MDT
Montana Department of Transportation
2701 Prospect Avenue
PO Box 201001
Helena MT 59620-1001
Jim Lynch, Director
Brian Schweitzer, Governor

June 30, 2011

Alan Woodmansey, P.E.
Great Falls and Billings Districts Operations Engineer
Federal Highway Administration (FHWA)
585 Shepard Way
Helena MT 59602

MASTER FILE COPY

Subject: Statewide Programmatic Categorical Exclusion for Pavement Preservation Projects
NH 57-1(6)0
Armington Jct.-East
Control Number: 7453000

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. For your information, I have attached a copy of the PFR/SOW (including the location map) and the signed Environmental Checklist. Environmental-related Special Provisions will be included in the contract plans.

If you have questions or concerns, please contact Eric Thunstrom at 444-7648. He will be pleased to assist you.

Sincerely,

Eric Thunstrom
FOR: Heidy Bruner, P.E.
Environmental Services Bureau Engineering Section Supervisor

Attachments: Environmental Checklist, PFR/SOW Report

electronic copies with attachment (Checklist only, unless noted):

Michael P. Johnson	Great Falls District Administrator
Tom Martin, P.E.	Environmental Services Bureau Chief
Heidy Bruner, P.E.	Environmental Services Bureau Engineering Section Supervisor
Eric Thunstrom	Environmental Services Bureau Project Development Engineer
Paul Ferry, P.E.	Highways Engineer
Christie McOmber, P.E.	Great Falls District Projects Engineer
Kevin Christensen, P.E.	Construction Engineer
Suzy Price	Contract Plans Bureau Chief
Dawn Stratton	Fiscal Programming Section
Montana Legislative Branch Environmental Quality Council (w/ PFR/SOW also)	
File	Environmental Services Bureau

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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: NH 57-1(6)0Control No.: 7453000 Project Name: Armington Jct. - East

Reference Post (Station): 0.275 To Reference Post (Station): 7.072

Applicant's Name: Montana Department of Transportation **Address:** PO Box 201001; Helena, MT 59620-1001

Type of Proposed Pavement Preservation Activity:

Type of Proposed Pavement Preservation Activity: 185 Resurface – Crack Seal

IMPACTS ON THE PHYSICAL ENVIRONMENT (TO BE COMPLETED BY APPLICANT)				
	Impact Questions	[Y/N] There are Potential Impacts; or Item Requires Documentation, Evaluation, Mitigation Measures, and/or (a) Permit(s).		
		Yes	No	Comment (Use attachments if necessary)
1.	Does the proposed action require work in, across, and/or adjacent to a listed or proposed Wild or Scenic River? (See http://www.rivers.gov/wildriverslist.html)	☐	☒	
2a.	Are there any listed or candidate threatened or endangered species in the vicinity of the proposed activity?	☐	☒	Unknown
2b.	Will the proposed action adversely affect listed or candidate threatened or endangered species, or adversely modify critical habitat?	☐	☒	Unknown
3.	Will the proposed action have potential to affect water quality? If 'Yes', an environment-related permit or authorization may be required. If 'No', go to question 4.	☐	☒	
3a.	If the answer to question 3 is yes, is a Clean Water Act Section 402 permit (i.e., MPDES or NPDES permit)required? (Need for an MPDES or NPDES is generally triggered by a disturbance area equal to or greater than one acre.)	☐	☐	☒ N/A
3b.	Is the proposed project within an MS4 Permit Area? (See http://deq.mt.gov/wqinfo/MPDES/StormWater/ms4.mcpx). (Billings, Great Falls, and Missoula Urbanized areas, and Butte, Bozeman, and Helena)	☐	☒	
4.	Does the proposed project have impacts to wetlands , streams, or other water bodies? If 'No', go to question 5.	☐	☒	
4a.	If the answer to question 4 is 'Yes', is a Clean Water Act Section 404 permit authorization required?	☐	☐	☒ N/A
4b.	If the answer to question 3 or 4 is 'Yes', is a Stream Protection Act 124SPA consultation required?	☐	☐	☒ N/A
5.	Are solid wastes, hazardous materials or petroleum products likely to be encountered? (For example, project occurs in or adjacent to Superfund sites, known spill areas, underground storage tanks, or abandoned mines.) (See http://nris.mt.gov/deq/remsitequery/portal.aspx)	☐	☒	
6.	Is the proposed activity on and/or within approximately 1 mile of an Indian Reservation? If answer is 'No', go to question 7.	☐	☒	
6a.	Are any Tribal water permits required?	☐	☐	☒ N/A
7.	Is the proposed project in a "Class I Air Shed" or a nonattainment area? (See http://deq.mt.gov/AirQuality/Planning/AirNonattainment.mcpx) (Class I Air Sheds include the Northern Cheyenne, Flathead, and Fort Peck Reservations; Glacier and Yellowstone National Parks; Anaconda-Pintlar, Bob Marshall, Cabinet Mountains, Gates of the Mountains, Medicine Lake, Mission Mountain, Red Rock Lakes, Scapegoat, Selway-Bitterroot, and U.L Bend Wilderness Areas)	☐	☒	

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Checklist prepared by:

Christie McOmber	Project Design Engineer	6/16/2011
Applicant	Title	Date

Approved by: Eric Thunstrom

Environmental Services	FOR: HEIDY BRUNER Click here to enter text.	6/30/2011 Click here to enter a date.
	Title	Date

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

Memorandum

To: Distribution

From: Paul Ferry, P.E. Signed by Lesly Tribelhorn 6/16/11
Highways Engineer

Date: June 16, 2011

Subject: NH 57-1(6)0
Armington Jct. - East
UPN 7453000
Work Type 183 – Resurfacing – Seal & Cover

Attached is the Preliminary Field Review Report/Scope of Work Report which was approved on 6/16/2011. 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:

Paul Ferry, Highways Engineer
Michael 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
Roy Peterson, Traffic and Safety Engineer
Jon Swartz, Maintenance Administrator
Rob Stapley, Right-of-Way Bureau Chief

cc:
Dawn Stratton, Fiscal Programming Section
Dustin Rouse, Road Design Area Engineer
Cascade County Commissioners, 325 2nd Ave. N, Rm. 111
Great Falls, MT 59401

e-copies:
Jim Walther, Preconstruction Engineer
Lesly Tribelhorn, Highways Design Engineer
Mark Goodman, Hydraulics Engineer
Kurt Marcoux, District Hydraulics Engineer
Bonnie Gundrum, Env. Res. Section Supervisor
Paul Sturm, District Biologist
Eric Thunstrom, Project Development Engineer
Danielle Bolan, Traffic Engineer
Ivan Ulberg, G.F. District Traffic Project Engineer
Kraig McLeod, Safety Management Engineer
Stephanie Brandenberger, Bridge Area Eng, G.F. District
Mary Gayle Padmos, PvMS Engineer
Daniel Hill, Pavement Analysis Engineer
Lee Grosch, District Geotechnical Manager
Marty Beatty, Engineering Information Services
Paul Grant, Public Involvement Officer
Jean Riley, Planner
Jerilee Weibel, District R/W Supervisor
Tony Strainer, Great Falls District Maintenance Chief
Jake Goettle, Construction Bureau – VA Engineer
Walt Scott, R/W Utilities Section Supervisor
David Hoerning, R/W Engineering Manager
Greg Pizzini, Acquisition Manager
Becky Duke, Sup. Traffic Data Collection
Joe Zody, R/W Access Management Section Manager
Paul Johnson, Project Analysis Bureau
Susan Sillick, Research Section Supervisor
Steve Prinzing, District Preconstruction Engineer
Christie McOmber, District Projects Engineer
Stan Kuntz, G.F. District Materials Lab
Doug Wilmot, G.F. District Construction Engineer
Linda Cline, District R/W Design
Dennis Ghekiere, District Utility Agent
Alyce Fisher, Fiscal Programming
James Combs, District Traffic Engineer

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

Memorandum

To: Paul Ferry, P.E.
Highways Engineer

From: Christie McOmber, P.E. CWM
District Projects Engineer, P.E.

Date: June 16, 2011

Subject: NH 57-1(6)0
Armington Jct. - East
UPN 7453000
Work Type 185 – Resurfacing – Crack Sealing

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

Approved Signed by Lesly Tribelhorn for _____ Date 6/16/2011
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
Dustin Rouse, Road Design Area Engineer

Introduction

This report was derived from information taken from the Preliminary Field Review conducted on May 12th, 2011, at the Great Falls District Office with the following individuals in attendance:

Mick Johnson	District Administrator	Great Falls
Christie McOmber	District Projects Engineer	Great Falls
Steve Prinzing	District Preconstruction Engineer	Great Falls
Steve McEvoy	Pavement Analysis	Helena
Jeania Cereck	District Design Supervisor	Great Falls
Teresa Davidson	District Designer	Great Falls

Proposed Scope of Work

The proposed project has been nominated to provide crack sealing to the existing surface followed by a seal and cover as recommended by the PVMS Data. Bridge ends will be mill/filled and guardrail ends and bridge rail upgraded to meet standards.

Purpose and Need

Significant transverse and longitudinal cracks are present along this project. It is necessary to provide crack sealing to prevent future pavement deterioration. A seal and cover will further prevent pavement deterioration and prolong the service life of the highway.
The 9 bridges within the project limits exhibit pavement failure at the bridge end connections. Although small digouts were considered, milling and replacing the plant mix is the preferred option due to the high ADT and the difficulty in obtaining compaction in short segments.

Project Location and Limits

The project is located in Cascade County on N-57 (US 87) and begins 0.275 miles southeast of the Jct. of P-60, N-57 and N-60, locally known as Armington Jct. The project proceeds 6.797 miles southeasterly on N-57 ending at the Judith Basin County line. Project reference posts are RP 0.275 to RP 7.072 and run from north to south on N-57.
The functional classification of this route is Principal Arterial – Non-Interstate.

Work Zone Safety and Mobility

At this time, Level 2 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), a limited Transportation Operations (TO) component and a limited Public Information (PI). These issues are discussed in more detail under the Traffic Control and Public Involvement sections.

Physical Characteristics

a. The PTW traverses level terrain that is used primarily for farm and range land.
b. The existing roadway was constructed in 1961 under project F-235(27) and improved in 1986 and 1987 under RTF 60-2(15) and RTF-HES 57-1(3)1 respectively. As-built projects are as follows:

From RP	To RP	Existing Surfacing	As-Built Project ID	Year Constructed
0.00	**5.30**	**0.25' Comp. P.M.B.S. 0.15' Comp. Top Course 1.25' Comp. S.B.B.C. (Crushed)**	**F 235(26)**	**1960**

5.30	**7.07**	**0.25' Comp. P.M.B.S. 0.15' Comp. Top Course 1.45' Comp. CBC Typ. A**	**F 235(27)**	**1961**
0.00	**0.23**	**0.25' P.M.B.S. Grade B**	**RTF 60-2(15)71**	**1986**
0.23	**7.07**	**0.25' P.M.B.S. Grade B**	**RTF-HES 57-1(3)1**	**1987**

c. The pavement width is 30' throughout.
d. PVMS Recommended Treatment is for a C_AC Crack Seal & Cover.
e. Surfacing in-slopes are 4:1 with rumble strips located on the 3.0' shoulders.

Traffic Data

2011 AADT = 1,320 (Present)
2011 AADT = 1,320 (Letting Year)
2031 AADT = 1,610 (Design Year)
DHV = 200
T = 33.2%
EAL = 203
AGR = 1.0%

Crash Analysis

The crash analysis was taken from January 1, 2001 through December 31, 2010 from RP 0.23 to RP 7.06.

a. There were **85** reported **crashes,** including **14 truck crashes.**
b. **The average crash** rate of 1.40 for this roadway is **above** the statewide average of 1.07 for rural primary routes.
c. **The all vehicle severity index** is 2.07, below the statewide average of 2.14.
d. **The all vehicle severity rate** is 2.90, **above** the statewide average of 2.29.
e. **Variations from Average Occurrence**: No significant variations were noted in comparison to statewide averages for NINHS routes.
f. **The truck crash rate** is 1.29, **above** the statewide average of 0.96.
g. **The truck severity index** is 2.93 **above** the statewide average of 2.34.
h. **The truck severity rate** is 3.78, **above** the statewide average of 2.25.
i. **Crash Clusters:** In 2001 the section between reference points 0.4 and 1.2 was identified as a crash cluster. No feasible countermeasures to address a specific crash trend were identified.
j. **Remarks & Recommendations:** The main crash trend was single-vehicle crashes (71 out of 85). Of these crashes, 20 were single vehicle run-off-the road overturning crashes, 17 crashes involving vehicles impacting either a guardrail face or end and 24 wild animal vehicle collisions.
There were 3 fatal crashes along this section of roadway resulting in 4 fatalities and 5 injuries (3 incapacitating injuries and 2 non-incapacitating injuries). Two of the three fatal crashes were bridge related. One involved a vehicle drifting onto the shoulder and striking the bridge end and overturning. The other crash involved a vehicle losing control after crossing a bridge deck and overturning. The remaining crash involved a westbound vehicle crossing the centerline and striking an eastbound vehicle resulting in a head-on collision.
Five of the 14 truck crashes involved vehicles initiating a passing maneuver and striking either a vehicle in the opposing lane and/or the commercial motor vehicle

they were trying to pass. The majority of these resulted in either a sideswipe or rear-end collision.

Please note the higher than average crash rate and severity rate. The Safety Engineering Section recommends the following safety upgrades for consideration by the Design Team during project development:

a. Upgrade signing/marking to current standards. *New signing and pavement markings will be required throughout this project.*

b. Upgrade guardrail end treatments. *Non-standard guardrail ends will be replaced with this project.*

Major Design Features

a. Design Speed. The design speed for the project is 60 mph while the posted speed limit is 65 and 70 mph for trucks and cars respectively.

b. Horizontal Alignment. The existing horizontal alignment is adequate for a preventative maintenance treatment.

c. Vertical Alignment. The existing vertical alignment is adequate for a preventative maintenance treatment.

d. Typical Sections and Surfacing. Due to the nature of this project, existing surface widths will not be altered. The PTW is 30' throughout. Milling will be required on this project, along with short overlays for milling replacement at bridge ends only. Details for crack sealing will be included in the plans with quantities.

e. Geotechnical Considerations. Because of the limited scope of this project, geotechnical considerations other than the bridge end digouts will not be addressed. Existing cores are available.

f. Hydraulics. Due to the nature of this project, hydraulic considerations are not anticipated for this project.

g. Bridges. Bridge rail and approach sections will be upgraded as necessary. Bridge will provide the details. Bridges located on the project are as follows:

(R.P.) Bridge Log	Type	Feature Crossed	Length feet	Built
0.394	Concrete Str.	Otter Creek	124	1959
0.676	Concrete Str.	Otter Creek	119	1959
1.029	Concrete Str.	Otter Creek	119	1959
1.503	Concrete Str.	Otter Creek	103	1959
1.909	Concrete Str.	Otter Creek	103	1959
2.213	Concrete Str.	Otter Creek	93	1959
2.555	Concrete Str.	Otter Creek	93	1959
3.097	Concrete Str.	Otter Creek	103	1959
3.612	Concrete Str.	Otter Creek	103	1959

.

h. Traffic. New pavement markings and signing will be required throughout this project.

c. Miscellaneous Features. Guardrail is present throughout the project and was last up-graded in 1987 with RTF-HES 57-1(3). Guardrail end sections will be updated with this project. Maintenance turnout locations and field approaches adjacent to the bridges may need adjustment to accommodate the new guardrail end sections and minor grading will be required.

d. Pedestrian/Bicycle/ADA. Due to the limited scope of this project, no new ADA features or impacts to existing features are anticipated for this project.

i. Context Sensitive Design Issues. No context sensitive design issues will be addressed

with this project.

Other Projects
Two projects also proposed as crack seal and/or seal & covers and possibly tied for letting are:

Riceville Hill - Armington Jct.
STPP 60-2(97)60
UPN 7463000
RP 60.298 to RP 71.038

Armington Jct. – Belt Hill
NH 60-2(95)71
UPN 7454000
RP 0.275 to RP 74.265

Design Exceptions
No design exceptions are anticipated for this project.

Right-of-Way
No new right-of-way will be required for this project.

Access Control
Access Control will not be pursued on this project.

Utilities/Railroads
No utility involvement is anticipated.

BNSF Railway tracks run parallel to the roadway through a portion of the project; however, no involvement with the railroad is anticipated. The railroad is more than 50 feet away from the roadway through this area.

Intelligent Transportation Systems (ITS) Features
There are no ITS solutions that will be designed within this project.
An existing ATR site, W-126 which includes a pre-pas and weigh-in-motion, is located at RP 1.000 and is in an area of guardrail replacement. A special provision will be added to the project to insure the ATR conduit is avoided.

Survey
No survey will be required for this project. The project will be designed using as-built plans.

Public Involvement
Due to the limited scope of the project, a level “A” public involvement plan is appropriate. The plan will include a news release, which will explain the project and include a department point of contact.

Environmental Considerations
This project meets the criteria for a statewide programmatic categorical exclusion under the pavement preservation agreement with FHWA. A pavement preservation checklist for the project will be submitted with this report.

Energy Savings/Eco-Friendly Considerations
Due to the nature of this project, extending the useful life of the pavement is aimed directly at minimizing the footprint on the environment. This is accomplished by postponing reconstruction projects through routine maintenance.

Experimental Features
No experimental procedures are planned for this project.

Traffic Control
Traffic will be maintained on the roadway during construction. Appropriate traffic control devices and signing will be used throughout the project in accordance with the Manual on Uniform Traffic Control Devices.
Due to the high AADT and narrow roadway width a TMP meeting will be held and a Traffic Management Plan developed. The Traffic Management Plan (TMP) will consist of a Traffic Control Plan (TCP), a Transportation Operation Plan (TO) and a Public Information (PI).

Project Management
The Great Falls District will be responsible for the plans. Christie W. McOmber, P.E., is the Great Falls District Projects Engineer. The project is not under full FHWA oversight.

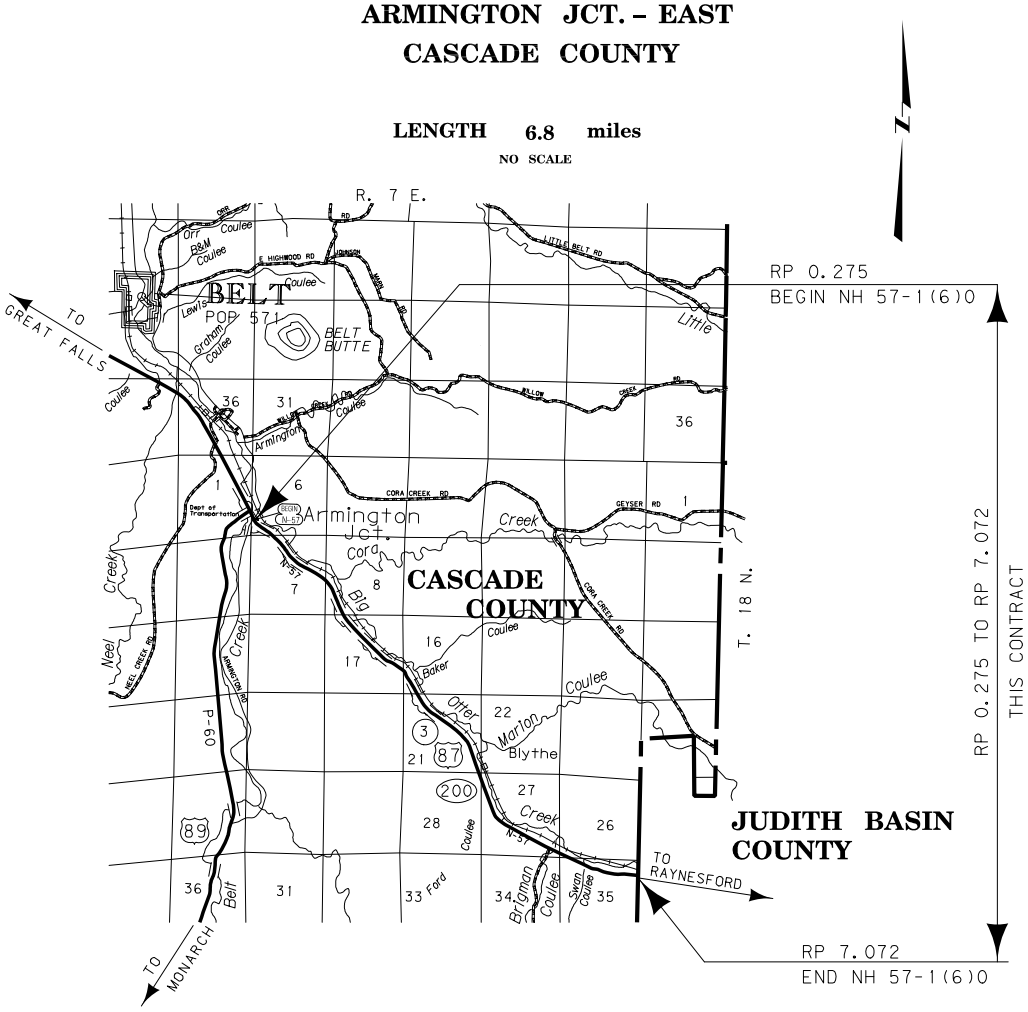
Preliminary Cost Estimate
The project was programmed at $445,000. Project costs include crack sealing, cold milling, new plant mix, guardrail upgrades and paint striping. Cost per mile is $70,382.

Armington Jct. - East		Estimate Costs	Inflation (INF) (from PPMS)	w/INF + IDC (from PPMS)
Road work		$375,461		
Traffic Control		$35,000		
Subtotal		**$410,461**		
Mobilization	10%	$41,046		
Subtotal		**$451,507**		
Contingencies	6%	$27,090		
Total CN		**$478,598**	**$85,692**	**$639,622**
CE	10%	**$47,860**	**$8,569**	**$63,962**
IDC:	13.35%		**TOTAL**	**$703,584**
		Inflation Factor (ppms)	*0.1790476*	

Ready Date
The ready date is September 1, 2011 with an anticipated letting date of March, 2012.

Site Map
The project site map is attached.

MONTANA DEPARTMENT OF TRANSPORTATION

FEDERAL AID PROJECT NH 57–1(6)0
CRACK SEAL AND SEAL & COVER
ARMINGTON JCT. – EAST
CASCADE COUNTY

LENGTH 6.8 miles
NO SCALE