



Montana Department of Transportation

RECEIVED

Jim Lynch, Director

July 7, 2006

2701 Prospect Avenue
PO Box 201001
Helena MT 59620-1001

JUL 11 2006 Schweitzer, Governor

LEGISLATIVE ENVIRONMENTAL
POLICY OFFICE

Carl James
Federal Highway Administration (FHWA)
585 Shepard Way
Helena, MT 59601-9785

MASTER FILE
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**Subject: Statewide Pavement Preservation Project
CASCADE – ULM
IM 15-5(113)237
CN 5759000**

Dear Carl James:

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 have determined 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 Checklist.

If you have any questions or concerns, please contact Heidi Bruner at 444-7203. She will be pleased to assist you.

Sincerely,

Thomas L. Hansen, PE
Engineering Section Supervisor
Environmental Services Bureau

cc (w/o attach): Mick Johnson MDT, Great Falls District Administrator
Jean A. Riley, PE MDT, Environmental Services Bureau Chief
Paul Ferry, PE MDT, Highway Engineer
Mark Wissinger, PE MDT, Construction Engineer
Suzy Price MDT, Contract Plans Bureau Chief
Dave Jensen MDT, MDT Fiscal Programming Section Supervisor
Heidi Bruner MDT, Environmental Services

cc (w/attach): Bob Seliskar, PE FHWA, Operations Engineer
Montana Legislative Branch Environmental Quality Council (EQC)
Cascade County Office
File

encl.

TLH:hsb:S:\PROJECTS\GREAT-FALLS\5759000\5759ENCEDCSP001.DOC

(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 No.: IM 15-5(113)257 ID: UPN 5759000 Project Name: Cascade-Ulm

Reference Post (Station) RP 256.492 to Reference Post (Station) RP 270.425

Applicants Name: Montana Department of Transportation Address: PO Box 1359, Great Falls, MT 59403-1359

Type of Proposed Pavement Preservation Activity: Work Type 183 Resurfacing - Seal & Cover

Table with 2 columns: Impact Questions, [Y/N] There are Potential Impacts; or Item Requires Documentation, Evaluation, Mitigation Measures, and/or (a) Permit(s). Rows include questions about river impacts, endangered species, water quality, wetlands, hazardous waste, and Indian Reservations.

8. Magnitude and significance of potential impacts: To be completed by applicant.

Checklist prepared by: Christie McOmber Applicant District Project Engineer Title June 7, 2006 Date

Approved by: [Signature] ENVIRONMENTAL ENGINEERING SECTION SUPERVISOR Title Date 7/7/06

Environmental Services (when items 1, 2, 3, 3a, 4, 4a, 4b, 5, 6, 6a, or 7 are checked "Yes") Title Date

Project Number: UPN 5759000 ID: IM 15-5(113)257 Designation: Cascade-Ulm

- A. The applicant shall complete the checklist indicating a "Yes" or "No" for each item, except number 8 which may require a narrative response.
- B. When a "Yes" is indicated on any number of items 1 through 7, MDT 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.
- 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. 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 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.

Montana's Wild and/or Scenic Rivers system as published by the U.S. DEPARTMENT OF AGRICULTURE (USDA), or the U.S. DEPARTMENT OF THE INTERIOR (USDol)

1. Middle Fork of the Flathead River (headwaters to South Fork of the Flathead River confluence)
2. North Fork of the Flathead River (Canadian Border to Middle Fork of the Flathead River confluence)
3. South Fork of the Flathead River (headwaters to Hungry Horse Reservoir)
4. Missouri River (Fort Benton to Charles M. Russell National Wildlife Refuge)



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

Memorandum

To: Paul R. Ferry, P.E.
Highways Engineer

From: Christie W. McOmber, P.E. *CWM*
Great Falls District Project Manager

Date: June 1, 2006

Subject: IM 15-5(113)257
Cascade-Ulm
UPN 5759 000
Work Type 183: Resurfacing - Seal & Cover

We request that you approve the **Preliminary Field Review/Scope of Work Report** for the subject project.

Approved *Paul R. Ferry* Date 6/7/06
Paul R. Ferry, P.E.
Highways Engineer

We are requesting comments from those on the distribution list. We will assume their concurrences if no comments are received within **two weeks** of the approval date.

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

Distribution (all w/ attachment)

Jim Walther, Engineering	Dustin Rouse, Road Design
Ivan Ulberg, Traffic & Safety	Bret Boundy, Geotechnical
Mark Goodman, Hydraulics	Dave Jensen, Fiscal Programming
Pierre Jomini, Safety Management	Walt Scott, Utilities
Sue Rowell, E.I.S.S.	Alice Flesch, Acting ADA Coordinator
Greg Pizzini, R/W - Access Management	Pamela Langve-Davis, Bicycle & Peds.
Drew Livesay, M.C.S.	Highways File
Becky Duke, Traffic Data & Collections	

Preliminary Field Review/Scope of Work Report

IM 15-5(113)257

Cascade-Ulm

UPN 5759 000

I. Introduction:

This report was developed from information taken from the preliminary field review conducted on March 8, 2006 with the following personnel in attendance:

Steve Prinzing	Engineering Services Engineer	Great Falls
Christie McOmber	District Project Manager	Great Falls
Jeania Cereck	District Design Supervisor	Great Falls
Laci Bogden	District Design	Great Falls
Jim Cornell	Traffic & Safety	Helena
Brandon Mattson	Pavement Management	Helena
Gerry Brown	Construction Oversight	Helena
Steve McEvoy	Surfacing Design	Helena
Ed Shea	Surfacing Design	Helena

II. Proposed Scope of Work:

This project is nominated as a preventative maintenance seal and cover. The intent of this project is to extend the life of the pavement by chipsealing the existing roadway including the south ramps (A1, A, B1, and B) and cross road (C ramp) located at the Ulm Interchange and the north ramps (F1 and F2) located at the North Cascade Interchange.

- A. The plans for the proposed project will be in English units starting at stations 2095+59.0 NB and 2095+77.8 SB and ending at stations 749+89.5 NB and 750+87.7 SB (RP 256.5 to RP 270.4). Stationing is taken from the original construction projects.
- B. The existing horizontal and vertical alignment will be used throughout the project. No work is planned on the existing guardrail or end treatments.
- C. As-Built project IM 15-5(93)235 added 15 Strategic Highway Research Program (SHRP) experimental sections to the northbound lane of the project between stations 541+00 and 658+50 which not receive a seal and cover with this project.
- D. The project was nominated at \$1,023,000. The estimate includes mobilization, traffic control, construction engineering, and contingency. This estimate also takes into consideration an inflation rate of 3% for 1 year.
- E. The project is being designed in the Great Falls Design Unit and has a ready date of **July 2006**.

III. Project Locations and Limits:

- A. The project is located in Cascade County on National Highway System Interstate Route 15 between Cascade and Ulm; the functional classification is Principal Arterial (Freeway) and designed to the geometric design criteria of a Freeway. It begins approximately 0.358 north of the Cascade city limits at the northern edge of the bridge that makes up the Cascade North Interchange (Station 2095+59.0 NB and Station 2095+77.8 SB average RP 256.5) and proceeds north for approximately 13.9 miles to the southern edge of the bridge that makes up the Ulm Interchange (Station 749+89.5 NB and Station 750+87.7 SB average RP 270.4).
- B. There are two county road overpasses; the Old Ulm-Cascade Road crosses the Interstate at station 301+50.0 (RP 261.918) and Fairhaven Road crosses the Interstate at station 531+30.0 (RP 266.263).
- C. The project crosses the Little Muddy Creek at station 341+00.0 (RP 262.662).
- D. Equations:
 - 1. Station 2117+76.3 (SB) Back = Station 2116+99.70 (SB)Ahead (+76.6')
 - 2. Station 2119+61.3 (NB) Back = Station 2118+74.6 (NB) Ahead (+86.7')
 - 3. Station 2175+00.0 Back = Station 95+00.0 Ahead (+208,005.0')
- E. As-Built:

Project ID	From		To		Year Built
	Station	RP	Station	RP	
I-15-5(50)239 U5	1659+00.0	247.829	182+04.6	259.648	1980
I-15-5(50)239 U1	182+01.6	259.648	337+00.0	262.587	1977
I 182(6)	337+00.0	262.587	465+00.0	264.008	1959
I 15-5(45)255 U1	465+00.0	264.008	753+21.0	270.790	1970
I 15-5(71)239 SB	1659+00.0	247.829	340+50.0	262.653	1982
I 15-5(80)257 NB	2095+59.0	256.492	749+89.5	270.403	1986
I 15-5(80)257 SB	341+50.0	262.672	750+87.7	270.422	
IM 15-5(90)248 SB	1676+37.0	248.158	750+87.7	270.422	1998
IM 15-5(93)256 NB	2095+59.0	256.492	749+89.5	270.403	1999

F. Adjacent projects:

ID Number	Project Name	Project Type	From RP	To RP
IM 15-5(108)248	Cascade-N&S	Seal & Cover	247.8	256.5
IM 15-5(101)270	Great Falls-N&S	Crack & Seat, Overlay, Seal & Cover	270.5	282.2
STPP 68-1(1)0	Cascade-N&S	Urban Rehab	0.00	1.49

IV. Physical Characteristics:

The P.T.W. traverses a rural area with generally level terrain used primarily as farm and range land.

A. Project History:

The project consists of two northbound traveling lanes and two southbound traveling lanes. Each traveling lane is 12.0' wide, the outside shoulders average 10.0' wide, and the inside shoulders average 4.0' wide. Total surface width of each lane is approximately 38.0'.

1. Original construction:

a. Surfacing:

The original construction consisted of 0.35' of plant mix, 0.15' to 0.40' of crushed top surfacing, and 1.10' to 1.85' of crushed base course. The exceptions are:

- i. I 182(6) which consisted of two lifts of 0.175' of plant mix; the first lift covered the total width of the road and the second lift covered the traveling lanes only.
- ii. I-15-5(50)239 U5 which constructed the F1 ramp with 0.25' of plant mix, 0.20' of crushed top surfacing, and 1.35' of crushed based course.

b. Original As-Built Projects:

- i. I-15-5(50)239 U5 built in 1980 constructed the current four-lane highway between stations 1659+00.0 and 182+04.6 (RP 247.829 to 259.648) as well as the F1 ramp at the North Cascade Interchange.
- ii. I-15-5(50)239 U1 built in 1977 constructed the current four-lane highway between stations 182+01.6 (equals station 182+04.6 on I-15-5(50)239 U5) and 337+00.0 (RP 259.648 to 262.587).
- iii. I 182(6) built in 1959 constructed the current four-lane highway between stations 337+00.0 and 465+00.0 (RP 262.587 to 264.008) as well as the cross road and ramps at the Ulm Interchange.
- iv. I 15-5(45)255 U1 built in 1970 constructed the current four-lane

highway between stations 465+00.0 and 753+21.0 (RP 264.008 to 270.790).

2. Pavement Preservations As-Built Projects:

- a. I 15-5(71)239 SB completed in 1982 between stations 1659+00.0 and 340+50.0 (RP 248.310 to RP 262.587) added open graded friction course and 0.15' of plant mix surfacing to the full width of the road and the F1 ramp.
- b. IR 15-5(80)257 completed in 1986 between station 2095+59.0 and 750+87.7 (RP 256.492 to RP 270.422) added open graded friction course and 0.25' of plant mix surfacing to the full width of the road. This project also added open graded friction course and 0.15' of plant mix surfacing to the A1, A, B1, B, and F2 ramps.
- c. IM 15-5(90)248 SB completed in 1998 between stations 1676+37.0 and 750+87.7 (RP 248.158 to RP 270.422) milled 0.22' and added 0.35' of plant mix surfacing to the full width less 3.0' to 4.0' of the inside shoulder. All bridge ends connections were milled 0.35' the full width of the road.
- d. IM 15-5(93)256 NB completed in 1999 between stations 2095+59.0 and 749+89.5 (RP 256.492 to RP 270.403) milled 0.22' with an average width of 35.2' and added 0.35' of plant mix surfacing the full width of the road. This project also milled 0.15' and added 0.15' of plant mix to the full width of the F2 and A1 ramps.

B. **PVMS Data:**

The recommended treatment in the PvMS Pavement Conditions and Recommended Treatments Report for the 2005 survey year is crack seal and cover.

PVMS INDICES		
	Left Lane	Right Lane
Ride	83.5 (Good)	83.8 (Good)
Rut	78.4 (Good)	70.8 (Good)
Alligator Cracking	96.4 (Good)	98.2 (Good)
Miscellaneous Cracking	82.0 (Good)	88.1 (Good)

C. **Horizontal & Vertical Alignment:**

The existing vertical and horizontal alignments meet current design standards for preventative maintenance seal and cover.

1. The maximum grade is 5.00%, which does not meet the Geometric Design Criteria for Freeways of 3% for level terrain, is located between stations 436+16.37 and 461+86.37,.
2. The grades for the remainder of the project are less than 3%, which is the desirable grade for level terrain according to the Geometric Design Criteria for Freeways.

3. The maximum horizontal curve radius is 5,729.58', which exceeds Geometric Design Criteria for Freeways radius of 1820' for 70 mph design speed.

D. Bridges:

Structure Description	Number of Structures	Road Width (feet)	Length (feet)	Year Built	Structure Status
Little Muddy Creek	2	38.0'	100.0'	1958	Continuous concrete

There are also two structures that pass over the project:

- a. The Old Ulm-Cascade Road intersects the project at station 301+50.00 (RP 261.918) with approximately 17.5' of clearance.
- b. The Fairhaven Road intersects the project at station 531+30.00 (RP 266.263) with approximately 17.0' of clearance.

V. Traffic Data:

Traffic Data is not required for seal and cover projects.

VI. Accident Analysis:

Traffic Data is not required for seal and cover projects.

VII. Major Design Features:

A. Design Speed:

Using the criteria of a rural interstate and level design control, the Geometric Design Criteria for Freeways section of the Road Design Manual qualifies this project for a design speed of 70 mph. The posted speed limit throughout the project is 75 mph.

B. Horizontal Alignment:

The existing horizontal alignment is adequate for a preventative maintenance treatment and no changes are proposed with this project.

C. Vertical Alignment:

The existing vertical alignment is adequate for a preventative maintenance treatment and no changes are proposed with this project.

D. Typical Sections:

1. The project is designed to seal and cover the total roadway width of approximately 38.0' of both the northbound and southbound lanes for the full length of the project less the bridges.
2. The south ramps in Ulm (A1, A, B1, and B) and the north ramps in Cascade (F1 and F2) will receive a seal and cover the total width of approximately 24.0'.
3. The cross road in Ulm (C Ramp) will receive a seal and cover the total width of approximately 25.6'.

E. Surfacing Design:

No surfacing design was requested for this seal and cover.

F. Geotechnical Consideration:

No geotechnical issues will be addressed with this seal and cover.

G. Hydraulics:

No hydraulics issues will be addressed with this seal and cover.

H. Bridge:

No Bridge involvement is anticipated as the seal and cover will not be applied to the bridges. No work on the bridge rails or bridge approaches is planned.

I. Traffic and Safety:

New pavement markings will be required. This will include the two shoulder stripes and centerline stripes as well as striping on the ramps. No signing, rumble strips or guardrail improvements are proposed on this project.

VIII. Miscellaneous:

A. In 1999 under IM 15-5(30)256 the follow were completed:

1. 15 Strategic Highway Research Program (SHRP) experimental sections between stations 541+00 and 658+50 were constructed in the northbound lanes.
2. A weather station at station 649+80 located between the outside edge of the northbound lane and the right-of-way boundary.
3. A traffic recorder at station 648+80.

B. In July of 2004 the SHRP sections received a chipseal and the weather station was removed.

IX. Other Projects:

A. During the 2006 construction season, project IM 15-5(108)248 will seal and cover to the south end of the project.

B. During the 2007 construction season, project IM 15-5(101)270 will crack and seat, overlay, and seal and cover from the north end of the project.

X. Design Exception:

The design exception process does not apply to pavement preservation projects.

XI. Right-Of-Way:

No new right-of-way will be required on this project.

XII. Access Control:

This project is on the Interstate and is already under access control.

XIII. Utilities/Railroads:

No utility or railroad involvement is anticipated for this seal and cover project.

XIV. Survey:

No survey will be required on this seal and cover project.

XV. Public Involvement:

Due to the limited scope of the project, a level "A" public involvement plan should suffice. This will include a news release to the local media.

XVI. Environmental Considerations:

No apparent significant environmental issues have been identified. It is anticipated that the project meets the criteria for the Statewide Programmatic Categorical Exclusion. An environmental checklist is being supplied with the Preliminary Field Review/Scope of Work Report.

XVII. Traffic Control:

Traffic will be maintained throughout the project during the construction with the appropriate signing, flagging, etc. All signing will be in accordance with the Manual on Uniform Traffic Control Devices.

XVIII. Preliminary Cost Estimate

Roadwork		\$ 731,000
Traffic Control	7%	\$ 51,000
Subtotal		\$ 782,000
Mobilization	10%	\$ 78,000
Subtotal		\$ 860,000
Contingencies	5%	\$ 43,000
Subtotal		\$ 903,000
Inflation	3% for 1 year	\$ 27,000
Total Construction		\$ 930,000
Construction Engineering	10%	\$ 93,000
Project Total		\$ 1,023,000

XIX. Ready Date:

The project is being designed in the Great Falls Design Unit and has a ready date of July 2006.

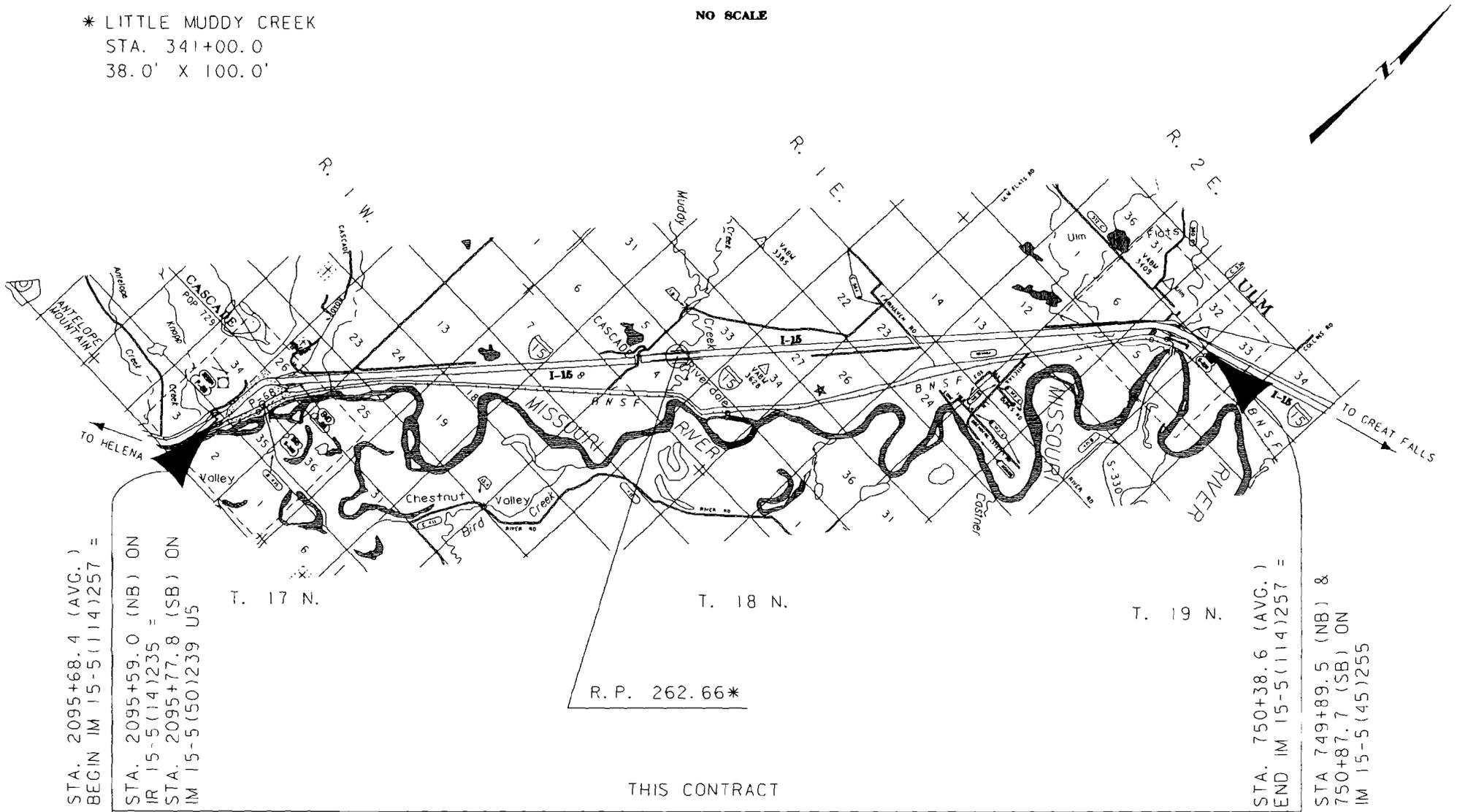
MONTANA DEPARTMENT OF TRANSPORTATION

FEDERAL AID PROJECT IM 15-5(114)257 RESURFACING - CRACK SEAL, SEAL AND COVER CASCADE - ULM CASCADE COUNTY

LENGTH 13.9 miles

NO SCALE

* LITTLE MUDDY CREEK
STA. 341+00.0
38.0' X 100.0'



STA. 2095+68.4 (AVG.)
BEGIN IM 15-5(114)257 =
STA. 2095+59.0 (NB) ON
IR 15-5(14)235 =
STA. 2095+77.8 (SB) ON
IM 15-5(50)239 U5

T. 17 N.

T. 18 N.

T. 19 N.

R. P. 262.66*

THIS CONTRACT

STA. 750+38.6 (AVG.)
END IM 15-5(114)257 =

STA. 749+89.5 (NB) &
750+87.7 (SB) ON
IM 15-5(45)255

RP 256.5 TO RP 270.4