



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

**Memorandum**

MASTER FILE  
COPY

To: Lisa Hurley, Supervisor  
Fiscal Programming Section

From: Heidi Bruner, P.E.  
Engineering Section Supervisor

Date: November 25, 2014

Subject: Categorical Exclusion (c) (23)  
NH 50-2(80)84  
HUFFINE LN/LOVE LN - W BOZEMAN  
Control Number: 8545000

Environmental Services has determined that this proposed project will not involve unusual circumstances as described under 23 CFR 771.117(b). As a result, the project qualifies as a Categorical Exclusion under the provisions of 23 CFR 771.117(c), part (23), which describes Federally-funded projects that receive less than \$5,000,000 of Federal funds. This proposed action also qualifies as a Categorical Exclusion under the provisions of ARM 18.2.261 (Sections 75-1-103 and 75-1-201, M.C.A.).

The proposed project involves the installation of a traffic signal at the intersection of Huffine Lane and Love Lane. A left turn lane will be added to Love Lane and the current farm field approach on the south will be aligned with Love Lane on the north. Additional right of way will be required. The total estimated cost of the project at this time including CN + CE w/INF + IDC = \$753,684

In accordance with the Federal Highway Administration's (FHWA) letter of March 29, 1999, please notify FHWA that the proposed action is being processed in accordance with 23 CFR 771.117(c).

e-copies: Jeff Ebert - Butte District Administrator  
Dustin Rouse – Butte District Engineering Services Supervisor  
Paul Ferry - Highways Engineer  
Robert Stapley - Right-of-Way Bureau Chief  
Tom Martin - Environmental Services Bureau Chief  
Heidi Bruner – Engineering Section Supervisor  
Jeff Patten – FHWA  
Barry Brosten – Environmental  
Nicole Pallister - Fiscal Programming Section Supervisor

copy: project file



**Memorandum**

To: Distribution

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

Date: May 27, 2014

Subject: NH 50-2(80)84  
 Huffine Ln/ Love Ln- W Bozeman  
 UPN-8545000  
 Work Type 410-Traffic Signals & Lighting

Attached is the Preliminary Field Review Report/Scope of Work Report which was approved on May 29, 2014. 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:

- |   |  |
|---|--|
| Jeff Ebert, Butte District Administrator  | Tom Martin, Environmental Services Bureau Chief              |
| Kent Barnes, Bridge Engineer              | Lynn Zanto, Rail, Transit, & Planning Division Administrator |
| Paul Ferry, Highways Engineer             | Jake Goettle, Construction Engineering Services Bureau       |
| Roy Peterson, Traffic and Safety Engineer | Matt Strizich, Materials Engineer                            |
| Robert Stapley, Right-of-Way Bureau Chief | Jon Swartz, Maintenance Administrator                        |

cc:

- |   |   |
|---|---|
| Joe Walsh, Project Design Manager, Butte District Master file | Dawn Stratton, Fiscal Programming Section |
|   | Damian Krings, Road Design Engineer       |

e-copies:

- |  |  |
|--|--|
| Jim Walther, Engineering, Preconstruction Engineer         | Jake Goettle, Construction Bureau – VA Engineer              |
| Lesly Tribelhorn, Highways Design Engineer                 | Dustin Rouse, Butte District Preconstruction                 |
| Mark Goodman, Hydraulics Engineer                          | Joe Walsh, Butte District Projects Engineer                  |
| Walt Ludlow, Butte District Hydraulics Engineer            | Mike Walsh, Butte District Materials Lab                     |
| Bill Semmens, Env. Resources Section Supervisor            | Kam Wrigg, Butte District Maintenance Chief                  |
| Deb Wambach, Butte District Biologist                      | Therese Iwaniak, Butte District Right of Way Supervisor      |
| Barry Brosten, Butte 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, Butte District Traffic Project Engineer      | Joe Zody, R/W Access Management Section Manager              |
| Kraig McLeod, Safety Engineer                              | Matt Strizich, Materials Engineer                            |
| Nathan Haddick, Bridge Area Engineer, Butte District       | Darin Reynolds, Pavement Design Engineer                     |
| Michael Grover, Engineering Cost Analyst                   | Jeff Jackson, Geotechnical Engineer                          |
| Marty Beatty, Engineering Information Services             | Patrick McCann, Butte District Geotechnical Manager          |
| Paul Grant, Public Involvement Officer                     | Dave Cunningham Butte District Geotechnical                  |
| Sue Sillick, Research Section Supervisor                   | Bryce Larsen, Supervisor, Photogrammetry & Survey            |
| Suzy Price, Contract Plans Bureau Chief                    | Paul Johnson, Project Analysis Bureau                        |
| Alyce Fisher, Fiscal Programming                           | Jean Riley, Planner  |
| Dawn Stratton, Fiscal Programming Section                  | Wayne Noem, Secondary Roads Engineer                         |
| Angela Zanin, Bicycle/Pedestrian Coordinator               | Michael Murphy, Eng. Manager, Bridge Management System       |
| Matt Maze, ADA Coordinator                                 | Becky Duke, Traffic Data Collection Section Supervisor (WIM) |
| Bill Rabey, Environmental                                  | Doug McBroom, Maintenance Division Operations Manager (RWIS) |
| Marisa Mailand, Road Log Manager                           |  |



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

**Memorandum**

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

From: Dustin Rouse, P.E.  
District Engineering Services Engineer

Date: May 23, 2014

Subject: NH 50-2(80)84  
Huffine Ln/ Love Ln- W Bozeman  
UPN-8545000  
Work Type 410-Traffic Signals & Lighting

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

Approved Roy Peterson Date May 29, 2014  
*Roy Peterson, P.E.*  
*Traffic & 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.):

Damian Krings, Road Design Engineer  
Master file  
John Van Delinder, City of Bozeman

Dave Fowler, Gallatin County  
Dustin Rouse, P.E. Engineering Services Supervisor

## Preliminary Field Review/Scope of Work Report

NH 50-2(80)84, Huffine Ln/Love Ln – W Bozeman  
Project Manager: Dustin Rouse

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### **Introduction**

On April 3, 2014, a Preliminary Field Review was held for the above noted project. The following were in attendance:

Jeff Ebert	MDT Butte District Administrator
Dustin Rouse	MDT Butte DESS
Joe Walsh	MDT Butte Engineering Project Manager
Justin Crow	MDT Butte Right-of-Way Design
Jason Brazill	MDT Butte Road Design
Dennis Schrock	MDT Helena Traffic Design
Rob Bukvich	MDT Bozeman Utilities
Paul Cogley	MDT Bozeman EPM
Dave Fowler	Gallatin County
John Van Delinder	City of Bozeman

### **Proposed Scope of Work**

This project has been nominated to install a traffic signal at the intersection of Huffine Lane and Love Lane. A left hand turn lane will be added to Love Lane. With this project the current farm field approach on the south will be aligned with Love Lane on the north.

### **Purpose and Need**

The location was recommended to be signalized based on a traffic signal warrant study completed by the Traffic Operations Section.

Based on the traffic study dated June 5, 2013, a fully-actuated traffic signal with mainline and side-street detection was recommended. When signalization occurs, the farm-field approach should also be signalized and moved to align with Love Lane. Based on MUTCD guidelines, flashing yellow arrows (FYA) will be required over the left-turn lanes on Huffine.

### **Project Location and Limits**

This project is located in Gallatin County at the intersection of NH-50 (Huffine Lane) and Love Lane. The project is located at RP 83.88 on NH-50. Huffine Lane is an MDT maintenance route and the side street, Love Lane is maintained by Gallatin County.

### **Work Zone Safety and Mobility**

Huffine Lane is part of a high crash corridor identified in the CHSP.

At this time, Level 2 construction zone impacts are anticipated for this project as defined in the Work Zone Safety and Mobility (WZSM) guidance. A Traffic Management Plan (TMP) consisting of a Traffic Control Plan (TCP), a limited Traffic Operations (TO) component and a limited Public Information (PI) component is appropriate for this project. These issues are discussed in more detail under the Traffic Control and Public Involvement sections.

### **Physical Characteristics**

The road log shows this section of P-50 was improved in 1997 under project STPP 50-5. Currently the plant mix surfacing width is 78-feet and has the following lane configurations:

Huffine Lane is a 5 lane facility with four-12' driving lanes and one-14' two way left turn lane and 8' shoulders on each side. The side street, Love Lane, is a 2-lane facility located on the north

## Preliminary Field Review/Scope of Work Report

NH 50-2(80)84, Huffine Ln/Love Ln – W Bozeman  
Project Manager: Dustin Rouse

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side of the intersection; a left turn lane will be added. The south leg of the intersection is currently a farm field approach that will be aligned with Love Lane to the north.

### Traffic Data

2014	AADT=	<u>22,500</u>	PRESENT
2016	AADT=	<u>24,100</u>	LETTING YEAR
2036	AADT=	<u>47,960</u>	DESIGN YEAR
	DHV=	<u>4800</u>	
	D=	<u>N/A</u>	
	T=	<u>2.1%</u>	
	EAL=	<u>148</u>	
	AGR=	<u>3.5%</u>	

### Crash Analysis

The MDT crash database was queried for crashes occurring on State Primary Route 50 from RP 83.6 to RP 84.1 for the five-year period January 1, 2009 through December 31, 2013. Eleven crashes were found meeting these criteria.

Of the 11 crashes, 6 were multi-vehicle crashes, 3 of which were sideswipe collisions. One of the multi-vehicle crashes resulted in 2 injuries; all other crashes were property damage only. Three of the 5 single vehicle crashes resulted in an overturn.

### Major Design Features

- a. **Design Speed.** Huffine Lane is classified as a Principal Arterial Non-Interstate. The design speed for this project is 55 mph. The posted speed limit is 55 mph.
- b. **Horizontal Alignment.** A realignment of the south farm field approach will be required to correct the offset when signaling this intersection.
- c. **Vertical Alignment.** The vertical alignment will be perpetuated on this project.
- d. **Typical Sections and Surfacing.** The intersection will be milled to remove existing pavement markings. The milled section will be repaved and chip sealed.
- e. **Geotechnical Considerations.** Not applicable to this project.
- f. **Hydraulics.** Irrigation ditches should be avoided to the extent practical.
- g. **Bridges.** Not applicable to this project
- h. **Traffic.** A traffic signal will be installed at the intersection of Huffine Lane and Love Lane. Radar detection and voice messaging pedestrian push buttons will be installed. Signing and pavement markings will be included as appropriate. New pavement markings will be included in this project. Geometrics will review and provide recommendations and coordinate with design as the project progresses.
- i. **Pedestrian/Bicycle/ADA.** There are no trails or sidewalks in the area. The signals will include pedestrian buttons for future ADA facilities.

## Preliminary Field Review/Scope of Work Report

NH 50-2(80)84, Huffine Ln/Love Ln – W Bozeman  
Project Manager: Dustin Rouse

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- j. **Miscellaneous Features.** Black Bull Run and MDT have a MOU for future improvements at this intersection.
- k. **Context Sensitive Design Issues.** There are no context sensitive design issues associated with this project.

### **Other Projects**

No other projects were identified.

### **Location Hydraulics Study Report**

There are numerous irrigation ditches within the project limits that may be affected by the widening for a left hand turn lane on Love Lane and the farm field approach relocation. Perform an irrigation study justification report to see if these ditches are currently active.

Survey all irrigation structures and culverts within the limits stated below. Including but not limited to shots of the culvert inlet and outlet inverts and tops, center of road over culvert, and description of the culvert diameter, material, and end treatment. Shots of the top corners, invert corners and material description of the irrigation structure.

#### *Left hand turn lane Love Lane*

Collect survey of the ditch from the intersection of Love Lane and All West Trail to the Intersection of Love Lane and Huffine Lane. Survey any ditch flowing into this ditch for a length of 100'. Collect survey of the ditches from the intersection of Love Lane and Huffine Lane to the irrigation structure located approximately 500' west of the intersection of Love Lane and Huffine Lane. Shoot inverts of irrigation structure and culvert inlet and outlet elevations if attached to structure. Shots to include thalweg, bottom of ditch LT & RT, top of ditch LT & RT. Collect grounds shots out to 50' parallel to the existing ditches.

#### *Farm Field Approach*

Survey all culverts crossing the approach. Survey ditches 200' upstream and downstream of the approach. Shots to include thalweg, bottom of ditch LT & RT, top of ditch LT & RT, and any culvert or irrigation structure within the survey limits.

### **Design Exceptions**

No design exceptions were identified at the PFR.

### **Right-of-Way**

New right of way will be required for this project. A cadastral survey will be required.

### **Access Control**

There will be no changes to existing access control.

### **Utilities/Railroads**

There will be no railroad involvement on this project. A phase 1 SUE survey will be required to identify any utility conflicts with the signal installation.

### **Maintenance Items**

No maintenance items were identified.

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Project Manager: Dustin Rouse

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### Intelligent Transportation Systems (ITS) Features

No ITS solutions will be included with this project.

### Survey

A conventional survey will be required for this project. The survey request form will be sent to the construction manager. A phase 2 SUE survey may be required. A cadastral survey will be required.

### Public Involvement

#### Level A

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

Because Huffine Lane is part of a high crash corridor, the “Public Advisory Program” standard special provision will be considered for the project. A limited PI component will be included outlining strategies for public notification. Possible strategies appropriate for this project would be: Newspaper ads, Montana Travel Info and variable message boards.

### Environmental Considerations

The level of Environmental Document is expected to be a Categorical Exclusion.

### Energy Savings/Eco-Friendly Considerations

LED signal indications will be utilized on this project.

### Experimental Features

No experimental features will be included with this project.

### Traffic Control

All work is expected to be completed under normal lane and/or shoulder closures which will be short in duration. Impact to the traveling public will be minimal. All work can be done during normal daytime working hours. The plans package will include a Traffic Management Plan (TMP) consisting mainly of a Traffic Control Plan (TCP). A limited Public Information (PI) component to address lane closures will also be included in the plan package.

### Project Management

The Butte District Road Design will develop the plans and Dustin Rouse will be the Project Design Manager. At this time this project is not under full FHWA oversight

### Preliminary Cost Estimate

	Estimated cost	Inflation (INF) (from PPMS)	TOTAL costs w/INF + IDC (from PPMS)
Road Work	200,000		
Electrical Work	200,000		
Signing Work	5,000		
Traffic Control	50,000		
<b>Subtotal</b>	<b>455,000</b>		
Mobilization (10%)	45,500		
<b>Subtotal</b>	<b>500,500</b>		

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NH 50-2(80)84, Huffine Ln/Love Ln – W Bozeman  
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Contingencies (8%)	40,040		
<b>Total CN</b>	<b><u>\$540,540</u></b>	<b><u>\$87,363</u></b>	<b><u>\$685,167.00</u></b>
<b>CE (10%)</b>	<b><u>\$54,054</u></b>	<b><u>\$8,736</u></b>	<b><u>\$68,517.00</u></b>
<b>TOTAL CN+CE</b>	<b><u>\$594,594</u></b>	<b><u>\$96,099.00</u></b>	<b><u>\$753,684.00</u></b>

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**

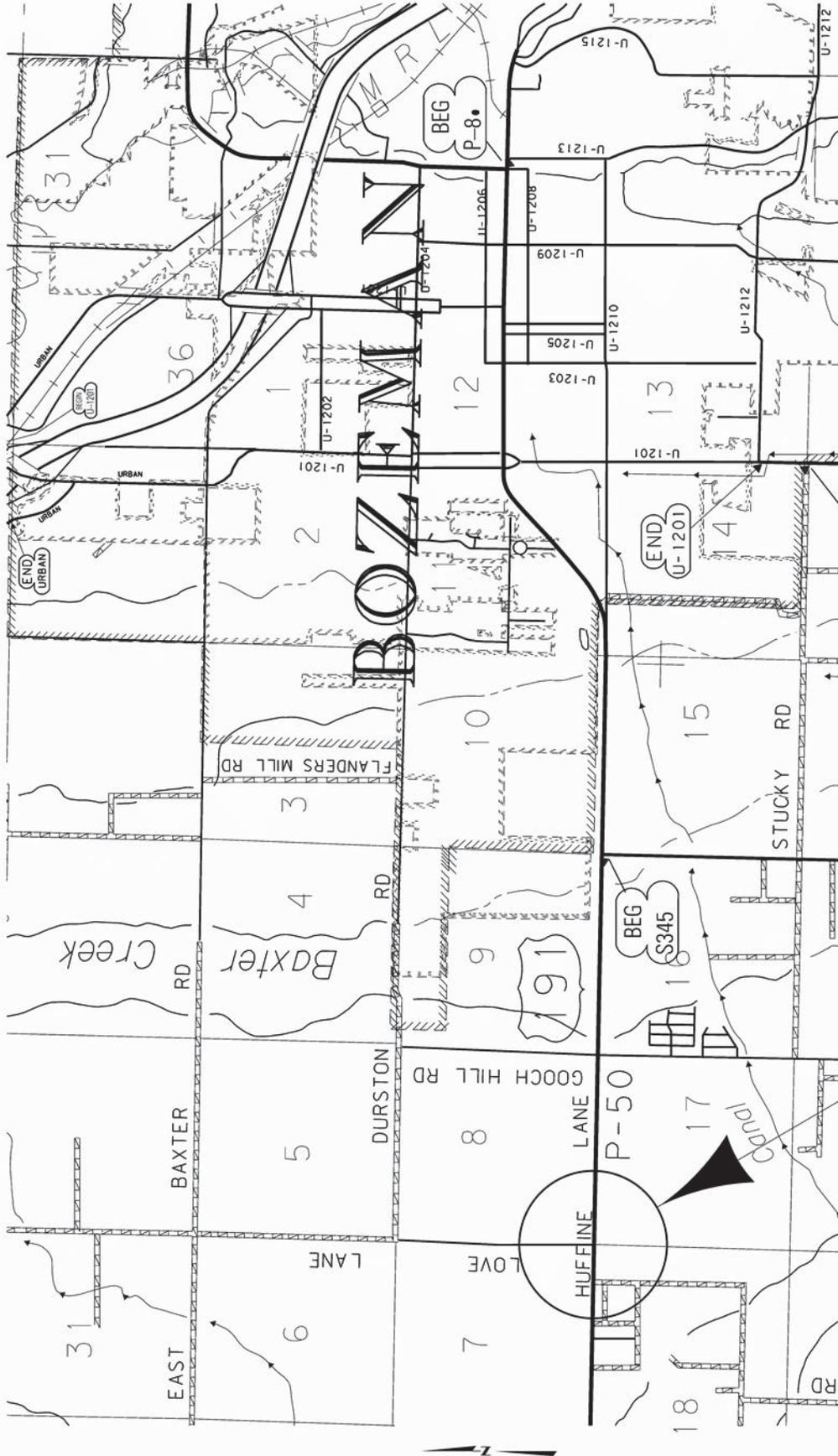
The ready date will be set after overrides are completed in OPX2 and the schedule has been reviewed. The anticipated letting date is 2015.

### **Site Map**

The project site map is attached.

Preliminary Field Review/Scope of Work Report

NH 50-2(80)84, Huffine Ln/Love Ln – W Bozeman  
Project Manager: Dustin Rouse



HUFFINE LN/LOVE LN - W BOZEMAN  
STPP 50-2(80)84  
UPN- 8545000