



January 31, 2013

Alan Woodmansey
Operations Engineer
Federal Highway Administration
585 Shepard Way
Helena, MT 59601-9785

Subject: Statewide Pavement Preservation Project
HSIP 16-2(14)47
SF119-SKID TRTMNT S OF ROUNDUP
Control Number: 7893 000

Dear Alan Woodmansey,

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.

The attached special provision will be included in this project:

- PROTECTION OF AQUATIC RESOURCES

For your information, I have attached a copy of the PFR/SOW, the signed Environmental Checklist, and the special provision listed above. If you have questions or concerns, please contact Tom Gocksch at 444-9412. He will be happy to assist you.

Sincerely,

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

e-copy (w/ all attach):

- | | |
|-----------------------|--------------------------------------------------------|
| Stefan Streeter, P.E. | Billings District Administrator |
| Roy Peterson, P.E. | Traffic and Safety Engineer |
| Tom S. Martin, P.E. | Chief, Environmental Services Bureau |
| Heidy Bruner, P.E. | Environmental Services Bureau Engr. Section Supervisor |
| Kevin Christensen, PE | Construction Engineer |
| Suzu Price | Contract Plans Bureau Chief |
| Nicole Pallister | Fiscal Programming |
| Tom Erving | Fiscal Programming |
| Bill Semmens | Billings District Biologist |
| Tom Gocksch, PE | Environmental Services |

Hard copy (w/ checklist):

- Montana Legislative Branch Environmental Quality Council (EQC)
- Environmental Services File

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(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: HSIP 16-2(14)47 Control No 7893000 Project Name: SF119-skid trtmnt s of roundup
Reference Post (Station): 47.6 To Reference Post (Station): 47.6
Applicant's Name: Montana Department of Transportation Address: PO Box 201001; Helena, MT 59620-1001
Type of Proposed Pavement Preservation Activity: Epoxy overlay and anti-skid treatment on bridge deck

Table with 3 columns: Impact Questions, Yes, No, Comment. Contains 14 rows of questions regarding environmental impacts like Wild or Scenic Rivers, species, water quality, wetlands, and air quality.

Checklist prepared by: Jeff Olsen (Applicant), Project Design Engineer, 1/24/2013
Approved by: [Signature] (Environmental Services), Environmental Engineering Section Supervisor, 2/5/13

Project Number: Click here to enter text. **Control No.:** Click here to enter text. **Project Name:** Click here to enter text.

(When any of the above questions are checked "Yes")

The Applicant is **not** authorized to proceed with the proposed work until the checklist has been reviewed and approved, as necessary, and any requested conditions of approval have been incorporated.

- A. Complete the checklist items 1 through 7, indicating "Yes" or "No" for each item. Include comments, explanations, information sources, and a description of the magnitude/importance of potential impacts in the right hand column. Attach additional and supporting information as needed. The checklist preparer, by signing, certifies the accuracy of the information provided.
- B. When "Yes" is indicated on any item, the checklist preparer must explain why and provide the appropriate documentation, evaluation, permit, and/or mitigation measures required to satisfy environmental concerns for the project. Use attachments if necessary. **Any proposed mitigation measures will become a condition of approval.**
- C. If the applicant checks "Yes" for any one item, the checklist and MDT's mitigation proposal, documentation, evaluation and/or permit shall be submitted to MDT Environmental Services Bureau. Electronic format is preferred. Contact Number 444-7228.
- D. When the applicant checks a "Yes" item, MDT cannot be authorized to proceed with the proposed work until Environmental Services Bureau reviews the information and signs the checklist.
- E. MDT will obtain all necessary permits or authorizations from other entities with jurisdiction prior to beginning the Pavement Preservation Activity.
- F. The links above are provided as a starting point for potential sources of information for completing the checklist. The Applicant is encouraged to consult Environmental Services Bureau and/or other information sources.

PROTECTION OF AQUATIC RESOURCES

Aquatic resources include, but are not limited to, wetlands, springs, streams (perennial, ephemeral, and intermittent drainages), rivers, lakes, ponds, reservoirs, irrigation systems, and associated riparian areas.

Impacts to aquatic resources, including the Musselshell River, are not anticipated in association with this project. MDT has NOT acquired any water quality permits or authorizations, including a Clean Water Act Section 404 permit (COE), a Stream Protection Act 124 (MFWP), or a 318 Authorization (DEQ). Therefore, impacts to any and all aquatic resources located adjacent to the project are not permitted. Avoid all equipment traffic, fill material, staging activities and other disturbances to aquatic resources.

- *To prevent impacts to fish and other aquatic organisms; measures must be in place to prevent all Flexogrid™ products (deck sealant and friction course) from leaving the bridge deck and entering the Musselshell River.*

Any impacts to these areas and associated consequences, without the proper permitting, are the responsibility of the Contractor. The Contractor must secure the appropriate permits or authorizations prior to working in these areas. If complete avoidance of these areas is not possible, contact the Project Manager immediately and coordinate the permitting effort with the District Biologist at 444-7727 or the District Environmental Engineering Specialist at 657-0273.

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JAN 24 2013
ENVIRONMENTAL™



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

Memorandum

To: Tom S. Martin, P.E, Chief, Environmental Services Bureau

From: Roy Peterson, P.E., Traffic and Safety Engineer

Date: January 24, 2013

Subject: "Click here and type project number"
SF119-SKID TRTMNT S OF ROUNDUP
UPN 7893000
Work Type 310 Roadway & Roadside Safety Improvements

Attached is the Preliminary Field Review/Scope of Work Report for the subject project. The project meets the criteria for the Statewide Programmatic Categorical Exclusion for pavement preservation projects and the environmental checklist is attached.

Please send the notification for the environmental documentation on this project to the FHWA. If you need additional information, contact Jeff Olsen at 444-7610.

Attachments

copies: Dave Johnson, w/attach (checklist only)
Bridge File, "

Environmental Services

PR	UNIT	DATE	AREA	TIME
		1/31	Soiling	

Comment ←

← *Tom G*
← *Bill*
← *JOU* 1/28
← *Jan 28*

← *Arron* 1/28

1/23/13
See comment to Johnson



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



Memorandum

To: Distribution

From: Roy Peterson, P.E.
 Traffic and Safety Engineer

Date: January 14, 2013

Subject: HSIP 16-2(14)47
 SF119-SKID TRTMNT S OF ROUNDUP
 UPN 7893000
 ROADWAY & ROADSIDE SAFETY IMPROVEMENTS (310)

Attached is the Preliminary Field Review Report/Scope of Work Report which was approved on JAN 16, 2013. We request that those on the distribution review this report and submit your concurrence within two weeks of the approval date.

Your comments and recommendations are also requested if you do not concur or concur subject to certain conditions. When all personnel on the distribution list have concurred, and the environmental documentation is approved, we will submit this report to the Preconstruction Engineer for approval.

I recommend approval:

Approved _____ Date _____

Distribution:

- | | |
|-------------------------------------------|--------------------------------------------------------------|
| Stefan Streeter, District Administrator | Tom Martin, Environmental Services Bureau Chief |
| Paul Ferry, Highways Engineer | Lynn Zanto, Rail, Transit, & Planning Division Administrator |
| Kent Barnes, Bridge Engineer | Jake Goettle, Construction Engineering Services Bureau |
| Robert Stapley, Right-of-Way Bureau Chief | Matt Strizich, Materials Engineer |

cc:

- | | |
|------------------------------------|-------------------------------------------|
| Jeff Olsen, Project Design Manager | Dawn Stratton, Fiscal Programming Section |
| Bridge File | Damian Krings, Road Design Engineer |

e-copies:

- | | |
|----------------------------------------------------|----------------------------------------------------|
| Jim Walther, Engineering, Preconstruction Engineer | Jake Goettle, Construction Bureau – VA Engineer |
| Lesly Tribelhorn, Highways Design Engineer | Gary Neville, District Preconstruction |
| Mark Goodman, Hydraulics Engineer | Rod Nelson, District Projects Engineer |
| Dave Leitheiser, District Hydraulics Engineer | Bill Henning, District Materials Lab |
| Jon Axline, Env. Resources Section Supervisor | Randy Roth, District Maintenance Chief |
| Bill Semmens, District Biologist | CB Clearwood, District Right of Way Supervisor |
| Tom Gocksch, District Project Development Engineer | Phillip Inman, Utilities Engineering Manager |
| Danielle Bolan, Traffic Operations Engineer | David Hoerning, R/W Engineering Manager |
| Ivan Ulberg, Traffic Design Engineer | Greg Pizzini, Acquisition Manager |
| LeRoy Wosoba, District Traffic Project Engineer | Joe Zody, R/W Access Management Section Manager |
| Kraig McLeod, Safety Engineer | Matt Strizich, Materials Engineer |
| Ryan Dahlke, Project Design Engineer | Daniel Hill, Pavement Analysis Engineer |
| Marty Beatty, Engineering Information Services | Cameron Klobberdanz, District Geotechnical Manager |
| Paul Grant, Public Involvement Officer | Bryce Larsen, Supervisor, Photogrammetry & Survey |
| Sue Sillick, Research Section Supervisor | Paul Johnson, Project Analysis Bureau |
| Alyce Fisher, Fiscal Programming Section | Jean Riley, Planner |
| | Dawn Stratton, Fiscal Programming Section |



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

Memorandum

To: Roy Peterson, P.E.
Traffic and Safety Engineer

From: David Johnson, P.E. *DFJ*
Bridge Design Engineer

Date: January 14, 2013

Subject: HSIP 16-2(14)47
SF119-SKID TRTMNT S OF ROUNDUP
UPN 7893000
ROADWAY & ROADSIDE SAFETY IMPROVEMENTS (310)

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

Approved *Roy Peterson* Date *JAN 16, '13*
Roy Peterson, P.E.
Traffic and Safety 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.):
Jeff Olsen. Project Design Manager
Master file

Preliminary Field Review/Scope of Work Report

HSIP 16-2(14)47 SF119-SKID TRTMNT S OF ROUNDUP

Project Manager : Jeff Olsen

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Introduction

A project preliminary field review was conducted on November 14, 2012 with the following individuals in attendance:

Gary Neville	District Engineering Services Supervisor	Billings
Doug Lutke	Lewistown Maintenance	Lewistown
Ryan Dahlke	Road Design	Helena
Louise Stoner	Road Design	Helena
Jennifer Schneidt	Road Design	Helena
Jin Nelson	Bridge Bureau	Helena
Jarrold Plummer	Bridge Bureau	Helena
Cameron Kloberdanz	Geotech	Helena
Gerry Brown	Construction	Lewistown
Jeremy Taylor	Hydraulics	Helena

A second office review was held on December 17, 2012 with the following in attendance:

Ryan Dahlke	Road Design	Helena
Craig McLeod	Safety Engineer	Helena
Patricia Burke	Traffic & Safety	Helena
Jeff Olsen	Bridge Bureau	Helena
Cameron Kloberdanz	Geotech	Helena
Bill Semmens	Environmental	Helena
Jeremy Taylor	Hydraulics	Helena

Proposed Scope of Work

The proposed project has been nominated to provide a skid treatment to the bridge deck on NBI P00016047+0.5501. Flexogrid™ Bridge Deck Overlay System, which is both a deck sealant and a friction course, will be applied to the bridge deck. This is an experimental project that will be awarded through direct purchasing.

Purpose and Need

The purpose and need for this project consist of improving skid resistance on the bridge deck with the intent of reducing the number of accidents on the bridge under icy or frosty conditions.

Project Location and Limits

The project location is the bridge over the Musselshell River approximately one mile southwest of Roundup on US 87 (N16). The work will be limited to just the bridge deck.

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).

Preliminary Field Review/Scope of Work Report

HSIP 16-2(14)47 SF119-SKID TRTMNT S OF ROUNDUP

Project Manager : Jeff Olsen

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Physical Characteristics

This 273 ft long, three-span prestressed concrete bridge was constructed in 1996. It contains two 12 ft driving lanes and two 8 ft shoulders for a total width of 40 ft. The bridge is located within a 2292ft horizontal curve and a 600 ft sag vertical curve. The local terrain is rolling and contains numerous horizontal curves both North and South of the bridge. Skid resistance testing was performed on the existing bridge deck on June 12, 2012. The resulting skid numbers were 46.8 in the NB lane and 40.5 in the SB lane.

Bridge Data:

Bridge ID number	P00016047+05501
Feature Crossed	Musselshell River
Feature carried	US 87 (N16)
Year built	1996
Deck width (out-to-out)	42.33 ft
Roadway width	40.0 ft
Bridge length	273.0 ft
Span lengths	90.75 ft – 91.50 ft – 90.75 ft
Girder type	Prestressed Concrete
Sufficiency rating	80
Structure status	Not deficient
Deck rating	8
Superstructure rating	8
Substructure rating	7

Traffic Data

The traffic data for this section of N-16 is as follows:

2012 ADT (present) =	2,730
2014 ADT (letting) =	2,800
2034 ADT (design) =	3,690
DHV =	450
Percent trucks =	11.1%
ESAL's =	164
Annual Growth Rate =	1.4%

Crash Analysis

The crash analysis for the subject project as requested by memorandum dated September 6, 2012 is summarized below. The analysis is for the bridge crossing the Musselshell River (NBI# P00016047+0.5501) on Non-Interstate National Highway Route 16 at reference post 47.5±, for the dates January 1, 2000 through December 31, 2009.

The Montana Highway Patrol records show 4 crashes on or related to this bridge during the study time. All crashes involved vehicles heading south bound and cite having icy road conditions in which 1 resulted in a roll over. There were 2 injury crashes with 2 incapacitating injuries and one non-incapacitating injury, and 2 property damage only crashes. The safety improvements in this area yielded a benefit-to-cost ratio of 3.0, assuming a \$95,188 construction cost for the time period January 1, 2000 through December 31, 2009.

Crash data for the area from January 1, 2010 through June 30, 2012 was also evaluated. There were no crashes reported that occurred on or were related to the bridge.

Preliminary Field Review/Scope of Work Report

HSIP 16-2(14)47 SF119-SKID TRTMNT S OF ROUNDUP

Project Manager : Jeff Olsen

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Major Design Features

- a. **Design Speed.** The design speed for the project under which this bridge was constructed was 60 mph. The posted speed limits within the project are the standard rural limits for Montana (70 mph day and 65 mph night for cars, 60 mph day and 55 mph night for trucks).
- b. **Horizontal Alignment.** The existing horizontal alignment will be unaffected by this project.
- c. **Vertical Alignment.** The vertical alignment will be unaffected by this project.
- d. **Typical Sections and Surfacing.** The bridge is on a constant 6% superelevation and will be maintained.
- e. **Geotechnical Considerations.** There are no geotechnical issues within the scope of this project. The field review noted some fill sloughing under both abutments. Review of the previous bridge inspections revealed that this has been an ongoing issue. A leveling course was placed behind the abutments sometime around 2003. The latest two inspections show little or no change suggesting that the approach fills have somewhat stabilized.
- f. **Hydraulics.** There will be no hydraulic involvement on this project.
- g. **Bridges.** The bridge work will consist of placing an epoxy overlay with a skid resistant surfacing. Flexogrid™ Bridge Deck Overlay System will be used as an experimental project.
- h. **Traffic.** No changes to traffic systems or signing are anticipated. Maintenance will provide new striping across the bridge after the project is complete.
- i. **Pedestrian/Bicycle/ADA.** This project will have no pedestrian/bicycle/ADA impacts.
- j. **Miscellaneous Features.** No miscellaneous features have been identified.
- k. **Context Sensitive Design Issues.** No context sensitive issues have been identified.

Other Projects

HSIP 52-2(38)49, SF-109 SKD TRTMNT – E. of Kalispell, CN 7507 is a similar experimental projects using the Flexogrid™ Bridge Deck Overlay System. The overlay product is a truck applied system, which will be mobilized from out-of-state. Although the two projects are about 400 miles apart, awarding these two projects together should result in a lower product cost.

Design Exceptions

No design exceptions are anticipated.

Right-of-Way

Neither new right-of-way nor construction permits will be required.

Utilities/Railroads

No railroad tracks or parcels have been identified in the project area. No utilities will be affected by this project.

Maintenance Items

Maintenance forces will stripe the bridge deck upon completion of the project.

Intelligent Transportation Systems (ITS) Features

There are no ITS solutions proposed.

Survey

No survey is needed for this project.

Preliminary Field Review/Scope of Work Report

HSIP 16-2(14)47 SF119-SKID TRTMNT S OF ROUNDUP

Project Manager : Jeff Olsen

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Public Involvement

Level A public involvement is appropriate for this project, which will include a news release explaining the project and a department point of contact.

Environmental Considerations

A categorical exclusion is the anticipated level of Environmental Documentation for this project. No work is proposed within the bed and bank, or below ordinary high water, therefore no Clean Water Act 404 permit or SPA 124 notification would be required. No threatened, endangered, proposed, candidate species or eagle nests have been documented within 2 miles of this project; therefore, no impacts to any special status species are anticipated.

Energy Savings/Eco-Friendly Considerations

The Flexogrid™ Bridge Deck Overlay System is a deck sealant as well as an anti-skid treatment. Using this product instead of just an anti-skid treatment alone will result in a material savings by extending the useful life of the deck.

Experimental Features

The Flexogrid™ Bridge Deck Overlay System will be used as an experimental feature. The MDT Research Programs section has prepared a work plan, which was approved by FHWA on January 3rd, 2013.

Traffic Control

The bridge deck overlay system will be applied on one half of the bridge at a time using single lane traffic closures. A Transportation Management Plan (TMP) consisting mainly of a Traffic Control Plan (TCP) is appropriate for this project.

Project Management

The Bridge Bureau will be responsible for the plans. Jeff Olsen is the Project Design Manager. This project is not under full FHWA oversight.

Preliminary Cost Estimate

The cost programmed to construct the project was \$95,200 for CN and \$9,500 for CE.

	Estimated cost	Inflation (INF) (from PPMS)	TOTAL costs w/INF + IDC (from PPMS)
Road Work	\$0		
Bridge Work	\$60,000		
Remove Structure	\$0		
Detour	\$0		
Traffic Control	\$5,000		
Subtotal	\$65,000		
Mobilization (10%)	\$6,500		
Subtotal	\$71,500		
Contingencies (10%)	\$7,150		
Total CN	<u>\$78,650</u>	<u>\$12,288</u>	<u>\$101,013</u>
CE (10%)	<u>\$7,865</u>	<u>\$1,228</u>	<u>\$10,100</u>
TOTAL CN+CE	<u>\$86,515</u>	<u>\$13,516</u>	<u>\$111,113</u>

Preliminary Field Review/Scope of Work Report

HSIP 16-2(14)47 SF119-SKID TRTMNT S OF ROUNDUP

Project Manager : Jeff Olsen

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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 11.08% as of FY 2013.

Ready Date

There is no ready date established in PPMS. This project will be awarded in conjunction with SF-109 SKD TRTMNT – E. of Kalispell, which is scheduled to be awarded through Purchasing in May 2013.

Site Map

The project site map is attached.

