secondary System). A short speed study was performed in 2008 resulting in 85% speeds averaging 55 mph (57 mph northbound, 52.1 mph southbound).

The project begins at Station 24+00.00 (RP 9.203) and proceeds north approximately 0.455 miles to Station 53+00.00 (RP 9.658). A two hundred foot connection to existing PTW will be located at south end of the project and a one hundred foot connection to existing PTW will be located at the north end of the project.

Work Zone Safety and Mobility

At this time, Level 3 construction zone impacts are anticipated for this project as defined in the Work Zone Safety and Mobility (WZSM) guidance. The plans package will include a Transportation Management Plan (TMP) consisting mainly of a Traffic Control Plan (TCP). These issues are discussed in more detail under the Traffic Control and Public Involvement sections.

Alignment and Grade Report

Physical Characteristics

The existing bridge is a two-span steel pony truss structure, 216 feet long with a rail-to-rail width of 19 feet. The bridge trusses were built in 1922 and were moved to their present location in 1969. The current sufficiency rating is 46.2. The existing structure is currently listed as Functionally Obsolete and Eligible for Replacement.

Numerous cracks and potholes exist in the overlaid PMS bridge deck surface. Deck timbers show rot in and around the potholes. Some timber stringers are bulging and rotten where they meet the decking. Paint is peeling throughout the steel truss members. Some pack rust exists on built up areas of the connections. Some vertical members have been damaged by traffic hits. The substructure is in fair condition. Some checks exist in the backing planks and minor erosion was noted at the four corners of the bridge.

Rehabilitation is not being considered due to the narrow, one-lane width of the trusses. It isn't feasible to widen the trusses for two-lane traffic and still carry the required loading. Also, the trusses are approaching 85 years of age and are near the end of their useful life.

The terrain in this rural location is generally flat and the adjacent land use is primarily irrigated farmland. The existing approach roadway surfacing is bituminous of unknown depth and the roadway width is approximately 24 feet. The existing inslopes appear to be $\leq 4:1$. The County indicated that this route is used frequently by gravel trucks as a pit is located south of the project.

Following is information on the existing structure:

Year Built	* 1922/1969
Inventory Number	L07530009+03001
Length	216'-0"
Width (rail-to-rail)	19'-0"
Number of Spans	2
Span Lengths	105'-0"
Bridge Rail Type	Steel W-beam
Superstructure Type	Steel Pony Truss w/Timber Deck & Stringers
Substructure Type	Timber Pile Bents
Sufficiency Rating	46.2
Structure Status	Functionally Obsolete and Eligible for Replacement
* Trusses were built in 1922 and were moved to their current location in 1969.	

The existing roadway portion south of the Sun River averages a grade of 0.1% then climbs at a 1.8% grade to the south bridge end. The bridge is on a 0.2% grade, at the north bridge end begins climb at 5.6% to the top of the bluff, and once at the top of the bluff the grade levels out to an average 0.1% grade.

The existing horizontal curves of the project consist of a 300' radius curve south of the bridge and a 700' radius curve north of the bridge; neither curve has any noticeable superelevation.

Horizontal Alignment

The proposed horizontal alignment has been designed to the Geometric Criteria of Rural Collector Roads (Secondary System).

- a. To the south of the Sun River the new alignment ties to the existing PTW approximately 1,630' from the proposed structure.
- b. The first proposed horizontal curve is a spiral curve right with a 2,320' radius and 6% superelevation. This curve is located south of the proposed structure. The superelevation

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- tangent runout was shortened approximately 8' so the spiral curve does not continue onto the structure.
- c. The new structure will be located approximately 120' downstream of the existing structure and on a skew with the new alignment.
 - d. The second proposed horizontal curve is a spiral curve left with a 3,775' radius and 5% superelevation. This curve is located north of the proposed structure. The superelevation tangent runout was shortened approximately 14' so the spiral curve does not continue onto the structure.
 - e. To the north of the Sun River the new alignment ties to the existing PTW approximately 1,245' from the proposed structure.

Vertical Alignment

The proposed vertical alignment has been designed to the Geometric Criteria of Rural Collector Roads (Secondary System).

- a. There are 4 proposed vertical curves with this project; three crest curves and one sag curve.
- b. The first vertical curve is located south of the proposed structure and consists of a 50' crest curve with an SSD of 10,297' and K- value of 476.0. Both values exceed the minimum design criteria of 570' and 151, respectively, for crest curves on Rural Collector Roads.
- c. The second vertical curve is located south of the proposed structure and consists of a 350' sag curve with a K-value of 148.7; which exceeds the minimum design criteria of 136 for sag curves on Rural Collector Roads.
- d. The proposed structure is located between the second and third vertical curves on a 2.1% grade.
- e. The third vertical curve is located north of the proposed structure and consists of a 600' crest curve with an SSD of 861.7' and K-value of 312.4. Both values exceed the minimum design criteria of 570' and 151, respectively, for crest curves on Rural Collector Roads.
- f. The fourth vertical curve is located north of the proposed structure and consists of a 50' crest curve with an SSD of 5,606.8' and K-value of 258.7. Both values exceed the minimum design criteria of 570' and 151, respectively, for crest curves on Rural Collector Roads.

Surfacing and Typical Section

The proposed surfacing has 6:1 inslopes and consists of 0.30' of Commercial Plant Mix and 0.67' of crushed aggregate course.

The bridge width and roadway width between approximate stations 37+45 and 43+43 will be 28' to match the bridge width. This width will accommodate two-12' travel lanes with 2' shoulders. The remainder of the roadway will be 24' with 120' tapers into and out of the 28' section.

4:1 ditch inslopes with a minimum 6' width will be maintained throughout the project. The majority of the project will consist of v-ditches with a 4:1 backslope. However, Stations 28+50 to 36+50 left, 35+07 to 37+00 right, and 42+49 to 48+50 right will include a 10' 20:1 ditch bottom.

Grading

Mainline and approach slope grading will be required.

- a. Grading quantities are currently balanced. The grading classification will be determined at plan-in-hand.
- b. All areas disturbed will be topsoiled, seeded, and fertilized.
- c. The weight limit on the existing structure will not allow large trucks/equipment to cross. Balancing the project at the bridge ends or including provisions for a work bridge may be necessary.

Hydraulics

- a. The existing bridge, proposed bridge, and the portion of the project south of the Sun River are located in a delineated floodplain. Cascade County regulates the Sun River floodplain and

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- county floodplain development permit will be required for the floodplain encroachment.
- b. Two irrigation ditches are located within in the project limits. The concrete irrigation ditch south of the river will be impacted and approximately 700' of the end of the ditch will be removed. The abandoned irrigation north of the Sun River will not be impacted beyond adjusting the roadside slope to perpetuate drainage of the proposed roadway ditch; the historic value of this irrigation ditch is being determined.
 - c. The entire section of the project south of the river is located within the 10-year floodplain. Per the request of Hydraulics, a minimum roadway elevation was provided at station 35+06.63 approximately 425' south of the proposed structure. A unique feature of the flooding in this area is the water begins to backup downstream and overtops the road from east to west whereas the main channel of water flows west to east.
 - d. Channel disturbance is anticipated with the removal of the existing structure, removal of piers from the 1922 structure, new pier placement and riprap placement beneath the new structure. Construction activities in and around flowing water are expected. Current design and construction specifications will minimize any water quality impacts. For additional information, see the Location Hydraulics Study Report.
 - e. Hydraulics will determine if area flooding requires the existing roadway berm remain or if it may be obliterated with this project.

Bridges

The new bridge is anticipated to be a three-span, prestressed concrete structure skewed right 15° in relation to the river flow. The rail-to-rail width will be 28'. The bridge rail will be standard W740, which consists of a box beam rail. Per the Alignment and Grade meeting, minimal adjustments have been made to the superelevation runout lengths to end them before the bridge ends.

Due to deer and other small animal tracks observed under the bridge, Environmental has requested that an animal passage be provided under each end of the bridge.

Traffic

This project will involve new delineation, signing, and pavement markings. Existing signage not associated with the new alignment and bridge will need to be removed (i.e. "One Lane Bridge", "Only One Vehicle at a Time on Bridge", "Truck Speed Limit 5 MPH", 25 MPH curves warnings, etc.). The placement and type of signage will need to be evaluated for the new bridge and alignment. The plans package will require signing plans and striping quantities.

Intelligent Transportation Systems (ITS) Features

No ITS features have been identified for this project.

Miscellaneous

Direct runoff into the Sun River is not allowed; for this reason bridge chose to use W740 bridge rail. Box beam guardrail was selected to protect the bridge ends and connect to the W740 bridge rail. Approval for the use of box beam guardrail has been received.

An informal fishing access site near the south end of the existing bridge has been observed. Since advanced acquisition of this project has taken place and Fish Wildlife and Parks requested access at this location, new access to this site will be provided as well as leveling and graveling the small parking area. Maintenance responsibilities of this site have not been determined.

Design Exceptions

Safety projects are not subject to the design exception process and a formal design exception will not be included with this project. An allowance for the use of V-ditches and shortened runout superelevation lengths is requested.

The Geometric Design Criteria for Rural Collector Roads (Secondary System) states that v-ditches are acceptable and if backslopes are steeper than a 4:1 to place the toe of the backslope outside the clear zone.

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Adjustments would impact the pivot irrigated field between Stations 24+00 and 28+00 left, the concrete irrigation ditch between Stations 24+00 and 27+50 right, and the irrigation ditch north of the Sun River between Stations 49+50 and 53+00. This project will still be correcting the existing roadway v-ditches, which consists of $\leq 4:1$ ditch inslopes and $\leq 3:1$ backslopes but still lessening the impact with v-ditches with 4:1 in-slopes and backslopes.

The section of the proposed typical section between Stations 49+50 and 53+00 right have v-ditches with a 6' minimum width 4:1 ditch inslope but a backslope steeper than 4:1 within the clear zone; this design preserves the possible historic irrigation ditch in this area with slight flattening of the roadside slope of the ditch. The existing v-ditch has 3:1 ditch inslopes and 2:1 backslopes. There are no recorded crashes with this irrigation ditch.

The superelevation runout lengths have been shortened to end at the bridge ends. The south side was shortened 8' and the north side was shortened 14'. This allows for not ending the spiral transition on the proposed structure and resulting in a less complex design.

Right-of-Way

Right-of-way has acquired 3 parcels impacted by this project; these parcels are currently being cleared of their structures and utilities. Additional right-of-way will still need to be negotiated with the remaining adjacent property owners.

The concrete irrigation ditch south of the Sun River will be impacted and likely need to be replaced. During the Alignment and Grade discussion, the design of this irrigation ditch was removed from the plans. Adjustments to this irrigation ditch will be handled during the Right-of-Way process. Additional Right of Way will be purchased in the name of Cascade County.

The maintenance of the informal fishing access south of the river and left of the new alignment will need to be determined. Ownership of the proposed driveway in this area will likely need to be determined as well.

Utilities/Railroads

There are no railroads within the project limits.

Relocation of telephone, gas, and power will be required.

Environmental Considerations

- a. Wetland impacts have yet to be determined.
- b. An individual programmatic Categorical Exclusion (d) appears necessary. In addition, CWA 404 and SPA 124 permits will likely be required.
- c. The Traffic Noise qualifies for a Type I project; however, a Detailed Noise Analysis will not be required due to low traffic volumes, the residence downstream of the bridge have been removed, and the residence upstream will be further away from the new alignment.
- d. The appropriate environmental evaluations and documents will be prepared by Environmental Services.
- e. Due to deer and other small animal tracks observed under the bridge, Environmental has requested that an animal passage be provided under each end of the bridge.
- f. Old piles from a previous bridge are visible downstream of the existing bridge; these piles will be removed with this project.
- g. The Determination of Effect for the abandoned irrigation ditch (William Rice Ditch) to the north of the Sun River is still in progress.
- h. The migratory bird special provision will be included in the plans package.

Experimental Features

No experimental features have been identified for this project.

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Traffic Control

The project is currently being designed to accommodate traffic on the existing bridge during the construction of the bridge and connecting roadway. Access to the adjacent property will be maintained throughout construction. Appropriate signing and flagging will be maintained in accordance with the Manual on Uniform Traffic Control Devices.

Public Involvement

Level B public involvement is recommended. This includes a news release to the appropriate newspapers explaining the project, contacts with local governments, interest groups, and adjacent landowners. An informal public meeting was held in Vaughn April 28, 2008; public response was accommodating.

Cost Estimate

The PFR cost estimate was \$1,520,300 compared to the \$2,164,000 AGR estimate. The majority of the increase resulted from a change in the new bridge estimate. The Road Work, Traffic Control, and removal of the existing structure increased from the PFR stage. In addition to the construction costs, Mobilization and Contingencies increased. The following items were considered in the Alignment & Grade estimate: PMS surfacing, grading, traffic control, structure removal, new structure, fencing, guardrail, and revegetation.

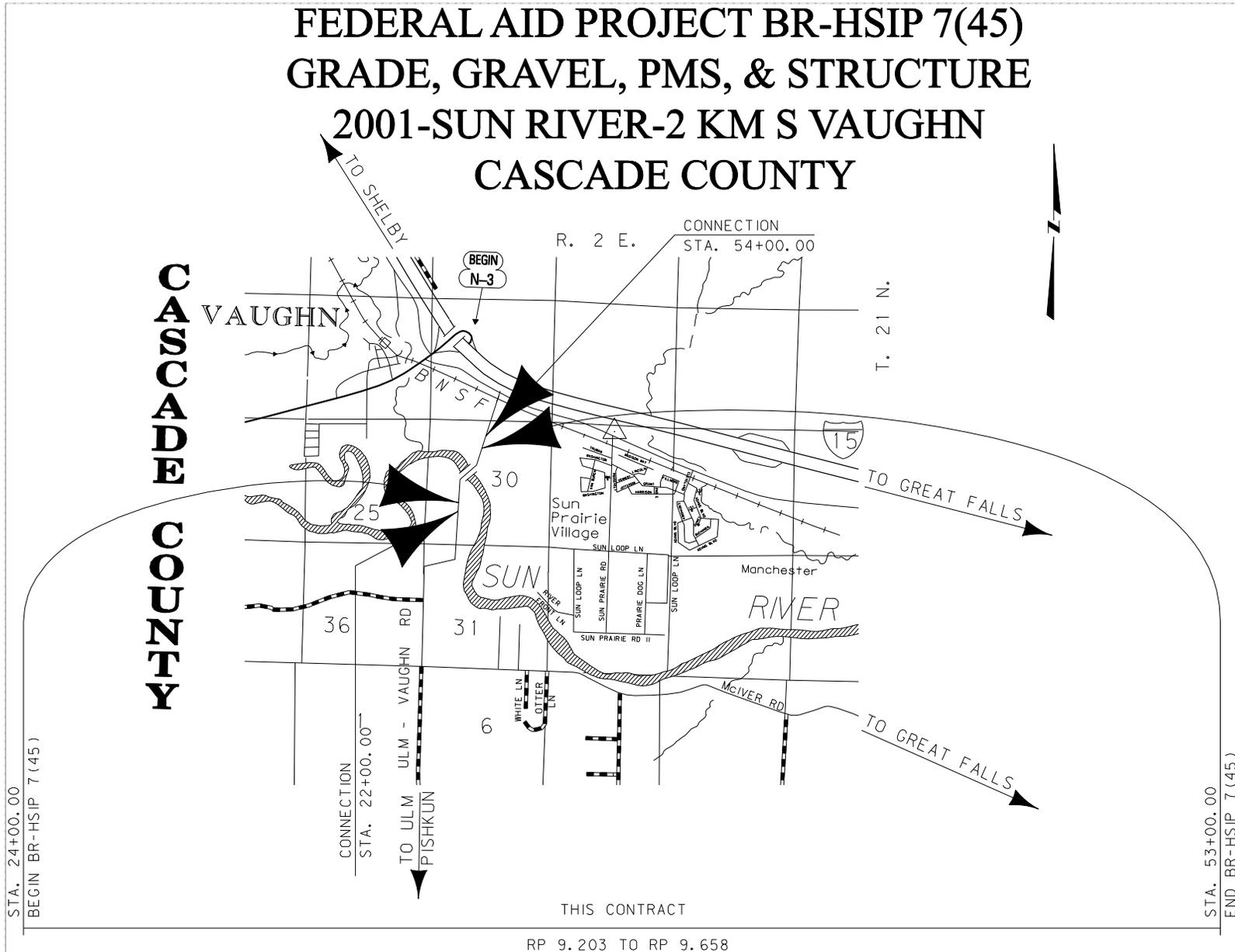
		Estimate	Inflation (INF)	w/INF + IDC
		Costs	(from PPMS)	(from PPMS)
Road work		\$463,500		
Remove Structure		\$53,000		
New Structure		\$845,000		
Traffic Control		\$25,000		
Subtotal		\$1,386,500		
Mobilization	18%	\$249,570		
Subtotal		\$1,636,070		
Contingencies	15%	\$245,411		
Total CN		\$1,881,481	\$69,279	\$2,211,186
CE	15%	\$282,222	\$10,392	\$331,678
IDC:	13.35%		TOTAL	\$2,542,864
Inflation Factor (ppms)		0.036821705		

Note: Inflation is calculated in PPMS to the letting date. If there is no letting date, the project is assumed to be inside the current TCP and is given a maximum of 5 years until letting. IDC is calculated at 13.35% as of FY 2011.

Ready Date

The current OPX2 ready date is August of 2012. This project is slightly behind schedule with its projected finish date in OPX2 at November of 2012. It appears the project will be able to meet the ready date. The letting date is anticipated for December 2012.

Alignment and Grade Report



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