



September 16, 2013

Brian Hasselbach
Federal Highway Administration (FHWA)
585 Shepard Way
Helena MT 59602

Subject: Statewide Programmatic Categorical Exclusion for Pavement Preservation Projects
IM 94-5(39)169
Terry-East & West (WB)
UPN 7942000

Dear Brian Hasselbach:

The MDT Environmental Services Bureau has reviewed the Preliminary Field Review/Scope of Work Report (PFR/SOW) for the subject project. Based on the completed Environmental Checklist for Pavement Preservation Projects (Checklist), we conclude that the Statewide Programmatic Categorical Exclusion for these types of projects would cover this project. For your information, I have attached a copy of the PFR/SOW and the signed Environmental Checklist. Environmental-related Special Provisions are not anticipated at this time.

If you have questions or concerns, please contact Tom Atkins at 444.7202. We will be pleased to assist you.

Sincerely,

Heidi Bruner, P.E.
Environmental Services Bureau Engineering Section Supervisor

Attachments: PFR/SOW Report, Environmental Checklist

Enclosure

e-copies w/checklist encl.:

Shane Mintz, Glendive District Administrator
Tom Martin, P.E., Environmental Service Bureau Chief
Heidi Bruner, P.E., ESB Engineering Section Supervisor
Paul Ferry, P.E., Highways Engineer
Kevin Christensen, P.E., Construction Engineer
Suzy Price, Contract Plans Bureau Chief
Lisa Hurly, Fiscal Programming
Tom Erving, Fiscal Programming
Montana Legislative Branch Environmental Quality Council
File

HB: S:\PROJECTS\GLENDIVE\7942000\7942000ENCED_PAVEPRES.docx

(FOR PROJECTS WITH NO RIGHT-OF-WAY INVOLVEMENT)

Applicant cannot be authorized to proceed with the proposed work until ALL of the conditions of the checklist have been satisfied.

ENVIRONMENTAL CHECKLIST FOR PAVEMENT PRESERVATION PROJECTS

(CRACK SEALING, SEAL & COVER, THIN OVERLAYS, MILL & FILL, PLANT MIX LEVELING, MILL OGFC, MICRO SURFACING, FOG SEAL)

Project Number: IM 94-5(39)169 Control No 7942000 Project Name: Terry-East & West (WB)
Reference Post (Station): 169.4 To Reference Post (Station): 178.1
Applicant's Name: Montana Department of Transportation Address: PO Box 201001; Helena, MT 59620-1001
Type of Proposed Pavement Preservation Activity: Mill/Fill, Seal and Cover

IMPACTS ON THE PHYSICAL ENVIRONMENT (TO BE COMPLETED BY APPLICANT)

Table with 3 columns: Impact Questions, Yes, No, Comment. Contains 14 rows of questions regarding environmental impacts like rivers, species, water quality, wetlands, etc.

Checklist prepared by: Kevin Gilbert Applicant

Project Design Engineer Title

9/9/2013 Date

Approved by: [Signature] Environmental Services

ENVIRONMENTAL ENGINEERING SECTION SUPERVISOR Title

9/18/13 Click here to enter a date. Date



Montana Department of Transportation
PO Box 201001
Helena, MT 59620-1001

Memorandum

To: Paul Ferry, P.E.
Highways Engineer

From: Damian Krings, P.E. *DMK*
Road Design Engineer

Date: September 9, 2013

Subject: **IM 94-5(39)169**
Terry-East & West (WB)
UPN 7942000
Work Type 160-Minor Rehabilitation

Please approve the attached Preliminary Field Review Report/Scope of Work Report.

Approved PAUL FERRY Date 9/9/13
Paul Ferry, P.E.
Highways Engineer

The same report is also being distributed under a separate cover as a Scope of Work Report for comments and approval recommendations.

cc (w/attach.):
Damian Krings, Road Design Engineer
Highways File

Preliminary Field Review/Scope of Work Report

IM 94-5(39)169, Terry-East & West (WB), CN 7942000
Project Manager: Steve Heidner, P.E.

Page 1 of 8

Introduction

A field review was held August 15, 2013. The following attended:

Shane Mintz, DA-Glendive	Steve McEvoy, Surfacing-Helena
Jim Frank, DPE-Glendive	Larry Sickerson, Environmental-Helena
Steve Heidner, DPDE-Glendive	Scott Walter, Bridge-Helena
Kevin Gilbert, Road Design-Helena	Mike Skillestad, Maintenance-Glendive
Jay Fleming, DCOE-Glendive	*Randy Robertson, Maintenance-Terry
Shane Jarvis, Road Design-Glendive	*Field only

Proposed Scope of Work

Scope of work includes:

Mill/Fill Driving Lane only, 14 ft, wide, 0.20' 3/4" Grade S PG 70-28, (WB only)

Seal and Cover

30-year bridge end design

Leveling: 250 tons/mile

Cold Millings to be used on the project or become property of Prairie County or the contractor

Rumble Strips

Purpose and Need

The purpose of this project is to extend the existing pavement life and provide a safer, smoother riding surface.

Project Location and Limits

- Counties: Prairie, T 11, 12 N, R 50, 51 E
- Route and Functional Classification: Interstate 94
- Begin Eastbound: RP 169.4±, as-built station 1096+71.10 on I 94-5(11)166, 1970
- End Eastbound, RP 178.1±, as-built station 1527+61.80 on I 94-5(11)166, 1970
- Length: Eastbound 8.5 miles

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 Traffic Control Plan (TCP). These issues are discussed in more detail under the Traffic Control and Public Involvement sections.

Physical Characteristics

a. As-builts:

This section of roadway was reconstructed in 1970 with project I 94-5(11)166.

The following are recent improvements:

IM 94-5(30)170, RP 169.5 to RP 185, Overlay 2001

IM 94-5(27)163, RP 162.5 to RP 170, Overlay 1998

b. Pavement width and number of lanes:

The pavement width is approximately 38 ft. converted from metric which includes 2-12 ft. driving lanes and a 4 ft. median shoulder and a 10 ft. outside shoulder.

Preliminary Field Review/Scope of Work Report

IM 94-5(39)169, Terry-East & West (WB), CN 7942000

Project Manager: Steve Heidner, P.E.

Page 2 of 8

c. Surfacing:

The existing surfacing is approximately 8.4 inches on a 22 inch base according to the MDT Roadlog.

*PvMS Index Numbers & Recommended Treatments for 2013 and 2015:

Section	Ride	Rut	ACI	MCI	Construction	Maintenance
RP 164.45 to RP 177.90L Year 2015	79.0	56.2	98.8	97.9	AC Crack/S&C Minor Rehab-Rut	AC Crack/S&C Maint. Rut Fill

d. Thickness of existing overlays:

The latest overlay in 2001 was 0.35 ft. mill/fill in the driving lane with hot recycled plant mix covered by 0.15 ft. plant mix overlay full width. Seal and cover and rumble strips were also included in this last overlay.

e. Terrain:

The existing terrain is rural rolling pasture and farmland.

f. Existing horizontal and vertical alignments:

The horizontal and vertical alignments will not be affected by this overlay project.

g. Existing Structures:

Powder River WB S – 7M SW Terry
MP 169.77
NBI I00094169+07742
Built in 1971 under contract I94-5(11)166 (Drawing 9294)
SR = 94.8 (Structural Deficient)
Length: 538 ft. Width: 41 ft.-6 in (face of curb to face of curb)
There are also 2-20 ft. concrete approach slabs.

Drainage, Vehicle Pass – 6M SW Terry
MP 170.38
NBI I00094170+03521
Built in 1964 under contract I94-5(11)166
SR = 65.0 (Not Deficient) Length: N/A Width: N/A
Culvert

Coal Mine Creek – 4M SW Terry
MP 172.37
NBI I00094172+03051
Built in 1964 under contract I94-5(11)166
SR = 54.0 (Not Deficient) Length: N/A Width: N/A
Culvert

Traffic Data

RP 169.4 to RP 177.9 (WB only)
2012 AADT 2,200 – Present
2016 AADT 2,480 – Letting Year
2036 AADT 4,510 – Design Year
DHV 1230
D EB-51% (WB-49%)
T 31.6%
EAL 1224
AGR 3.0%

Preliminary Field Review/Scope of Work Report

IM 94-5(39)169, Terry-East & West (WB), CN 7942000

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Page 3 of 8

Crash Analysis

The following is from Safety Management's memo dated August 27, 2012.

The analysis is for Interstate 94 from RP 169.4 to RP 177.9 (westbound lanes only) for the 10 ½-year period January 1, 2002 through June 30, 2012.

ENGINEERING STUDY EVALUATION DATE: August 27, 2012

DESCRIPTION: Terry-East & West (WB)

ROUTE & RP: I-94 RP 169.4 to RP 177.9

DATA TIME FRAME: 01-01-2002 TO 06-30-2012

STATEWIDE AVERAGE RURAL INTERSTATE ROUTES STUDY AREA

(2007-2011) (2002-2011)

ALL VEHICLES CRASH RATE: 0.90¹⁾ 0.64¹⁾

ALL VEHICLES SEVERITY INDEX: 1.83²⁾ 1.85²⁾

ALL VEHICLES SEVERITY RATE: 1.64³⁾ 1.18³⁾

TRUCK CRASH RATE: 0.54⁴⁾ 0.32

TRUCK SEVERITY INDEX: 1.81⁴⁾ 1.00

TRUCK SEVERITY RATE: 0.98⁴⁾ 0.32

TRUCK CRASHES: 5

TOTAL RECORDED CRASHES: 34

1) Crash rates are defined as the number of crashes per million vehicle miles.

2) Severity index is defined as the ratio of the sum of fatal and incapacitating injury crashes times 8 plus the number of other injury crashes times 3 plus the number of property damage crashes to the total number of crashes.

3) Severity rate is defined as the crash rate multiplied by the severity index.

4) Statewide average truck accident rate, truck severity index, and truck severity rate are for the years 2007 through 2011.

I. VARIATIONS FROM AVERAGE OCCURRENCE:

• 67.7% of the crashes occurred during dry road conditions vs. 53.0% statewide average for rural interstate routes.

II. CRASH CLUSTERS OR SAFETY PROJECTS:

In 2010, the section between reference point 169.7 to 170.2 was identified as a crash cluster. The main crash trend identified was single vehicle off road overturning crashes in the median. Slope flattening was recommended prior to the Powder River Bridge. However, it was not pursued because the existing slope is 5:1 and the subject resurfacing project was to be let in 2013.

In 2003, the section between reference point 169.5 and reference point 170.2 was identified as a crash cluster. No feasible countermeasure was identified to address any specific crash trend.

In 2001, the section between reference point 169.5 and reference point 170.2 was identified as a crash cluster. The main crash trend was vehicles losing control on an icy bridge deck. A field review was completed in June 2001 and the bridge deck surface was in good condition. No further recommendations were made.

In 2000, the section between reference point 141.150 and reference point 185.5 was identified as a crash cluster. As a result, under project STPHS 94-4(66)14, UPN 4712000, wild animal exclusionary fencing was installed in 2007. The limits for the animal exclusionary fencing were modified to RP 152.1 to RP 169.8.

Preliminary Field Review/Scope of Work Report

IM 94-5(39)169, Terry-East & West (WB), CN 7942000
Project Manager: Steve Heidner, P.E.

Page 4 of 8

III. REMARKS & RECOMMENDATIONS:

The main crash trend was single vehicle crashes (32 crashes). Of the single vehicle crashes, 11 resulted in the vehicle overturning, 15 were wild-animal vehicle collisions and the remaining 8 crashes involved collisions with roadside features.

Please note that since the completion of the wild animal exclusionary fencing there has been a 97% reduction in wild animal-vehicle collisions. There were only 18 total crashes from RP 163.4 to RP 169.5 since the completion of the wild animal exclusionary fencing, 2 of which involved a collision with a wild animal.

There were also 8 median crashes throughout the study area, all of which resulted in the vehicle overturning.

There has been one fatal crash occurring throughout the study area during the 2002-2011 period. The crash involved a vehicle losing control while initiating a passing maneuver and leaving the roadway and overturning.

There were also 2 bridge deck related crashes. Both of these crashes, occurred during icy, snowy, slushy road conditions. One crash resulted in the vehicle overturning and one striking a ditch.

The first six-month period from January 1, 2012 through June 30, 2012 was also queried one crash has occurred during this time.

The crash rate and severity rate are below the statewide averages for rural interstate routes. While the severity index is equal to the statewide average for rural interstate routes.

Major Design Features

a. **Design Speed.**

The design speed for this interstate in rolling terrain is 60 mph. The posted speed is 75 mph for passenger vehicles and 65 mph for trucks.

b. **Horizontal Alignment.**

This project will not affect the horizontal alignment.

c. **Vertical Alignment.**

This project will not affect the vertical alignment.

d. **Typical Sections and Surfacing.**

Mill/Fill driving lane of WB 0.20 ft. depth, 14.0 feet wide, with Grade S 3/4". Use PG 70-28 and asphalt cement content of 5.1%. Seal and cover full width.

e. **Geotechnical Considerations.**

No geotechnical considerations were identified at the preliminary field review.

f. **Hydraulics.**

No hydraulic issues were identified at the preliminary field review.

g. **Bridges.**

There will be no bridge work included in this project. The Bridge work will be completed with the project NHPB-STPB STWD (208), BR Deck Terry-Fallon Area, CN 8127000.

Preliminary Field Review/Scope of Work Report

IM 94-5(39)169, Terry-East & West (WB), CN 7942000
Project Manager: Steve Heidner, P.E.

Page 5 of 8

h. **Traffic.**

The Traffic Section will determine if the existing signing meets reflectivity requirements and if the delineation needs to be upgraded or not. The Traffic Section will also provide pavement marking quantities.

i. **Pedestrian/Bicycle/ADA.**

There is no designated pedestrian or bicycle paths on this route.

j. **Miscellaneous Features.**

Guardrail:

There is both w-beam at the interchanges and Wyoming box beam on this project. The existing guardrail has optional terminal sections. The existing guardrail will be used as is.

Rumble Strips:

New rumble strips will be required as the existing rumble strips are too shallow and would be ineffective if they were to receive a chip seal.

Fencing:

Fencing appeared to be in good condition and will not be included in this project.

Interchanges:

Work will only be done on the mainline. The ramps will not be included in this project.

Cold Milling:

The millings on this project will offered to Prairie County then the contractor. Maintenance has no immediate use for them.

Digouts:

The 30-year bridge end design will be included per the standard detail.

k. **Context Sensitive Design Issues.**

No context sensitive design issues were raised at the preliminary field review.

Other Projects

Project NHPB-STPB STWD (208), BR Deck Terry-Fallon Area, CN 8127000 is in the vicinity of this project. The bridge deck repair project begins at the Powder River Bridge which is just off of the end of this project. No ready date has been set at this time.

Location Hydraulics Study Report

A Location Hydraulic Study Report will not be needed for this project.

Design Exceptions

No design exceptions are needed for this project.

Right-of-Way

No right of way acquisition or construction permits will be needed for this project.

Access Control

No changes to the current access control level are anticipated with this project.

Preliminary Field Review/Scope of Work Report

IM 94-5(39)169, Terry-East & West (WB), CN 7942000

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Page 6 of 8

Utilities/Railroads

No utility conflicts are anticipated with this project.

Cold-In-Place Recycle (for mill & overlay projects only)

CIR is not a viable option for this project as this project provides for leveling full width and a mill/fill just in the driving lane.

Maintenance Items

No Maintenance items were brought up at the time of this field review.

Intelligent Transportation Systems (ITS) Features

No ITS features will be included in this project.

Survey

No survey needs were identified at the preliminary field review.

Public Involvement

It is anticipated that the following level of public involvement will be sufficient at this time:

Level A

News release explaining the project and including a department point of contact.

Environmental Considerations

A programmatic categorical exclusion environmental checklist is appropriate for this project. If situations are observed during construction that may potentially impact water quality, including wetland areas, utilize Best Management Practices (BMP) and/or temporary erosion control measures as necessary to protect the resource. Refer to Section 208 of the MDT Detailed Drawings (2005 English edition) for erosion and sediment control Best Management Practices. The installation of temporary erosion control measures will be paid as "Miscellaneous Work." No water quality permits are anticipated at this time.

Environmental will provide any necessary environmental related special provisions.

Energy Savings/Eco-Friendly Considerations

No energy savings/eco-friendly considerations were discussed for this pavement preservation project.

Experimental Features

No experimental features were discussed at the field review for this pavement preservation project.

Traffic Control

A traffic control plan will be developed as the design of the project progresses. Traffic will be maintained during construction activities throughout the project. Appropriate traffic control devices and signing will be used throughout the project in accordance with the *Manual of Uniform Traffic Control Devices*.

Project Management

Steve Heidner of the Glendive District Office will be the project manager. This project is not under full FHWA oversight.

Preliminary Field Review/Scope of Work Report

IM 94-5(39)169, Terry-East & West (WB), CN 7942000

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Page 7 of 8

Preliminary Cost Estimate

The following is taken from the nomination estimate on PPMS. The estimate will be updated at plan review stage when quantities are available.

	Estimated cost	Inflation (INF) (from PPMS)	TOTAL costs w/INF + IDC (from PPMS)
Road Work	\$1,150,000		
New Structure			
Remove Structure			
Detour			
Traffic Control	\$139,000		
Subtotal	\$1,289,000		
Mobilization (10%)	\$129,000		
Subtotal	\$1,418,000		
Contingencies (10%)	\$142,000		
Total CN	<u>\$ 1,560,000</u>	<u>\$ 211,000</u>	<u>\$ 1,967,000</u>
CE (10%)	<u>\$ 160,000</u>	<u>\$22,000</u>	<u>\$ 202,000</u>
TOTAL CN+CE	<u>\$1,720,000</u>	<u>\$ 233,000</u>	<u>\$ 2,169,000</u>

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 9.12% for FY 2014.

Ready Date

The current ready date in OPX2 is October 1, 2014.

Site Map

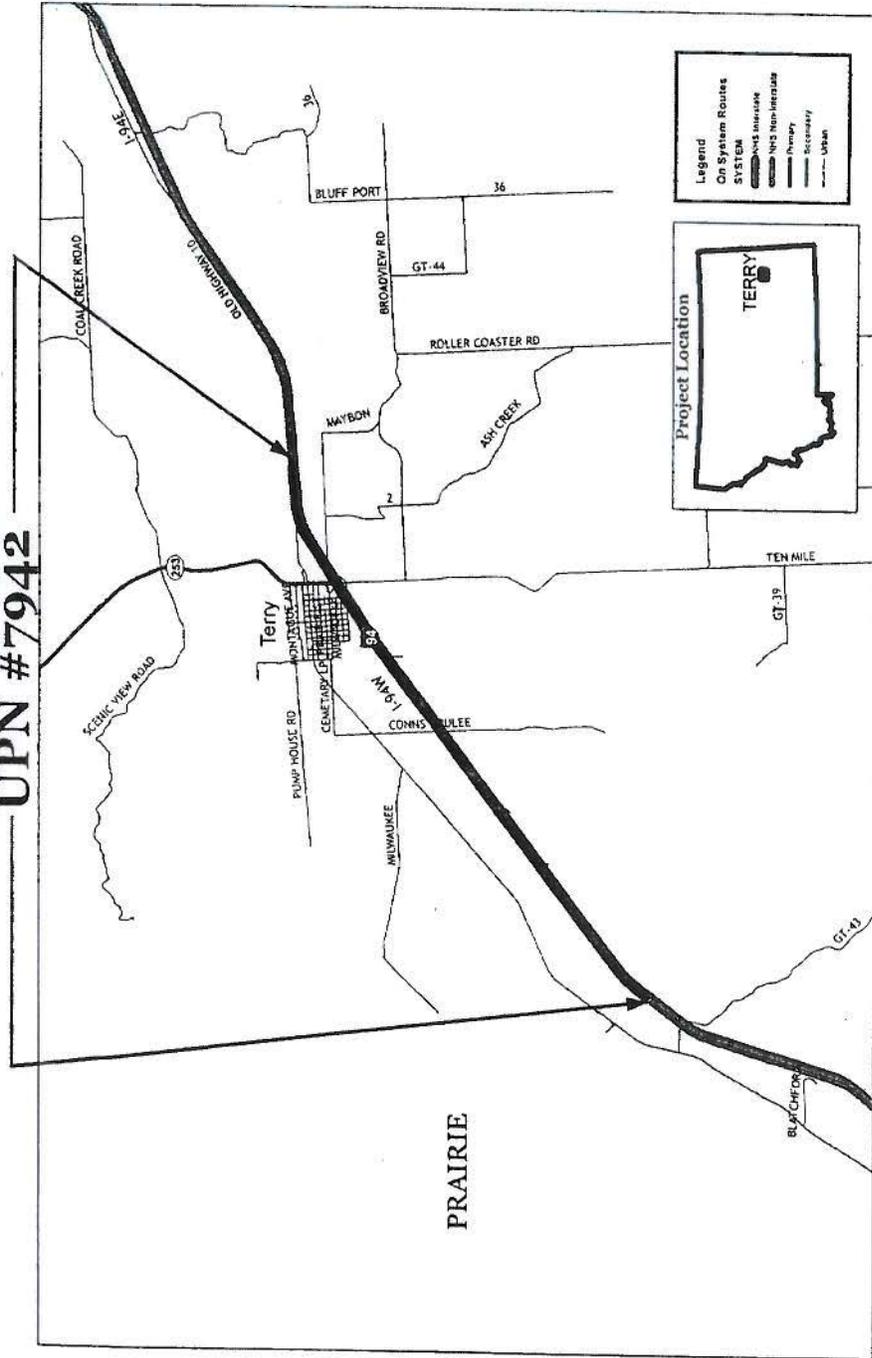
The site map is attached.

Preliminary Field Review/Scope of Work Report

IM 94-5(39)169, Terry-East & West (WB), CN 7942000

Project Manager: Steve Heidner, P.E.

**TERRY - EAST & WEST (WB)
UPN #7942**



MONTANA
MDTA
DEPARTMENT OF TRANSPORTATION

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