



Montana Department of Transportation

PO Box 201001

Helena, MT 59620-1001

Memorandum

To: Dawn Stratton
Fiscal Programming Section

From: Heidi Bruner, P.E.
Engineering Services Supervisor
Environmental Services

Date: August 4, 2011

Subject: SF 099 E of Idaho Border
HSIP 93-1(17)10
Control Number: 7204 000

Environmental Services has determined that this proposed project will not involve unusual circumstances as described under 23 CFR 771.117(b). It therefore qualifies as a Categorical Exclusion under the provisions of 23 CFR 771.117(c), part (8). The project is located on Highway 12 west of Lolo, MT between reference posts 10.1 and 11.4. The proposed project is to provide roadway safety enhancements by installing flashing beacons above curve warning signs, increase size of warning and advisory signs and replace existing chevron signs. A more complete scope of work and location map is attached. This proposed action also qualifies as a Categorical Exclusion under the provisions of ARM 18.2.261 (Sections **75-1-103** and **75-1-201, M.C.A.**).

In accordance with the Federal Highway Administration's (FHWA) letter of March 29, 1999, please notify FHWA that the proposed action is being processed in accordance with 23 CFR 771.117(c).

Attachment

cc: Doug Moeller District Administrator- Missoula
Paul F. Ferry, P.E. Highways Engineer
Kent M. Barnes, P.E. Bridge Engineer
Ivan Ulberg Project Design Manager
Robert Stapley Right-of-Way Bureau Chief
Walt Scott Utilities Section Supervisor
Suzy Price, P.E. Contract Plans Supervisor
Tom Martin, P.E. Environmental Services Bureau Chief
Susan Kilcrease Missoula Project Development Engineer
Gene Kaufman, P.E. Operations Engineer-FHWA
Environmental Quality Council
File



Memorandum

To: Distribution

From: Roy Peterson, PE IBU (for)
Traffic and Safety Engineer

Date: August 4, 2011

Subject: HSIP 93-1(17)10
SF 099 E of Idaho Border
UPN 7204 000
Work Type 410 – Traffic Signals and Lighting

Attached is the Project Report which was approved on July 19, 2011. We request that those on the distribution review this report and submit your comments within two weeks of the approval date. Due to the limited nature of the project, MDT desires to deliver this safety project in spring / summer 2012; the report will only address necessary features specific to this project.

Your comments and recommendations are also requested if you are not on the direct distribution list. When the environmental documentation is approved, we will finalize design and prepare to let the project to contract. No right-of-way will be required for this project.

Distribution:

Doug Moeller, District Administrator	Lynn Zanto, Rail, Transit, & Planning Division Administrator
Tom Martin, Environmental Services Bureau Chief	Jake Goettle, Construction Engineering Services Bureau
Robert Stapley, Right-of-Way Bureau Chief	Jon Swartz, Maintenance Administrator
Paul Ferry, Highways Engineer	

cc:

Dawn Stratton, Fiscal Programming Section	Traffic and Safety File
Ivan Ulberg, Project Engineer	Rod Blessing / Ralph Revello
	Lolo National Forest
	Fort Missoula Bldg. 24
	Missoula MT 59804

e-copies:

Jim Walther, Engineering, Preconstruction Engineer	Shane Stack, District Preconstruction
Lesly Tribelhorn, Highways Design Engineer	Ed Toavs, District Maintenance Chief
Bonnie Gundrum, Env. Resources Section Supervisor	David Hoerning, R/W Engineering Manager
Pat Basting, District Biologist	Paul Johnson, Project Analysis Bureau
Suzan Kilcrease, District Project Development Engineer	Jean Riley, Planner
Danielle Bolan, Traffic Engineer	Marty Beatty, Engineering Information Services
James Freyholtz, District Traffic Project Engineer	Paul Grant, Public Involvement Officer
Kraig McLeod, Safety Management Engineer	Jim Cornell, Traffic Signing
Allen Levens, Traffic Electrical	Jean Crow, District R/W Supervisor
Alyce Fisher, Fiscal Programming	Wayne Noem, Secondary Roads Engineer

Project Report

HSIP 93-1(17)10, SF 099 E of Idaho Border
Project Engineer: Ivan B. Ulberg, PE

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Introduction

This project has not been field reviewed. The report is generated from information gathered by the Safety Management Section during their review of the site, reviewing electronic images available on-line, and Department documentation. The site will be reviewed during the design process to confirm all design-critical elements.

Proposed Scope of Work

The proposed project has been nominated to provide roadway safety enhancements by installing flashing beacons above the curve warning signs at either end of the series of curves, increase the size of the warning signs and advisory 35 mph signs, replace the existing chevron signs. All sign locations will be evaluated to assure proper placement.

Purpose and Need

The majority of crashes within the project limits are single-vehicle, run-off crashes. The purpose of this project is to provide improved signage to alert drivers as to the set of 'S-curves' found within the project limits.

Project Location and Limits

The project is located in Missoula County on N-93 (US 12), approximately 22 miles west of Lolo. The project covers a length of 1.285 miles, from RP 10.10 to RP 11.40. There are no major traffic breaks within these limits. The functional classification of this highway is "rural, principal arterial".

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.

Physical Characteristics

This section of N-93 runs through rural, rolling terrain. According to the MDT Road Log, this section of roadway was reconstructed in 1964 and improved in 2003, under project NH 93-1(15)0. Surfacing thickness is reported to be 7.97" of PMS over 11.0" of compacted gravel base. Within the limits, the highway is comprised of two 12' lanes with 2' shoulders paralleling the roadway in both directions of travel.

The vertical alignment consists of a gentle downhill slope in the eastbound direction of travel. The entirety of the project occurs within a fill section. There is one length of guardrail running along the eastbound side of the highway; it is approximately 1200' long and runs from ~RP 10.16 through ~RP 10.38. Outside of this section, the side slopes do not appear to exceed a 4:1 ratio. However, through a large portion of the project, there is an abrupt back slope present on the westbound side of the highway; this occurs mainly with in two sections: one from ~RP 10.64 through ~RP 10.97 and the other ~RP 11.09 through ~RP 11.25.

Traffic Data

The traffic data for this location is as follows:

2010 (Present) AADT = 750
2013 (Letting) AADT = 760
2033 (Design) AADT = 930
DHV = 150
Truck% = 24.6%
Equivalent Single Axle Load = 97
Annual Growth Rate = 1.0%

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Project Engineer: Ivan B. Ulberg, PE

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Crash Analysis

The original crash analysis used to generate this project was for the time period November 1, 2000 through December 31, 2007. A total of 9 crashes were identified, 8 of which were identified as addressable with the proposed improvements. Of these, four were injury crashes resulting in five injuries, four were property damage only, and no fatal crashes were reported. A benefit / cost (B/C) ratio of 50.27 was calculated.

An updated crash analysis was performed in this area to confirm that a crash trend is still present. Eighteen crashes occurred on N-93 from RP 10.10 to RP 11.40 between January 1st, 2001 and December 31th, 2010. The main crash trend identified at this location continues to be run-off-the-road; all but one of the recorded events were single-vehicle crashes. With regard to injuries, nine of the eighteen events resulted in no injury, three resulted in non-incapacitating evident injuries, four included incapacitating injuries and there were two fatalities crashes.

Major Design Features

- a. **Design Speed.** The design speed for this section of roadway based on its functional classification of "rural, principal arterial" in rolling terrain is 60 miles per hour (mph). The posted speed limit is 70 mph with a night-time speed of 65 mph for passenger vehicles; for trucks, the day and night speed limits are 60 mph and 55 mph, respectively.
- b. **Horizontal Alignment.** The horizontal alignment consists of 'S-curves', a composition of three left-hand curves and two right-hand curves, with respect to eastbound traffic. No changes will occur to the horizontal alignment.
- c. **Vertical Alignment.** There is a gentle downward slope, running from the west to the east end, throughout the length of roadway within the project limits. No changes will occur to the vertical alignment.
- d. **Typical Sections and Surfacing.** The existing roadway section will not change: its widths and surfacing will remain as is. There is no slope work or alignment modification included in the scope of work.
- e. **Hydraulics.** The West Fork Lolo Creek runs parallel to the highway throughout the entire project. Due to the lack of physical work being performed on the roadway, no hydraulic-related involvement is anticipated.
- f. **Traffic.** The traffic section will be responsible for the plans and project delivery.
- g. **Pedestrian/Bicycle/ADA.** There are no pedestrian, bicycle or ADA specific features included in this project.
- h. **Context Sensitive Design Issues.** The entirety of this project is located within the Lolo National Forest.

Other Projects

No other projects are currently under construction or in design that will affect this project.

Design Exceptions

No design exceptions are anticipated for this project.

Right-of-Way

No new right of way is necessary for this project. All work will take place within the existing shoulder.

Access Control

No changes to access control are proposed.

Intelligent Transportation Systems (ITS) Features

No ITS features will be used on this project.

Experimental Features

No experimental features will be used on this project.

Utilities/Railroads

There are no railroads affected by this project. Overhead utilities run adjacent to the project corridor. A one-call will be required prior to placing new signposts.

Survey

No surveys, such as a soil survey or an S.U.E., are warranted.

Public Involvement

The project will include a 'Level A' standard of public involvement. This includes a news release explaining the project and a departmental point of contact.

Environmental Considerations

A 'Categorical Exclusion' is anticipated on this project.

Traffic Control

The plans package will include a Transportation Management Plan (TMP) consisting mainly of a Traffic Control Plan (TCP). Impacts to traffic will be low, and the work can be completed from the shoulder of the roadway. All signing and/or flagging operations will be in accordance with the Manual on Uniform Traffic Control Devices.

Project Management

Ivan Ulberg will be the Project Design Engineer. This project does not require full FHWA oversight.

Proposed OPX-2 Flowchart

The OPX-2 flowchart will be modified to include the bare minimum needed to get us to a letting. Proposed are the following activities:

- 950 – Program P.E.: 1 day, 4 hours (critical path)
- 400 – Preliminary Field Review: 5 days, 40 hours (critical path)
- 706 – Prepare / Review BRR/BA: 20 days, 20 hours
- 722 – Enviro Doc: 20 days, 20 hours (critical path)
- 902 – Request News Release: 1 day, 4 hours
- 652 – Distribute News Release: 5 days, 8 hours
- 968 – Secure Design Appr: 10 days, 20 hours (critical path)
- 404 – Preliminary Electrical Plans: 10 days, 20 hours (critical path)
- 414 – Prepare Signing & Pavement Markings: 15 days, 50 hours (critical path)
- 988 – Final PIH Inspection: 15 days, 60 hours (critical path)
- 445 – Transmit to Contract Plans (electrical): 2 days, 5 hours (critical path)
- 446 – Transmit to Contract Plans (signing): 2 days, 5 hours (critical path)

The existing OPX-2 flowchart assigned to this project may be used as the template to make these changes.

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Preliminary Cost Estimate

	Estimated cost	Inflation (INF) (from PPMS)	TOTAL costs w/INF + IDC (from PPMS)
Signing, Striping	\$3,000		
Solar Flasher (2)	\$8,000		
Traffic Control	\$1,200		
Subtotal	\$12,200		
Mobilization (10%)	\$1,200		
Subtotal	\$13,400		
Contingencies (10%)	\$1,300		
Total CN	<u>\$ 14,700</u>	<u>\$ 1,695</u>	<u>\$ 17,975</u>
CE (10%)	<u>\$ 1,500</u>	<u>\$ 172</u>	<u>\$ 1,833</u>
TOTAL CN+CE	<u>\$ 16,200</u>	<u>\$ 1,867</u>	<u>\$ 19,808</u>

Note: Inflation is calculated in PPMS to the letting date. IDC is calculated at 9.64% as of FY 2012.

Ready Date

A ready date will be set once the project is sent for overrides. If available, this project's limited scope lends itself for consideration to be installed by MDT Maintenance forces.

Site Map

