



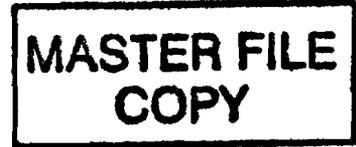
Montana Department of Transportation

Jim Lynch, Director
Bran Schweitzer, Governor

2701 Prospect Avenue
PO Box 201001
Helena MT 59620-1001

July 14, 2006

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



**Subject: Statewide Pavement Preservation Project
GREAT FALLS URBAN
IM 315-5(13)0
CN 5947000**

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

RECEIVED

JUL 19 2006

LEGISLATIVE ENVIRONMENTAL
POLICY OFFICE

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\5947000\5947ENCEDCSP1_PAVE PRES_GTF.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 315-5(013)0 ID: UPN 5947000 Project Name: Great Falls Urban

Reference Post (Station) RP 0.00 to Reference Post (Station) RP 1.31

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

Type of Proposed Pavement Preservation Activity: Work Type 181 Resurfacing: Asphalt (thin lift<=.15ft/45.72mm)(Scheduled Maintenance)

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

Table with 2 main columns: Impact Questions and [Y/N] There are Potential Impacts; or Item Requires Documentation, Evaluation, Mitigation Measures, and/or (a) Permit(s). Includes rows 1 through 7 with checkboxes and 'None Anticipated' notes.

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

Checklist prepared by: Christie McOmber Applicant District Project Engineer June 19, 2006 Date

Approved by: [Signature]

ENVIRONMENTAL ENGINEERING SECTION SUPERVISOR 7/14/06

Environmental Services

Date

Project Number: UPN 5947000 ID: IM 315-5(013)0 Designation: Great Falls Urban

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

- 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 21, 2006

Subject: IM 315-5(13)0
Great Falls Urban
UPN 5947 000
Work Type 181 Resurfacing: Asphalt (thin lift<=0.20 ft)(Scheduled Maintenance)

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

Approved *Paul R. Ferry* Date 6/22/06
for 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.	Becky Duke, Traffic Data & Collections
Paul Sutrm, Environmental	Heidy Bruner, Environmental
Dave Dobbs, City of Great Falls, PO Box 5021, Great Falls, MT 59403	
Highways File	

Preliminary Field Review/Scope of Work Report

**IM 315-5(13)0
Great Falls Urban
UPN 5947 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 overlay. The intent is to overlay the existing roadway with 0.15' of Plant Mix Bituminous Surfacing (Grade S) and a 0.0625' Plant Mix Seal. (Please refer to the attached site maps for a graphical illustration of the project.)

- A. This project's intent is to correct the ride and rutting, remove several maintenance patches at the bridge ends, and provide scheduled maintenance since the last overlay was completed in 1995.
- B. The existing horizontal and vertical alignment will be used throughout the project
- C. The project was nominated at \$1,243,000. The estimate includes mobilization, traffic control, construction engineering, and contingency. This estimate also takes into consideration an inflation rate of 3% for 1 year.
- D. This 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 proposed project is located in Cascade County and the City of Great Falls on National Highway Interstate Route 315; the functional classification is Principal Arterial (Freeway) and designed to the geometric design criteria of an Urban Freeway. The project begins at Station 538+75.00 (RP 0.000), proceeds easterly for approximately 0.740 miles, and ends at Station 42+72.22 (RP 1.311). The City Limits boundary is at Station 31+10.70 (RP 1+0.091).

- B. The proposed overlay will include the four ramps and “E” line of the Spur Interchange and the I-315 Mainline and six ramps of the 14th Street Southwest Interchange.
- C. As-Built Plans:
 - 1. I-315-5(3)272 constructed in 1967 – included the Mainline of the project from Station 17+00.00 to Station 47+27.20 (RP 0.253 to RP 1.397).
 - 2. I 15-5(26)271 constructed in 1967 – included the “E” line from Station 529+58.10 to Station 552+11.6 (RP 0.000 to RP 0.253) as well as the “E1”, “E2”, “E3”, and “E4” ramps.
 - 3. IR 315-5(12)F constructed in 1995 – included the I-315 Mainline from Station 17+00.00 to Station 47+27.20 (RP 0.253 to RP 1.397) and “A”, “B”, “C”, “D”, “E”, and “F” ramps as well as the Spur Interchange “E” line from Station 529+58.10 to Station 552+10.89 (RP 0.000 to RP 0.253) and “E1”, “E2”, “E3”, and “E4” ramps.
- D. For this project, the stationing of the 14th Street Southwest ramps was adjusted to better match the stationing of the Mainline and to reduce the number of equations.
- E. Equations:
 - 1. The end of “E2” ramp at station 521+74.80 back = the beginning of the “E” line at station 529+58.10 ahead.
 - 2. The end of “E3” ramp at station 531+28.71 back = the beginning of the “D” ramp at station 17+00.00 ahead.
 - 3. The end of “E4” ramp at station 543+91.66 back = “E” line station 547+95.60 ahead.
 - 4. The “E” line station at 550+80.23 back = the beginning of the “A” ramp at station 15+69.33 ahead.
 - 5. The end of “E” line at station 552+10.90 back = the beginning of the Mainline at station 17+00.00 ahead.

IV. Physical Characteristics:

The P.T.W. traverses generally level terrain within the urban limits of Great Falls.

A. Project History:

- 1. Original construction:
 - a. The Spur Interchange was originally constructed in **1967** under I 15-5(26)271
 - i. The “E” line transitions from three lanes (two 12.0’ and one 14.0’) with a 5.0’ median to four 12.0’ lanes with a 17.0’ median. The outside shoulders are 6.0’ and the inside shoulders are 1.5’.
 - ii. The Spur Interchange ramps generally consist of one 14.0’ lane with a 4.0’ and a 6.0’ shoulder except:
 - (i) The “E1” ramp transitions to two 12.0’ lanes.
 - (ii) The “E2” ramp consists of one 15.0’ lane with a 4.0’ and a 6.0’ shoulder.

- iii. "E" line and the ramps were constructed with 0.35' of plant mix surfacing, 0.15' crushed top surfacing, 0.50' crushed base second course, and 1.10' of crushed base first course.
- b. The Mainline was originally constructed in **1967** under I-315-5(3)272
 - i. The Mainline was constructed with four 12.0' driving lanes, two 10.0' outside shoulders, two inside shoulders that vary in width between 1.0' and 3.0', and one median that varies in width between 14.0' and 18.0'.
 - ii. The Mainline was constructed with 0.35' of plant mix surfacing Type 3, 0.15' crushed top surfacing, 0.50' of crushed base second course, and 1.10' of crushed base first course.
2. Reconstruction:

The project was partially reconstructed in **1995** under IR 315-5(12)F

 - a. The Spur Interchange ramps, "E" line, and Mainline (excluding the bridges) received a 0.20' mill and fill with plant mix surfacing and seal and cover with cover.
 - b. An additional width of 42.0' was added to the Mainline to accommodate the new ramps to 14th Street Southwest and was constructed with 0.35' of plant mix surfacing, 0.15' crushed top surfacing, and 2.50' crushed base course.
 - c. The ramps to 14th Street Southwest were constructed:
 - i. They generally consist of one 14.0' lane with a 4.0' and a 6.0' shoulder except:
 - (i) The "B" ramp consists of two 14.0' lanes separated by a 2.0' median, each with a 6.0' outside shoulders and 1.0' inside shoulders.
 - (ii) The "E" ramp consists of two 14.0' lanes separated by a 2.0' median, each with a 6.0' outside shoulders, 4.0' inside shoulders, and 2' of curb and gutter.
 - ii. The "A", "C", "D", and "F" ramps were constructed with 0.35' of plant mix surfacing, 0.15' of crushed top surfacing, 1.10' of crushed base course, and 0.75' of cold milled material was used as a base course.
 - iii. The "B" ramp was added to combine the "A" and "C" ramps and was constructed with 0.35' of plant mix surfacing, 0.15' of crushed top surfacing, 1.10' of crushed base course, and 0.75' of cold milled material was used as a base course.
 - iv. The "E" ramp was added to combine the "D" and "F" ramps and was constructed with 0.35' of plant mix surfacing, 0.15' of crushed top surfacing, and 1.85' of crushed base course.

B. PVMS Data:

The PvMS Pavement Conditions and Recommended Treatments Report for the 2005 survey year recommended a thin overlay.

PVMS INDICES		
	Left Lane	Right Lane
Ride	67.7 (Fair)	68.0 (Fair)
Rut	67.2 (Good)	65.9 (Good)
Alligator Cracking	100.0 (Good)	97.6 (Good)
Miscellaneous Cracking	83.8 (Good)	90 (Good)

C. Horizontal & Vertical Alignment:

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

1. The maximum grade of the "E" line is 4.6%, which meets the Geometric Design Criteria for Freeways (Urban) maximum of 5%. There are two horizontal curves; the minimum radius is 739.3', which does not meet Geometric Design Criteria for Freeways (Urban) of 760' for a 50 mph design speed.
2. The maximum grade of the Mainline is 5.0%, which meets the Geometric Design Criteria for Freeways (Urban) maximum of 5%. There are no horizontal curves.

D. Structures:

Structure Description	Number of Structures	Road Width (feet)	Length (feet)	Year Built	Structure Status
Spur Interchange					
"E" Line Overpass at I-15	1	45.0'	294.0'	1967*	Prestressed Concrete
I-315					
Mainline WB Overpass at 14 th	1	44.8'	145.0'	1967*	Prestressed Concrete
Mainline EB Overpass at 14 th	1	36.0'	150.0'	1967*	Prestressed Concrete
"A" ramp Overpass at 14 th	1	23.3'	134.3'	1997	Prestressed Concrete
"F" ramp Overpass at Railroad	1	23.3'	181.8'	1996	Prestressed Concrete
Mainline WB Overpass at RR	1	36.7'	206.0'	1967**	Prestressed Concrete
Mainline EB Overpass at RR	1	44.6'	177.9'	1946**	Continuous Steel

* Reconstructed in 1995

** Reconstructed in 1996

V. Traffic Data:

2006 ADT	=	24,170 Letting Year
2026 ADT	=	42,810 Design Year
DHV	=	4,710
Com Trks	=	3.1%
ESAL	=	196
AGR	=	2.9%

VI. Accident Analysis:

- A. The accident analysis for Interstate 315 was taken for the dates January 1, 1995 through December 31, 2004 between RP 0.000 and 1.397
- B. The average accident rate is 0.78, severity index is 1.95, and severity rate is 1.52. The statewide averages for urban interstates are not available.
- C. The total recorded accidents is 43 with no truck accidents.
- D. Variations from Average Occurrence:
30.2% dark – lighted vs. 14.8% statewide urban average.
- E. Accident Clusters and Safety Projects:
There were no accident clusters identified and no safety projects within the ten-year study period.
- F. Remarks:
The majority of the collisions in this section were rear ends and sideswipes. Seventeen of the 43 crashes occurred at RP 0.342, which is the 14th Street SW Interchange. The 2004 Traffic by Sections shows constant traffic volumes on I-315 from I-15 to Fox Farm Road. In reality, the traffic volumes on I-315 between I-15 and the 14th Street SW Interchange are lower than the volumes on I-315 between the 14th Street SW Interchange and Fox Farm Road. This could impact the crash rates given.

At the approach to the intersection with Fox Farm Road, an advanced overhead flasher has been recommended for eastbound traffic with the safety project STPHS 60-2(65), UPN 5385000.

VII. Major Design Features:

- A. **Design Speed:**
According to the Geometric Design Criteria for Freeways, the project is classified as an Urban Freeway and qualifies for a design speed of 50 mph. The existing speed limit for eastbound traffic exiting I-15 is not posted from the beginning of the project to station 32+50 where the posted speed limit is 45 mph. The existing posted speed limit for westbound traffic is 45 mph from station 42+25 to station 32+50 where the posted speed limit increases to 55 mph through the end of the project.
- B. **Horizontal Alignment:**
The existing horizontal alignment is adequate for a preventative maintenance overlay and

no changes are proposed with this project.

C. Vertical Alignment:

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

D. Typical Sections:

1. All cold milling material will be offered to the City of Great Falls.
2. The new designed widths will be as follows:

<u>Area</u>	<u>FTW/ft</u>
"E" line	57.0' – 79.0' (includes 5.0' – 18.0' median)
"E1" Ramp	23.0' – 33.0'
"E2", "E3", and "E4" Ramps	23.0'
Mainline	44.0' – 76.0'
"A", "C", "D", and "F" Ramps	23.0'
"B" Ramp	43.0' (includes 2.0' median)
"E" Ramp (curbed area)	49.0' (includes 4.0' median)

E. Geotechnical Consideration:

No geotechnical issues will be addressed with this preventative maintenance overlay.

F. Hydraulics:

No hydraulics issues will be addressed with this preventative maintenance overlay.

G. Bridge:

No Bridge involvement is anticipated as this preventative maintenance overlay will not be applied to the bridges. No work on the bridge rails or bridge approach rails is planned.

H. Traffic and Safety:

1. New pavement markings will be required. This will include shoulder striping and lane line striping on the entire project and any words and symbols on the "B" and "E" ramps.
2. Three guardrail ends are outdated and will be replaced.
3. The 55 mph speed limit sign will be replaced with a 65 mph speed limit as per MCA 61-8-303, which states that the speed limit for vehicles traveling on federal-aid interstate highways within an urbanized area of 50,000 population or more is 65 mph at all times.

I. Pedestrian/Bicycle/ADA:

No Pedestrian, Bicycle, or ADA improvements are planned with this preventative maintenance overlay.

J. Context Sensitive Design Issues:

The use of plant mix seal is being implemented for two reasons due to the project's urban location. The first reason is to reduce the amount of dust the usual chipseal creates. The second reason, this project has noise concerns and this is an attempt to reduce traffic noise.

VIII. Other Projects:

- A. Safety Project STPHS 60-2(65)95 is planned for the 2008 construction season at the intersection between 10th Avenue South and Fox Farm. (UPN 5385000)
- B. Great Falls North & South IM 15-5(97)270 will be performing a crack and seat, overlay, and seal and cover on I-15 during the 2007 construction season. Great Falls North & South will be milling into the Spur Interchange ramps as well as passing under the "E" line of this project. (UPN 4041000)
- C. 14th Street Southwest is scheduled for a chipseal during the 2007 construction season. (UPN 6124000)

IX. Location Hydraulics Study Report

No hydraulics issues will be addressed with this preventative maintenance overlay.

X. Design Exception:

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

XI. Right-Of-Way:

No new right-of-way will be required for this preventative maintenance overlay.

XII. Access Control:

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

XIII. Utilities/Railroads:

The project crosses the Burlington Northern Railway; however, no utility or railroad involvement is anticipated with this preventative maintenance overlay.

XIV. Survey:

No survey will be required with this preventative maintenance overlay.

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 this 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. A Special Provision will be prepared to outline a sequence of operation.

XVIII. Preliminary Cost Estimate

Roadwork		\$ 880,000
Traffic Control	8%	\$ 70,000
Subtotal		\$ 950,000
Mobilization	10%	\$ 95,000
Subtotal		\$ 1,045,000
Contingencies	5%	\$ 52,000
Subtotal		\$ 1,097,000
Inflation	3% for 1 year	\$ 33,000
Total Construction		\$ 1,130,000
Construction Engineering	10%	\$ 113,000
Project Total		\$ 1,243,000

The following items were considered in the roadwork preliminary cost estimate: surfacing, cold milling, pavement markings, and guardrail ends.

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

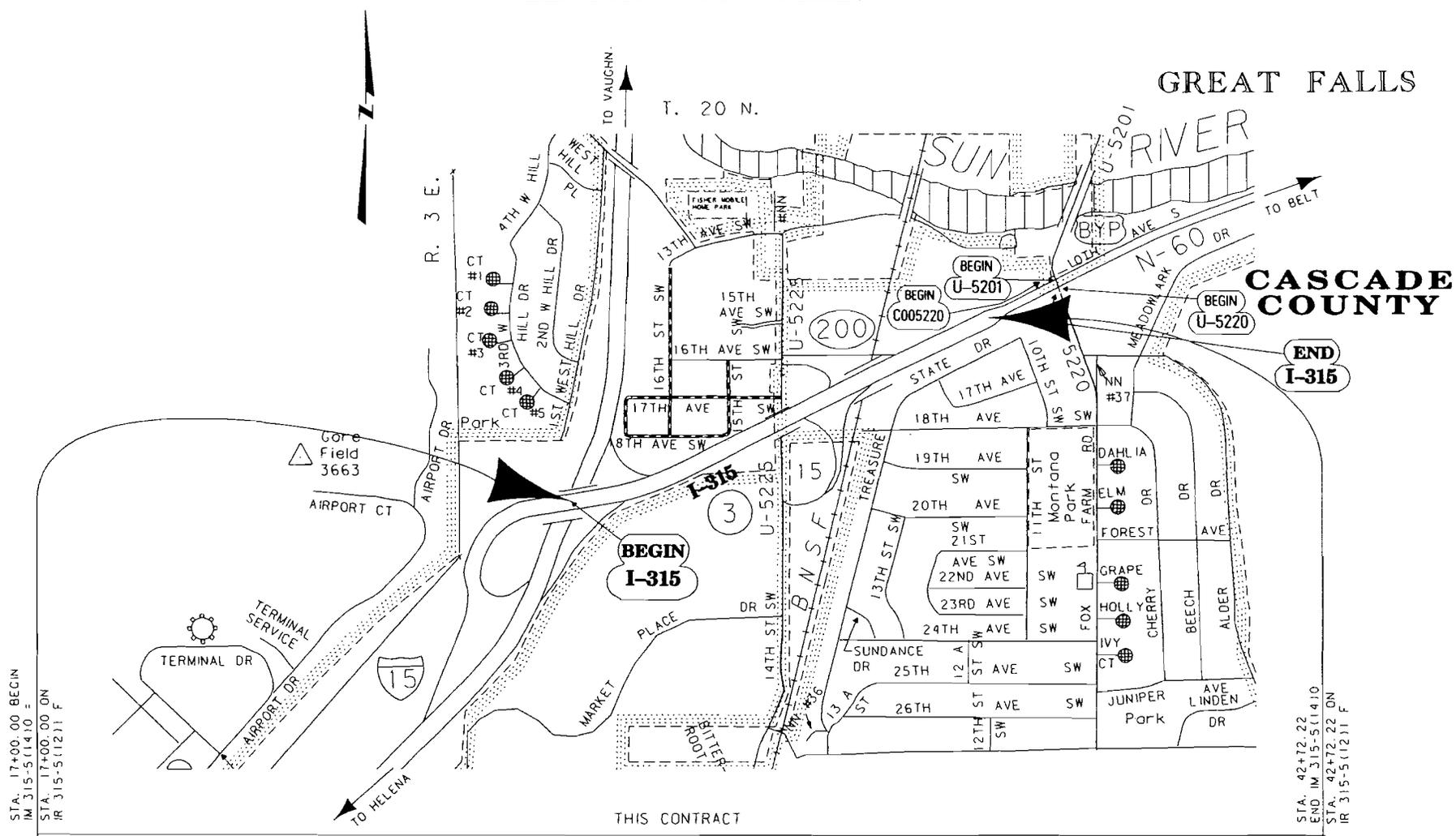
FEDERAL AID PROJECT IM 315-5(14)0

RESURFACING - THIN OVERLAY

GREAT FALLS URBAN

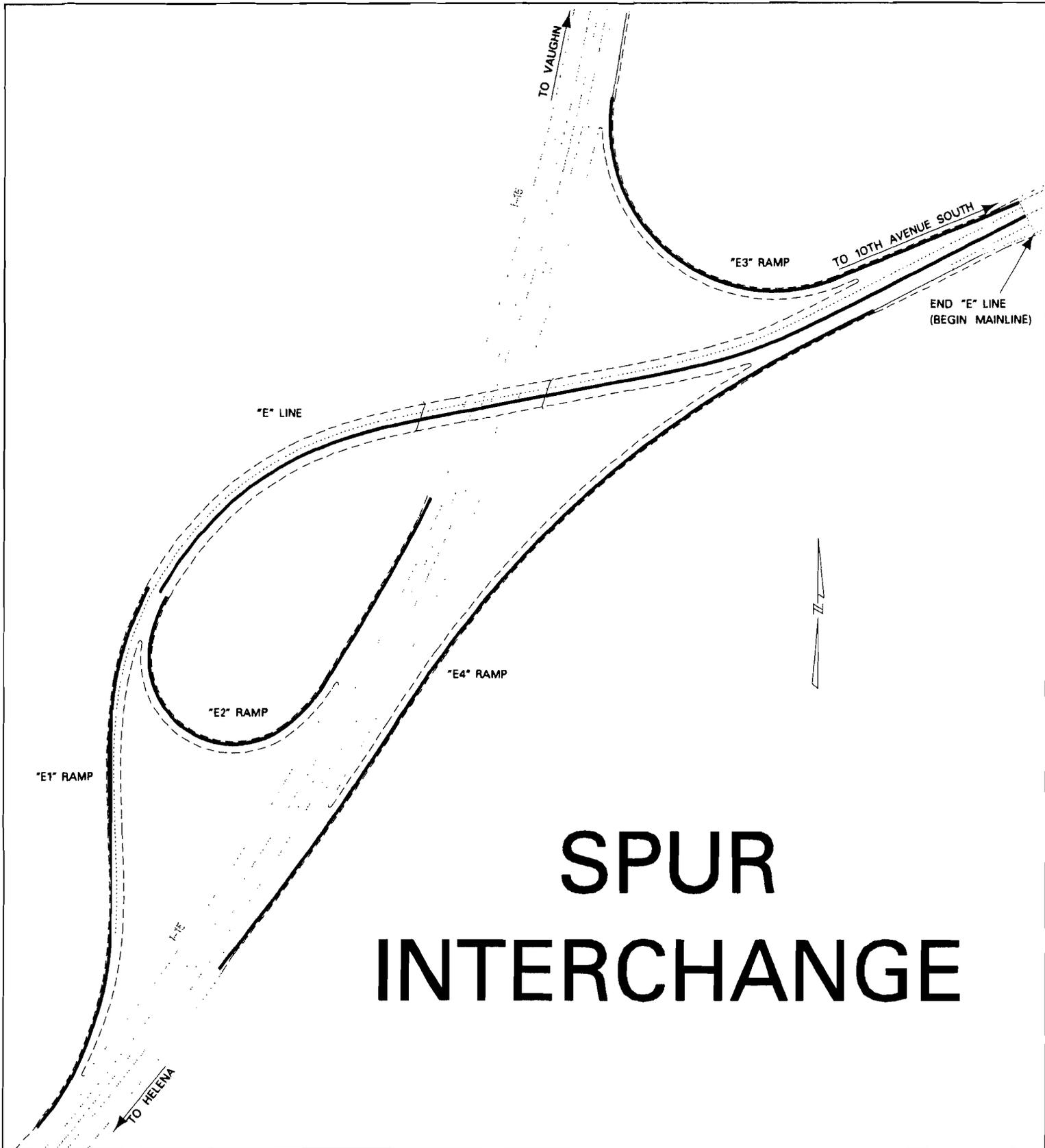
CASCADE COUNTY

LENGTH 0.5 MILES



THIS CONTRACT

RP 0.0 TO RP 1.1



SPUR INTERCHANGE

