



Montana Department of Transportation

2701 Prospect Avenue
PO Box 201001
Helena MT 59620-1001

Jim Lynch, Director
Brian Schweitzer, Governor

October 15, 2010

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FHWA
MONTANA DIVISION

Kevin McLaury
Division Administrator
Federal Highway Administration
585 Shepard Way
Helena, MT 59601-9785

Subject: Request for Concurrence of Continued Validity of CE Designation
BH 9026(18)
Pugsley Br-Scour Protection
Control Number: 7025000

MASTER FILE
COPY

Dear Kevin McLaury:

As the design phase of the subject project has progressed, some new information has become available. The proposed project will now require an easement for the installation and maintenance of riprap.

The subject project qualified as a Categorical Exclusion (CE). The original CE was signed by your agency on March 9, 2010. The updated section of the CE is highlighted below.

	<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"/>

MDT has reviewed this new information in regard to NEPA/MEPA applicability. MDT concludes that the proposed subject action will still not have a significant environmental impact, will still qualify as a CE under 23 CFR 771.117(d), and will still qualify as a CE under ARM 18.2.261. At this time, we request the FHWA's concurrence that the proposed subject action is still properly classified as a CE under 23 CFR 771.117(d).

Eric Thunstrom
Eric Thunstrom
Environmental Services Bureau
Great Falls District Project Development Engineer

Date: 10/15/10

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

Date: 10/15/10.

[Signature]
Concur
Federal Highway Administration

Date: 19 Oct 10

e-copies:

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
Paul Ferry, P.E.	Highways Engineer
Kent Barnes, P.E.	Bridge Engineer
Steve Prinzing, P.E.	Great Falls District Engineering Services Supervisor
Dustin Rouse, P.E.	Road Design Area Engineer
Rob Stapley	Right-of-Way Bureau Chief
David Jensen	Fiscal Programming Section Supervisor
Suzy Price	Contract Plans Bureau Chief
Paul Sturm	Environmental Services Bureau District Biologist
Stacy Hill, P.E.	Great Falls District Environmental Engineering Specialist
Walt Scott	Right-of-Way Bureau Utilities Section
Montana Legislative Branch Environmental Quality Council (EQC)	

copies:

File Environmental Services Bureau

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Memorandum

To: Distribution

From: Paul R. Ferry, P.E. *PRF*
 Highways Engineer

Date: September 20, 2010

Subject: BH 9026(18)
 Pugsley Br Scour Protection
 UPN 7025000
 Work Type – 240 Minor Bridge Rehabilitation

The Scope of Work Report for this project has been released on 9/21/10. We request that those on the distribution review this report and submit your concurrence within two weeks of the above date.

Your comments and recommendations are also requested if you do not concur or concur subject to certain conditions.

When all the personnel on the distribution list have concurred, we will submit this report to the Preconstruction Engineer for approval.

I recommend approval:

Approved _____ Date _____

Distribution:

- | | |
|---|--|
| Mick Johnson, District Administrator | Lynn Zanto, Rail, Transit, & Planning Division Administrator |
| Kent Barnes, Bridge Engineer | Jake Goettle, Construction Engineering Services Bureau |
| Tom Martin, Environmental Services Bureau Chief | Matt Strizich, Materials Engineer |
| Duane Williams, Traffic and Safety Engineer | Jon Swartz, Maintenance Administrator |
| Robert Stapley, Right-of-Way Bureau Chief | Paul Ferry, Highways Engineer |

cc:

- | | |
|---|--|
| Dave Jensen, Fiscal Programming Section Supervisor | Russ Temple – Liberty Co. Commissioner |
| Dustin Rouse Project Design Manager, GTF District Highways File | PO Box 131 |
| | Chester, MT 59522-0131 |

Liberty Co. Conservation District
 Marlene Moon
 Box 669 Chester, MT 59522

e-copies:

- | | |
|---|---|
| Jim Walther, Engineering, Preconstruction Engineer | Jason Sorenson, Engineering Cost Analyst |
| Lesly Tribelhorn, Highways Design Engineer | Jake Goettle, Construction Bureau – VA Engineer |
| Mark Goodman, Hydraulics Engineer | Stephen Prinzing, District Preconstruction |
| Kurt Marcoux, District Hydraulics Engineer | Christie McOmer, District Projects Engineer |
| Bonnie Gundrum, Env. Resources Section Supervisor | Stanley Kuntz, District Materials Lab |
| Paul Sturm District Biologist | Michael MacDonald, District Maintenance Chief |
| Eric Thunstrom, District Project Development Engineer | Walt Scott, R/W Utilities Section Supervisor |
| Danielle Bolan, Traffic Engineer | David Hoerning, R/W Engineering Manager |
| Ivan Ulberg, District Traffic Project Engineer | Greg Pizzini, Acquisition Manager |
| Pierre Jomini, Safety Management Engineer | Joe Zody, R/W Access Management Section Manager |
| Stephanie Brandenberger, Bridge Area Engineer – GTF | Paul Johnson, Project Analysis Bureau Chief |
| Matt Strizich, Materials Engineer | Sue Sillick, Research Section Supervisor |
| Vacant, Pavement Engineer | Lee Grosch, District Geotechnical Manager |
| Marty Beatty, Engineering Information Services | Bryce Larsen, Supervisor, Photogrammetry & Survey |
| Paul Grant, Public Involvement Officer | Wayne Noem, Secondary Roads Engineer |
| Jean Riley, Planner | |

Scope of Work Report

Scope of Work

The proposed project was nominated to mitigate the effects of scour at the Pugsley Bridge. The anticipated work consists of riprap placement at the north tower's foundation and the northern bridge abutment.

Purpose and Need

The purpose of this project is to protect the bridge's north abutment from scour action and maintain the integrity of the county road.

Project Location and Limits

- a. The project is located in Liberty County;
- b. The project is located approximately 24 miles south of Chester, MT;
- c. The project is not located on an Indian Reservation;
- d. The project is located on County maintained road No. 38 where it crosses the Marias River.;
- e. The project includes work protecting the northerly substructure units of the Pugsley Bridge (L26038885+01001).

Physical Characteristics

- a. The existing bridge is a 3-span, timber decked, braced-chain type suspension bridge built in 1951. The timber deck was reconstructed in 1987 under MDT project BR 9026(4). The endbents are constructed of timber piles with wingwalls. Piers are constructed of reinforced concrete shafts on spread footings.
- b. The bridge data for the structure is given below:

L26 038 RP 5.100 (Pugsley Bridge)

Bridge Inventory Number	L26038005+0.100-1
Year Built	1951
Project Number	County Construction
Length	329'-0"
Width (curb to curb)	15'-0"
Bridge Rail Type	Cables w/ steel posts
Superstructure Type	Suspension w/ timber deck and stringers
Sufficiency Rating	74.2
Structure Status	Not Deficient

Traffic Data

Traffic data was not requested for this scour remediation project.

Accident Analysis

Accident data was not requested for this scour remediation project.

Major Design Features

The project will be designed using US Customary units.

- a. **Design Speed.** Design speed is not applicable for this scour remediation project.
- b. **Horizontal Alignment.** No changes to the horizontal alignment are planned.
- c. **Vertical Alignment.** No changes to the vertical alignment are planned.
- d. **Typical Sections and Surfacing.** The existing roadway surfacing will not be disturbed.
- e. **Geotechnical Considerations.** No involvement from the Geotechnical Section is currently anticipated.
- f. **Hydraulics.** Concrete rubble has been placed at the upstream side of the bridge protecting the pier and abutment. The rubble projects into the channel far enough to provide some scour protection at the pier. The footings are exposed along the stream side of the pier, no undermining is evident. Signs of scour and stream bank erosion are evident at the left bank

Scope of Work Report

upstream and downstream of the bridge. The left bank downstream of the bridge is actively eroding.

The county and local residents are concerned that the river will continue to migrate toward the county road potentially damaging the road. In April 2006, the Marias River Watershed Group hired Great West Engineering to conduct a study to determine alternative solutions to address erosion issues at the left bank downstream that is migrating toward the county road. This report lists several alternatives for possible designs.

In March of 2009 Marlene Moon from the Marias Watershed Group contacted MDT regarding possible mitigation plans at this site. On June 5, 2009 MDT personnel Kent Barnes, Kevin McCray, David Hedstrom and Russell Brewer conducted a site visit with Marleen Moon from the Marias Watershed Group. The below recommendation is based on this site visit and consultation with Paul Sturm, MDT District Biologist.

Hydraulics recommends removing the existing concrete rubble at the upstream side of the bridge and place class II riprap at the left abutment and around pier 3. Place riprap along pier at a 2H:1V slope to a minimum thickness of 3-feet. The upstream end of the riprap should be tied into the existing concrete rubble. Extend the riprap repair from a point approximately 30-feet upstream along the pier to a point approximately 30-feet downstream of the bridge. Key the downstream end of the riprap into the bank to prevent undermining by stream flow. Construct a toe trench so that the riprap "key" section extends below the channel bottom elevation. Place a geotextile erosion control fabric beneath the riprap according to MDT standard detail drawing 613-16.

- g. **Bridges.** Bridge coordinated with Hydraulics to develop the scour countermeasures described in the Hydraulics section. Road Design will prepare the plan package.
- h. **Traffic.** No involvement.
- i. **Pedestrian/Bicycle/ADA.** No involvement.
- j. **Context Sensitive Design Issues.** Existing concrete rubble used as riprap will be removed.

Design Exceptions

No design exceptions are anticipated.

Right-of-Way

No new right-of-way acquisition is anticipated. A right-of-way easement will be secured for the installation and future maintenance of the riprap.

Utilities/Railroads

A fiber optic line was surveyed and is attached to the downstream face of the bridge. Utility locates will be necessary for concrete rubble removal and riprap installation. There will be no railroad involvement.

Environmental Considerations

No apparent significant environmental impacts or issues have been identified at this time. A programmatic categorical exclusion was signed by FHWA on March 9, 2010. 404 CWA and 124 SPA permits will be needed for the proposed work associated with this project.

Energy Savings/Eco-Friendly Considerations

No energy savings/eco-friendly considerations have been identified for this 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

Scope of Work Report

BH 9026(18) Pugsley Br Scour Protection
Project Manager: Dustin Rouse, PE

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Management Plan (TMP) consisting mainly of a Traffic Control Plan (TCP).

Other Projects

The Marias River Watershed group is currently working on a project to control erosion on the north bank of the Marias, just downstream of the bridge. Funding for their project is being supplemented with a DNRC Renewable Resource Grant. We will share information to help with their project.

Traffic Control

There may be minor delays from the movement of construction equipment across the north approach to the bridge. Traffic will be maintained on the existing roadway during construction. Appropriate signing and flagging will be maintained in accordance with the Manual on Uniform Traffic Control Devices.

Public Involvement

A public notice was distributed to local media describing the proposed project on December 9, 2009. No comments were received.

Cost Estimate

	Estimated cost	Inflation (INF) (from PPMS)	TOTAL costs w/INF + IDC (from PPMS)
Road Work	19,000		
Traffic Control	4,600		
Subtotal	23,600		
Mobilization (12%)	2,800		
Subtotal	26,400		
Contingencies (8%)	2,100		
Total CN	<u>\$28,500</u>	<u>\$200</u>	<u>\$3,000</u>
CE (10%)	<u>\$2,900</u>	<u>\$1,800</u>	<u>\$29,800</u>
TOTAL CN+CE	<u>\$31,400</u>	<u>\$2,000</u>	<u>\$32,800</u>

Note: Inflation is calculated in PPMS to the letting date plus one year to estimate mid-point of construction. 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.

Project Management

Helena Road Design will be responsible for the plans and Dustin Rouse is the Project Design Manager. This project is not under full FHWA oversight.

Ready Date

The letting date for this project is January 27, 2010. Plans have been submitted for checking. FM's are requested to review activities and update durations to meet the delivery date.