

REVISED

Townsend - South



Environmental Assessment and “Nationwide” Section 4(f) Evaluations

Project NH-F 8-4(16)78; Control No. 1420
Broadwater County, Montana



Montana Department of Transportation
and



U.S. Department of Transportation
Federal Highway Administration

REVISED
ENVIRONMENTAL ASSESSMENT
and
"NATIONWIDE" SECTION 4(f) EVALUATIONS

TOWNSEND-SOUTH
(U.S. Highway 287)
PROJECT NH-F 8-4(16) 78; CN 1420

BROADWATER COUNTY, MONTANA

This document is prepared in conformance with the *Montana Environmental Policy Act (MEPA)* requirements and contains the information required for an Environmental Assessment under the provisions of ARM 18.2.237(2) and 18.2.239. It is also prepared in conformance with the *National Environmental Policy Act (NEPA)* requirements for an Environmental Assessment under 23 CFR 771.119 and *Section 4(f)* of the *U.S. DEPARTMENT OF TRANSPORTATION Act* under 23 CFR 771.135.

Submitted pursuant to:

**42 U.S.C. 4332(2)(c), 49 U.S.C. 303 and
Sections 2-3-104, 75-1-201, M.C.A.**

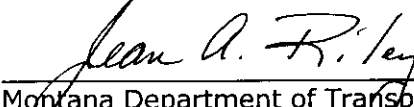
by the

U.S. DEPARTMENT OF TRANSPORTATION
Federal Highway Administration

and the

MONTANA DEPARTMENT OF TRANSPORTATION

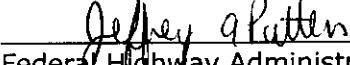
Submitted by:



Montana Department of Transportation
Environmental Services Bureau

Date: 10/2/06

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Distribution:



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Acronyms and Abbreviations Used in the EA

AADT	Annual Average Daily Traffic
AASHTO	American Association of State Highway and Transportation Officials
ACHP	Advisory Council on Historic Preservation
ADT	Average Daily Traffic
ARM	Administrative Rules of Montana
AST	Above ground storage tanks
ATR	Automatic Traffic Recorder
ATS	Average Travel Speed
BLM	U.S. Department of the Interior Bureau of Land Management
BOR	U.S. Department of the Interior Bureau of Reclamation
BRR	Biological Resources Report
BA	Biological Assessment
BMP	best management practices
CERCLA	Comprehensive Emergency Response, Compensation, and Liability Act
CFR	Code of Federal Regulations
COE	U.S. Army Corps of Engineers
CWA	Clean Water Act
dB	decibel
dba	A-weighted decibels
DNRC	Montana Department of Natural Resources and Conservation
DHV	design hourly volume
EA	Environmental Assessment
EASLs	Equivalent Single Axle Loads
EIS	Environmental Impact Statement
EPA	U.S. Environmental Protection Agency
EO	Executive Order
ESA	Endangered Species Act
FAS	Fishing Access Site
FEMA	Federal Emergency Management Agency
FHWA	Federal Highway Administration
FIRM	Flood Insurance Rate Map
FPPA	Farmland Protection Policy Act
ha	hectare
HCM 2000	Highway Capacity Manual 2000
MDEQ	Montana Department of Environmental Quality
MDT	Montana Department of Fish, Wildlife & Parks
MDT	Montana Department of Transportation
MEPA	Montana Environmental Policy Act
MNHP	Montana Natural Heritage Program
MVMT	million vehicle miles traveled
MRL	Montana Rail Link Railroad
MUTCD	Manual on Uniform Traffic Control Devices
MPDES	Montana Pollutant Discharge Elimination System
NAAQS	National Ambient Air Quality Standards

NAC Noise Abatement Criteria
NHS National Highway System
NPL National Priority List
kmkilometers
NRCS..... U.S. Department of Agriculture Natural
Resources Conservation Service
NRHP..... National Register of Historic Places
NRIS Natural Resource Information System
PLPublic Law
PTSF..... percent time spent following
PTWpresently traveled way
RCRA.....Resource Recovery and Conservation Act
RP.....Reference Post
SHPO.....Montana State Historic Preservation Office
SWPPP Storm Water Pollution Prevention Plan
TMDL..... total maximum daily load
TNM Traffic Noise Model
USC.....United States Code
USFS United States Forest Service
USFWS U.S. Department of the Interior Fish and Wildlife Service
USTUnderground Storage Tank
VMT vehicle miles traveled

Contents

	<u>Page No.</u>
INTRODUCTION	IN-1
SUMMARY OF THE REVISED EA	S-1
PART 1.0: Description of the Proposed Action	
1.1 INTRODUCTION	1
1.2 PROJECT LOCATION, LENGTH, AND TERMINI	1
1.2.1 Location	1
1.2.2 Project Termini	2
1.2.3 Project Area Photographs	3
1.3 SCOPE OF THE PROPOSED PROJECT	4
1.4 JURISDICTION	8
1.5 EARMARKED FUNDING FOR THE PROJECT	8
PART 2.0: Purpose of and Need for Action	
2.1 PURPOSE AND NEED STATEMENT	9
2.2 TRANSPORTATION AND OTHER NEEDS	10
2.2.1 Project History and Status	10
2.2.2 Functional Classification	11
2.2.3 Current and Future Road Use	11
2.2.4 Level of Service (LOS)	14
2.2.5 Roadway Deficiencies	16
2.2.6 Bridge Deficiencies	17
2.2.7 Road Condition	18
2.2.8 Traffic Safety	19
2.2.9 Access Management Needs	20
2.3 OVERALL CONCLUSIONS ON NEED	21
PART 3.0: Alternatives Considered	
3.1 INTRODUCTION	24
3.2 NO ACTION ALTERNATIVE	25
3.3 PREFERRED ACTION	25
3.3.1 Overview	25
3.3.2 Design Speed/Posted Speed Limits	26
3.3.3 Design Year LOS Target	26
3.3.4 Horizontal and Vertical Alignments	27
3.3.5 Typical Road Cross-Sections	27
3.3.6 Center Medians/Left Turn Lanes	28
3.3.7 Directional Passing Lanes	29
3.3.8 Intersections/Approaches	29
3.3.9 Bridges/Culverts/Irrigation Facilities	31
3.3.10 Access Control and Management	31
3.3.11 Highway Right-of-Way and Utilities	32
3.4 ALTERNATIVES DEVELOPMENT	33
3.5 ALTERNATIVES SCREENING	33

3.6 LOCATION OPTIONS CONSIDERED BUT REJECTED ...	38
3.6.1 Rebuild U.S. Highway 287 West of the River	38
3.6.2 Rebuild U.S. Highway 287 East of the Existing Road.....	40
3.6.3 Rebuild on the Present Alignment.....	42
3.7 DESIGN OPTIONS CONSIDERED BUT REJECTED	42
3.7.1 Reconstruction As an Improved 2-Lane Facility ...	43
3.7.2 Two-Lane Reconstruction With One Passing Area..	44
3.7.3 Two-Lane Reconstruction With Alternating Passing Areas	45
3.7.4 Two-Lane Reconstruction With Three Passing Areas	46
3.7.5 Reconstruction as a 4-Lane Facility.....	48
3.8 RESULTS OF ALTERNATIVES SCREENING	49

PART 4.0: Affected Environment and Environmental Impacts

4.1 INTRODUCTION	54
4.2 IMPACTS TO THE NATURAL ENVIRONMENT	54
4.2.1 Impacts to Landforms and Soils	54
4.2.2 Important Farmland	55
4.2.3 Water Resources and Quality	57
4.2.4 Floodplains	62
4.2.5 Air Quality Impacts	64
4.2.6 Vegetation	66
4.2.7 Wetlands	69
4.2.8 Impacts to Threatened or Endangered Species.....	78
4.2.9 Impacts to Wildlife Resources	83
4.2.10 Impacts to Aquatic Resources	89
4.3 IMPACTS TO THE HUMAN AND CULTURAL ENVIRONMENTS	94
4.3.1 Land Use Impacts	94
4.3.2 Right-of-Way and Utility Impacts	96
4.3.3 Transportation and Circulation	99
4.3.4 Social Impacts and Environmental Justice	100
4.3.5 Economic Impacts.....	103
4.3.6 Noise Impacts	105
4.3.7 Hazardous Substances.....	111
4.3.8 Cultural Resources	112
4.3.9 Section 4(f) Resources	117
4.3.10 Section 6(f) Lands	118
4.3.11 Pedestrian and Bicyclist Considerations.....	119
4.3.12 Visual Resources	120
4.3.13 Construction Impacts	122
4.3.14 Permits Required	124
4.4 INDIRECT (SECONDARY) EFFECTS	126
4.5 CUMULATIVE IMPACTS	127
4.5.1 Recently Completed Projects on U.S. Highway 12/287.....	128
4.5.2 Planned Projects on U.S. Highway 12/287	128
4.5.3 Planned Projects on U.S. Highway 12 (East of Townsend).....	129
4.5.4 Reasonably Foreseeable MDT Projects.....	129

4.5.5 Projects by Federal Agencies in the Area 132
 4.5.6 Planned Projects by Others in the Area 134
 4.5.7 Conclusions 135

PART 5.0: Coordination with Others

5.1 INTRODUCTION 136
5.2 AGENCY COORDINATION 136
 5.2.1 Cooperating Agencies 136
 5.2.2 Agencies Consulted 136
 5.2.3 Agency Coordination 137
5.3 PUBLIC INVOLVEMENT 138
 5.3.1 Initial Project News Release 138
 5.3.2 June 28, 2001 Public Meeting 138
 5.3.3 November 2005 EA Circulation 138
 5.3.4 December 15, 2005 Public Meeting on EA 140
 5.3.5 Written Comments Received on the EA 142
 5.3.6 February 22, 2006 Meeting with BCDC 142
 5.3.7 Planned Public Involvement Activities
 for the Revised EA 143
5.4 DISTRIBUTION LIST FOR THE EA 144
**5.5 LIST OF AGENCIES WITH JURISDICTION
 AND/OR PERMITS REQUIRED** 147

APPENDICES

- APPENDIX A: LIST OF PREPARERS
- APPENDIX B: CORRESPONDENCE PERTINENT TO PROJECT
- APPENDIX C: PUBLIC INVOLVEMENT (INCLUDING PUBLIC HEARING NOTICE, TRANSCRIPT, COMMENTS AND RESPONSES)
- APPENDIX D: WRITTEN COMMENTS RECEIVED AND MDT/FHWA RESPONSES
- APPENDIX E: "NATIONWIDE" SECTION 4(F) EVALUATIONS AND SUPPORTING MATERIALS
- APPENDIX F: COMPARISON OF LOCATION ALTERNATIVES CONSIDERED

LIST OF TABLES

TABLE S-1: Summary of Impacts for Alternatives Evaluated in Detail S-4
 TABLE S-2: Summary of Mitigating Measures for the Preferred Alternative S-9
 TABLE 2-1: Current and Future Traffic in the Townsend-South Corridor 12
 TABLE 2-2: 2003 Daily Variation in Traffic on US Highway 12/287 at ATR Station A-2 13
 TABLE 2-3: 2003 Monthly Variation in Traffic on US Highway 12/287 at ATR Station A-2 13

LIST OF TABLES (CONT.)

	<u>Page No.</u>
TABLE 2-4: Level of Service (LOS) Descriptions for Two-Lane Highways	15
TABLE 2-5: Vehicle Crash Summary (1994-2003)	19
TABLE 3-1: Screening Criteria for Location Alternatives	35
TABLE 3-2: Screening Criteria for Design Alternatives	37
TABLE 3-3: Screening Evaluation of Townsend-South Location Options	50
TABLE 3-4: Screening Evaluation of Townsend-South Design Options	52
TABLE 4-1: Townsend-South Wetlands and Estimated Impacts	70
TABLE 4-2: Population Data for Townsend, Broadwater County, and State of Montana	101
TABLE 4-3: Noise Abatement Criteria (NAC) Hourly A-Weighted Sound Level in Decibels (dBA)	106
TABLE 4-4: Predicted Traffic Noise Levels in the Townsend-South Project Corridor	107
TABLE 4-5: Cultural Resources-Townsend-South Corridor ...	114

LIST OF FIGURES

	<u>Page</u>
FIGURE 1: Project Location Map	2
FIGURE 2: Project Area Map	5
FIGURE 3: REVISED Lane Configurations for the Preferred Alternative	30
FIGURE 4: Alternate Alignments Considered	34
FIGURE 5: Surface Waters	58
FIGURE 6: Floodplains	65
FIGURE 7: Project Area Wetland Sites	71
FIGURE 8: Noise Receptor and Measurement Locations	108
FIGURE 9: Cultural Resources in the Project Area	113

LIST OF PHOTO PLATES

	<u>Page</u>
Photo Plate 1: Typical Landscapes - Project Corridor	6
Photo Plate 2: Typical Landscapes - Project Corridor	7
Photo Plate 3: Roadway Deficiencies	22
Photo Plate 4: Roadway Deficiencies	23
Photo Plate 5: Project Area Wetlands	72
Photo Plate 6: Project Area Wetlands	73

INTRODUCTION

Introduction

BACKGROUND

The Montana Department of Transportation (MDT) plans to reconstruct 13.2 km (8.2 miles) of U.S. Highway 287 in Broadwater County, Montana. The proposed “**Townsend-South**” project would begin at the south city limits of Townsend near reference point (RP) 78.1 and end north of Toston at RP 86.3.

The Townsend-South project is intended to enhance traffic operations and safety within the corridor and upgrade the physical condition of the highway. The existing highway would be rebuilt to meet MDT’s current standards for Rural Principal Arterials on the National Highway System (NHS). A new two-lane highway at least 12.0 m (40 feet) wide would replace the existing 9.1 m (30-foot) wide road. Additional road widening would occur at various locations to provide center medians and left turn lanes and passing lanes for both travel directions. As a result, the project would include areas with three-lane and five-lane configurations.

In November 2005, MDT distributed an Environmental Assessment (EA) for the proposed project and solicited comments from the public and interested agencies. A Public Hearing on the EA was held on December 15, 2005 in the Community Room of the Townsend High School. The hearing included presentations discussing the EA and its findings and the proposed scope of the project. Those attending offered comments and discussed the project with MDT staff. Written comments on the EA were accepted through January 13, 2006.

WHY DID MDT CIRCULATE A REVISED EA?

The FHWA’s Technical Advisory T 6640.8A “*Guidance for Preparing and Processing Environmental and Section 4(f) Documents*” (October 30, 1987) indicates that following the public availability period, the EA should be revised or an attachment provided to:

- reflect changes in the proposed action or mitigation measures resulting from comments received on the EA or at the public hearing and any impacts of the changes;
- include any necessary findings, agreements, or determinations required for the proposal; and
- include a copy of pertinent comments received on the EA and appropriate responses to the comments.

Since the public availability period for the Townsend-South EA ended, several changes to MDT’s Preferred Alternative were made in response to comments received and to further enhance safety within the project corridor. These changes include: combining the southern two passing areas into one

long passing area; incorporating a center median and left turn lane at the approach for the York's Island Fishing Access Site; and developing school bus turnarounds at two locations adjacent to county roads near U.S. Highway 287. The Revised EA includes text discussing these changes.

This document also allows MDT to clarify design details for the passing areas included with the Preferred Alternative. The graphic showing proposed lane configurations (**FIGURE 3** in the EA distributed in November 2005) inadvertently showed passing areas as undivided four-lane sections. MDT proposes that passing areas be 22.8 meters (76-feet) wide and consist of four driving lanes and a center median/left turn lane. Although the EA disclosed that the passing areas may include sections with five-lanes, the document did not clearly represent that passing areas would be developed with five-lane typical cross-sections.

FIGURE 3 in the EA showed three areas in the project corridor where improved two-lane sections would be provided. The Preferred Alternative includes only two areas with an improved two-lane typical section and has other adjoining areas with three-lane typical sections. Additionally, the figure did not provide any indication of where transitions occur between various lane configurations. The figure suggested abrupt changes would exist between areas with different lane configurations. In reality, gradual transitions would be constructed in areas where the roadway width and lane configurations change.

The discrepancies between the proposed lane configurations shown on **FIGURE 3** in the EA and MDT's design proposal were disclosed at the December 15, 2005 public hearing. The display boards used by MDT during the engineering presentation at the hearing accurately showed the proposed lane configurations for this project. These aerial photo displays were frequently referenced during the presentation, the oral comment period, and during informal discussions with the public.

Circulating a Revised EA allows MDT to accurately show the lane configurations associated with the Preferred Alternative and eliminate any confusion that may have been created by the original lane configuration graphic.

WHERE CAN RESPONSES TO MY COMMENTS BE FOUND?

Comments heard at the December 15, 2005 Public Hearing and MDT/FHWA responses can be found in **APPENDIX C**.

Responses to written comments submitted on the EA can be found in **APPENDIX D**.

CAN I COMMENT ON THIS DOCUMENT?

Written opinions, comments and concerns about this Revised Environmental Assessment may be submitted until **NOVEMBER 27, 2006** to:

Jean Riley
MDT Environmental Services
2701 Prospect Avenue
P.O. Box 201001
Helena, MT 59620-1001

Comments can also be submitted online at MDT's website:
www.mdt.mt.gov/pubinvolve/eis_ea.shtml.

WHAT HAPPENS NEXT?

After the close of the comment period, comments received on this document will be evaluated to determine:

- whether significant impacts will occur from the implementation of the Preferred Alternative;
- if further consideration of the impacts discussed in the document is needed; and
- if new issues have arisen that must be addressed.

If no significant impacts are identified, MDT will prepare a summary of comments received on the comments received on the Revised Environmental Assessment along with appropriate responses and/or text clarifications. MDT will then provide this information to the FHWA and request the agency to make a Finding of No Significant Impact (FONSI). The signed FONSI, comments and responses, and any necessary text clarifications will then be attached to this Revised EA.

If significant impacts are found, then MDT and FHWA must determine if an Environmental Impact Statement (EIS) must be prepared to advance the proposed Townsend-South project.

SUMMARY OF THE ENVIRONMENTAL ASSESSMENT

Summary of the Revised Environmental Assessment

This Revised Environmental Assessment (EA) examines the environmental effects of rebuilding a portion of U.S. Highway 287 south of Townsend. The EA identifies why this road segment needs to be rebuilt; discusses the range of alternatives considered; discloses the potential environmental impacts of the Preferred Alternative and the No Action Alternative; and describes measures that will be implemented to mitigate the adverse effects of the proposed highway project.

PROPOSED ACTION

The Montana Department of Transportation (MDT), together with the Federal Highway Administration (FHWA), proposes to rebuild 13.2 kilometers (8.2 miles) of U.S. Highway 287 south of Townsend in Broadwater County. The proposed project, designated as the "Townsend-South" project, begins at the south city limits of Townsend near reference point (RP) 78.1 and ends north of Toston at RP 86.3.

The Townsend-South project would reconstruct the existing two-lane highway to meet MDT's current standards for Rural Principal Arterials included on the National Highway System (NHS) in Montana. The proposed project would provide a new two-lane highway at least 12.0 m (40 feet) wide to replace the existing 9.1 m (30 foot) wide road. Additional road widening would occur to provide a center median and left turn lanes at various locations and two five-lane passing areas for northbound and southbound motorists. The five-lane passing areas would consist of four driving lanes and a center median/left turn lane. PART 1.0 of the EA provides a general description of the project and contains maps showing its location. PART 3.0 discusses specific features and associated elements of the proposed project.

PURPOSE AND NEED FOR ACTION

The purpose of the proposed action is to enhance traffic operations and safety within the corridor and to improve the physical condition of the highway. Rebuilding the roadway is needed to bring this section of U.S. Highway 287 up to the geometric design standards applicable to this NHS route.

The existing roadway is nearly 65 years old and many of its associated features do not comply with MDT's current geometric design standards. Most notably, the width of the road does not meet the minimum paved roadway width of 12.0 m (40 feet) for Rural Principal Arterials with similar traffic volumes. The highway also has numerous areas with substandard roadside slopes. The recent accident history for the corridor verifies the

need for eliminating substandard roadside fill slopes. Twenty percent of the 93 reported crashes in the project corridor during a recent ten-year period included vehicles that overturned after leaving the roadway surface. Further, all three bridges on the route cannot accommodate a 12.0 m (40 feet) wide roadway. These key deficiencies are related to the design of the roadway and can be corrected only through reconstruction activities.

Traffic has steadily increased on U.S. Highways 12 and 287 in recent decades and traffic volumes are expected to continue to grow at nearly 5 percent annually over the foreseeable future. These conditions indicate the need for operational improvements like increasing passing opportunities and providing left turn lanes to separate slower-moving vehicles from the main stream of traffic within the corridor. Without improvements, this section of highway will operate below MDT's targeted Level of Service (LOS B) within the next twenty years.

The subgrade beneath the existing highway has high moisture levels. High moisture in the subgrade can reduce the strength and stiffness of the aggregate base materials beneath the road surface, contributing to pavement failures like rutting and potholes. Reconstruction of the roadway is needed to remedy the moisture problem in the subgrade.

Access management is lacking within the project corridor and there are unsafe and underused access points along the highway corridor. Access management will be provided to help MDT preserve the capacity of the roadway and enhance safety for road users over the foreseeable future. Similar reconstruction or facility improvements have already been implemented on this route between Townsend and Helena and south of Toston. These improvements have benefited traffic operations by increasing passing opportunities and separating turning traffic from through traffic at several locations.

PART 2.0 of the EA provides additional details about the purpose of this proposed project.

PREFERRED ALTERNATIVE

PART 3.0 of the EA describes the alternatives considered for the Townsend-South project including the improvements comprising MDT's Preferred Alternative. The Preferred Alternative would provide a paved road surface varying from 12.0 m (40 feet) wide in areas with an undivided two-lane cross-section to 22.8 m (76 feet) wide in passing areas consisting of four through lanes and a center median/left turn lane.

Travel lanes would be 3.6 m (12 feet) wide. Center median/left turn lanes would be 3.6 m (12 feet) or 4.2 m (14 feet) wide. Shoulder widths would typically be 2.4 m (8 feet) wide. The Preferred Alternative would also:

- flatten roadside slopes;
- upgrade signing, striping and guardrails;
- replace existing bridges with new structures and/or pipes

-
- and improve drainage elsewhere in the corridor;
 - relocate conflicting utilities; and
 - acquire additional right-of-way to accommodate the proposed road widening over the length of the project.

Due to the nearby location of the Montana Rail Link railroad line, road widening must generally occur to the east of the existing highway. At the north end of the project, the centerline of the new road would closely follow that of the existing highway. However, south of RP 78.7, the centerline would be shifted about 10 m (33 feet) to the east and would parallel the existing road to about RP 83.5. South of RP 83.5, the new road's centerline would be shifted slightly westward to parallel the east shoulder of the existing road. The new road would follow this alignment to RP 86.1 before transitioning back to the centerline of the existing road at RP 86.3.

Public comments have influenced the design of the Preferred Alternative. Several comments made during and after the December 15, 2005 public hearing questioned why a short (1.1 km or 0.7 mile) three-lane transition was proposed between the two passing areas in the southern half of the corridor. Combining the two passing areas would result in a 5.3 km (3.3 mile) long passing area. MDT staff reviewed the proposed transition area and determined the passing areas could be combined without notable increases in project costs, right-of-way needs, or environmental impacts. With this modification, five-lane passing areas would be provided from RP 80.0 to RP 81.4 and from RP 82.7 to RP 86.0.

MDT's preliminary design in the vicinity of the York's Island FAS turnoff was an improved two-lane typical cross-section. However, several comments suggested the need for a left turn lane at the approach to the FAS. After considering this suggestion and reviewing the intersection in the field, MDT decided to provide a left turn lane for northbound traffic at the approach for the FAS. Adding left turn provisions at the intersection can be accomplished without notably increasing impacts to roadside wetlands. New impacts to known populations of Ute ladies' tresses (a plant protected under the federal *Endangered Species Act*) would be avoided by ensuring the disturbance area along the west side of the highway does not extend beyond the toe of the existing roadside fill slope.

The Broadwater County Superintendent of Schools also asked MDT if bus turnarounds could be included with the proposed project. Two potential locations for bus turnarounds (adjacent to Shelley Road and Dry Creek near U.S. Highway 287) were identified with the assistance of the Superintendent. These locations were reviewed by MDT staff and it was determined the bus turnarounds could be added to the proposed project with minimal new impacts.

OTHER ALTERNATIVES CONSIDERED

Other locations for the road (including moving the highway west of the Missouri River or considerably east of its present alignment) were considered. Additionally, several other designs (lane configurations) were evaluated for this proposed project. These alternatives and the reasons why these other potential actions were rejected are discussed in PART 3.0. The reasons for eliminating other alternatives are also disclosed in PART 3.0.

In general, other alternatives were dismissed because they require the community of Townsend to be bypassed, require MDT to construct and maintain substantially more road than the Preferred Alternative, or have the potential to create environmental impacts similar to or greater than those associated with the Preferred Alternative. The alternative of taking no action was also considered and analyzed in detail. The No Action Alternative does not meet the purpose and need for the project because it fails to remedy identified geometric deficiencies and would not improve the operation or safety of the existing highway.

ENVIRONMENTAL EFFECTS AND MITIGATING MEASURES

This Revised EA evaluates in detail the potential social, economic and environmental impacts of the No Build Alternative and of the Preferred Alternative in PART 4.0. **TABLE S-1** summarizes the most apparent environmental effects associated with the Preferred Alternative and the No Action Alternative.

TABLE S-2 presents mitigating measures for impacts resulting from the implementation of the Preferred Alternative.

Table S-1: Summary of Impacts for Alternatives Evaluated in Detail

RESOURCE OR IMPACT CATEGORY	NO ACTION	PREFERRED ALTERNATIVE
LANDFORMS AND SOILS	No impacts.	The proposed road improvements would require cutting and filling adjacent terrain to widen the highway, modify horizontal curves and road grades, and develop portions of road on new areas adjacent to the present highway.
IMPORTANT FARMLAND	No impacts.	The construction of the proposed project would directly convert about 24.5 ha (60.6 acres) of soils meeting the designation of Important Farmland. There would be no indirect conversion of Important Farmland.
WATER QUALITY	Minor amounts of sediments and other pollutants associated with sanding and deicing would continue to be introduced to surface waters in the project area by snow plowing and runoff from snow melting.	<p>Road widening would increase the impervious surface area of the highway and increase runoff to adjoining lands. Pollutants from the highway would be transported into roadside wetlands and surface waters.</p> <p>Vegetation clearing and grading for the proposed highway construction would increase the potential for soil erosion and sediment transport.</p> <p>Work within stream channels would be required for new structure or culverts at Deep Creek, the Deep Creek Overflow, Greyson Creek, and Dry Creek. The proposed project would affect irrigation features and require work within jurisdictional irrigation ditches crossed by the highway.</p>
FLOODPLAINS	No impacts.	This proposed project would result in transverse encroachments on delineated floodplains at Deep Creek and Greyson Creek and a longitudinal encroachment on the delineated floodplain of the Missouri River between RP 83 and RP 84.
AIR QUALITY	Minimal long-term effects due to vehicle emissions associated with increased traffic on the route.	<p>Minimal long-term effects due to vehicle emissions associated with increased traffic on the route.</p> <p>The Preferred Alternative would result in short-term air quality impacts during construction of the proposed project due to the disturbance of relatively large areas and operation of heavy equipment in work zones.</p>
VEGETATION	No further effects to vegetation resources within the corridor.	<p>The proposed highway improvements would result in the permanent loss of vegetation where roadway alignment revisions and widening occur. Temporary disturbances would occur where vegetation is cleared from the right-of-way, at staging areas for construction equipment and at any necessary borrow sites.</p> <p>Impacts to known occurrences of sensitive plants have been avoided.</p> <p>Construction would disturb existing noxious weed communities. Opportunities for new noxious weed establishment would occur in disturbed areas.</p>

Table S-1: Summary of Impacts (Cont.)

RESOURCE OR IMPACT CATEGORY	NO ACTION	PREFERRED ALTERNATIVE
WETLANDS	No new effects to wetlands in the project area.	<p>The proposed project would result in direct impacts to 22 of the 26 delineated wetland sites in the corridor and the loss of about 5.7 ha (14.1 acres) of wetland. The proposed project would impact 5.3 ha (13.1 acres) of Category III wetlands, 0.2 ha (0.6 acres) of Category II wetlands, and 0.2 ha (0.4 acres) of Category I wetlands.</p> <p>The largest individual impact (2.1 ha - 5.2 acres) and most notable loss of wetland functions would occur at wetland sites located between RP 81.9 to RP 82.8.</p>
THREATENED OR ENDANGERED SPECIES	No impacts.	<p>A determination of May Affect, Not Likely to Adversely Affect was made for project-related effects to bald eagles.</p> <p>A determination of May Affect, Likely to Adversely Affect was made with respect to project effect to Ute ladies' tresses.</p>
WILDLIFE RESOURCES	<p>No new impacts to wildlife resources or habitat.</p> <p>Animal-vehicle collisions (most often involving deer) are common in the corridor, particularly between RP 80 and RP 83.</p> <p>Increasing traffic on the route could result in more wildlife mortalities.</p>	<p>The impacts on wildlife associated with the reconstruction of U.S. Highway 287 would include: the temporary loss of and avoidance of habitats adjacent to the construction area; direct mortality from vehicles and construction equipment; and permanent habitat degradation and/or displacement.</p> <p>The proposed road widening would further contribute to habitat fragmentation already occurring in the area.</p> <p>Higher travel speeds, along with projected traffic increases, could increase wildlife mortalities in the corridor. Increased driver sight distance along with the planned road and shoulder widening, would help offset potential increases in wildlife mortalities to some extent by affording drivers better opportunities to identify and avoid wildlife on the highway.</p>
AQUATIC RESOURCES	<p>No new impacts to aquatic resources.</p> <p>Road maintenance activities would continue to occur in proximity to Deep, Greyson, and Dry Creeks and the Missouri River.</p>	<p>Surface waters crossed by the project would be affected by direct disturbances for bridge removal and replacement and new culvert installations.</p> <p>Project activities would temporarily increase the potential for erosion and increased turbidity in local surface waters.</p> <p>Fish passage at Deep, Greyson, and Dry Creeks and would be maintained.</p>

Table S-1: Summary of Impacts (Cont.)

RESOURCE OR IMPACT CATEGORY	NO ACTION	PREFERRED ALTERNATIVE
LAND USE	No change to adjacent land uses or accesses.	<p>Adjoining land would be converted to highway right-of-way. There would be no adverse effects to commercial or residential developments located along the roadway. Minor amounts of cropland and pasture would be converted to right-of-way.</p> <p>The project would not conflict with the <i>Broadwater County Growth Policy Plan & Comprehensive Economic Development Strategy</i>.</p> <p>Induced growth is not anticipated as a result of this project's capacity and safety improvements.</p>
RIGHT-OF-WAY	No impacts.	<p>Estimates based MDT's preliminary Right-of-Way Plans show that about 31.4 ha (79 acres) of new right-of-way would be required.</p> <p>Preliminary design plans for the Preferred Alternative indicate that two residences east of the highway (at about RP 80.6 and RP 85.2) would be within the new right-of-way for the highway. Residents of these households would be displaced by new right-of-way acquisition. These residences would have to be acquired by MDT and demolished or moved to accommodate the planned highway reconstruction. No business relocations would be required.</p> <p>Conflicting utilities would be relocated.</p>
TRANSPORTATION AND CIRCULATION	There would be no change to current operational conditions on U.S. Highway 287. The anticipated traffic growth on the route would decrease the operational efficiency of the facility and could ultimately increase traffic conflicts between various highway users.	<p>Rebuilding U.S. Highway 287 would enhance traffic operations and safety by: increasing the width of the roadway; adding new passing areas in both directions at three locations; providing left turn lanes at public roads; constructing safe roadside slopes; and providing access management within the project corridor. These measures would help to reduce the chances for and severity of accidents.</p> <p>School bus turnarounds would be developed adjacent to Shelley Road and Dry Creek Road. These facilities would provide safe pick-up and drop-off locations for area students.</p>
SOCIAL IMPACTS/ ENVIRONMENTAL JUSTICE	No safety or operational improvements would be provided for highway users.	<p>No notable effects on the location, distribution, density or growth rate of the population of Townsend or Broadwater County. No environmental justice impacts.</p> <p>This alternative would provide traffic safety benefits and more efficient facility for road users. Minor benefits to emergency service providers by improving response times.</p>

Table S-1: Summary of Impacts (Cont.)

RESOURCE OR IMPACT CATEGORY	NO ACTION	PREFERRED ALTERNATIVE
ECONOMIC	<p>MDT would still be obligated to budget funds to maintain the existing facility and perform spot improvements on U.S. Highway 287.</p> <p>Although not a certainty, the anticipated increases in traffic on this route could contribute to a higher incidence of traffic accidents (and associated economic losses) without safety and operational improvements.</p>	<p>The proposed highway project would not adversely affect or cause notable long-term changes to the economy of Broadwater County or Townsend.</p> <p>Right-of-way acquisition would permanently remove about 31.4 ha (79 acres) of private property (mostly agricultural land) from the tax rolls. Taxes paid on the land would be lost to Broadwater County.</p> <p>Some temporary beneficial economic impacts (jobs and increased demands for local goods and services) may occur during construction.</p>
NOISE	<p>Noise levels would continue to increase on adjoining properties due to increased traffic. The noise study indicates the NAC for Category B is presently exceeded at one receptor location (R10) along the highway and would be exceeded at another location (R6) by the Design Year.</p>	<p>The NAC for Category B activities (66 dBA) would be exceeded at three receptors in the Design Year. Predicted Design Year noise levels would exceed the NAC by 8 or 9 dBA at two receptors (R6 and R10) and by 1 dBA at Receptor R11.</p> <p>The noise analysis showed that Design Year noise levels would exceed the NAC at Receptors R6 and R10 with or without the improvements associated with the Preferred Alternative.</p>
HAZARDOUS SUBSTANCES	<p>No impacts.</p>	<p>The proposed project would not affect any hazardous waste sites or encounter any areas of known contamination.</p>
CULTURAL RESOURCES	<p>No impacts.</p>	<p>No Effect to Feature 2 of the Kieckbush Farm (24BW816) or the Northern Pacific Railroad line (24BW0818).</p> <p>No Adverse Effect to the Wallace House (24BW812), the Montana Ditch (24BW0729), the overflow channel associated with the East Side Canal of the Broadwater-Missouri Diversion Project (24BW0837), or the Big Springs Ditch (24BW0836).</p> <p>The historic bridges over the Montana Ditch (24BW956) and the Deep Creek Overflow (24BW958) would be removed and replaced with new bridges, box culverts or pipes. The Deep Creek Bridge (24BW957) is not NRHP-eligible.</p>
SECTION 4(F)	<p>No impacts.</p>	<p>The Wallace House, two historic concrete highway bridges, and historic irrigation features are subject to <i>Section 4(f)</i>.</p> <p>Nationwide Programmatic <i>Section 4(f)</i> Evaluation forms were prepared for each of these resources to document project related impacts and measures to minimize harm.</p>
LAND & WATER CONSERVATION FUND/SECTION 6(F)	<p>No impacts.</p>	<p>No direct impacts. The proposed project would reconstruct the approach to the York's Islands FAS.</p>

Table S-1: Summary of Impacts (Cont.)

RESOURCE OR IMPACT CATEGORY	NO ACTION	PREFERRED ALTERNATIVE
PEDESTRIANS AND BICYCLISTS	Bicyclists and pedestrians must use the existing road's 0.9 m (3-foot) paved shoulder or roadside slopes for travel through the area.	The Preferred Action would provide 2.4 m (8 foot) wide shoulders for use by pedestrians and bicyclists. Safety would be improved for these facility users.
VISUAL	No impacts.	Minor visual changes would result due to the increased width of the new roadway, a slight easterly shift in the road's location, and revised roadside slopes. These changes would be most apparent to area residents or frequent highway users.
CONSTRUCTION	Minimal and localized impacts associated with typical highway maintenance activities would occur.	Road reconstruction activities would cause temporary inconveniences to the traveling public and to local residents. These inconveniences may include slightly longer travel times, minor detours around work zones, and the noise and dust generated by construction equipment.
PERMITS REQUIRED	None required for typical highway maintenance activities.	<p>A variety of water quality related permits would be required from federal and state agencies.</p> <p>Broadwater County must grant a floodplain development permit.</p> <p>Open-cut mining and air quality permits may be required during construction.</p>

Table S-2: Summary of Mitigating Measures for the Preferred Alternative

RESOURCE OR IMPACT CATEGORY	MITIGATING MEASURES FOR THE PREFERRED ALTERNATIVE
LANDFORMS AND SOILS	<ul style="list-style-type: none"> ▪ Clearing and grubbing operations will be restricted to the minimum area necessary to accommodate the planned highway reconstruction. ▪ A Storm Water Pollution Prevention Plan (SWPPP) employing Best Management Practices for controlling erosion and sediment transport will be implemented. ▪ Areas disturbed within the MDT Right-of-Way or construction easements will be reseeded as quickly as practicable after construction.
IMPORTANT FARMLAND	<ul style="list-style-type: none"> ▪ No mitigating measures are necessary or proposed.
WATER QUALITY	<ul style="list-style-type: none"> ▪ A SWPPP will be implemented in the project area. ▪ Work in streams, wetlands, or other jurisdictional waters will be subject to the conditions of water-related permits from the MDEQ, MDFWP, and the COE. ▪ Development of a revegetation plan, erosion control measures, and SWPPP will be coordinated with appropriate permitting and resources agencies.
FLOODPLAINS	<ul style="list-style-type: none"> ▪ MDT will obtain a Floodplain Development Permit from the Broadwater County Floodplain Administrator for construction activities within the delineated floodplains of the Missouri River or its tributaries.
AIR QUALITY	<ul style="list-style-type: none"> ▪ MDT's Standard Specifications for Road and Bridge Construction will be implemented for this project. This document includes guidelines for construction operations to help minimize adverse effects on air quality. ▪ Contractors will be required to obtain permits from the MDEQ Air Quality Bureau for activities like gravel crushing and the production of asphalt. ▪ MDT's contractor will incorporate all necessary dust control measures into the plans for the proposed project.
VEGETATION	<ul style="list-style-type: none"> ▪ Clearing and grubbing operations will be restricted to the minimum area necessary to accommodate the planned reconstruction activities. ▪ Areas disturbed within the MDT Right-of-Way or construction easements will be reseeded as quickly as practicable after construction. ▪ A revegetation plan will be developed for this project to be followed by the contractor. The plan will include specifications on seeding methods, seeding dates, types and amounts of mulch and fertilizer, and seed mix components. Broadwater County Weed Control District will be offered an opportunity to review the revegetation plan. ▪ The Contractor must also follow the requirements of the County Noxious Weed Management Act and all county and contract noxious weed control provisions. ▪ Construction equipment must be cleaned prior to entering the project area to avoid the unintentional introduction of noxious weed seed from other sites. ▪ Mulch used for revegetation will be certified as weed-free.

Table S-2: Summary of Mitigating Measures for the Preferred Alternative

RESOURCE OR IMPACT CATEGORY	MITIGATING MEASURES FOR THE PREFERRED ALTERNATIVE
WETLANDS	<ul style="list-style-type: none"> ▪ Impacts were avoided and minimized to the extent practicable by keeping the proposed alignment adjacent to the existing alignment and slightly shifting the alignment of the roadway in critical wetland areas. To the extent possible, the passing lane sections have been placed to limit wetland impacts. ▪ Compensatory mitigation for the projected wetland loss is being developed in cooperation with the COE and according to the agency's regulations and guidelines. MDT is currently investigating a potential wetland mitigation project on the Hahn Ranch near the Townsend-South corridor that could yield between 6 and 10 ha (16 and 25 acres) of new wetlands. As necessary, MDT will also purchase COE-approved wetlands at a privately-owned mitigation site on Woodson Creek near Ringling in Meagher County to mitigate the impacts of this project. ▪ All Clean Water Act Section 404 permit conditions, as well as Section 401 water quality certification and Montana Stream Protection Act (124) conditions, and any additional state or federal water quality requirements/conditions will be complied with. ▪ Removed culverts, guardrail, and other items will not be stockpiled in or adjacent to wetland or stream areas. ▪ Where practicable, construction in wetlands will be timed in order for these sites to be as "dry" as possible during construction to minimize sedimentation as well as construction difficulties. ▪ Construction equipment operating in wetlands will be limited to that which is needed to perform the necessary work. ▪ Disturbed wetland and streamside areas will be revegetated with salvaged wetlands material and soils obtained from impacted areas, where practicable. Additionally, appropriate measures will be taken to prevent the introduction/spread of noxious weeds into wetland areas. ▪ Wide-track or balloon-tire construction equipment will be considered for use in saturated/inundated areas. Timber pads, prefabricated equipment pads, or geotextile fabric overlain with gravel fill will be considered if typical construction equipment is used in such areas. All pads and temporary fill will be removed following construction. ▪ Straw wattles or other accepted erosion and sedimentation control devices or methods will be installed or utilized at the edges of wetlands and other waters of the U.S. prior to construction. All exposed soils will be permanently stabilized at the earliest practicable date. ▪ Hazardous materials, including fuels and lubricating oils, will not be stored within 30 m (100 feet) of wetlands or streams. Additionally, construction equipment will not be refueled within 30 m (100 feet) of such areas.

Table S-2: Summary of Mitigating Measures for the Preferred Alternative

RESOURCE OR IMPACT CATEGORY	MITIGATING MEASURES FOR THE PREFERRED ALTERNATIVE
<p>THREATENED OR ENDANGERED SPECIES</p>	<p><u>CONSERVATION MEASURES FOR BALD EAGLES</u></p> <ul style="list-style-type: none"> ▪ Prior to the start of construction, an MDT biologist will confirm the nesting status of bald eagles in the project area. At a minimum, coordination with local resource agency biologists and a MNHP records check will occur. ▪ If MDT becomes aware of any threatened, endangered, proposed or candidate species located in the vicinity of potential staging and borrow/gravel source areas, MDT will inform the contractor of those locations and of potential restrictions that may be required to avoid impacts to those species. ▪ Areas disturbed within the MDT Right-of-Way or construction easements will be reseeded as quickly as practicable after construction. ▪ Best Management Practices (BMPs) will be followed to minimize the potential for increasing sediment loads in any of the project area waterways. <p><u>CONSERVATION MEASURES FOR UTE LADIES' TRESSES</u></p> <ul style="list-style-type: none"> ▪ The project corridor will be surveyed again for Ute ladies' tresses prior to construction. ▪ The roadway alignment will be designed to minimize impacts to known populations of Ute ladies' tresses. ▪ Areas with known populations of Ute ladies' tresses and other sensitive plants will be shown on MDT's design plans. ▪ MDT's biologist will also "flag" the known locations of Ute ladies' tresses prior to the start of construction to help contractors avoid these sensitive areas. The contractor will also be required to place temporary fencing around the flagged locations to help ensure that construction activities do not impact these areas. ▪ Clearing and grubbing operations will be restricted to the minimum area necessary to accommodate the planned reconstruction activities. ▪ To minimize potential indirect affects of the proposed project on known Ute ladies' tresses locations, current hydrologic conditions within the roadside ditches will be maintained to the extent practicable to prevent wetland habitat from drying out or becoming too wet to support this species.
<p>WILDLIFE RESOURCES</p>	<ul style="list-style-type: none"> ▪ Clearing and grubbing operations will be restricted to the minimum area necessary to accommodate the planned reconstruction activities. ▪ Best Management Practices (BMPs) will be followed to minimize the potential for increasing sediment loads in any of the project area waterways. ▪ Areas disturbed within the MDT Right-of-Way or construction easements will be reseeded as quickly as practicable after construction.

Table S-2: Summary of Mitigating Measures for the Preferred Alternative

RESOURCE OR IMPACT CATEGORY	MITIGATING MEASURES FOR THE PREFERRED ALTERNATIVE
WILDLIFE RESOURCES	<ul style="list-style-type: none"> ▪ MDT will include 0.5 m (1.6-foot) wide benches underneath the ends of the new bridge at Deep Creek to facilitate terrestrial wildlife passage. ▪ To enhance small mammal crossings of the highway, culvert installations will be perpetuated at RP 79.0 and RP 81.1 and 600 mm (24-inch) diameter or larger pipes will be installed in the upper half of the roadway prism in the vicinity of RP 79.3, RP 81.3, RP 81.6, RP 82.3, RP 82.6, and RP 83.4. ▪ To enhance crossings of the highway for larger mammals, a new 2100 mm (82-inch) diameter culvert will be installed at RP 81.3. ▪ MDT will consider additional opportunities to provide wildlife under crossings in the project corridor, particularly in the area where a concentration of deer mortalities exists. Such opportunities may include perpetuating existing stockpass locations or adding new stockpasses in appropriate areas. ▪ MDT will also consider whether or not signing improvements, like the use of flashing signs during certain periods, are practical and effective ways to increase the motoring public's awareness of deer crossings. ▪ Prior to the nesting season (typically mid-May through mid-July), old nests will be removed from inside or underneath structures where swallow nesting is known or suspected and physical measures (such as plastic netting or wire) will be installed to exclude cliff swallows from establishing new nests or reoccupying old nests. Or, MDT will require that the demolition of bridges or culverts where swallow nesting is known or suspected occurs outside the nesting season. ▪ Prior to construction, an MNHP records check for new sensitive species occurrences will be performed in the project area.
AQUATIC RESOURCES	<ul style="list-style-type: none"> ▪ Fish passage will be maintained at the highway crossings of Deep, Greyson, and Dry Creeks. ▪ Construction equipment will not be permitted within the active channel of Deep, Greyson, and Dry Creeks (unless otherwise permitted by the regulatory agencies). The Contractor will be required to comply with the conditions attached to permits for the project including any measures deemed necessary to prevent the spread of whirling disease to other waters. ▪ Clearing and grubbing operations will be restricted to the minimum area necessary to accommodate the planned reconstruction activities. ▪ A Stormwater Pollution Prevention Plan (SWPPP) employing Best Management Practices for controlling erosion and sediment will be designed and implemented by MDT.

Table S-2: Summary of Mitigating Measures for the Preferred Alternative

RESOURCE OR IMPACT CATEGORY	MITIGATING MEASURES FOR THE PREFERRED ALTERNATIVE
AQUATIC RESOURCES	<ul style="list-style-type: none"> ▪ Any restrictions on work near streams or in wetlands will be specified as terms of water related permits obtained from MDEQ, MDFWP, and the COE. ▪ Removed culverts, guardrail, and other items will not be stockpiled in or adjacent to wetland or stream areas. ▪ Construction equipment operating in wetlands will be limited to that which is needed to perform the necessary work. The width of the construction zone will be minimized to the extent practicable in wetland and stream areas.
LAND USE	<ul style="list-style-type: none"> ▪ No mitigating measures are proposed for land use impacts associated with this proposed project.
RIGHT-OF-WAY	<ul style="list-style-type: none"> ▪ The acquisition of land or improvements for highway construction will be in accordance with the <i>UNIFORM RELOCATION ASSISTANCE AND REAL PROPERTY ACT</i> of 1970 and the <i>UNIFORM RELOCATION ACT AMENDMENTS</i> of 1987. ▪ MDT will prepare an Access Management Plan and implement access control in the project corridor to enhance traffic operations and safety. ▪ MDT's Right-of-Way design for this project will attempt to minimize the area required for the new highway and adverse effects on adjoining landowners. Temporary construction permits will be used when possible to minimize the need for new right-of-way. ▪ MDT will coordinate with the appropriate utility companies to determine the timing and details of relocating conflicting utilities. ▪ MDT will review all stockpass locations within the project corridor and contact landowners to determine their status during the final design and right-of-way phase of the project. These efforts will allow MDT to identify which stockpasses need to be perpetuated or abandoned and to determine the need for any new stockpasses.
TRANSPORTATION AND CIRCULATION	<ul style="list-style-type: none"> ▪ MDT will maintain traffic through the project area during construction by allowing continued use of the existing road and will attempt to minimize delays. ▪ MDT will ensure that access to properties adjacent to the highway is maintained throughout the construction period.
SOCIAL IMPACTS/ ENVIRONMENTAL JUSTICE	<ul style="list-style-type: none"> ▪ No mitigating measures are required or proposed.
ECONOMIC	<ul style="list-style-type: none"> ▪ MDT will maintain traffic through the project area during construction. ▪ Access to residences, businesses, and agricultural lands adjacent to the project will be perpetuated during the reconstruction of the highway.

Table S-2: Summary of Mitigating Measures for the Preferred Alternative

RESOURCE OR IMPACT CATEGORY	MITIGATING MEASURES FOR THE PREFERRED ALTERNATIVE
NOISE	<ul style="list-style-type: none"> ▪ Noise abatement measures are not considered to be reasonable or feasible actions to implement with the proposed project. ▪ The proposed residential acquisitions at RP 80.6 and RP 85.2 would eliminate the potential noise impact at two of the three receptor locations where such impacts were predicted.
HAZARDOUS SUBSTANCES	<ul style="list-style-type: none"> ▪ In accordance with MDT's Standard Specifications, the contractor for the project will be required to store fuel and other hazardous materials away from surface waters and wetlands to reduce the potential adverse effects of an accidental spill. ▪ The contractor for the project will be required to plan for and implement containment procedures in response to any accidental spills of fuel or other hazardous materials.
CULTURAL RESOURCES	<ul style="list-style-type: none"> ▪ If significant unanticipated cultural materials are encountered during construction, MDT will require the contractor(s) to temporarily suspend work in the immediate vicinity of the find until the cultural materials can be assessed. ▪ MDT and FHWA have complied with <i>Section 106</i> of the <i>NATIONAL HISTORIC PRESERVATION ACT</i> for historic bridges by following the procedures required by the 1997 Programmatic Agreement regarding historic roads and bridges in Montana.
SECTION 4(F)	<ul style="list-style-type: none"> ▪ The project will be accomplished in a manner that does not substantially alter the setting of the Wallace House or historic irrigation ditches within the project area. ▪ Mitigation for effects to historic irrigation ditches and historic bridges has been accomplished as required under the provisions of the 1997 Programmatic Agreement between MDT, FHWA, the Montana SHPO and the ACHP.
LAND & WATER CONSERVATION FUND/SECTION 6(F)	<p>The proposed project would reconstruct the approach to the York's Islands FAS and provide a left turn lane for northbound traffic turning into the FAS. MDT will implement the following measures to mitigate temporary, construction-related impacts to facilities and use of the FAS:</p> <ul style="list-style-type: none"> ▪ Public access to the FAS from U.S. Highway 287 will be perpetuated throughout the construction period. ▪ MDT will reset existing advance information signs for the FAS located adjacent to the highway affected by the proposed reconstruction project.
VISUAL	<ul style="list-style-type: none"> ▪ Areas disturbed within the MDT Right-of-Way or construction easements will be reseeded as quickly as practicable after construction.

Table S-2: Summary of Mitigating Measures for the Preferred Alternative

RESOURCE OR IMPACT CATEGORY	MITIGATING MEASURES FOR THE PREFERRED ALTERNATIVE
PEDESTRIANS AND BICYCLISTS	<ul style="list-style-type: none"> ▪ MDT will review the need for adding a sidewalk in the commercial area along the east side of the U.S. Highway 287 immediately south of the city limits during the final design of the project. If one is needed, then MDT will reconsider whether to include one in this project. ▪ MDT will work with the community on future projects that could provide sidewalks to help address pedestrian needs and enhance the U.S. Highway 287 corridor in Townsend.
CONSTRUCTION	<ul style="list-style-type: none"> ▪ Traffic control will be accomplished in accordance with MDT's standard practices and the Manual on Uniform Traffic Control Devices (MUTCD). ▪ If dust generated by construction activities becomes a concern, it will be controlled by the required use of either water or another approved dust suppressant. ▪ Temporary and permanent Best Management Practices (BMPs) for erosion control will be employed to prevent sediments from reaching the area surface waters or wetlands. A SWPPP employing BMPs will be implemented throughout the project corridor. ▪ The contractor will be required to have a plan for implementing appropriate measures in the event of an accidental spill of fuel or other hazardous materials. ▪ All work related to the proposed Townsend-South project will be subject to the provisions included in the current edition of Standard Specifications for Road and Bridge Construction as adopted by MDT and the Montana Transportation Commission. ▪ Reasonable access to adjacent businesses and residences will be maintained during construction. ▪ Disposal of project waste materials will be accomplished with applicable laws, rules and regulations.

PART 1.0: Description of the Proposed Action

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1.1 INTRODUCTION

The Montana Department of Transportation (MDT) plans to improve transportation in Broadwater County by reconstructing 13.2 km (8.2 miles) of U.S. Highway 287. This proposed project begins at the south city limits of Townsend near reference point (RP) 78.1 and ends near the grain terminal facility north of Toston at RP 86.3.

The proposed project would reconstruct the existing roadway and make changes to its alignment to provide an improved driving surface and safer road for highway users. The proposed work would be completed under the project designated by MDT as "**Townsend-South**" [Project Number NH-F 8-4(16) 78; CN 1420].

U.S. Highway 287 (FAP 8) is classified as a Rural Principal Arterial. This section of highway is part of the Non-Interstate National Highway System (NHS) in Montana, providing an important link between Interstate 15 at Helena to Interstate 90 near Three Forks. The NHS consists of over 6,196 km (3,850 miles) of the state's most important transportation routes including the Interstate highway system, other principal arterials, and other highways that are essential to the nation's strategic defense policy or that link military installations. The project begins just south of the junction of U.S. Highways 12 and 287 in Townsend.

1.2 PROJECT LOCATION, LENGTH AND TERMINI

1.2.1 PROJECT LOCATION

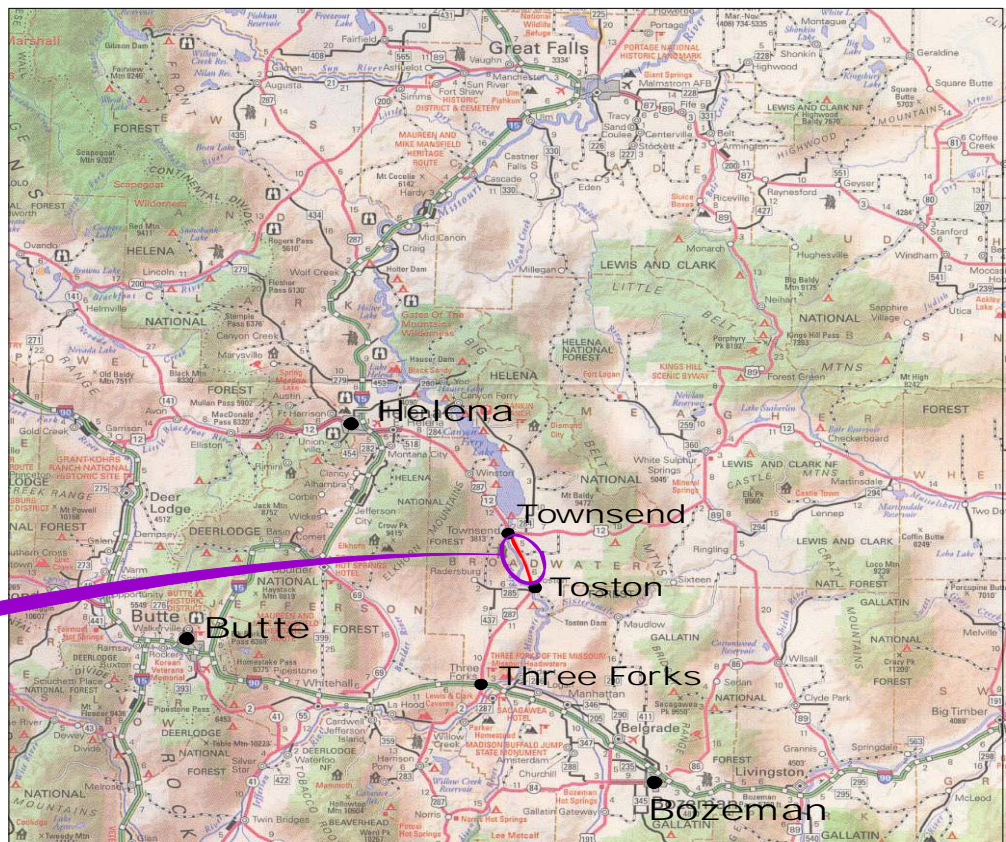
The project area is located in west-central Montana near the center of Broadwater County. The City of Townsend, the County Seat of Broadwater County, is located at the northern edge of the project area. Townsend is located about 60 km (37 miles) southeast of Helena in neighboring Lewis and Clark County, and about 55 km (34 miles) north of Three Forks in Gallatin County. The community of Toston is located just south of the project area on U.S. Highway 287.

The Townsend-South project is located within the following Townships, Ranges, and Sections, M.P.M.:

Township-5-North, Range-2-East, Sections 3, 10, 11 and 14
Township-6-North, Range-2-East, Sections 5, 6, 8, 16, 17, 21,
27, 28, and 34

The general location of the project area in Montana and in Broadwater County is shown in **FIGURE 1**.

FIGURE 1
PROJECT LOCATION
MAP



Townsend South
Project Area

1.2.2 PROJECT TERMINI

This proposed project begins at the south city limits of Townsend near reference point (RP) 78.1 and ends north of Toston at RP 86.3. These beginning and end points for the project are logical based on a consideration of the three factors listed in 23 CFR 771.111(f). This statute requires that the limits of transportation projects be established so that the proposed action:

- Connects logical termini and is of sufficient length to address environmental matters on a broad scope;
- Has independent utility or independent significance (i.e., is usable and is a reasonable expenditure even if no additional transportation improvements in the area are made); and
- Does not restrict consideration of alternatives for other reasonably foreseeable transportation improvements in the area.

RP 78.1 is the logical beginning terminus for the proposed project because it is the ending point for the recently completed Townsend-Urban reconstruction project.

RP 86.3 was chosen as the southern terminus for the Townsend-South project based on the need to select an ending point that does not limit the consideration of any alignment alternatives for the future reconstruction of U.S. Highway 287 in the Toston area. The replacement of the highway bridges over the Missouri River and Montana Rail Link at Toston and the reconstruction of the route further to the south are reasonably foreseeable transportation improvements.

A project to add passing lanes south of Toston, let to contract in April 2005, is nearly completed. A similar project north of I-90 at Three Forks was let to contract in December 2005 and should be completed in 2006. Preliminary engineering activities are underway for three reconstruction projects, Toston-South, Jct. S-437-North & South, and North of Three Forks-North, which would also include measures to increase passing opportunities between Toston and Three Forks. These reconstruction projects would be built sometime after 2010 depending upon the availability of funding. The Turn Bay-W Three Forks Interchange project, located on the U.S. Highway 287 north of I-90, would also provide operational improvements and is scheduled for construction in 2008.

However, the funding for and timing of a bridge replacement project at Toston is uncertain and such a project may not occur within the next ten years. Various alignment options for the new bridges and their approaches must first be identified and evaluated. Therefore, the exact location where the bridge replacement project would tie into the existing road is unknown at this time. Setting the southern terminus of the Townsend-South project at RP 86.3 (a location north of the bridges) does not preclude any alignment possibilities for a future project to replace the highway bridges at Toston.

The Townsend-South project has independent utility because the proposed highway reconstruction activities are stand-alone actions that do not require transportation improvements be made elsewhere on the route. The project is also a reasonable expenditure of public funds even if no additional transportation improvements were made in the area.

The resulting project corridor is of sufficient length to allow for a comprehensive review of the environmental effects associated with the proposed highway reconstruction.

FIGURE 2 shows the section of U.S. Highway 287 proposed for reconstruction under the Townsend-South project.

1.2.3 PROJECT AREA PHOTOGRAPHS

Typical landscapes within the Townsend-South project area are shown in **PHOTO PLATES 1** and **2**.

1.3 SCOPE OF THE PROPOSED PROJECT

The proposed project involves reconstructing and widening the existing 9.1 m (30 foot) wide roadway to enhance the operation and safety of the facility. At a minimum, the new roadway would have a 12.0 m (40 feet) finished top width and provide two 3.6 m (12 foot) driving lanes and two 2.4 m (8 foot) shoulders. However, a center median and/or left turn lane would be provided at other locations within the Townsend-South corridor. A two-lane road with center median/turning lane (similar to the existing road within the community) would be provided to serve the commercial developments at the south edge of Townsend.

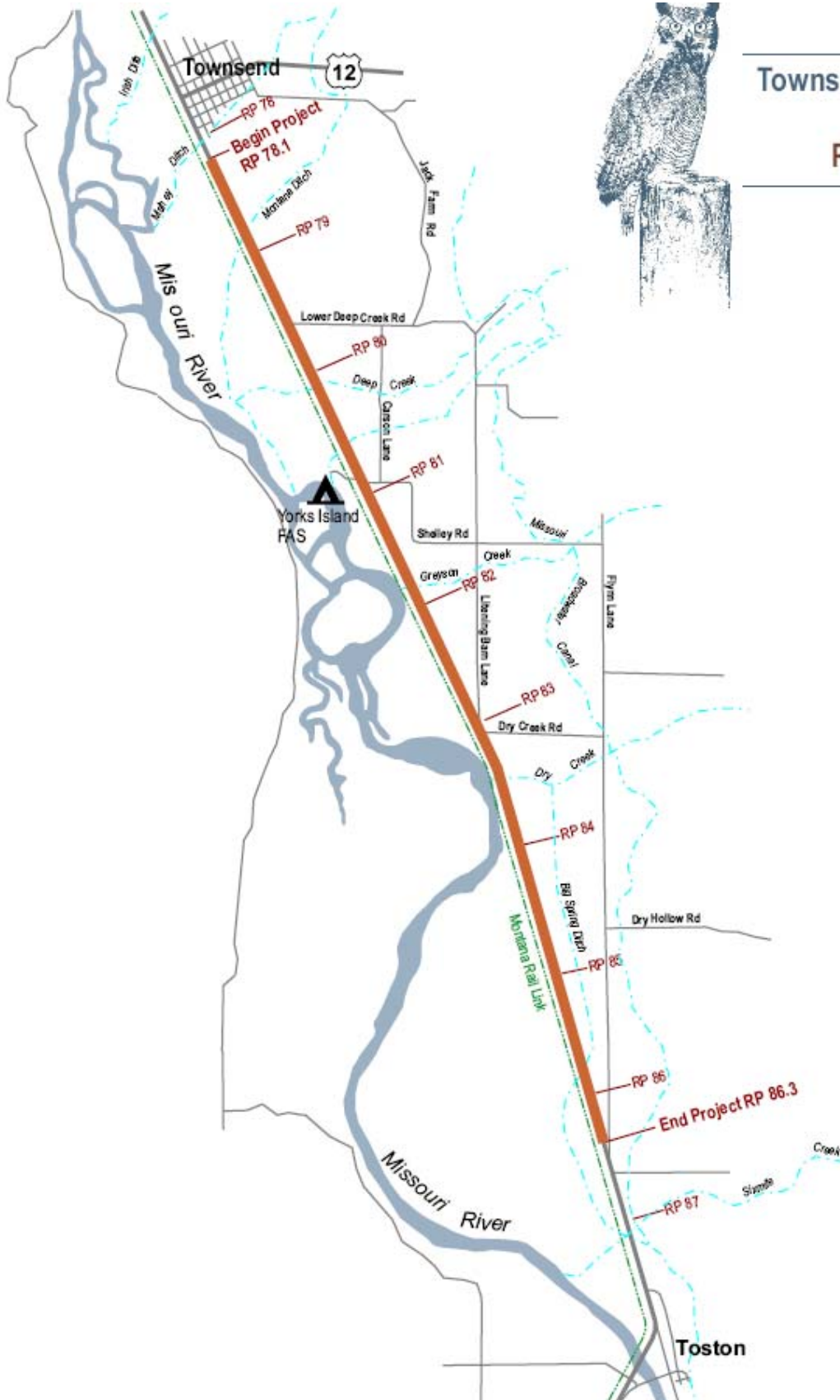
Two five-lane passing areas would be provided within the project corridor. The passing areas would include four 3.6 m (12 foot) driving lanes, a 3.6 m (12 foot) center median/left turn lane, and two 2.4 m (8 foot) shoulders. Designated left turning lanes would be provided at public road approaches and some private approach locations.

The proposed horizontal and vertical alignments would both closely follow that of the existing roadway. Initially, the centerline of the new road would closely follow that of the existing highway. However, south of RP 78.7, the centerline would be shifted about 10 m (33 feet) to the east and would parallel the existing road to about RP 83.5. South of RP 83.5, the new road's centerline would be shifted to the west and parallel the east shoulder of the existing road and connect to the existing road at RP 86.3. The vertical alignment may be raised slightly to improve sight distance at a vertical curve near RP 83.4 and at drainage crossing locations to provide adequate cover for pipe and structure installations.

The project would flatten roadside slopes; upgrade signing, striping and guardrail; provide drainage improvements; and relocate conflicting utilities. Additional right-of-way would need to be purchased, and permits would be required for ditch work during construction. The project would result in an improved driving surface and a safer roadway for the traveling public.

The existing highway is paralleled by tracks belonging to the Montana Rail Link Railroad, which is in turn paralleled by the Missouri River to the west. The proposed project is considered to be in flat terrain. Horizontal and vertical alignments would be designed to meet the requirements for a design speed of 110 kilometers per hour (km/h) (70 mph). This design speed is consistent with standards for Rural Principal Arterials in level terrain as outlined in MDT's "Road Design Manual." The posted speed limits would be unchanged with this project.

All existing irrigation siphons, culverts and bridges in the project area would be evaluated and replaced where needed.



Townsend - South
Figure 2
Project Area

Photo Plate 1: Typical Landscapes Townsend-South Project Corridor

Photograph 1:
Typical roadside
development at the
southern edge of Townsend
near the beginning of the
proposed project.



Photograph 2:
U.S. Highway 287 south of
Townsend follows a tangent
alignment through
agricultural lands.



Photo Plate 2: Typical Landscapes Townsend-South Project Corridor

Photograph 1:

Many high quality wetlands exist along U.S. Highway 287 between RP 79 and RP 83. This open water wetland area is located north of the Litening Barn/Dry Creek Road intersection.



Photograph 2:

This photograph shows U.S. Highway 287 near the southern terminus of the Townsend-South project. The community of Toston is in the distance.



Safety enhancements proposed with the project include: the installation of rumble strips; the provision of a center median and/or left turn lane at various locations; realignments of skewed public and private side road approaches; and modifications to the Litening Barn Lane/Dry Creek Road intersection at RP 83.1 to provide one access point with a 90-degree approach to the highway.

In response to public comments, a left turn lane for northbound traffic turning into the York's Island Fishing Access Site approach would be included and two school bus turnarounds would be developed at convenient locations adjacent to county roads near the highway.

Additional detail about the proposed improvements and alternatives considered is included in PART 3.0.

1.4 JURISDICTION

U.S. Highway 287 is under the jurisdiction of MDT, which has full maintenance responsibilities for the route in the project area. Major roads intersecting the project corridor are under the jurisdiction of and maintained by Broadwater County.

There are no federal or state lands adjacent to the highway in project area. However, a state-owned public recreation site adjacent to the Missouri River exists west of the highway within the project corridor. York's Islands Fishing Access Site, operated and maintained by the MONTANA FISH, WILDLIFE AND PARKS (MDFWP), is accessible from an approach on the west side of the highway at RP 81.5.

Montana Rail Link is indirectly involved in the project. The railroad's mainline track and associated right-of-way is west of and parallel to U.S. Highway 287 through the entire project corridor.

The current daytime speed limit on rural sections of U.S. Highway 287 is 110 km/h (70 mph) for cars and light trucks and 100 km/h (60 mph) for heavy trucks. Nighttime speed limits on this route are 8 km/h (5 mph) less for all vehicles. The Montana Highway Patrol has primary law enforcement jurisdiction on U.S. Highway 287.

1.5 EARMARKED FUNDING FOR THE PROJECT

The *Safe, Accountable, Flexible, Efficient Transportation Equity Act: A Legacy for Users* (SAFETEA-LU), signed by President Bush on August 10, 2005, authorizes the Federal surface transportation programs for highways, highway safety, and transit for the 2005-2009 period. SAFETEA-LU contains provisions designating \$10 million for the construction of the Townsend-South project. This funding is "earmarked" specifically for this project and funding cannot be transferred to other highway projects in Montana. With this guaranteed funding source in place and a Finding of No Significant Impact on this Revised Environmental Assessment, MDT estimates the Townsend-South project could be let to contract in early 2009 and be under construction later that same year.

PART 2.0: Purpose of and Need for Action

PART 2.0: Purpose of and Need for Action

This section of the EA discusses the purpose of the proposed highway improvement project and describes the transportation and other needs to be addressed by the Townsend-South project. These "needs" primarily relate to substandard conditions associated with the roadway and its features and the need to improve traffic operations and safety within the project corridor. The various alternatives presented in PART 3.0 were developed in response to the needs described on the following pages.

2.1 PURPOSE AND NEED STATEMENT

MDT has determined that a portion of U.S. Highway 287 between Townsend and Toston in Broadwater County is inadequate for future traffic volumes and operating characteristics. The existing roadway is also 65 years old and does not meet current geometric design standards outlined in MDT's *Road Design Manual*.

The purpose of the proposed Townsend-South project [NH-F 8-4(16) 78; Control No. 1420] is to enhance the operational characteristics, safety and physical conditions of the existing facility through the consideration of contemporary design practices. Reconstructing the existing two-lane highway is needed to ensure the facility meets applicable MDT geometric design standards and provides the desired improvements in safety and highway operations for the traveling public.

To accomplish this purpose, the proposed action must:

- incorporate physical changes to the roadway and its adjoining environment so the road's design complies with MDT's geometric design standards for Rural Principal Arterials and with MDT's Route Segment Plan;
- provide a transportation facility that meets current and future demands through the replacement of substandard highway infrastructure including the road's pavement and associated bridges, culverts and pipes;
- improve the operation and efficiency of the facility for the traveling public by incorporating measures to increase passing opportunities in the corridor; and
- reduce opportunities for traffic conflicts and accidents associated with turning movements at major intersections and other corridor locations.

2.2 TRANSPORTATION AND OTHER NEEDS

The following sections identify the problems or concerns that already exist with the current transportation facility or that will exist if the proposed improvements are not implemented. The section begins with a brief history of the development of the Townsend-South project and a discussion of the roadway's use.

2.2.1 PROJECT HISTORY AND STATUS

U.S. Highway 287 in the Townsend-South project corridor was constructed in 1939 under as-built project FAP 204-C (2). The original project extended from approximately RP 78.1 to RP 87.7 on the route. The roadway received an overlay with seal and cover in 1979 under project F 8-4(1) 77 U-1. Routine maintenance actions have also been completed over the years on this route.

MDT's efforts to reconstruct U.S. Highway 287 south of Townsend began in the early 1990s with the nomination of the "Townsend-Toston" project. The proposed project began at the south city limits of Townsend and ended at the junction of Secondary Highway 285 south of Toston. MDT initially planned a widening, mill, fill, and overlay project but in 1992 changed the scope to a reconstruction project. The principal reason for the change in the scope was the discovery of high moisture levels in the subgrade soil beneath the highway. MDT concluded that the subgrade moisture problem could not be properly addressed without reconstructing the highway.

Work began on an EA for the Townsend-Toston project in 1995. However, the project was put on hold near the end of 1996 due to funding reasons and potential right-of-way issues associated with providing new bridges across the Missouri River and Montana Rail Link Railroad near Toston.

Late in 1998, MDT proposed a new reconstruction project known as "Townsend-South" that included all but the last 3.7 km (2.3 miles) of the original Townsend-Toston project. The project no longer included the construction of a new Missouri River bridge at Toston. The southern terminus was selected to ensure to not preclude any future options for replacing the highway bridge at Toston.

Work on an EA for the Townsend-South project was reinitiated in 2000 but again put on hold during 2001 as issues relating to the appropriate level of environmental documentation (a project-specific EA versus an Environmental Impact Statement for the U.S. Highway 12/287 corridor between East Helena and I-90 at Three Forks), the establishment of logical termini, and MDT's plans to initially acquire a right-of-way sufficient for a future four-lane through the corridor.

Efforts to advance the Townsend-South reconstruction project were resumed in early 2003. In November 2005, MDT distributed an EA for the Townsend-South project and solicited comments. A Public Hearing on the EA was held on December 15, 2005.

2.2.2 FUNCTIONAL CLASSIFICATION

The roadways comprising Montana's highway system are functionally classified by the characteristics of service (function) provided by each facility. The functional classification system recognizes that each highway (or streets in urban areas) provides varying levels of access to property and travel mobility.

Functional classification also provides the framework for determining the geometric design of individual highways. Once the function of the highway is defined, the appropriate design controls, roadside safety elements, amenities, and other design values can be determined.

According to the NHS Route Segment Plan Map in MDT's *Road Design Manual*, U.S. Highway 287 is classified as a **Rural Principal Arterial**. Principal arterial highways are characterized by their capacity to quickly move relatively large volumes of traffic. The arterial system provides for high travel speeds and for the longest trip movements. Rural principal arterials are highways that provide access between an arterial and a major port, airport, public transportation facility, or other intermodal transportation facility. As indicated previously, U.S. Highway 287 is on the NHS system.

2.2.3 CURRENT AND FUTURE ROAD USE

U.S. Highway 287 is an important transportation facility because it links interstate and regional population and commerce centers. U.S. Highway 287 provides a north-south connection between Interstate 15 at Helena and Interstate 90 near Three Forks. This highway also provides a convenient north-south connection between U.S. Highway 12 at Townsend and Interstate 90 near Three Forks. For this reason, commercial transporters often prefer U.S. Highway 287 to the use of Interstate 15. Residents of Townsend and northern Broadwater County also commonly travel U.S. Highway 12/287 while commuting to and from work, shopping, or leisure activities in Helena.

Due to the important transportation linkages provided by this route, improving U.S. Highway 287 through the Townsend-South corridor is essential to meeting the demands of commercial traffic passing through the area.

U.S. Highway 287 also provides access to recreational sites and public lands in the region. The highway generally parallels Canyon Ferry Reservoir and the Missouri River, providing access to a variety of outdoor recreation sites and opportunities related to these water bodies, particularly between Winston and Toston (campgrounds, fishing and boating access, etc.). The highway can also be used to access Helena National Forest lands on the east side of the Elkhorn Mountains north of Townsend. The route is also a designated portion of the historic Lewis and Clark Trail as it passes through Montana. U.S. Highway 287 provides access to public lands in the area managed by the BUREAU OF

LAND MANAGEMENT (BLM), BUREAU OF RECLAMATION (BOR) and the State of Montana. MTFWP's York's Islands Fishing Access Site is accessed from U.S. Highway 287 in the project area.

U.S. Highway 287 serves local traffic generated by area residents traveling to and from Townsend, the neighboring communities of Toston and Winston, and farms and ranches in the surrounding area. The highway also serves as one of the "main streets" for local commerce in Townsend.

Current and Future Traffic Volumes

Current and Future Traffic Volumes. There are no permanent traffic counters located on U.S. Highway 287 within the Townsend-South project area. However, two automatic traffic recorders are located north of the route's intersection with U.S. Highway 12. MDT maintains automatic traffic recorders (ATR Station A-2) on U.S. Highway 12/287 about 14.5 km (9 miles) east of Helena and at RP 72.4 (about 9 km or 5.7 miles north of the project area). Data for the Station A-2, shows that the average daily traffic (ADT) at was 5,730 vehicles per day in 2004, an increase of about 5.2 percent over the ADT for 2003.

ATR Station north of Townsend (Station A-101) has been recording traffic on the route only since 2000. The ADT for Station A-101 was 4,804 vehicles per day in 2004, an increase of about 4.8 percent over 2002 volumes. An ADT volume for Station A-101 is not available for 2003 due to road construction in the vicinity of the counter.

MDT's design traffic data for U.S. Highway 287 in the Townsend-South project area is summarized in **TABLE 2-1**.

Table 2-1: Current and Future Traffic in the Townsend-South Corridor

2002 Average Daily Traffic (ADT) (Vehicles per day)	3,190
2006 ADT (Vehicles per day)	3,660
2026 ADT (Vehicles per day)	7,280
Design Hourly Volume (DHV) (Vehicles per hour)	950
Percent Trucks (T)	10.2%
8,165 kg Equivalent Single Axle Loads (EASLs) (Daily)	338.17

MDT's traffic data indicate that traffic volumes within the Townsend-South corridor are anticipated to grow by about 4.9 percent annually over the 20-year period from 2006 to 2026.

The design hourly volume (DHV) represents the one-hour two-way traffic volume in the selected design year for the project (2026 in this case). The 30th highest hourly volume during the

design year is typically chosen as the DHV. The DHV typically represents about 15 percent of the ADT on rural arterial roads.

TABLE 2-1 shows that trucks comprise about 10 percent of all traffic on U.S. Highway 287 in the project area.

**Variations in Traffic
On U.S. Highway
12/287**

Detailed data from ATR Station A-2 for 2004 is shown in **TABLES 2-2** and **2-3** to illustrate typical daily and monthly variations in traffic occurring on this route.

Table 2-2: 2004 Daily Variation in Traffic on U.S. Highway 12/287 *

Day of the Week	% the Daily Average is of the ADT for Year*
Sunday	90.8%
Monday	97.2%
Tuesday	96.1%
Wednesday	98.6%
Thursday	102.0%
Friday	117.7%
Saturday	97.7%

* at ATR Station A-2 at RP 72.4

TABLE 2-2 shows that the most travel on the route occurs on Friday and the least travel occurs on Sunday.

TABLE 2-3 shows the busiest months for traffic on the route is typically the May through September period. In 2004, ADT volumes during this period ranged from about 4 to 21 percent higher than the ADT volumes at the counter location. The least traveled months during 2004 were December, January, and February. ADT volumes during these months were typically 13 percent or more below the ADT at the counter location in 2004.

Table 2-3: 2004 Monthly Variation in Traffic on U.S. Highway 12/287 *

Month	% the Monthly Daily Average is of the ADT for Year
January	76.4%
February	86.2%
March	91.0%
April	97.6%
May	103.9%
June	114.8%
July	120.8%
August	116.4%
September	105.8%
October	103.6%
November	96.1%
December	87.2%

* at ATR Station A-2 at RP 72.4

2.2.4 LEVEL OF SERVICE (LOS)

One of the major reasons for undertaking the proposed improvements to U.S. Highway 287 is to provide for the safe and efficient movement of traffic. To accomplish this, the proposed action must provide highway facilities capable of handling the traffic likely to occur on the route over the foreseeable future.

The Transportation Research Board's *Highway Capacity Manual 2000 (HCM 2000)* provides procedures to estimate the traffic-carrying ability of highway facilities over a range of operating conditions. The principal objective of these procedures (known as capacity analysis) is to determine the number of vehicles that a facility can accommodate with reasonable safety during a specified time period. Capacity analysis also provides a way to estimate the maximum amount of traffic that a facility can accommodate while maintaining a prescribed level of operation. The *HCM 2000* defines levels of operation in terms of Level of Service (LOS). Capacity analysis typically examines both existing conditions and future (design year) traffic conditions.

The LOS is a quality of service measure that represents the operating conditions expected to occur on a highway segment of the highway when accommodating current or anticipated future traffic volumes. Factors affecting LOS include speed and travel time, freedom to maneuver, traffic interruptions, and comfort and convenience. The *HCM 2000* designates operating conditions using six levels of service, LOS A through LOS F. LOS A represents the best operating conditions (free-flowing traffic, highest travel speeds, and little or no interference between vehicles) and LOS F the worst operating conditions (congested conditions).

Levels of service for different types for highways facilities are based on several measures of performance. For two-lane highways, average travel speed and the percent time spent following are the primary measures of performance considered in the determination of LOS. The Average Travel Speed (ATS) is a measure of the efficiency of mobility within a two-lane highway section. The Percent Time Spent Following (PTSF) is a measure of the quality of service and represents the percent of time spent following another vehicle within a two-lane highway section. Density, expressed in passenger cars per mile per lane (pc/mi/ln), is the primary measure used to determine LOS on four-lane highways.







U.S. Highway 287 is considered to be a Class I highway according to the *HCM 2000*. Class I highways function as major intercity routes, primary arterials connecting major traffic generators, daily commuter routes, or as primary links in state and national highway networks. Motorists expect to travel at relatively high speeds on such routes. Descriptions of operating conditions and measures of performance for two-lane highways in Class I under various LOS categories are provided in **TABLE 2-4**. A graphic illustrating traffic flow conditions for two-lane highways associated with various LOS Categories is also provided.

Table 2-4: Level of Service (LOS) Descriptions Two-Lane Highways*

LOS Category	Traffic Flow Conditions	Measures of Performance	
		Percent Time Spent Following (PTSF)	Average Travel Speed (ATS)
A	Unimpeded flow	Less than or equal to 35	Greater than 55
B	Reasonably free flow	Greater than 35-50	Greater than 50-55
C	Increase in formation of platoons (groups of vehicles traveling relatively close together)	Greater than 50-65	Greater than 45-50
D	Passing maneuvers are difficult	Greater than 65-80	Greater than 40-45
E	Passing is impossible	Greater than 80	Less than or equal to 40

* Class I highway as defined in the Transportation Research Board's *Highway Capacity Manual 2000*.

LEVELS OF SERVICE for Two-Lane Highways

Level of Service	Flow Conditions	Operating Speed (mph)	Technical Descriptions
A		55+	Highest quality of service. Free traffic flow with few restrictions on maneuverability or speed. No delays
B		50	Stable traffic flow. Speed becoming slightly restricted. Low restriction on maneuverability. No delays
C		45	Stable traffic flow, but less freedom to select speed, change lanes or pass. Minimal delays
D		40	Traffic flow becoming unstable. Speeds subject to sudden change. Passing is difficult. Minimal delays
E		35	Unstable traffic flow. Speeds change quickly and maneuverability is low. Significant delays
F			Heavily congested traffic. Demand exceeds capacity and speeds vary greatly. Considerable delays

Source: 2000 HCM, Exhibit 20-2, LOS Criteria for Two-Lane Highways in Class 1

Existing and Future Level of Service

The proposed Townsend-South project must also ensure an acceptable LOS under anticipated future traffic conditions. In this instance, MDT has established LOS B as its desired (target) level of service for the proposed facility under traffic conditions in the design year (2026).

The existing and future LOS on U.S. Highway 287 was analyzed using current traffic data and projected traffic data. Capacity analysis procedures outlined in the *HCM 2000* were used to evaluate existing and design year LOS in the Townsend-South project corridor. The analysis considered traffic volumes, the types of vehicles using the road, and geometric information for current conditions and anticipated conditions in the design year assuming no improvements to the route were done.

The existing two-lane highway is striped to allow for passing over about 80 percent of the 13.2 km (8.2 mile) long segment. The capacity analysis indicates that this highway section currently operates at LOS B with a PTSF of 47 percent.

Without any improvements, this section of U.S. Highway 287 is expected to operate at LOS D with a PTSF of 67 percent under 2026 traffic conditions.

2.2.5 ROADWAY DEFICIENCIES

Geometric Deficiencies Associated with the Existing Road

Geometric design criteria for all functional classifications associated with rural and urban highways are identified in MDT's *Road Design Manual*. The *Manual* lists appropriate design speeds for various types of terrain and presents design criteria for roadway elements (like width of travel lanes and shoulders), cut sections and fill slopes, and roadway alignment considerations (e.g. passing and stopping sight distance, grades, superelevation, and horizontal and vertical curves).

U.S. Highway 287 is a Rural Principal Arterial passing through flat terrain. The appropriate design speed for Rural Principal Arterials in level terrain is 110 km/h (70 mph). Deficiencies associated with the existing highway were identified based on a review of the geometric design criteria for a 110 km/h (70 mph) design included in *Figure 12-2: Geometric Design Criteria for Rural Principal Arterials* in the *Road Design Manual*. This review indicates that the existing horizontal and vertical alignment of the highway generally meets or exceeds 110 km/h design criteria.

However, the existing highway is too narrow based on these design standards. U.S. Highway 287 has a finished top surface width of 9.1 m (30 feet) in the project area which accommodates two 3.6 m (12 foot) wide travel lanes and two 0.9 m (3 foot) wide shoulders. According to MDT's Route Segment Plan (*Section 12 of the Road Design Manual*), the minimum paved roadway width planned for U.S. Highway 287 in the Townsend-South project area is 12.0 m (40 feet). This minimum standard paved width applies to other Rural Principal Arterials with similar ADT volumes.

In addition to the narrow road surface, the existing highway has fill slopes in the project area ranging from 5:1 to 1.5:1 and cut slopes ranging from 3:1 to 1:1. Based on MDT geometric design criteria, roadside areas with existing fill slopes steeper than 2:1 and cut slopes steeper than 1.5:1 are substandard. Parallel slopes of 3:1 or flatter are considered "traversable"-- meaning that a vehicle can safely cross the slope. Areas with steep fill slopes present safety concerns because vehicles leaving the roadway may not be able to recover and could even overturn.

Hazards exist within the clear zone of the existing highway. Roadside areas should typically be clear of any non-traversable hazards or fixed-objects. Roadside hazards are described in general terms as any roadside feature that cannot be safely impacted by a run-off-the-road vehicle. The width of roadside clear zones, the distance measured beyond the edge of the travel lane that should be clear of any non-traversable hazards or fixed-objects, varies according to the design speed, slope condition and traffic volumes of the proposed roadway.

Associated clear zone distances, as shown in *Figure 14.2A* of the *Road Design Manual*, would range from 8.0 to 12.5 m (26 to 41 feet) depending on the slope's design for this section of U.S. Highway 287. Between RP 82 and 83, wetlands with permanent standing water are located within the required clear zone.

Several of the side road approaches within the corridor create undesirable skewed intersections with the highway. Skewed intersections limit sight distance for motorists attempting to enter onto the highway. Such intersections need to be reconfigured to ensure adequate sight distance. For example, the intersection of Litening Barn Lane and Dry Creek Road at RP 83.1 needs to be realigned to form a single access at a 90-degree angle to the new highway.

2.2.6 BRIDGE DEFICIENCIES

MDT periodically conducts detailed evaluations of the condition of bridges on the state highway system and on many off-system roads according to National Bridge Inventory Standards (NBIS). The evaluations are used to develop a Sufficiency Rating to assess the condition of each bridge. The Sufficiency Rating, based on a 100-point scale, is a composite of several ratings of individual bridge items that consider the structural condition and geometry of the bridge. Typically bridges must have a Sufficiency Rating of 80 or less to be eligible for rehabilitation or less than 50 to be eligible for replacement with federal funding for highway bridges.

The bridges located within the Townsend-South project area and their recent Sufficiency Ratings are listed below. MDT's records show these structures were originally built in 1931 and reconstructed in 1939.

<u>Structure</u>	<u>Sufficiency Rating</u>
Montana Ditch (RP 78.9)	70.8
Deep Creek (RP 80.0)	71.8
Deep Creek Overflow (RP 80.6)	70.8

Bridges can be classified as “structurally deficient” or “functionally obsolete” based on the results of their periodic inspections. A *structurally deficient* bridge is one in which at least one of the major structural elements (deck, superstructure, or substructure) has a condition rating of poor or worse. A *functionally obsolete* bridge is one that is not structurally deficient, but has deficient roadway width, vertical clearance, waterway, road alignment or load capacity.

Although these bridges are not structurally deficient or functionally obsolete, none of the existing bridges are wide enough to accommodate road widening to at least 12.0 m (40 feet). Further, the existing bridges were designed for lower load ratings than MDT currently requires of new highway structures.

2.2.7 ROAD CONDITION

The existing roadway in the Townsend-South project area was constructed in 1939, and received an overlay with seal and cover in 1979. Pavement maintenance and other activities are routinely completed by MDT to preserve the facility.

As indicated earlier, the subgrade beneath the existing highway has high moisture levels. The subgrade, the in-place soil under the road surface, must be able to support loads transmitted from the pavement structure. Moisture content, the degree of compaction, and the type of soil found in the subgrade are all factors that affect the road’s load bearing capacity. High moisture in the subgrade can reduce the strength and stiffness of the aggregate base materials beneath the road surface, contributing to pavement failures like rutting and potholes.

Reconstruction is necessary to stabilize the subgrade of the road. A centerline soil survey performed by MDT during 1991 showed that 15 of the 21 test holes dug for the centerline soil survey showed moisture levels in the subgrade in excess of optimum levels. The most likely sources of the very high subgrade moisture are high groundwater and lateral seepage from drainage ditches or standing water areas adjoining the road.

MDT periodically collects information on the condition of the pavement surfaces on Montana’s roadways and developed a “ride index” to assess their relative condition. The Ride Index is based on a 0-100 scale, with scores of 80 to 100 being “good”; 60 to 79.9 being “fair”; and 0-59.9 being “poor.” The section of U.S. Highway 287 between RP 78.3 and RP 88.4 was assigned a Ride Index of 81 by MDT’s 2002 ride survey data placing it in the low end of the good category.

2.2.8 TRAFFIC SAFETY

Corridor Accident History

Accident summaries were reviewed to help understand the accident history of the project area during the ten-year period from January 1, 1994 through December 31, 2003. The roadway section covered in the accident analysis is between RP 78.1 and 86.3.

TABLE 2-5 summarizes motor vehicle accident statistics for the project study area. These statistics are also compared to the statewide averages for rural sections of Non-Interstate NHS routes on the Primary system during the 1999-2003 period.

Table 2-5: Vehicle Crash Summary (1994-2003)

Accident/Severity Measures	Townsend-South Corridor	All Non-Interstate NHS Primary Routes (Rural)*
Number of Fatal Accidents (# fatalities)	2 (4)	N/A
Total Number of Reported Accidents	93	N/A
Accident Rate (All Vehicles)	0.98	1.30
Severity Index (All Vehicles)	2.24	2.32
Severity Rate (All Vehicles)	2.20	3.02
Truck Accident Rate**	0.45	1.15

* Rates for 1999-2003 period N/A – Not Applicable

** Truck accident rates are for the July 1, 1992 through June 30, 2002 period.

As **TABLE 2-5** shows, the overall accident rate for the Townsend-South corridor was calculated to be 0.98 crashes per million vehicle miles of travel (MVMT) over the 1994-2003 period. This compares to a statewide average of 1.30 crashes/MVMT for all rural areas of Non-Interstate NHS routes on the Primary system during the past five years.

The severity index and severity rate are statistics commonly used by MDT as measures of the overall severity of accidents on a particular road segment or route based on the number and degree of injuries or fatalities recorded during a given period. The severity index is the ratio of the sum of fatal accidents and incapacitating injury accidents times 8, plus the number of other injury accidents times 3, plus the number of property damage accidents to the total number of accidents. The severity rate of 2.20 during the study period was also lower than the statewide average severity rate of 3.02 for all rural Non-Interstate NHS Primary routes.

A review of the characteristics and contributing factors to motor vehicle crashes occurring within the Townsend-South project area during a recent 10-year study period identified the

following variations in relation to statewide occurrences:

- 70.4% property damage only accidents vs. 58.4% statewide rural
- 76.1% dry road condition vs. 64.3% statewide rural
- 62.0% clear weather vs. 48.6% statewide rural
- 28.2% collisions with wild animals vs. 12.7% statewide rural
- 20% of the crashes involved vehicle rollovers

The section of U.S. Highway 287 between RP 83.0 and 83.6 was identified as an accident cluster area in 1988. A review of this area resulted in no feasible counter measures to address a specific accident trend.

Twenty-two of the 27 collisions with wild animals in the project area during the study period occurred during dawn, dusk, or darkness. While collisions with wild animals occurred throughout the project, six of these accidents occurred between RP 80.9 and 81.2.

As indicated earlier, the existing highway has roadside areas with 2:1 fill slopes. Areas with substandard roadside slopes present a safety concern because vehicles leaving the roadway may not be able to recover and could even overturn. This concern is supported by the finding that one-fifth of the reported motor vehicle crashes in the project corridor during the study period involved vehicles that overturned after leaving the roadway surface.

2.2.9 ACCESS MANAGEMENT NEEDS

Access management involves the establishment of guidelines for managing access points and spacing along a highway, adding turn lanes, incorporating turning restrictions, consolidating accesses, eliminating unnecessary accesses and implementing traffic control measures to maintain the desired operational characteristics of the highway. The goals of access management are to improve the safety, function, and operation of the roadway, and to ultimately provide a traffic facility that better serves both local and regional users.

The existing highway corridor lacks access control. There are more than 60 side road approaches intersecting with U.S. Highway 287 in the Townsend-South project area, the majority of which come from the east side of the highway. Only three of the approaches are for public roads. To enhance traffic safety and ensure the highway operates efficiently, access to the highway needs to be managed and some underused approaches in the corridor need to be consolidated or even closed.

2.3 OVERALL CONCLUSIONS ON NEED

The existing roadway is nearly 65 years old and many of its associated features do not comply with MDT's current geometric design standards. Most notably, the width of the road does not meet the minimum paved roadway width of 12.0 m (40 feet) for Rural Principal Arterials with similar traffic volumes. The highway also has numerous areas with substandard roadside slopes. The accident history for a recent ten-year period shows that substandard roadside fill slopes are an important concern as one-fifth of all the reported motor vehicle crashes in the project corridor involved vehicles that overturned after leaving the roadway surface.

Further, three of the bridges on the route are not wide enough to accommodate a 12.0 m (40 feet) wide roadway. These key deficiencies are related to the design of the roadway and can be corrected only through reconstruction.

Reconstructing the Townsend-South segment of U.S. Highway 287 as proposed would bring the design of the highway into compliance with MDT's current design standards for Rural Principal Arterials with design speeds of 110 km/h (70 mph). The width of the roadway's surface within the project area would be increased to at least 12.0 m (40 feet) consistent with the minimum paved roadway width for Rural Principal Arterials with similar traffic volumes specified in MDT's Route Segment Plan.

The average daily traffic on this route has increased notably in recent years due to development within this region of Montana. Traffic on this route is expected to continue increasing at nearly 5 percent per year over the next two decades. The level of service (LOS) evaluations for this project suggest that without improvements to increase the road's capacity, U.S. Highway 287 would function at an undesirable LOS D by 2026. This expected level of operation is well below MDT's target level of service (LOS B) in the design year.

The subgrade of the existing highway has high moisture levels that may contribute to future pavement problems or failures. MDT concluded that reconstruction of the roadway incorporating methods and materials to stabilize the subgrade is necessary to remedy this problem.

The existing highway corridor lacks access control and has more than 60 side road approaches that intersect the highway in the project area. Access management is needed within the project corridor to eliminate unsafe access points and reconfigure or close underused accesses. Access management is necessary to help preserve the capacity of the roadway and enhance safety for road users over the foreseeable future.

PHOTO PLATES 3 and 4 illustrate deficiencies associated with the existing facility or other "needs" that would be addressed through the implementation of this proposed project.

Photo Plate 3: Roadway Deficiencies Townsend-South Project Corridor

Photograph 1:

The existing road is only 9.1 m (30 feet) wide. MDT's standards show that the minimum width for the road should be at least 12 m (40 feet). The current facility does not have any auxiliary turn lane provisions and lacks access control.



Photograph 2:

This photograph shows steep roadside slopes and clear zone obstructions that exist along the highway.



Photo Plate 4: Roadway Deficiencies Townsend-South Project Corridor

Photograph 1:

Three bridges within the project area are more than 70 years old and only about 11 m (36 feet) wide. The bridges are too narrow to accommodate a new road at least 12 m (40 feet) wide in accordance with MDT's standards.



Photograph 2:

Traffic demands suggest the need for increased capacity and additional passing opportunities within the project area.



PART 3.0: Alternatives Considered

PART 3.0: Alternatives Considered

This PART describes the alternatives considered to address the transportation and other needs identified in PART 2.0. Alternatives are the various activities or actions that could be implemented by MDT to meet the purpose and the need for improving U.S. Highway 287 within the Townsend-South project area. Alternatives considered include various road alignments and designs and the option of taking no action to improve this road segment.

3.1 INTRODUCTION

The Townsend-South project would reconstruct 13.2 km (8.2 miles) of U.S. Highway 287 south of Townsend. A variety of preliminary engineering activities and studies have been completed to establish the use and condition of the existing facility and to evaluate how the present road complies with MDT's design standards for Rural Principal Arterials with design speeds of 110 km/hr (70 mph). The "action" alternatives considered for this proposed project are comprised of actions and measures to:

- eliminate deteriorated conditions and replace substandard road features;
- enhance the overall safety and efficiency of the highway; and
- ensure the reconstructed highway is responsive to its current and future roadside environment and uses.

This PART describes the proposed improvements that comprise the Preferred Alternative. The "Preferred Alternative" is the alternative that MDT believes would best meet the purpose and need for the project, giving consideration to economic, environmental, technical factors, and public sentiment. Other alternatives considered for the Townsend-South reconstruction project and reasons for rejecting such alternatives are disclosed in this PART.

The alternative of taking no action to improve U.S. Highway 287 was also considered. The No Action Alternative does not meet the purpose and need for the project as described in PART 2.0. Also, the No Action Alternative does not address geometric deficiencies associated with the existing road and offers no way to improve the operation and safety of the facility. The No Action Alternative does, however, provide a baseline against which the Preferred Alternative (or other alternatives) can be compared. The environmental effects of the No Action Alternative will be discussed in PART 4.0 as a means of comparing and contrasting the impacts of the Preferred Alternative.

3.2 NO ACTION ALTERNATIVE

The No Action Alternative (also known as the No Build Alternative) involves taking no major actions to improve or change U.S. Highway 287 between Townsend and Toston. MDT would maintain and repair the road and its associated features as needed to ensure continued public use.

However, this alternative would not change the horizontal or vertical alignment of the highway, increase its width of the roadway, replace bridges or drainage features, or include any measures to address identified needs for operational improvements. The geometric layouts at county road intersections, like the skewed configuration at the highway's intersection with Litening Barn/Dry Creek Road, would not be realigned or improved. The highway would continue to be substandard in width based on MDT's geometric design criteria for Rural Principal Arterials and the volume of traffic using the route.

The costs of this alternative would be those associated with continuing maintenance activities and repairing the roadway and its features. Maintenance costs would likely increase as the existing road continues to deteriorate. Given the identified subgrade moisture problems, deterioration of the road surface could occur at an accelerated rate when compared to roads with good subgrade conditions.

Other than minor, temporary and localized adverse environmental effects, the No Build Alternative would not cause any new impacts to the surrounding environment in the Townsend-South project area. There would be no new impacts on adjacent land uses since this alternative would not change access to adjoining lands or require the acquisition of any new right-of-way. There would be no change to the appearance of the highway corridor.

3.3 PREFERRED ALTERNATIVE

3.3.1 OVERVIEW

The Preferred Alternative is to reconstruct U.S. Highway 287 south of Townsend from RP 78.1 to RP 86.3. Transitions to and from the existing roadway north and south of the project area would be required. The proposed reconstruction project would revise the existing two-lane facility to include wider paved shoulders, turn lanes, passing lanes, and improved geometric layouts at major intersections. The proposed project would reconstruct the existing roadway to provide an improved driving surface and safer road for highway users. The new highway, with a multi-lane configuration in some areas, would substantially enhance traffic operations when compared to the existing facility.

Reconstruction of U.S. Highway 287 would require the development of detailed design and right-of-way plans and the preparation of an access control plan for the project area.

MDT's Geometric Design Standards (set December 4, 1992) set design standards for highway reconstruction and construction

projects. These standards guide the modernization and addition of capacity that occurs during the reconstruction of highways.

Geometric standards are based on design policies and guidelines established by MDT and AASHTO. The project would be developed to conform to MDT's *Road Design Manual* and "Bridge Design Standards" and to AASHTO's Standard Specifications.

New right-of-way would be acquired over the length of the project. Site preparation work would include relocating conflicting utilities and clearing and grading to construct a new foundation for the highway. Drainage structures with adequate roadside ditches to accommodate runoff from the roadway would be installed and slopes would be stabilized and revegetated. New fences would be installed at the new right-of-way limits.

The existing bridges over the Montana Ditch (RP 78.9), Deep Creek (RP 80.0), and the Deep Creek Overflow (RP 80.9) would be replaced with new bridges, box culverts or pipes. Culverts and irrigation siphons beneath the highway would be modified or replaced to accommodate the wider roadway.

Advisory and regulatory signs, as well as appropriate pavement markings would be installed according to standards outlined in the *Manual on Uniform Traffic Control Devices* (MUTCD). Guardrail would be placed in locations warranted by the presences of roadside obstacles or steep slope conditions.

Estimated current construction costs for the proposed Townsend-South project would total about \$12.5 million, including traffic control during construction and construction engineering. Traffic would be maintained on the route during construction and appropriate staging, signing, flagging, and traffic controls would be implemented to minimize delays and inconveniences for highway users.

3.3.2 DESIGN SPEED/POSTED SPEEDS

Horizontal and vertical alignments as well as all other design features for U.S. Highway 287 in the Townsend-South project area would be designed to meet the requirements for a design speed of 110 km/hr (70 mph). This design speed is consistent with standards for Principal Arterial routes in level terrain as outlined in MDT's *Road Design Manual*.

Current posted speed limits in the rural areas would remain unchanged with the Preferred Alternative. A speed reduction zone is proposed at the beginning of the project for northbound motorists approaching the Townsend City Limits.

3.3.3 DESIGN YEAR LOS TARGET

The proposed Townsend-South project must also ensure an acceptable LOS under anticipated traffic conditions in the design year (2026). MDT has established LOS B as its desired level of service for the proposed facility from the opening of the project to the design year. This LOS target is consistent with geometric

design criteria for Principal Arterials (National Highway System-Non-Interstate) located in level or rolling terrain as outlined in *Figure 12-3* of the *Road Design Manual*.

3.3.4 HORIZONTAL AND VERTICAL ALIGNMENTS

Horizontal Alignment. The proposed road would be designed to closely parallel the existing horizontal alignment of U.S. Highway 287 through the project corridor. From the Townsend city limits to approximately RP 78.7, the centerline of the new road would closely follow that of the existing highway. South of RP 78.7, the centerline would be shifted about 10 m (33 feet) to the east and would parallel the existing road to about RP 83.5 (near the highway's crossing of Dry Creek). South of RP 83.5, the new road's centerline would be shifted to the west and parallel the east shoulder of the existing road to RP 86.1. A 0.3 km (0.2 mile) long connection would be used to transition the new road to the existing highway at RP 86.3.

The proposed alignment shift to the east would facilitate traffic during construction and retain most of the existing road's base. The proximity of the Montana Rail Link Railroad and a fiber optic telephone cable installation between the highway and railroad were additional factors in the decision to shift the alignment of the new highway slightly to the east. The existing highway easement is already less than Montana Rail Link's minimum offset distance of 36.6 m (120 feet) and rebuilding the road closer to the railroad highway would compromise safety at railroad crossings. Therefore, shifting the new road slightly to the east allows MDT to maintain the existing offset distance between the highway easement and centerline of the mainline railroad track.

Vertical Alignment. The vertical alignment of the new road would be similar to that of the existing roadway although it may be raised slightly in areas of new pipe or structure installations. Adjustments to the vertical alignment would be made to ensure desirable stopping sight distance and passing zones. The "sag" in the vertical alignment at RP 83.4 would be raised to improve sight distance. Grades on the reconstructed highway would generally be less than 0.5 percent throughout the project corridor.

3.3.5 TYPICAL ROAD CROSS-SECTIONS

MDT's Route Segment Plan calls for a 12.0 m (40 feet) or wider finished top width for U.S. Highway 287. Consistent with this recommendation, a new facility with a minimum 12.0 m (40 feet) finished top width accommodating two 3.6 m (12-foot) wide driving lanes and two 2.4 m (8-foot) wide shoulders would be provided.

The proposed design would also incorporate other typical cross-sections over its length including a two-lane road with center median/left turn lane (three-lane), passing areas with four

travel lanes and a center median/left turn lane (five-lane), and transitions between areas of the project with differing lane configurations.

Travel lanes and passing lanes would typically be 3.6 m (12 feet) wide. Center median/left turning lanes would be 3.6 m (12 feet) wide except at the north end of the project where the center turn lane would be 4.2 m (14 feet) wide. Shoulders would typically be 2.4 m (8 feet) wide except at the north end of the project where the shoulders would be 0.6 m (2 feet) wide. The finished top width of the proposed road's surface would range in width from 12.0 m (40 feet) in areas with an improved two-lane cross-section to 22.8 m (76 feet) in five-lane passing areas.

FIGURE 3 shows where these various lane configurations would be constructed within the corridor.

Surfacing Design. The reconstructed highway would be built with a plant mix bituminous (asphalt) surface over the top of a crushed gravel base course. Surfacing depths would be determined after the completion of detailed soils investigations and pavement design activities. The pavements of the new road would be designed to last for at least 20 years with regular maintenance and preservation activities based upon anticipated traffic volumes, vehicle loadings, and underlying soil conditions.

Rumble Strips. Rumble strips would be installed in accordance with MDT's current policy that calls for 300 mm (1-foot) long rumble strips to be cold-milled at an offset of 150 mm (6 inches) outside the edge of traveled way (shoulder stripe).

Roadside Slopes and Grading. Typically, the new road would be designed with 6:1 slopes immediately adjacent to the road and with other standard cut and fill slopes specified in MDT's *Road Design Manual (Figure 12-3: Geometric Design Criteria for Rural Principal Arterials)*. A 6:1 slope means that for every six units of measure (meters or feet) away from the edge of the road, the elevation of the roadside would decrease by one unit.

The design of roadside slopes may vary from the standards in specific areas of the project as efforts are made to avoid or minimize impacts to delineated wetlands and other sensitive resources, or to reduce right-of-way impacts.

3.3.6 CENTER MEDIANS/LEFT TURN LANES

A painted center median or center median with left turn lane flush with the surface of the new roadway would be provided at various locations within the project corridor. Incorporating a center median/left turn lane provides both safety and operational benefits for facility users. Medians offer safety benefits by separating opposing traffic lanes, providing a recovery area for out-of-control vehicles, and allowing space for speed changes by left turning vehicles. The median area also offers additional maneuvering room for farm equipment crossing the highway.

Left turn lanes provide both safety and operational benefits by removing vehicles slowing or stopped for turns from through traffic at side road intersections. Research compiled by the FHWA (www.ops.fhwa.dot.gov/access_mgmt/docs/benefits_am_trifold.htm) shows that exclusive turn lanes substantially reduce the overall number of crashes and the number of rear-end collisions on roadways. The same FHWA information source shows a shared left turn and through lane has only about 40 to 60 percent of the capacity provided by a standard through lane and that adding a left turn lane can increase a roadway's capacity by 25 percent or more.

3.3.7 DIRECTIONAL PASSING LANES

Auxiliary passing lanes can also be used to improve traffic operations on two-lane highways. Additional lanes are often provided in one or both directions of travel on two-lane highways. Passing lanes enhance the operation of two-lane highways by helping to breakup traffic platoons (groups of closely spaced vehicles traveling in the same direction) and to improve passing opportunities. The need for auxiliary passing lanes is typically determined through an engineering study that includes professional judgment, operational experience and a LOS (capacity) analysis.

MDT's traffic engineering study determined passing lanes would be a desirable and effective means of enhancing traffic operations within the Townsend-South corridor. The Preferred Alternative would provide five-lane passing areas at two locations within the project corridor. The approximate locations and lengths of the proposed passing areas are listed below:

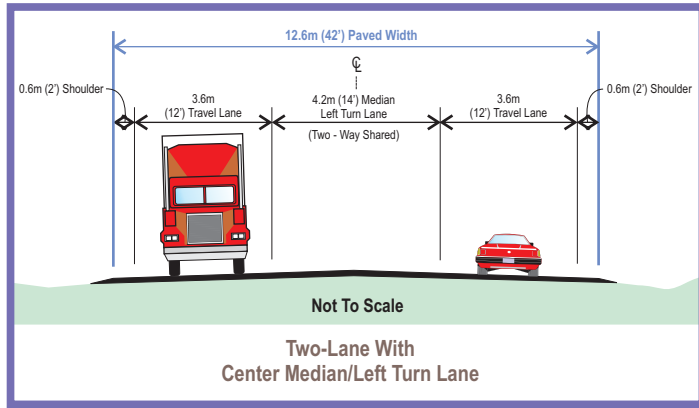
<u>Passing Lane Location</u>	<u>Length of Passing Lane Area</u>
RP 80.0 to 81.4	1.8 km (1.1 miles)
RP 82.7 to 86.0	5.3 km (3.3 miles)

3.3.8 INTERSECTIONS/APPROACHES

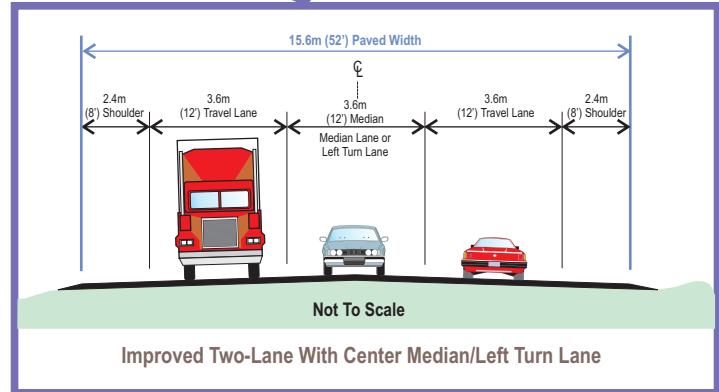
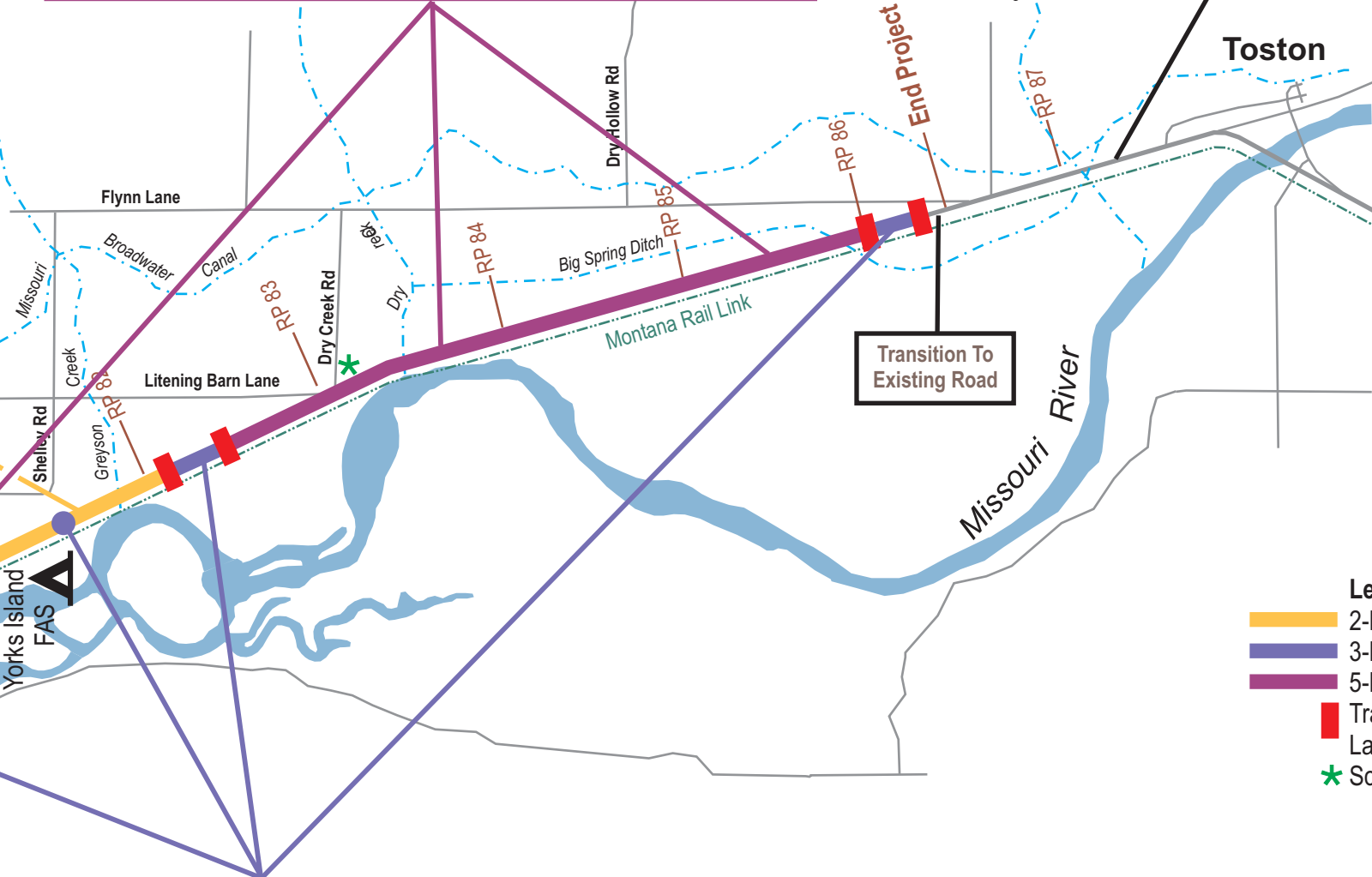
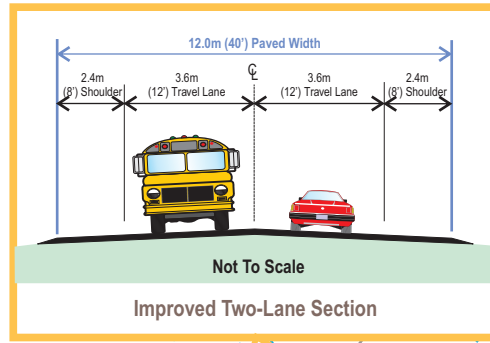
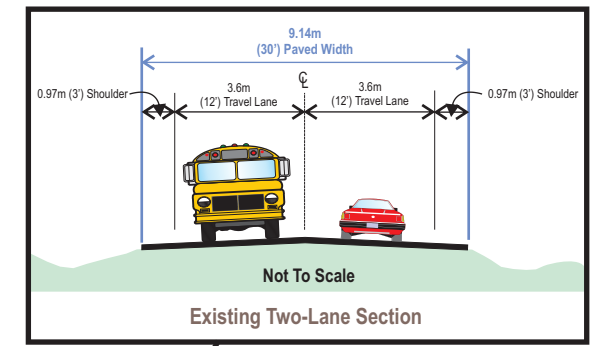
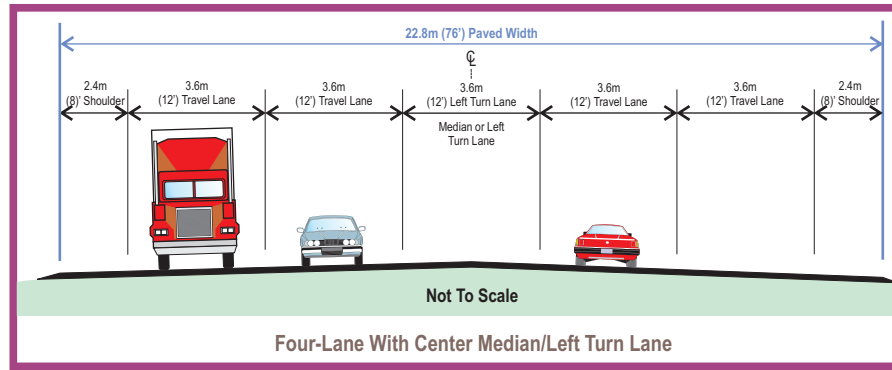
Public and private approaches would be designed and reconstructed to fit local conditions and in a manner that would ensure safe entry and exit from the highway. Approaches would typically be aligned to intersect the roadway at angles between 75 and 90 degrees to provide adequate sight distance. MDT proposes to pave public and private approaches to the right-of-way line. Farm field approaches (those providing access only to pasture or farmland) would be graded and graveled to the new right-of-way line with a 3.6 m (12 foot) wide paved strip placed parallel and adjacent to the roadway. Slopes for approaches would be designed to current MDT standards. MDT would install drainage culverts beneath these approaches.

The Preferred Alternative would generally maintain the location and layout of all public road approaches. Left turn lanes for southbound motorists would be provided at the route's intersections with Lower Deep Creek Road (RP 79.5), Shelley Road (RP 80.9), and Litening Barn Lane/Dry Creek Road (RP 83.1).

South Edge of Townsend



Passing Areas



Townsend - South
REVISED Figure 3
 Lane Configurations
 Preferred Alternative



The skewed configuration of Litening Barn Lane/Dry Creek Road intersection would be realigned to form a single approach at a 90-degree angle to the new highway. School bus turnarounds would also be developed with the proposed improvements near the intersections of U.S. Highway 287 with Shelley Road and Litening Barn Lane/Dry Creek Road.

The public approach at RP 81.5 provides access to the York's Islands Fishing Access Site. This approach would be perpetuated and a center median with left turn lane for northbound traffic would be provided at this location. The new highway would have a three-lane cross-section in the vicinity of the approach for the Fishing Access Site.

3.3.9 BRIDGES/CULVERTS/IRRIGATION FACILITIES/STOCKPASSES

Reconstruction of U.S. Highway 287 in the Townsend-South corridor would affect three bridges: the Montana Ditch crossing at RP 78.9, the Deep Creek crossing at RP 80.0, and the Deep Creek Overflow crossing at RP 80.6. These existing structures would be replaced with new bridges, box culverts or pipes depending upon the hydraulic requirements and environmental considerations at each crossing.

Where needed, the Preferred Alternative would also replace or modify all other existing drainage culverts and irrigation siphons.

MDT would review all stockpass locations within the project corridor and contact landowners to determine their status during the final design and right-of-way phase of the project. These efforts would identify which stockpasses need to be perpetuated or abandoned and to determine the need for any new stockpasses.

3.3.10 ACCESS CONTROL/MANAGEMENT

Limited access control and access management would be incorporated as part of the proposed Townsend-South reconstruction project. Access management has been proposed for this route as a means of helping to control traffic congestion, conflicts, and motor vehicle accidents over the project's design life.

Access management involves the establishment of guidelines for managing access points and spacing along a highway, adding turn lanes, incorporating turning restrictions, consolidating accesses, eliminating unnecessary accesses and implementing traffic control measures to maintain the desired operational characteristics of the highway. The goals of access management are to improve the safety, function, and operation of the roadway, and to ultimately provide a traffic facility that better serves both local and regional users. MDT would ensure that all residents or businesses have reasonable access to their properties.

MDT would prepare an Access Management Plan and a set of plan drawings showing the specific location, configuration, ownership, land use type, and level of use (volume) for each individual property access within the corridor. The intent of the Access Management Plan would be to identify and perpetuate necessary existing access points; shift or combine approaches where practical; and eliminate unneeded approaches.

Whenever practicable, existing accesses would be made to conform to the guidelines set forth in the Access Management Plan. Future new accesses, subdivisions, or changes in use would be required to meet the guidelines specified in the Plan. MDT would administer the Access Management Plan and be responsible for all decisions on access requests.

The Montana Transportation Commission must designate the Townsend-South corridor as a limited access facility before MDT can implement the Access Management Plan.

3.3.11 RIGHT-OF-WAY AND UTILITIES

New right-of-way would be required over the length of the project corridor to build the proposed highway improvements. As indicated earlier, the Montana Rail Link Railroad parallels U.S. Highway 287 throughout much of the corridor. The proximity of the railroad and safety considerations at railroad crossings necessitate that MDT maintain the west right-of-way limits for the highway at its current location. Temporary construction permits would be used to build generally non-critical improvements (like slope adjustments) beyond the permanent right-of-way for the highway.

Overhead power lines, buried telephone lines, and other utilities in conflict with the proposed highway reconstruction would be relocated. A fiber optic cable is buried west of the existing right-of-way between the highway and the railroad line throughout the entire corridor. Care would be taken during the design and reconstruction of the highway to avoid impacting the fiber optic cable due the high costs associated with repairing damages to such lines.

The Preferred Alternative would replace existing fencing impacted by the proposed highway construction. MDT would coordinate fencing needs with affected landowners during the right-of-way negotiation and design phases of the project.

Landscaping, other than applying topsoil, seed and fertilizer along the roadway is not proposed as part of the Preferred Alternative. However, MDT would work with the owners of residential or commercial properties along U.S. Highway 287 to remedy potential impacts to existing landscaping that may result from the proposed construction project. Remedies could include moving affected landscape features, providing similar replacement landscaping, or providing financial compensation to landowners for impacts.

3.4 ALTERNATIVES DEVELOPMENT

The identification and analysis of alternatives are important elements of the NEPA process. Consideration of alternatives helps identify a solution that satisfies the transportation need and protects environmental and community resources. The alternatives developed must relate to the underlying purpose and need for undertaking the proposed action.

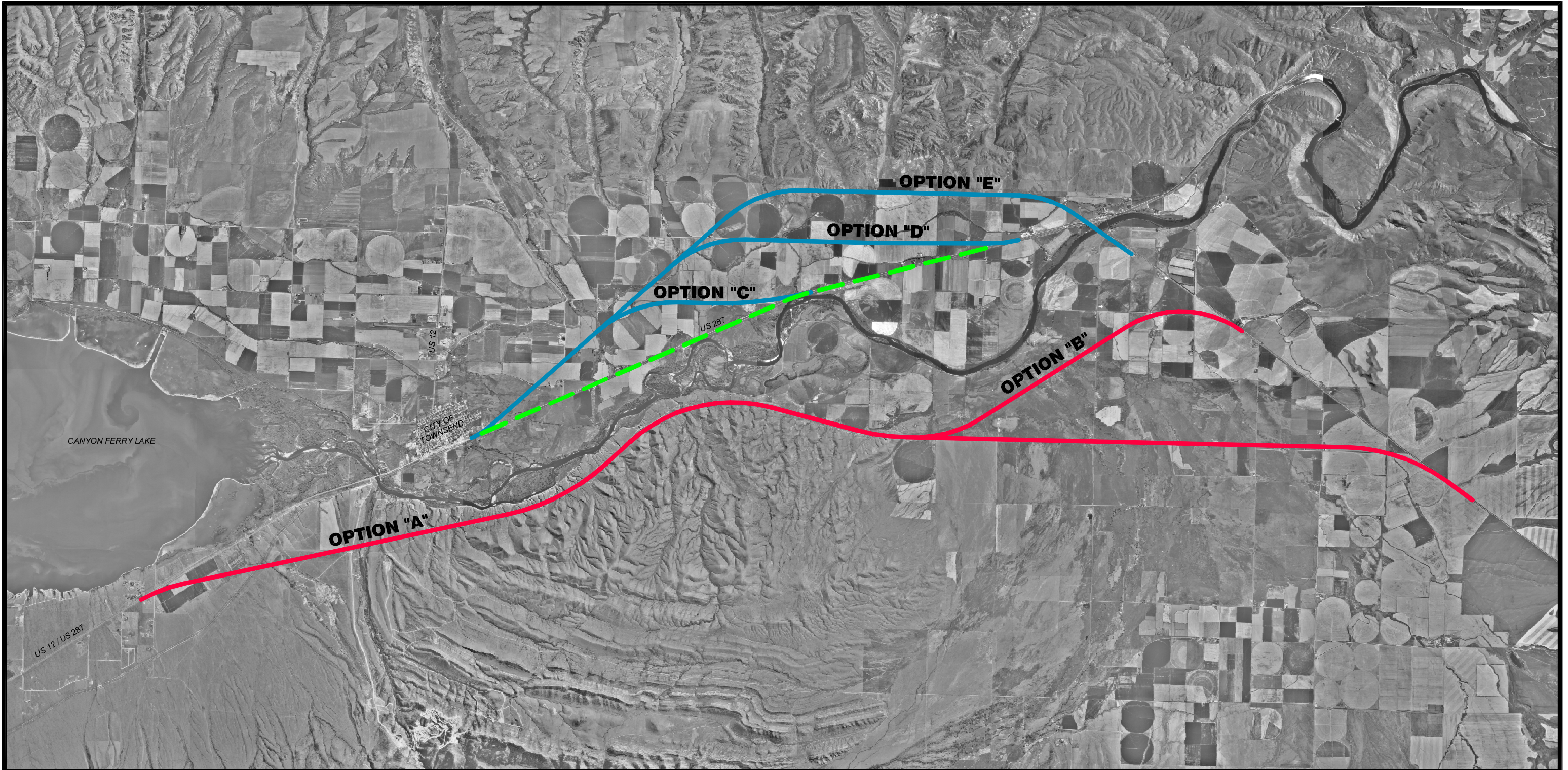
FIGURE 4 shows the alternate alignments that were identified and considered for U.S. Highway 287 south of Townsend. These alignment alternatives included moving the highway to a new location west of the Missouri River, reconstructing the highway east of the present corridor, and rebuilding the highway on or near the present road. Changes in the location of U.S. Highway 287 were examined primarily as a means to avoid extensive wetlands within the existing Townsend-South project corridor.

A range of potential design options for highway reconstruction in the Townsend-South corridor were also developed to represent design modifications that could be implemented to incrementally increase the capacity of the existing highway. These options consist of variations in the highway's cross-section elements and generally refer to the combination of through lanes and passing or turning lanes incorporated into the potential design. The alternate designs considered for this proposed action are discussed later in this PART.

3.5 ALTERNATIVES SCREENING

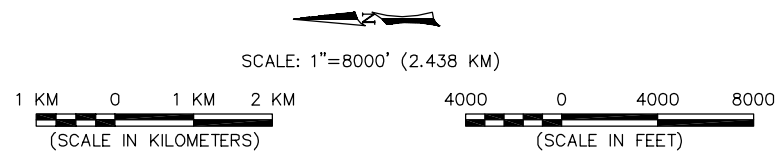
Alternatives screening provides a means of reducing the range of potential alternatives by comparing them to a set of specific criteria. The screening criteria typically respond to various aspects of the purpose and need for the proposed action. Alternatives that favorably address the criteria are candidates for more detailed study. Alternatives that were not responsive to the purpose and need or have other fatal flaws (like excessive costs, unacceptable environmental or community impacts, etc.) can be eliminated from further consideration through the screening evaluation.

For this proposed action, screening criteria were established for both route location and road design alternatives. The location and road design alternatives developed for this proposed project were screened against the criteria presented in **TABLES 3-1** and **3-2** to identify reasonable alternatives.



USGS AERIAL PHOTOGRAPH (DOQQ) OBTAINED FROM THE MONTANA STATE LIBRARY, NATURAL RESOURCE INFORMATION SYSTEM, HELENA, MONTANA

 PREFERRED ALIGNMENT



ALTERNATE ALIGNMENTS
CONSIDERED

Figure 4

Table 3-1: Screening Criteria for Location Alternatives

SCREENING CONSIDERATIONS	SPECIFIC EVALUATION CRITERIA
Consistency With Pertinent Policy Goals of TranPlan 21	<p>Consistent with the following goals of TranPlan 21?</p> <ul style="list-style-type: none"> • <u>Econ Development Goal A</u> - Preserve the efficient functioning of the transportation system used by Montana's export-oriented industries to access regional, national, and international markets. • <u>Econ Development Goal B</u> - Monitor and <u>address</u> capacity needs arising from Montana's economic growth trends. • <u>Traveler Safety Goal A</u> - Reduce the number and severity of traffic crashes on Montana's roadways. • <u>Access Management Goal A</u> - Improve corridor level access management to preserve the highway system • <u>Bicycle and Pedestrian Transportation Goal B</u> - Target bicycle and pedestrian improvements to account for differences in current and future use. (Improved bicycle and pedestrian facilities through incorporation in existing projects). • <u>Roadway System Performance Goal A</u> - Establish specific priorities for roadway improvements. First priority to preserve Montana's existing system; Second Priority to add capacity and improve mobility. • <u>Roadway System Performance Goal B</u>- Preserve mobility for people and industry in Montana.
Consistency With Applicable Goals of Broadwater County Growth Policy	<p>Consistent with following goals of the Broadwater County Growth Policy?</p> <ul style="list-style-type: none"> • <u>Transportation Goal 2</u>: Provide an efficient and functional transportation network that will adequately handle present and expected traffic. • <u>Growth and Land Use Goal 2</u>: New development must be designed to minimize the public costs of providing services, and minimize or prevent public health or safety hazards. • <u>Growth and Land Use Goal 3</u>: New development must be designed to prevent interfering with, or diminishing the efficiency and management of agricultural operations. • <u>Growth and Land Use Goal 5</u>: Discourage new land development on key, productive agricultural lands that are critical to the vitality of Broadwater County's economy; Encourage new growth to locate near existing communities, where services can be efficiently provided, and the loss of agricultural and forest land is minimized.
System Impacts	<p>Would implementation preclude or otherwise affect MDT's future ability to improve U.S. Highway 287 at the Missouri River crossing at Toston?</p> <p>Vehicle miles of travel and/or travel times would be improved.</p> <p>Would accommodate pedestrian/bicyclist use on route.</p> <p>Would enhance overall safety of route.</p>
Feasibility/Initial Construction Costs/Affordability	<p>Alternative must have a feasible construction cost.</p> <p>Alternative must be feasible to implement.</p> <p>Range of cost per mile for construction and implementation.</p> <p>Operating costs over time.</p>
Maintenance Obligations	<p>Would the alternative require MDT or Broadwater County to maintain additional lengths of paved roadway?</p> <p>Result in substantially increased annual maintenance costs?</p>

Table 3-1: Screening Criteria for Location Alternatives

SCREENING CONSIDERATIONS	SPECIFIC EVALUATION CRITERIA
Economic and Social	<p>Does the location option bypass Townsend?</p> <p>Would the location option alter the location, distribution, density, or growth rate of the human population in the area? Would the location option alter or interfere with the productivity or profitability of the existing land use in the area?</p> <p>Would the location option result in a need for new facilities or substantial alterations to any of the following utilities: electric power, natural gas, other fuel supply or distribution systems, or communications?</p> <p>Would the location option alter the "character" of the community or neighborhood? (Require relocations or substantially disrupt agricultural operations/farmland)</p>
Impacts to the Environment	<p>Would the alignment result in an overall detraction from the quality of the area's environmental resources such as:</p> <ul style="list-style-type: none"> a. Wetlands? b. Floodplains? c. Ecological/wildlife habitat? d. Historical and archeological resources? e. Threatened and endangered species? f. Prime or unique farmlands? g. Water quality?

Table 3-2: Screening Criteria for Design Alternatives

SCREENING CONSIDERATIONS	SPECIFIC EVALUATION CRITERIA
Consistent with MDT Route Segment Plan?	<p>The design provides at least 40' wide paved road.</p> <p>Alternative would provide design features consistent with those of adjoining segments of the route.</p> <p>Would implementation of the design preclude or otherwise affect MDT's future ability to improve U.S. Highway 287 south of the Townsend-South corridor.</p>
Eliminate/Reduce Roadway Deficiencies	<p>Design alternative must be consistent with MDT Design Standards for Rural Principal Arterials by:</p> <ul style="list-style-type: none"> a. Improving the road's horizontal and vertical alignments b. Increasing roadway's width c. Flattening roadside slopes and providing adequate clear zones. d. Improving accommodations for bicyclists and pedestrians.
Replace/Rehabilitate Highway Infrastructure	<p>Improve overall condition of transportation facility and replace outdated features (e.g. bridges).</p>
Improve Traffic Operations	<p>Alternative must provide an acceptable Level of Service in the design year. MDT's target level of service for this highway improvement project is LOS B for a period from the opening of the project to the design year.</p> <p>Alternative must provide increased passing opportunities within the Townsend-South corridor.</p> <p>Alternative would provide access management in the corridor</p>
Enhance Traffic Safety	<p>Alternative must improve vehicular safety.</p> <p>Reduce opportunities for traffic conflicts within the corridor</p> <p>Include access management and control</p> <p>Reduce number of non-standard features or other physical deficiencies associated with the transportation facility</p>
Effects on the Human Environment	<p>Will the implementation of the design result in notable effects to the land uses, cultural features, and human activities in the project corridor?</p>
Effects on the Natural Environment	<p>Will the implementation of the design notably degrade the quality of the environmental resources in the project area? The following resources were considered:</p> <ul style="list-style-type: none"> a. Wetlands? b. Floodplains? c. Ecological/wildlife habitat? d. Threatened and endangered species? e. Prime or unique farmlands? f. Water quality?

3.6 LOCATION OPTIONS CONSIDERED BUT REJECTED

The location and design alternatives identified were evaluated with respect to the screening criteria. As a result, several location and road design alternatives were not advanced for further consideration in the EA. The alternatives eliminated from consideration are discussed below.

3.6.1 REBUILD U.S. HIGHWAY 287 WEST OF THE RIVER

U.S. Highway 287 could be reconstructed on a new location west of the Missouri River in the Townsend to Toston area. Two preliminary alignment options, identified as Options A and B, were developed and analyzed. These options (previously shown in **FIGURE 4**) are described in more detail below.

Option A would depart from the existing alignment of U.S. Highway 287 about 10.5 km (6.5 miles) southwest of Toston. The alignment would follow existing county roads (Hossfeld Lane, Ferrat Lane, and River Road) for about 14.5 km (9 miles) before reaching the bluffs west and southwest of Townsend. The alignment of Option A would then generally follow River Road, an existing road paralleling the Missouri River, and rejoin the existing alignment about 8 km (5 miles) north of Townsend.

Option B's alignment departs from the existing road about 4.8 km (3 miles) southwest of Toston at Rauser Lane and continues on a northwest to southeast alignment to join River Road and the alignment of Option A before reaching the bluffs west and southwest of Townsend.

Option B attempts to reduce the length of the new alignment by more closely paralleling the course of the Missouri River. It also attempts to skirt the wetland areas presumed to exist within the Indian Creek, Crow Creek-Swamp Creek-Springs Creek drainage.

In addition to avoiding the wetlands in the Townsend-South project corridor, the principal benefits offered by shifting the road's alignment to the west side of the Missouri River would be the elimination of the need for two major bridges on the route - the Missouri River bridges at Toston and just north of Townsend. Further, since U.S. Highway 287 would no longer pass through Townsend, through traffic movements on the highway may be facilitated since there would be no need to slow down or stop in Townsend.

Although rebuilding U.S. Highway 287 west of the Missouri River in the area south of Townsend offers advantages, Options A and B were dropped from consideration because they would dramatically increase the scope and cost of highway improvements within the corridor. Options A and B would require rebuilding about 30 to 35 km (18.6 to 21.5 miles) of U.S. Highway 287, some 17 to 22 km (10.6 to 13.5 miles) more reconstruction than associated with the Preferred Alternative. The associated higher costs of reconstructing U.S. Highway 287 west of the river (estimated to be at least \$15 to \$20 million

more than the Preferred Alternative) would inhibit and delay MDT's ability to make improvements to the route.

Shifting to the other side of the river would also likely commit MDT to undertake and implement one massive project. Without the provision of temporary crossings of the Missouri River and Montana Rail Link Railroad linking new construction with the existing highway, staged construction of several shorter projects on the new route would offer no immediate benefits to facility users.

Shifting the alignment of U.S. Highway 287 to a location west of the Missouri River would also dramatically increase the amount of road MDT would be obligated to maintain. Since access must be perpetuated to lands and uses adjoining the existing highway south of Townsend, it is unlikely that the old highway would be totally abandoned. Due to the cost, it is doubtful Broadwater County would choose to assume responsibility for maintaining the old highway. Therefore, MDT would be obligated to continue maintenance on 22 to 29 km (13.7 to 17.7 miles) of the old route and the entire length of the new route.

Another fundamental reason for the rejection of Options A and B is that these alignments bypass the community of Townsend. According to **60-2-211, M.C.A.**, MDT "may not construct highway bypasses or highway relocation projects without prior consent of the governing body of an incorporated municipality."

The City of Townsend was contacted in May 2006 to determine if they had ever formally expressed their support or opposition for a U.S Highway 287 bypass of the community. It was learned that the City had not taken an official position about a bypass of the community but the local Chamber of Commerce did submit a letter to the City some years ago expressing their opposition to a bypass.

Since the City's official stance on a bypass had not previously been stated, MDT contacted the City and asked for a letter outlining their position on a bypass. The issue was discussed at a City Council meeting held on June 20, 2006 and MDT later received a letter from the Mayor stating the City was strongly opposed to a bypass. A copy of the City's June 22, 2006 letter can be found on page D-20 of **APPENDIX D**. Given the City's current position, it is unlikely the City would consent to a highway bypass as required by **60-2-211, M.C.A.**

A highway bypass would have the potential to adversely affect existing highway-oriented businesses in Townsend. While a bypass could create opportunities for new businesses or business relocations, existing highway-oriented businesses could be negatively impacted due to less drive-by traffic and fewer customers. The City of Townsend could also see a decline in tax revenues from the businesses that relocated outside the city limits.

Concerns also exist about the environmental effects associated with Options A and B since new construction would occur in areas not previously disturbed by major transportation corridors. Major amounts of new right-of-way would be required and potential exists to sever or disrupt the use of agricultural lands. The rugged terrain present in the area southwest of Townsend also suggests that notable cuts and fills may be necessary, potentially increasing the area of disturbance and visual scarring on the landscape. Notable wetland areas and surface waters could also be encountered where the new alignment crosses Warm Springs, Crow, Swamp, and Spring Branch Creeks near the south end of the alignment.

Options A and B would require that a major new intersection for U.S. Highways 12 and 287 be provided north of Townsend. Developing a safe intersection design could be challenging at the northern terminus of the alignment due to the topography, the skewed alignment of the roads, and a required grade separation for the Montana Rail Link Railroad.

For the reasons summarized above, reconstructing U.S. Highway 287 west of the Missouri River in the Townsend to Toston area was dropped.

APPENDIX F presents detailed information about Options A and B and summarizes the anticipated environmental effects of implementing either option.

3.6.2 REBUILD U.S. HIGHWAY 287 EAST OF THE EXISTING ROAD

U.S. Highway 287 south of Townsend could also be constructed on a new alignment east of its present location. As a starting point for establishing possible new alignments, it was assumed that a departure from the existing alignment would occur near the beginning of the Townsend-South project. Three alignment options were developed in the area east of the existing highway. These options (shown in **FIGURE 4**) are discussed in the following paragraphs.

Option "C" This alignment would depart from the existing alignment at the south edge of Townsend and proceed southeast before turning south to follow Litening Barn Lane. The new alignment would rejoin the existing alignment about 9 km (5.5 miles) south of Townsend. The intent of the alignment is to minimize the departure from the existing alignment but still avoid the concentration of wetlands located between the Montana Ditch and Dry Creek.

Option "D" This alignment would depart from the existing alignment at the south edge of Townsend similar to Option C and proceed southeast before turning south to follow Flynn Lane. The new alignment would rejoin the existing alignment just south of the end of the proposed Townsend-South project.

Option "E" Similar to Options C and D, this alignment would depart from the existing alignment at the south edge of Townsend and proceed southeast to parallel the bench at the east edge of the valley and then turn due south. A long curve would shift the alignment to the southwest providing a long tangent (straight) connection to the existing highway south of the Missouri River bridge at Toston. The new alignment would rejoin the existing alignment about 0.8 km (0.5 miles) south of Toston. This option would require the replacement of the Missouri River bridge at Toston.

Options C, D, and E avoid the concentrated area of wetlands along the existing highway in Townsend-South project area and present several other benefits as compared to alignment options west of the Missouri River. The proposed alignments minimize the required departure from the existing alignment and stay within the project termini of the Townsend-South project. None of the alignment options bypass Townsend.

Options C and D generally follow existing county roads over notable portions of their length and offer opportunities for incorporating existing right-of-way into the new facility.

The concept of rebuilding U.S. Highway 287 on alignments east of the present road within the Townsend-South project area was dropped from consideration for the following reasons:

- The resulting eastern route would be 2.0 to 2.4 km (1.3 to 1.5 miles) longer than the existing route with construction costs estimated to range between \$2 million to \$10 million higher than the Preferred Alternative.
- Building on a new eastern alignment would require MDT to operate and maintain between 8.9 and 15.3 km (5.5 to 9.5 miles) of the existing route as a Secondary Highway and provide access to adjoining uses.
- While it may be possible to avoid key wetlands adjacent to the existing route in the Townsend-South corridor, rebuilding all or substantial portions of the route on a new eastern alignment requires the development of new highway corridor through areas where such facilities did not previously exist. The resulting environmental effects of such an action could have notable right-of-way impacts, could disrupt agricultural operations, and may require the direct conversion of as much or more important farmland than the Preferred Alternative. Complete avoidance of wetlands would be unlikely since a new eastern alignment would also cross other riparian wetlands.

The issues summarized above represent the major reasons why the concept of reconstructing U.S. Highway 287 on new alignments east of the present roadway was dropped from consideration. Detailed information about Options C, D, and E and summaries of the anticipated environmental effects of implementing these options are presented in **APPENDIX F**.

3.6.3 REBUILD ON THE PRESENT ALIGNMENT

Reconstructing U.S. Highway 287 on exactly the same location within the project corridor is possible but this alignment option was rejected for several important reasons. The Montana Rail Link Railroad lies immediately west of U.S. Highway 287 and parallels the highway through the entire project corridor. Rebuilding the road on an alignment strictly following its existing centerline requires that the construction limits and right-of-way be expanded equally to both sides of the road.

The existing centerline of the highway is located within 48 m (157 feet) of the centerline of the mainline railroad track over the entire length of the corridor. The existing right-of-way easement for the highway is typically about 32 m (105 feet) from the centerline of the mainline railroad track. Contacts with the railroad company indicates that for safety reasons at railroad crossings, the distance from the edge of new highway easements to the centerline of the nearest railroad track must be no closer than 36.6 m (120 feet). Therefore, the existing highway easement is already less than Montana Rail Link's minimum offset distance and rebuilding the road closer to the railroad would compromise safety at railroad crossings. The Preferred Alternative would shift the new road slightly east and would maintain the existing offset distance between the highway easement and centerline of the mainline railroad track.

Another consideration in rejecting this alignment concept was that traffic control during construction would be more difficult and the costs associated with maintaining traffic during reconstruction would be greater than those of the Preferred Alternative. The desired sequencing of work activities could be adversely affected by building the new road on the existing centerline and under traffic. The contractor would be obligated to minimize delays to motorists and considerable amounts of time and effort would have to be devoted to maintaining a passable road surface in the corridor and controlling traffic within work zones. Conflicts would inevitably arise between through traffic, construction personnel, and the operation of construction equipment if the road were rebuilt on the existing centerline.

The Preferred Alternative would shift the alignment to the east shoulder of the present roadway over most of the corridor so traffic can be maintained on the existing road prism during much of the proposed reconstruction.

3.7 DESIGN OPTIONS CONSIDERED BUT REJECTED

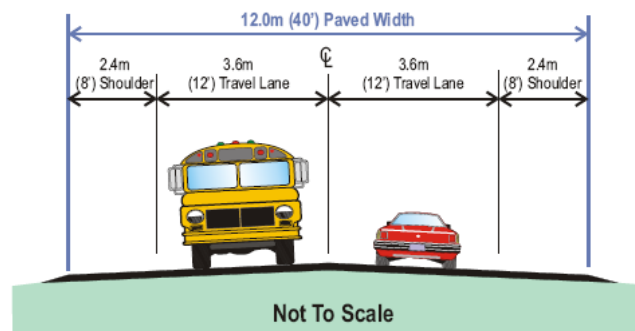
Other lane configurations (design options) were considered for U.S. Highway 287 in the Townsend-South project area. These options consisted of variations in the highway's cross-section elements and typically refer to the combination of through lanes and turning lanes incorporated into the design for the roadway.

In addition to the Preferred Alternative, preliminary consideration was given to reconstructing the route as a four-

or five-lane facility over the entire project length and several alternate design options incorporating various lane configurations. These design options and the reasons why they were eliminated from consideration are discussed below.

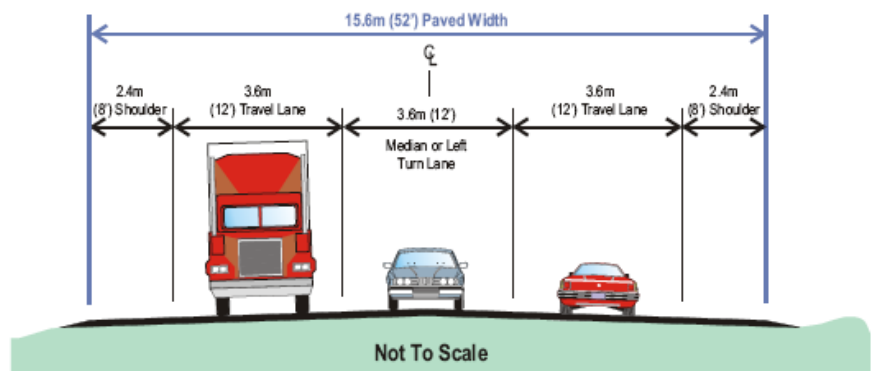
3.7.1 RECONSTRUCTION AS AN IMPROVED TWO-LANE FACILITY

This option would replace the existing two-lane road with a similar but wider two-lane facility. The proposed design would improve the horizontal and/or vertical alignments and reconstruct roadside slopes where needed to meet design standards. Travel lanes would typically be 3.6 m (12 feet) wide and shoulders would be 2.4 m (8 feet) wide as illustrated below.



Improved Two-Lane Section

The addition of a center turning lane on the outskirts of Townsend and at the road's intersections with Lower Deep Creek Road, Shelley Road, and Litening Barn Lane/Dry Creek Road would result in areas with a three-lane typical cross-section as shown below.



Improved Two-Lane With Center Median/Left Turn Lane (3-Lane)

The wider paved shoulders associated with this design would not substantially change operating conditions within the corridor. However, capacity analysis shows that passing opportunities and LOS would be reduced over that of the existing facility due to the addition of left turn lanes. MDT's capacity analysis indicates

this design would operate at an unacceptable LOS D with a PTSF of 69 percent (as compared to a PTSF of 67 percent for the existing facility) under design year traffic conditions.

Therefore, this design option would not meet the fundamental purpose and need for this project and was dropped from further consideration.

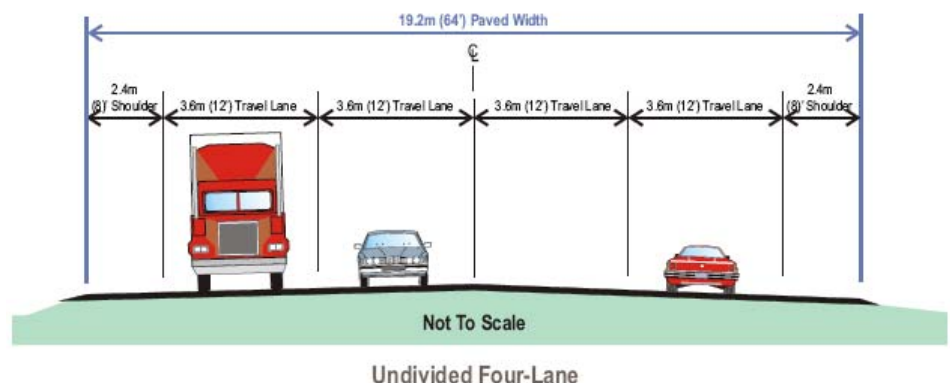
3.7.2 TWO-LANE RECONSTRUCTION WITH ONE PASSING AREA

This design would provide a two-lane road with one undivided four-lane passing area. This design option was initially proposed in 1998 when the Townsend-South project was reconsidered and activated. The passing lane segment would be 4.8 km (3 miles) long and located near the south end of the project. The single passing area was located in this area of the project because few wetland sites exist along the roadway.

A center turn lane would be provided in the area south of the Townsend City limits and center median/left turn lanes would be provided at the intersections of Lower Deep Creek Road, Shelley Road, and Litening Barn Lane/Dry Creek Road. Travel lanes and passing lanes would typically be 3.6 m (12 feet) wide. The center median/left turn lanes would be 3.6 m (12 feet) wide except at the north end of the project where the center median/left turn lane would be 4.2 m (14 feet) wide. Shoulders would typically be 2.4 m (8 feet) wide except at the north end of the project where the shoulders would be 0.60 m (2 feet) wide. Since the passing area would occur near the south end of the project where no major county road intersections exist, this design configuration would not include any five-lane roadway.

The typical two-lane and three-lane road cross-sections associated with this design configuration are similar to those of the improved two-lane facility described previously.

The typical road cross-section for the undivided four-lane passing area is shown below.



Although this option represented MDT's initial design concept for the project, it was dropped from consideration in favor of a design providing two or three passing areas within the Townsend-South corridor.

The capacity analysis showed that a single passing area would not benefit the level of service on this road section. This is because the operational effects of the passing area (increased passing opportunities) would not be effective over the entire 13.2 km (8.0 mile) project corridor. The capacity analysis indicates that this design option would operate at LOS D with a PTSF of 71 percent in the design year. These forecasted design year operating conditions would be similar to those expected if nothing were done to improve the facility.

Further, MDT believes a center median/left turn lane should be provided in the passing area(s) within the project corridor because of the safety and operational benefits offered by this design element.

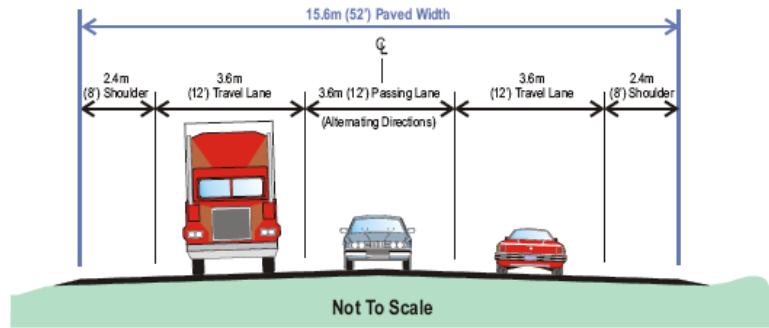
For these reasons, this design option was dropped from further consideration in the EA.

3.7.3 TWO-LANE RECONSTRUCTION WITH ALTERNATING PASSING AREAS

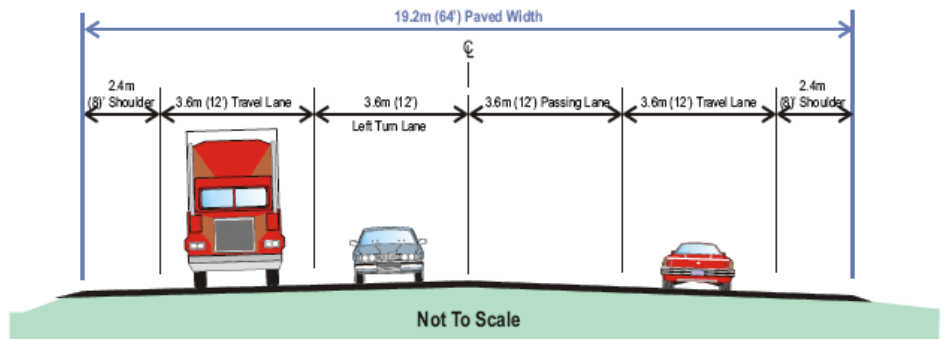
Due to fiscal constraints not all highways can be built to four-lane specifications so the need to maximize benefits of two-lane roadways has become increasingly more important. The growing need to maximize benefits of a two-lane roadway through improved capacity, mobility, and safety has led to the development and implementation of "Super 2" highways. The Super 2 highway is a two-lane road with enhanced design features which enable the facility to carry higher volumes of traffic at an improved level of safety and service.

The Super 2 concept would include center median/left turn lanes at the Lower Deep Creek Road, Shelley Road, and Litening Barn Lane/Dry Creek Road intersections and 1.6 to 3.2 km (1-2 mile) long, alternating, directional passing areas. Two passing areas, spaced about 5.6 km (3.5 miles) apart, would be provided within the corridor for both northbound and southbound traffic. The design configuration would provide a three-lane cross-section over about 70 percent of the project's length. The Super 2 design would result in the road having a four-lane cross-section if the directional passing area occurred in an area with a center median/left turn lane.

Areas with a two-lane road cross-section would be similar to the design configuration for the improved two-lane facility previously described. The road's typical cross-sections in passing areas are shown below.



Improved Two-Lane With
Alternating Passing Lane



Improved Two-Lane with
Alternating Passing Lane and Left Turn Lane

The Super 2 design option has the benefit of a narrower overall roadway width than required for other design options incorporating passing areas with a four- or five-lane cross-section. As a result, the right-of-way needs and environmental effects of the Super 2 design would generally be less than for other options incorporating passing lanes.

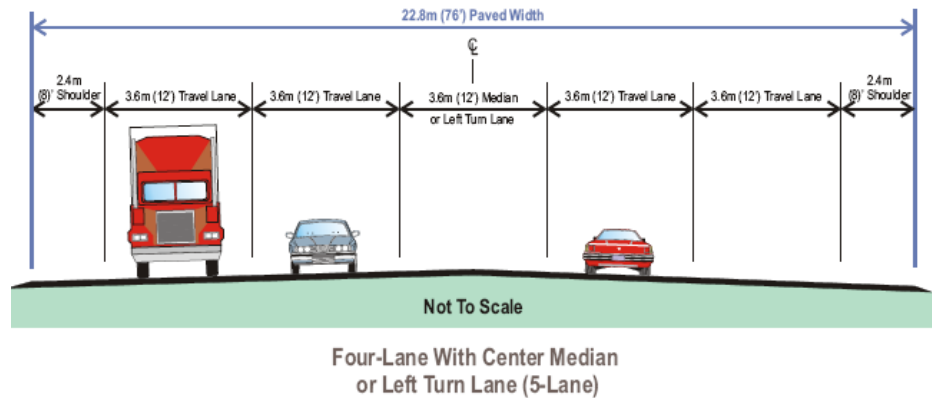
However, the overall passing opportunities in the project corridor would be reduced over present conditions due to the fact that no passing zones would exist for the traffic on the opposite side of the passing zone. The capacity analysis indicates that this design option would operate at LOS C under traffic conditions in the anticipated letting year for the project and in the design year. This projected LOS falls short of MDT's design year target of LOS B for this facility. As with the design option with one passing area, the alternating directional passing areas of the Super 2 design would not provide operational benefits for the entire length of the project.

3.7.4 TWO-LANE RECONSTRUCTION WITH THREE PASSING AREAS

Road designers evaluated a design configuration that would provide passing lanes for both directions at three locations within the project corridor. The passing areas, ranging in length

from about 1.8 to 2.3 km (about 1.1 to 1.4 miles) were strategically located to minimize wetland impacts and occur near county roads where practicable.

This design configuration incorporated areas of improved two-lane road, a three-lane (two-lane with center median/left turn lane), and undivided four-lane passing areas. The provision of a center median/left turn lane at major road intersections resulted sections with a five-lane configuration in two of the three passing areas. The design option would incorporate typical cross-sections described earlier for two-lane, three-lane, and undivided four-lane areas. The typical cross-section at locations where a center median/left turn lane would occur in passing areas is shown below.



This design option was identified as the Preferred Alternative in the EA for the Townsend-South project distributed for public comments in November 2005.

About the time the EA was released, MDT's Traffic and Safety Bureau recommended this design option be modified to incorporate a center median/left turn lane over the entire length of the three passing areas and not just in the vicinity of major intersections. The principal reason for this design change was the safety and operational benefits for road users possible by including a center median/left turn lane to separate opposing traffic flows and remove turning vehicles from through lanes. This revised design concept was presented and discussed at the public hearing held on December 15, 2005 in Townsend.

Comments received at and following the December 15, 2005 public hearing supported the use of passing areas and suggested that the southern two passing areas be combined to eliminate a short transition area. MDT considered these comments and agreed that the passing areas could be combined without substantially increasing project costs or environmental impacts.

Due to changes in lane configurations and because three passing areas are no longer proposed, this option was eliminated in favor of the Preferred Alternative.

3.7.5 RECONSTRUCTION AS A 4-LANE FACILITY

This design configuration would provide a four-lane facility over the length of the Townsend-South project corridor. Travel lanes would typically be 3.6 m (12 feet) wide and shoulder widths would typically be 2.4 m (8 feet) wide. The addition of a 3.6 m (12 feet) wide center median/left turn lane at various locations in the corridor would result in areas with a five-lane cross-section. The typical road cross-sections for this design option would be the same as the four-lane and five-lane sections previously described.

Although rebuilding the existing roadway as a four-lane facility meets the purpose and need for this proposed action, this design option was not selected as the Preferred Alternative. This design option was dropped from consideration because projected traffic volumes over the next twenty years on this portion of U.S. Highway 287 would be unlikely to warrant the provision of a four-lane facility. The associated environmental impacts and costs of rebuilding the existing road as a four-lane facility would notably exceed those of the Preferred Alternative.

Traffic volumes on U.S. Highway 12/287 are highest near East Helena and decrease south of Townsend. The section of U.S. Highway 12/287 between East Helena and Townsend has shown steady increases in traffic in recent years. In response to these increasing traffic demands, operational improvements including the addition of four-lane passing segments have been implemented between East Helena and Townsend. Future four-lane reconstruction on this route, should it occur, would likely begin east of East Helena (where the highest traffic volumes exist) and continue toward Townsend. Expectations are that four-lane reconstruction in the East Helena to Townsend area would not be warranted for at least ten years. A four-lane facility south of Townsend could not be justified for at least ten years after such reconstruction occurred north of Townsend.

Further, rebuilding U.S. Highway 287 as a four-lane facility would likely result in more right-of-way acquisition and greater environmental impacts than other design options due to the increased "footprint" of road. The associated cost of construction and right-of-way would be the higher than other design options considered for the Townsend-South project.

One of the most notable environmental consequences of rebuilding this route as a four-lane facility would be impacts to roadside wetlands. To the extent practicable, the passing areas associated with the Preferred Alternative have been located to minimize impacts to adjoining wetlands. Due to its wider typical section, constructing a four-lane facility over the full length of the project area would likely result in more wetland impacts than the other designs considered.

3.8 RESULTS OF ALTERNATIVES SCREENING

TABLES 3-3 and **3-4** summarize the results of the screening evaluation for the highway location and design alternatives considered for the proposed Townsend-South project. These tables present side-by-side comparisons of how each location and design alternative considered in this PART addresses the general screening considerations and specific criteria previously established in **TABLES 3-1** and **3-2**.

TABLE 3-3: Screening Evaluation of Townsend-South Location Options

GOALS/PROJECT CONSIDERATIONS	SCREENING CRITERIA	LOCATION OPTIONS				
		No Action	Options A/B Alignments West of the River	Options C/D/E Alignments East of Existing Highway	Strictly Follow the Existing Alignment	Rebuild Near the Existing Alignment (PREFERRED)
Consistency With Pertinent Policy Goals of TranPlan 21	Consistent with pertinent Policy Goals of TranPlan21?	○	+	+	+	+
	• <u>Econ Development Goal A</u> - Preserve the efficient functioning of the transportation system used by Montana's export-oriented industries to access regional, national, and international markets.	■ ■	++	++	++	++
	• <u>Traveler Safety Goal A</u> - Reduce the number and severity of traffic crashes on Montana's roadways.	○	+	+	+	+
	• <u>Access Management Goal A</u> - Improve corridor level access management to preserve the highway system	■ ■	+	+	+	+
	• <u>Bicycle and Pedestrian Transportation Goal B</u> - Target bicycle and pedestrian improvements to account for differences in current and future use. (Improved bicycle and pedestrian facilities through incorporation in existing projects).	■	+	+	+	+
	• <u>Roadway System Performance Goal A</u> - Establish specific priorities for roadway improvements. First priority to preserve Montana's existing system; Second Priority to add capacity and improve mobility.	■ ■	++	++	++	++
	• <u>Roadway System Performance Goal B</u> - Preserve mobility for people and industry in Montana.	○	+	+	+	+
Consistency With Applicable Goals of Broadwater County Growth Policy	Consistent with applicable goals of County Growth Policy?	■ ■	++	++	++	++
	• <u>Transportation Goal 2</u> : Provide an efficient and functional transportation network that will adequately handle present and expected traffic.	○	■	■	○	○
	• <u>Growth and Land Use Goal 2</u> : New development must be designed to minimize the public costs of providing services, and minimize or prevent public health or safety hazards.	○	■ ■	■ ■	○	○
	• <u>Growth and Land Use Goal 3</u> : New development must be designed to prevent interfering with, or diminishing the efficiency and management of agricultural operations.	○	■ ■	■	○	○
System Impacts	Would implementation preclude or otherwise affect MDT's future ability to improve U.S. Highway 287 at the Missouri River crossing at Toston?	○	+	○ (Options C/D) ■ (Option E - Requires new bridge at Toston)	○	○
	Vehicle miles of travel would be significantly changed.	○	■		○	○
	Would reduce travel times on route.	○	■		○	○
	Would accommodate pedestrian/bicyclist use on route.	○	+			
	Would enhance overall safety of route.	○	+			

++ Significantly Positive ■ Negative ○ Neutral/No Change/Minimal Effect
 + Positive/Yes ■ ■ Significantly Negative

TABLE 3-3: Screening Evaluation of Townsend-South Location Options

GOALS/PROJECT CONSIDERATIONS	SCREENING CRITERIA	LOCATION OPTIONS				
		No Action	Options A/B Alignments West of the River	Options C/D/E Alignments East of Existing Highway	Strictly Follow the Existing Alignment	Rebuild Near the Existing Alignment (PREFERRED)
Feasibility/ Initial Construction Costs/ Affordability	Alternative must have a feasible construction cost.	N/A	■ ■	■ ■ (Options C/D) ■ (Option E)	+	+
	Alternative must be feasible to implement.	+	■ ■	+	+	+
	Range of cost per mile for construction and implementation.	○	■	■ (Options C/D) ■ ■ (Option E)	■	■
	Operating costs over time.	○	■ ■	■	■	■
Maintenance Obligations	Would the alternative require MDT to maintain additional lengths of paved roadway?	○	■ ■	■	○	○
	Result in substantially increased annual maintenance costs?	○	■ ■	■	■	■
Economic and Social	Does the location option bypass Townsend?	○	■ ■	○	○	○
	Would the location option alter the location, distribution, density, or growth rate of the human population in the area?	○	■	■	○	○
	Would the location option alter or interfere with the productivity or profitability of the existing land use in the area?	○	■	■	○	○
	Would the location option result in a need for new facilities or substantial alterations to any of the following utilities: electric power, natural gas, other fuel supply or distribution systems, or communications?	○	+	+	○	○
	Would the location option alter the "character" of the community or neighborhood? (Require relocations or substantially disrupt agricultural operations/farmland)	○	■ ■	■ ■	+	+
Impacts to the Natural Environment	Would the alignment result in an overall detraction from the quality of the area's environmental resources such as: a. Wetlands? b. Floodplains? c. Ecological/wildlife habitat? d. Historical and archeological resources? e. Threatened and endangered species? f. Prime or unique farmlands? g. Water quality?	○	■ Entirely new highway corridor required ■ (Habitat, Important Farmland, Wetlands, Floodplains)	■ Major areas of new highway corridor required. ■ (Habitat, Important Farmland, Wetlands Floodplains)	○ ■ ■ (Wetlands) ■ (Habitat, Important Farmland, Floodplains)	○ ■ ■ (Wetlands) ■ (Habitat, Important Farmland, Floodplains)
Access Management	Must provide efficient access to agriculture and rural residences in corridor.	○	+	+	+	+
OVERALL ASSESSMENT		ADVANCED	DROPPED FROM CONSIDERATION	DROPPED FROM CONSIDERATION	DROPPED FROM CONSIDERATION	ADVANCED

++ Substantially Positive ■ Negative ○ Neutral/No Change/Minimal Effect
 + Positive ■ ■ Substantially Negative N/A Not Applicable

TABLE 3-4: Screening Evaluation of Townsend-South Road Design Alternatives

GOALS OR DESIGN CONSIDERATIONS	SCREENING CRITERIA	DESIGN ALTERNATIVES						
		No Action	Reconstruct as an Improved Two-Lane	Reconstruct with Alternating Passing Lanes "Super 2"	Reconstruct with One Passing Area	Reconstruct with Three Passing Areas	Reconstruct with Two Passing Areas (PREFERRED)	Reconstruct As a Four-Lane Facility
Consistent with MDT Route Segment Plan?	The design provides at least 40' wide paved road.	--	++	++	++	++	++	++
	Alternative would provide design features consistent with those of adjoining segments of the route.	○	○	-	○	○	○	-
	Would implementation of the design preclude or otherwise affect MDT's future ability to improve U.S. Highway 287 south of the Townsend-South corridor.	○	○	○	○	○	○	○
Eliminate/Reduce Roadway Deficiencies	Design alternative must be consistent with MDT Design Standards for Rural Principal Arterials by:							
	a. Improving the road's horizontal and vertical alignments	○	+	+	+	+	+	+
	b. Increasing roadway's width	○	++	++	++	++	++	++
	c. Flattening roadside slopes and providing adequate clear zones.	○	++	++	++	++	++	++
d. Improving accommodations for bicyclists and pedestrians.	○	+	+	+	+	+	+	
Replace or Rehabilitate Highway Infrastructure	Improve overall condition of transportation facility and replace outdated features (e.g. bridges).	○/-	++	++	++	++	++	++
Improve Traffic Operations	Alternative must provide an acceptable Level of Service in the design year. MDT's target level of service for this highway improvement project is LOS B for a period from the opening of the project to the design year.	--	--	--	--	-	-	++
	Alternative must provide increased passing opportunities within the Townsend-South corridor.	LOS B (Initially) LOS D (Design Year)	LOS C (Initially) LOS D (Design Year)	LOS C (Initially) LOS C (Design Year)	LOS C (Initially) LOS D (Design Year)	LOS B (Initially) LOS C (Design Year)	LOS B (Initially) LOS C (Design Year)	LOS A (Initially) LOS A (Design Year)
	Alternative would provide access management in the corridor	○/-	++	++	++	++	++	++

++ Substantially Positive - Negative ○ Neutral/No Change/Minimal Effect
 + Positive -- Substantially Negative N/A Not Applicable

TABLE 3-4: Screening Evaluation of Townsend-South Road Design Alternatives

GOALS/DESIGN CONSIDERATIONS	SCREENING CRITERIA	DESIGN ALTERNATIVES						
		No Action	Reconstruct as an Improved Two-Lane	Reconstruct with Alternating Passing Lanes "Super 2"	Reconstruct with One Passing Area	Reconstruct with Three Passing Areas	Reconstruct with Two Passing Areas (PREFERRED)	Reconstruct As a Four-Lane Facility
Enhance Traffic Safety	Alternative must improve vehicular safety.	○	+	+	+	+	+	+
	Reduce opportunities for traffic conflicts within the corridor	○	++	++	++	++	++	++
	Include access management and control	-	++	++	++	++	++	++
	Reduce number of non-standard features or other physical deficiencies associated with the transportation facility	○	++	++	++	++	++	++
Effects on the Human Environment	Will the implementation of the design result in notable effects to the land uses, cultural features, and human activities in the project corridor?	○/- (Noise impacts at some locations)	○ - (Noise, right-of-way effects)	○ - (Noise, visual right-of-way effects)	○/- - (Noise, visual right-of-way effects)	- - (Noise, visual right-of-way effects)	- - (Noise, visual right-of-way effects)	- - (Noise, visual right-of-way effects)
Effects on the Natural Environment	Will the implementation of the design notably degrade the quality of the environmental resources in the project area? The following resources were considered: a. Wetlands? b. Floodplains? c. Ecological/wildlife habitat? d. Threatened and endangered species? e. Prime or unique farmlands? f. Water quality?	○	○	-	-	-	-	-
OVERALL ASSESSMENT		ADVANCED FOR EA ASSESSMENT	DROPPED FROM CONSIDERATION	DROPPED FROM CONSIDERATION	DROPPED FROM CONSIDERATION	DROPPED FROM CONSIDERATION	ADVANCED FOR EA ASSESSMENT	DROPPED FROM CONSIDERATION

++ Substantially Positive
+ Positive

- Negative
-- Substantially Negative

○ Neutral/No Change/Minimal Effect
N/A Not Applicable

PART 4.0: Affected Environment and Environmental Consequences

PART 4.0: Affected Environment and Environmental Consequences

4.1 INTRODUCTION

This PART of the EA describes the existing conditions or environmental resources in the project area (affected environment) and the anticipated impacts of implementing the Preferred Alternative for the Townsend-South highway reconstruction project. Resources likely to be affected were identified through agency contacts, literature reviews, research and field studies, and public involvement activities. This PART also discusses the potential effects of taking no action to improve U.S. Highway 287. The No Action Alternative does not meet the purpose and need for the project but the impacts of this alternative were analyzed to compare and contrast the anticipated effects of the Preferred Alternative. Where appropriate, measures to mitigate the adverse environmental impacts of this project are discussed at the end of each section. If the Preferred Alternative is advanced, then MDT will implement the mitigating measures identified in this PART.

4.2 IMPACTS TO THE NATURAL ENVIRONMENT

4.2.1 IMPACTS TO LANDFORMS AND SOILS

EXISTING CONDITIONS. The Townsend-South project area lies within the Northern Rocky Mountains Physiographic Province of the United States. The project area consists of generally flat terrain in the bottom of the Missouri River valley. U.S. Highway 287 generally follows the Missouri River from the southern end of Canyon Ferry Reservoir to Toston. The river valley is about 16 km (10 miles) wide in the project area, stretching from the Big Belt Mountains on the east to the Elkhorn Mountains on the west.

Surface elevations in project area range from approximately 1,165 m to 1,200 m (3,820 to 3,940 feet), increasing gradually toward the south end of the project.

Deep Creek, Greyson Creek, and Dry Creek are the main streams draining the Townsend-South project area. These drainages typically flow westward, and are tributaries of the Missouri River. The Townsend-South section of U.S. Highway 287 is adjacent to or generally within 0.8-1.6 km (0.5-1 miles) of the Missouri River over the majority of the corridor's length. The river flows generally northward from its headwaters at the confluence of the Jefferson, Madison and Gallatin Rivers near Three Forks.

IMPACTS OF THE PREFERRED ALTERNATIVE. The proposed road improvements would require cutting and filling adjacent terrain to widen the highway, modify horizontal curves and road grades, and develop portions of road on new areas adjacent to the present highway. These activities would disrupt, displace, compact, and cover soils not currently associated with the existing highway. These effects would be most notable in the wetland areas in the northern portion of the project area and on previously undisturbed lands. Much of the presently traveled way (PTW) would generally be incorporated into the foundation of the new roadway.

The Townsend-South project would require importing additional borrow materials to widen the road and change the road's grade. Surface and subsurface materials would be disturbed at locations away from the project corridor to generate fill material needed to build the new roadway. MDT's contractor(s) would typically provide any needed foundation material for the highway. The environmental effects associated with the highway contractor obtaining and transporting any additional material needed to build the highway cannot be assessed at this time since the origin of such materials is unknown.

No known geotechnical conditions exist that would limit the development of the Townsend-South project. However, soil samples show that some area soils are corrosive to zinc-coated steel and aluminum and some soils are alkali-reactive to concrete. These soil conditions would dictate the types of materials best suited for drainage pipes under the new highway. Where determined necessary, MDT would install culverts made of materials that are resistant to corrosive soils.

Soil testing has shown that the road's subgrade has high moisture levels in some portions of the corridor. The most likely sources of the very high subgrade moisture are high groundwater and lateral seepage from drainage ditches or standing water areas adjoining the road. Reconstruction of the road using methods and materials to stabilize the subgrade would address this condition.

IMPACTS OF THE NO ACTION ALTERNATIVE. The No Action Alternative would not require any significant ground disturbances.

MITIGATING MEASURES. No mitigating measures are necessary or proposed for the proposed project's effects on landforms and area soils.

4.2.2 IMPORTANT FARMLAND

EXISTING CONDITIONS. The *FARMLAND POLICY PROTECTION ACT (FPPA) (7 U.S.C. 4201 et. seq.)* requires special consideration be given to soils that are considered as prime farmland, unique farmland, or farmland of statewide or local importance by the by the U.S. DEPARTMENT OF AGRICULTURE NATURAL RESOURCES CONSERVATION SERVICES (NRCS). For the purposes of

this EA, these soils are considered together and identified as "Important Farmland."

Based on a review of the Broadwater County Area soil survey (1977) and consultation with the District Conservationist from NRCS Townsend District Office, eight soils considered to be Important Farmland were identified along the U.S. Highway 287 within the Townsend-South project corridor. The following soils (listed by soil symbol and name) were identified by the NRCS as being Important Farmland (**P** - Prime Farmland or **PI** – Prime, if Irrigated):

BsA	Brocko silt loam, 0 to 2 percent slopes (P)
Fa	Fairdale silt loam (PI)
Fb	Fairdale-Lothair silty clays (if irrigated) (PI)
Ha	Havre loam (P)
Lt	Lothair silty clay (P)
MsA	Mussel loam, 0 to 2 percent slopes (P)
Te	Thess silt loam (P)
Vd	Villy silty clay loam, drained (P)

Mapping shows that approximately two-thirds of the land underlying and adjacent to U.S. Highway 287 is comprised of soils meeting these Important Farmland classifications. The existing highway corridor encompasses more than 27.5 ha (64 acres) of soil types considered Prime Farmland or Prime Farmland (If Irrigated).

IMPACTS OF THE PREFERRED ALTERNATIVE. Of importance under the *FPPA* are the areas of direct and indirect conversion of Important Farmland. Direct conversions occur when soils meeting the definition of farmland are included in the proposed highway right-of-way. Indirect conversions of farmland occur when the areas remaining in a tract of land partially taken for right-of-way: 1) would no longer be capable of being farmed due to access restrictions; or (2) would likely be converted to a non-farm use due to the accessibility of the highway.

The information provided by NRCS and preliminary right-of-way plans for the proposed improvements were reviewed to determine the area of Important Farmland that would be affected by the Townsend-South project. Based on the information presented above, about 50.5 ha (124.7 acres) of soils meeting Important Farmland classifications exist within the proposed right-of-way for the Preferred Alternative. The construction of the proposed project would directly convert about 24.5 ha, or 60.6 acres, of soils meeting the designation of Important Farmland. The proposed project would not indirectly convert any Important Farmland.

A Farmland Conservation Impact Rating form (#AD-1006) was prepared for the proposed highway improvement project in accordance with the *FPPA*. The form was submitted to the NRCS District Conservationist in Townsend on July 30, 2004 for the completion of Parts II, IV, and V of the form. To date, the form has not been returned. According to 7 CFR 658.4(a), the

proposed project may proceed as if there were no lands subject to the FPPA since the NRCS did not complete its response within 45 days. However, the Preferred Alternative's impacts on Important Farmland were still assessed without information from the NRCS.

MDT's consultant assigned points for the site assessment criteria in Part VI of the form and arrived at a total score of 81. The *Total Points* for the project in Part VII of the form was calculated to be 181 assuming a value of 100 points for Part V. Since this total is less than 260 points, no further consideration for protection is necessary and no additional Important Farmland evaluations are required. The completed form was not submitted to the NRCS but a copy is provided in **APPENDIX B**.

IMPACTS OF THE NO ACTION ALTERNATIVE. The No Action Alternative would not directly or indirectly convert any additional Important Farmland in the Townsend-South corridor.

MITIGATING MEASURES. No mitigating measures are necessary or proposed since the *Total Points* for the project is less than the threshold of 260 points on form #AD-1006.

4.2.3 WATER RESOURCES AND QUALITY

SURFACE WATERS. Major surface water drainages crossed by U.S. Highway 287 in the Townsend-South project area include: Deep Creek, Deep Creek Overflow channel, Greyson Creek, and Dry Creek. These streams pass beneath the highway under bridges or through culverts as they flow towards the Missouri River.

There is also an extensive system of irrigation canals and ditches in the project area including the Montana Ditch, Broadwater-Missouri East Side Canal, and Big Spring Ditch.

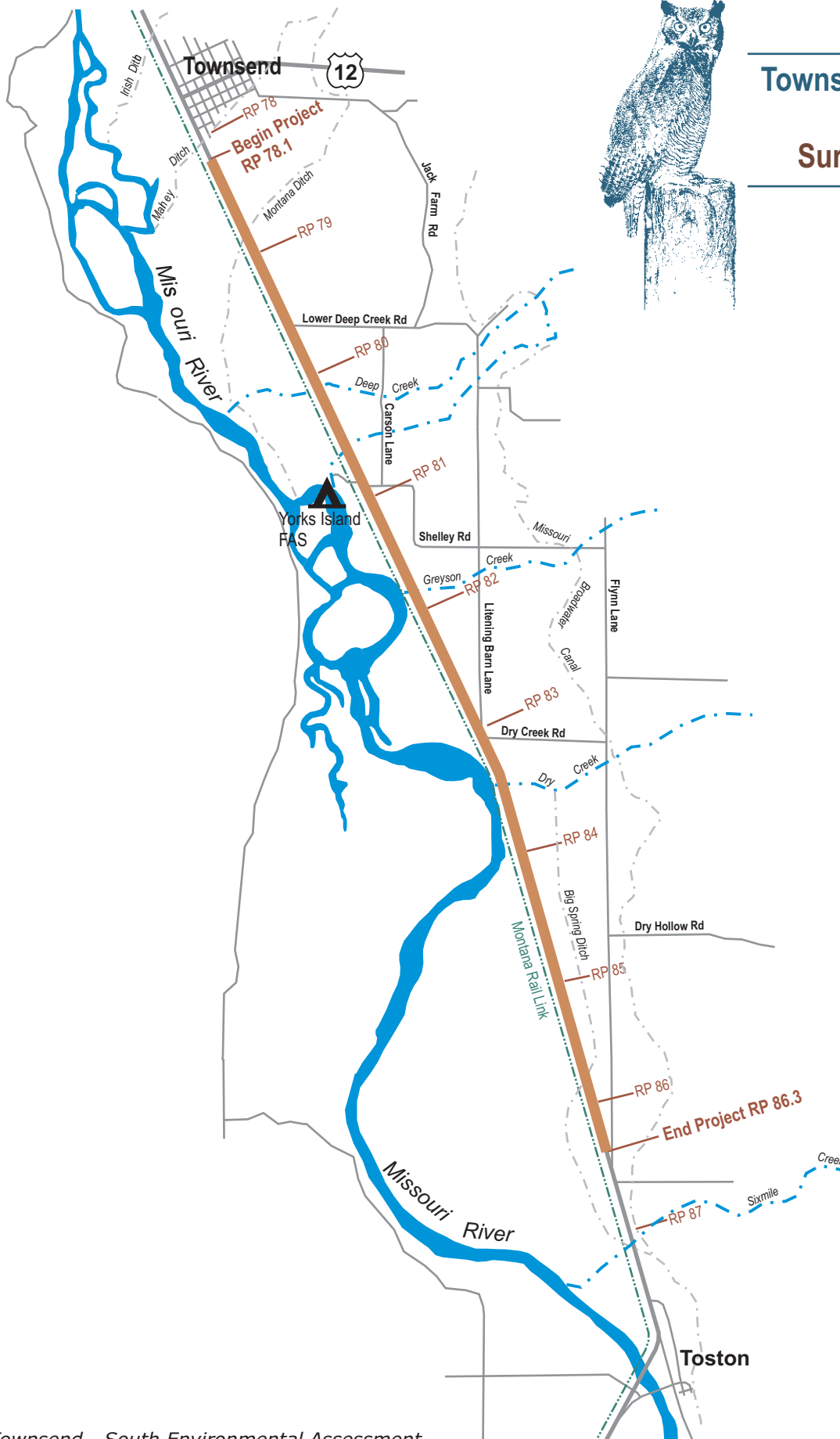
Irrigation features and systems in the project area are managed by the Montana Ditch Company, the Broadwater-Missouri Water Users Association, or privately owned. The Toston Irrigation District distributes water from the Missouri River to agricultural and other users in areas west and south of the Toston community. The Townsend-South corridor has 15 active or abandoned irrigation crossings including a structure across the Montana Ditch, a box culvert, and several siphons and shallow corrugated steel pipes exposed in the right-of-way.

FIGURE 5 shows existing surface waters and major irrigation features along U.S. Highway 287 in the project area.

GROUNDWATER RESOURCES. Groundwater is an important resource in the project area, given its use as a domestic water supply and its function as the primary source of water for the extensive wetlands adjoining portions of the highway corridor. The shallow alluvial aquifer beneath the Missouri River Valley is composed mostly of unconsolidated



Townsend - South Figure 5 Surface Waters



sediments deposited by the river and its tributary streams. In most instances, shallow wells in the aquifer provide adequate water for most domestic and agricultural purposes.

Groundwater information from the MONTANA BUREAU OF MINES AND GEOLOGY was obtained from the Internet (www.nris.state.mt.us) to identify the typical depth of groundwater at water wells drilled in the project area. Data on wells drilled along U.S. Highway 287 since 1900 show well depths range from 6 m (20 feet) to more than 120 m (400 feet) with an average depth of about 10 m (33 feet). Permanently standing water in roadside wetlands, particularly near RP 82.5 north of the intersection of Litening Barn Lane/Dry Creek Road, is indicative of groundwater conditions in some portions of the corridor.

WATER QUALITY. Surface water quality is typically assessed according to the amount and kind of substances present in water, by the water's ability to support beneficial uses such as irrigation and recreation, and by the overall health of the aquatic ecosystem. The health of streams and wetlands (and other surface waters) is assessed based on the constituents dissolved in the water, the condition of the banks and associated riparian zone, and the types and numbers of plants and animals living in the water.

The *MONTANA DEPARTMENT OF ENVIRONMENTAL QUALITY* (MDEQ) has the responsibility under *Section 401* of the federal *Clean Water Act* (**33 U.S.C. 1251-1376**) and the *Montana Water Quality Act* (**75-5-101 M.C.A.**, et seq.) to monitor and assess the quality of Montana surface waters and to identify impaired or threatened stream segments and lakes. The MDEQ sets limits, known as Total Maximum Daily Loads (TMDLs), for each pollutant entering a body of water. TMDLs are established for streams or lakes that fail to meet certain standards for water quality and describe the amount of each pollutant a water body can receive without violating water quality standards. The legislatively mandated TMDL process determines the concentration of pollutants in water bodies and stipulates controls needed to improve water quality in order to support designated uses.

The Missouri River (from Toston Dam to Canyon Ferry Reservoir) and Deep Creek (from the National Forest boundary to the Missouri River) are on MDEQ's "2002 Montana 303(d) Impaired Waters" and the "2004 Montana Water Quality Integrated Report" lists. The agency concluded that the beneficial uses of the Missouri's surface water (like aquatic life support, cold water fishery, drinking water supply and industrial) are impaired by metals, flow alteration, riparian degradation, habitat alterations, and siltation caused by agriculture, grazing, and resource extraction activities.

Similarly, Deep Creek's beneficial uses are impaired by flow alterations, habitat alterations, and siltation associated with agriculture, grazing, removal of riparian vegetation, and streambank modifications. MDEQ expects to have TMDLs developed for both water bodies before 2011.

IMPACTS OF THE PREFERRED ALTERNATIVE. The proposed reconstruction of U.S. Highway 287 would directly impact several streams within the project corridor due to the replacement of bridges and culverts at the streams crossed by the roadway. Installing new bridges and culverts within project area streams would result in slight changes to the alignments of existing stream channels at the highway crossings and placement of minor amounts of fill within existing channels. Minor impacts to flows and degradation of water quality could result from work within streams.

Specifically, fill placement and associated work within stream channels would be needed for new bridge or culvert installations at Deep Creek, the Deep Creek Overflow, Greyson Creek, and Dry Creek. Work in or near streams in the project area would require *124SPA* permit from the MDFWP. Likewise, the placement of fill material in surface waters or wetlands would require a Section 404 permit by the U.S. ARMY CORPS OF ENGINEERS (COE).

The Preferred Alternative would increase the impervious surface area of the highway. Depending upon the location in the corridor, road widening would add between 3 and 13.7 m (10 and 46 feet) of additional asphalt surfacing for wider shoulders, left turn lanes, and directional passing lanes. The wider paved surface area would decrease infiltration and increase the amount of runoff from the road to adjoining wetlands and drainages crossed by the highway. Water quality could be adversely affected if runoff carrying pollutants from the highway flows directly into wetlands and receiving waters.

Erosion of disturbed areas during construction and surface runoff after construction would be the primary ways that water quality could be indirectly affected by the proposed highway project. Unless preventative measures are taken, runoff carrying sediments from disturbed areas or other pollutants from the roadway corridor have the potential to affect water quality and aquatic resources.

Vegetation clearing and grading for the proposed highway during construction would increase the potential for soil erosion and sediment transport. This potential for erosion and adverse sedimentation impacts would vary depending upon the amount of soil area disturbed, the nature of the soils disturbed, the steepness of slopes, the proximity of the disturbance to wetlands and surface waters, and the duration of the soil disturbance.

Some sediment is normal and expected in any natural stream system, but excess sediment can cause a variety of problems related to water quality. These problems may include alteration of downstream deposition patterns; harming fish habitat by covering the spaces in spawning materials; causing water temperatures and turbidity levels of the water to rise; and increasing the level of nutrients (nitrates and phosphorus) which in turn, may reduce dissolved oxygen levels and impact aquatic food sources and fish growth and health.

Since the total area of soil disturbances for this project would exceed 0.4 ha (1.0 acre), a storm water permit administered by the MDEQ would be required. MDT would develop a Storm Water Pollution Prevention Plan (SWPPP) for this project to meet permit requirements. The SWPPP would be designed specifically for the Townsend-South project and submitted to the MDEQ Permitting and Compliance Division in accordance with their Montana Pollutant Discharge Elimination System (MPDES) Regulations ([ARM 16.20.1314](#)).

Best Management Practices (BMPs), including temporary and long-term erosion control measures, would be considered in the design of the SWPPP. Such practices may include the use of straw wattles, lined channels, silt fences, ditch blocks, mulch, slope protection and other commonly accepted control measures. The SWPPP would be developed using procedures and methods established in MDT's *Erosion and Sediment Control Best Management Practices: Reference Manual* whose main objective is to minimize erosion of disturbed areas during and after construction of the proposed project.

Because the SWPPP would be implemented to control erosion and sediment transport during and after the proposed project, the Preferred Alternative would not be expected to cause notable adverse effects on surface water quality in the Townsend-South project area.

Potential water quality impacts can also occur due to highway runoff during the operational life of the road improvement project. The primary constituents in highway runoff include suspended sediments (pavement wear and dirt), lead (gasoline, tire filler), zinc (tire filler, motor oil stabilizers), copper (metal platings, brake linings), and petroleum (gasoline, antifreeze, hydraulic fluids). De-icing and sanding practices, for example, may leave concentrations of chloride, sodium, and calcium on the roadway surface. These pollutants can be introduced into surface waters by snow plowing and snow melting. Rural roadways with gravel shoulders and vegetated ditches tend to slow runoff through soil absorption.

During the mid-1980s, the FHWA conducted extensive nationwide studies to determine highway runoff constituents, amounts relative to roadway types and traffic conditions, and the potential impacts to surface water resources (*Pollutant Loadings and Impacts from Highway Stormwater Runoff, Volume I*, FHWA, April 1990). FHWA's research concluded that pollutants in highway runoff are not present in amounts sufficient to threaten surface or groundwater where ADT volumes are below 30,000. Since traffic volumes in the Townsend-South corridor are projected to be less than 7,300 vehicles per day by the design year (2026), it can be concluded that runoff from the highway would not cause significant degradation of surface or groundwater in the project area.

The proposed project would affect irrigation features and require work within irrigation canals crossed by the highway. In the

recent Headwaters, Inc. v. Talent Irrigation District case, the U.S. Court of Appeals for the Ninth Circuit ruled that irrigation canals that receive water from natural streams and lakes, and that divert water to streams and creeks, are connected as "tributaries" to those other waters. As tributaries, the canals are jurisdictional "Waters of the United States" and subject to the *Clean Water Act* and the COE's 404 permitting requirements. Based on this decision, some of the irrigation canals crossed by the highway may require a 404 permit prior to the installation of new culverts and the realignment of irrigation canals.

Groundwater hydrology in the project area would be unaffected by the proposed highway improvements since excavation to or below the depth of groundwater would be unnecessary. The proposed project would have no direct adverse impacts to public or private drinking water supplies derived from groundwater sources.

IMPACTS OF THE NO ACTION ALTERNATIVE. The No Action Alternative would not construct roadway improvements so no project-related impacts to the Missouri River and its tributary streams in the project area would result. Minor amounts of sediments and other pollutants associated with sanding and deicing would continue to be introduced to surface waters in the project area by snow plowing and runoff from snow melting.

MITIGATING MEASURES. The following measures will be implemented to minimize water quality impacts in the Townsend-South project area.

- *A Storm Water Pollution Prevention Plan (SWPPP) employing Best Management Practices for controlling erosion and sediment transport will be implemented in the project area.*
- *Work in streams, wetlands, and irrigation ditches subject to the recent Headwaters, Inc. v. Talent Irrigation District decision will be performed in accordance with the conditions of water-related permits from the MDEQ, MDFWP, and/or the COE.*
- *Development of a revegetation plan, erosion control measures, and storm water pollution prevention plan will be coordinated with appropriate permitting and resources agencies.*

4.2.4 FLOODPLAINS

DELINEATED FLOODPLAINS. Executive Order No. 11988 and FHWA's floodplain regulations (23 CFR 650, Subpart A) require that the proposed action be evaluated to determine the effects of any encroachments on the "base" floodplain. The base floodplain is the area covered by water from the 100-year flood.

The 100-year flood represents a flood event that has a 1 percent chance of being equaled or exceeded in any given year. The Executive Order requires that federal agencies, in carrying out their proposed projects, provide leadership and take action to reduce the risk of flood loss; minimize the impacts of floods on human safety, health, and welfare; and restore and preserve the natural and beneficial values served by floodplains.

FIGURE 6 shows delineated floodplains in the project area. The floodplain mapping is based on Flood Hazard Boundary Maps (FHBMs) for Broadwater County prepared by the FEDERAL EMERGENCY MANAGEMENT AGENCY (FEMA) in 1982. The FEMA maps show areas at risk from major flood events. FHBM panels #300145 9B and 300145 12B (effective 12/01/1986) show delineated floodplains of the Missouri River and its tributaries. As **FIGURE 6** shows, U.S. Highway 287 crosses delineated floodplains at Deep Creek, at the confluence of Greyson Creek and the Missouri River, and along the Missouri River south of Litening Barn/Dry Creek Roads.

IMPACTS OF THE PREFERRED ALTERNATIVE. This proposed project would result in transverse encroachments on delineated floodplains at Deep Creek and Greyson Creek and a longitudinal encroachment on the delineated floodplain of the Missouri River between RP 83 and RP 84.

The Preferred Alternative would replace existing drainage features at or near their present locations to ensure that floodwater is accommodated and managed without major changes that could adversely impact nearby residents and uses. Where feasible, the proposed project would attempt to enhance existing drainage conditions.

The Preferred Alternative would place fill and require work within the stream channel for the installation of new bridges or culverts at Deep and Greyson Creek and within the delineated floodplain of Missouri River. However, the new drainage structures would be sized to handle the anticipated flood flows without interruption to public transportation due to flood damage to the roadway.

These encroachments would not substantially increase 100-year flood elevations. Consistent with the requirements of Executive Order No. 11988, the proposed project would not be expected to promote or encourage development within the floodplain or increase flood liability hazards.

Broadwater County has adopted Floodplain Development Regulations for activities within delineated floodplains for the FEMA. A floodplain permit from the Broadwater County Floodplain Administrator will be required prior to construction of the project, as the new roadway will result in further transverse encroachment on the delineated floodplain.

IMPACTS OF THE NO ACTION ALTERNATIVE. This alternative would have no new effects to floodplains in the

project area. There are no risks of new flooding incurred, no impacts on natural and beneficial floodplain values, and no likelihood of incompatible floodplain development.

MITIGATION MEASURES. The following measures will be implemented to minimize any floodplain concerns associated with MDT's proposed reconstruction of U.S. Highway 287 in the Townsend-South project area.

- *MDT will obtain a Floodplain Development Permit from the Broadwater County Floodplain Administrator for construction activities within the delineated floodplains of the Missouri River or its tributaries.*

4.2.5 AIR QUALITY IMPACTS

EXISTING CONDITIONS. Air quality within the Townsend-South project area can be described as good. Sources of air pollution in the area include vehicle emissions, dust generated by traffic on unpaved roads in the area, agricultural activities and from occasional outside burning. No violations of state or federal air quality standards are known.

The proposed action is located in an unclassifiable/ attainment area of Montana for air quality under 40 CFR 81.327, as amended. As such, this proposed project is not covered under the U.S. Environmental Protection Agency's Final Rule of September 15, 1997 on Air Quality Conformity. Therefore, this proposed action complies with Section 176(c) of the Clean Air Act, as amended (**42 U.S.C. 7521(a)**).

IMPACTS OF THE PREFERRED ALTERNATIVE. The Preferred Action would result in short-term air quality impacts during construction of the proposed project due to the disturbance of relatively large areas and operation of heavy equipment in work zones. These impacts would be minor and limited to the construction period. Slight reductions in the amount of vehicle emissions could occur due to the provision of a more efficient highway facility. Traffic volume increases in the future on this route will result in increased vehicle emissions over present conditions. However, emissions will not increase to a level approaching established standards for air quality.

IMPACTS OF THE NO ACTION ALTERNATIVE. A minimal increase in vehicle-generated air pollutants could occur if traffic volumes on the route increase to a level where average vehicle speeds notably decrease. As with the Preferred Action, traffic volume increases in the future will increase pollutant levels --but not to levels of concern.

MITIGATING MEASURES. The following measures will be implemented to minimize any air quality impacts associated with the construction of this project.

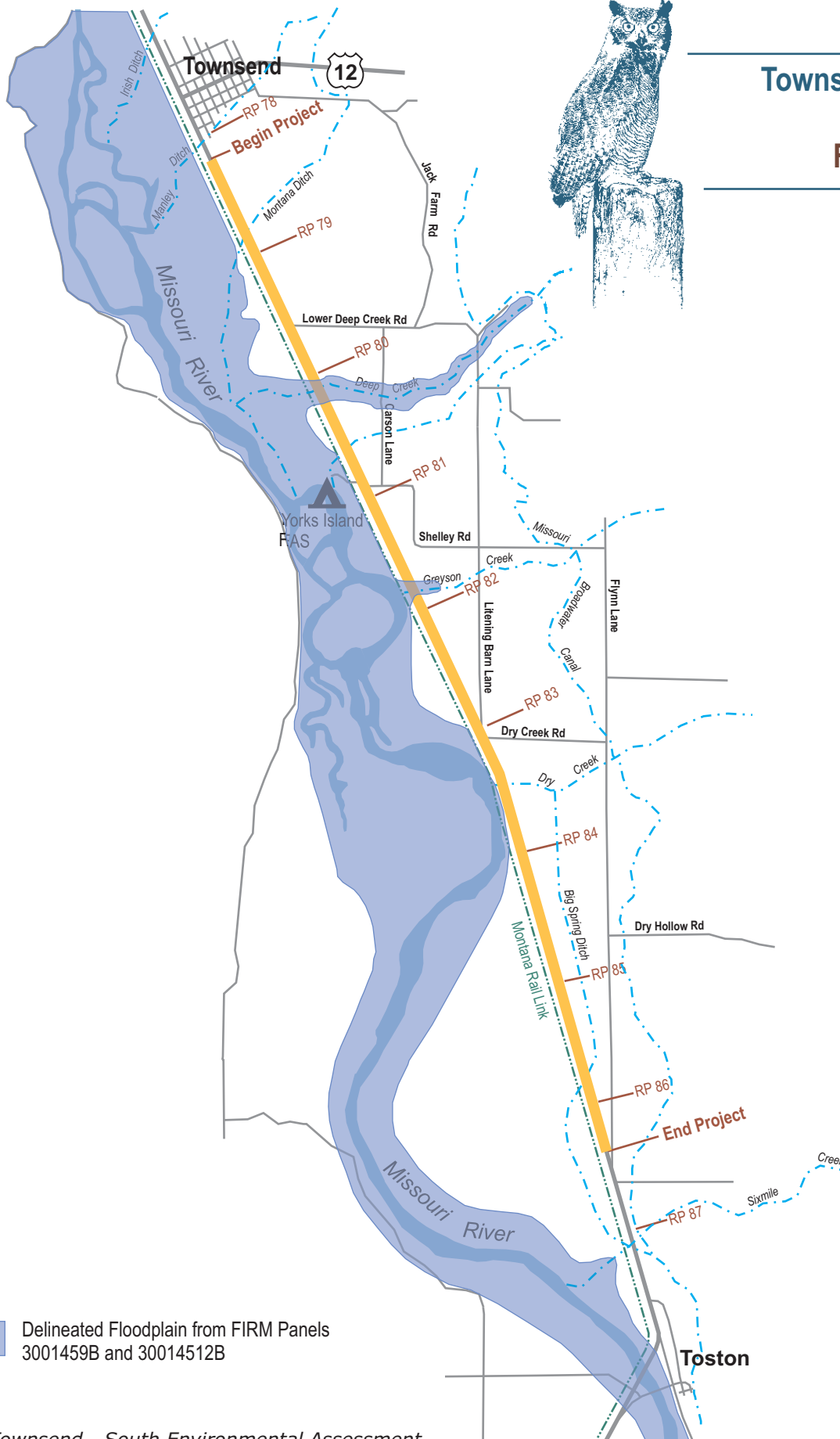
- *MDT's Standard Specifications for Road and Bridge*



Townsend - South

Figure 6

Flood Plains



 Delineated Floodplain from FIRM Panels 3001459B and 30014512B

Construction will be implemented for this project. This document includes guidelines for construction operations to help minimize adverse effects on air quality.

- *Contractors will be required to obtain permits from the MDEQ Air Quality Bureau for activities like gravel crushing and the production of asphalt.*
- *MDT's contractor will incorporate all necessary dust control measures into the plans for the proposed project.*

4.2.6 VEGETATION

EXISTING CONDITIONS. The proposed alignment traverses intermountain valley grassland and meadow, much of which has been converted to pasture, crop and hay land. Common grass species observed within and adjacent to the highway corridor include wheatgrasses, quackgrass, brome, Kentucky bluegrass, cheatgrass, and great basin wild rye.

Grasses in the project area are often interspersed with other common species including yellow and white sweetclover, kochia, American licorice, showy milkweed, curly-cup gumweed, scattered alfalfa, Canada thistle, field bindweed, broadleaf plantain, and dandelion.

Scattered shrubs interspersed with grasslands include golden current, snowberry, wild rose, chokecherry, and several willow species. Tree species scattered throughout the project area and common along the Missouri River bottom include narrowleaf cottonwood, poplar, and Russian olive.

Typical species found in wetlands is discussed later in this PART.

RARE OR SENSITIVE PLANTS. A search of the MONTANA NATURAL HERITAGE PROGRAM (MNHP) database revealed two known sensitive plant locations adjacent to the proposed project (MNHP 2000). Annual Indian paintbrush (*Castilleja exilis*) and Mealy primrose (*Primula incana*) both occur in areas near the existing highway. A population of Indian paintbrush was found west of the existing highway near the Montana Ditch (RP 79). Populations of Indian paintbrush and Mealy primrose also exist east of U.S. Highway 287 in the vicinity the York's Islands Fishing Access Site.

Ute ladies' tresses, a federally-listed threatened plant, also occurs within the project corridor. The potential effects of highway reconstruction on this listed plant species and its habitat are discussed later in this Part.

INVASIVE/NOXIOUS PLANTS. Executive Order 13112, *Invasive Species*, signed on February 3, 1999, addresses federal agency responsibilities with respect to invasive species (noxious weeds). As a partially federally funded action, the project is subject to the provisions of the Executive Order. According to

the Invaders Database System (2004), twelve of the noxious weeds listed for Montana have been identified in Broadwater County. These include common tansy, hoary cress, diffuse knapweed, spotted knapweed, Russian knapweed, Canada thistle, field bindweed, houndstongue, leafy spurge, yellow toadflax, dalmation toadflax, and St. Johnswort.

Canada thistle is common along the highway for much of the project length, particularly in association with seasonally moist areas and disturbed pasture land and roadside ditches. Field bindweed also commonly occurs immediately adjacent to the roadway and pasture land and roadside ditches. Field bindweed also commonly occurs immediately adjacent to the roadway and in pasture traversed by the existing highway alignment. Both species are Category 1 noxious weeds as defined by the State of Montana. The MONTANA DEPARTMENT OF AGRICULTURE defines Category 1 noxious weeds as "weeds that are currently established and generally widespread in many counties of the state." These weeds are capable of rapid spread and render land unfit or greatly limit beneficial uses.

Other less common Category 1 noxious weeds identified in the project corridor include spotted knapweed, diffuse knapweed, and houndstongue.

IMPACTS OF THE PREFERRED ALTERNATIVE. The proposed highway improvements would result in the permanent loss of vegetation where roadway alignment revisions and widening occur. Temporary disturbances would occur where vegetation is cleared from the right-of-way, at staging areas for construction equipment and at any necessary borrow sites.

Within the project area, the extent of vegetation lost would be greatest to the east side of the existing highway since the alignment of the road would be shifted slightly in that direction.

Minor amounts of cropland, hay land and grazing land would be impacted in upland areas, and some riparian and wetland vegetation would be lost due to the proposed road reconstruction.

Upland areas immediately adjacent to the existing highway are currently subjected to other types of human disturbance including railroad, residential, commercial, and agricultural (farming, grazing) activities. Consequently, upland vegetation communities affected by the project are generally judged to be of moderate to relatively low overall quality. As such, direct impacts to existing upland vegetation in the project area resulting from the proposed highway reconstruction are considered relatively minor.

Wetlands and riparian areas support some of the most important vegetation and habitat types in the project area. Many wildlife species associate at times with wetland and riparian habitats due to the diverse vegetation and sources of water often found in these areas. Additionally, many species use riparian areas as

movement corridors. Permanent and temporary impacts to riparian and wetland habitat are expected with this project and would occur as a result of alignment shifts and widening of the roadway.

The Townsend-South project has been designed to avoid impacts to a known population of Indian paintbrush in the project area. The mapped location of these plants were considered in MDT's preliminary design, and known locations for Indian paintbrush would be outside the project's required construction limits. However, because suitable habitat for this sensitive plant species occurs east of the road – impacting habitat for Indian paintbrush is unavoidable.

Construction would disturb existing noxious weed communities and would create opportunities for noxious weed establishment within newly disturbed areas. Exposed soils, particularly adjacent to roadways, are extremely vulnerable to weed establishment. Offsite movement from roadway corridors onto adjacent land can result in reduced land values and productivity through a reduction in vegetative diversity and occurrence of native plants.

Implementation of weed control measures prior to and during construction would reduce the potential severity of this impact.

Measures to control weeds include: spraying weeds prior to initial disturbance; use of weed-free soils and other materials, including certified weed-free seed for reclamation; and maintaining weed control along the project for an adequate period of time following construction.

In accordance with Executive Order No. 13112, MDT would implement measures to help prevent the introduction of invasive species into the Townsend-South project area. These measures would include coordinating the project with the Broadwater County Weed Control District, promptly reseeding disturbed areas with desirable vegetation, and requiring MDT's contractors to follow procedures to prevent the spread of noxious weeds.

IMPACTS OF THE NO ACTION ALTERNATIVE. This alternative would cause no further impacts on vegetation within the Townsend-South project area.

MITIGATION MEASURES. The following measures will be implemented to minimize vegetation impacts and reduce the potential for the spread of noxious weeds in the project area.

- *Clearing and grubbing operations will be restricted to the minimum area necessary to accommodate the planned reconstruction activities and improvements.*
- *Areas disturbed within the MDT Right-of-Way or construction easements will be reseeded as quickly as practicable after construction.*

-
- *A revegetation plan will be developed for this project to be followed by the contractor. The plan will include specifications on seeding methods, seeding dates, types and amounts of mulch and fertilizer, and seed mix components. The plan will also be submitted to the Broadwater County Weed Control District for review.*
 - *The Contractor must also follow the requirements of the County Noxious Weed Management Act and all county and contract noxious weed control provisions.*
 - *Construction equipment must be cleaned prior to entering the project area to avoid the unintentional introduction of noxious weed seed from other sites.*
 - *Mulch used for revegetation will be certified as weed-free.*

4.2.7 WETLANDS

EXISTING CONDITIONS. Land & Water Consulting, Inc. delineated wetlands in the project area according to criteria and methods outlined in the U.S. ARMY CORPS OF ENGINEERS (COE) *1987 Wetlands Delineation Manual* (Environmental Laboratory, 1987). The manual provides guidance for determining the presence of jurisdictional wetlands based on observations of vegetation, soils, and hydrology. Wetland location maps, found plant species lists, and COE Routine Wetland Determination forms were prepared for wetland sites identified within the corridor. Additionally, MDT Field Evaluation forms were completed to assess the many functions and values attributable to wetlands. These materials are included in the Biological Resources Report prepared for MDT.

Delineated Wetland Sites. Thirteen wetland sites (comprised of twenty-six smaller subsites) were delineated in the project corridor. These sites are listed in **TABLE 4-1** and their general locations are shown in **FIGURE 7**. **TABLE 4-1** also presents the approximate locations, dominant wetland class, overall wetland ratings using MDT's Montana Wetland Assessment Method, approximate impact area, source of wetland hydrology, and a brief narrative description for each wetland delineated along the Townsend-South project corridor.

Wetland Types. Wetlands along the proposed project generally fall into one of three categories including: 1) seasonally to permanently inundated emergent wetlands on both sides of the roadway, 2) emergent wet meadow wetlands east of the highway, and 3) fringe wetlands along the natural drainages and irrigation canals that cross the highway. Representative photos of project area wetlands are shown in **PHOTO PLATES 5** and **6**.

Wetlands included in first category are typically associated with roadside borrow areas between the highway and railroad, and also to a lesser extent, on the east side of the roadway. These are the most prominent wetlands within the project corridor. Also included in this category are historic Missouri River

Table 4-1: Townsend-South Wetlands and Estimated Impacts

Site	Approximate Location by (RP)	Vegetated Cowardin Classes ^{1,2}	MDT Wetland Rating Category	Source of Wetland Hydrology	Estimated Impact Ha/(Acres)	Description of Wetland Site
1A	RP 78.7 to RP 78.9	EM	III	Groundwater	0.1/ (0.2)	Wet meadow pasture
1B	RP 78.7 to RP 78.9	EM	III	Groundwater	0.1/ (0.3)	Wet meadow pasture
1C	RP 78.7 to RP 78.9	EM/SS	III	Groundwater	0.1/ (0.2)	Roadside borrow area
2	RP 78.9	EM/SS/UB	III	Montana Ditch	0.0/ (0.0)*	Irrigation ditch
3A	RP 78.9 to RP 79.4	EM	III	Groundwater	1.2/ (2.9)	Wet meadow pasture
3B	RP 78.9 to RP 79.4	EM	III	Groundwater	0.1/ (0.2)	Wet meadow pasture
3C	RP 78.9 to RP 79.4	EM	II	Groundwater	0.2/ (0.6)	Roadside borrow area
4	RP 80.1	EM/SS/UB	III	Deep Creek Groundwater	0.1/ (0.2)	Deep Creek
5	RP 80.6	EM/SS	III	Deep Creek Groundwater	0.0/ (0.0)*	Deep Creek Overflow
6A	RP 80.9 to RP 81.4	EM/SS/AB	III	Groundwater	0.4/ (0.9)	Roadside borrow area
6B	RP 80.9 to RP 81.4	EM/SS	I	Groundwater	0.1/ (0.4)	Roadside borrow area
6C	RP 80.9 to RP 81.4	EM/AB	III	Groundwater	0.7/ (1.7)	Historic channel
6D	RP 81.4	EM/SS	III	Groundwater	Combined with 6C	Wet meadow pasture
7A	RP 81.4	EM/SS	I	Groundwater	0.0/ (0.1)*	Roadside borrow area
7B	RP 81.4	EM/AB	III	Groundwater	0.1/ (0.3)	Historic channel
8A	RP 81.9 to RP 82.8	EM	III	Groundwater	0.0/ (0.0)	Roadside borrow area
8B	RP 81.9 to RP 82.8	EM/SS/AB	III	Groundwater	2.1/ (5.1)	Marsh/Roadside borrow area
8C	RP 81.9 to RP 82.8	EM/SS/AB	III	Groundwater	0.1/ (0.3)	Marsh -- Roadside borrow area
8D	RP 81.9 to RP 82.8	EM	III	Groundwater	0.0/ (0.0)	Roadside borrow area
8E	RP 81.9 to RP 82.8	EM	III	Groundwater	0.0/ (0.0)	Roadside borrow area
9	RP 81.9	EM/SS/UB	III	Greyson Creek	0.0/ (0.0)*	Greyson Creek
10	RP 83.4	EM/UB	III	Dry Creek Groundwater	0.0/ (0.0)*	Dry Creek
11	RP 83.6	EM	III	Groundwater	0.0/ (0.0)	Roadside borrow area
12	RP 85.6	EM/FO/UB	III	Groundwater	0.0/ (0.0)*	Ditch
13A	RP 85.8	EM/UB	III	Big Spring Ditch Groundwater	0.0/ (0.1)*	Big Spring Ditch
13B	RP 85.9	EM	III	Groundwater	0.3/ (0.6)	Roadside borrow area
				TOTAL	5.7/(14.1)	

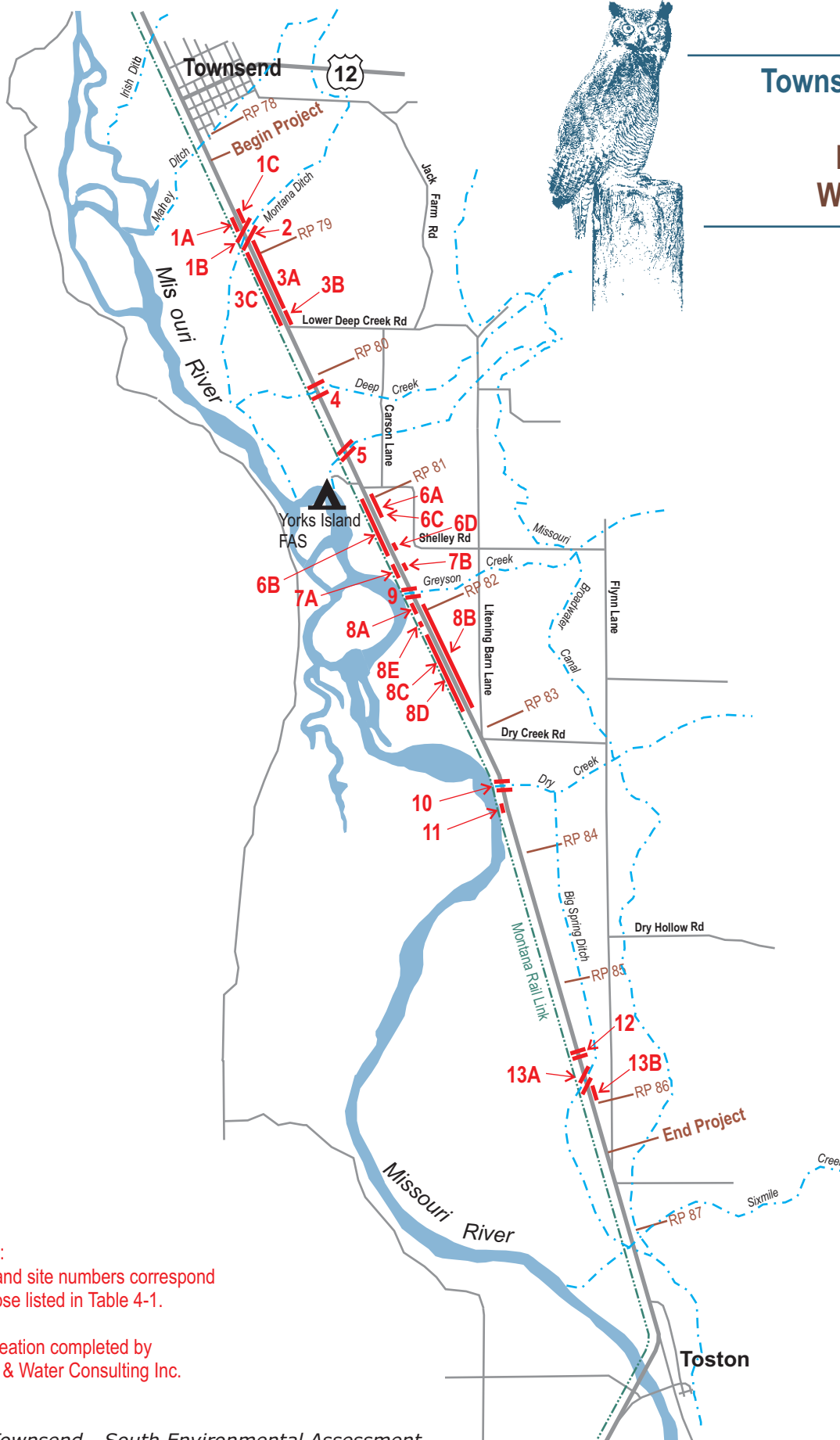
1 EM = Emergent Marsh; SS = Scrub/Shrub; UB = Unconsolidated Bottom; AB = Aquatic Bed

2 Cowardin et. al. 1979

* Note that minor wetland impacts would occur at these sites; however, rounding to one decimal place resulted in impact areas of 0.0 ha or 0.0 acres.



Townsend - South
Figure 7
Project Area
Wetland Sites



NOTES:

1. Wetland site numbers correspond to those listed in Table 4-1.

2. Delineation completed by Land & Water Consulting Inc.

Photo Plate 5: Representative Wetlands Townsend-South Project Corridor

Photograph 1:
Roadside wetlands with emergent marsh habitat exists at numerous locations throughout the corridor.



Photograph 2:
Emergent wet meadow pastures are common in the northern portion of the project corridor. These wetlands are characterized by a high groundwater table and exhibit extensive hummocks.



Photo Plate 6: Representative Wetlands Townsend-South Project Corridor

Photographs 1/2:

Typical roadside wetlands found between RP 82 and RP 83. These wetlands, associated with roadside borrow areas are seasonally to permanently inundated by groundwater and comprised of emergent marsh, open water and aquatic bed habitat.



channels bisected by the roadway. These wetlands are seasonally to permanently inundated from groundwater and comprised mainly of emergent wetland habitat, with some scrub/shrub wetland, open water and aquatic bed habitat. Common emergent wetland species include: broad-leaf cattail, reed canarygrass, meadow foxtail, creeping spikerush, a variety of sedges and bulrush, American sloughgrass, Baltic rush, Alkali cordgrass, foxtail barley, field horsetail, field mint, redtop, tall manna grass, and common reed. Common woody species found within scrub/shrub wetlands include sandbar willow, bebb willow, yellow willow, and cottonwood.

Wetlands in the second category are comprised primarily of the expansive wet meadow pastures east of the highway near the north end of the project corridor. These wetlands benefit from a seasonally high groundwater table and exhibit hummocks throughout. Common wetland plant species include: redtop, meadow foxtail, foxtail barley, Baltic rush, and silverweed. Wet meadow pastures in the project corridor are moderately to heavily grazed.

The last wetland category is comprised of fringe wetlands adjacent to the irrigation ditches and streams in the project corridor. Deep, Greyson, and Dry Creeks have perennial flows, except during extreme drought conditions and/or when irrigation diversion results in de-watering of the channel. The irrigation facilities flow water from approximately April through September. Though each site has distinct characteristics, fringe wetlands at these sites are generally comprised of emergent marsh and scrub/shrub habitat. Common plant species include reed canary grass, mint, redtop, horsetail, creeping spikerush, sandbar willow, bebb willow, and cottonwood.

Wetland Functions. Wetland functions at delineated sites were evaluated according to the 1999 MDT Montana Wetland Assessment Method. Based on this method, Category I is the highest overall ranking a wetland can receive, followed by Category II, Category III, and Category IV.

The majority of the delineated wetlands in the project corridor were rated Category III. However, two wetland sites (Sites 6B and 7A) rated as Category I and one site (Site 3C) rated as Category II. Wetland Sites 6B and 7A were rated as Category I due to the presence of Ute ladies' tresses. Generally, large wet meadow pastures in the area rated the lowest because of the high disturbance associated with grazing and due to the lack of wetland diversity. Prominent functions at most corridor wetland sites include: Short and Long Term Surface Water Storage, Sediment, Nutrient, Toxicant Removal, Production Export/Food Chain Support, and Groundwater Discharge/ Recharge. Several of the large emergent marsh wetlands adjacent to the highway also provide important habitat for waterfowl, song birds, shore birds, amphibians and reptiles, deer, and small mammals.

Jurisdictional Status of Corridor Wetlands. The "jurisdictional" status of affected wetlands in the area is an

important consideration for this proposed project because of MDT's mitigation requirements. Jurisdictional wetlands are those that fall under the COE jurisdiction with respect to *Section 404* of the *Clean Water Act*. According to 33 CFR 328.4 (c), the limits of jurisdiction in non-tidal waters are as follows:

- In the absence of adjacent wetlands, the jurisdiction extends to the ordinary high water mark, or
- When adjacent wetlands are present, the jurisdiction extends beyond the ordinary high water mark to the limit of the adjacent wetlands.
- When the water of the United States consists only of wetlands the jurisdiction extends to the limit of the wetland.

As indicated previously, irrigation canals that receive water from natural streams and that divert water to streams and creeks, are considered tributaries of the associated streams. As tributaries, the canals are jurisdictional "Waters of the United States."

Based upon recent published guidance, all of the wetland sites bisected by this project would be considered jurisdictional because they are directly connected or adjacent to a Water of the United States. It should be noted, however, that jurisdiction will ultimately be decided by the COE for each delineated wetland site.

IMPACTS OF THE PREFERRED ALTERNATIVE.

Reconstructing U.S. Highway 287 would result in unavoidable encroachments into some wetlands in the project area due to the proposed road realignment and widening and required crossings of area streams and irrigation canals. Wetland vegetation would be removed and hydric soils would be covered with the roadbed and fill slopes in impacted areas. A preliminary design for the proposed highway improvements project has been developed to minimize encroachment into wetlands. However, wetlands are extensive and found on both sides of the existing highway throughout the project corridor, making it difficult to construct the new road without encroachments into wetlands.

The proposed project would result in direct impacts to 22 of the 26 delineated wetland sites in the corridor and the loss of about 5.7 ha (14.1 acres) of wetland. The impacts would primarily be the result of fill placement in wetland sites. The proposed project would impact 5.3 ha (13.1 acres) of Category III wetlands, 0.2 ha (0.6 acres) of Category II wetlands, and 0.2 ha (0.4 acres) of Category I wetlands. All of wetland sites impacted by the proposed project are likely to be jurisdictional under the *Clean Water Act*.

The largest individual impact (2.1 ha - 5.2 acres) along the project would occur at Wetland 8B. The most notable loss of wetland functions would occur at Wetland 8C. Both sites occur between RP 81.9 to RP 82.8 in the corridor.

Minor, temporary impacts within the right-of-way and temporary construction easements may also occur, although these impacts cannot be quantified because detailed design plans do not yet exist and precise construction techniques/approaches are unknown at this time. Temporary impacts to wetlands within the right-of-way construction easement areas would be restored to original contours and revegetated immediately following construction.

IMPACTS OF THE NO ACTION ALTERNATIVE. This alternative would cause no further impacts to wetlands within the project area.

MITIGATION MEASURES. The *1990 Memorandum of Agreement Between the Environmental Protection Agency and the Department of the Army Concerning the Determination of Mitigation Under the Clean Water Act Section 404(b)(1) Guidelines* requires that wetland mitigation be addressed in the following sequence:

- (1) Avoid potential impacts to the maximum extent practicable.
- (2) Minimize unavoidable impacts to the extent appropriate and practicable.
- (3) Compensate for unavoidable adverse impacts that remain after all appropriate and practicable minimization has been required.

Avoidance and Minimization. Impacts were avoided and minimized to the extent practicable by keeping the proposed alignment adjacent to the existing alignment and slightly shifting the alignment of the roadway in critical wetland areas. To the extent practicable, the three passing lane sections have been placed to limit wetland impacts. Further avoidance and minimization measures will be examined as the design of the roadway proceeds. The majority of impacts would occur at sites immediately adjacent to the road, often on both sides, and are largely unavoidable regardless of whether the centerline is shifted to the east or west of the existing highway.

Compensation. Compensatory mitigation for the projected 5.7 ha (14.1 acre) wetland loss is being developed in cooperation with the COE and according to the agency's regulations and guidelines. These regulations and guidelines include Regulatory Guidance Letter 02-02 - "Guidance on Compensatory Mitigation Projects for Aquatic Resource Impacts Under the Corps Regulatory Program Pursuant to Section 404 of the Clean Water Act and Section 10 of the Rivers and Harbor Act of 1899" (dated December 24, 2002) and the EPA/COE joint Memorandum to the Field - "Model Compensatory Mitigation Plan Checklist for Aquatic Resource Impacts Under the Corps Regulatory Program" (issued on November 7, 2003).

Because the design is only in the preliminary stages, it is not readily apparent yet whether there are any viable opportunities for on-site mitigation along the old alignment. In general, much of the area occupied by the old road would be incorporated into the new facility and construction limits on the west side of the road would remain within the existing right-of-way.

Since the early 1990s, numerous on and off-site opportunities have been evaluated by MDT (including more than 30 sites reviewed by a consultant) with no success in finding a suitable mitigation site or sites. However, substantial progress has recently been made towards identifying a wetland site to mitigate the anticipated wetland losses associated with this project and possibly other highway reconstruction projects in the watershed.

MDT is actively pursuing wetland mitigation for the Townsend-South project at a site on Woodson Creek near Ringling in Meagher County. The Woodson Creek Wetland Mitigation Project will restore meanders to a 2.4 km (1.5 mile) long, channelized section of Woodson Creek and restore hydrology to the adjacent riparian and scrub-shrub wetland areas within a 42.5 ha (105 acre) wetland conservation easement within a ranch owned by the Ringling Land and Cattle Company LLC. The project will provide an estimated 18 ha (44.4 acres) of COE-approved wetland credits. The Ringling Land and Cattle Company LLC will be responsible for the project and will allow MDT to purchase credits from the site.

MDT is currently finalizing a wetland feasibility study on a ranch south of Townsend in Broadwater County. The intent of the study is to determine the feasibility and cost of developing creditable wetlands within a 20 ha (50 acre) tract of land adjacent to the Missouri River located within the Hahn Ranch. Preliminary findings from the study indicate developing a wetland mitigation project on the site is feasible. Work to date suggests that between 6 and 10 ha (16 and 25 acres) of wetlands could be developed on the property. MDT will continue to evaluate and refine wetland mitigation concepts for this property.

Other Mitigating Measures. The following general measures will be implemented to minimize disturbance of wetlands and other waters of the United States during construction of the proposed project:

- *All Clean Water Act Section 404 permit conditions, as well as Section 401 water quality certification and Montana Stream Protection Act (124) conditions, and any additional state or federal water quality requirements/conditions will be complied with.*
- *Removed culverts, guardrail, and other items will not be stockpiled in or adjacent to wetland or stream areas.*
- *Whenever possible, construction in wetlands will be timed in order for these sites to be as "dry" as possible during*

construction to minimize sedimentation as well as construction difficulties.

- *Construction equipment operating in wetlands will be limited to that which is needed to perform the necessary work.*
- *Disturbed wetland and streamside areas will be revegetated with salvaged wetlands material and soils obtained from impacted areas, where practicable. Additionally, appropriate measures will be taken to prevent the introduction/spread of noxious weeds into wetland areas.*
- *Wide-track or balloon-tire construction equipment will be considered for use in saturated/inundated areas. Timber pads, prefabricated equipment pads, or geotextile fabric overlain with gravel fill will be considered if typical construction equipment is used in such areas. All pads and temporary fill will be removed following construction.*
- *Straw waddles or other accepted erosion and sedimentation control devices or methods will be installed or utilized at the edges of wetlands and other waters of the U.S. prior to construction. All exposed soils will be permanently stabilized at the earliest practicable date.*
- *Hazardous materials, including fuels and lubricating oils, will not be stored within 30 m (100 feet) of wetlands or streams. Additionally, construction equipment will not be refueled within 30 m (100 feet) of such areas.*

4.2.8 IMPACTS TO THREATENED OR ENDANGERED SPECIES

EXISTING CONDITIONS. Threatened and endangered species include those species listed or proposed for listing by the U.S. FISH AND WILDLIFE SERVICE (USFWS) as threatened or endangered. Under *Section 7* of the *Endangered Species Act of 1973*, as amended (**16 U.S.C. 1531 et seq.**), activities conducted, sponsored, or funded by federal agencies must be reviewed for their effects on species federally listed or proposed for listing as threatened or endangered and any designated critical habitat for these species.

In accordance with the provisions of the *Endangered Species Act*, the current USFWS list of threatened, endangered, and proposed species for Broadwater County was consulted and range and habitat descriptions were reviewed to determine threatened, endangered, proposed, or candidate species with the potential to occur in the project area.

Based on this assessment, the following listed species may occur in the Townsend-South project area:

-
- Bald Eagle (*Haliaeetus leucocephalus*) - Threatened
 - Ute ladies' tresses (*Spiranthes diluvialis*) - Threatened

A brief discussion of these species and their potential occurrence in the project area is presented in the following paragraphs.

Bald Eagles. In 1978, the USFWS designated the bald eagle an endangered species. The bald eagle was reclassified as a threatened species in 1995. On July 6, 1999, the USFWS proposed to remove the bald eagle from the list of threatened and endangered species.

The Missouri River and its associated riparian lands provide year-round habitat for bald eagles in the project area. Three bald eagle nest sites along the Missouri River are known to occur within 3 km (1.8 miles) of the proposed Townsend-South project. The "Rogers" nest is located southwest of Townsend, the "Deepdale" nest located in the vicinity of the York's Islands Fishing Access Site, and the "Toston" nest near the southern terminus of the project.

In addition to nesting in the area, bald eagles feed, roost and perch along the Missouri River during spring and fall migration and throughout the winter. During these periods, eagles may prey on fish and waterfowl along the river and small mammals on adjacent farm and rangeland. Bald eagles may occasionally forage in wetlands immediately adjacent to the roadway or feed on road-killed carrion.

Ute-ladies' tresses. In 1992, the Ute-ladies' tresses orchid was designated as threatened by the USFWS. Ute ladies' tresses is one of three plant species currently listed as threatened or endangered in Montana.

This perennial orchid is known to occur at twelve locations within the Jefferson, Beaverhead, Ruby, Gallatin, Madison, and Missouri River drainages. Ute-ladies' tresses typically occur along riparian edges, gravel bars, old oxbows, high flow channels, and moist to wet meadows along perennial streams. The plants are usually found in stable wetlands and wet areas associated with old landscape features within historical floodplains of major rivers.

As discussed earlier in this PART, sensitive plant surveys conducted in 2000 identified populations of Ute ladies' tresses in the project area between the Montana Rail Link railroad line and the existing highway near the York's Islands Fishing Access Site. Because a dormancy state is common in Ute ladies' tresses, particularly during drought conditions (such as in 2000 when the initial survey occurred), plant counts can vary greatly from year to year. For this reason, a survey for the species was performed in 2001 to verify the population near the fishing access site and to search for the species at other locations in the corridor.

The 2001 plant survey identified a small population of Ute-ladies' tresses near the Montana Ditch (RP 79). Previously identified populations of Ute ladies' tresses were monitored

again during 2002. Additional plants were identified in the area of the fishing access site but the plants near the Montana Ditch were not relocated.

The three years of monitoring indicates that the number of flowering Ute ladies' tresses plants located along the highway fluctuates from year to year and that some plants may not flower in many years.

IMPACTS OF THE PREFERRED ALTERNATIVE. Impacts to threatened and endangered species can be categorized as direct or indirect effects and such effects may be short-term or long-term. Direct effects are **results** of the proposed action. Direct effects may include loss of habitat and mortality of individuals. Indirect effects are effects caused by the proposed action that are reasonably certain to occur.

The potential impacts on identified threatened and endangered species associated with reconstructing U.S. Highway 287 in the Townsend-South project area are described below.

Impacts to Bald Eagles. The *Habitat Management Guide for Bald Eagles In Northwestern Montana* (prepared by the Montana Bald Eagle Working Group in 1991) defines three primary zones associated with bald eagle nests. The *nest site area* includes the area within 400 m (0.2 mile) of the existing and alternate nests. Eagles are most sensitive to human activity within this zone, and will react to intrusion. The *primary use area* includes the area heavily used by a nesting pair, or an 800 m (0.5 mile) radius from the occupied and alternate nests. The *home range* represents all areas used by the eagles during the nesting season. In the absence of site-specific data, the area within a 4 km (2.5 mile) radius is considered as a minimum home range.

Based on these parameters, the proposed project falls within the anticipated home range of all three bald eagle nests, and within the primary use area of the Deepdale nest.

With respect to the Deepdale nest, bald eagles have likely become accustomed to moderate levels of disturbance associated with the highway, railroad, nearby fishing access site, and boaters and bank fisherman. Although a short section of the highway project falls within the primary use area, identifiable impacts from construction activities are unlikely. With respect to all three nesting territories, none of the actual nest trees and all known and potential nest and roost trees fall outside proposed construction limits of the project.

Due to the year-round presence of bald eagles along the project route, construction activities during all seasons could conceivably temporarily disturb or displace eagles where the project is visible from nesting, roosting and foraging habitat. However, because the areas and duration of disturbance would be relatively confined and occur in a currently disturbed corridor, and similar undisturbed habitat for any displaced birds is abundant in the surrounding area, these impacts are not

considered substantial.

Exposure of soils associated with project activities could result in temporary increases in turbidity in Deep Creek, Greyson Creek, Dry Creek, and the Missouri River. Water quality would be indirectly affected over the short term by the introduction of pollutants from runoff over disturbed surfaces during storm events. If notable enough, turbidity and suspended sediment could reduce stream productivity and indirectly affect feeding opportunities for bald eagles.

These temporary impacts should be reduced by implementing standard best management practices for sediment/erosion control during construction and through compliance with project-specific conditions to be specified in water quality-related environmental permits required for the project.

Should vehicle speeds increase as a result of highway improvements, the risk of injury or mortality due to vehicle collisions with eagles feeding on highway carrion would be elevated. However, highway improvements would also increase the visibility of eagles on or near the highway to motorists and should help avoid such collisions. Prompt removal of roadkill deer and other wildlife from the highway would further reduce the potential for vehicles to collide with eagles on the highway.

Conservation Measures for Bald Eagles. The following are recommended conservation measures that would be implemented to minimize impacts to bald eagles:

- *An MDT biologist prior to construction will confirm the nesting status of bald eagles in the project area. At a minimum, coordination with local resource agency biologists and a MNHP records check will occur. Further coordination with the USFWS may be required should a new nest site ultimately be discovered in the project area. Depending on the location of such nests, if any, appropriate special and temporal construction restrictions may be warranted.*
- *The location for construction-related activities, such as staging and borrow/gravel source activities, are independently determined by the construction contractor, who is responsible for compliance with all laws and activities associated with those activities. If MDT becomes aware of any threatened, endangered, proposed or candidate species located in the vicinity of these activities, MDT will inform the contractor of those locations and of potential restrictions that may be associated with avoiding impacts to those species. MDT will also recommend that MDT's contractor contacts and coordinates with the USFWS.*
- *Areas disturbed within the MDT Right-of-Way or construction easements will be reseeded as quickly as practicable after construction.*

-
- *Best Management Practices (BMPs) will be followed to minimize the potential for increasing sediment loads in any of the project area waterways.*

Determination of Effect – Bald Eagles. Based on the above information and recommended conservation measures, a determination of **May Affect, Not Likely to Adversely Affect** is appropriate with respect to the anticipated effects on bald eagles due to the proposed Townsend-South project.

Impacts to Ute ladies' tresses. Expansion of the highway through the project corridor would likely result in direct and/or indirect impacts to known Ute ladies' tresses populations and suitable habitat for the species.

The preliminary design for the proposed project has been developed with a goal of avoiding known populations of Ute ladies'-tresses in the corridor. The mapped locations of these populations were considered in MDT's preliminary design efforts and known locations for Ute ladies'-tresses would be outside the required construction limits for the proposed design. The provision of a center median/left turn lane at the approach for the York's Islands Fishing Access Site would not impact known populations of Ute ladies' tresses located west of the highway. New construction in this area would not extend beyond the toe of the existing roadside fill slope.

Given the large amount of wetlands adjacent to the existing highway and the anticipated impacts to these wetlands, some suitable habitat for Ute ladies' tresses would be permanently impacted due to the proposed highway reconstruction. Because suitable habitat for the species occurs along both sides of the existing highway, impacting habitat for this plant is unavoidable. Also, despite extensive monitoring efforts, Ute ladies' tresses may be impacted in other locations within anticipated construction limits that have not yet been identified due to the dormancy state associated with the plants.

Indirect impacts, though not anticipated, may occur as a result of habitat alterations, primarily alterations to hydrology along the highway corridor. Expansion of the roadway could potentially affect ground and surface water characteristics in the project corridor, thus indirectly affecting wetland habitat along the roadway. MDT is taking this potential effect into consideration and has no plans to intentionally alter water flow such that adjacent habitats would be significantly affected.

Determination of Effect – Ute ladies' tresses. Based on the above information and recommended conservation measures, a determination of **May Affect, Likely to Adversely Affect** was made with respect to project-related effects to Ute ladies' tresses.

Formal consultation regarding any listed species is necessary under the *Endangered Species Act* if the proposed action may affect any listed species or critical habitat. Formal consultation

with the USFWS was initiated in January 2005 regarding project-related effects on Ute ladies' tresses. Formal consultation was concluded on June 9, 2005 when the USFWS issued a Biological Opinion stating the project would not jeopardize the continued existence of Ute ladies' tresses. The Biological Opinion will remain valid through the implementation of the project unless the design notably changes; previously unanticipated effects to the species are identified; or a new species is listed or critical habitat designated that may be affected by the project.

Conservation Measures for Ute ladies' tresses. The Biological Opinion included conservation recommendations to help minimize or avoid effects to Ute ladies' tresses and its habitat in the project area. The following conservation recommendations will be implemented for this project:

- *The roadway alignment will be designed to avoid known populations of Ute ladies' tresses and efforts will be taken to minimize effects to wetlands that provide habitat for this species.*
- *Areas with known populations of Ute ladies' tresses and other sensitive plants will be shown on MDT's design plans. MDT's biologist will also "flag" the known locations of Ute ladies' tresses prior to the start of construction. The contractor will also be required to place temporary fencing around the flagged locations to help ensure that construction activities do not impact these sensitive areas.*
- *Clearing and grubbing operations will be restricted to the minimum area necessary to accommodate the planned reconstruction activities and improvements.*
- *To minimize potential indirect effects of the proposed project on known Ute ladies' tresses locations, current hydrologic conditions within the roadside ditches will be maintained to the extent practicable to prevent wetland habitat from drying out or becoming too wet to support this species.*
- *The project corridor will be surveyed again for Ute ladies' tresses prior to construction.*

IMPACTS OF THE NO ACTION ALTERNATIVE. The No Action Alternative would not result in new impacts to either bald eagles or Ute ladies' tresses.

4.2.9 IMPACTS TO WILDLIFE RESOURCES

EXISTING CONDITIONS. Wildlife species inhabiting the project area are typical of those that occur in grasslands, cultivated lands, riparian areas and wetlands of central Montana. Common mammals occupying habitats in the general project area include: mule deer, white-tailed deer, porcupine, raccoon,

striped skunk, badger, bobcat, coyote, red fox, muskrat, ground squirrel, deer mouse, and meadow vole.

During the 1990's, the Montana Bird Distribution Committee compiled observations of 146 different bird species within the general geographic area of this project. Commonly observed birds in the corridor include osprey, mourning dove, European starling, black-billed magpie, ring-necked pheasant, red-winged blackbird, and yellow-headed blackbird. The MNHP database shows two great blue heron rookeries occur along the Missouri River west of the project corridor.

Waterfowl are seasonally abundant in the project area, utilizing the numerous open water/emergent marsh wetlands adjacent to the roadway and the Missouri River to the west. Several species including cinnamon, blue-winged and green-winged teal, mallards, ruddy ducks, pintail, wood ducks and northern shovelers use wetland habitat adjacent to the roadway. The Missouri River and open water habitats adjacent to the roadway also provide resting habitat for spring and fall migrating waterfowl.

Raptors observed during the survey include northern harrier, red-tailed hawk, American kestrel, osprey, and bald eagle. Two artificial osprey nest structures and three bald eagle nest occur along the project corridor. Habitat quality for large raptors adjacent to the alignment is judged to be high, based on the diversity of habitats associated with the nearby Missouri River cottonwood riparian bottom and extensive wetland habitat immediately adjacent to the roadway.

Cliff swallows are known to nest inside or underneath the structures over the Montana Ditch, Deep Creek, and the Deep Creek overflow. Nesting may also occur at the Dry Creek crossing and the Big Spring Ditch although nesting was not apparent during field reviews of these structures.

Amphibians and reptiles likely to occur in the project area include the various toads and frogs, painted turtle, racer, rubber boa, gopher snake, western rattlesnake, and garter snakes.

Rare and Sensitive Species. A search of the MNHP database revealed no known occurrences of wildlife species of concern within the general area of the project. Animals listed as species of special concern by the MNHP that could occur are listed below:

<i>Northern leopard frog</i>	<i>Ferruginous Hawk</i>
<i>Mountain Plover</i>	<i>Peregrine Falcon</i>
<i>Burrowing Owl</i>	<i>American White Pelican</i>
<i>Northern Goshawk</i>	<i>Forster's Tern</i>
<i>Common Tern</i>	<i>Caspian Tern</i>
<i>Dwarf shrew</i>	<i>Townsend's big-eared bat</i>
<i>Black-tailed prairie dog</i>	

Of these species, only the American White pelican is commonly seen in the general project area.

IMPACTS OF THE PREFERRED ALTERNATIVE. In

general, the impacts on wildlife associated with the reconstruction of U.S. Highway 287 would include: the temporary loss of and avoidance of habitats adjacent to the construction area; direct mortality from vehicles and construction equipment; and permanent habitat degradation and/or displacement.

Construction of the project could result in direct wildlife mortality, primarily to those species with limited mobility and/or those that could conceivably be in burrows or nests at the time of construction (e.g., mice, voles, young birds/eggs, frogs, salamanders, snakes, badgers, ground squirrels.). More mobile species, such as adult deer, coyotes, and most adult birds, would be able to avoid direct mortality by moving into adjacent habitat.

Construction activities in the vicinity of occupied osprey nests in the corridor could cause adults to abandon their nesting attempt, or flush from the nest, exposing eggs or young to predation. The osprey using the nests along the project have likely become habituated to noise and traffic associated with the highway and railroad. For this reason, osprey would be expected to be tolerant to construction activities, especially those conducted outside of particularly sensitive periods for the species.

Generally, only minor indirect disturbance to wildlife communities is expected due to construction activities. Such disturbance would be temporary and alternative habitat similar to that which would be affected is abundant in the general area, including wetland and riparian habitat associated with the Missouri River floodplain.

The Preferred Alternative would result in minor adverse effects to migratory bird species identified in 50 CFR 10.13 and addressed in Executive Order 13186 (*Responsibilities of Federal Agencies to Protect Migratory Birds*) signed in January 2001. Although not substantial, the project has the potential for direct impacts to nesting waterfowl in the general area and their use of suitable habitat along U.S. Highway 287 during the spring. The proposed project would permanently displace some migratory birds from habitat occupied by the new road and would likely cause temporarily displace such species from habitats disturbed by road reconstruction activities.

Additionally, the demolition of bridges or culverts at the Montana Ditch, Deep Creek, and Deep Creek Overflow (and possibly other structures in the project area) could result in indirect impacts to cliff swallow eggs or young if conducted during the nesting season.

As discussed earlier, no species of special concern are known from the immediate project corridor, and none were observed during reconnaissance surveys by consulting biologists. Several of the rare and sensitive species identified earlier, however, may

occur in the general area. Based on the lack of records for and observations of species of special concern in the project corridor, substantial impacts to these species are not anticipated. Any of these species which are present in the project corridor, but for which no records or observations exist, would be subject to the impacts discussed above.

Habitat fragmentation is often a concern with linear transportation projects. Habitat fragmentation occurs when previously contiguous blocks of habitat are separated into one or more disconnected areas dividing populations into smaller, more isolated units. Habitat fragmentation can result in impediments to wildlife dispersal and corresponding genetic exchange among populations. The existing highway and railroad, in association with the agricultural and light residential development, presently contribute to habitat fragmentation in the project area.

Implementation of the project would add to habitat fragmentation in the project area by further reducing the amount of physical cover adjacent to the highway and incrementally increasing separation between cross-highway habitats. The planned widening would increase the separation of habitat on either side of the highway reducing roadside cover and making it more difficult for some species to safely cross the road.

Based on available data, a certain level of impediment to wildlife movement is occurring, as exemplified by high mortality rates and concentrated mortality areas. One of the field reviews undertaken for the Biological Resources Report in 2001 placed an emphasis on locating existing animal crossings and high concentrations of road-killed wildlife. Consulting biologists positively identified 51 wild animal carcasses along the highway between RP 80.0 and 83.2, an area of the corridor with extensive wetlands. White-tailed deer made up a majority of the carcasses (40) with the remaining carcasses included those of various small mammals and even an elk. Given the state of decomposition, biologists believed most of the observed carcasses to be less than a year old.

With dense riparian habitat along the Missouri River bottom west of the highway and agricultural land to the east, whitetails routinely cross the roadway as they travel between cover and food sources. While deer could potentially cross the highway at any point over the project length, deer mortality is concentrated between RP 80 and 83, and more specifically, between RP 80.7 and 81.3, where 21 deer carcasses were found.

As with the deer, the wetland habitat adjoining both sides of the highway between RP 80.0 and 83.0 provides habitat for several small mammal species. Much of this area has no hydrologic connection between opposite sides of the road, thus forcing wildlife to cross over the roadway to get to habitat on the other side.

Studies relating the frequency of roadkills to posted speed limits and actual vehicle travel speeds in Yellowstone National Park.

The Yellowstone study determined that vehicle speed was the primary factor contributing to animal-vehicle collisions. Road design appeared to influence vehicle speed more than the posted speed limit with vehicles traveling slightly faster on a newly constructed road segments. Actual travel speeds were also found to be substantially higher than posted speed limits on road segments where the road's design and condition did not act to slow vehicle speeds.

Although adjoining land uses, wildlife habitation, and vehicle operations in the Townsend-South corridor differ from those in Yellowstone National Park, it is recognized that travel speeds may increase somewhat as a result of the proposed improvements. Higher travel speeds, along with projected traffic increases, could increase wildlife mortalities in the corridor. Increased driver sight distance along with the planned road and shoulder widening, would help offset potential increases in wildlife mortalities to some extent by affording drivers better opportunities to identify and avoid wildlife on the highway.

Effective countermeasures that can be implemented to help reduce animal-vehicle collisions are limited by the project area's flat topography, its many public and private road approaches, and the presence of extensive wetlands and sensitive plant species.

Studies suggest that one of the most effective methods for reducing deer-vehicle collisions is properly designed and maintained fencing used together with appropriate crossing structures like underpasses, overpasses, or one-way deer gates. Wildlife fencing must be sufficiently high, strong, long, and well anchored without gaps or other locations where deer can cross.

Installing a wildlife fence along the road to restrict and/or direct wildlife movements is difficult in the Townsend-South corridor due to the number of access locations that must be accommodated. This situation makes it impractical to provide a continuous fenced barrier to restrict deer movements. Without guide fencing, only opportunistic use of underpasses by wildlife can be expected with only marginal benefits for helping address deer-vehicle collisions.

Adding underpasses or new bridges to accommodate deer movements would require the elevation (grade) of the new roadway to be raised. Grade raises would increase impacts to roadside wetlands and populations of Ute ladies' tresses and could substantially increase project costs due to the need for more right-of-way and to import large quantities of fill material for the new road.

Some opportunities do exist to increase habitat connectivity and wildlife passage for mammals within the project corridor. The proposed bridge at Deep Creek (RP 80.0) affords an opportunity to enhance wildlife passage beneath the roadway at this location. MDT proposes to provide 0.5 m (1.6-foot) wide

benches on both sides of the channel beneath the ends of the new bridge. This would allow terrestrial wildlife to pass underneath the structures throughout the year except perhaps during extremely high runoff events. Fencing to help direct wildlife movements may also be used at this structure and at other crossing locations in the project area.

MDT also proposes to install a standard stockpass (employing a large-diameter culvert) beneath the road at the Deep Creek Overflow crossing. The bottom of the culvert would be buried to facilitate wildlife passage and fencing would be installed to help direct wildlife to the stockpass.

During final design activities, MDT would consider additional opportunities to provide wildlife under crossings in the project corridor, particularly in the area where a concentration of deer mortalities exists. Such opportunities may include perpetuating existing stockpass locations or adding new stockpasses in appropriate areas. MDT must balance the use of these features with the potential for increasing wetland impacts, impacts to sensitive vegetation, right-of-way and project costs.

Drainage culverts are used by several species of small mammals to move between habitats on opposite sides of roadways at Greyson Creek and Dry Creek. Perpetuating existing culverts at these locations and providing new installations specifically for small mammal use elsewhere in the corridor are actions that would enhance wildlife passage beneath the new road. New small mammal culverts would be placed above typical flow elevations and standing water levels in wetlands so they remain dry and useable throughout the year.

Signing to increase the awareness of wildlife crossings is a practical countermeasure, yet only moderately effective method for minimizing collisions with wildlife. As part of final design activities, MDT would also consider whether or not signing improvements (like the use of flashing signs during certain periods) are practical and effective ways to increase the public's awareness of deer crossings in this highway corridor.

IMPACTS OF THE NO ACTION ALTERNATIVE. This alternative would cause no new impacts to wildlife resources or habitat in the Townsend-South project area.

MITIGATION MEASURES. MDT will implement the following measures to ensure that adverse impacts to wildlife species are minimized or avoided:

- *Clearing and grubbing operations will be restricted to the minimum area necessary to accommodate the planned reconstruction activities and improvements.*
- *Best Management Practices (BMPs) will be followed to minimize the potential for increasing sediment loads in any of the project area waterways.*

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- *Areas disturbed within the MDT Right-of-Way or construction easements will be reseeded as quickly as practicable after construction.*
 - *MDT will include 0.5 m (1.6 foot) wide benches underneath the ends of the new bridge at Deep Creek to facilitate wildlife passage.*
 - *To enhance small mammal crossings of the highway, culvert installations will be perpetuated at RP 79.0 and RP 81.1 and 600 mm (24-inch) diameter or larger pipes will be installed in the upper half of the roadway prism in the vicinity of RP 79.3, 81.3, RP 81.6, RP 82.3, RP 82.6, and RP 83.4.*
 - *To enhance crossings of the highway for larger mammals, a new 2100 mm (82-inch) diameter culvert (stockpass) will be installed at RP 81.3.*
 - *MDT will consider additional opportunities to provide wildlife under crossings in the project corridor, particularly in the area where a concentration of deer mortalities exists. Such opportunities may include perpetuating existing stockpass locations or adding new stockpasses in appropriate areas.*
 - *MDT will also consider whether or not signing improvements, like the use of flashing signs during certain periods, are practical and effective ways to increase the motoring public's awareness of deer crossings.*
 - *Prior to construction, an MNHP records check for new sensitive species occurrences will be performed in the project area.*
 - *Prior to the nesting season (typically mid-May through mid-July), old nests will be removed from inside or underneath structures where swallow nesting is known or suspected and physical measures (such as plastic netting or wire) will be installed to exclude cliff swallows from establishing new nests or reoccupying old nests. Or, MDT will require that the demolition of bridges or culverts where swallow nesting is known or suspected occurs outside the nesting season.*

4.2.10 IMPACTS TO AQUATIC RESOURCES

EXISTING CONDITIONS. Streams traversed by the existing alignment include Deep Creek, Deep Creek Overflow, Greyson Creek, and Dry Creek. Two irrigation facilities, the Montana Ditch and Big Spring Ditch, also pass underneath the roadway.

The Missouri River occurs west of and parallels the project for its entire length at distances ranging between approximately 0.2 km (0.12 mi) and 4.0 km (2.0 mi). Additionally, the existing roadway bisects several historic meanders of the Missouri River.

According to the Montana Rivers Information System (MFISH 2004), Deep Creek has an outstanding fisheries resource value, and supports several game and non-game species including: brook, brown, and rainbow trout, white sucker, Flathead chub, longnose dace, longnose sucker, and mottled sculpin. In addition to the resident species, rainbow trout from Canyon Ferry Reservoir and the Missouri River likely spawn in reaches of Deep Creek above the highway crossing.

The Deep Creek Overflow channel is dry during most of the year, and only carries water during extreme runoff events in the main Deep Creek channel. Greyson Creek, an intermittent tributary of the Missouri River, has limited fisheries resource values and supports small numbers of brook and rainbow trout.

Dry Creek is a perennial tributary of the Missouri River. According to MFISH 2004, this stream has an outstanding fisheries resource value, and supports several fish species including: brook trout, brown trout, rainbow trout, and mottled sculpin. Like Deep Creek, rainbow trout from Canyon Ferry Reservoir and the Missouri River spawn in reaches of Dry Creek above the highway crossing.

As stated previously, the Missouri River occurs west of and parallels the project corridor for its entire length. In addition to species already mentioned for area tributary streams, fish species in this section of the Missouri River include: burbot, common carp, white sucker, northern pike, largemouth bass, mountain sucker, mountain whitefish, and stonecat.

Deep Creek and Dry Creek provide extensive spawning opportunities for trout residing in the Missouri River and Canyon Ferry Reservoir. Greyson Creek provides occasional spawning opportunities for trout residing in the Missouri River depending on available flow. Large numbers of trout eggs incubate from mid-March through early July (rainbow trout) in all three tributaries, and moderate numbers of trout eggs incubate from mid-October through April (brown trout) in Deep Creek.

The existing highway bridge at Deep Creek allows fish to freely pass up and downstream. However, fish passage is a concern at Greyson Creek and Dry Creek due to notable elevation differences between the outfall of the culverts beneath the railroad at each stream's confluence with the Missouri River. This elevation difference likely impedes upstream passage under most flow conditions for resident or spawning fish from the Missouri. Fish passage for spring spawning rainbows is possible at Dry Creek as Missouri River levels rise and flows increase within the stream.

Withdrawals for irrigation have also created chronic dewatering problems in Deep Creek, Greyson Creek, and Dry Creek.

Rare & Sensitive Fish Species. No rare or sensitive fish species have been documented or are suspected in the general project area, and none are expected within any of the natural drainages or man-made conveyances traversed by the proposed project.

IMPACTS OF THE PREFERRED ALTERNATIVE. Impacts to project area drainages would primarily result from direct disturbances associated with bridge construction/removal, culvert replacements, highway fill placement, and pipe inlet/outlet channel realignment and stabilization. Road obliteration and general clearing and grubbing would occur adjacent to project area drainages. Existing impacts from sand/gravel use during the winter months and general highway runoff are expected to continue following construction.

Construction activities would result in temporary increased erosion potential, reduced slope stability, and could temporarily increase turbidity in streams downstream of the project. Water quality could also be indirectly affected over the short term by runoff carrying minor amounts of pollutants from unpaved surfaces into receiving waters during storm events. Since pollutant levels in runoff would be low, effects to stream productivity in the immediate project area would be minor.

The replacement or removal of bridges and culverts and other instream activities would result in temporary turbidity increases by disturbing drainage bottoms and re-suspending existing sediments in the water column. Widening the paved surface of the highway would result in increased runoff and incremental increased flow into the Missouri River drainage. Exposure of any cut slopes and fill slopes in the project area would provide a continuing source of sediment into the local system during precipitation events until stabilized.

Increases in turbidity, suspended sediment, and other pollutants can reduce stream productivity, reduce feeding opportunities for fish, and result in fish avoidance of important habitat. Deposited sediments reduce habitat volume by filling pools and spaces between gravel, which are critical to young fish. Without measures to inhibit erosion from disturbed areas, deposited sediments could affect spawning success in Deep, Greyson, and Dry Creeks.

To minimize sedimentation as well as construction hardship, it is recommended that construction in and adjacent to wetlands and streams be timed in order for these sites to be as "dry" as possible during construction, if practicable.

Since traffic would be maintained on the existing roadway during the project, no temporary detours across streams are expected. If ultimately required for the project, clearance for the placement of such detours would be the responsibility of the contractor.

Prior to and during construction, MDT would obtain and comply with various state and federal water quality permits in association with this project. Section 208 of the MDT *Standard Specifications for Road and Bridge Construction* (MDT 1995) specifies the process with which the contractor must comply to prevent and control the siltation of lakes, streams, rivers, ponds, and other wetlands. The contractor must also comply with all state and federal laws or regulations for preventing or abating erosion, water pollution, and siltation.

Fish passage is currently provided beneath the highway at Deep, Greyson, and Dry Creeks and would be maintained with this project. MDT's preliminary ideas for these crossings include a bridge at Deep Creek and culverts at Dry and Greyson Creeks. A stream crossing design that provides up and downstream passage for all species regardless of size, age-class, or swimming ability is desirable at each crossing, but may not be possible depending on gradient, culvert length, and velocities.

The effectiveness of MDT's efforts to maintain fish passage beneath the new road at Greyson and Dry Creeks would continue to be limited until existing stream problems between the railroad and the river are resolved. These areas are well outside the existing and proposed right-of-way for the Townsend-South project. For this reason, resolving existing fish passage issues between the railroad crossing and river would require cooperation from Montana Rail Link (MRL).

IMPACTS OF THE NO ACTION ALTERNATIVE. This alternative would cause no further impacts to aquatic resources in the Townsend-South project area.

MITIGATION MEASURES. MDT will implement the following measures to ensure that adverse impacts to aquatic resources are minimized or avoided. Additional state and federal water quality permit conditions may be stipulated at the time of permit issuance.

- *Fish passage will be maintained at the highway crossings of Deep, Greyson, and Dry Creeks. MDT will evaluate stream characteristics at each of these sites to help develop appropriate and effective designs for maintaining fish passage at these new drainage structures.*
- *Construction equipment will not be permitted within the active channel of Deep, Greyson, and Dry Creeks (unless otherwise permitted by the regulatory agencies).*
- *The Contractor will be required to comply with the conditions attached to permits for the project including any measures deemed necessary to prevent the spread of whirling disease to other waters.*
- *Clearing and grubbing operations will be restricted to the minimum area necessary to accommodate the planned reconstruction activities and improvements.*

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- *A Stormwater Pollution Prevention Plan (SWPPP) employing Best Management Practices for controlling erosion and sediment will be designed and implemented.*
 - *Any restrictions on work near streams or in wetlands will be specified as terms of water related permits obtained from MDEQ, MDFWP, and the COE.*
 - *Removed culverts, guardrail, and other items will not be stockpiled in or adjacent to wetland or stream areas.*
 - *Construction equipment operating in wetlands will be limited to that which is needed to perform the necessary work. The width of the construction zone will be minimized to the extent practicable in wetland and stream areas.*

A January 12, 2006 letter from two local MDFWP biologists (see page D-1 of **APPENDIX D**), described an informal parking area west of the highway on the south side of Dry Creek that anglers often use while fishing the Missouri River. MDFWP encouraged MDT to maintain and develop a safe pull-off for anglers at this location and suggested such an action could serve as partial mitigation for impacts due to widening the roadbed at Dry Creek.

MDT's right-of-way plans show this informal parking area is located outside the existing highway right-of-way easement and within the right-of-way for the MRL railroad line. Since the existing turn off is unauthorized, it would not be appropriate for MDT to perpetuate the parking area and encourage fishermen and others to trespass on MRL property. MRL would likely oppose "formalizing" a parking area so close to the railroad line due to safety and liability concerns.

4.3 IMPACTS TO THE HUMAN AND CULTURAL ENVIRONMENTS

4.3.1 LAND USE IMPACTS

LAND OWNERSHIP. The Townsend-South project begins at the southern city limits of the City of Townsend so the entire project area lies within rural Broadwater County. The county encompasses some 322,000 ha (796,000 acres) with about 65% of the area being privately owned and 35% in public ownership. The major public land owners in the County include the U.S. FOREST SERVICE, U.S. BUREAU OF LAND MANAGEMENT, and STATE OF MONTANA.

The lands within the Townsend-South project area are almost entirely under private ownership. MDFWP manages the York's Islands Fishing Access Site (FAS), a public recreation site on the Missouri River west of the highway. Montana Rail Link owns and maintains a transportation corridor that parallels U.S. Highway 287 through the entire project area.

EXISTING LAND USES. The majority of the Townsend-South corridor passes through rural farmland. U.S. Highway 287 provides access to various residences and farm fields situated adjacent to and near the highway. At the beginning of the project, the highway passes through an area of low-density commercial development just south of the Townsend city limits. The highway north of the project area serves as one of the main streets of the community. York's Islands FAS is accessed from U.S. Highway 287 at RP 81.5.

APPLICABLE LAND USE PLANS. Land uses in Broadwater County are generally regulated by an approved growth policy. The County Commission adopted the *Broadwater County Growth Policy Plan & Comprehensive Economic Development Strategy* in July 2003. The growth policy document replaces the county's 1980 comprehensive plan. Broadwater County is one of only two counties in Montana that have combined a growth policy with an economic development plan. The County's expectation is that conflicts associated with community growth can be avoided by integrating growth management policies with economic development strategies.

The Broadwater County Commissioners and the County Planning Board are the responsible entities for implementing the growth policy and associated subdivision regulations. Work is underway to revise the county's subdivision regulations to conform to the new growth policy document.

The *Broadwater County Growth Policy Plan & Comprehensive Economic Development Strategy* identifies several preferred locations for new development in the County. Preferred development locations for industrial and commercial were identified for areas with access to transportation facilities, water supplies, and electrical power) and in areas that avoid areas with environmental hazards, and conflicts with existing residences. Preferable locations for new residential development are in areas close to existing communities with good access to

water supplies and public roads, in areas that avoid areas with environmental hazards, and in areas that minimize the loss of productive agricultural land. Preferred development locations were identified for lands immediately northwest and east of Townsend, near the community of Toston, and north of the junction of U.S Highway 287 and I-90.

IMPACTS OF THE PREFERRED ALTERNATIVE. The proposed improvement of U.S. Highway 287 would impact minor amounts of land adjacent to the existing highway. With the exception of developed lands at the south edge of Townsend and scattered rural residences, nearly all of the affected land is used for livestock grazing, raising forage crops, or farming.

The proposed project would not adversely affect highway commercial, commercial, or residential developments located along the roadway. No preferred development locations listed in the *Broadwater County Growth Policy Plan & Comprehensive Economic Development Strategy* exist in the Townsend-South project corridor.

Impacts to agricultural land uses would include the acquisition of cropland and pasture land for new highway right-of-way and modifications to field access locations. Generally, access to farm fields or pastures from the new roadway would be maintained, although the location of access points may be moved to ensure adequate sight distance is provided along the new road.

The implementation of limited access control within the project corridor could result in some existing accesses being relocated, combined or even closed. However, the access management provisions implemented with this project would ensure that reasonable access is maintained for all properties and land uses adjoining the highway.

The Townsend-South project would not directly affect any state land but would rebuild the U.S. Highway 287 approach to the York's Islands FAS.

The proposed reconstruction of U.S. Highway 287 would not conflict with the goals, objectives and policies outlined in the *Broadwater County Growth Policy Plan & Comprehensive Economic Development Strategy*.

IMPACTS OF THE NO BUILD ALTERNATIVE. This alternative would cause no changes to existing land uses along U.S. Highway 287.

MITIGATION MEASURES. No mitigating measures are proposed for land use impacts associated with this proposed project. Measures to mitigate the impacts of new right-of-way acquisition are discussed in the following section.

4.3.2 RIGHT-OF-WAY AND UTILITY IMPACTS

EXISTING CONDITIONS. The existing right-of-way corridor for U.S. Highway 287 is typically 27.6 m (90 feet) wide with the roadway centered within the corridor. Over the length of the proposed Townsend-South project, the existing road and its right-of-way encompasses about 37.4 ha (92.4 acres). MDT's preliminary Right-of-Way Plans list thirty different owners for properties adjoining the existing highway.

Overhead power lines, underground telephone cables, buried fiber optic lines, and other utilities cross or exist adjacent to the existing road throughout the Townsend-South project area. A high voltage overhead transmission line crosses the highway north of the Litening Barn Road intersection at about RP 82.8.

The existing highway does not cross any public water or sewer lines. Residential and commercial properties throughout the corridor utilize wells as a source of domestic water and individual sewage disposal systems with septic drain fields to manage wastewater.

Irrigation facilities owned by the Montana Ditch Company, the Broadwater-Missouri Water Users Association, or by private parties are located adjacent to or crossed by the existing road.

As indicated previously, the Montana Rail Link rail line and its associated transportation corridor parallels U.S. Highway 287 through the entire project area. The Montana Rail Link's mainline track is located about 46 m (150 feet) west of the existing highway.

IMPACTS OF THE PREFERRED ALTERNATIVE. U.S. Highway 287 would be reconstructed to closely follow the existing alignment through the project corridor. From the Townsend city limits to approximately RP 78.7, the centerline of the new road would closely follow that of the existing highway. South of RP 78.7, the centerline would be shifted about 10 m (33 feet) to the east and would parallel the existing road to about RP 83.5 (near the highway's crossing of Dry Creek). South of RP 83.5, the new road's centerline would be shifted to the west and parallel the existing east shoulder to RP 86.1.

The Preferred Alternative would require areas of new right-of-way over its entire length. The additional right-of-way is necessary to accommodate road widening, adequate clear zones, and utility relocations throughout the project corridor. New right-of-way acquisition would result in the loss of minor areas of cultivated and grazing lands adjacent to the highway corridor.

Based on preliminary right-of-way plans for this project, the reconstructed highway would occupy a total right-of-way area of about 69.4 ha (171.5 acres). Estimates from the preliminary Right-of-Way Plans show that about 31.4 ha (79.1 acres) of new

right-of-way would be required for the Townsend-South project.

Due to the planned alignment shift, the majority of the right-of-way would be required from properties east of the present highway corridor. Nearly 24.7 ha (61.1 acres) of the new right-of-way area would be needed from properties east of the present highway.

The permanent new right-of-way for U.S. Highway 287 would be acquired and owned by MDT. Construction permits may also be needed at various locations to accommodate temporary construction (like slope adjustments) beyond the required permanent right-of-way corridor.

Note the right-of-way areas discussed above are subject to change since only a set of preliminary Right-of-Way plans exists for the proposed project. During the design process, MDT would identify specific right-of-way needs from lands along the proposed alignment of U.S. Highway 287. Prior to construction, affected landowners would be contacted about the acquisition of new land needed for the highway and remedies for right-of-way effects to the remainder of their property.

The Preferred Alternative would displace the residents of a mobile home located east of the existing highway at about RP 80.6 and a residence east of the highway at RP 85.2. These residences would have to be acquired by MDT and demolished or moved to accommodate the planned highway reconstruction. Additionally, the preliminary right-of-way limits encroach on a farm storage building east of the highway at about RP 80.4. The Preferred Alternative would not require the relocation of any businesses.

The Preferred Alternative would replace irrigation ditch crossings on U.S. Highway 287 with new box culverts or pipes. Other irrigation facilities impacted by the planned reconstruction would be replaced or modified as needed. Preliminary design plans also indicate the need for realigning a section of the Big Spring Ditch where this irrigation feature crosses the highway near RP 85.8.

MDT would review all stockpass locations within the project corridor and contact landowners to determine their status during the final design and right-of-way phase of the project. These efforts would identify which stockpasses need to be perpetuated or abandoned and determine the need for any new stockpasses.

The acquisition of land or improvements for highway construction is governed by state and federal laws and regulations designed to protect both the landowners and taxpaying public. Landowners affected are entitled to receive fair market value for any land or buildings acquired and any damages as defined by law to remaining land due to the effects of highway construction. This action would be in accordance with the *UNIFORM RELOCATION ASSISTANCE AND REAL PROPERTY ACT* of 1970 (**P.L. 91-646** as amended), (**42 U.S.C 4601**, et. seq.) and the *UNIFORM RELOCATION ACT AMENDMENTS* of 1987 (**P.L. 100-17**).

Access management would be implemented with a goal of maintaining reasonable access to all residents and businesses within the corridor. Access management in the Townsend-South project area would help address significant traffic safety concerns and enhance the operation of the roadway resulting in benefits to adjoining properties.

Overhead power lines, underground telephone cables, buried fiber optic lines, and other utilities cross or exist adjacent to the existing road throughout the Townsend- South project area. Some of these utilities may be in conflict with the proposed highway reconstruction at various locations. Conflicting utilities would be relocated prior to construction.

Parallel easements may be required from Montana Rail Link at several locations due to minor encroachments on the railroad corridor. Montana Rail Link has indicated it would consider granting parallel easements within 30 m (100 feet) of the mainline track at locations where no public road crossings of the railroad exist.

IMPACTS OF THE NO ACTION ALTERNATIVE. The No Build Alternative would not require any additional right-of-way, affect existing utilities or irrigation facilities, or result in the relocation of residents or businesses in the area.

MITIGATION MEASURES. The following measures will be implemented to minimize the right-of-way and utilities impacts associated with the proposed highway improvements:

- *MDT will review all stockpass locations within the project corridor and contact landowners to determine their status during the final design and right-of-way phase of the project. These efforts will allow MDT to identify which stockpasses need to be perpetuated or abandoned and to determine the need for any new stockpasses.*
- *MDT will prepare an Access Management Plan and implement access control in the project corridor to enhance traffic operations and safety.*
- *MDT's Right-of-Way design for this project will attempt to minimize the area required for the new highway and adverse effects on adjoining landowners. Temporary construction permits will be used when possible to minimize the need for new right-of-way.*
- *Right-of-way acquisition will be in accordance with the UNIFORM RELOCATION ASSISTANCE AND REAL PROPERTY ACT of 1970 (the Uniform Act) and its subsequent amendments in 1987. The Uniform Act provides for fair and equitable treatment of persons whose property will be acquired or who will be displaced because of programs or projects financed with Federal funds.*

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- *MDT will coordinate with the appropriate utility companies to determine the timing and details of relocating conflicting utilities.*

4.3.3 TRANSPORTATION AND CIRCULATION

EXISTING CONDITIONS. As described in detail in PART 2.0, the existing highway has physical deficiencies that contribute to reduced safety and convenience for users of this route. U.S. Highway 287 is a regionally and locally important transportation route. The highway presently serves as the primary roadway for commercial traffic, commuters, and visitors to Canyon Ferry Reservoir and its surrounding recreational lands. The highway also functions as a principal route for farm-to-market needs and local travel by residents of the Townsend-Toston area.

IMPACTS OF THE PREFERRED ALTERNATIVE.

Rebuilding U.S. Highway 287 would provide traffic safety benefits and a more efficient facility for local residents and other highway users. Road reconstruction would enhance traffic operations and safety by: increasing the width of the roadway; adding new passing areas in both directions at two locations; providing a center median/left turn lane at public roads and other locations; constructing safe roadside slopes; and providing access management within the project corridor. These measures would help to reduce the chances for and severity of accidents. The highway would be reconstructed to MDT standards that reflect designs appropriate for both the type and level of traffic using the highway facilities.

School bus turnarounds would be developed adjacent to Shelley Road and Dry Creek Road. These facilities would provide safe pick-up and drop-off locations for area students.

Other than restructuring access from the highway to some adjoining properties and reconfiguring public road intersections, no long-term changes to overall travel patterns would be likely due to the reconstruction of the highway. Implementing the Preferred Alternative would not result in traffic increases above those already expected to occur on this route.

IMPACTS OF THE NO ACTION ALTERNATIVE. The No Action Alternative would not change current operational conditions on U.S. Highway 287. The anticipated traffic growth on the route would decrease the operational efficiency of the facility and could ultimately increase traffic conflicts would decrease the operational efficiency of the facility and could ultimately increase traffic conflicts between various highway users. Unless corresponding facility improvements are made to accommodate expected growth in traffic, the frequency and/or severity of accidents could increase over time.

MITIGATION MEASURES. The following measures will be incorporated into the proposed project to minimize impacts to traffic and circulation:

- *MDT will maintain traffic through the project area during construction by allowing continued use of the existing road and will attempt to minimize delays.*
- *MDT will ensure that access to properties adjacent to the highway is maintained throughout the construction period.*

4.3.4 SOCIAL IMPACTS AND ENVIRONMENTAL JUSTICE

EXISTING AND PROJECTED POPULATION. The Townsend-South project area is located entirely in rural portions of Broadwater County. According to data from the U.S. Bureau of the Census, the year 2000 population of Broadwater County was estimated to be 4,385, and the population of the City of Townsend was 1,867. Since 1990, the population of Broadwater County has increased by more than 32 percent, while the population of Townsend has grown by over 14 percent. Historical and current populations for the City of Townsend, Broadwater County, and the State of Montana are presented below in **TABLE 4-2**.

The MONTANA DEPARTMENT OF COMMERCE, Census and Economic Information Center released estimates of recent (July 1, 2005) populations for Broadwater County and the City of Townsend in early 2006. These estimates show Broadwater County's population to be about 4,520 and Townsend's population to be 1,950 as of July 1, 2005.

In December 2004, NPA Data Services, Inc. issued projections of future populations through the year 2030 for Broadwater County for the Census and Economic Information Center. Based on the NPA Data Services projections, Broadwater County's population is expected to grow by nearly 47 percent by the year 2030. This translates into an anticipated County growth rate of about 1.9 percent per year for the foreseeable future. Using the City of Townsend's growth rate of about 1.2 percent per year since 1990, the community's population may exceed 2,500 residents by 2025 and 2,600 residents by 2030.

Future projections of populations for the City of Townsend, Broadwater County, and the State of Montana can be viewed in **TABLE 4-2**.

Table 4-2: Population Data for Townsend, Broadwater County and State of Montana

	City of Townsend	Broadwater County	State of Montana
1990 Census ¹	1,635	3,318	799,065
2000 Census ¹	1,867	4,385	902,195
July 1, 2005 ² Estimate	1,950 ²	4,517 ³	935,670 ³
2010	2,100 ⁵	5,070 ⁴	988,875 ⁴
2015	2,230 ⁵	5,430 ⁴	1,037,405 ⁴
2025	2,515 ⁵	6,230 ⁴	1,148,160 ⁴
2030	2,625 ⁵	6,640 ⁴	1,211,425 ⁴

Sources:

¹ U.S. BUREAU OF THE CENSUS.

² Montana Department of Commerce, Census and Economic Information Center, Annual Estimates of the Population for Incorporated Places in Montana: April 1, 2000 to July 1, 2005 (SUB-EST2005-04-30); Release Date: June 21, 2006

³ Montana Department of Commerce, Census and Economic Information Center, Annual Estimates of the Population for Counties of Montana: April 1, 2000 to July 1, 2005 (CO-EST2005-01-30); Release Date: March 16, 2006.

⁴ MONTANA POPULATION PROJECTIONS, prepared and copyrighted by NPA Data Services, Inc., issued December 2004 accessible from (http://ceic.commerce.state.mt.us/Demog/project/NPAallcounties_0606.pdf)

⁵ Population projection based on estimated growth rate of 1.2% for City of Townsend over 1990-2005 period.

SOCIO-ECONOMIC CHARACTERISTICS. Detailed population and socio-economic data for residents of Broadwater County is periodically collected and distributed by the U.S. BUREAU OF ECONOMIC ANALYSIS (BEA) and the Montana Census and Economic Information Center of the MONTANA DEPARTMENT OF COMMERCE. Based on data from these sources, the following characteristics are evident for Broadwater County residents as compared to all other State of Montana residents:

- Minorities comprised 3 percent of the County's population as compared to the state average of 9.4 percent at the time of the 2000 Census.
- About 19.3 percent of the County's residents are estimated to be over the age of 65 as compared to the state average of 13.8 percent according to 2005 data.
- The 2003 median household income in the County was estimated to be \$33,289 as compared to a state average of \$34,439.
- The estimated per capita personal income for County residents was \$22,782 in 2004 as compared to a state average of \$27,657. An estimated 13.0 percent of all County residents lived below the poverty line in 2003 as compared to a statewide average of 14.2 percent.
- The average household size was 2.47 persons at the time of the 2000 Census similar to the 2.45 persons per household average for the entire state.

IMPACTS OF THE PREFERRED ALTERNATIVE.

Executive Order 12898 (*Federal Actions to Address Environmental Justice in Minority and Low-Income Populations*) has been observed for this proposed project. This project would not have any significant impact on the location, distribution, density or growth rate of the population of Townsend or Broadwater County.

This alternative would not cause disproportionately high adverse human health or environmental effects on minority and low-income populations. This conclusion was made because a review of data from the 2000 Census showed there were no substantial differences in several key socio-economic characteristics (minority population, residents over age 65, median household income, and population living in poverty status) of project area residents when compared to similar data for all of Broadwater County and the State of Montana. The proposed Townsend-South project would also comply with the provisions of *TITLE VI* of the *CIVIL RIGHTS ACT (42 U.S.C. 2000d*, as amended) under the FHWA's regulations (23 CFR 200).

This alternative would provide traffic safety benefits and more efficient facility for road users through the construction of a wider roadway, provision of auxiliary lanes for turning and passing, and the enhancement of sight distance within the corridor. These improvements are expected to result in decreases in the number of accidents within the project area. In addition, the wider paved shoulders associated with the Preferred Alternative would improve safety for pedestrians and bicyclists that infrequently use the roadway.

The Preferred Alternative would indirectly benefit local school districts by improving the route used to transport students to area schools on the highway and providing two school bus turnarounds in the corridor. Similarly, the improvement of this route may benefit the providers of emergency services by slightly reducing response times from Townsend to areas south of the community.

IMPACTS OF THE NO ACTION ALTERNATIVE. This alternative would not require the acquisition of land for highway purposes and would not displace households, businesses, or other areas used for human activities. Taking no action would not influence population growth or distribution in or near the project area. The No Action Alternative would not adversely affect any social or ethnic groups and it would not isolate or divide existing residential areas. This alternative would not create disproportionately high and adverse human health or environmental effects on minority and low-income populations in or near the Townsend-South project area.

MITIGATING MEASURES. No mitigating measures are required or proposed.

4.3.5 ECONOMIC IMPACTS

EXISTING CONDITIONS. The six largest industries in Broadwater County include manufacturing, agriculture, mining, government, tourism and travel, and transportation and public utilities. R-Y Timber (timber processing), GrayMont Western US, Inc. (lime mining and processing), and Wheat Montana (farm, processing and bakery enterprise) are the principal manufacturing/processing firms in the County.

Non-farm industries (manufacturing, mining, services, wholesale and retail trade, government, construction, etc.) comprise the largest industrial sector in the economy of Broadwater County. Private services and retail businesses account for the most jobs in the County. Of the estimated 2,100 jobs in the County in 2000, non-farm industries accounted for 85 percent of the total employment (U.S. BUREAU OF ECONOMIC ANALYSIS, Regional Economic Information System – Employment by Major Industry).

Agriculture has been and continues to be a key component of Broadwater County's economy and a major source of employment. Agriculture and agricultural services accounted for 18 percent of the 2,100 jobs in the County in 2000. According to the Census of Agriculture compiled by the U.S. Department of Agriculture's National Agricultural Statistics Service for the years 1993 and 1998, the number of farms in Broadwater County increased by 36 percent, the average size of farms decreased by 23 percent, and the amount of land in farms increased slightly over this recent period. Approximately 62 percent of the total land in the county is in farms. The top livestock commodities raised on farms and ranches in the county are cattle and sheep; while the top crop commodities grown are wheat, barley, hay and potatoes.

Townsend is the seat of government and the economic center of Broadwater County. The community provides the principal place of residence for approximately 43 percent of the County's population, and is the only place where many goods and services can be purchased locally.

Several businesses exist along U.S. Highway 287 at the beginning of the proposed project.

IMPACTS OF THE PREFERRED ALTERNATIVE. The proposed project would improve the quality of travel on an important interstate freight transportation route and travel corridor. Improved safety for all highway users would decrease the potential for serious motor vehicle accidents.

The proposed highway project would not adversely affect or cause notable long-term changes to the economy of Broadwater County or Townsend. There would be no business relocations or land acquisitions that would affect the viability of agricultural operations or businesses within the corridor.

The proposed reconstruction of U.S. Highway 287 would require an estimated 30.7 ha (75.8 acres) of new right-of-way from adjacent landowners. Right-of-way acquisition would permanently remove this amount of property (predominately agricultural land) from the tax rolls and taxes paid on the land would be lost to Broadwater County. This loss in property tax revenue would have a negligible effect on total revenues received by the County.

Temporary jobs would be created during the construction of the Townsend-South project. Also, the demand for local goods and services (food, lodging, recreation, etc.) would be increased in Townsend due to the presence of workers temporarily living in the area during the construction of the project. These beneficial economic impacts would be sustained over the period when the highway construction project is implemented.

Local spending by workers during road construction activities may cause a slight increase in the local tax revenues. This impact would likely be small and short-term.

The implementation of access management is not expected to result in substantial changes in property values in the project corridor. Literature on the subject has shown that property values often remain stable or may increase along roadways that carry significant traffic volumes so long as the traffic can flow smoothly with a minimum of congestion and conflicting movement. Access management in the Townsend-South project area would help address significant traffic safety concerns and enhance the operation of the roadway resulting in benefits to adjoining properties.

IMPACTS OF THE NO ACTION ALTERNATIVE. This alternative would not change economic conditions or cause any new economic impacts to residents or businesses in the project area. MDT would still be obligated to budget funds to maintain the existing facility and perform spot improvements on U.S. Highway 287.

This alternative would not require any new right-of-way and would not displace any residents or businesses. However, the No Action Alternative offers no relief to identified roadway deficiencies and associated traffic safety issues. Although not a certainty, the anticipated increases in traffic volumes on this route could contribute to a higher incidence of traffic accidents if geometric and operational improvements are not implemented.

MITIGATING MEASURES. The following measures will be implemented to minimize economic impacts of the proposed project:

- *MDT will maintain traffic through the project area during construction.*

-
- *Access to residences, businesses, and agricultural lands adjacent to the project will be perpetuated during the reconstruction of the highway.*

4.3.6 NOISE IMPACTS

AMBIENT NOISE LEVELS. In September 2004, Big Sky Acoustics, LLC revised a traffic noise study previously completed in February 2001. The noise study was revised due to changes in projected traffic data and design year for the proposed reconstruction project and revisions to the preliminary design concept for this proposed project. The traffic noise study was completed following guidelines from MDT's *Traffic Noise Analysis and Abatement: Policy and Procedure Manual, June 2001* and the FHWA's *Procedures for Abatement of Highway Traffic Noise and Construction Noise*.

As part of this work, ambient (existing) noise levels were monitored at three representative properties east of the existing road (at about RP 80.5, RP 84.0, and RP 85.4) for one-hour periods on different days during September 2001. The measured distances from the existing road's centerline at these locations varied from 14.5 m (48 feet) to about 16.2 m (53 feet). Field measurements showed that ambient evening peak hour Leq(h) noise levels at the receptor locations in the project corridor were typically 67 or 68 dBA. The measured noise level at one receptor was 74 dBA due to a train sounding its horn across from the measurement location.

Leq(h) refers to equivalent, steady state sound level which, in a stated period of time (one-hour), contains the same acoustic energy as the time-varying sound level during the same period. The Leq(h) metric is useful for traffic noise studies because it uses a single number to describe the constantly fluctuating noise levels at a receiver location as vehicles pass. The term dBA represents decibels measured with a frequency weighting corresponding to the A-scale on standard sound level meters. The "A-weighted" scale filters or removes sounds frequencies undetectable by the human ear.

The noise consultant employed a noise model to predict traffic noise levels at noise-sensitive receptors (single family residences) located near the road. Based on the results of the actual noise level measurements, the FHWA's Traffic Noise Model (TNM) Version 2.5 computer program was used to predict the ambient traffic noise levels at other noise receptors within the project area. To verify the accuracy of the TNM, the computer model was also used to predict ambient noise levels at the same three representative locations where actual noise levels were measured within the corridor. The measured and predicted noise levels at two of the locations differed by only 1 dBA. The third location was discounted due to the extensive sounding of the train horn during the analysis period. Therefore, the TNM model developed for this project was judged to be reasonably accurate and acceptable for traffic noise level predictions at all noise sensitive receptors in the corridor.

Noise levels associated with traffic are often a concern at land uses along highways where highway traffic noise may affect frequent human activities. Noise-sensitive land uses in the vicinity of highways have been categorized according to the Noise Abatement Criteria (NAC) listed in 23 CFR 772. The NAC, presented below in **TABLE 4-3** are a set of guidelines established by the FHWA to help determine when traffic noise is no longer compatible with uses of adjacent lands. Maximum exterior (and sometimes interior) noise levels are specified for each NAC Activity Category.

**Table 4-3: Noise Abatement Criteria (NAC)
Hourly A-Weighted Sound Level in Decibels (dBA)**

Activity Category	Leq(h)	Description of Activity Category
A	57 (Exterior)	Lands on which serenity and quiet are of extraordinary significance and serve an important public need and where the preservation of those qualities is essential if the area is to continue to serve its intended purpose.
B	67 (Exterior)	Picnic areas, recreation areas, playgrounds, active sports areas, parks, residences, motels, hotels, schools, churches, libraries, and hospitals.
C	72 (Exterior)	Developed lands, properties, or activities not included in Categories A or B above.
D	--	Undeveloped lands.
E	52 (Interior)	Residences, motels, hotels, public meeting rooms, schools, churches, libraries, hospitals, and auditoriums.

Source: "Procedures for Abatement of Highway Traffic Noise and Construction Noise" (23 CFR Part 772).

A total of 13 noise receptor locations were identified for the Townsend-South project noise study. These receptors, consisting of noise-sensitive land uses, are scattered rural residences that fall within Activity Category B according to the NAC. Commercial establishments and other developed land uses fall under NAC Activity Category C. While commercial properties exist within the project limits at the south end of Townsend, they were not included in the study because they are typically not considered noise-sensitive. Undeveloped rural lands are considered to be in Activity Category D, and the NAC does not specify an associated maximum noise level for this category.

The measurement and modeled receptor locations are shown on **FIGURE 8**.

IMPACTS OF THE PREFERRED ALTERNATIVE. Detailed noise analyses are required for Type I highway projects according to 23 CFR 772 and MDT's "Traffic Noise Analysis and Abatement: Policy and Procedure Manual" (2001). Type I projects would build a highway on a new location, physically alter the existing roadway to significantly change its horizontal or vertical alignment, or increase the number of through traffic lanes. A significant change in alignment would occur if the horizontal distance between the highway centerline and the

noise receiver was halved or if changes in the profile of the road are 6 m (20 feet) or more. The Townsend-South project is considered a Type I project due to a proposed alignment shift and the addition of new driving, passing, and turn lanes on U.S. Highway 287 near noise-sensitive receptors.

MDT's Noise Policy defines a traffic noise impact is defined as when existing or predicted noise levels approach or exceed the Noise Abatement Criteria (NAC), or when predicted noise levels substantially exceed existing levels. Approach means that design year Leq(h) noise levels are predicted to be within one dBA of the level listed for the appropriate NAC activity category. Substantially exceeding existing noise levels means that design year Leq(h) noise levels are predicted to increase by 13 dBA over existing levels.

Within the Townsend-South corridor, traffic noise impacts would occur if predicted traffic noise levels at sensitive noise receptors (rural residences) are 66 dBA or greater in the Design Year, or if the predicted noise levels in the Design Year are 13 dBA or greater than existing levels. If either criterion is met, then a traffic noise impact will occur, and traffic noise abatement measures need to be considered.

Predicted traffic noise levels for the Preferred Alternative are shown in **TABLE 4-4**. The noise model shows the NAC for Category B activities (66 dBA) would be exceeded at three receptors (R6, R10 and R11) in the Design Year. Predicted noise levels in the Design Year would exceed the NAC by 8 or 9 dBA at Receptors R6 and R10 and by 1 dBA at Receptor R11. The proposed residential acquisitions at RP 80.6 and RP 85.2 would eliminate the potential noise impacts at Receptors R6 and R10.

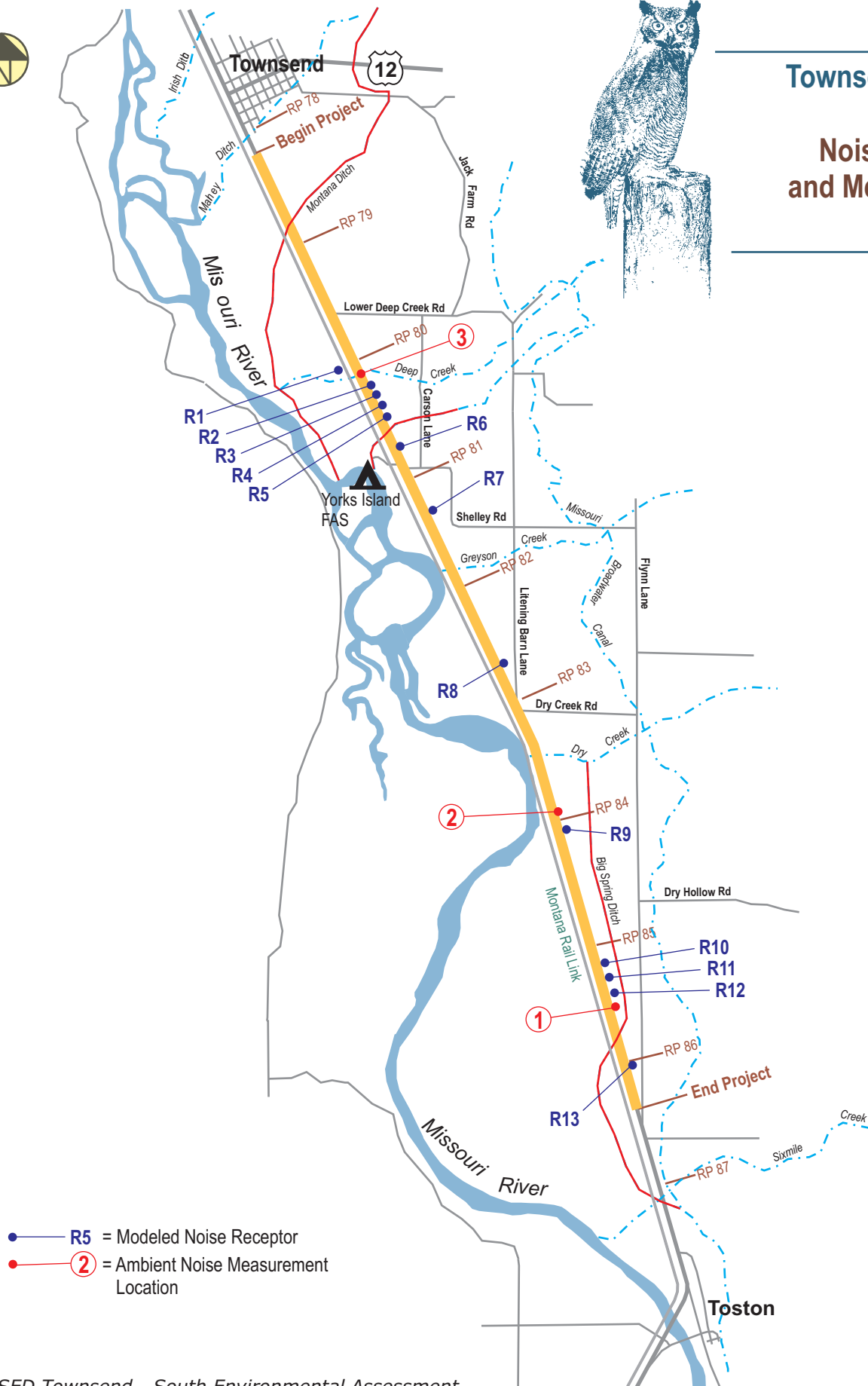
Table 4-4: Predicted Traffic Noise Levels in the Townsend-South Project Corridor

Receptor	Distance and Direction to Existing US 287 Centerline	Location	No-Build Alt. Leq(h) (dBA), Present Year (2002)	No-Build Alt. Leq(h) (dBA), Design Year (2026)	Preferred Alt. Leq(h) (dBA), Design Year (2026)
R1	71 m/233 ft west	0.1 mi. N of Deep Ck.	58	61	64
R2	97 m/318 ft east	0.1 mi. S of Deep Ck.	55	58	63
R3	101 m/331 ft east	0.2 mi. S of Deep Ck.	54	58	63
R4	96 m/315 ft east	0.3 mi. S of Deep Ck.	55	58	63
R5	101 m/331 ft east	0.3 mi. S of Deep Ck.	54	58	63
R6	30 m/98 ft east	0.3 mi. N of Shelley Rd.	65	69	74
R7	91 m/299 ft east	0.5 mi. N of Greyson Ck.	55	59	61
R8	100 m/328 ft east	0.3 mi. N of Litening Barn Lane	54	58	63
R9	79 m/259 ft east	0.5 mi. S of Dry Ck.	56	60	64
R10	24 m/79 ft east	0.7 mi. N of Big Spring Ditch	67	71	75
R11	67 m/220 ft east	0.5 mi. N of Big Spring Ditch	58	62	66
R12	93 m/305 ft east	0.4 mi. N of Big Spring Ditch	55	59	63
R13	104 m/341 ft east	0.4 mi. N of Flynn Lane	54	58	59

Note: Shading means predicted traffic noise level meets or exceeds the noise impact criteria (66 dBA).



Townsend - South
Figure 8
Noise Receptor
and Measurement
Locations



- R5 = Modeled Noise Receptor
- ② = Ambient Noise Measurement Location

Construction-related noise effects are discussed later in this PART.

IMPACTS OF THE NO ACTION ALTERNATIVE. TABLE 4-4 also presents predicted traffic noise levels for the No Action Alternative at the established receptor locations along U.S. Highway 287 within the Townsend-South corridor. According to the TNM, traffic noise impacts are already occurring at two receptors (R10 and R11) and noise impacts would continue to occur at these locations with the No Action Alternative.

As the table shows, the predicted traffic noise levels currently exceed the NAC (66 dBA) for Category B activities by 1 dBA at one receptor (R10). The NAC would be exceeded by 3 to 5 dBA at Receptors R6 and R10 in the Design Year. This analysis shows that the NAC would be exceeded at Receptor R10 with or without the improvements associated with the Preferred Alternative. Since the travel lanes would be no nearer to these rural residences with the No Build Alternative, the anticipated increase in traffic on the route would be the reason for predicted increases in noise at the receptor locations.

The operation of heavy equipment needed for maintenance of U.S. Highway 287 could generate noise potentially noticeable to highway users or those within close proximity to maintenance work zones.

MITIGATING MEASURES. When traffic noise impacts are predicted, possible abatement measures for the mitigation of highway traffic noise must be considered. Possible abatement measures include modifying the road design associated with the Preferred Alternative, constructing noise barriers or berms, and implementing traffic management measures, such as reducing the speed limit on the road or restricting the access of certain vehicle types.

According to MDT's *Traffic Noise Analysis and Abatement: Policy and Guidance*, abatement measures must be reasonable and feasible, and criteria are presented to help determine if a measure should be considered for noise mitigation. Barriers or berms must provide a minimum reduction in noise levels of 6 dBA to be considered feasible.

Possible noise abatement measures for the Townsend-South project corridor are described below.

- **Design Modifications.** Shifting the alignment of the proposed new highway may be a way to provide noise abatement. If a minimum distance of approximately 60 meters (197 feet) for receptors located along U.S. Highway 287 could be provided between the centerline of the new road and the receptor, then traffic noise impacts could be avoided. However, in this instance, alignment shifts are not reasonable or feasible due to a variety of other factors, such as the relocation of receptors, the additional cost of right-of-way acquisition, impacts to

wetlands, the location of the railroad tracks, or impacts to irrigation features within the corridor.

- **Barriers and Berms.** A barrier is most effective when it is continuous and blocks the direct line-of-sight between the roadway and the noise receptor. Driveways and access roads from many of the noise-impacted properties to U.S. Highway 287 would limit the location and ability to provide a continuous barrier or berm and it is unlikely that a 6-dBA reduction in noise levels could be achieved. A berm provided between the road and impacted receptors would also require additional right-of-way width and its construction would likely cause negative impacts to adjacent land uses and sensitive natural features in the corridor like wetlands.
- **Traffic Management.** Reducing the speed limit by 8 to 16 km/h (5 to 10 mph) on the road could reduce traffic noise levels by about 1 dBA. Even if a 1-dBA reduction were possible, traffic noise impacts would remain at Receptors R6 and R10.

Restricting certain vehicle types, like trucks, from the road, and limiting the time of day that certain vehicles may use the road could help reduce the noise levels. However, limiting truck traffic on U.S. Highway 287 is not a feasible mitigation measure since the road is a Rural Principal Arterial, and it would limit access by trucks to the agricultural properties along the road. The route is also part of the National Highway System (NHS) that provides efficient transportation routes for commercial transport. Domestic and international freight carriers would be inhibited through restrictions on vehicle types on U.S. Highway 287.

- **Pavement.** Studies have shown that open-graded asphalt or rubberized asphalt can reduce traffic noise in comparison to Portland cement and dense-graded asphalt. However, the noise reduction benefits decline as the surface ages, and therefore, the predicted levels in the Design Year may not significantly be reduced unless the roadway was regularly resurfaced with the same material. In addition, such pavement types may not withstand winter freeze/thaw conditions and snow-removal compared to dense-graded asphalt, and therefore, may be a safety hazard. At this time, MDT is investigating the feasibility of using quieter pavements, but such material may not be considered reasonable due to increased maintenance costs and durability issues.

Based on the above discussions, none of these noise abatement measures are considered to be reasonable or feasible actions to implement with the proposed Townsend-South project.

Please note that the provisions for mitigation contained in MDT's 2001 Noise Policy are not considered when establishing property values for purposes of just compensation.

4.3.7 HAZARDOUS SUBSTANCES

EXISTING CONDITIONS. Hazardous materials are products or wastes regulated by the U.S. ENVIRONMENTAL PROTECTION AGENCY (EPA) or the MDEQ. These include substances regulated under the *COMPREHENSIVE EMERGENCY RESPONSE, COMPENSATION, AND LIABILITY ACT* (CERCLA of Superfund), the *RESOURCE CONSERVATION AND RECOVERY ACT* (RCRA), and regulations for solid waste management, above-ground storage tanks (ASTs) and underground storage tanks (USTs).

No National Priority List (NPL) or Superfund sites identified by the EPA are located in or near the Townsend-South project area. Although two CECRA Priority Sites (Kenison Pole Plant and Townsend Post and Pole) exist in Townsend, the sites are not within or near the corridor where highway reconstruction would occur.

MDEQ's statewide database of all UST registered with the agency identified seven facility locations within the general vicinity of the Townsend-South project. None of the registered UST sites are listed with active tanks.

The MDEQ's Petroleum Release Section maintains a statewide database of all storage tank releases that have been reported since 1986. MDEQ's database of LUST sites identified three facilities near the project area where leaks have been reported. The most recent confirmed release date occurred some ten years ago and none of these sites are listed as active by MDEQ.

IMPACTS OF THE PREFERRED ALTERNATIVE. Based on a review of the potential sources of hazardous waste in the project area and an evaluation of records for known hazardous waste sites and concerns, it was concluded the proposed project would not affect any hazardous waste sites or encounter any areas of known contamination.

The only other known sources of hazardous wastes for the proposed project associated with the equipment used for construction of the new roadway and its related features. These are the fuels, lubricants, hydraulic fluids, and related items needed for construction vehicles and equipment. A minor risk of the release of these hazardous fluids exists since vehicles and heavy equipment would be operating within the project area throughout the construction period.

IMPACTS OF THE NO ACTION ALTERNATIVE. This alternative would have no impacts on hazardous waste sites, generators, or substances. A slight risk for the release of hazardous fluids exists since MDT would operate trucks and other heavy equipment during the performance of required road maintenance activities.

MITIGATION MEASURES. The following measures will be implemented to minimize hazardous waste impacts of the proposed project:

- *In accordance with MDT's Standard Specifications, the contractor for the project will be required to store fuel and other hazardous materials away from surface waters and wetlands to reduce the potential adverse effects of an accidental spill.*
- *The contractor for the project will be required to plan for and implement containment procedures in response to any accidental spills of fuel or other hazardous materials.*

4.3.8 CULTURAL RESOURCES

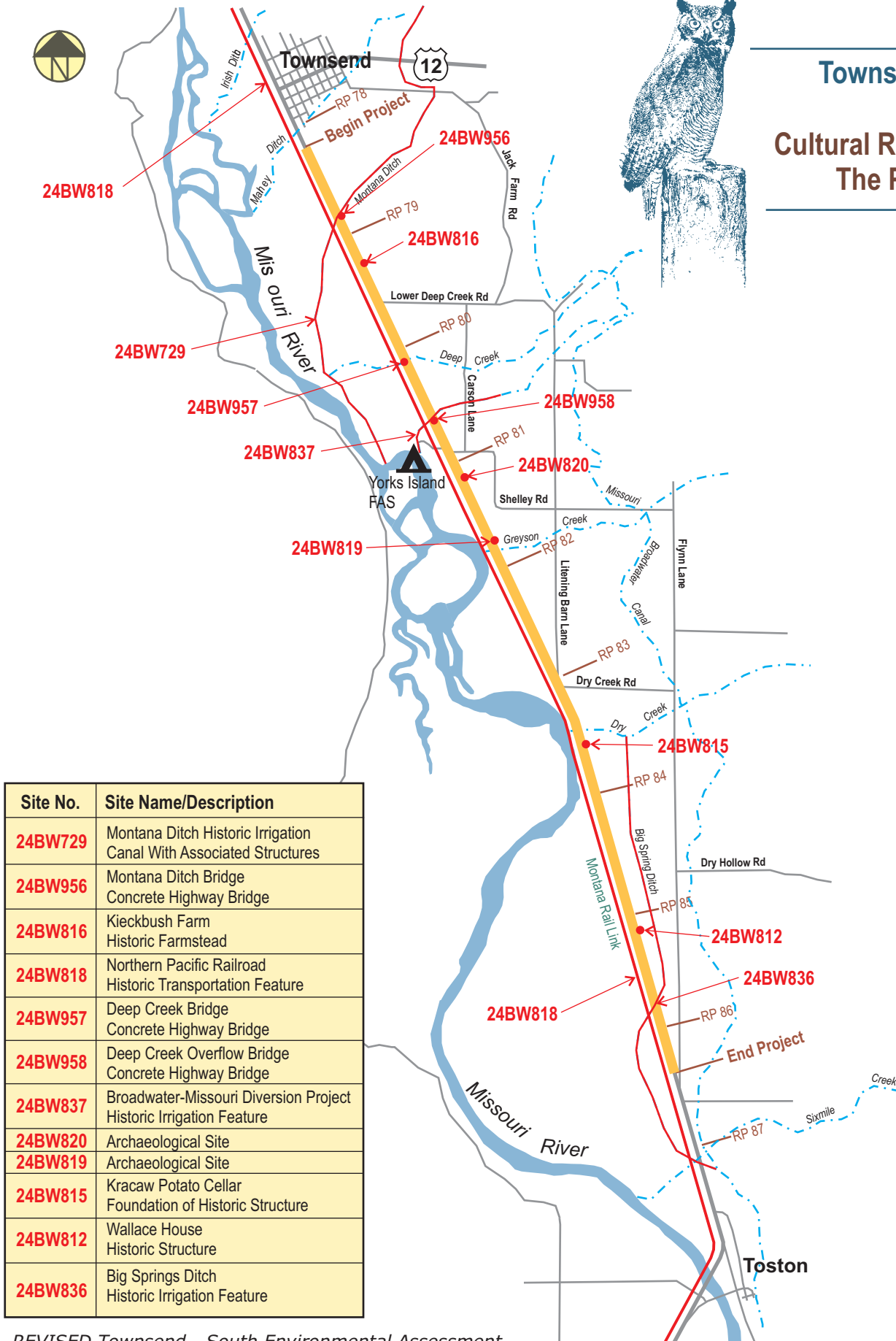
EXISTING CONDITIONS. Cultural resources are protected by the *NATIONAL HISTORIC PRESERVATION ACT OF 1966*, as amended (**16 U.S.C. 470 et seq.**). This law and its implementing regulations require the identification and evaluation of significant historical resources that a project may impact. It further requires that resources so identified be avoided, if possible, or when avoidance is not possible, that any adverse effects of the project on the resources be mitigated. Coordination is also required with the MONTANA STATE HISTORIC PRESERVATION OFFICE (SHPO) and the ADVISORY COUNCIL ON HISTORIC PRESERVATION (ACHP).

In 1995, Renewable Technologies Inc. completed a cultural resource survey for MDT's Townsend-Urban and Townsend-Toston projects. The area addressed in the 1995 cultural resources survey included the entire Townsend-South project corridor. Due to the time that had elapsed since the original survey and the fact that the Townsend-Toston project was replaced by the present Townsend-South project, MDT decided to update the existing cultural resources survey.

During 2003, Aaberg Cultural Resources Consulting Service was retained to review previous cultural resources investigations and recommendations and to evaluate several archaeological sites within the corridor, including the purported site of a tipi ring that was identified by a local resident during a previous public meeting on this project. The updated cultural resources report was completed in July 2003. The cultural resources report identified nine previously recorded sites in the project area including seven historic sites and two archaeological sites. Included among the nine sites are two farms, a newly recorded historic home, a historic railroad line, three historic irrigation ditches or systems, and two prehistoric sites.

TABLE 4-5 lists previously recorded sites and newly recorded cultural sites within Townsend-South project corridor and presents their *National Register of Historic Places (NRHP)* eligibility status. The general locations of these sites are shown on **FIGURE 9**.

Townsend - South Figure 9 Cultural Resources In The Project Area



Three highway bridges within the Townsend-South corridor were not evaluated in RTI's 1995 cultural resource report. The existing concrete bridges over the Montana Ditch (RP 78.9), Deep Creek (RP 80.0), and the Deep Creek Overflow (RP 80.6) are over 50 years old. In accordance with MDT's recently modified historic roads and bridges Programmatic Agreement with the FHWA, the Montana SHPO, and the ACHP, determinations of NHRP eligibility were made for each structure. Based on a recent evaluation of these historic age bridges, MDT concluded the Montana Ditch and Deep Creek Overflow bridges are NHRP-eligible since these structures are excellent examples of 1930's concrete slab bridges.

U.S. Highway 287 crosses the Montana Ditch, an overflow channel associated with the East Side Canal of the Broadwater-Missouri Diversion Project, and the Big Springs Ditch. MDT determined these historic irrigation features to be NRHP-eligible.

Table 4-5: Cultural Resources–Townsend-South Corridor

Site Number	Site Name/Description	Approximate Reference Post (RP)	Location	NHRP Eligibility Status
24BW729	Montana Ditch Historic irrigation canal with associated structures	Various RP 78.9	Sec. 5, T6N, R2E highway crossing	Eligible
24BW956	Montana Ditch Bridge Concrete highway bridge	RP 78.9	Sec. 5, T6N, R2E	Eligible
24BW0816	Kieckbush Farm Historic farmstead	RP 79.4	Sec. 8, T6N, R2E	Eligible (Feature 2 only)
24BW0818	Northern Pacific Railroad Historic transportation feature	Various	Parallels U.S. Highway 287 in corridor	Eligible
24BW957	Deep Creek Bridge Concrete highway bridge	RP 80.0	Sec. 8, T6N, R2E	Not Eligible
24BW958	Deep Creek Overflow Bridge Concrete highway bridge	RP 80.6	Sec. 16, T6N, R2E	Eligible
24BW837	Broadwater-Missouri Diversion Project Historic irrigation feature	RP 80.6	Sec. 17, T6N, R2E highway crossing of overflow channel for East Side Canal	Eligible
24BW0820	Archaeological site	RP 81.1	Sec. 16, T6N, R2E	Not Eligible
24BW0819	Archaeological site	RP 81.9	Sec. 21, T6N, R2E	Not Eligible
24BW0815	Kracaw Potato Cellar Foundation of historic structure	RP 83.6	Sec. 34, T6N, R2E	Not Eligible
24BW0812	Wallace House Historic structure	RP 85.2	Sec. 3, T5N, R2E	Eligible
24BW836	Big Springs Ditch Historic irrigation feature	Various RP 85.8	Sec. 10, T6N, R2E highway crossing	Eligible

SHPO was contacted for concurrence with NRHP eligibility determinations for cultural sites recorded in the Townsend-South project area. SHPO concurred with the NRHP eligibility determinations for these sites on July 28, 2003. The agency also concurred with the NRHP eligibility determinations for the three historic age highway bridges in the project area on April 21, 2004. Copies of MDT's letters to SHPO regarding NRHP-eligibility determinations for cultural sites in the project area with the agency's concurrence stamp can be found in **APPENDIX B**.

IMPACTS OF THE PREFERRED ALTERNATIVE. Two sites within the project area, the Northern Pacific Railroad (24BW0818) and the Wallace House (24BW0812) were determined eligible for the NRHP. Additionally, one structure on the Kieckbush Farm (24BW816) was determined NRHP-eligible. The Montana Ditch bridge (24BW956) and Deep Creek Overflow bridge (24BW958) were also determined NHRP-eligible.

The Northern Pacific Railroad line (24BW0818) consists of a 13.2 km (8.2 mile) long segment of the former Northern Pacific Railroad's Main Line. The Northern Pacific Railroad's Main Line in Montana is NRHP-eligible. In the project area, the rail line is parallel to U.S. Highway 287 and located about 48 m (160 feet) west of the highway. Since its original construction in 1883, the rail line has remained active and is currently used and maintained by Montana Rail Link.

The Preferred Alternative would not remove or alter historic features associated with the Northern Pacific Railroad Main Line (24BW0818) since the proposed highway widening would occur to the east side of the current roadway. Although the new road would be no closer to the railroad line than at present, the new right-of-way required for the highway would encroach on the existing right-of-way corridor for the railroad. Over most of the project, these encroachments would typically range from 1 to 4 m (about 3 to 13 feet) and may be as much as 8 m (26 feet) at some isolated locations. In April 2004, a Determination of Effect that concluded the Preferred Alternative would have **no effect** to the Northern Pacific Railroad line was submitted to SHPO. The agency concurred with this determination on April 21, 2004.

The Kieckbush Farm site (24BW816) consists of a barn, two homestead shacks, and other associated features. Feature 2 is a clapboard-sided house dating to the 1920s. The barn at the site does not qualify for the National Register because it was moved to the property in the mid-1950s and other structures and features of the site no longer retain their integrity. In August 2003, MDT submitted a Determination of Effect for the Townsend-South project's potential impacts to Feature 2 of 24BW816. The determination concluded the Preferred Alternative would have **no effect** to the Feature 2 of the Kieckbush Farm. SHPO concurred with this determination on August 14, 2003.

The Wallace House site (24BW0812) consists of a house with attached garage and two sheds surrounded by a shelterbelt. The house and garage, built around 1947, are good examples of residential architecture in the post-World War II period. The reconstruction of U.S Highway 287 in the vicinity of the Wallace House would provide a five-lane roadway with improved roadside slopes. New right-of-way would be acquired from the property containing the Wallace House. Structures on the site would not be affected but several trees within the shelterbelt between the house and the highway would be removed. The Preferred Alternative would also reconstruct the driveway approach to the Wallace House. The proposed improvements

would not affect any features that make the Wallace Site eligible for the NRHP or substantially change the setting of the property. In April 2004, MDT submitted a Determination of Effect that concluded the Preferred Alternative would have **no adverse effect** to the Wallace House. SHPO concurred with this determination on April 21, 2004.

The proposed highway reconstruction would require the removal of reinforced concrete slab bridges located at the Montana Ditch, and the Deep Creek Overflow crossings and a reinforced concrete T-beam bridge at the Deep Creek crossing. These structures were originally built in 1931 and reconstructed in 1939. Only the Montana Ditch and Deep Creek Overflow bridges were determined NHRP-eligible.

Since the Preferred Alternative would be constructed on or near the existing alignment of U.S. Highway 287, the bridges over the Montana Ditch, Deep Creek and the Deep Creek Overflow would be removed and replaced with new bridges, box culverts or pipes. These structures do not represent unique examples of reinforced concrete highway bridges in Montana. The 1997 Programmatic Agreement regarding historic roads and bridges was enacted in lieu of regular procedures for compliance with *Section 106* of the *NATIONAL HISTORIC PRESERVATION ACT (16 U.S.C. 470 f)* as applied only to historic roads and bridges in Montana. MDT has complied with *Section 106* for these historic bridges by following the procedures required by the Programmatic Agreement.

Reconstruction of U.S. Highway 287 would affect historic irrigation features where the new road would cross the Montana Ditch (24BW0729), the overflow channel associated with the East Side Canal of the Broadwater-Missouri Diversion Project (24BW0837), and the Big Springs Ditch (24BW0836). These crossings would require the installation of new metal or concrete culverts beneath the road at each location where the new highway crosses the irrigation ditches. Minor revisions to the alignment of the canal adjacent to the roadway would be required at the Big Springs Ditch crossing. MDT, through consultation with SHPO, determined that the proposed highway reconstruction would have no adverse effect to these historic irrigation features. SHPO concurred with this determination on April 18, 2005.

Copies of pertinent correspondence between MDT and SHPO regarding the potential effects of highway reconstruction on NHRP-eligible sites in the Townsend-South project can be found in **APPENDIX B**.

Federally funded actions affecting historic sites that are on, or considered as eligible for the NRHP also must comply with *Section 4(f)* of the *U.S. Department of Transportation Act of 1966*, as amended (**49 U.S.C. 303**). This compliance is discussed later in this PART.

IMPACTS OF THE NO ACTION ALTERNATIVE. The No Action Alternative would not result in any further effects on the cultural resources in the Townsend-South project area.

MITIGATING MEASURES. The following measure will be implemented to minimize potential impacts on cultural resources due to implementation of the proposed project:

- *If significant unanticipated cultural materials are encountered during construction, MDT will require the contractor(s) to temporarily suspend work in the immediate vicinity of the find until the cultural materials can be assessed.*

4.3.9 SECTION 4(f) RESOURCES

EXISTING CONDITIONS. *Section 4(f)* of the U.S. DEPARTMENT OF TRANSPORTATION ACT, as amended (**49 U.S.C. 303**), applies to Federally-funded transportation actions that affect sites on or eligible for the NRHP, publicly-owned parks, recreation lands, and wildlife and waterfowl refuges.

There are no public parks, public recreation sites, or wildlife or waterfowl refuges within the area that would be affected by the proposed action. York's Islands Fishing Access Site, a 6.6 ha (16.34 acre) public recreation site administered by the MDFWP, is accessible from U.S. Highway 287 in the Townsend-South corridor. However, the fishing access site property is located between the Missouri River and the Montana Rail Link railroad line and would not be affected by the proposed highway reconstruction.

The Northern Pacific Railroad (24BW0818), one structure at the Kieckbush Farm (24BW816), and the Wallace House site (24BW0812) are eligible for the NRHP and potential effects to these sites must be reviewed to assess whether *Section 4(f)* applies. Additionally, the Montana Ditch (24BW0729), the Broadwater-Missouri Diversion Project (24BW0837), the Big Springs Ditch (24BW0836) and three reinforced concrete highway bridges in the corridor are subject to *Section 4(f)*.

IMPACTS OF THE PREFERRED ALTERNATIVE. Impacts to *Section 4(f)* resources must be avoided whenever feasible. If it can be shown that no other feasible and prudent alternatives exist and such resources cannot be avoided, then all possible planning must be implemented to minimize harm to *4(f)* resources.

Impacts to *Section 4(f)* resources include both the direct and indirect "use" of property from a publicly owned public park, recreation area, wildlife refuge, and waterfowl refuge or historic site. A direct use (or taking) occurs when land from a *4(f)* site is acquired for a transportation project or when the occupancy of land within the site is considered adverse. An indirect use (or constructive use) of *Section 4(f)* resources can occur when the

proximity impacts of the transportation project are so great that the function or use of the site is substantially impaired. When a project uses land protected by *Section 4(f)*, a separate *4(f)* evaluation must be prepared.

The Preferred Alternative would impact existing historic sites, irrigation ditches, and highway bridges within the Townsend-South project corridor in the same manner as previously described under **4.3.8. Cultural Resources**.

In 1983, the FHWA developed a Nationwide *Section 4(f)* Evaluation form for projects requiring minor uses of land from historic sites. Copies of completed Nationwide Programmatic *Section 4(f)* Evaluation forms for this project's potential effects to the Wallace House, irrigation ditches, and highway bridges within the Townsend-South corridor can be found in **APPENDIX E**. The forms programmatically demonstrate compliance with the provisions of *Section 4(f)*. Evaluation forms were not prepared for the Northern Pacific Railroad (24BW0818) or the Kieckbush Farm (24BW816) since the Preferred Alternative would have no effect to these sites.

IMPACTS OF THE NO ACTION ALTERNATIVE. This alternative would not affect sites on or eligible for the NRHP, publicly owned parks, recreation lands, or wildlife and waterfowl refuges.

MITIGATING MEASURES. The Nationwide Programmatic *Section 4(f)* Evaluation forms for the historic sites, irrigation ditches, and highway bridges affected by the proposed reconstruction of U.S. Highway 287 found in **APPENDIX E** discuss measures to minimize harm to these properties.

4.3.10 SECTION 6(f) LANDS

Section 6(f) of the *NATIONAL LAND & WATER CONSERVATION FUND ACT (16 U.S.C. 460)* requires that coordination be done to determine if federal funds were used to acquire or improve any lands in the project area for recreation or water conservation purposes.

The MDFWP, the agency that administers the Land and Water Conservation Fund (LWCF) in Montana, was contacted to identify sites in the Townsend-South project area where federal monies were used to acquire or develop public recreation facilities. According to correspondence received from the agency in 1991, the York's Islands Fishing Access Site (FAS), formerly known as the Deepdale FAS, has LWCF involvement and qualifies as a *Section 6(f)* site.

IMPACTS OF THE PREFERRED ALTERNATIVE. The proposed improvements to U.S. Highway 287 would not require any land from or otherwise affect the property associated with the York's Islands FAS. The approach used to access the FAS from the highway would be impacted by road reconstruction; however, this work would occur within the existing right-of-way

corridor for U.S. Highway 287. The Preferred Alternative would provide a left turn lane for northbound traffic turning into the FAS. Advance signing for the public recreation area located adjacent to the existing highway would be disturbed by the proposed construction.

IMPACTS OF THE NO ACTION ALTERNATIVE. This alternative would not affect the York's Islands FAS property, the highway approach used to access the site, or advance signing for the recreation area.

MITIGATING MEASURES. The following measures will be implemented to mitigate temporary, construction-related impacts to York's Islands FAS:

- *Public access to the FAS from U.S. Highway 287 will be perpetuated throughout the construction period.*
- *MDT will reset existing advance information signs for the FAS located adjacent to the highway.*

4.3.11 PEDESTRIAN AND BICYCLIST CONSIDERATIONS

EXISTING CONDITIONS. Although counts are not available to quantify such use, this section of U.S. Highway 287 receives only limited use by pedestrians and bicyclists. Most pedestrian and bicyclist activity would be expected to occur within or near Townsend, not within the rural project corridor. The existing highway has a paved surface only 9.1 m (30 feet) wide so bicyclists must use the road's 0.9 m (3-foot) paved shoulder for travel. Pedestrians must also use the road's paved shoulder or unpaved roadside slopes for walking along the highway.

IMPACTS OF THE PREFERRED ALTERNATIVE. The Preferred Alternative would provide wider road shoulders for use by pedestrians and bicyclists and improve safety for these facility users. The proposed road would be constructed with 2.4 m (8 foot) wide shoulders to replace the narrow 0.9 m (3 foot) wide shoulders that presently exist along U.S. Highway 287 through the project area. The shoulders for the new road would incorporate a 0.3 m (1 foot) wide rumble strip reducing the unobstructed paved shoulder width for bicycle travel to about 2.1 m (7 feet).

Several public comments received as a result of the EA distribution and public hearing, suggested a separated pedestrian/bicycle path or designated bicycle lane be provided with the project. Some comments also called for including a sidewalk along the east side of the highway in the commercial area immediately south of Townsend.

MDT considered these suggestions and concluded that adding a separate pedestrian/bicycle path cannot be economically justified by the existing or expected level of bicycle use in this

corridor. Adding a path along the new highway would require a wider right-of-way corridor and notably increase project costs and potential impacts to adjoining landowners and roadside wetlands. A designated bicycle lane is not appropriate for this route based on the guidelines MDT uses to justify the design feature. Ultimately, it was concluded that the proposed 2.4 m (8-foot) wide paved road shoulder is the most economical and practical method of accommodating bicycle use in this corridor.

Since sidewalks do not immediately adjoin the project, the decision to add a sidewalk in the project area should be justified based on a recognized need for such facilities. MDT would review the need for adding a sidewalk along the east side of the highway immediately south of Townsend during final design activities and determine whether or not to include any areas of sidewalk.

IMPACTS OF THE NO ACTION ALTERNATIVE. There would be no change in the facilities available for bicyclists or pedestrians with the No Action Alternative. These highway users would be required to continue using the narrow paved road shoulder or roadside slopes for travel along and through the project area. Safety for pedestrians and bicyclists would decline as traffic volumes increase on the route.

MITIGATING MEASURES. No mitigating measures are required or proposed. In response to public comments about adding sidewalks along the east side of the highway in the area immediately south of Townsend, the following actions are proposed:

- MDT will review the need for adding a sidewalk in the commercial area along the east side of the U.S. Highway 287 immediately south of the city limits during the final design of the project. If one is needed, then MDT will reconsider whether to include one in this project.
- MDT will work with the community on future projects that could provide sidewalks to help address pedestrian needs and enhance the U.S. Highway 287 corridor in Townsend.

4.3.12 VISUAL RESOURCES

EXISTING CONDITIONS. The project area is situated in flat to gently rolling terrain within the Missouri River valley. Lands adjacent to the highway are covered with common grasses, sagebrush, sweet clover and prickly pear. Riparian areas are scattered throughout the project area and numerous wetlands exist with areas of open water, willows, and cattails adjacent to the roadway. The dominant man-made features in the project area are: the existing road and its associated features; intersecting roads and driveways; fencing; commercial buildings and landscaping at the south edge of Townsend; scattered residences and farmsteads along the highway; overhead utilities

including a large electrical transmission line and towers; pivot irrigation systems and cultivated agricultural land.

Background landscapes visible from the highway corridor are dominated by the foothills and uplands of the Big Belt Mountain Range (Mt. Baldy and Mt. Edith being the most visible peaks) to the north and east; the Limestone Hills and Elkhorn Mountains to the west; and distant peaks in the Tobacco Root Mountains to the southwest. Foreground landscapes in the Townsend-South corridor consist primarily of the rolling hills and agricultural lands adjacent to the road, the Missouri River and its tributaries with associated riparian areas, scattered development along the highway, and the Montana Rail Link railroad line.

Those who view the existing roadway and who would see the reconstructed transportation facilities in the project area include permanent residents, motorists on U.S. Highway 287, and operators of Montana Rail Link trains on the railroad line that parallels the highway.

IMPACTS OF THE PREFERRED ALTERNATIVE. The Preferred Alternative would not change views of the background landscapes along U.S. Highway 287 south of Townsend. However, this alternative would cause minor changes to the foreground landscape due to the increased width of the new roadway, a slight easterly shift in the road's location, and revised roadside slopes.

The existing 9.1 m (30-foot) wide road would be replaced by a new two-lane highway at least 12 m (40 feet) wide with wider paved shoulders and flatter roadside slopes for about half the corridor's length. Throughout the remainder of the corridor, the new road would include center medians and/or left turn lanes, two five-lane passing areas, wider paved shoulders, and flatter roadside slopes. The paved roadway would be 22.8 m (76 feet) wide in each passing area. Corridor residents and frequent highway users would notice the increased width of the new roadway and recognize that the right-of-way and clear zone areas would be considerably wider than those associated with the existing facility.

North of Dry Creek (between RPs 82 and 83), road widening would encroach on several large wetland areas adjacent to the road with open water. Due to the proposed easterly alignment shift, fill would be placed in portions of these wetlands. The appearance of these wetlands would be changed from existing conditions. It is expected that over time, these roadside wetlands would take on an appearance similar to the existing condition.

The new roadway would be closer to several residences located east of the highway as a result of an alignment shift. Some trees from windbreaks near a few residences and along streams or irrigation ditches would be lost due to road widening. Other permanent visual changes within the project area within the

Townsend-South corridor would include revisions to major road intersections and roadway approaches.

The Preferred Alternative would not change the visual relationship between the highway and Montana Rail Link Railroad through the corridor. The offset distance between the western edge of the highway and the railroad would be unchanged.

The Preferred Alternative would cause minor, short-term visual impacts during the construction period. Visual changes during construction would include: surface disturbances and clearing until revegetation occurs; temporary sign installations; the storage of excavated material, equipment, and material; and dust and debris from construction activities.

IMPACTS OF THE NO ACTION ALTERNATIVE. There would be no change in the visual appearance of the project area due to continued highway maintenance actions by MDT.

MITIGATION MEASURES. The following measures will be incorporated with the proposed Townsend-South project to offset potential visual impacts:

- *Areas disturbed within the MDT Right-of-Way or construction easements will be reseeded as quickly as practicable after construction.*

4.3.13 CONSTRUCTION IMPACTS

Road reconstruction activities associated with the Preferred Alternative would cause temporary inconveniences to the traveling public and to local residents. These inconveniences may include slightly longer travel times, minor detours around work zones, and the noise and dust generated by construction equipment. These impacts could be expected to occur at various times throughout the two-year-long period required to construct the proposed highway improvements and its associated features.

Typical impacts associated with the construction are described in more detail below:

- **Traffic Disruptions, Delays, and Detours.** The proposed project would be built “under traffic” meaning that travel through work zones would be allowed during construction. Traffic inconveniences will be most frequent during the first construction season when the foundation for the new road and new drainage facilities are installed.

MDT will prepare a traffic control plan to ensure that traffic flows through the project area are maintained in a safe and efficient manner and that access to adjacent businesses, residences, and agricultural lands is provided during the construction period. The traffic control plan may require the use of temporary detours, occasional

delays, and the use of flaggers or pilot cars to guide traffic through work zones.

- **Noise and Vibration.** The operations of heavy machinery like earth moving equipment, paving equipment, power tools, and trucks would create periods of undesirable noise in the project area. Noise due to construction activities would produce short-term impacts for residents and business owners near the highway. Construction-related noise may also temporarily displace some wildlife and bird species from the area or deter such species from using habitats in the vicinity of the roadway.
- **Dust.** The operation of heavy equipment on disturbed areas and gravel crushing activities could produce dust.
- **Water Quality.** Runoff from disturbed surface areas has a minor potential to enter surface waters and adversely affect water quality. Petroleum products and other materials could be spilled during the operation and maintenance of equipment needed to build the new highway facilities.

Waste Materials. The reconstruction of U.S. Highway 287 will produce a variety of waste materials associated with the old highway including: old asphalt, culverts, guardrail, and concrete removed from three existing bridges in the project area. Additionally, waste fluids associated with contractor vehicles and equipment will be produced.

- **Visual.** Stockpiles of materials (topsoil, gravel, old asphalt) and parked equipment needed for the construction of the new roadway may cause short-term adverse impacts for local residents and others passing through the project area.
- **Gravel Source and Asphalt Plant.** Substantial quantities of gravel (aggregate) must be imported for the construction of a foundation for the new road and for the preparation of asphalt surfacing. Typically, providing gravel and asphalt surfacing is the responsibility of the contractor for the project. A gravel source for this project has not yet been identified; however, it is assumed that the source will be identified in the general area of the Townsend-South project. The development of a gravel source site requires the contractor to obtain and follow all provisions of an Opencut Mining Permit from the MDEQ in accordance with the *OPENCUT MINING ACT* (82-4-401 et seq., MCA). The contractor must prepare a reclamation plan and submit a reclamation bond.

The contractor must also establish and operate an asphalt plant in the general project area to provide surfacing for the new road. An air quality permit from the

MDEQ is required for the operation of any mineral crushing or other processing plants.

IMPACTS OF THE NO ACTION ALTERNATIVE. The only construction impacts associated with this alternative would be related to the completion of minor maintenance activities on the existing roadway and its related facilities. Maintenance actions have the potential to create minor temporary and localized impacts such as noise from equipment, delays or detours, and surface disturbances.

MITIGATION MEASURES. Construction impacts will be mitigated through the implementation and enforcement of control measures during construction such as:

- *Traffic control will be accomplished in accordance with MDT's standard practices and the Manual on Uniform Traffic Control Devices (MUTCD).*
- *If dust generated by construction activities becomes a concern, it will be controlled by the required use of either water or another approved dust suppressant.*
- *Temporary and permanent BMPs for erosion control will be employed to prevent sediments from reaching the area surface waters or wetlands. A SWPPP employing BMPs will be implemented throughout the project corridor.*
- *The contractor will be required to have a plan for implementing appropriate measures in the event of an accidental spill of fuel or other hazardous materials.*
- *All work related to the proposed Townsend-South project would be subject to the provisions included in the current edition of Standard Specifications for Road and Bridge Construction as adopted by MDT and the Montana Transportation Commission.*
- *Reasonable access to adjacent businesses and residences will be maintained during construction.*
- *Disposal of project waste materials will be accomplished with applicable laws, rules and regulations.*

4.3.14 PERMITS REQUIRED

The No Action Alternative would not require any permits.

However, the Preferred Alternative for the proposed Townsend-South project would require a variety of permits to be obtained prior to any relevant disturbances.

Water-Related Permits. The Preferred Alternative will require the following permits to comply with various provisions of the *CLEAN WATER ACT* (33 U.S.C. 1251 - 1376):

-
- **Section 402/Montana Pollutant Discharge Elimination System (MPDES) Permit.** The project will require a *Section 402/Montana Pollutant Discharge Elimination System* permit from the MDEQ's Permitting and Compliance Division. Accordingly, MDT will submit a Notice of Intent (NOI) Form for stormwater discharges under the MPDES "General Permit for Storm Water Discharges Associated with Construction Activity." This permitting process would serve only as a notice of intent to discharge, rather than a submittal for agency review or approval of a Storm Water Pollution Prevention Plan (SWPPP).
 - **Section 318 Authorization.** In accordance with 75-5-318, MCA, a Section 318 Authorization for short-term turbidity may be required from the MDEQ Permitting and Compliance Division.
 - **Section 404 Permit.** A *Section 404* permit from the COE will be required for the placement of fill or excavation in delineated jurisdictional wetlands and "Waters of the US" associated with the installation of new replacement culverts. The COE will determine if this proposed project requires an "Individual" permit or qualifies for a "Nationwide" permit under the provisions of 30 CFR 330. Preliminary correspondence from the COE (September 9, 2003) suggests that an Individual Permit may be required due to the anticipated project impacts to jurisdictional wetlands and Waters of the U.S. The Individual Permit process typically requires 120 days or more to complete following the submittal of a complete 404 permit application.
 - **Section 401 Water Quality Certification.** Under *Section 401*, states can review and approve, condition, or deny all Federal permits or licenses that might result in a discharge to State waters, including wetlands. The MDEQ must provide a Section 401 Water Quality Certification if this project requires an Individual Permit from the COE.

Other water-related permits required for the Townsend-South project include:

- **124SPA Permit.** A **124SPA** Permit as required under the *Montana Stream Protection Act* is necessary for a new culvert installations and related work in Deep Creek, Deep Creek Overflow, Greyson Creek, and Dry Creek.

All work would also be in accordance with the *WATER QUALITY ACT OF 1987 (P.L. 100-4)*, as amended.

Floodplain Development Permit. A Floodplain Development Permit would be required from Broadwater County for the proposed work in the delineated floodplains of the Missouri River, Deep Creek, and Greyson Creek.

Other Likely Permits. Several other permits associated with construction activities may be required for this proposed project. These permits are identified below:

- **Opencut Mining Permit.** The development of a gravel source site requires the contractor to obtain and follow all provisions of an Opencut Mining Permit from the MDEQ in accordance with the *OPENCUT MINING ACT (82-4-401 et seq., MCA)*.
- **Air Quality Permit.** An air quality permit from the MDEQ Air Resources Management Bureau is required for the operation of any mineral crushing or asphalt processing plants.

4.4 INDIRECT (SECONDARY) EFFECTS

Indirect (secondary) effects are those caused by the proposed highway reconstruction project but that occur at a different time and/or place. Transportation improvements often have the potential to induce growth and change patterns of land use, population density or growth rates, social and economic conditions, accessibility, traffic volumes, noise levels. Such induced changes may in turn affect air and water quality and other natural systems.

The indirect effects associated with the Townsend-South project are expected to be minor and several indirect effects may be beneficial. This conclusion was made because the primary purpose of the proposed project is to make design changes to an existing roadway to increase its safety and improve its capacity. The resulting facility would make travel on U.S. Highway 287 safer, more efficient, and more convenient for area residents and other highway users.

Other minor indirect impacts that could occur as a result of this project include:

- Road widening would increase in the amount of impervious surface area in the highway corridor. As a result, groundwater infiltration along the roadway would be reduced and larger quantities of runoff from the highway would transport roadway pollutants to area drainages.
- A minor loss in property tax revenue to Broadwater County due to right-of-way acquisition for the expanded highway.
- Upgrades to utilities or minor enhancements to services in the project corridor due to utility relocations.
- Increased traffic on the highway over time and the change in road alignment would result in noise levels above the NAC at two locations.
- The minor loss of "Important Farmland" would contribute to the continuing loss of such resources in Broadwater County.

This project is not intended to induce growth or cause land use changes. Subdivision and growth of rural lands in Broadwater County, like many areas of western Montana, is on the increase and expected to continue. Rural areas of Broadwater County grew by 32 percent over the 1990-2000 period, making the County one of the state's top three growth counties trailing only Ravalli County and adjoining Gallatin County. Over the same period, the City of Townsend grew by 14 percent. According to the "Broadwater County Growth Policy Plan and Comprehensive Economic Development Strategy," similar growth is anticipated over the next ten years in the County.

Although growth has occurred in the County and is expected to continue, such growth has generally taken place in areas north of Townsend (near the Lewis and Clark County line, north of Winston, and in the Silos area) and near the junction of U.S. Highway 287 and I-90. New development and population growth has generally not occurred in the Townsend-South project area since much of the area is comprised of agricultural lands held by a relatively small number of owners.

The proposed Townsend-South project may indirectly contribute to further growth and development in rural Broadwater County. While this is a possibility, there are too many other factors that promote growth to accurately predict that if or when substantial new growth would occur in the project area. The factors include items such as the general economy, land prices, tax levels and the existence of services and infrastructure. The *Broadwater County Growth Policy Plan and Comprehensive Economic Development Strategy* attempts to discourage new development in areas with irrigated and productive agricultural lands (like the project corridor) in favor already areas with existing infrastructure and services or where infrastructure and services can be readily extended.

Any potential indirect impacts would be tempered somewhat by the fact that U.S. Highway 287 would be improved on or near its existing alignment and with relatively limited modifications.

Reconstructing the road would not substantially change the character of the much of the project area or cause current property owners and developers to build faster or any differently than they would have without the proposed highway improvements. The proposed action would not make any lands in project area accessible for the first time for development activities.

4.5 CUMULATIVE IMPACTS

Cumulative impacts are those effects that result from the incremental consequences of an action when added to other past and reasonably foreseeable future actions regardless of what agency (federal or non-federal) undertakes such actions. In order to help evaluate possible cumulative effects, research was conducted to identify other known or planned projects in the vicinity of the Townsend-South corridor.

Recently completed, ongoing, and reasonably foreseeable projects by MDT and others are described in the following paragraphs.

4.5.1 RECENTLY COMPLETED PROJECTS ON U.S. HIGHWAY 12/287

The following projects on U.S. Highway 12/287 between Helena and the West Three Forks interchange on I-90 or on U.S. Highway 12 near Townsend were recently completed.

- **US 287 Passing Lane - Baum Road** - Passing Lane Addition on U.S. Highway 12/287 finished in 2003.
- **US 287 Passing Lane - N of Silos** - Passing Lane Addition on U.S. Highway 12/287 finished in 2003.
- **Winston North & South** - Seal and Cover project on U.S. Highway 12/287 let and finished in 2002.
- **2 km S of Winston-South** - Widen, Seal and Cover project on U.S. Highway 12/287 let and finished in 2003.
- **Townsend-East** - Pavement preservation project on U.S. Highway 12 immediately east of Townsend let and finished in 2004.
- **Deep Creek Canyon** - Pavement preservation project on U.S. Highway 12 through Deep Creek Canyon east of Townsend let and finished in 2004.

4.5.2 ONGOING AND PLANNED PROJECTS ON U.S. HIGHWAY 12/287

MDT currently has three active and one planned projects on U.S. Highway 12/287 between Helena and the West Three Forks interchange on I-90, not including the proposed Townsend-South project. These projects are identified and briefly described below:

- **Helena-East Helena; NH 8-2(59) 46; Control No. 4820.** This active project would mill the surface and replace the median and shoulder paving on a portion of U.S. Highway 12/287 between Helena and East Helena. The proposed project is located about 51 km (32 miles) north of the Townsend-South project area. The project was let to contract in January 2006.
- **US 287 Passing Lane - S of Toston; NH 8-4(41) 58; Control No. 3377.** This active project will provide a four-lane passing area by widening and resurfacing about 4.2 km (2.6 miles) of U.S. Highway 287 south of Toston. The proposed project is located about 16 km (10 miles) south of the Townsend-South project area. Construction

began on this project in the summer of 2005 and should be completed in 2006.

- **US 287 Passing Lane - N of Three Forks; NH 8-4(32) 58; Control No. 3377.** This active project would provide a four-lane passing area by widening and resurfacing about 5.2 km (3.2 miles) of U.S. Highway 287 north of the west I-90 interchange near Three Forks. The project is located about 32 km (20 miles) south of the Townsend-South project area. The project was let to contract in December 2005 and should be completed in 2006.
- **Turn Bay-W Three Forks Interchange; IM-STPHS 8-4(34) 108; Control No. 4435.** This proposed project would replace the highway bridge at West Three Forks I-90 interchange and provide turn lanes for traffic on U.S. Highway 287. The project is located about 35 km (22 miles) south of the Townsend-South project area. The planned date for implementation of this passing lane addition is during Fiscal Year 2006.

4.5.3 PLANNED PROJECTS ON U.S. HIGHWAY 12 (EAST OF TOWNSEND)

MDT currently has two planned projects on U.S. Highway 12 in the Townsend area including:

- **East of Townsend; STPP 14-1 (9) 16; Control No. 1510.** This planned project would reconstruct about 7.7 km (4.8 miles) of U.S. Highway 12 and replace an existing bridge. The project, located about 22.5 km (14 miles) northeast of the Townsend-South project, would be implemented in Fiscal Year **2006**.
- **2001-Turn Bay - E of Townsend; STPHS 14-1 (12) 2; Control No. 5020.** This planned safety project to be implemented during 2007 would provide a turn bay at the U.S. Highway 12/Secondary Highway 284 intersection located about 3.2 km (2 miles) east of Townsend. The project is scheduled for letting in 2006.

It should be noted that the availability of funding could affect the timing of implementation for these planned MDT projects.

4.5.4 REASONABLY FORESEEABLE MDT PROJECTS

The projects identified below are reasonably foreseeable MDT actions in the general vicinity of the Townsend-South project area.

- **U.S. Highway 287 Reconstruction in the Toston Area.** MDT has considered other potential reconstruction projects on U.S. Highway 287 in the Toston area. Two

such projects, identified for planning purposes as the "Toston-North" and "Toston-South" projects, proposed to reconstruct about 13 km (8 miles) of U.S. Highway 287 immediately south of the proposed Townsend-South project. Highway reconstruction in this area would require the replacement of highway bridges over the Missouri River and the Montana Rail Link railroad at Toston.

MDT's original Townsend-Toston project (started in the early 1990's) included the replacement of highway bridges over the Missouri River and railroad at Toston. Several alternative alignments for the river crossing were identified prior to when the project was dropped. It is likely that a project to replace the bridges would be implemented in the future. However, the current funding situation suggests that it may be ten or more years before MDT would sufficient monies to implement such a project.

MDT recently issued new information about the Toston-South project and another project that would connect the passing lane sections presently under construction on U.S. Highway 287 between Toston and Three Forks. The planned Toston-South project [NH 8-4(47) 89; Control No. 5814000] would rebuild about 6.8 km (4.2 miles) of U.S. Highway 287 between RP 89.1 (0.5 miles south of the Radersburg Road) and RP 93.3. The planned Jct. S-437-North & South project [NH 8-4 (49) 96, CN 5813000] would reconstruct another 9.8 km (6.1 miles) of U.S. Highway 287 between RP 96.1 and 102.2.

Both projects would flatten the road to improve sight distance, widen the existing highway, and incorporate new four-lane sections and left turn lanes at various locations. The projects would be constructed after 2010 depending on the availability of funding.

An additional reconstruction project (known as the North of Three Forks-North) was recently proposed by MDT. This project would reconstruct about 2.9 km (1.8 miles) of U.S. Highway 287 between RP 105.4 and MP 107.2. The scope of the proposed project would be similar to the Toston-South and Jct. S-437-North & South projects. The project would be built sometime after 2010.

- **Four-lane Reconstruction of U.S. Highway 12/287.** Traffic volumes on the U.S. Highway 12/287 corridor between East Helena and I-90 near Three Forks have steadily increased in recent years. The highest traffic counts in the corridor occur in the East Helena area and traffic volumes generally decrease in a southerly direction within the corridor. As discussed in Part II of the EA, MDT expects traffic on this route to continue increasing at about 5 percent annually for at least the next twenty years. With continued increases in traffic, it is conceivable that four-lane reconstruction could be

proposed in the most heavily traveled section(s) of the corridor in the foreseeable future.

U.S. Highway 12/287 from East Helena to Helena has already been reconstructed as a four-lane facility. As indicated previously, the route has also been reconstructed between East Helena and Townsend to provide two passing sections. Other than the improvement projects mentioned above, there are no immediate plans for reconstructing U.S. Highway 12/287 between East Helena to I-90 as a four-lane facility. MDT's recent and proposed improvements to the route are expected to provide the necessary safety and operational enhancements to adequately accommodate traffic growth over the next decade.

The most logical location for future four-lane reconstruction on the route would be between East Helena and Townsend where the traffic volumes are highest and density of roadside development is greatest. MDT does not envision four-lane reconstruction in this portion of the route occurring for ten or more years. South of Townsend, four-lane reconstruction probably couldn't be justified based on traffic volumes for at least twenty years.

The earliest anticipated date for the beginning construction of the Townsend-South project is 2009. A review of MDT's other planned highway projects shows that all of these projects will likely be completed before the Townsend-South construction project is initiated. None of these other MDT projects would be located in close proximity to the Townsend-South project area. The review also shows that none of the proposed projects would be of the same magnitude as the proposed Townsend-South reconstruction project.

Because MDT's other active and planned reconstruction projects are not contiguous with the proposed work area in the Townsend-South project area and would not generally occur at the same time, the cumulative environmental impacts of these projects on the proposed Townsend-South project would be minor. Similarly, the proposed improvements on U.S. Highway 287 would not be expected to produce any significant cumulative environmental impacts on other proposed projects in MDT's Butte District.

Although these MDT projects occur in the same general area of Broadwater County and would likely be implemented within two or three years of each other, the planning, design, and construction of each project has proceeded independently.

Implementing the Townsend-South reconstruction project would not trigger the need for improvements to other adjoining segments of the route, on U.S. Highway 12 east of Townsend, or on other county or local roads. Likewise, implementation of other known road projects within Broadwater County would not

require that U.S. Highway 287 in the Townsend-South project be reconstructed.

MDT would continue to coordinate future projects with the public and other appropriate agencies, complete a review of potential impacts to the environment, and identify requirements for mitigation of any adverse effects as projects are developed and implemented.

Future growth in the Townsend-South corridor, Broadwater or Lewis and Clark Counties, or adjoining counties would likely be driven by factors other than improvements to U.S. Highway 12/287. Such factors are primarily related to the national and global economic conditions and the price of energy. For these reasons, it is impossible to predict what types of impacts might occur. It is certain that such development, should it occur, would happen independently of the Townsend-South reconstruction project.

4.5.5 PROJECTS BY FEDERAL AGENCIES IN THE AREA

Projects underway or proposed by federal agencies in the vicinity of the Townsend-South project corridor were also reviewed to help assess the potential for cumulative impacts. These projects are discussed in the following paragraphs.

U.S. FOREST SERVICE - HELENA NATIONAL FOREST

PROJECTS. The U.S. FOREST SERVICE (USFS) administers land in the Helena National Forest to the east and west of the U.S. Highway 12/287 corridor. A review of the Helena National Forest NEPA Quarterly Report (October 2004), shows a variety of active projects within the Townsend Ranger District of the Helena National Forest. All of these projects are well removed from the Townsend-South corridor and most will be implemented within the next year. Categorical Exclusions are being processed for many of the proposed actions, suggesting there would be no significant impacts associated with their implementation.

U.S. DEPARTMENT OF THE INTERIOR - BUREAU OF LAND MANAGEMENT PROJECTS.

The U.S. DEPARTMENT OF THE INTERIOR BUREAU OF LAND MANAGEMENT (BLM) manages a variety of public lands in this area but none of their lands adjoin the U.S. Highway 287 corridor in the Townsend-South project area. The only project being undertaken by the BLM near the project corridor is described below.

- **Montana Army National Guard Withdrawal at Limestone Hills Training Area.** The Limestone Hills Training Area (LHTA) encompasses about 9,350 ha (23,100 acres) in the Elkhorn Mountains west of the Missouri River southwest of Townsend. The LHTA contains 1,070 ha (2,640 acres) of private and state-owned inholdings, but the majority of the property is owned and managed by the BLM. The area is the main training area for the Montana Army National Guard.

Access to the LHTA is provided from a county road joining US Highway 12/287 north of Townsend.

The BLM has allowed the National Guard to train on the property since the 1950s; however, the agency recently decided they want to modify the arrangement, and put more of the management responsibilities on the National Guard. The agency proposes to retain management of the mineral resources on the property but transfer the surface land to the U.S. Department of Defense.

Graymont Western mines limestone on a portion of the land in the LHTA. The most recent agreement between the BLM and the National Guard expires in 2014. Early in 2003, the Department of the Army announced its intentions to prepare a Legislative EIS to analyze the effects of the proposed withdrawal of lands supporting training exercises for the National Guard.

U.S. DEPARTMENT OF THE INTERIOR - BUREAU OF RECLAMATION PROJECTS.

The U.S. DEPARTMENT OF THE INTERIOR-BUREAU OF RECLAMATION manages lands surrounding Canyon Ferry Reservoir. The following projects or actions by the agency have or will be occurring in the general vicinity of the Townsend-South project area.

- **Canyon Ferry Reservoir Resource Management Plan/Environmental Assessment.** The U.S. DEPARTMENT OF THE INTERIOR-BUREAU OF RECLAMATION (BOR) recently completed the combined Resource Management Plan/Environmental Assessment (RMP/EA) to establish a 10-year management framework for conserving, protecting, enhancing, developing and using the physical and biological resources at Canyon Ferry Reservoir and its surrounding lands. Canyon Ferry Dam and Reservoir can be accessed from U.S. Highway 12/287 via several Secondary and county roads. The Finding of No Significant Impact (FONSI) document for the RMP was signed on February 7, 2003.
- **Silos Bay Marina Project.** Construction for a major new recreation facility on Canyon Ferry Reservoir north of Townsend near the Silos Recreation Area was started in September 2003. The project, known as the Silos Bay Marina, will be developed on land leased to Broadwater County by the BOR. Various state and federal agencies, the City of Townsend, and local residents have been involved in the planning and implementation of the project.

The Silos Bay Marina project, which is estimated to cost about \$3.3 million, will be implemented under several phases and take several years to complete. The initial phase, which began construction in September 2003, involves excavating a deep-water bay that will provide the only safe docking site for boaters on the southwest side of Canyon Ferry Reservoir. Construction of two boat

launch ramps, docks, a parking area, and roads are included in future phases. The final phase of project may provide a full-service marina and restaurant. No completion date for the entire project has been set.

Local officials are optimistic that investment in the marina will eventually be returned through new economic growth in the Townsend area and Broadwater County.

- **Long-Term Water Service Contract Renewals.** The BOR recently prepared a Draft Environmental Assessment for the long-term renewal of water service contracts with the Helena Valley and Toston irrigation districts and City of Helena. Water from Canyon Ferry Reservoir and Crow Creek Pumping Plant on the Missouri River near Toston provides water for power, flood control, irrigation, municipal and industrial supplies, fish and wildlife, recreation, and other purposes in the upper Missouri River basin. The Toston Irrigation District does not encompass any lands within the Townsend-South corridor.

Federally-managed lands do not exist in close proximity to the U.S. Highway 12/287 corridor. None of the federal projects considered here would be expected to result in cumulative effects because the projects are not contiguous with the proposed Townsend-South work area and would not generally occur at the same time.

The Silos Bay Marina will be a new recreational destination and could ultimately attract new visitors and seasonal residents to Canyon Ferry Reservoir and the Townsend area. Consequently, recreational use of the reservoir and its adjoining lands, travel routes, and traffic volumes on area roads may change over time. Since U.S. Highway 12/287 serves as one of the principal access routes to Canyon Ferry Reservoir, additional vehicle trips would likely be realized on the highway corridor in the future.

However, MDT's planning and proposed facility improvements would provide additional capacity on the route. New recreational development at Canyon Ferry Reservoir would not cause notable impacts to traffic operations or compromise traffic safety within the U.S. Highway 12/287 corridor.

For the above reasons, the cumulative environmental effects of these federal projects when considered with the proposed Townsend-South project would be minor.

4.5.6 PLANNED PROJECTS BY OTHERS IN THE AREA

Projects underway or proposed by others in the vicinity of the Townsend-South project corridor were also reviewed to help assess the potential for cumulative impacts.

The lands in the Townsend area, particularly between Townsend and East Helena, including some lands immediately adjacent to U.S. Highway 12/287, continue to see commercial and residential development. Currently, there are no known major subdivisions proposed for the immediate Townsend-South project corridor. Minor subdivision proposals continue to be received by the County in northern Broadwater County.

The City of Townsend is planning to reconstruct many of the streets within the community. This reconstruction work began in the summer of 2005 and will be completed during 2006.

4.5.7 CONCLUSIONS

Based on the review of ongoing, planned and proposed projects by MDT and others, it was concluded that the proposed reconstruction of U.S. Highway 287 would not cause significant indirect or cumulative impacts to environmental resources in the Townsend-South project area.

MDT would continue to coordinate future projects with the public and other appropriate agencies, complete a review of potential impacts to the environment, and identify requirements for mitigation of any adverse effects as projects are developed and implemented. Likewise, other future federal and state projects will be subject to reviews under NEPA and MEPA to determine if significant environmental impacts are likely and identify measures to mitigate any identified adverse effects.

Broadwater County's Growth Policy Plan and Comprehensive Economic Development Strategy recognize that growth and development, if not planned, may cause adverse cumulative effects and change the "character" of the County. The Growth Policy has identified policies and objectives to guide new developments within the County. Broadwater County ultimately has the ability to control many potential cumulative effects associated with new growth and development through land use planning and regulations.

PART 5.0: Coordination with Others

PART 5.0: Coordination with Others

5.1 INTRODUCTION

This PART summarizes efforts undertaken to communicate with interested agencies and the public about the proposed highway improvements within the Townsend-South project area. The objectives of the activities performed to coordinate this project are to:

- identify and include people, groups, and agencies that may be affected;*
- provide opportunities for interested parties to express their views, ideas, and concerns about the project;*
- ensure that interested parties receive understandable project information; and*
- make it apparent to interested parties that their opinions and ideas have been considered during the development of the project.*

5.2 AGENCY COORDINATION

5.2.1 COOPERATING AGENCIES

MDT and the FHWA are developing the proposed Townsend-South reconstruction project under Montana's National Highway System (NHS) Program. There were no requests issued to federal, state or local agencies with jurisdiction by law or special expertise to become Cooperating Agencies for this proposed action.

5.2.2 AGENCIES CONSULTED

Coordination with permitting and resource agencies has informally occurred during the development of the project through correspondence requesting comments and/or needed information. The following agencies and parties were consulted during the development of this Environmental Assessment:

- Montana Department of Commerce (MDOC)
- Montana Department of Environmental Quality (MDEQ)
- Montana Department of Fish, Wildlife & Parks (MDFWP)
- Montana State Historic Preservation Office (SHPO)
- Natural Heritage Program, Montana State Library (MNHP)
- U.S. Department of the Interior - U.S. Fish & Wildlife Service – (USFWS)
- U.S. Department of Agriculture - Natural Resources Conservation Service (NRCS)
- U.S. Department of the Army Corps of Engineers (COE)
- U.S. Environmental Protection Agency (EPA)
- Broadwater County Commissioners
- Mayor, City of Townsend

5.2.3. AGENCY COORDINATION

PROJECT NOTIFICATION LETTERS. Letters were sent to various state and federal agencies in May 2000 to provide notifications of this proposed project and to solicit comments and information useful to the development of the EA. Agency responses were used to help establish the scope of this environmental document.

SEPTEMBER 11, 2003 MEETING. A coordination meeting with interested or involved agencies was held on September 11, 2003. In addition to MDT and FHWA staff, representatives of the COE, USFWS, MDFWP, and MDEQ attended the meeting. Coordination also occurred with staff from the EPA who could not attend the September 2003 meeting.

The overall purpose of the meeting was to provide current information about the scope of the proposed project to interested agencies and seek input for the EA. Preliminary project plans and wetland impact estimates were provided in advance to meeting attendees to provide an indication of potential impacts to wetlands associated with rebuilding on or near the existing alignment.

Jeff Ebert, MDT's Butte District Administrator, provided a brief history of the project's development and explained past suspensions of work on the project. Mr. Ebert indicated FHWA and MDT discussed the need to prepare an Environmental Impact Statement (EIS) for the U.S. Highway 12/287 corridor between East Helena and Three Forks and indicated a decision was ultimately made to prepare a project-specific EA for the Townsend-South segment.

Agency representatives were also advised that the proposed project includes three passing lanes sections instead of one long four-lane segment as originally proposed. Reasons for these preliminary design changes were discussed.

Considerable discussion at the meeting focused on wetland impacts associated with reconstructing the highway on or near its present alignment. The COE representative commented that a wetland mitigation plan will need to be in place before the COE permits the project. The COE representative also indicated that the EA should document why other alternate alignments were not selected if the selected action is to rebuild on or near the existing highway. Other discussions regarding wetlands focused on possible measures to reduce wetland impacts and the status of wetland mitigation opportunities for the project and past efforts to seek mitigation sites in the drainage.

Potential effects to populations of Ute ladies' tresses, a plant listed under the *Endangered Species Act*, were also discussed. The USFWS representative indicated there will be an adverse effect on the plants but there won't be a "taking" of the species because the Endangered Species Act treats plants differently than wildlife species. The USFWS representative mentioned that

threatened and endangered species issues must be appropriately addressed and resolved because they are important factors in the COE 404 permitting process.

The meeting concluded with a general discussion of wildlife passage and crossing issues.

5.3 PUBLIC INVOLVEMENT

5.3.1 INITIAL PROJECT NEWS RELEASE

MDT issued a news release about the proposed Townsend-South project on May 23, 2001. The news releases typically contained a general description of the scope of work proposed at the time and announced the time, date, and location for a June 28, 2001 public information meeting on the project.

The news release was mailed to the following local news organizations:

- *Bozeman Daily Chronicle*
- *Helena Independent Record*
- *High Country Independent Press*
- *Meagher County News*
- *Three Forks Herald*
- *Townsend Star*

5.3.2 JUNE 28, 2001 PUBLIC MEETING

A public informational meeting about MDT's Townsend-South project was held at the Townsend High School Community Room at 7:00 p.m. on June 28, 2001. The meeting was held to discuss the project area, basic design elements, and the environmental process and schedule for developing the project. More than twenty people attended the meeting.

Oral comments heard at the meeting concerned impacts to agricultural properties and operations, traffic speeds and safety, impacts to wetlands and wildlife, and the need for additional right-of-way.

Seven written comment forms were received following the meeting. Six of the seven comments advocated relocating U.S. Highway 287 to the west side of the Missouri River, to avoid adverse agricultural, wetland, and right-of-way impacts. The remaining comment indicated general support for this project as a means to increase traffic safety on U.S. Highway 287.

5.3.3 NOVEMBER 2005 EA CIRCULATION

APPROVAL OF EA FOR PUBLIC AVAILABILITY. The FEDERAL HIGHWAY ADMINISTRATION (FHWA) approved the Townsend-South EA and "Nationwide" *Section 4(f)* Evaluations for public availability on October 6, 2005. The EA was subsequently published and distributed to local, state, and federal agencies and others who had previously expressed interest in receiving the document.

PUBLIC NOTICE AND EA AVAILABILITY. On November 17, 2005, a news release announcing the availability of the EA and the time, date, and location of the public hearing was posted on MDT's website and sent to area newspapers and radio and television stations. The news release was sent to the following media outlets:

Newspapers

- *Independent Record* (Helena)
- *Townsend Star* (Townsend)
- *Three Forks Herald* (Three Forks)
- *Queen City News* (Helena)

Radio and Television Stations

- KBLL AM/FM
- KMTX AM/FM
- KCAP
- KHKR
- KZMT
- KVCM
- Carroll College Radio
- KHBB-TV
- KTVH-TV

A copy of the news release posted on MDT's website and provided to local newspapers and broadcast media outlets can be found in **APPENDIX C**.

Display advertisements announcing the availability of the Townsend-South EA and the scheduled public hearing were published in area newspapers as shown below:

Independent Record – Friday, November 18, 2005
Sunday, December 4, 2005

Townsend Star – Thursday, November 24, 2005
Thursday, December 8, 2005

Three Forks Herald – Wednesday, November 23, 2005
Wednesday, December 7, 2005

A copy of the display advertisement as published in these local newspapers can be found in **APPENDIX C**.

EA DISTRIBUTION. Copies of the EA were mailed to all agencies and persons on the EA Circulation List (as shown in **PART 5.0** of the EA) by November 18, 2005. MDT provided a letter with each copy of the EA indicating the date, time, and location of the public hearing on the EA, how to submit comments on the EA, and the comments due date.

Additionally, letters announcing the availability of Townsend-South EA and the scheduled public hearing were mailed to about 40 individuals including landowners along the project corridor; other interested groups. The letter indicated where copies of EA could be viewed; how copies of the EA could be obtained; the

those who attended previous project meetings or previously the time, date, and location of the public hearing; and how and when to submit written comments on the EA.

EA VIEWING LOCATIONS. MDT's newspaper notices and letters to interested parties advised that copies of the Townsend-South EA were available for public review beginning November 18, 2005 at the following locations:

- **Broadwater County Museum/Library**
631 North Pine (Townsend)
- **Broadwater County Clerk & Recorder's Office**
515 Broadway (Townsend)
- **Montana State Library**
1515 East Sixth Avenue (Helena)
- **MDT Environmental Services Bureau**
2701 Prospect Avenue, Room 111 (Helena)

The multiple copies of the EA provided to the Montana State Library allowed for the distribution of the document to state agencies and other libraries including the Montana Historical Society and those affiliated with state universities.

An on-line version of the document was made available for viewing or downloading from MDT's website: www.mdt.mt.gov/pubinvolve/eis_ea.shtml. An opportunity to submit comments on the Townsend-South EA via e-mail was also provided from MDT's website.

REQUESTS FOR COPIES OF THE EA. As a result of the public notice and distribution of the EA, MDT did not receive any requests for copies of the document from the public or other interested parties. MDT provided additional copies of the EA for public viewing at the Broadwater County Clerk & Recorder's Office and Broadwater County Museum/Library.

PUBLIC REVIEW PERIOD FOR THE EA. The public review period for the EA began on November 18, 2005 and ended on January 13, 2006.

5.3.4 DECEMBER 15, 2005 PUBLIC HEARING ON EA

A public hearing was held on Thursday, December 15, 2005 in the Community Room of the Townsend High School (201 North Spruce Street). The purposes of the hearing were to explain the scope of the proposed highway reconstruction project, discuss the findings of the EA, and to receive public comments. The public hearing began at about 7:00 p.m. and concluded by 9:30 p.m. MDT recorded the engineering presentation and comments heard at the meeting.

According to the sign-in sheets from the public hearing, 29 individuals attended the meeting including MDT and FHWA staff present at the meeting. Copies of the sign-in sheets from the public hearing are provided in **APPENDIX C**.

The public hearing began with introductions by Charity Watt Levis of MDT and a brief discussion of the meetings purpose and procedures for offering comments on the EA. Ms. Watt Levis then turned the meeting over to Dan Norderud of Robert Peccia & Associates, an environmental consultant hired by MDT to prepare the EA. He discussed the scope of the proposed project, the reasons why reconstruction is being proposed, design and location alternatives considered, potential environmental effects, and mitigating measures that would be implemented with the project.

Mr. Norderud provided handouts containing copies of PowerPoint slides used in the presentation about the EA and its findings.

Following Mr. Norderud's presentation, Jim Davies of MDT described the scope of the proposed reconstruction project and the planned lane configurations for the Townsend-South section of U.S. Highway 287. Mr. Davies also discussed the implementation and funding of the proposed project. He stated that \$10 million in funds have been earmarked specifically for the Townsend-South project under the recently approved federal highway bill. Mr. Davies said the project could be let to bid in February 2009 based on MDT's current schedule.

After Mr. Davies' remarks, the hearing was opened for formal comments on the EA. Charity Watt Levis moderated the comment period meeting. Ten individuals offered comments during the formal comment period at the public hearing. Ms. Watt Levis advised the audience that those not wanting to make oral comments could provide written comments on forms available at the meeting.

An informal discussion and question and answer session was held after all formal comments were received. Notable comments made during this part of the hearing focused on the following:

- The effects of right-of-way acquisition on individual properties along the highway;
- Potential impacts to existing access locations and farm field approaches;
- Concerns about using county roads as detour routes around the work zone due to the impacts of more and faster traffic and associated road dust;
- Ensuring that the contractor conducts work in a timely manner and does not leave portions of the new road unpaved over the winter; and
- The timeframe for work addressing issues with the Toston Bridge.

MDT recorded the presentations summarizing the EA and the proposed scope of the project; oral comments made during the formal public period; and the questions asked and answers

provided during the December 15, 2005 hearing. A transcript of the public hearing, produced from the recorded proceedings, is provided in **APPENDIX C**.

MDT/FHWA responses to comments made during the public hearing can be found in **APPENDIX C**.

5.3.5 WRITTEN COMMENTS RECEIVED ON THE EA

MDT received written comments from the following agencies and individuals during the public review period for the EA:

- **Montana Fish, Wildlife & Parks Comments**
Ron Spoon and Tom Carlsen
(letter dated January 12, 2006)
- **Broadwater County Development Corporation** (letter dated January 16, 2006)
- **Chuck Hahn - Hahn Ranch**
(letter received by MDT on January 13, 2006)
- **Nancy Marks EA Comment Form**
(December 15, 2005)

These written comments, along with MDT/FHWA responses, are provided in **APPENDIX D**.

5.3.6 FEBRUARY 22, 2006 MEETING WITH BCDC

In response to written comments made by the Broadwater County Development Corporation (BCDC), MDT staff met with group on February 22, 2006. The meeting focused on the items listed in the EA comment letter submitted by the group (which can be found in Appendix C). Many of the responses provided to the BCDC's written comments reflect the outcome of discussions at the February 2006 meeting with the group.

MDT representatives addressed the group's request for a separated pedestrian-bike path or bicycle lane by explaining that the wider shoulders associated with the new road represents a substantial improvement for bicyclists given the level of bicyclist use in the corridor. MDT also discussed the issue of providing a sidewalk along the east side of the road in the area immediately south of Townsend. The BCDC also asked questions about developing a path north of Townsend and a discussion of possible funding sources for trails projects in the community occurred. MDT suggested working with the group to develop a Community Transportation Enhancements Program (CTEP) project to add sidewalks along U.S. Highway 287 in the area.

The meeting also included conversations about adding a left turn lane for northbound traffic at the York's Islands FAS and the inclusion of bus turnarounds at two locations in the project

corridor. MDT was also asked about why such a short transition was being proposed between the southern two passing lane areas. This comment, plus similar comments heard at the public meeting and from the Superintendent of Public Schools, prompted MDT to eliminate the transition and make one long five-lane passing area in the southern part of the corridor.

MDT has responded to the BCDC's comments (see **APPENDIX D**) or addressed these comments through modifications to the Preferred Alternative.

5.3.7 PLANNED PUBLIC INVOLVEMENT ACTIVITIES FOR THE REVISED EA

A Notice of Availability of the Revised Environmental Assessment and will be mailed to all parties on the mailing list and published in local newspapers.

Written comments on the Revised Environmental Assessment will be received for thirty (30) days following its distribution. After the close of the comment period, public and agency comments on this document received by MDT will be evaluated to determine:

- whether significant impacts will occur from the implementation of the Preferred Alternative;
- if further consideration of the impacts discussed in the document is needed; and
- if new issues have arisen that must be addressed.

If no significant impacts are identified, MDT will prepare a summary of comments received on the comments received on the Revised Environmental Assessment along with appropriate responses and/or text clarifications. MDT will then provide this information to the FHWA and request the agency to make a Finding of No Significant Impact (FONSI). The signed FONSI, comments and responses, and any necessary text clarifications will then be attached to this Revised Environmental Assessment. Federal, State, and local government agencies with interests in the projects and others on the mailing list will be notified of the availability of the FONSI on the Revised Environmental Assessment.

If significant impacts are found, then MDT and FHWA must determine if an Environmental Impact Statement (EIS) must be prepared to advance the proposed Townsend-South project.

Additional public information meetings on this proposed project are not anticipated at this time. However, if this proposed project is implemented, meetings with individual property owners would occur to discuss right-of-way needs and the project's proposed access management plan.

5.4

DISTRIBUTION LIST FOR THE EA

The following agencies, groups, and individuals are being sent a copy of this Environmental Assessment:

FEDERAL, STATE, AND LOCAL AGENCIES

U.S. DEPARTMENT OF THE INTERIOR
U.S. Fish & Wildlife Service
Attn: Scott Jackson
301 South Park, Box 10023
Helena, MT 59626

U.S. ARMY CORPS OF ENGINEERS
Attn: Allen Steinle
Helena Regulatory Office
10 West 15th Street, Suite 2200
Helena, Montana 59626

EPA Montana Operations Office
Attn: Kristine Knutson
Federal Building
10 West 15th Street, Suite 3200
Helena, MT 59626

MONTANA DEPARTMENT OF
ENVIRONMENTAL QUALITY
Attn: Permitting and Compliance Division
P.O. Box 200901
Helena, Montana 59620-0901

MONTANA DEPARTMENT OF FISH,
WILDLIFE & PARKS
Region 3
Attn: Tom Hinz
1400 South 19th
Bozeman, MT 59718

MONTANA DEPARTMENT OF FISH,
WILDLIFE & PARKS
Region 3
Attn: Pat Flowers, Regional Supervisor
1400 South 19th
Bozeman, MT 59718

MONTANA DEPARTMENT OF FISH,
WILDLIFE & PARKS
Attn: Glenn Phillips
P.O. Box 200701
Helena, MT 59620-0701

MONTANA DEPARTMENT OF FISH,
WILDLIFE & PARKS
Attn: Jeff Hagener, Director
P.O. Box 200701
Helena, MT 59620-0701

MONTANA DEPARTMENT OF FISH,
WILDLIFE & PARKS
Attn: Debbie Dils
Lands Office
P.O. Box 200701
Helena, MT 59620-0701

DEPARTMENT OF NATURAL RESOURCES &
CONSERVATION
Attn: Area Manager
Central Lands Office
P.O. Box 201601
Helena, MT 59620-1601

STATE LIBRARY
Collection Management Librarian
1515 East Sixth Avenue
Helena, MT 59620-1800

ENVIRONMENTAL QUALITY COUNCIL
Attn: Todd Everts
P.O. Box 201704
Helena, MT 59620-1704

BROADWATER COUNTY COMMISSIONERS
515 Broadway Street
Townsend, MT 59644-2397

Honorable Mary Alice Upton, Mayor
City of Townsend
129 South Spruce
Townsend, MT 59644

**INDIVIDUALS SUBMITTING WRITTEN COMMENTS ON TOWNSEND-SOUTH EA
DISTRIBUTED IN NOVEMBER 2005**

Ron Spoon, Fisheries Biologist
Montana Department of Fish, Wildlife & Parks
P.O. Box 1137
Townsend, MT 59644

Ernie Forney, President
Broadwater County Development Corporation
P.O. Box 947
Townsend, MT 59644

Tom Carlsen, Wildlife Biologist
Montana Department of Fish, Wildlife & Parks
P.O. Box 998
Townsend, MT 59644

Chuck Hahn
Hahn Ranch
7996 Highway 287
Townsend, MT 59644

Nancy Marks
3597 Highway 284
Townsend, MT 59644

OTHERS

Robert L and Linda E. Davis
8537 Highway 287
Townsend, MT 59644

Henry and Violet Lohr
P.O. Box 1288
Townsend, MT 59644

The following individuals were sent a letter announcing availability of EA and providing notice of the time, date and location of the public hearing on this project.

TOWNSEND-SOUTH PROJECT CORRIDOR LANDOWNERS (From R/W Plans)

Michael & Darcy Anderson
96 Shelley Road
Townsend, MT 59644-9745

P.O. Box 96
Townsend, MT 59644

Bruce and Charlene Beebe
P.O. Box 11
Townsend, MT 59644

Gary & Charlene Guthrie
P.O. Box 445
Townsend, MT 59644

Michael and Estrelleta Burtch
8045 Highway 287
Townsend, MT 59644

Hahn Ranch Corporation
7996 Highway 287
Townsend, MT 59644

Davis Bar Triangle T Ranch
8393 Highway 287
Townsend, MT 59644

John and Tamie Hahn
53 Carson Lane
Townsend, MT 59644

Curtis and Zelda Diehl
454 Flynn Lane
Townsend, MT 59644

Freida Herman
P.O. Box 174
Townsend, MT 59644

William & Jerrie Evans
605 Broadway Street
Townsend, MT 59644

Montana Rail Link
Post Office Box 16390
101 International Way
Missoula, Montana 59808

Flynn Ranch
674 Flynn Lane
Townsend, MT 59644

Scott & Dede Mostad
P.O. Box 1259
Townsend, MT 59644

Joseph P. and Cary A. Nelson
P.O. Box 1187
Townsend, MT 59644

Ward & Sherry Scoffield
80 Shelley Road
Townsend, MT 59644

R.H. & Joann Price
P.O. Box 297
Townsend, MT 59644-97

Townsend Electric, Inc.
P.O. Box 401
Townsend, MT 59644

R & L Ranch Company
8515 Highway 287
Townsend, MT 59644

TRI G, Inc.
8545 Highway 287
Townsend, MT 59644

Charles & Kathryn Ragen
14451 Mandan Ct
Apple Valley, CA 92307-5349

Gail & Lorrie Vennes
P.O. Box 1170
Townsend, MT 59644-11

Delmar & Audrey Schubring
P.O. Box 881
Townsend, MT 59644

Linda White
23 Lower Deep Creek Road
Townsend, MT 59644

Dennis Scoffield
230 Litening Barn Lane
Townsend, MT 59644

Larry Wilkin
1412 Sagebrush
Billings, MT 59102

Edwin Watson
152 Springville Lane
Townsend, MT 59644

The following individuals who previously submitted comments at the June 28, 2001 public meeting were sent notices of the EA's availability and the public hearing.

Monti Olsen
P.O. Box 103
Toston, MT 59643

Edna Hemsley
402 S Spruce #2
Townsend, MT 59640-2812

Joanne Motta
100 Slifka Lane
Toston, MT 59643

Darryl Scharrer
P.O. Box 102
Toston, MT 59643

Judith Slifka
P.O. Box 65
Toston, MT 59643

Mark Slifka
03 Slifka Lane
Toston, MT 59643

Kyle Motta
P.O. Box 63
Toston, MT 59643

5.5 AGENCIES WITH JURISDICTION AND/OR PERMITS REQUIRED

The following agencies have jurisdictional authority or permit requirements applicable to the proposed Townsend-South project:

- **U.S. Department of the Army, Corps of Engineers (Regulatory Office)** -- *Section 404* Permit for placing fill material associated with road construction in wetlands or other "Waters of the U.S." including jurisdictional irrigation ditches.
- **U.S. Department of the Interior, Fish and Wildlife Service** – Formal consultation with MDT and FHWA regarding project-related impacts to Ute-ladies' tresses and suitable habitat for this threatened plant species. Formal consultation was completed in June 2005.
- **Montana Department of Fish, Wildlife & Parks - 124SPA** Permit as required under the *Montana Stream Protection Act* for culvert installations and related work in Deep, Greyson, and Dry Creeks.
- **Montana Department of Environmental Quality, Permitting and Compliance Division** - Notice of Intent to be covered by General Permit for storm water and pollution prevention plan in accordance with *Section 402*/Montana Pollutant Discharge Elimination System.
- **Broadwater County** - Floodplain Development Permit for the proposed highway reconstruction if future work encroaches on the delineated floodplains.

APPENDICES

APPENDIX A: List of Preparers

The following parties are responsible for the preparation and content of this document:

Jean A. Riley, P.E., Bureau Chief
Environmental Services
Montana Department of Transportation
P.O. Box 201001
Helena, MT 59620-1001

Jeffrey A. Patten, Operations Engineer
Montana Division Office
Federal Highway Administration
2880 Skyway Drive
Helena, MT 59602

The following consultants assisted the Montana Department of Transportation coordinate, develop supporting information, and write this document:

ROBERT PECCIA & ASSOCIATES, INC. – LEAD FIRM

Consulting Civil Engineers, Planners and Designers
825 Custer Avenue
P.O. Box 5653
Helena, Montana 59604

LAND & WATER CONSULTING

Biological Resource Consultants
801 North Last Chance Gulch
P.O. Box 239
Helena, MT 59624

GARCIA AND ASSOCIATES

Sensitive Plant Survey
151 Evergreen Drive, Suite B
Bozeman, MT 59715

LISA DRUCKENMILLER

Botanist/Sensitive Plant Specialist
23 Bridger Pines Road C-1
Bozeman, MT 59715

RENEWABLE TECHNOLOGIES, INC.

Cultural Resource Consultants
511 Metals Bank Building
Butte, MT 59701

**AABERG CULTURAL RESOURCES
CONSULTING SERVICE**

Cultural Resource Consultants
2909 East McDonald
Billings, Montana 59102

BIG SKY ACOUSTICS, LLC

Highway Noise Consultant
P.O. Box 27
Helena, MT 59624



APPENDIX B: Correspondence Pertinent to the Project



FARMLAND CONVERSION IMPACT RATING

PART I (To be completed by Federal Agency)		Date of Land Evaluation Request July 30, 2004/REV 08/10/06		
Name of Project TOWNSEND-SOUTH NH-F 8-4 (16) 78; Control No. 1420		Federal Agency Involved U.S. DOT Federal Highway Administration/ Montana Department of Transportation		
Proposed Land Use U.S. Highway 287 Reconstruction and New R/W		County and State Broadwater County, Montana		
PART II (To be completed by NRCS)		Date Request Received by NRCS		
Does the site contain prime, unique, statewide or local important farmland? <i>(If no, the FPPA does not apply - do not complete additional parts of this form).</i>		Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	Average Farm Size
Major Crop(s)	Farmable Land in Govt. Jurisdiction Acres: %	Acres Irrigated	Amount of Farmland As Defined in FPPA Acres: %	
Name of Land Evaluation System Used	Name of Local Site Assessment System	Date Land Evaluation Returned by NRCS		
PART III (To be completed by Federal Agency)		Alternative Site Rating		
		Preferred Action	Other Alternatives	Existing Highway (No-Action)
A. Total Acres To Be Converted Directly (Area of farmland within new R/W)		60.6	NA	0.0
B. Total Acres To Be Converted Indirectly		0.0	NA	0.0
C. Total Acres In Site (Total Acres of New & Existing Right-of-Way)		171.5	NA	92.4
PART IV (To be completed by NRCS)				
A. Total Acres Of Prime And Unique Farmland (Area in Existing & New R/W)		124.7		64.1
B. Total Acres Of Statewide or Local Important Farmland		0.0		0.0
C. Percentage Of Farmland in County or Local Govt. Unit To Be Converted				
D. Percentage Of Farmland in Govt. Jurisdiction With Same Or Higher Relative Value				
PART V (To be completed by NRCS) Land Evaluation Criterion Relative Value Of Farmland To Be Converted (Scale of 0 to 100 Points)		100 - Assumed		
PART VI (To be completed by Federal Agency) Site Assessment Criteria (These criteria are explained in 7 CFR 658.5(b))		Maximum Points	Preferred Action	Other Alternatives Not evaluated on this form
1. Area in Nonurban Use		15	15	15
2. Perimeter in Nonurban Use		10	10	10
3. Percent of Site Being Farmed		20	16	16
4. Protection Provided by State and Local Government		20	0	0
5. Distance From Urban Builtup Area		N/A	N/A	N/A
6. Distance to Urban Support Services		N/A	N/A	N/A
7. Size of Present Farm Unit Compared to Average		10	10	10
8. Creation of Nonfarmable Farmland		25	10	0
9. Availability of Farm Support Services		5	3	3
10. On-Farm Investments		20	15	15
11. Effects of Conversion on Farm Support Services		25	0	0
12. Compatibility With Existing Agricultural Use		10	2	0
TOTAL SITE ASSESSMENT POINTS		160	81	69
PART VII (To be completed by Federal Agency)				
Relative Value Of Farmland (From Part V)		100	100	
Total Site Assessment (From Part VI above or a local site assessment)		160	81	
TOTAL POINTS (Total of above 2 lines)		260	181	
Site Selected: Action As Proposed Reason For Selection		Date of Selection	Was a Local Site Assessment Used? Yes <input type="checkbox"/> No <input type="checkbox"/>	

(See Instructions on reverse side)

Form AD-1006 (10-83)

STEPS IN PROCESSING THE FARMLAND AND CONVERSION IMPACT RATING FORM

Step 1 - Federal agencies involved in proposed projects that may convert farmland, as defined in the Farmland Protection Policy Act (**FPPA**) to nonagricultural uses, will initially complete Parts I and III of form.

Step 2 - Originator will send copies A, B, and C together with maps indicating locations of site(s), to the Natural Resources Conservation Service (NRCS) local field office and retain copy D for their files. (Note: NRCS has a field office in most counties in the U.S. The field office is usually located in the county seat. A list of field office locations are available from the NRCS State Conservationist in each state).

Step 3 - NRCS will, within 45 calendar days after receipt of form, make a determination as to whether the site(s) of the proposed project contains prime, unique, statewide or local important farmland.

Step 4 - In cases where farmland covered by the **FPPA** will be converted by the proposed project, NRCS field offices will complete Parts II, IV, and V of the form.

Step 5 - NRCS will return copy A and B of the form to the Federal agency involved in the project. Copy C will be retained for NRCS records.

Step 6 - The Federal agency involved in the proposed project will complete Parts VI and VII of the form.

Step 7 - The Federal agency involved in the proposed project will make a determination as to whether the proposed conversion is consistent with the **FPPA** and the agency's internal policies.

INSTRUCTIONS FOR COMPLETING THE FARMLAND CONVERSION IMPACT RATING FORM

Part I : In completing the "County and State" questions list all the local governments that are responsible for local land controls where site(s) are to be evaluated.

Part III: In completing item B (Total Acres to Be Converted Indirectly), include the following:

1. Acres not being directly converted but that would no longer be capable of being farmed after the conversion, because the conversion would restrict access to them.
2. Acres planned to receive services from an infrastructure project as indicated in the project justification (e.g. highways, utilities) that will cause a direct conversion.

Part VI: Do not complete Part VI if a local site assessment is used.

Assign the maximum points for each site assessment criterion as shown in § 658.5(b) of CFR. In cases of corridor-type projects such as transportation, powerline and flood control, criteria #5 and #6 will not apply and will be weighted zero, however, criterion # 8 will be weighted a maximum of 25 points, and criterion #11 a maximum of 25 points.

Individual Federal agencies at the national level, may assign relative weights among the 12 site assessment criteria other than those shown in the **FPPA** rule. In all cases where other weights are assigned, relative adjustments must be made to maintain the maximum total weight points at 160.

In rating alternative sites, Federal agencies shall consider each of the criteria and assign points within the limits established in the **FPPA** rule. Sites most suitable for protection under these criteria will receive the highest total scores, and sites least suitable, the lowest scores.

Part VII: In computing the "Total Site Assessment Points", where a State or local site assessment is used and the total maximum number of points is other than 160, adjust the site assessment points to a base of 160. Example: if the Site Assessment maximum is 200 points; and alternative Site "A" is rated 180 points:

$$\frac{\text{Total Points assigned to Site A}}{\text{Maximum points possible}} = \frac{180}{200} \times 160 = 144 \text{ points for Site "A"}$$

**Robert
Peccia &
Associates**



Civil
Transportation
Environmental
Engineers

P.O. Box 5653
825 Custer Avenue
Helena, MT 59604
(406) 447-5000
FAX (406) 447-5036
www.rpo-hln.com

July 30, 2004

District Conservationist
Natural Resources Conservation Service
Townsend Field Office
415 South Front Street
Townsend, MT 59644-2813

COPY

Subject: Townsend-South
NH-F 8-4 (16) 78; Control No. 1420

Dear District Conservationist:

Robert Peccia & Associates is responsible for preparing the required Environmental Assessment for the Townsend-South highway reconstruction project proposed by the Montana Department of Transportation (MDT).

In February 2004, Mark Lambrecht of our staff contacted you with information about this proposed project. Based on our review of existing soils information and mapping, it is apparent that soils considered to be "Important Farmland" (Prime, Prime if irrigated, and farmland of statewide or local importance) exist along about 70% of the existing and proposed project corridors. Therefore, in accordance with the Farmland Protection Policy Act, we've estimated the potential direct and indirect conversions of Important Farmland in the project area and are processing form AD-1006. Preliminary right-of-way plans have not yet been completed but the acreages for converted area and total right-of-way area shown on the form are believed to be reasonable estimates.

Attached is a copy of the partially completed Farmland Conversion Impact Rating form. We request that you fill out Parts II, IV, and V of the form and return it to us so we can complete the remainder of form and the necessary processing.

Please return a copy of the form to us at your earliest convenience. At this time, we anticipate the Draft Environmental Assessment for this project will be available for public review late this fall. We'll notify you when the document's available for review and comment.

If you have questions, please don't hesitate to contact me at 447-5000. Thanks for your cooperation.

Sincerely,
ROBERT PECCIA & ASSOCIATES, Inc.

Daniel M. Norderud, AICP
Environmental Studies Division Manager

Attachment
cc: file

F:\HIGHWAYS\ENVDOC01\townsouth03\corresp\073004nrns.doc



MONTANA HISTORICAL SOCIETY

225 North Roberts ♦ P.O. Box 201201 ♦ Helena, MT 59620-1201
♦ (406) 444-2694 ♦ FAX (406) 444-2696 ♦ www.montanahistoricalsociety.org ♦

April 13, 2005

JON AXLINE
MDT
2701 PROSPECT AVENUE
PO BOX 201001
HELENA MONTANA 59620

RECEIVED

APR 18 2005

ENVIRONMENTAL

RE: NH-F 8-4 (16) 78 Townsend - South Control No. 1420

Dear Jon,

Based on your description of this undertaking, and our phone conversation this morning, we would propose a finding of no adverse effect. We will record a No Adverse Effect finding for sites 24BW0729, 24BW0836, and 24BW0837.

If you have any questions about any points that I have made, you may call me at (406) 444-0388, or email jwarhank@state.mt.us.

Sincerely,

Josef J Warhank
Review & Compliance Officer

file: MDT/2005



Montana Department of Transportation

2701 Prospect Avenue
PO Box 201001
Helena MT 59620-1001

David A. Galt, Director
Judy Martz, Governor

April 8, 2004

Mark Baumler, Ph.D.
State Historic Preservation Office
1410 8th Avenue
P O Box 201202
Helena, MT 59620-1202

Subject: NH-F 8-4(16)78 F
Townsend - South
Control No. 1420

Dear Mark:

2004040905
RECEIVED

APR 22 2004

ENVIRONMENTAL

RECEIVED
APR 09 2004

BY: _____

CONCUR
MONTANA SHPO

DATE 1 Apr 04 SIGNED _____

Jared
MDT
Townsend -
South
Three bridge

Enclosed are the site forms and CRABS for three reinforced concrete bridges on the above project. Of those, we have determined that the Montana Ditch Bridge (24BW9956) and the Deep Creek Overflow Bridge (24BW958) eligible for the National Register under Criterion C and request your concurrence. The proposed project to reconstruct and widen U.S. Highway 287 between Townsend and Toston would result in the removal of both bridges. We will treat them under the terms of the Programmatic Agreement.

The August 5, 2003 Determination of Effect inadvertently omitted the Northern Pacific Railway (24BW818) and the Wallace House (24BW812). The existing and proposed alignment for the roadway does not encroach on the railroad Right-of-Way through the entire length of the project. The existing historic alignment of the railroad would be perpetuated. There would be change in the setting of the railroad and its significance to the historic development of Broadwater County and Montana would remain intact and undiminished. The proposed project, therefore, would have **No Effect** to the NRHP-eligible railroad grade.

At the Wallace House (attachment), the existing centerline would be perpetuated, but the roadway would be widened 10-feet from 30-feet to 40-feet. The existing centerline is 131-feet from the buildings on property; the pavement edge is 116-feet from the buildings. The roadway would be widened 5-feet closer to the property, placing the proposed pavement edge 111-feet from the site. Construction would be confined to the R/W and would not encroach on the site. A row of trees between the site's buildings and the roadway would be removed. The loss of the trees, however, would not have a significant impact on the property as there are additional rows of trees between it and the road that would not be removed. The vegetative screen would remain in-place.

There would be **No Adverse Effect** to the Wallace House as a result of the proposed project. The buildings on the site would remain intact and unaltered. The pavement edge would be only 5-feet closer to the property. That footage, moreover, would constitute paved shoulders - the driving lanes would remain the same distance away from the site's

file: MDT/2004

buildings. Although a row of trees that screens the property from the roadway would be removed, two rows of screening would remain untouched outside the R/W boundary. The setting would essentially remain intact, but the loss of five trees would constitute an effect, although minor, to the property. The characteristics that make the site eligible for the National Register would be perpetuated and the project would not have a significant impact to it. We request your concurrence.

If you have any questions, please contact me at 444-6258.



Jon Axline, Historian
Environmental Services

Enclosures

cc: Jeff Ebert, P.E., Butte District Administrator
Tom Martin, Consultant Design Bureau
Bonnie Steg, Resources Section



Montana Department of Transportation

2701 Prospect Avenue
PO Box 201001
Helena MT 59620-1001

David A. Galt, Director
Judy Martz, Governor

August 5, 2003

Josef
M.D.T. - TOWNSEND-SOUTH
Kieckbusch Farm
(24BW816)

RECEIVED
AUG 06 2003

BY: _____

Mark Baumler, Ph.D.
State Historic Preservation Office
1410 8th Avenue
P O Box 201202
Helena, MT 59620-1202

Subject: NH-F 8-4(16)78
Townsend - South
Control No. 1420

CONCUR
MONTANA SHPO
DATE 17 Aug 03 SIGNED *Josef Kieckbusch*

Enclosed is the Determination of Effect for the above project in Broadwater County. We have determined that the proposed project would have No Effect to Feature 2 at the Kieckbusch Farm (24BW816) for the reasons specified in the document. We request your concurrence.

If you have any questions, please contact me at 444-6258.

Jon Axline
Jon Axline, Historian
Environmental Services

Enclosure

cc: Jeff Ebert, P.E., Butte District Administrator
Carl Peil, P.E., Preconstruction Bureau
Bonnie Steg, Resources Section



Montana Department of Transportation

2701 Prospect Avenue
PO Box 201001
Helena MT 59620-1001

David A. Galt, Director
Judy Martz, Governor

July 11, 2003

Mark Baumler, Ph.D.
State Historic Preservation Office
1410 8th Avenue
P O Box 201202
Helena, MT 59620-1202

RECEIVED

AUG - 1 2003

RECEIVED

JUL 14 2003

BY:-----

Subject: NH-F 8-4(16)78 F
Townsend - South
Control No. 1420

Enclosed is the updated cultural resource report, CRABS, and site forms for the above project in Broadwater County. The original cultural resource report for this MDT project was completed by RTI in 1994 and submitted to SHPO for comments. Only Feature 2 at the Kieckbusch Farm (24BW816) was determined eligible for the National Register. One site, the Wallace House (24BW812), was not old enough to meet the NRHP age criteria; it has since reached the 50 year age mark. Three sites, 24BW836, 24BW837, and 24BW728/838 are irrigation ditches and are covered under a programmatic agreement. Two archaeological sites, 24BW819 and 24BW820, were left unresolved pending the development of the plans for the project. One site, the Northern Pacific Railway (24BW818) was determined eligible for the NRHP under Criterion A.

Aaberg Cultural Resources Consulting Service (ACRCS) reinvestigated the old Townsend - South project area in 2003. No additional sites were discovered other than those previously recorded by RTI in 1994. ACRCS did conduct testing at 24BW819 and 24BW820 to determine their National Register eligibility. Based on the investigation, ACRCS recommends both sites ineligible to the National Register. We agree with that recommendation and request your concurrence. In addition, ACRCS recommended the Wallace House (24BW812) eligible for the National Register. We also agree with that recommendation. Finally, we continue to agree that 24BW818 and Feature 2 at 24BW816 are eligible for the National Register. The three irrigation ditches are still covered under the programmatic agreement. We request your concurrence.

If you have any questions, please contact me at 444-6258.

Jon Axline

Jon Axline, Historian
Environmental Services

**CONCUR
MONTANA SHPO**

DATE 28 JUL 2003 SIGNED

Jon Axline

Enclosures

cc: Jeff Ebert, P.E., Butte District Administrator
Carl Peil, P.E., Preconstruction Bureau
Bonnie Steg, Resources Section

**Montana Department
of
Fish, Wildlife & Parks**



1420 East Sixth Avenue
Helena, Montana 59620

October 9, 1991

Mr. David S. Johnson, Chief
Preconstruction Bureau
Dept. of Highways
2701 Prospect
Helena, MT 59620

Dear Mr. Johnson:

RE: F 8-4(16)78
Townsend - Toston C#1420

Date Recd. Preconst. 10-11-91		MAIL ROUTE	Attach	Initial
<input checked="" type="checkbox"/>	Info	30 Preconst Engr		
<input checked="" type="checkbox"/>	Act	30 Assistant		
<input checked="" type="checkbox"/>		30 Office Mgr		
<input checked="" type="checkbox"/>		31 Safety Mgmt.		
<input checked="" type="checkbox"/>		32 Road Design		
<input checked="" type="checkbox"/>		33 Environment		
<input checked="" type="checkbox"/>		34 Hydraulics		
<input checked="" type="checkbox"/>		35 Survey & Mapping		
<input checked="" type="checkbox"/>		36 Traffic Eng.		
<input checked="" type="checkbox"/>		37 Traffic Operations		
<input checked="" type="checkbox"/>		39 Consultant Dsn.		
		<i>Rapp</i>		

We have reviewed your above-mentioned proposed project for reconstruction of FAP 8 in Broadwater County, beginning at the Townsend south city limits proceeding south 10.3 miles to the junction of FAS 285.

The Toston Fishing Access Site and Deepdale Fishing Access Site are near your project boundaries. These lands have 4(f) usage as defined by Section 4(f) of the 1966 Department of Transportation Act. If you anticipate any impacts to our site as a result of your highway reconstruction project, please contact us so we can work with you to mitigate any problems.

The Toston Fishing Access Site and Deepdale Fishing Access Site areas do fall under 6(f) of the Land and Water Conservation Fund Act.

Please keep Bob Martinka, the regional supervisor of region 3, informed as this project develops.

If you need more information regarding the Toston Fishing Access Site and Deepdale Fishing Access Site area, please let us know. Thank you for the opportunity to comment. We appreciate your cooperation.

Sincerely,

Mary Ellen McDonald
MARY ELLEN MC DONALD
Administrative Officer
Operations Bureau
Parks Division

cc: Bob Martinka

Mr. Norman Hobby
August 19, 1993
Page 2

As for F 8-4(16)78 Townsend-Toston, Montana Rail Link is proposing to lengthen its siding track at Toston approximately 3,800 ~~feet~~^{WEST} of its existing location. This could definitely impact your design in view of the standards previously outlined.

Sincerely,

Richard L. Keller/jp

Richard L. Keller
Chief Engineer

SRW:jp

APPENDIX C: Public Involvement

- May 23, 2001 News Release
(Pages C-1)
- Advertisement of June 28, 2001 Public Meeting
(Pages C-2)
- Transcript of December 15, 2005 Public Hearing
(Pages C-3 through C-20)
- Sign-In Sheets from December 15, 2005 Public Hearing
(Pages C-21 through C-23)
- MDT/FHWA Responses to Comments Offered on EA at the
December 15, 2005 Public Hearing
(Pages C-24 through C-32)



MDT
Public
Meeting

Hear.

The Montana Department of Transportation (MDT) invites you to a public meeting to discuss reconstruction of a portion of Montana Highway 287 between Townsend, Montana and Toston, Montana in Broadwater County.

The proposed project includes reconstruction, widening, and paving of the two-lane highway beginning at the Townsend Urban Limits on the south side of Townsend, extending south approximately 8.2 miles to just north of the Missouri River Bridge at Toston.

For safety, a two-way left turn lane will be constructed beginning at the Townsend Urban Limits extending south approximately 2.5 miles. Intersections of county roads will be constructed to approach the highway at 90 degrees for improved sight distance. At the south end of the project, passing lanes will also be constructed.

New right of way and utility relocation will be required, and traffic will be maintained during construction activities throughout the project.

Be Heard.

Your comments and concerns are a very important part of the process. We invite you to attend to voice suggestions and present pertinent information about the project. For more information or to arrange special accommodations for disabilities please call MDT at (800) 261-6909, or TTY (800) 335-7592.

7 pm, Thursday, June 28
Townsend High School,
Community Room
201 North Spruce Street
Townsend, Montana

TRANSCRIPT

TOWNSEND SOUTH PUBLIC MEETING CN 1420

**Townsend High School, 201 North Spruce Street ~ Townsend, MT
December 15, 2005**

WELCOME

I would like to welcome you and thank you for coming tonight. My name is Charity Watt Levis. I'm the Public Information Officer for the Montana Department of Transportation. This is a Public Hearing on the Environmental Assessment document discussing the proposed actions and environmental effects associated with reconstructing 8.2 miles of U.S. Hwy 287 south of Townsend in Broadwater County.

Before I get started I would like to remind everybody for the record to sign in. There were sign-in sheets as you came in tonight, so if you didn't sign in please do so on your way out. I would like to start with some introductions. Dan Norderud from Robert Peccia and Associates. Jeff Patton from the Federal Highway Administration. From MDT we have Jeff Ebert the District Administrator. Jim Davies the District Design Project Manager. Joe Olsen is the Engineering Services Supervisor. Deb Wambach is our Biologist at MDT. Wayne Nelson is our Right-of-Way Supervisor. Roger Shultz is our Design Supervisor. Lorelle Demont is our Transportation Commission Secretary. I would like to take this opportunity to introduce any city or county officials in the audience: Elaine Mann, Broadwater County Commissioner. Thank you for coming.

Let me lay out the agenda for tonight. We will start with Dan Norderud who will give an overview and a bit of the project history. Then Jim Davies will give a description of the project. Then we will have a public comment period as part of the hearing. After all of the comments are taken for the Environmental Assessment, then we will close the hearing and open up the meeting for general questions and answers. During the comment period, I encourage you to let us know what is on your mind regarding the Environmental Assessment.

We are presenting a preliminary preferred alternative and let me stress that a final decision has not been made so community participation is an important component of developing the project. That is a project that best meets the needs of those who use the road and live in the community. So it is very important if you have something on your mind, please let us know especially if we've missed something, if something is not going to work, if something is right, or if something can be done better. That is really what we are here for tonight.

We are recording this meeting as a matter of public record. All public comments taken tonight during the public hearing will be formally addressed in the Environmental Assessment. We have microphones here that will aid not only in everyone being able to hear, but also help us record your comments so they are accurately reflected and we can address those comments. If you are not prepared to make public comments tonight, we have written comment forms so you can submit your comments in writing. You can leave them here tonight, you can take them home and fill them out and mail them in, or you may also submit your comments on line. After the formal comment period, we will close the hearing and then we will take general questions and answers about the project. With that I'll turn things over to Dan.

PRESENTATION – Dan Norderud, Robert Peccia and Associates

Introduction: Thank you Charity. I'm an Environmental Planner with Robert Peccia and Associates. Our firm is one of MDT's term contractors. We help them prepare environmental documents for highway and bridge projects. This was one of our assignments that, for some of us, dates back a long time. I started work on the Townsend-Toston EA back in 1995. I think Charity gave a good overview of what we are proposing to do tonight. The handouts that you have are duplicates of the slides I will show you tonight, so if there is something you can't see you can refer to them on your handout.

History of Roadway: Basically I'll start out with a little background and project history. This portion of U.S. 287 was constructed back in 1939 and there really hasn't been a whole lot other than overlays that has happened since that time. As I mentioned, the Townsend-Toston Project was originally started at the south end of Townsend and went all the way across the bridge to the Radersburg turnoff. That project was initially intended to be an overlay and widening type project but it was ultimately changed to a full reconstruction type project back in 1995 when we started work on an EA for that project. In 1996 the Townsend-Toston Project was put on hold. The reason for that was funding. Bridges are very expensive to do together with a reconstruction project and there were also right-of-way issues associated with that. So it kind of went through a lull. Back in 1998 the Townsend-South Project, which this is, was programmed. The project does not include the bridge at Toston, so that is one big difference right there.

Work started on the Environmental Assessment back in 2001. You folks might remember a public meeting back here in August of 2001. There was also some consideration given in the time since then to doing an EIS for the entire corridor between East Helena and Three Forks to really identify what should be done over this whole corridor. Through discussions with the Federal Highway Administration the issue about doing an EIS was resolved and it was determined that it was ok to move forward with an EA. So here we are moving forward.

This figure (referring to slide) comes out of the EA and is basically an overview showing the project begins at the south edge of Townsend at the end of the Townsend Urban Project and extends southward to just north of Flynn Lane.

Environmental Assessment: The Environmental Assessment document has been out and looks like this (referring to slide) and is still available for review and will be probably for close to another month yet. There are copies here locally at the Library, Clerk and Recorder's office, as well as our office in Helena, and MDT's offices as well. I encourage you to take a look at that. It is also available on line. To give you a little information about what an EA is and why we have to do one: an EA is a document that is written to inform the public and agencies involved in the project about a particular proposal. It helps the Federal Highway Administration and MDT determine if there is a need to do an EIS. That decision point comes if the Environmental Assessment identifies a potential for significant impacts. Two laws, a federal law and a state law, dictate that an environmental analysis be done. I'm sure you may have heard of NEPA (National Environmental Policy Act), which is the federal law and MEPA (Montana Environmental Policy Act), which is a counterpart regulation. An Environmental Assessment is a kind of a document that allows for various alternatives to be evaluated. In essence, it documents coordination and compliance with a variety of federal and state regulations that might apply.

What's In the Townsend South EA: Basically it has five or six defined parts. First it has the description of what is being proposed. Secondly there is a purpose and need discussion, which outlines the reasons why the project is needed. There is a chapter discussing alternatives that were considered and a preliminary preferred alternative. There is an evaluation of existing conditions. Then it contains an assessment of what kind of impacts might happen with the proposed action being implemented. There is a summary of coordination in the back part of the book, which really outlines what agency comments have come in the past and also highlights previous comments that we've heard from you as part of this

project. This document also contains something called “Section 4(f) evaluations,” which are an analysis that needs to be done for minor affects on historic resources.

Purpose and Need: The overall document is really guided by a purpose and need statement that was written specifically for it. I’ll quote verbatim: “The purpose of the proposed Townsend-South project is to enhance the operational characteristics, safety and physical conditions of the existing facility through the consideration of contemporary design practices.” It is really aimed at addressing a variety of needs out there.

Photographs Showing Need: These photographs illustrate some examples of that. The existing highway is only about 30 feet wide. As you well know, it has fairly narrow shoulders for the amount of traffic that is on it. It has three bridges that are more than 70 years old and in various stages of ... I guess I should say they are fulfilling their design life. They are really too narrow to allow for any widening to happen without replacing those structures.

Steep roadside slopes exist along a lot of the corridor. As the caption on this picture indicates, an accident analysis that was done over a recent ten-year period showed that 20 percent of the accidents that occurred in this eight-mile section were rollover accidents. That is from people leaving the roadway and encountering these steep shoulders.

As you are also well aware, traffic is increasing on this route. Traffic demands indicate the need for more passing opportunities to be provided in the corridor. Hand-in-hand in making the facility function more efficiently, access management is necessary to preserve the capacity of the roadway. Access management is a way of providing reasonable access to all adjoining properties but still combining unnecessary approaches, sharing approaches, and that sort of thing. It is meant to avoid conflict points with through traffic.

To address all of these needs the proposed project must really change the design of the roadway to comply with MDT’s design standards, which are based on federally accepted standards. Also to comply with the MDT’s Route Segment Plan, which outlines the kind of facility this is and basically some of the general parameters of what this highway should look like. It needs to provide a facility that meets current and future traffic demands. Also there is a need to rehabilitate the highway’s infrastructure, meaning culverts and those associated features with the road. As I mentioned, there is a need to improve traffic operations, provide additional traffic passing opportunities, and better manage access points along the roadway, and more importantly to reduce opportunities for traffic conflicts and accidents to occur on this route.

Alternatives Considered: There were a variety of alternatives that were considered in this document. They include what we call the “no action” alternative, which means the status quo. That means doing nothing except maintaining the facility that is there right now. That alternative provides a real good baseline for us to compare the proposed action versus the present situation. We looked at a variety of “action” alternatives or “build” alternatives. In this case we have alignment options, which means alternate locations for the roadway corridor itself and road design alternatives or lane configuration options. Each of these alternatives were considered and screened as part of this process to identify those that didn’t meet the purpose and need of the project and those that would be moved forward for more detailed study.

Location Alternatives: As I mentioned there were possible new alignments for this corridor. They include: (1) rebuilding the highway west of the river, (2) moving the roadway further east, (3) rebuilding strictly following the centerline – just replacing what is there right now, and (4) rebuilding near the existing road – not exactly following the alignment but being very close within the same roadway corridor.

Rebuilding West of the River: This was something we've heard public comment on in the past and also was an idea that several resource agencies put forward as a means of helping to reduce wetland impacts. The wetlands that are along this highway are considered a very valuable resource and that is really where the agencies' issues or concerns came in for this option. The idea was not advanced as a reasonable alternative in the EA for a variety of reasons – key to that is in order put a road on the other side of the river you really have to build a lot of road. It makes good sense to avoid the river crossing at Toston and also north of Townsend. So all of a sudden you go from an eight-mile long project to about a 20-mile long project to really do this right. The costs are an order of magnitude higher with those kinds of things than what is being proposed. There are also a lot of difficulties with stage constructing it. You can't go over on the other side of the river and build what you can afford and tie it into the existing facility because the river is in between, so there are a lot of difficulties associated with that. The old highway, if you did that option, the existing highway would need to remain in service as either a county facility or as a secondary road maintained as well by the state of Montana, which increases their operational or maintenance costs for that. A key thing too is bypassing the community of Townsend. There is a state law that says a community must ok a bypass before MDT may pursue that. Additionally, because you are going on a new alignment, you've got significant right-of-way needs and there is potential for all kinds of other associated impacts, and north and east of Townsend you end up running through the residential area at Indian Creek and the River Road area, and there is some difficult terrain to deal with in there.

Rebuilding East of the Present Corridor: Basically the alignments that were looked at there were trying to follow county roads where facilities already existed. That was not advanced as a reasonable alternative because of the increased route length. Costs go up as we add more road miles, and again you have the issue of having to maintain all or portions of the existing road and someone has to pay for those maintenance costs. Substantial new right-of-way requirements would be necessary. For me the key thing is that you are putting a road right through the heart of a lot of rural residences that exist adjacent to those county roads and really disrupting agricultural operations.

Rebuilding Following Exactly on the Centerline. This was not advanced. The principal reason is the roadway is already as close to the river as you can get so if you widen the roadway equally to both sides, the separation distance between the road and the railroad decreases beyond what is acceptable to Montana Rail Link. There are also wetlands and sensitive plan communities on both sides of this road. The impacts would occur on both east and west of the roadway from widening as opposed to what is being preferred in shifting slightly to the east of the centerline. Traffic control during construction would also be a difficult thing and very costly. There would probably be pilot cars required and that sort of thing because you would have traffic intending to be moved right where you are working.

(Showing figure) This figure is a little hard to see but the blue alignments represent those corridors that were looked at east of the present roadway. The red lines on the bottom are west of the river options that were evaluated. As you can see, the length of the west option is very much longer than the existing corridor.

Preferred Location: The preferred location for the new road is basically rebuilding it very near the present alignment. Generally it involves a slight easterly shift of about 30-feet over most of the corridor. The new road would basically parallel the existing highway. This option was preferred because it does not bypass Townsend, ties into existing portions of the route, there is no increase in the route length, and incorporates a lot of the existing roadway back into the new facility. In fact the west limits of the road would basically be held at the toe of the slopes on the existing highway. That provides sufficient offset for Montana Rail Link and it also allows for traffic to be maintained on the route during construction.

Road Design (Lane Configuration) Alternatives: (1) Reconstruction as an improved two-lane road, basically just a 40-foot wide road with 12-foot lanes and eight-foot shoulders with left turn lanes where

appropriate but with no measures to really increase passing. (2) Improved two-lane road with one passing area. The option that was evaluated was a three-mile long passing lane at the southern end of this project. (3) Improved two-lane road with three passing areas, with passing areas spaced roughly evenly within the corridor. (4) Improved two-lane with alternating passing lanes. Sometimes this is referred to as a “super two” type design, which basically alternates directional passing lanes within the corridor. (5) Reconstruction as a full four-lane facility was examined.

Road Design Alternatives Eliminated From Consideration: The improved two-lane option was dropped basically because it doesn’t do anything to enhance passing opportunities in the corridor. In fact adding the left-turn lanes at certain intersections takes away some passing opportunities. Ultimately it came down to the fact that the design would not meet the target level of service twenty years from now. So it is an obsolete idea for this corridor. An improved two-lane with one passing area was also dropped because a three-mile long passing area, while it might be possible to do that, a lot of research indicates that 1.2 to 1.5 mile long passing areas are better in the design sense. The increased passing opportunities that would be provided would not be distributed throughout the entire corridor. Again it resulted in an undesirable level of service.

An improved two-lane with alternating passing area was dropped basically because passing opportunities were decreased if you were opposing an area with passing lanes there is no way you could pass yourself. Again, the level of service was not what was desired.

Rebuilding as a four-lane through the entire corridor was eliminated because projected traffic does not indicate that a four-lane demand exists over the full length of the corridor and it is not estimated to be there for another 20 years or more. Also the increased right-of-way acquisition and other impacts due to the expanded foot print of the four-lane road all through this corridor, and the associated higher costs with that option.

The Preferred Design Alternative: Is an improved two-lane with three five-lane passing areas. This is a combination kind of an option, which basically involves a variety of lane configuration ranging from two lanes to a three-lane typical section, which has a center median or a left turn depending on the location very much like the Townsend Urban Section just to the south of town here, and five lanes, which basically include passing areas plus a left-turn median. This option was preferred because it provides good passing opportunities over the entire corridor, provides an acceptable level-of-service through the design years, and it meets the other elements of the purpose and need.

One thing I want to point out is that I show Figure 4 up here but it is actually Figure 3, which is a schematic in our environmental document very much like this. That figure needs to be tweaked a little bit to more accurately represent what MDT has provided up here. So the final document, when it comes out, will have something very similar to this. We just didn’t identify enough of the three-lane sections with median.

Typical Sections: Here is an example of the typical sections in the areas where a two-lane would be used, which correspond to the yellow up on these boards (referring to graphic). There would be a 40-foot wide road – basically the travel lanes would be 12-foot wide with eight-foot shoulders. The blue lines you see on the boards represent three-lane sections or two-lanes with a center median left-turn lane. There are two different widths that would be used. The one on the right is a 42-foot wide top, which basically matches the Townsend Urban design. Then in other portions of the corridor there would be a 52-foot wide top for the three-lane sections. The five-lane section would be 76-feet wide with four 12-foot lanes and a 12-foot center median left-turn lane.

Examples of the Preferred Design: This is the Townsend Urban Project (showing graphic) and is very much like what you would see at the north end of this project and in the other three-lane areas. This is a picture north of Townsend where a four-lane passing lane exists with a center median left-turn lane.

Potential Effects of the Physical Environment: The potential effects of implementing this project – most of the environmental document goes into much more detail but I just want to call out the most notable ones. First there would be work that will occur in and adjacent to some of the streams in the area. Because of that work, there is a potential for water quality impacts to occur, however, with the implementation of the project, erosion control measures would be implemented to minimize that potential.

Floodplains: There is also some minor floodplain encroachments associated with this project. There are delineated floodplains at Deep Creek and Greyson Creek and also a section of the Missouri River where this project would cross a delineated floodplain. Basically what MDT is required to do in those cases is make sure that what they are proposing doesn't increase the elevation of the floodplain at those points.

Wetland Impacts: There will be direct impacts to a variety of wetlands sites. Our biologists delineated 26 individual sites along this 8.2-mile section. Twenty-two of the 26-wetland sites would have some degree of impact. Overall we are estimating about 13.9 acres of wetland loss as a result of the road reconstruction project. That loss will have to be mitigated with the replacement of wetlands either on-site or elsewhere. Currently there is a feasibility study underway to look at potential wetland mitigation on the Hahn Ranch, which may or may not be a feasible thing to do – that still hasn't been determined yet. There is also a likelihood that if that doesn't pan out, wetland credits could be purchased from an existing mitigation site on Woodson Creek over by Ringling.

T & E Species: There are two federally listed threatened and endangered species that potentially occur in the corridor or be affected by the project. They include Bald Eagles – there are nests along the river in the area, as well Ute Ladies Tresses, which are one of only a handful of a couple of plants that are on the Threatened and Endangered Species List in Montana. Formal consultation with U.S. Fish and Wildlife Service has already occurred regarding potential effects on Ute Ladies Tresses and MDT road design staff has done a very commendable job at designing and putting together the preliminary plans such that it avoids known populations of those threatened plant species.

Wildlife & Fish: The project will also have minor effects on wildlife and fisheries habitat. The mitigation ideas being talked about in the document include installing a number of small diameter culverts for small mammals like skunks or raccoons to cross beneath the highway. Also the idea is talked about including a stock pass type culvert at Deep Creek overflow to allow larger mammals like deer to move back and forth in that area. There will also be a maintained fish passage at major stream crossings.

Other Potential Effects: It appears to us that there will be minimal effects on land use, the economic, social conditions in the area. There would be a conversion of soil types that the Natural Resource Conservation Service considers important farmland. That is unavoidable with the expansion of the right-of-way corridor and basically involves taking potential farmland and converting it to a transportation use.

Right-of-Way: There will be additional land required for additional right-of-way and any conflicting utilities would also have to be relocated. There are no commercial relocations involved with this project.

Noise: And our analysis showed that noise impacts would occur at two locations, however, I should point out that these impacts are basically the result of increasing traffic on the route and those impacts would happen even if nothing were done to improve this facility. Doing noise abatement, which is like putting in walls or berms, is not practical or feasible in this corridor.

Historical Properties: As I mentioned before there would be some minor effects to some National Register of Historical Eligible Properties that exist along the corridor. And the 4(f) evaluations included

in the document discuss that. There would also be removal of the bridges, as we mentioned. The old concrete bridges are historic as well as some of the irrigation facilities and canals that were put in a long time ago.

Visual Changes: As you all probably know, the cross section of the road would change with this project. Road widening and the slight alignment shift would probably be apparent to those of you that drive it all the time or live along the road, but most likely the people who are just passing through may not know any different. The proposed improvements will hopefully make the facilities more efficient and should make it safer.

Cumulative Effects: We did not identify any notable cumulative effects, meaning the project would not appear, by itself, be something that would cause a lot more growth in the area than already is happening or to encourage any type of new development particularly, and it doesn't conflict with the county's growth policy.

Construction: Obviously rebuilding the road is going to generate some temporary impacts during construction. The road would be built under traffic and there would be inconveniences to the traveling public – delays could be possible. Access to adjoining properties would be perpetuated throughout construction and some of the other permits that would be necessary in order for MDT to construct this project would help safeguard water quality.

Preliminary Conclusions: To this point, the proposed reconstruction of this section of highway would not appear to result in significant impacts. Based on this, an EIS would not be needed to proceed with the project. If the Federal Highway Administration agrees, after considering the environmental document and all the comments that we may hear tonight, plus the written comments that we receive, if they agree with that conclusion then they can issue a Finding of No Significant Impact (FONSI). If a FONSI is issued, then this project can proceed into the final design and right-of-way acquisition stage.

What Happens Next: Basically we are going to take any oral comments you want on the record to be addressed in the document specifically, and also your written comments can be left at the meeting tonight or sent into MDT. Comments on the EA will be accepted until January 13, 2006. After that time, we will review what we hear, identify what needs to be responded to in the document, what kind of changes are necessary to the environmental document itself, and then when those changes are made we will resubmit the document to the Federal Highway Administration and ask them to make a decision regarding a FONSI. We expect this process to get done in the next two –or three months if we can, and move on. With that I'll turn it over to Jim Davies and let him give you a description of the project.

PRESENTATION – Jim Davies, MDT

Thank you Dan. Good evening ladies and gentlemen. I'm going to go over the engineering portion of the proposed preferred option. As everybody knows, the highway is located on U.S. Hwy 287 but on our National Highway System this is called Route No. 8. Our National Highway System is one notch under the Interstate System, so it is a pretty important highway.

The project is going to begin at milepost 78.1, which is on the outside of Townsend, and go all the way to milepost 86.3. As Dan mentioned, our horizontal alignment we are proposing shifting it east away from the railroad. There are three bridges currently on the project – the one at Montana Ditch, the Deep Creek Bridge, and the Deep Creek overflow. Preliminary hydraulic analysis would indicate that the only bridge that needs to be replaced is the Deep Creek Bridge. The Montana Ditch could be taken care of with some kind of a pipe system, possibly a box culvert, and the Deep Creek overflow would be the same thing.

For those of your who are irrigators, the irrigation crossings will be perpetuated and your irrigation will go on uninterrupted through the irrigation season. We want to make sure you get water to your crops.

We will put a special provision into our construction plans directing the contractor to ensure that he doesn't mess up your irrigation facilities during the irrigation season.

With this project, all of the main line culverts and approach pipes would be replaced with new pipes.

For those of you interested, our current traffic records are showing the following traffic counts on this section of Hwy 287. As you can see (showing graphic) in 2002, they counted 3,190 vehicles that use this highway every day. Of those vehicles, 325 were commercial trucks. With that data and past data, it is predicted that in the year 2006 that figure will be bumped up to 3,660 vehicles. Then our projected ADT for 2026 will be 7,280 vehicles per day using this facility.

Our typical section or what you call the roadway width – our finished width will vary throughout the project – at the very minimum it will be a 40-foot finished paved top. The typical section is what we place on top of what is called the “sub-grade” or the “dirt work” in the project. The typical section on this project is proposed to be about 3-1/2 inches of plant mix surfacing on top of 22 inches of gravel. For the lanes we have a couple of typical sections up here (showing graphic) – one for the urban section that connect into Townsend. We've got two travel lanes and then a center turning lane. Then we have a typical section for our rural two-lane section, which would be two 12-foot lanes with two eight-foot shoulders for a total of a 40-foot top.

Now as Dan mentioned, there will be some areas that are three-lane sections with the center lane for turning. This will be in the rural section. Those sections would be 52-feet wide – three 12-foot lanes, with a center lane of course, and then two eight-foot shoulders. Where we get into the five-lane section, we would be into 76-foot wide finished plant mix top, with five 12-foot travel lanes and two eight-foot shoulders. Also the new slopes will be much flatter than what is out there now and much safer.

I might just walk through the boards for you at this time since we are on the typical sections. Right here at Townsend (showing graphic) we will be into this three-lane configuration that I just mentioned. In the blue section here, that is all three-lane. That will come out past Watson Irrigation and then we will transition down into a two-lane configuration. The area across Montana Ditch will be two-lane until we get just before the Lower Deep Creek Road where we will transition back into our three-lane configuration. That will go for just a little bit to ensure that there is a left-turn lane for this Lower Deep Creek Road. Once we get to this area, we will transition from a three-lane configuration into a five-lane configuration. So just before mile marker 80 we will be into a five-lane configuration. So the new bridge going over Deep Creek will be a five-lane bridge. That is significant because (1) we won't need to build a detour. On a lot of projects we have a narrower bridge and you need to build a detour on one side or the other but with a five-lane bridge we anticipate we can build it with stage construction – meaning building half of it at a time and move traffic over so there would less impact. And (2) the five-lane will be in place for future traffic.

Then we are moving along here (showing graphic) past Hank's Salvage, then from our five-lane just before mile marker 81 we drop down to our three-lane. Then from there we transition to a two-lane where we go past the York Island Fishing Access Site – that will be two-lane all across here through mile marker 82. Then we come back to beginning here and drop down to Greyson Creek where we are still at two lanes through mile marker 82. Then we begin transitioning from a three-lane directly into a five-lane, and it is five-lane through mile marker 83. You can see these red lines (referring to graphic) and you can come up after the meeting and take a real close look. We propose bringing Lighting Barn Lane into the Dry Creek Road as one approach. Two approaches coming in are real dangerous particularly on an approach that is at such a skew as this. So we think that will be a lot safer. Then back to the main line—we are at a five-lane across Dry Creek through mile marker 84. Then we will start transitioning to a three-lane, and it will be three-lane through the blue (referring to graphic), and then at mile marker 85 we

are back to a five-lane until we get to the Big Spring Ditch and then we start transitioning back down to a three-lane, and we end the project just before Flynn Lane.

There will be new signing and pavement markings with the project and the shoulders will be wide enough that we can provide rumble strips on them. There will certainly be a need for new right-of-way acquisition, but at this time since we are so preliminary, the exact extent of that is not known. I do have a set of preliminary plans and afterwards, if anybody is interested, we can certainly find your place and look at what is the proposed take.

On your approaches, if it is a private approach or a county road approach, it will be paved to the new right-of-way line. On the farm field approaches, they will receive a 12-foot plant mix strip. From there to the right-of-way line it will be graveled. All utilities that will be affected with this project will be relocated. Where the mailboxes are along the highway, we will provide a mailbox turnout, which is another safety feature for both the mailman and yourself.

Traffic will be maintained during construction of this highway. The prime contractor will hire a traffic control contractor to help us out. MDT will provide reasonable access to your property at all times during construction. So we don't plan to impede access – you can get to and from your fields, homes, and businesses.

As far as the funding, the project is 87% federal dollars and the remaining 13% will be state match. The project has \$10 million earmark in the latest highway bill and the project will be at least \$11 million, so we will have to come up with an additional \$1 million out of our NH funding. That \$10 million earmarked funds is a good thing for this project because it is directly listed for this project in the highway bill. So it can't be taken from this project and moved to another project. There is \$10 million set aside. So with that, it is fundable in 2009 and as long as we get all the design tied up, we feel we can let the project somewhere around February 2009.

That is just a general synopsis of the engineering aspects of what you would expect to see with this proposed alternative. With that I will turn it back over to Dan or Charity.

Charity Levis Watt: At this point we will open the floor for public comment. Again, I ask you to limit your comments to the Environmental Assessment and save any general project questions you have until after we have closed the public hearing.

QUESTION/COMMENTS

Com: (Elaine Mann) I'm Elaine Mann, Broadwater County Commissioner District 3. One of the concerns has always been the wetlands, which have helped cause accidents mostly because of people stopping to watch the waterfowl. From the EMS standpoint, the wider shoulders are encouraged. We would like the special ditches with the non-roll and I see you have that in there. Then on our agricultural side, we are concerned about the lanes and the passing lanes and moving farm equipment and cattle during those seasons. So the safety for our Ag folks is a big concern. Then this doesn't include this but I had a request from one of my citizens to ask about an underpass at the Lone Mountain 287 Junction where there is a real deep dip. By the looks of the project and if we can encourage some kind of safety concerns for our farmers for equipment and cattle, I think that would work out well. Thank you.

A: (Jim Davies) If I could just reiterate that one point – we are totally in support of safety for our agricultural community and everybody as well. Dan did touch on it – the drawing in the EA that shows the four-lane, is actually wrong. There is not going to be any four-lane proposed here because with a four-lane section you don't have that center turn lane for the left turn movements. That's imperative with the amount of traffic and the amount of approaches that we do have the left

turn lane here for your safety. You can get in there and stop and wait for the opposing traffic to go by.

- Com: (Bob Davis) I'm the party that resides at mile marker 85.2 and if MDT purchased my place they forgot to put the check in the mail. So it has not been bought. Another thing, on one of the slides it showed three bridges, so I don't know if the Spring Ditch Bridge doesn't count. On Spring Ditch, when the current highway went in, they changed the alignment of the ditch and that bridge needs to go back in on the skew because we've had a run-in with the local maintenance crew when we cleaned the ditch because the ditch is at a right angle to the highway. So I believed that needs to be looked at.
- Com: (Curt Diehl, Dry Creek) I'm concerned about Dry Creek where the fish come up there. Of course you are on the railroad side, we've got a problem down there, but if we are going to do some things there, I think we ought to address what is going on there. There are a lot of fish that come up in there and spawn, particularly rainbow trout and some browns now since the rainbows are kind of down because of Whirling disease. The other thing and I think there have been a lot of us who have talked about it here; there is an awful lot of deer killed on this road. I don't think there is any day that goes by where there isn't a deer killed. You say you are not going to do anything about the deer but think about all the damage it does to the cars and the potential for injuring people. I've got an underpass in that low area by the spud cellar and it was used for many years as an access to the river for water for the cattle on our farm. We haven't used it but that doesn't mean we wouldn't want to sometime. So I think that should be enhanced so we can get some deer under there. I think Davis's have an issue and I'm not going to talk about Davis's issues there too but I'm sure that we need to do that there and I think that is an environmental thing – killing all these deer along the highway. I hate to see it and I'm sure everybody else does too. Not only that, their cars are damaged and it costs them \$10,000 to get it fixed again and that isn't a very good thing.
- Com: (Ted Flynn) I want to say the same thing that Curt did. There is not a day that we drive to town where we don't see at least one deer – there is 365 a year or more killed because I'm sure we don't see all of them that area laying there. I'm getting tired of running over them myself. One of the other concerns I have is moving cows. We are here right at the end of the project at mile marker 86, and we have kind of a unique situation where we have to come out onto Hwy 287 and then go 200 yards north to hit our main railroad crossing to get across. In thinking about safety as far as designing this far ahead, I would like to see on our private crossing something done so that we could come straight out across the highway and then right straight across the railroad tracks rather than having to take cattle and machinery and everything down 200 yards and then go across. That would be an issue with both MDT and Burlington Northern, but that would be a safety issue that I think we should at least address as long as we are looking at it this far ahead.
- Com: (Ed Watson) I live right where Litening Barn comes in on the highway. The deer issue is another concern of mine along with everybody else. I think we have maybe more by our arch there than anywhere else. It seems like there is always one every other day there. I would like to see, if we could do something more with maybe more culverts through there for wildlife to pass – just a couple of them might be really good especially with the wetlands involved. Then I would like to participate in a larger culvert of some sort for my own personal use right there. We would like to be able to go underneath that highway with a four-wheeler or maybe some kind of a crossing and I would like to know who to talk to about that or if they could get in contact with me.
- Com: (Nancy Marks) I was one of the people who worked on the original CTEP grant for the pedestrian bike trail that goes north from Townsend. I would like to see that issue plugged into this program.

I realize it would probably be a future idea but we would like to see a pedestrian bike trail go from Townsend south even as far as York Island. So if that could be put in the plan. I know that is separate from MDT but it should be assessed in this project.

Com: (Chuck Hahn) Mile post 80 is where we are affected. I have questions as far as when the bridge is put in what it is going to do to our approach. I also have a question on Lower Deep Creek Road where it is skewed where it meets the highway. If we come from the south and have to turn onto that road with trucks, we have to swing out into that on-coming lane to make that turn and I don't think there is any provision in there now that would cover that. I also think it is a little bit of a safety issue where you have the five-lane going down to three-lanes right about where our approach is. We have so many entrances and exits with trucks right there. I don't know if there is any way to correct that or not, but I just counted today how many times we go in and out, not with trucks necessarily, and I counted 50 times in one day. I think it is a fairly good issue to look at.

Com: (Cory Davis) We are at mile marker 84. I have a couple of issues. We've got a five-lane for turning, which is great. There is substantial amount of fill in the highway right there (referring to graphic), and we do cross cattle underneath the highway there and to try and get across four lanes of traffic would be extremely dangerous. We have to stop traffic to do that and it is tough enough on the two-lane, let alone a four lane. We need a box culvert or something big enough to get cattle to trail through there for safety.

Here (referring to graphic) we maintain this approach across the highway here. It doesn't look like it is used very much but we need that one maintained. Station 130 – we need to have that approach maintained. There is also a pipeline that feeds our irrigation down here and we will have to talk to somebody about that. It needs to be upgraded and it needs to be done when the highway is done. It is just a concrete line now and it needs to go to a pressurized water system. Then also Spring Ditch that Bob talked about – that 90-degree thing is terrible. We are on that work crew every spring and it causes a lot of trouble there and we need that back in line.

Com: (Gail Vennes) I live at mile marker 84. I run a livestock service business there involving embryo-transfer work. What my concern is – I'm going to need a truck access. Right now I'm using the access basically down from 120 to 125, right in this area (referring to graphic), but if we widen this road out, this access road that we have going along side the highway will be eliminated. Therefore I'm going to need an access up in this area where my facility is at 120.

Com: (Curt Diehl) Right there by Dry Creek where we turn in, is that access going to be maintained? There is an access right there (referring to graphic) that we have to use to go into that field. Is that going to be maintained?

A: (Jim Davies) Yes.

Com: (Dennis Williams) My father is Bill Williams. Since he is not here, how come you are doing the project there, when the real choke point is the Toston Bridge?

Com: (Elaine Mann) Now that the funding is budgeted for this, can I start asking for money for the Toston Bridge?

Com: (Pam Converse) Broadwater County Weed District. I would just like to know, especially along that stretch of highway with as much dirt as you are going to be moving, if there was some provision to make sure that we do get the federal funding so we can do pretreatment. There is a project being worked on right now where we did not have a chance to use the federal funding, we had to use our county-designated state money and it would be nice to be able to work with the funding to get that started so we don't have as many problems afterwards.

CLOSE THE PUBLIC HEARING PORTION OF THE MEETING

Charity Watt Levis: I will remind you again that we will still continue to take public comment in writing so if you are not prepared to speak tonight, you can fill out a form tonight here, you can review the Environmental Assessment closer and submit your comments either on line or in the mail. Are there any other comments for the public hearing portion of the meeting? Last call for public comment. At this point then, seeing none, we will officially close the public hearing and open the meeting up for general questions and discussion.

GENERAL QUESTION\COMMENT

- Q: (Chuck Hahn) Part of the EA shows that the centerline is going to move 33 feet to the east up to about Dry Creek and then it is going to be moved to the west? Is that right?
- A: (Jim Davies) Let's take a look at the plans. You are talking about what station?
- Q: (Chuck Hahn) It is on page 26 of the EA. It says from Townsend city limits 78.7 the centerline of the new road would closely follow that of the existing highway south of 78.7 the centerline would be shifted 33 feet to the east and would parallel the existing road to milepost 83.5 near the highways crossing of Dry Creek. South of 83.5 the new road centerline would be shifted to the west and parallel the east shoulder of the existing road.
- A: (Jim Davies) That is correct. It is shifting back to the west, that is proposed.
- Q: (Chuck Hahn) How can it shift to the west there? Is it further away from the railroad tracks?
- A: (Jim Davies) Apparently.
- Q: (Chuck Hahn) That is the reason it has to be shifted to the east because it is too close to the railroad tracks now?
- A: (Jim Davies) That is correct. The railroad certainly has driven a large part of where the horizontal alignment has been placed.
- Q: (Chuck Hahn) So if it is shifted 33 feet to the east and you are going to have a 76-foot road surface, how much right-of-way are you going to have to acquire on that east side?
- A: (Jim Davies) A considerable amount. It will vary based on the fill height that will determine where the fill slope is going to catch. It will be a considerable amount for sure.
- Q: (Chuck Hahn) That is still to be determined then?
- Q: (Hank's Salvage) You are coming into my yard and my house!
- A: (Jim Davies) Well, we will take a look and give you a rough idea.
- Q: (Hank's Salvage) You are moving me!
- A: (Jim Davies) Somewhere around 120 feet or 130 feet from centerline.
- Q: (Hank's Salvage) That still puts you in my front yard right outside my door!
- A: (Dan Norderud) Where are you at?
- A: (Jim Davies) Station 65.
- Q: (Hank's Salvage) Those cars are behind my house.

-
- A: (Jim Davies) It indeed is going through there and our right-of-way folks, once it goes into right-of-way phase, will definitely be around to talk to you about that. One of the fellows here tonight is Wayne Nelson. If you have any questions about what may be done, definitely talk to Wayne. That is why we brought him.
- Q: (Hank's Salvage) You are moving me! That ditch will be right at my door!
- Q: (Chuck Hahn) The EA that I have in front me, there are several things that are different from what we see here. So if we make a comment or a written comment out of this EA, what do we actually look at as the true plan to comment on?
- A: (Dan Norderud) On the typical section, as I mentioned figure three will be revised to reflect this concept. The EA was written in a generic fashion when we went through various iterations and that figure should have been revised before it went out. The idea we talked about in there was that there would be a number of different ... a combination of these typical sections using left-turn lanes where necessary and that sort of thing. We will make the correction to that figure for the final document. Just make your comments and we will address those for you.
- Q: (Bob Davis) So in one place here it said that my house was purchased at 85.2, and following Chuck's thought here, according to the document it is going to be moved to the west. So is my house saved?
- Q: (John Hahn) I just have a question on the wetlands around milepost 79 where it is going to be two-lane. Are those wetlands going to be completely eliminated or are they still going to be there? To me that has always been a dangerous area and I don't always understand why it should be two-lane there because there is going to be a bad accident there someday. Is that going to be completely eliminated? Is that going to be a 40-foot driveway?
- A: (Jim Davies) That will be a 40-foot top – 12-foot driving lanes, shoulders, and flatter slopes. That will in fact be a 40-foot top there, which would include eight-foot shoulders on both sides and our slopes would be much flatter than they are today. So it would be very much safer than it is today.
- Q: (John Hahn) Will there still be wetlands there or are they going to be eliminated?
- A: (Jim Davies) If the wetlands are there they will obviously be outside of the danger zone or the clear zone, which is a distance from the edge of our traveled land where we feel a vehicle can come back and recover. So they will be beyond that if they are still there at all. But a large portion of them will certainly be filled.
- Q: (Ward Scoffield) I'm at mile marker 81 on Shelley Road. We have a lot of trucks coming out there – Hahn's trucks for one, Mike Anderson and his brother's cattle trucks are coming out of there, Bob Wilkins' trucks, Joe Flynn's trucks and these are all semi-trucks. It changes right there. Is the green three-lane?
- A: (Jim Davies) Five-lane.
- Q: (Ward Scoffield) Oh, it's five and then it goes to three – I see. Right now it's really a bad place. I'm assuming a new road is going to help that considerably. One concern is that right there, that road dips down. There have been several cars rear-ended right there because of that dip and of course the highway is marked not to pass but that means nothing. They come along and some people have even pulled over and they still get rear-ended. Is there anything ... what is going to happen with that dip, is it still going to be like that?

-
- A: (Jim Davies) That dip will be filled in. That's part of our vertical alignment and that will be corrected so you will be able to have good sight distance. As far as the turning movements onto the road (1) that road will be brought in at a 90 degree angle so that will make it safer, and (2) also you will still have the left-turn lane for your trucks in that area so it will be very much safer than it is today.
- Q: (Unidentified) At Shelley Lane you are going to bring that up so it is level from there up to ... because that is a hill coming up?
- A: (Jim Davies) We will certainly make it so you can see.
- Q: (Unidentified) All the way down?
- A: (Jim Davies) It will be much, much safer than it is today. That is correct.
- Q: (Ward Scoffield) Another point, if you see up the road there about 100 yards (referring to graphic), I have a crossing that goes across the railroad tracks. I have the same problems ... I used to haul second crop hay across there and over to my feeding mangers. It became so dangerous that I quit doing it because I had a bail wagon and you just couldn't sit there long enough to get it moving, you had to have both lanes clear to get across there. You could look up the road as far as you could see and you couldn't see anybody coming, but then you'd pull out there and if you had to stop for another car there would be somebody barreling down on you. If that is a five-lane right there, I'm assuming you are going to have an island of safety out there in the middle?
- A: (Jim Davies) That is correct.
- Q: (Bob Davis) The contractor south of Toston is quite slow at moving dirt, will this contractor be faster and will we have a gravel road all one winter as White Sulphur did, and up at Winston?
- A: (Jeff Ebert) I'm the District Administrator. We were not pleased with the speed at which the contractor moved. In fact he just barely got the work done so that he got a paved surface on and didn't have to deal with gravel through the winter. Let me diverge a little a bit. There are some District Administrators, and I'm not one of them for your benefit, that like to keep their roads graveled through the winter. They feel it gets a better product out of it. You all have to drive that and as long as I'm District Administrator here we're going to try and get a paved surface on before the winter.

Jim [Davies] talked about trying to let this project in February. With a February letting, the ideal thing is to have the contractor ready to go the first of April and be able to do the dirt work through the middle of the summertime when we should be doing construction. Unfortunately the tourists come and that slows the whole operation down and we have to deal with that, but it is our intent, and we will write in the special provisions that Jim talked about, dealing with the irrigation issues we are going to run into, but we will write in special provisions to get the contractor to get at least part of a paved surface – maybe not the entire surface but have all the dirt work in place and maybe just have a paved surface. This is a fair amount of work here, there's about seven or eight miles of construction and it is a little bit longer than our other one. That project was let late in the year and we knew going onto it that we were going to be pushing the envelope. Ideally if we can get the right-of-way acquired in a timely manner and it sounds like we might have some troubles but we are going to be good, we will be very good, and we will be fair. We will try to get this so the construction will happen during the middle of the summer and get first lift of paving on prior to the fall and not leave you in gravel through the wintertime. Contractors don't like to do that because we make them do the maintenance on the roadway during that time and it is an incentive

to them to try to get that done. We always have to take the low bidder and sometimes the low bidder is not always the fastest worker.

- Q: (Ward Scoffield) Is there any plan to detour this traffic up these county roads? If there is for one thing we don't want to put up with the dust and the dirt.
- A: (Jeff Ebert) One of the things we talked about in the presentation – one of the issues with the alignment we've chosen is that we can do the work off on the side and allow the traveling public to go through on the current road similar to what we did on the piece further to the south where they did a lot of their dirt work while that roadway was in place. I think the intent is to stay that same way. We do have a couple of structures in here and there might be some short little detours but I don't think we are going to be going off onto any of the county roads. That is not the plan right now.
- Q: (Ward Scoffield) The reason I asked is that when they resurfaced this road the last time, they detoured a lot of that traffic up our road. When it is hot and dry it is dirty. We don't want that dirt out on our crops. These guys are putting up hay.
- A: (Jeff Ebert) We don't like to get the phone calls in Butte or Bozeman telling us that is happening either. No, if that happens we are going to make sure the contractor complies with the contract provisions and take care of the dust and not leave you in a bad condition.
- Q: (Ward Scoffield) That is just for the record.
- Q: (Ted Flynn) Ward, you beat me to it. I know for a fact that with this construction starting where it is, Flynn Lane is going to be a racetrack. I think you guys need to address that early because it doesn't make any difference what you do, whether you stop the traffic or you just slow it down, the fact remains that Flynn Lane is going to be a racetrack. Everybody knows where it goes and how to utilize it and get to town. That is one thing – you're either going to have to stop people on the south side of Flynn Lane and hold them up but you are going to have to do something. I've got a backhoe and I'll dig a trench across the damn thing. Something is going to have to be addressed in that particular place. The same thing is going to happen at Lightning Barn Lane just because of the direction that those lanes run. If traffic is slowed up and/or stopped, either one it doesn't make any difference, these are going to be racetracks.
- A: (Jeff Ebert) Thanks for bringing that up because I think that is something we can get written into the special provisions, we can work with the county and set up a special speed zone or some sort of traffic calming to try and keep that speed down, and work with the contractor and try and prevent that or try and mitigate that as best we can.
- Q: (Ed Watson) Ted beat me too because I live on Lightning Barn Lane and some dust control would sure be a consideration I would think because they will be used.
- Q: (Brian Patrick) (referring to graphic) When I look at the middle panel on the bottom and I see that stretch a mile or so long that goes from the green, which understand is a five-lane, down to a two-lane, to a three-lane, back to a two-lane, and then back to a five-lane, I've always wondered why it wouldn't be easier just to make that full stretch a five lane? As I considered that, I guess people in our county know how to drive the road – where it narrows and where it widens. My concern would be all the people who travel the road who are going to college from Northern Montana that use this way to get to Bozeman that don't know the road and that would make that a pretty unsafe section.

A: (Jeff Ebert) The biggest reason that we're only building a five-lane through portions of this is money. We were very fortunate, and I'll take this opportunity, with our Congress doing a set-aside of \$10 million. In the Butte District, Jim talked about the National Highway System, the pot of money that our district gets is probably the smallest throughout the five districts that compete for the money. Unfortunately our district has very little NHS roads but we have a major portion of the traffic with U.S. 287, U.S. 12, U.S. 191, U.S. 89 are examples of NHS routes that are competing for the funding that we have. Thank you to Senator Baucus, Senator Burns, and Representative Rehberg for getting that earmarked because that helped us out in getting the \$10 million we need for the \$11 million project so we now only have to come up with one million. It allows us to do some other projects – one on Jack Rabbit Lane in Bozeman is one but we also have two or three more projects on U.S. 287 where we are going to try to put in passing lanes and what have you. We just do not have the full funding to do this to a five-lane facility all the way down.

Elaine [Mann] touched on the bridges, and I'll take this opportunity now, we have nominated a project to study – and I know that everyone said that was studied before, but unfortunately we can not find those plans or that study. So we are going to restudy that whole issue again and look at it. We did put up some flashing lights on the bridges over Toston and we are going to also put up some centerline rumble strips to warn motorists to stay off the centerline when they go over that bridge so we don't have any side-swiping of vehicles. We will do that later on this summer. Once we can get a study done, we will try and determine what the costs are and then start saving up our funding to replace the structures over there. I know as long as I have been here, that is one of the major issues I hear about and I will do my best to try and get something done there. I'll promise that – whether I'll do that before I retire and before I'm old and gray and all that. It is going to be a priority of ours. We just have a lot of traffic out there and we will try and do the best we can.

Q: (Unidentified) You brought it up – you said Congress. I've got one suggestion. It looks to me like the biggest problem we've got here is the differential between the different speed limits between the trucks and cars. If somebody in their infinite wisdom would just decide to make the truck and car speed limits exactly the same, you wouldn't have a lot of the problems we have today. Why not go to the State Legislature and say, "hey as a safety issue, let's get this thing figured out."

A: (Jeff Ebert) And you would hear the same echo from the Department of Transportation. That speed differential is a big issue. Trucks are only supposed to go 60 mph but the cars around them can go 70 mph and that 10 mph differential between them is a big issue and if there are any politicians here tonight ... please ... That is a state law and we really don't have any control over that. Yes, I concur.

Q: (Unidentified) I have one other thing I would like to talk about regarding wetlands. I think you would have a lot better chance with your wetlands if your federal government didn't want to totally control that land. If you have wetlands, as I understand it at least with the contract that I read, that you couldn't take a penny off that land. If you wanted to put a cow on there or anything like that, you can't do that. So what you are doing is giving them an easement forever to use that land as wetlands, which is a good thing, I'd like to have some. But I'm not going to give them an easement forever and pay the taxes on it and then have five pages of remedies that they have in case something happens.

Q: (Chuck Hahn) Any anticipation where you are going to get all the fill material at this point? I have in excess of ½ million yards, but I'm just wondering about ... I would think that some of the county roads are going to get a lot of heavy use from gravel trucks.

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- A: (Jeff Ebert) The only thing I'll comment about is that one of the things this process tonight allows us to kick off is final design. What we've done so far is fairly preliminary in order to determine impacts. I think we've got a rough calculation of how much dirt we are possibly going to need and it probably is what we term a "borrow job". In other words, we've got to find dirt and we usually leave that up to the contractor. The contractor would be required to make sure that the roadway he hauls that over is left in a better condition. We take a lot of criticism because that doesn't always happen. We've tried some things and again we are going to sit down and talk to the county. One of the things they've done in some areas is to go out and actually videotape the road beforehand to get the condition of it, and then come back and if it doesn't look like that videotape, then the contractor has to go fix it. If you know of any dirt sources or any gravel sources, we are all ears. Again we make that the contractor's responsibility but we can pass that information on.
- Q (Bill Davis) I want to talk about lining on the road and Flynn Lane. If those roads get increased traffic from your construction, we are going to get decreased crop productivity. That dust affects new alfalfa and lentils and beans, and both of the roads have those crops growing on them. So it isn't just a matter of trying to control the traffic, it would be a matter of coming in and putting in some type of dust control on the roads for those distances. Crop production reduction is not going to help us at all; we just can't have it, we are all trying to max it out now. So we need that written into the contract.
- A: (Jeff Ebert) Ok.
- Q: (Dennis Williams) Regarding the bridges. As you are improving the highway up and down, it looks to me that you are making it a lot easier for traffic to go back and forth. You are going to have an increase in traffic there. What is the time frame for getting the bridge there fixed? Are we realistically going to get that fixed?
- A: (Jeff Ebert) Time frames – when they ask us for our next call for "nominations" which will probably in the spring. It will go through the transportation planning process. They will put the project out for a public comment period probably through this summer. Then it would go to our Transportation Commission in September. October would be the next new fiscal year start, so we would start programming funding for that. The study would probably take place over the next couple of years. Then it is just a matter of trying to find enough funding. So I would say because we have projects scheduled out through 2010 that, a minimum, we are looking at five to six years and probably more in the neighborhood of seven to ten years.
- Q: (Unidentified) What about irrigation? I have a well, a good well, and I'm pretty sure you are going to be over all of that.
- A: (Jeff Ebert) Wells that are something that maybe Wayne can address. If we are going in and we ran into this same issue East of Townsend where we are going to try and fix U.S. 12 – if that was the only well you could get, because of the water equality and the amount of water we are going to work that out in what is called a "cost to cure". So if we get our roadway on top of that well, we will have to give you the funding to build a new well and get it up to your satisfaction.
- Q: (Bryan Patrick) Superintendent of School. School bus turnouts, where are stops? That is something that we ran into on the passing lanes project we did at Baum Road – there wasn't any provisions for school bus turnouts. So where would those occur?
- A: (Jeff Ebert) I'm glad you brought that up. That is a very good point. We would like to make provisions because, again, that whole issue of getting children to school safely is part of what we

need to do with our project. So let us know where they are. We will get a hold of you. Thank you.

CLOSING:

Charity Watt Levis: It seems we are winding down on questions but I'll give you a last chance now. Certainly the staff will be around if you want to approach them immediately after the meeting if you have questions or things you want to have explained. We will be here. With that, thank you all for coming tonight, we appreciate all the good comments you had and the feedback. Again, those will be addressed in the Environmental Assessment.

SIGN-IN SHEETS FROM PUBLIC HEARING (3)



Montana Department of Transportation Public Meeting Sign-in Sheet

Meeting: Townsend-South project and EA
 Project ID: CN 1429, NH-F 8-4(16)78F in Broadwater County
 Date and time: 7 pm on Thursday, December 15, 2005
 Location: Townsend High School Community Room
 201 N Spruce Street, Townsend

Please print!

	Name	Mailing Address	Zip Code
1.	Franklin Slicks	Box 63 Toston MT	59643
2.	Henry & Viola Loh	P.O. Box 128 Townsend	59644
3.	Bob & Linda Davis	8517 Hwy 287, Townsend	59644
4.	Jeff Patton	FHWA	
5.	Ted Flynn	669 Flynn Ln Townsend	59644
6.	Chuck Hahn	7996 Hwy 287 Townsend MT	59644
7.	Dusty Hahn	7996 Hwy 287 TOWNSEND, MT	59644
8.	Cory Davis	150 Dry Creek Rd Townsend MT	59644
9.	Curt & Zilda Diehl	" " 454 Flynn Lane	59644
10.	Ward Scappellato	80 Shelley Rd Townsend, MT	59644
11.	Joe Nelson (Nelson)	23 Nelson Rd	59644

Please print!



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Please print!

	Name	Mailing Address	Zip Code
12.	BILL S Davis	Townsend 379 Flynn Ln	59644
13.	Lois M. Vennes	P.O. Box 1170	59644
14.	Hahn Ranch Feed & Supply John Hahn	7821 Hwy 287	59644
15.	JOE OLSEN	P.O. Box 3068 BUTTE, MT.	
16.	Nancy Marks	3597 Hwy 284	59644
17.	ELAINE MANNA COUNTY COM.	290 RIMPTON UPPER TOSTON 59643	980 2052
18.	Dennis Williams	306 Lone Mtn Toston	59643
19.	BRIAN PATRICK	200 S-Cedar Townsend	59644
20.	Broadwater Co. Weed Dist. Pam Converse	515 Broadway Townsend	59644 59644
21.	Deb Wambach	MDT	
22.	Jim Davies	MDT	

Please print!



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Please print!

	Name	Mailing Address	Zip Code
23.	Ed Watson	7387 Hwy 87 Townsend	59744
24.	Jeff Ebert	MDT - Butte DA	
25.	Wayne Nelson	MDT - Butte R/W	
26.	Roger Schultz	MDT - Helena Road Design	
27.	Lorelle Demont	MDT - Helena Public Inv	
28.	Charity Watt Lewis	MDT - Helena PID	
29.	Dan Norderud	Peccia & Associates	
30.			
31.			
32.			
33.			

Please print!

MDT/FHWA Responses to Comments Offered on EA at December 15, 2005 Public Hearing

The following comments were made during the formal comment period at the December 15, 2005 public hearing. Responses to these comments are provided below where necessary.

Comment No.	Name	Affiliation	Date of Comment	Source of Comment
1	Elaine Mann	Broadwater County Commissioner District 3	12/15/05	Public Hearing

COMMENT 1A: One of the concerns has always been the wetlands, which have helped cause accidents mostly because of people stopping to watch the waterfowl. From the EMS standpoint, the wider shoulders are encouraged. We would like the special ditches with the non-roll and I see you have that in there.

RESPONSE: U.S. Highway 287 in the project area has two 12-foot-wide travel lanes and two 3-foot-wide shoulders. The existing highway also has areas with fill slopes as steep as 2:1 and cut slopes steeper than 1.5:1. The paved roadway width and steep roadside slopes are considered substandard conditions based on MDT's minimum paved width for Rural Principal Arterials with similar traffic volumes and on the agency's geometric design criteria.

The proposed project would address these substandard conditions by providing wider shoulders and flatter roadside slopes. Shoulders would be 8-foot-wide except at the north end of the project where the shoulders would be 2-foot-wide, matching the adjoining road configuration in Townsend's highway commercial area. Typically, the new road would be designed with 6:1 slopes immediately adjacent to the road and with other standard cut and fill slopes specified in MDT's *Road Design Manual*. The design of roadside slopes may vary in areas of the project corridor as efforts are made to avoid or minimize impacts to delineated wetlands or to reduce right-of-way impacts.

COMMENT 1B: Then on our agricultural side, we are concerned about the lanes and the passing lanes and moving farm equipment and cattle during those seasons. So the safety for our Ag folks is a big concern.

RESPONSE: Jim Davies of MDT responded to this comment during the public hearing by stating that consideration has been given to agricultural uses in the area. He indicated that center turn lanes for left turn movements would be provided for safety at many locations within the corridor. The center turn lanes would help separate slower moving agricultural equipment from faster through traffic on the highway.

COMMENT 1C: Then this doesn't include this but I had a request from one of my citizens to ask about an underpass at the Lone Mountain 287 Junction where there is a real deep dip. By the looks of the project and if we can encourage some kind of safety concerns for our farmers for equipment and cattle, I think that would work out well. Thank you.

RESPONSE: The intersection of Lone Mountain Road and U.S. Highway 287 is located more than 5 miles south of the end of the Townsend-South project limits. Therefore, reconstruction work at this intersection would not be eligible for federal-aid reimbursement from funds allocated for the Townsend-South project.

The Lone Mountain Road intersection is located within the limits of the Toston-South project that would reconstruct U.S. Highway 287 beginning at RP 89.1 (about 0.5 miles south of the Radersburg Road turnoff) and ending at RP 93.3. This planned MDT project would flatten the road to improve sight distance, widen the existing highway, incorporate a new four-lane section and add left turn lanes at several locations. Conditions at the Lone Mountain Road intersection would be evaluated and necessary geometric modifications made as part of the project. The Toston-South project would be constructed after 2010 depending on the availability of funding.

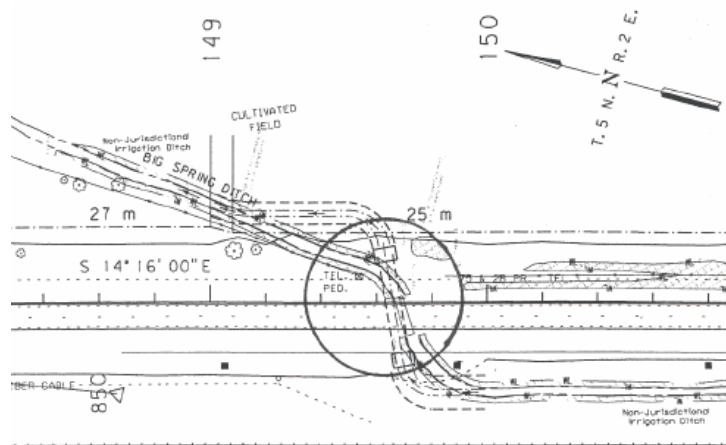
Comment No.	Name	Affiliation	Date of Comment	Source of Comment
2	Bob Davis	Project Area Resident	12/15/05	Public Hearing

COMMENT 2A: *I'm the party that resides at mile marker 85.2 and if MDT purchased my place they forgot to put the check in the mail. So it has not been bought.*

RESPONSE: Efforts to acquire Mr. Davis' residence were started several years ago when a decision was made by MDT to pursue an early acquisition of the property. An environmental document for the proposed advanced acquisition was approved by FHWA in August 2002 and an offer to purchase Mr. Davis's home was subsequently made by MDT. However, for a variety of reasons, the advance acquisition did not occur. The EA incorrectly states in several locations that the property was purchased and the text will be revised to reflect that the early acquisition never happened. The property will be identified as a necessary residential relocation in the FONSI/EA document and text identifying the property as an early acquisition will be deleted.

COMMENT 2B: *Another thing, on one of the slides it showed three bridges, so I don't know if the Spring Ditch Bridge doesn't count. On Spring Ditch, when the current highway went in, they changed the alignment of the ditch and that bridge needs to go back in on the skew because we've had a run-in with the local maintenance crew when we cleaned the ditch because the ditch is at a right angle to the highway.*

RESPONSE: We assume this comment refers to the Big Springs Ditch crossing on U.S. Highway 287 which is a concrete box culvert and not a bridge. A preliminary design drawing shown below indicates the existing concrete box culvert would be replaced with a new irrigation pipe beneath the highway and the inlet and outlet channels for the ditch would be realigned. The dashed lines shown in the figure indicate the proposed new alignment of the ditch.



The new pipe beneath the highway would not be skewed to the same degree as the existing culvert. Realigning the ditch so as much of this irrigation facility is outside the new right-of-way and away from roadway should help local maintenance efforts.

Comment No.	Name	Affiliation	Date of Comment	Source of Comment
3	Curt Diehl	Project Area Resident	12/15/05	Public Hearing

COMMENT 3A: *I’m concerned about Dry Creek where the fish come up there. Of course you are on the railroad side, we’ve got a problem down there, but if we are going to do some things there, I think we ought to address what is going on there. There are a lot of fish that come up in there and spawn, particularly rainbow trout and some browns now since the rainbows are kind of down because of Whirling disease.*

RESPONSE: Dry Creek is a perennial tributary of the Missouri River with an outstanding fisheries resource value. However, fish passage problems exist at Dry Creek. The elevation difference between the railroad culvert outfall and the river likely inhibits upstream passage under most flow conditions for resident or spawning fish from the Missouri. Fish passage is possible at Dry Creek as Missouri River levels rise and flows increase within the stream.

MDT will assure that fish passage is provided at Deep, Greyson, and Dry Creeks. However, this project would not address fish passage issues between the railroad culvert at Dry Creek and the Missouri River. Until this problem is addressed, fish passage issues will continue on Dry Creek and the effectiveness of MDT’s fish passage measures at this crossing would be limited. MDT has worked jointly with the Montana Department of Fish, Wildlife & Parks (MDFWP) and the railroad on projects to improve fish passage elsewhere in western Montana. It may be possible to implement such a project at Dry Creek if a cooperative effort and funding issues can be worked out.

COMMENT 3B: *The other thing and I think there have been a lot of us who have talked about it here; there is an awful lot of deer killed on this road. I don’t think there is any day that goes by where there isn’t a deer killed. You say you are not going to do anything about the deer but think about all the damage it does to the cars and the potential for injuring people. I’ve got an underpass in that low area by the spud cellar and it was used for many years as an access to the river for water for the cattle on our farm. We haven’t used it but that doesn’t mean we wouldn’t want to sometime. So I think that should be enhanced so we can get some deer under there. I think Davis’s have an issue and I’m not going to talk about Davis’s issues there too but I’m sure that we need to do that there and I think that is an environmental thing – killing all these deer along the highway. I hate to see it and I’m sure everybody else does too. Not only that, their cars are damaged and it costs them \$10,000 to get it fixed again and that isn’t a very good thing.*

RESPONSE: We acknowledge that animal-vehicle collisions, particularly with deer, are a common, dangerous, and costly occurrence in the project area. However, effective countermeasures that can be implemented to help reduce such collisions in this area are limited. Studies suggest that one of the most effective methods for reducing deer-vehicle collisions is properly designed and maintained fencing used together with appropriate crossing structures like underpasses, overpasses, or one-way deer gates.

Wildlife fencing must be sufficiently high, strong, long, and well anchored without gaps or other locations where deer can cross. Installing a wildlife fence along the road to restrict and/or direct wildlife

movements is difficult in the Townsend-South corridor due to the number of access locations that must be accommodated. This situation makes it impractical to provide a continuous fenced barrier to restrict deer movements. Without guide fencing, only opportunistic use of underpasses by wildlife can be expected.

As indicated in the EA, MDT proposes to install a bridge accommodating wildlife movements at Deep Creek and a standard stockpass (a large-diameter culvert) beneath the road at the Deep Creek Overflow crossing. The bottom of the culvert would be buried to facilitate wildlife passage and fencing may be considered in the immediate area to help direct wildlife to the stockpass.

In response to your comments and similar comments made at the Public Hearing, MDT will look for other opportunities to provide wildlife undercrossings in the project corridor, particularly in the area where a concentration of deer mortalities exists. Such opportunities may include perpetuating existing stockpass locations or adding new stockpasses in appropriate areas. MDT must balance the use of these features with their potential for increasing project costs and right-of-way and wetland impacts.

MDT will also consider whether or not signing improvements, like the use of flashing signs during certain periods, are practical and effective ways to increase the motoring public’s awareness of deer crossings.

Comment No.	Name	Affiliation	Date of Comment	Source of Comment
4	Ted Flynn	Project Area Resident	12/15/05	Public Hearing

COMMENT 4A: *I want to say the same thing that Curt did. There is not a day that we drive to town where we don’t see at least one deer – there is 365 a year or more killed because I’m sure we don’t see all of them that area laying there. I’m getting tired of running over them myself.*

RESPONSE: Please see the response to Comment 3B above.

COMMENT 4B: *One of the other concerns I have is moving cows. We are here right at the end of the project at mile marker 86, and we have kind of a unique situation where we have to come out onto Hwy 287 and then go 200 yards north to hit our main railroad crossing to get across. In thinking about safety as far as designing this far ahead, I would like to see on our private crossing something done so that we could come straight out across the highway and then right straight across the railroad tracks rather than having to take cattle and machinery and everything down 200 yards and then go across. That would be an issue with both MDT and Burlington Northern, but that would be a safety issue that I think we should at least address as long as we are looking at it this far ahead.*

RESPONSE: This comment refers to existing private approaches at RP 86.1 (Station 153+90) and another existing approach on the east side of the highway at RP 86.2 (Station 155+80). The approach on the west side of the highway at RP 86.1 connects to the at-grade railroad crossing.

MDT’s preliminary design plans for this area include perpetuating these approaches at their present locations. The approach at RP 86.2 would be realigned slightly to help eliminate a skewed intersection with the highway. The new highway in this area would have single northbound and southbound through lanes and a center left turn lane for the approaches at RP 86.1 and RP 86.2.

MDT would support the change you're proposing if moving the at-grade crossing is acceptable to Montana Rail Link. If the location of the railroad crossing is shifted to be directly opposite your main approach, it would also be desirable to eliminate your existing approach at RP 83.1 (153+90).

Comment No.	Name	Affiliation	Date of Comment	Source of Comment
5	Ed Watson	Project Area Resident	12/15/05	Public Hearing

COMMENT 5A: I live right where Litening Barn comes in on the highway. The deer issue is another concern of mine along with everybody else. I think we have maybe more by our arch there than anywhere else. It seems like there is always one every other day there. I would like to see, if we could do something more with maybe more culverts through there for wildlife to pass – just a couple of them might be really good especially with the wetlands involved.

RESPONSE: Please see the response to Comment 3B.

COMMENT 5B: Then I would like to participate in a larger culvert of some sort for my own personal use right there. We would like to be able to go underneath that highway with a four-wheeler or maybe some kind of a crossing and I would like to know who to talk to about that or if they could get in contact with me.

RESPONSE: MDT will review all stockpass locations within the project corridor and contact landowners to determine their status during the final design and right-of-way phase of the project. These efforts will allow MDT to identify which stockpasses need to be perpetuated or abandoned and to determine the need for any new stockpasses.

Staff from MDT's Right-of-Way Bureau can address any specific questions you might have about this process. MDT's Right-of-Way contact for this project is Wayne Nelson – phone (406) 494-9618.

Comment No.	Name	Affiliation	Date of Comment	Source of Comment
6	Nancy Marks	Broadwater County Resident	12/15/05	Public Hearing

COMMENT 6: I was one of the people who worked on the original CTEP grant for the pedestrian bike trail that goes north from Townsend. I would like to see that issue plugged into this program. I realize it would probably be a future idea but we would like to see a pedestrian bike trail go from Townsend south even as far as York Island. So if that could be put in the plan. I know that is separate from MDT but it should be assessed in this project.

RESPONSE: We acknowledge the community's interest in developing a pedestrian/bike trail south of Townsend. The proposed reconstruction project does not include a separate path for pedestrians or bicyclists but accommodates these road users through the provision of 8-foot-wide shoulders along the roadway. The wider shoulder would serve the needs of bicyclists passing through the area better than the existing facility.

Developing a separated pedestrian/bicycle path within the Townsend-South corridor presents challenges since the Montana Rail Link railroad property is immediately adjacent to the west right-of-way for U.S. Highway 287. Reducing the separation between the railroad and highway is undesirable and has been discouraged by Montana Rail Link. Adding a path along the east side of the new highway would require

further expansion of the highway right-of-way corridor increasing project costs and potential impacts to adjoining landowners.

Construction of a separated path for pedestrians and bicyclists along either side of the roadway would increase the overall “footprint” of the facility and likely result in more impacts to roadside wetlands. MDT has an obligation to avoid or minimize impacts to wetlands and must provide replacement wetlands for unavoidable impacts.

Given these issues, development of a trail removed from the highway corridor (possibly along the east side of the Missouri River between Townsend and Yorks Islands FAS) might be a more desirable community trail project to pursue.

Comment No.	Name	Affiliation	Date of Comment	Source of Comment
7	Chuck Hahn	Project Area Resident	12/15/05	Public Hearing

COMMENT 7A: Mile post 80 is where we are affected. I have questions as far as when the bridge is put in what it is going to do to our approach.

RESPONSE: Your approach at RP 80 (Station 55+70 RT) would not be moved or substantially changed with the project. A 76-foot-wide five-lane section is proposed for this area. A left turn lane would be provided for northbound traffic turning into your approach and right turns into your approach by southbound traffic would be accommodated from the right hand travel lane. The existing bridge over Deep Creek would be replaced with a new structure accommodating four through lanes and a center left turn lane.

COMMENT 7B: I also have a question on Lower Deep Creek Road where it is skewed where it meets the highway. If we come from the south and have to turn onto that road with trucks, we have to swing out into that on-coming lane to make that turn and I don't think there is any provision in there now that would cover that.

RESPONSE: Preliminary design plans show the new highway in this area would have single northbound and southbound through lanes, a center median south of the intersection, and a left turn lane for southbound traffic turning onto Lower Deep Creek Road. The alignment of Lower Deep Creek Road would be revised to eliminate the skewed intersection with U.S. Highway 287.

COMMENT 7C: I also think it is a little bit of a safety issue where you have the five-lane going down to three-lanes right about where our approach is. We have so many entrances and exits with trucks right there. I don't know if there is any way to correct that or not, but I just counted today how many times we go in and out, not with trucks necessarily, and I counted 50 times in one day. I think it is a fairly good issue to look at.

RESPONSE: The transition from a three-lane section to a five-lane section would begin about 0.25 miles north of your approach near RP 80 and the transition to five-lanes would be completed more than 500 feet north of your approach. As indicated in the response to your previous comment (Comment 7A), a left turn lane would be provided for northbound traffic turning into your approach and southbound traffic would make right turns into your approach from the right hand travel lane. Your approach and the opposing (east side) approach would be widened slightly due to modifications to turning radii and both approaches paved

to the right-of-way line. Views to the north and south of oncoming traffic from your approach should be enhanced due to the wider roadway and new structure at Deep Creek.

Comment No.	Name	Affiliation	Date of Comment	Source of Comment
8	Cory Davis	Project Area Resident	12/15/05	Public Hearing

COMMENT 8A: We are at mile marker 84. I have a couple of issues. We’ve got a five-lane for turning, which is great. There is substantial amount of fill in the highway right there (referring to graphic), and we do cross cattle underneath the highway there and to try and get across four lanes of traffic would be extremely dangerous. We have to stop traffic to do that and it is tough enough on the two-lane, let alone a four lane. We need a box culvert or something big enough to get cattle to trail through there for safety.

RESPONSE: MDT will review all stockpass locations within the project corridor and contact landowners to determine their status during the final design and right-of-way phase of the project. These efforts will allow MDT to identify which stockpasses need to be perpetuated or abandoned and to determine the need for any new stockpasses.

Staff from MDT’s Right-of-Way Bureau can address any specific questions you might have about this process. MDT’s Right-of-Way contact for this project is Wayne Nelson – phone (406) 494-9618.

COMMENT 8B: Here (referring to graphic) we maintain this approach across the highway here. It doesn’t look like it is used very much but we need that one maintained. Station 130 – we need to have that approach maintained.

RESPONSE: This comment refers to private approaches east and west of the highway at RP 84.6 (Station 129+80). MDT’s preliminary design plans show that both approaches would be perpetuated but realigned slightly to eliminate skewed intersections. The new highway would have single northbound and southbound through lanes and a center left turn lane for the approaches at RP 84.6.

COMMENT 8C: There is also a pipeline that feeds our irrigation down here and we will have to talk to somebody about that. It needs to be upgraded and it needs to be done when the highway is done. It is just a concrete line now and it needs to go to a pressurized water system.

RESPONSE: Your comment is noted. MDT’s preliminary design plans show that a 300 mm conduit would be provided at RP 84.58 (Station 129+68) to allow for the installation of a pressurized water line at this location.

COMMENT 8D: Then also Spring Ditch that Bob talked about – that 90-degree thing is terrible. We are on that work crew every spring and it causes a lot of trouble there and we need that back in line.

RESPONSE: Please see the response to Comment 2B.

Comment No.	Name	Affiliation	Date of Comment	Source of Comment
9	Gail Vennes	Project Area Resident	12/15/05	Public Hearing

COMMENT 9: *I live at mile marker 84. I run a livestock service business there involving embryo-transfer work. What my concern is – I’m going to need a truck access. Right now I’m using the access basically down from 120 to 125, right in this area (referring to graphic), but if we widen this road out, this access road that we have going along side the highway will be eliminated. Therefore I’m going to need an access up in this area where my facility is at 120.*

RESPONSE: This comment refers to the potential impacts on a private road that parallels the east side of the existing highway in the vicinity of RP 84 (between Stations 119+00 and 123+00).

Our initial impression is that your private “frontage” road should be perpetuated since it would maintain a connection between your home and business and an existing at-grade railroad crossing. MDT’s contractor could relocate the road beyond the new right-of-way as part of the project or a MDT would pay you to hire your own contractor to relocate the road under a “cost-to-cure” process. MDT will review this issue as the final design progresses and discuss it with you during right-of-way phase of the project to determine the most acceptable way to proceed.

Comment No.	Name	Affiliation	Date of Comment	Source of Comment
10	Curt Diehl	Project Area Resident	12/15/05	Public Hearing

COMMENT 10: *Right there by Dry Creek where we turn in, is that access going to be maintained? There is an access right there (referring to graphic) that we have to use to go into that field. Is that going to be maintained?*

RESPONSE: The approach referred to by Mr. Diehl is an existing farm field approach at Station 110+60 LT located just north of Dry Creek. This approach would be maintained with the proposed project.

Comment No.	Name	Affiliation	Date of Comment	Source of Comment
11	Dennis Williams	Project Area Resident	12/15/05	Public Hearing

COMMENT 11: *My father is Bill Williams. Since he is not here, how come you are doing the project there, when the real choke point is the Toston Bridge?*

RESPONSE: Improving traffic operations and safety on U.S. Highway 287 between East Helena and I-90 has been a priority to MDT in recent years. Several projects, most notably passing lane additions south of Toston and north of I-90 at Three Forks, have been implemented on the route. The Toston-South, Jct. S-437–North & South, and North of Three Forks–North reconstruction projects between Toston and Three Forks are in the planning stages and may be built after 2010.

Traffic safety and operational issues exist at the Toston Bridge and replacing the existing structure is the only way that these issues can be sufficiently corrected. MDT has conducted a speed study at the bridge and implemented several interim measures to help make the bridge safer for motorists such as installing advisory speed signing on the bridge curve and flashing yellow lights on the approaches to the bridge.

The installation of centerline rumble strips was also done to help prevent sideswipe crashes. MDT also hopes to begin a new study later this year to identify alignment options and the associated costs for reconstructing U.S. Highway 287 in the Toston Bridge area. After the study is done and the level of funding required is known, efforts can begin in earnest to start programming funds and advancing a project at the Toston Bridge.

Comment No.	Name	Affiliation	Date of Comment	Source of Comment
12	Elaine Mann	Broadwater County Commissioner	12/15/05	Public Hearing

COMMENT 12: Now that the funding is budgeted for this, can I start asking for money for the Toston Bridge?

RESPONSE: The recently reauthorized surface transportation bill included \$10 million earmarked specifically for the Townsend-South reconstruction project. However, there were no funds earmarked for other improvements on U.S. Highway 287 like replacement of the Toston Bridge. The bridge does not fall within the limits of MDT’s Toston-South project which begins 0.5 miles south of the Radersburg Road.

As discussed earlier, MDT will start allocating funds for the replacement of the Toston Bridge after a new engineering study is completed. MDT’s highway projects are currently scheduled through 2010. Unless a source of funding can be identified sooner, a project at the Toston Bridge would be unlikely until several years after 2010.

Comment No.	Name	Affiliation	Date of Comment	Source of Comment
13	Pam Converse	Broadwater County Weed District	12/15/05	Public Hearing

COMMENT 13: I would just like to know, especially along that stretch of highway with as much dirt as you are going to be moving, if there was some provision to make sure that we do get the federal funding so we can do pretreatment. There is a project being worked on right now where we did not have a chance to use the federal funding, we had to use our county-designated state money and it would be nice to be able to work with the funding to get that started so we don’t have as many problems afterwards.

RESPONSE: MDT does not have specific funding mechanisms in place for local entities to conduct preconstruction treatments for weed control with federal dollars. There are procedures in place for funding post-construction treatment but the process requires a bidder for the District to be in place to do the work.

Section 107.11.5 (Noxious Weed Management) in the 2006 Edition of MDT’s Standard Specifications requires contractors to follow the requirements of the County Noxious Weed Management Act and all county and contract noxious weed control requirements. There is a requirement for the contractor to determine specific noxious weed control requirements not specified in the Contract for each county where the project is located before submitting a bid. All costs incurred to meet the weed control requirements are incidental to other items of the Contract.

APPENDIX D: Written Comments Received on the EA and MDT/FHWA Responses

- Montana Fish, Wildlife & Parks Comments (January 12, 2006)
(Pages D-1 through D-6)
- Broadwater County Development Corporation (January 16, 2006)
Ernie Forrey, President
(Pages D-7 through D-13)
- Chuck Hahn, Hahn Ranch (January 13, 2006)
(Pages D-14 through D-20)
- EA Comment form (December 15, 2005)
Nancy Marks
(Page D-21)



RESPONSES TO COMMENTS FROM MDFWP

RECEIVED
JAN 13 2006
ENVIRONMENTAL



**Montana Fish,
Wildlife & Parks**

January 12, 2006

Jean Riley
MDT
2701 Prospect Avenue
P.O. Box 201001
Helena, MT 59620

MASTER FILE
COPY

Dear Ms. Riley:

COMMENT: *The Montana Department of Fish, Wildlife & Parks (FWP) has completed review of your EA for the Townsend-South Project (Project NH-F 8-4(16) 78; Control No. 1420). The following comments were provided by the local FWP wildlife biologist (Tom Carlsen) and fisheries biologist (Ron Spoon).*

Comments Relating to Wildlife Issues:

Due to the existing wetlands adjacent to the existing highway it is recognized that there are likely to be unavoidable impacts to these wetlands due to this proposal. To mitigate for any loss of wetland habitat, on-site mitigation would be preferred, however if off-site mitigation is the only option, local opportunities do exist. It is recommended that local opportunities for off-site mitigation be reviewed and explored with local Fish, Wildlife and Parks biologists.

RESPONSE: MDT has devoted considerable efforts to find and investigate on-site and off-site wetland mitigation opportunities in this watershed since the early 1990s. These efforts have included: placing advertisements in area newspapers soliciting interest from landowners with potential mitigation sites; hiring a consultant to identify and review more than 30 potential sites in this watershed; and investigating local opportunities when they arise. MDT is currently finalizing a feasibility study for a potential wetland mitigation project on the Hahn Ranch south of Townsend. Unfortunately, the study concluded that a wetland project on the site is not a viable action for MDT. Off-site mitigation appears to be the only feasible way to mitigate wetland losses in the corridor.

Due to a lack of suitable on-site and off-site mitigation opportunities for this project, MDT will likely purchase Corps of Engineers-approved wetland credits at the privately-owned Woodson Creek Wetland Mitigation Site near Ringling. The project is presently being developed by the Ringling Land and Cattle Company LLC.

Throughout these efforts to find wetland mitigation sites in the area, MDT and its consultants have coordinated with staff from various resource agencies for ideas about

mitigation sites in this watershed. If FWP knows of viable local opportunities for wetland impacts in the area, please contact Larry Urban (444-6224) with the information.

COMMENT: *We concur with your assessment on page 83 of the EA that there will likely be an increase in wildlife mortalities once this project is completed. This would be readily apparent in an increase in white-tailed deer mortality. This potential increase in deer loss is not only an undesirable outcome of highway improvement but also negatively affects human safety due to the increase of deer/vehicle collisions. MDT has identified existing animal crossings and high concentration areas of road-killed deer. Only 2 new underpasses are mentioned in the EA for this 3.2 mile high concentration area with both occurring within about one-half mile of each other. It is recommended that additional underpasses at appropriate areas be included in your design and construction. While I don't readily have the literature to back up the claim, experience suggests that underpasses in the form of a bridge are more likely to be used by a variety of wildlife species as opposed to underpasses constructed from culverts.*

RESPONSE: We acknowledge that animal-vehicle collisions, particularly with deer, are a common, dangerous, and costly occurrence in the project area. However, effective countermeasures that can be implemented to help reduce such collisions in this area are limited. Studies suggest that one of the most effective methods for reducing deer-vehicle collisions is properly designed and maintained fencing used together with appropriate crossing structures like underpasses, overpasses, or one-way deer gates.

Wildlife fencing must be sufficiently high, strong, long, and well anchored without gaps or other locations where deer can cross. Installing a wildlife fence along the road to restrict and/or direct wildlife movements is difficult in the Townsend-South corridor due to the number of access locations that must be accommodated. This situation makes it impractical to provide a continuous fenced barrier to restrict deer movements. Without guide fencing, only opportunistic use of underpasses by wildlife can be expected and will only provide a marginal benefit. However, additional bridges to accommodate deer movements will require grade raises in the new roadway that will increase impacts to wetlands, Ute ladies tresses, right-of-way and project costs. MDT's goal with the proposed alignment and grade is to balance quality, safety, cost effectiveness, economic vitality and sensitivity to the environment.

Other countermeasures include improving roadway shoulder widths, flatter fill slopes and minimizing guardrail to improve visibility and maneuverability to avoid animal-vehicle collisions. These countermeasures have been considered in the design in conjunction with the minimization of impacts to wetlands and Ute ladies' tresses.

As indicated in the EA, MDT proposes to install a bridge accommodating wildlife movements at Deep Creek and a standard stockpass (a large-diameter culvert) beneath the road at the Deep Creek Overflow crossing. The bottom of the culvert would be buried to facilitate wildlife passage and fencing may be considered in the immediate area to help direct wildlife to the stockpass.

In response to your comments and similar comments made at the Public Hearing, MDT will consider additional opportunities to provide wildlife under crossings in the project

corridor, particularly in the area where a concentration of deer mortalities exists. Such opportunities may include perpetuating existing stockpass locations or adding new stockpasses in appropriate areas. MDT must balance the use of these features with their potential for increasing wetland impacts, impacts to sensitive vegetation, right-of-way and project costs.

MDT will also consider whether or not signing improvements, like the use of flashing signs during certain periods, are practical and effective ways to increase the motoring public's awareness of deer crossings.

COMMENT: *Culverts placed in the roadway prism to enhance small mammal crossing should be of sufficient diameter that they don't become attractive denning sites for some animals thus diminishing the intent of the culvert. For example, a 24-inch culvert may be an attractive denning site for a fox while a 36-inch culvert would not.*

RESPONSE: Dry culverts for small mammal crossings have been incorporated on several recent highway reconstruction projects in western Montana. MDT will investigate the effectiveness of small mammal culverts and associated maintenance issues on other MDT projects and if necessary, modify the diameter of the proposed culverts.

COMMENT: *Where water flows under the roadway a bridge would be preferable for water passage compared to a culvert. We have had chronic beaver problems with culverts being dammed in this area, particularly on Deep Creek. Culverts, even fairly large ones, are much more likely to be dammed than a bridge crossing.*

RESPONSE: We agree that culverts under roads can be very common beaver damming sites. Many beaver dams can be found in the low gradient streams in this area regardless of the highway structures in place. Deep Creek is a prime example as there are bridges in place (both highway and railroad) and numerous beaver dams can be found for miles upstream of the highway crossing and downstream to the Missouri River. Specific to this project, there is no correlation between beaver dams at culverts or bridges that would indicate a preference for one structure over the other.

Research about why beavers commonly interfere with road crossings suggests that the designs for the crossings often constrict the flow and increase flow velocities. According to information compiled for a recent research project to address beaver damming problems done for the Virginia Department of Transportation by Stephanie Boyles (published in March/April 2005 edition of the VDOT *Bulletin*), the increased flow velocity and associated riffing sounds of flowing water are conditions that often compel beavers to build dams.

The highway stream crossings will be designed to meet the hydraulic requirements of the highway, simulate the natural stream characteristics to the extent possible and provide fish passage and mobility of the channel substrate. The proposed project would likely provide a bridge at the Deep Creek crossing and large culverts at the stream crossings of Greyson and Dry Creeks. The costs and benefits of bridges versus culverts are typically evaluated before decisions are made about the most appropriate type of crossing

structure. Culverts are usually more cost-effective because they are often less expensive to install, require less maintenance, and have longer effective lives than bridges.

COMMENT: *Comments Relating to Fisheries:*

The EA indicates that either bridges or culverts may be proposed for stream crossings at Deep Creek, Dry Creek and Greyson Creek. FWP strongly encourages the use of suitable bridges at each of these locations due to the extensive fishery values of each of these streams, and the need for reliable fish passage for each of these important tributaries of the Missouri River. Deep Creek and Dry Creek provide extensive spawning opportunity for trout residing in the Missouri River and Canyon Ferry Reservoir, and reliable fish passage is extremely important. Greyson Creek provides occasional spawning opportunities for trout resident to the Missouri River depending on available flow.

RESPONSE: Fish passage will be provided at the Deep Creek, Dry Creek and Greyson Creek road crossings. MDT's preliminary ideas for these crossings include a bridge at Deep Creek and culverts at Dry and Greyson Creeks. MDT will evaluate stream characteristics at each of these sites to help develop appropriate and effective designs for maintaining fish passage at these new drainage structures.

COMMENT: *Pages 86 and 87 of the document states that no spawning is known or suspected at each of these streams downstream of the highway. FWP has monitored spawning use in each of these streams since 1990, and Deep Creek and Dry Creek have extensive spawning use below the highway, and Greyson Creek has occasional spawning use downstream of the highway. Large numbers of trout eggs incubate from mid-March through early July (rainbow trout) in all three tributaries, and moderate numbers of trout eggs incubate from mid-October through April (brown trout) in Deep Creek.*

RESPONSE: Thank you for this new information about fish spawning in Deep Creek, Dry Creek and Greyson Creek. MDT's consultant did not have this information when the Biological Resources Report was prepared for the project. We will correct the text in the EA that indicates no spawning occurs or is suspected downstream from the highway.

COMMENT: *Drainage of groundwater associated with wetlands near the highway provides relatively cool water to the Missouri River and associated tributaries. Plans to modify these areas where groundwater drains beneath the roadbed should be discussed with both fisheries and wildlife biologists. Major groundwater sources should be managed using small bridges rather than culverts due to extensive beaver activity in the area. As your maintenance personnel are fully aware, the combination of beaver and culverts makes for a difficult and time-consuming maintenance problems and results in unwanted beaver control measures.*

RESPONSE: MDT's preliminary design ideas for the project include the use of a free draining base in the road embankment in areas with high or standing groundwater. The drainage galleries, consisting of large rock wrapped in geotextile fabric, would be part of the road's foundation and provide a means for groundwater to pass beneath the roadway.

COMMENT: *The EA recognizes the important and popular fishing access at York's Island and an appropriate, safe access point at this location is incorporated in the design. Another very popular, but informal, fishing access site is located on the south side of Dry Creek. Numerous anglers use the small parking area along Dry Creek to fish the Missouri River. FWP strongly encourages that maintenance of a safe pull-off for anglers at this location. Development of such an access could be considered as partial mitigation for likely impacts due to widening the roadbed at Dry Creek.*

RESPONSE: MDT's right-of-way plans show the informal parking area on the south side of Dry Creek is located outside the existing highway right-of-way easement and within the right-of-way for the Montana Rail Link (MRL) railroad line. We believe the existing turn off is unauthorized, and as such, it would not normally be perpetuated with this project.

It is not appropriate for MDT to perpetuate the pull-off and parking area without the consent of MRL. In doing so, we would encourage fishermen and others to trespass on MRL private property. We anticipate that MRL may also oppose "formalizing" a parking area so close to the railroad line due to safety and liability concerns. However, if FWP can secure the area from MRL, then MDT would work with FWP to develop an approach for the parking area. The pull-off's location raises some safety concerns and may have to be built to a lower standard to fit the confined setting.

COMMENT: *Very large numbers of spawning rainbow trout use a short segment (about one mile) of Dry Creek for spawning and rearing purposes. Due to the short segment of spawning habitat available in Dry Creek, any reduction in quality spawning habitat represents a potentially significant impact. Widening the roadbed at this location is potentially a larger problem than at either Deep Creek or Dry Creek. The existing "box culvert" at Dry Creek generally provides spawning access above the highway, but at specific flow levels, some spawning access is restricted by either high water velocity or shallow water depth.*

RESPONSE: Your comments are noted. MDT is committed to maintaining fish passage and minimizing impacts to aquatic habitat at Dry Creek and other stream crossings within the project limits.

COMMENT: *Potential impacts to available spawning habitat due to the road project at Dry Creek seems to have at least two or three mitigation components. As referenced in the above paragraph, construction of a safe pull-off is important to allow continued anglers access.*

RESPONSE: Please review our response to your previous comments about providing a parking area on the south side of Dry Creek.

COMMENT: *In addition, spawning rainbow trout occasionally have difficulties entering Dry Creek due to an abrupt drop below the railroad crossing and modification of this crossing could be one means of mitigating potential highway impacts. And finally, the upstream landowner is very interested in*

stream habitat improvements on his property and 319 funds and FWP funds are currently being considered for use on a potential project.

RESPONSE: MDT will include measures to maintain fish passage beneath the new road at Dry Creek; however, the effectiveness of our efforts will continue to be limited by stream problems between the railroad and the river – well beyond the limits of this project. Resolving fish passage issues between the railroad crossing and river is not solely MDT’s responsibility. We encourage FWP to pursue fish passage enhancements on Dry Creek with MRL.

COMMENT: *Finally, FWP would like to emphasize that the connection of these spawning tributaries to the Missouri River has been and important watershed and fisheries issue for over a decade. At Deep Creek, for example, over \$200,000 was invested to restore fish passage by installing a siphon at Montana Ditch and large numbers of fish enter this stream every year. Similar projects can be done at both Dry Creek and Greyson Creek and FWP wants to ensure that future highway crossings are compatible with efforts to maintain or improve the function of these tributaries.*

RESPONSE: We agree that Deep Creek, Dry Creek and Greyson Creek are important spawning tributaries to the Missouri River and acknowledge the efforts of FWP and others to restore fish passage in these streams. MDT supports some type of a joint effort involving MRL and private landowners to address fish passage and spawning issues in Dry and Greyson Creeks. We anticipate that the proposed highway crossings at Dry and Greyson Creeks will be compatible with future efforts to maintain and improve the function of these streams.

Thank you for the opportunity to provide input on this proposed project.

Sincerely,

Ron Spoon
Fisheries Biologist
P.O. Box 1137
Townsend, MT 59644
266-4237
rspoon@mt.gov

Tom Carlsen
Wildlife Biologist
P.O. Box 998
Townsend, MT 59644
266-3367
tcarlsen@mt.gov

RESPONSES TO COMMENTS FROM BROADWATER COUNTY DEVELOPMENT CORPORATION

Broadwater
County
Development
Corporation

P.O. Box 947
Townsend, Montana
59644

Ms. Jean Riley
Montana Department of Transportation
P.O. Box 201001
Helena, MT 59620-1001

ENVIRONMENTAL

January 16, 2006

Re: Townsend - South (U.S. Highway 287) Project NH-F8-4(16)
78; CN 1420

Dear Ms. Riley:

COMMENT: *The Broadwater County Development Corporation (BCDC) is hereby providing comment on the Townsend-South (U.S. Highway 287) highway improvement project. The Townsend South project lies wholly in Broadwater County, Montana. We appreciate the opportunity to comment on this project and the preferred alternative and look forward to working with you on the items identified for inclusion below.*

The Broadwater County Development Corporation includes members representing businesses, service organizations, local government and individuals from Broadwater County who are working toward a more diverse economy while retaining the friendliness and aesthetics of a smaller community. Our primary efforts in the past five years have been to increase attractiveness of and accessibility to our retail business sectors. To that end, our members worked with MDT project leader Loren Frazier in 1999 to incorporate a bike path into the Townsend Front Street project. Since that project was completed in 2000, we have provided grants and worked with sixteen businesses to improve their storefronts as well as cooperate with the Townsend Tree Board, Rotary Club and County to landscape along the Front Street project area which was initiated in 2005. We are continuing this landscaping effort in 2006, and we are also working with MDT to replace aged sidewalks on Broadway (U.S. Highway 12).

RESPONSE: MDT acknowledges your community development and enhancement efforts.

COMMENT: *We understand that MDT also has economic development as one of its goals for highway improvement efforts. We are concerned that the Purpose and Need does not reference economic development and the Preferred Alternative for the Townsend-South project does not include a single component that would continue and complement our community-wide efforts toward improved accessibility and attractiveness for businesses.*

RESPONSE: The Purpose and Need statement and text in Part 2.0 of the EA does not specifically identify “economic development” as a reason for undertaking the Townsend-South project. However, the criteria used to screen location alternatives (presented in Table 3-1 and Table 3-3) assessed the consistency of the project against two broad economic development goals elaborated in MDT’s TransPlan 21 document and with applicable goals from Broadwater County’s Growth Policy.

The proposed project would incorporate the same highway design as constructed during MDT’s recent Townsend-Urban project in the highway commercial area at the southern edge of town. The proposed roadway would have a center two-way left turn lane to facilitate access into roadside businesses. MDT is willing to work with the community of Townsend to incorporate other enhancements (like adding a sidewalk) along U.S. Highway 287. Such enhancements may be good projects for the future use of local CTEP funds.

COMMENT: *We request the following items be considered for inclusion in the Townsend-South project:*

1. Bike-Pedestrian Path or Designated Bike Lane

U.S. Highway 287 is one of the most popular routes for bicycle tourists traveling through Montana. Townsend has become a primary stop for almost every organized bicycle tour. We regularly host Bike America tours, the American Lung Association tours, Biking for Christ and other groups and individuals. In 2000, MDT worked with Townsend and Broadwater County to install the bike path north to the Missouri River. The Broadwater County Trust Board was recently awarded a Montana Fish Wildlife and Parks Recreation Trails Grant to redevelop the old highway frontage for a bike-pedestrian path to the Silos. These segments are part of the larger effort to connect Helena to Three Forks with bicycle friendly routes.

We are concerned that the EA for this project identifies an increase in accidents and projects increased traffic, yet does not directly provide accommodation for these most vulnerable highway users, We are requesting the inclusion of either a bicycle path as part of this project or increase the planned shoulder width (currently proposed to be 8 feet) to accommodate a designated bicycle lane.

RESPONSE: The type of bicycle facilities included with projects like this depends on a variety of factors such as the roadway’s functional classification, existing and projected traffic volumes, and whether the road is in a rural or urban location. In all cases, the demand (existing and anticipated future volume of bicycle traffic) is the key consideration when MDT makes decisions about the best way to accommodate bicycle use on state roads.

A bicycle path is a bikeway physically separated from motorized vehicular traffic by an open space or barrier and either within the highway right-of-way or within an independent right-of-way. MDT considers the following guidelines to justify the use of a bicycle path:

- high vehicular speed on adjacent roadway;

-
- high vehicular traffic volume on adjacent roadway;
 - high percentage of trucks on the adjacent roadway;
 - high bicycle traffic volume;
 - substantial anticipated increase in vehicular and/or bicycle traffic volume;
 - absence of suitable alternative routes;
 - around schools, playgrounds, parks or other areas where children are expected;
 - demonstration that the facility would serve a definite purpose; and
 - reasonable indication that the bicycle path would be the safest and most economical method of providing a bicycle facility.

While the guidelines related to vehicle speeds, traffic volumes, and truck usage may be met, the Townsend-South corridor does not experience high levels of use by local or long-distance bicyclists and the highway does not serve schools or recreation areas where children are expected. Without substantial improvements to make adjoining sections of U.S. Highway 287 between East Helena and I-90 more attractive to bicyclists, the level of use by these road users is not expected to increase substantially. Therefore, given the low level of existing or expected bicycle use in the corridor, it is difficult to conclude that a bicycle path is the most economical method of providing a bicycle facility.

Developing a separated pedestrian/bicycle path within the Townsend-South corridor presents challenges since the Montana Rail Link railroad property is immediately adjacent to the west right-of-way for U.S. Highway 287. Reducing the separation between the railroad and highway is undesirable and has been discouraged by Montana Rail Link. Adding a path along the east side of the new highway would require further expansion of the highway right-of-way corridor increasing project costs and potential impacts to adjoining landowners. Construction of a separated path for pedestrians and bicyclists along either side of the roadway would increase the overall “footprint” of the facility and likely result in more impacts to roadside wetlands. MDT has an obligation to avoid or minimize impacts to wetlands and must provide replacement wetlands for unavoidable impacts.

A bicycle lane is a portion of a roadway which has been designated by striping, signing and pavement markings for the preferential or exclusive use of bicyclists. Bicycle lanes are one-way facilities and carry traffic in the same direction as the adjacent motor vehicle traffic. Bicycle lanes are usually preferred in urban conditions. MDT relies on the following guidelines to justify a bicycle lane:

- moderate to low vehicular speed on adjacent roadway;
- moderate to low vehicular traffic volume on adjacent roadway
- moderate bicycle traffic volume;
- anticipated increase in bicycle traffic volume;
- insufficient land to construct bicycle paths without major disruptions on the surroundings;
- demonstration that the facility would serve a definite purpose; and
- indication that the bicycle lane would be the safest and only feasible method of providing a bicycle facility.

The guidelines related to low vehicle speeds, traffic volumes, and bicycle usage are not met in the Townsend-South corridor. There is also no indication that a bicycle lane is the

safest and only feasible method of accommodating the needs of these users within the corridor. In short, a designated bicycle lane is not appropriate for this route.

In most rural areas of Montana, bicycling space is provided on the roadway shoulder. Paved shoulders, whether they are designated and signed as bikeways or not, provide an acceptable place for people to ride. We believe that accommodating bicycle use on the proposed 8-foot wide road shoulder is also the most economical and practical method of providing a bicycle facility in this corridor.

COMMENT: *Our understanding of design widths provided in the CTEP program is that 10 feet is now the minimum.*

RESPONSE: The Community Transportation Enhancement Program (CTEP) is a Montana program that funds locally identified transportation-related projects that meet eligibility requirements. The *CTEP Manual* does not specify minimum design widths for pedestrian and bicycle facilities; however, the *Manual* suggests that such projects be developed based consistent with generally accepted engineering design standards and guidelines. Chapter Six of the *Manual* lists the MDT's *Road Design Manual*, the American Association of State Highway and Transportation Officials (AASHTO) *Guide for the Development of Bicycle Facilities*, and the *Americans With Disabilities Act Accessibility Guidelines* as design references. According to AASHTO's *Guide for the Development of Bicycle Facilities*, the recommended paved width for a two-directional shared use path is 10 feet.

AASHTO advises that paved shoulders should be 4 feet wide at minimum to provide adequate space for use by cyclists. AASHTO recommends additional shoulder width be provided for bicyclists in high traffic situations or along roadways with speeds over 50 mph. The 8-foot shoulder proposed for the Townsend-South project area would allow rumble strips to be milled into the pavement and still provide a sufficiently wide and smooth paved area for bicyclists. There is no justification to increase the shoulder width to 10 feet in this corridor.

COMMENT: *Appropriate signs that identify bicycles as one of the user groups on the highway in this area would also be needed.*

RESPONSE: Several states, including Colorado, Maine, Maryland and South Carolina have experienced limited success in increasing bicycle safety by installing "Share the Road" signs on highways with little or no shoulder or where bicyclists and motor vehicles must share the driving lane. Such signs are intended to remind motorists that bicyclists frequently use a particular roadway. These signing efforts have typically been statewide efforts and implemented together with far reaching public information campaigns.

According to the Montana Codes Annotated, bicycles are classified as a vehicle and bicyclists are subject to all of the rights and duties applicable to the driver of any other vehicle. Therefore, bicycles can conceivably be expected on all State roadways. Bicycling on Montana's highway system is typically a seasonal activity. The effectiveness of "Share the Road" signs on this route (or other routes in the state) would be limited during off-season months due to the lack of bicycle activity. MDT and transportation agencies in other states have discovered that bicycle traffic, deer crossing and other warning signs lose their effectiveness if they are too broadly applied. If

bicyclists are not routinely seen in this corridor, signs advising other highway users of their presence would fail to attract the attention of motorists and their original purpose is undermined.

Implementation of “Share the Road” signing in this corridor (or on other routes in Montana) would also likely require some type of public education campaign to increase the effectiveness of such signing. Since this route receives substantial use by motorists from out of this area and out-of-state during the summer tourist season, it may be impossible to adequately implement a public information effort broad enough to reach all potential highway users.

For the above reasons, we believe permanent signs to identify bicyclists as one of the highway users in Townsend-South corridor would be undesirable and ineffective. Instead, we support the current practice of placing temporary “Bikes on Road” signs when cycling events occur in the area.

COMMENT: 2. Sidewalks

The project needs to continue the sidewalk on the east side of U.S. 287 south through the retail business sector to Watson Irrigation. This area has been identified in the Townsend Comprehensive Plan and Broadwater County Growth Policy as having the potential for the greatest commercial growth, Indeed that is already occurring with the construction of the Post Office, and redevelopment of several other businesses. A sidewalk is an absolute necessity as many of our older residents utilize the sidewalks to do errands and get exercise, and our children use the sidewalks to get to the swimming pool and park from the south side of town.

RESPONSE: This project, as currently proposed, does not include the installation of sidewalk along the east side of the highway and would not provide sidewalks in areas outside the identified project limits. Since sidewalks do not immediately adjoin the project, the decision to add a sidewalk in the project area should be justified based on a recognized need for such facilities. We will review the need for adding a sidewalk along the east side of the highway in the area you reference during the final design of the project. If one is needed, then we will reconsider whether to include one in this project. We are also willing to work with the community on future projects that could provide sidewalks to enhance the U.S. Highway 287 corridor and help address pedestrian needs in Townsend.

COMMENT: 3. Designate and Improve Turnoff to Yorks’ Islands Recreation area

The Yorks’ Islands recreation/fishing access is a popular destination for boaters and fishing enthusiasts. People towing boat trailers have to slow down greatly to negotiate the rutted ingress route and railroad tracks which creates a highway speed hazard. Please consider a turning lane, improved signs, and improved access across the railroad tracks as part of this project.

RESPONSE: MDT’s preliminary design in the vicinity of York’s Island FAS turnoff was an improved two-lane road. However, after considering this comment and reviewing the intersection in the field, MDT decided to provide a left turn lane for northbound traffic at

the approach for the FAS. The left turn provisions can be made at the intersection without increasing impacts to roadside wetlands and to Ute ladies' tresses, a plant protected under the federal *Endangered Species Act*.

At the FAS turnoff, MDT would reconstruct and pave the approach to the right-of-way line which in this case is the existing easement line for the Montana Rail Link Railroad line. Improving the railroad crossing and access road into the FAS is not proposed as part of this project and would be the responsibility of Montana Rail Link and the Montana Department of Fish, Wildlife & Parks (MDFWP) who are adjoining landowners. MDT will reset existing signs for the FAS that may be impacted by the proposed reconstruction; however, MDFWP would need to determine if advance signing for the FAS needs to be improved.

COMMENT: 4. *Big Game Mortality*

Our members have participated in the MDT highway cleanup program on a portion of the Townsend-South project area for over 10 years. It is their annual observations of the big game carnage (an average of 10-15 deer alone, and an occasional elk, annually in just two miles of the cleanup area) along the side of the highway that lead us to recommend inclusion of some kind of measures to reduce the incidence of vehicle-game accidents. Our wildlife contribute to the local economy also!

RESPONSE: Please review the response to comments from the Montana Fish, Wildlife & Parks regarding deer-vehicle collisions and measures to help minimize such occurrences provided on page D-2.

COMMENT: 5. *Scenic Turnouts*

The Townsend-North project included a scenic turnout north of the Silos Recreation area turnoff. This turnout serves numerous purposes, as well as provides an opportunity for us to tell travelers a little about our valley. Please consider a scenic turnout in the Townsend-South project. We would be glad to work with you on location options and interpretive information.

RESPONSE: U.S. Highway 287 provides highway users with many views of Montana's picturesque rural landscape. However, the scenery in the project area is not overly distinct and the highway corridor itself does not offer the traveling public a truly outstanding or memorable visual experience. With the exception of the turnout near the Silos north of Townsend (where a historic roadside marker existed for many years), there are no other formalized scenic turnouts on U.S. Highway 287 between Helena and I-90 at Three Forks. The turnout north of Townsend (near the Silos) was a location where a road marker existed for many years. MDT also included a portable scale site with the passing lane project north of Townsend.

Little, if any, room exists for including a scenic turnout on the west side of the highway due to the proximity of the Montana Rail Link Railroad. The preliminary design for the proposed roadway has been developed to avoid encroachments on the existing railroad right-of-way and to maintain the separation between transportation facilities.

Adding a scenic turnout east of the road would require additional right-of-way and would encroach upon existing agricultural lands or rural residential properties. Expansion of the roadway corridor to the east is also a concern in the northern half of the project area due to the extensive roadside wetland areas and occurrences of sensitive plant species. Unless a scenic turnout was provided on the west side of the highway, southbound motorists would have to turn left across traffic to access a turnout on the east of the highway. This would be an undesirable source of conflicts between through and turning traffic.

We acknowledge your interest in adding a scenic turnout in the project area and are willing to consider feasible proposals for such a feature if they are introduced prior to final design.

COMMENT: Again, we appreciate the opportunity to comment and become involved with this project. We would like to meet with a project representative at your earliest convenience to discuss our concerns and recommended changes. BCDC meets the third Wednesday of each month at 12:30 p.m. but we would also be receptive to another meeting arrangement. My phone number is 266-5886 at Jack Farm Crafts in Townsend.

RESPONSE: MDT staff, including the Butte District Administrator, met with representatives of the BCDC to discuss their comments and other project issues on February 22, 2006.

Sincerely,


ERNIE FORREY, PRESIDENT
Broadwater County Development Corporation

Cc: City of Townsend
Broadwater County Commission
Hahn Feed Supply
Pro-Auto

RESPONSES TO COMMENTS FROM CHUCK HAHN, HAHN RANCH

RECEIVED

JAN 13 2006

ENVIRONMENTAL

RE: Comment on Townsend – South project and EA

HAHN RANCH
7996 HWY 287
TOWNSEND, MT 59644

MASTER FILE
COPY

NH-F 8-4(16) 78
CN 1420

COMMENT: *Let me first begin by saying that I believe the Hahn Ranch would be the only landowner in the area that would be directly impacted by all of the alternatives that were studied. Alternatives C, D, E and the preferred alternative have major direct economic impacts to our deeded lands; while alternatives A and B would bisect two of our BLM grazing allotments and some of our private grazing leases along River Road. So if I seem biased towards some of the options other than the preferred alternative, it is not necessarily because those options would have not impact on our farming and ranching operation, it is because those options make better sense economically.*

RESPONSE: Your comments are noted.

COMMENT: *I believe that Options A and B should be considered as reasonable options to the preferred route. According to the EA, MDT only assumed that the city of Townsend would not give its consent to construct a route which bypassed the town. I believe that the city council should have the opportunity to comment on whether or not Options A and B would have a great impact on Front Street businesses which would be bypassed. I think that businesses such as Townsend Marine and Town Pump, might welcome the opportunity to move out of town where they have the space to expand and be better able to accommodate recreational vehicles and semi trucks. Ninety percent of the businesses in Townsend generate their income primarily from sales to local residents rather than from consumers hurrying through town on Front Street/Highway 287. The city, as whole, might actually benefit from not having 3000 plus vehicles per day crowding through the intersection of Highway 12 and 287.*

RESPONSE: Your comments are noted. The EA has been available for review and comment by local governments as well as other members of the public. Although the City of Townsend did not submit any comments on the proposed Townsend-South project or EA during the public review period, MDT contacted the City for their views about a highway bypass of the community.

MDT's environmental consultant for the Townsend-South project, contacted the City of Townsend on May 25, 2006 regarding any past actions taken by the City supporting or opposing a bypass of the community. It was learned that the City has not taken an

official position on bypassing the community but the Chamber of Commerce did submit a letter to the City some years ago expressing their opposition to a bypass.

Since MDT did not have formal documentation indicating the City's position on a bypass, the Mayor and City Council were contacted and asked to provide MDT with a letter stating their position. The issue was discussed at a meeting held on June 20, 2006 and MDT received a letter from the City on June 22, 2006 indicating their opposition to a bypass. A copy of the City's letter can be found at the end of this response (page D-20).

Comments on this project were received from the Broadwater County Development Corporation during the public availability and review period for the EA. This group includes members representing businesses, service organizations, local government and individuals from Broadwater County concerned with the local economy. The Broadwater County Development Corporation's comments focused on efforts to enhance the existing U.S. Highway 287 corridor and did not advocate bypassing the community. The Broadwater County Development Corporation's comments and our responses can be viewed on pages D-7 through D-13 in this APPENDIX.

It is difficult to assert that bypassing Townsend would result in only beneficial effects for the community. While a bypass may create opportunities for some businesses, other highway-oriented businesses may be negatively impacted due to less drive by traffic and fewer customers. The City of Townsend may also see a decline in tax revenues from the businesses that relocated outside the city limits. It is unknown whether or not the local economy is healthy enough to see new businesses readily move into buildings vacated by businesses that chose to relocate elsewhere.

COMMENT: As far as needing consent from a governing body to bypass an incorporated municipality: how was the interstate system able to gain consent from various cities and towns that it bypasses? Does the Right of Eminent Domain only apply to individual landowners?

RESPONSE: 60-2-211, M.C.A. contains a provision that exempts MDT from needing prior consent from governing bodies before bypassing municipalities for highway bypasses or highway relocation projects associated with the national system of interstate highways.

Eminent domain is the right of the state to take (condemn) private property for public use. The Montana Constitution asserts that private property shall not be taken or damaged for public use without just compensation to the full extent of the loss having been first made to or paid into court for the property owner. According to **70-30-103(b)** and **(c)**, **M.C.A.**, there are instances where publicly-owned property can be taken under the statute.

COMMENT: I also believe the logic, that Options A or B are much more expensive to construct, is flawed.

- ❖ ***The EA compares the cost of re-constructing the 8.2 miles of the preferred alternative to new construction of from 18.6 to 21.5 miles in Options A and B. Option A would actually shorten the amount of highway needed since it takes a straighter route to the north.***

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- ❖ *Additionally two bridges over the Missouri River would not eventually have to be replaced. By my calculations the bridge at Toston alone, would cost from \$5 to \$7 million to replace. The bridge at Townsend would most likely need replacement in the next 20 years which would cost an additional \$3 to \$5 million.*
 - ❖ *The cost to replace and bring up to design year standards; that 6 mile section of the highway north of RP 78.1 through Townsend to approximately Whitehorse Road and that 8.3 mile section of the highway from RP 86.3 south to the approximate point where Option A would depart from the current roadbed; would most likely run from \$18 million to \$20 million.*
 - ❖ *When all of these replacement costs (for 14.4 miles of existing highway, RP 72 to 78.1 and RP 86.3 to 94.6) are added together with the cost of the preferred alternative (\$11.8 million), the total is somewhere between \$37 million and \$44 million. This is from \$10 to \$11 million more costly than the two options which would move the highway west of the river.*

RESPONSE: Your opinions are noted. Moving U.S. Highway 287 to the west side of the river in the Townsend–Toston area is a major decision that would directly affect MDT’s ability to implement highway improvements on this route. Such an action would require a commitment to a costly reconstruction project (or projects) and changing priorities for improvements on other Non Interstate NHS routes. Since MDT has limited funding for highway projects and must rely heavily on the availability of federal funding to undertake them, committing the amount of funding needed to construct a western bypass route in the Townsend-Toston area would delay MDT’s ability to make improvements to this route. Funds would have to be diverted from other projects and equally important needs for reconstruction or improvements on other Non Interstate NHS routes would go unmet.

COMMENT: *Additional benefits to Option A would be that the present highway could be used while the new highway was being constructed. This would eliminate any disruption of traffic flow as well as allow the highway contractor to complete their work with much less traffic control problems and interruption of their work schedule. This could potentially make Option A much cheaper than estimated in the EA, since the perception in that document seems to be that it would be necessary to construct this option all at one time because there would be no way to tie into the existing system if it were constructed over a period of several funding cycles. In fact this option could be designed and built in phases, as funding allowed, but not tie into the present highway until construction was completed on the entire realignment. The present highway alignment will surely serve the needs of the motoring public until the new construction was completed. Once the new highway was in use, LOS might very well exceed MDT’s target level of B due to motorists not having to reduce speed as they pass through Townsend.*

RESPONSE: We agree that rebuilding U.S. Highway 287 west of the Missouri River could be done without major inconveniences to existing highway users and that time and cost savings could be realized if the contractor could work without minimal disruptions. However, the staged reconstruction concept you advocate is undesirable for several reasons.

Developing the alignment west of the river commits MDT to making a large investment in the facility and doing what's necessary to get the facility up and running as soon as possible. Building portions of the road as funding is secured makes it difficult to predict when the bypass segment would actually be finished. Long-term funding for highway projects is not fixed and depends upon the apportionments Montana receives under the six-year reauthorizations of the federal transportation program. In short, MDT does not know and cannot accurately predict what the federal funding levels will be beyond the life of the current transportation bill.

Traffic could not be rerouted to the new facility until the entire bypass route was completed. Constructing portions of the route as funding allows means that highway users would be unable to make immediate use of the operational and safety improvements designed into the new facility. One of the principal reasons why the Townsend-South project has been proposed is the current need for measures to improve traffic safety and operational improvements on the existing facility. The level of service on the existing facility would continue to deteriorate for however long it took to complete the western bypass segment. Staged construction of several shorter projects on a new route west of the river would offer no immediate benefits to facility users.

MDT would also incur maintenance costs for activities needed to ensure that the completed sections of the bypass route remain in good condition until the route is opened.

As indicated in the EA, there is no easy way to make temporary connections to existing portions of the existing route due to the need to cross the Missouri River and Montana Rail Link Railroad. Therefore, it is possible that the public would be highly critical of a staged construction approach. Unless a reasonably short time frame were set for completing the entire bypass route, MDT's projects could be perceived as building a "road to nowhere" or an unwise expense of public funds.

COMMENT: *The benefits of options A and B are not limited to what I have previously laid out.*

- ❖ *Option A would be constructed on soils which are much more suitable for roadbed stability. A quick look at the Broadwater County soil survey shows that the preferred alignment sits directly on top of some of the most unstable soils (as far as maintaining a road bed) in the entire county. This was one of the reasons road builders in the 1800s built the stage roads on the west side of the river.*
- ❖ *Drainage on the preferred alignment is very poor, as evidenced by the amount of wetlands in close proximity to the highway along much of its length.*
- ❖ *Farm traffic on the preferred alignment is much heavier than it would be on a route west of the river. Slow moving farm equipment creates a hazard and tends to make the motoring public make bad decisions about passing.*
- ❖ *Whitetail deer are also much less common on the west side of the river. Therefore the chance of vehicle/deer collisions would be significantly reduced.*

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- ❖ *The amount of prime and unique farmland impacted would be significantly reduced when Option A is compared to a like amount of miles of the present highway alignment.*
 - ❖ *Approximately five miles of right-of-way for Option A would cross public lands. Acquisition costs for these lands should be reasonable in comparison to prime farmland which lies along the preferred alignment.*

For these reasons I think either option A or B (preferably A) should be reconsidered as the preferred alignment for Highway 287.

RESPONSE: Your comments and opinions are noted. However, one major consideration that is overlooked is the fact that the existing road would need to remain in service and that maintenance of the old road and its associated features would likely continue to be the State's responsibility. The existing section of U.S. Highway 287 replaced by a western bypass would continue to be the most convenient and efficient way for area residents to travel to and from many adjoining residences and agricultural operations. Since it is unlikely that Broadwater County would choose to take over maintenance for the old roadway, MDT will be left with a continued maintenance responsibility on some 14 to 18 miles of the old route and the entire length of the new bypass route. Many of the same maintenance and funding issues currently faced by MDT (like seasonal snowplowing and sanding, the eventual need to replace structures on the route and the need for periodic pavement preservation activities) will exist on the section of existing highway replaced by the western bypass.

COMMENT: *If MDT chooses to go forward with their preferred alignment, there are several issues that need to be addressed. One of the most important issues I see is the fact that the design uses the 2 lane, to 5 lane step up step down method. In this heavily used agricultural corridor this actually increases the risk of accidents due to the impatience of the motoring public. In their hurry to pass slower moving traffic, motorists tend to speed up and pass near the areas where the highway necks back down to two lanes. One only needs to drive the Highway 93 corridor to see what I am talking about.*

RESPONSE: MDT can do little about impatient motorists other than attempt to provide a well-designed roadway for all highway users. The proposed design would include safe transitions to and from the various lane configurations used in the project corridor. Increased passing opportunities from the use of several five-lane sections within the corridor should help disperse traffic. Wider roadway shoulders should also be effective in helping to enhance overall traffic safety in the project corridor.

COMMENT: *I believe that, rather than trying to minimize the disturbance to wetlands, it would be safer to make the full eight mile section of the Townsend-South project five lanes. Traffic flow would be much smoother, making ingress and egress at side roads safer.*

RESPONSE: The primary reason a five-lane highway has not been proposed is that the anticipated traffic demand on this route is unlikely to warrant such a facility for at least two decades in the Townsend-South project area. While a five-lane road would ensure this section of U.S. Highway 287 operates at a high level of service well into the future,

the cost and associated impacts of such a facility would be greater than those associated with the Preferred Alternative. MDT has a financial obligation to make wise decisions with the funding it receives for highway projects. Overbuilding the facility does not represent a prudent use of limited public funds.

MDT has an obligation under the federal *Clean Water Act* to avoid or minimize impacts to wetlands. Impacts that cannot be avoided must be mitigated either on-site or at off-site locations. MDT's design attempts to provide a facility incorporating substantial improvements in safety and traffic operations while balancing adverse effects to adjoining wetlands and sensitive plants.

COMMENT: On a more personal note, direct impacts to our farm and ranch and trucking operations will need to be addressed as this proposed project proceeds forward. I will look forward to discussing these issues with MDT personnel in the near future.

Thank you for taking time to consider my comments.

Chuck Hahn

RESPONSE: MDT will contact project area landowners during the final design and right-of-way stages of the project. These efforts will allow MDT to provide information about the proposed design and its associated effects. In advance of these contacts, comments on design-related issues can be directed to Jim Davies – phone (406) 444-6227 and comments on right-of-way issues can be directed to Wayne Nelson – phone (406) 494-9618.

CITY OF TOWNSEND

OFFICE OF THE MAYOR

"FIRST CITY ON THE MISSOURI"

OFFICE OF THE CLERK CM 1420

110 BROADWAY
TOWNSEND, MONTANA 59644-2218
(406) 266-3911 * FAX (406) 266-4042
E-mail: cityoftownsend@qwest.net

Townsend - 607M
NH 0-4 (43) 78

BUTTE DISTRICT	
<input checked="" type="checkbox"/>	DISTRICT ADMINISTRATOR
<input checked="" type="checkbox"/>	DISTRICT CLERK
<input checked="" type="checkbox"/>	ASST. DIST. CONSTR. SUPERVISOR
<input checked="" type="checkbox"/>	ASST. DIST. CONST. SUPERVISOR
<input checked="" type="checkbox"/>	ENGR. DEPT. CHIEF
<input checked="" type="checkbox"/>	ENGR. SERV. SUPERVISOR
<input checked="" type="checkbox"/>	PLANNING
<input checked="" type="checkbox"/>	DESIGN
<input checked="" type="checkbox"/>	LAB
<input checked="" type="checkbox"/>	TRAFFIC
<input checked="" type="checkbox"/>	UTILITIES
<input checked="" type="checkbox"/>	DIST. TRAFFIC ENG.
<input checked="" type="checkbox"/>	PERSONNEL SPEC.
<input checked="" type="checkbox"/>	DIST. ADMIN. OFFICER
<input checked="" type="checkbox"/>	CH. PLAN. MGMT. OFFICER
<input checked="" type="checkbox"/>	HEAVY CONSTR. DIVISION
<input checked="" type="checkbox"/>	STEEP SLOPE DIVISION
<input checked="" type="checkbox"/>	P.O. SEC. SUPERVISOR
<input checked="" type="checkbox"/>	MOTION CARRIER DIVISION
<input checked="" type="checkbox"/>	LAND SURVEYOR
<input checked="" type="checkbox"/>	EST. MGR.

✓ BARRY BROSTEN
✓ JIM DAVIES
✓ TOM HANSEN
✓ JEFF PATTON, FAWA

June 21, 2006

Montana Department of Transportation
Box 3068
Butte, Montana 59702-3068
Attention: Jeff Ebert - District Administrator

Dear Mr. Ebert:

The City of Townsend would like to go on record as strongly opposing any plan to by-pass Townsend on the Townsend South Project. We understand there is a need to up grade this Highway but feel the junction of two major highways deserves to be maintained. It would undoubtedly cost the Highway Department more to move the highway across the river than to leave it where it is presently located.

If you have any questions please let us know.

Sincerely,

Mary Alice Upton
Mary Alice Upton, Mayor
City of Townsend

Highways Bureau		
INITIALS	DATE	INITIALS
	6-27-06	
	Routing	
2	Highways Eng	
1	Hwys Des Eng	
	Office Mgr	
	Traff Mgr	
✓	Road Design <i>Hansen</i>	
	Hydraulics	
	Photo & Survey	
3	File	

RECEIVED

JUN 22 2006
DEPT. OF TRANSPORTATION
BUTTE, MONTANA 59701

RESPONSES TO COMMENTS FROM NANCY MARKS (EA COMMENT FORM)

*Nancy Marks
3597 Highway 284
Townsend, MT 59644*

COMMENT: *What about including plans for a pedestrian/bike trail heading to York Island turnout.*

RESPONSE: Please review the response to a similar comment from Ernie Forrey of the Broadwater County Development Corporation beginning on page D-7.

COMMENT: *Pre & Post treatment of disturbed soils on & near construction site.*

RESPONSE: MDT does not have specific funding mechanisms in place for local entities to conduct preconstruction treatments for weed control with federal dollars. There are procedures in place for funding post-construction treatment but the process requires a bidder for the District to be in place to do the work.

Section 107.11.5 of MDT's Standard Specifications requires contractors to follow the requirements of the *County Noxious Weed Management Act* and all county and contract noxious weed control requirements. There is a requirement for the contractor to determine specific noxious weed control requirements not specified in the Contract for each county where the project is located before submitting a bid. All costs incurred to meet the weed control requirements are incidental to other items of the Contract.



APPENDIX E: Nationwide Section 4(f) Evaluations and Supporting Materials



MONTANA DIVISION
"NATIONWIDE" SECTION 4(f) EVALUATION FOR MINOR IMPACTS
ON
HISTORIC SITES
EXCLUDING HISTORIC BRIDGE REPLACEMENTS

Project # NH-F 8-4 (16) 78 F, (C.N. #1420)
 Project Name: TOWNSEND-SOUTH

Date: August 10, 2006
 Location: Montana Ditch (24BW729)
Broadwater County, Montana

The Montana Ditch (24BW729) is a privately developed irrigation feature crossed by U.S Highway 287 at RP 78.9 about 1 mile south of Townsend. The Montana Ditch, consisting of an earthen canal approximately 11 miles long and about 10 feet wide, was originally constructed around 1900. The ditch diverts water from the Missouri River south of Townsend and carries it to agricultural fields on the east side of the river. The Montana Ditch has been continually maintained since its construction and occurs in its original alignment. All but the extreme north end of the original ditch is still in use. A map showing the location of the Montana Ditch is provided in Part 4.0 of the Revised EA.

Reconstruction of U.S. Highway 287 will affect the Montana Ditch where the present road crosses the irrigation facility. The Townsend-South project will shift the centerline of the new road slightly to the east and would reconstruct and widen the existing two-lane highway in the vicinity of the Montana Ditch. The project will also install a new concrete or metal culvert beneath the road and make minor revisions to the alignment of the canal at the Montana Ditch crossing.

NOTE: Any response in a box requires additional information. Consult the "Nationwide" Section 4(f) Evaluation criteria.

- | | <u>YES</u> | <u>NO</u> |
|--|--------------------------|--------------------------|
| 1. Is the 4(f) site adjacent to the existing highway? | <u>X</u> | <input type="checkbox"/> |
| 2. Does the proposed project require the removal or alteration of historic structures, and/or objects? | <input type="checkbox"/> | <u>X</u> |
| 3. Does the proposed project disturb or remove archaeological resources which are important to preserve in-place rather than to recover? | <input type="checkbox"/> | <u>X</u> |
| 4. Is the impact on the 4(f) site considered minor (i.e.: no effect; or no adverse effect)? <i>There would be no adverse effect to 24BW729.</i> | <u>X</u> | <input type="checkbox"/> |
| 5. Has the STATE HISTORIC PRESERVATION OFFICE (SHPO) agreed in writing with the assessment of impacts, and the proposed mitigation? | <u>X</u> | <input type="checkbox"/> |
| 6. Is the proposed action under an <u>Environmental Impact Statement (E.I.S.)</u> ? | <input type="checkbox"/> | <u>X</u> |
| 7. Is the proposed project on a new location? | <input type="checkbox"/> | <u>X</u> |

The centerline of the new road will be shifted slightly to the east near the Montana Ditch highway crossing. Widening will occur along the east (left) side of the existing roadway due to the proximity of the Montana Rail Link railroad line throughout the corridor.

- | | | |
|---|----------|--------------------------|
| 8. The Scope-of-Work for the proposed project is one of the following: | <u>X</u> | <input type="checkbox"/> |
| a) <u>Improved traffic operation;</u> | | |
| b) <u>Safety improvements;</u> | | |
| c) 3R; | | |
| d) Bridge replacement on essentially the same alignment; or | | |
| e) <u>Addition of lanes. (Left turn lanes and five-lane passing areas will be provided with this project).</u> | | |

ALTERNATIVES CONSIDERED

- | | <u>YES</u> | <u>NO</u> |
|---|------------|--------------------------|
| 1. The "do-nothing" ALTERNATIVE has been evaluated, and is <u>not</u> considered to be feasible and prudent. (SEE Part 3.0 of the Revised EA) | <u>X</u> | <input type="checkbox"/> |
| <i>The existing highway has physical deficiencies that contribute to reduced safety for users of U.S. Highway 287. The road's substandard width, steep roadsides, and presence of obstructions within the clear zone are related to the design of the road and can be corrected only by reconstruction.</i> | | |
| 2. An ALTERNATIVE has been evaluated on the existing alignment which improves the highway without any 4(f) impacts, and is also <u>not</u> considered to be feasible and prudent. (SEE Part 3.0 of the Revised EA) | <u>X</u> | <input type="checkbox"/> |
| <i>Rebuilding U.S. Highway 287 on the existing alignment would be possible. However, the Montana Ditch would still be crossed by the new highway.</i> | | |
| 3. An ALTERNATIVE on a new location avoiding the 4(f) site has been evaluated, and is <u>not</u> considered to be feasible and prudent. (SEE Part 3.0 of the Revised EA) | <u>X</u> | <input type="checkbox"/> |
| <i>Shifting the alignment east or west of the existing highway would also require crossings of this irrigation ditch. Shifting the highway to the east would place the new highway less than 120 feet from the centerline of Montana Rail Link's mainline track, eliminating the ability to provide storage between the highway and the railroad for a tractor-trailer combination attempting to cross the rail line. Shifting the road substantially to the east would result in extensive impacts to roadside wetlands, convert large areas of important farmland and agricultural land, disrupt existing irrigation systems, and require significant new right-of-way acquisition.</i> | | |

MINIMIZATION OF HARM

- | | <u>YES</u> | <u>NO</u> |
|---|------------|--------------------------|
| 1. The proposed project includes all possible planning to minimize harm. | <u>X</u> | <input type="checkbox"/> |
| 2. Measures to minimize harm include the following: | <u>X</u> | <input type="checkbox"/> |
| <i>The alignment of the new highway is offset slightly to the east of the existing road's alignment in the vicinity of the Montana Ditch crossing thereby minimizing impacts to this historic irrigation feature.</i> | | |

COORDINATION

- | | <u>YES</u> | <u>NO</u> |
|--|------------|--------------------------|
| 1. The proposed project has been COORDINATED with the following: | | |
| a) SHPO
<i>July 28, 2003 – Concurrence with MDT NHRP-eligibility determinations
April 13, 2005 – Concurrence with No Adverse Effect determination</i> | <u>X</u> | <input type="checkbox"/> |
| b) ADVISORY COUNCIL ON HISTORIC PRESERVATION | <u>X</u> | <input type="checkbox"/> |
| c) Property owners
<i>Public Information Meeting – June 28, 2002
Public Hearing – December 15, 2005</i> | <u>X</u> | <input type="checkbox"/> |
| d) Local/State/Federal agencies | <u>X</u> | <input type="checkbox"/> |

2. One of the preceding had the following comment(s) regarding this proposed project, and/or the mitigation:

No comments received.

SUMMARY

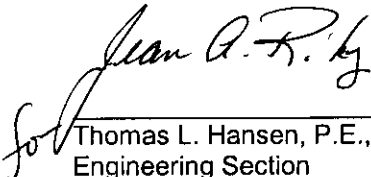
The proposed action is preferred because the No Build Alternative does not satisfy the specified purpose and need for improving U.S. Highway 287 south of Townsend. The No Build Alternative does not meet the traveling public's needs because it does not address the substandard surface width associated with the road and its bridges and does not eliminate or reduce other identified conditions that contribute to safety and operation problems on the existing roadway. The No Build Alternative does not provide a traffic facility consistent with all MDT design standards for Rural Principal Arterials Montana's National Highway System.

Rebuilding the road on an alignment similar to that of the existing highway could be accomplished, however, this alternative would not avoid minor effects to the Montana Ditch and would result in an unacceptable encroachment on the nearby Montana Rail Link railroad main line. Similarly, shifting the alignment of U.S. Highway 287 significantly to the east or west of the present highway would also require crossings of this historic ditch or affect facilities associated with other irrigation systems in the area. The design and location alternatives considered for this proposed project are described in Part 3.0 of the Revised EA. Therefore, no feasible and prudent alternatives exist to avoid the minor effects associated with reconstructing U.S. Highway 287 in the vicinity of the Montana Ditch (24BW729).

The proposed action meets all criteria regarding the required **Alternatives, Coordination, and Measures to Minimize Harm**. All possible planning to minimize harm to the identified irrigation ditches has been undertaken and will be incorporated in this proposed project. This proposed project therefore complies with the December 23, 1986 Final Nationwide *Section 4(f)* Evaluation by the U.S. DEPARTMENT OF TRANSPORTATION's Federal Highway Administration.

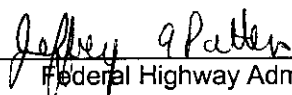
APPROVAL

This document is submitted pursuant to **49 U.S.C. 303** and in accordance with the provisions of **16 U.S.C. 470f**.



Thomas L. Hansen, P.E., Supervisor
Engineering Section
MDT Environmental Services

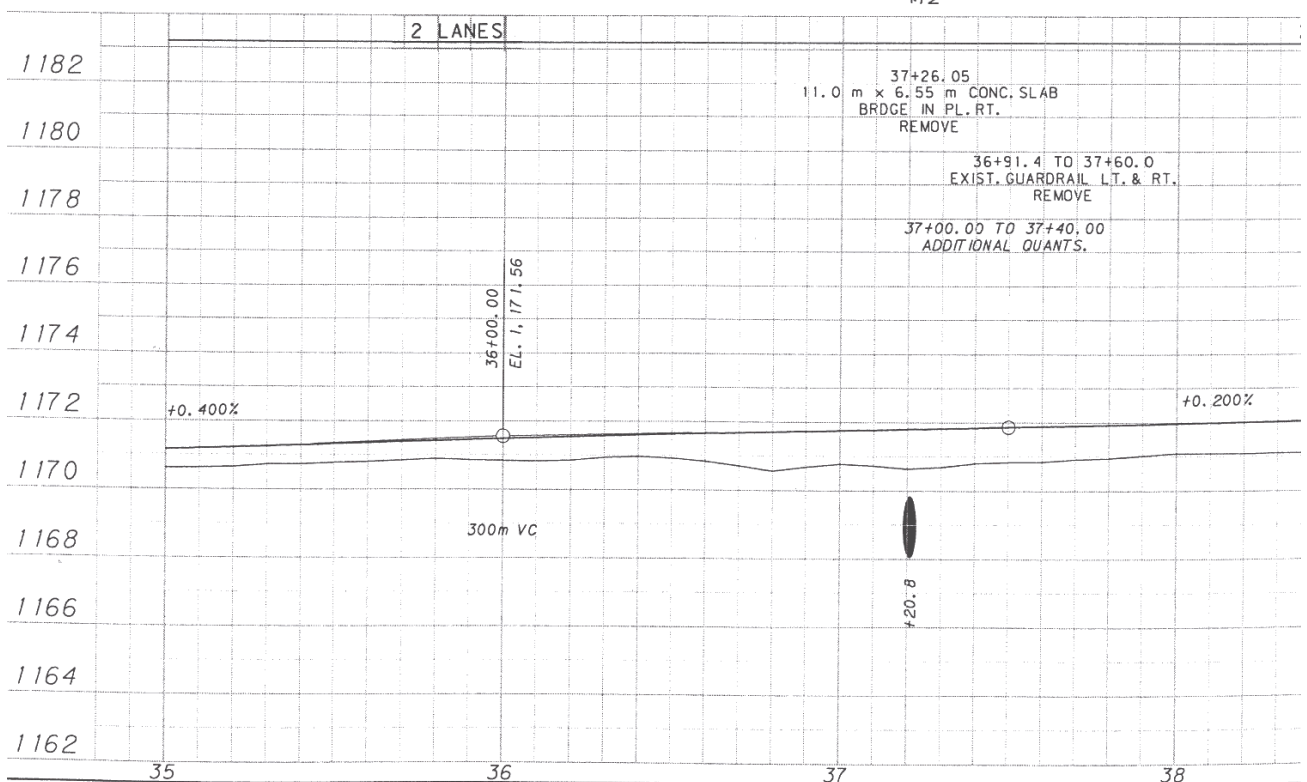
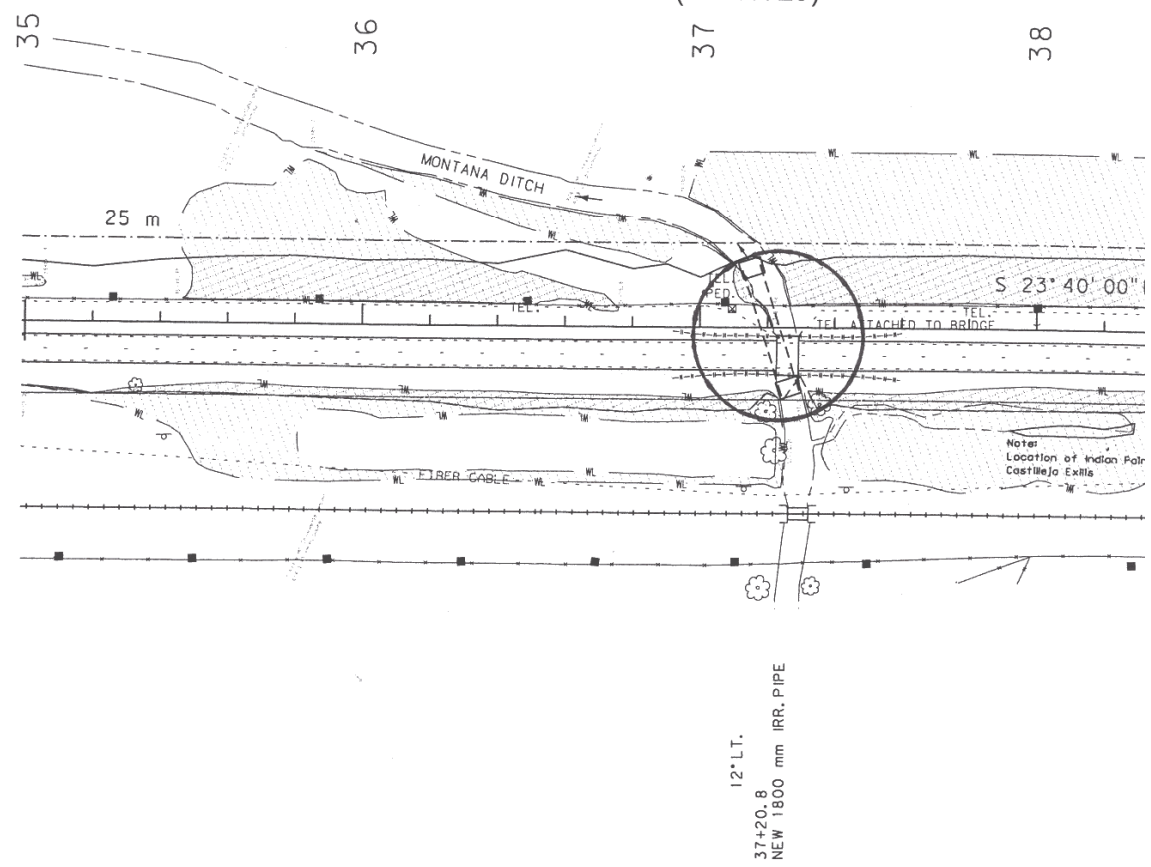
Date: 10/2/04

Approved: 

Federal Highway Administration

Date: 10-06-06

Montana Ditch (24BW729)



MONTANA DIVISION
"NATIONWIDE" SECTION 4(f) EVALUATION FOR MINOR IMPACTS
ON
HISTORIC SITES
EXCLUDING HISTORIC BRIDGE REPLACEMENTS

Project # NH-F 8-4 (16) 78 F, (C.N.#1420)
 Project Name: TOWNSEND-SOUTH

Date: August 10, 2006
 Location: Wallace House (24BW812)
Broadwater County, Montana

The Howard and Rubye Wallace House site (24BW0812) consists of a house with attached garage and two sheds surrounded by a shelterbelt. The house and garage, built around 1947, are good examples of residential architecture in the post-World War II period. In 1995, the Wallace House was recommended as ineligible for the *National Register of Historic Places* (NRHP) because the site was less than 50 years old. MDT's 2003 update to the cultural resources report for the Townsend-South project recommended 24BW812 as NRHP-eligible.

The reconstruction of U.S Highway 287 in the vicinity of the Wallace House will provide a five-lane roadway and improved roadside slopes. New right-of-way will be acquired from the property containing the Wallace House. Structures on the site will not be affected but several trees within the shelterbelt between the house and the highway will be removed. The Preferred Alternative will also reconstruct the driveway approach to the Wallace House. The proposed improvements will not affect any features that make the Wallace Site eligible for the NRHP or substantially change the setting of the property. In April 2004, MDT submitted a Determination of Effect that concluded the Preferred Alternative would have **no adverse effect** to the Wallace House. SHPO concurred with this determination on April 21, 2004.

A map showing the location of 24BW812 is provided in Part 4.0 of the Environmental Assessment.

NOTE: Any response in a box requires additional information. Consult the "Nationwide" Section 4(f) Evaluation criteria.

- | | <u>YES</u> | <u>NO</u> |
|---|-------------------------------------|-------------------------------------|
| 1. Is the 4(f) site adjacent to the existing highway? | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| 2. Does the proposed project require the removal or alteration of historic structures, and/or objects?
<i>The proposed highway improvements will not affect structures on the site but will require additional right-of-way from the property containing 24BW812 and remove several trees within the shelterbelt between the house and the highway.</i> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| 3. Does the proposed project disturb or remove archaeological resources which are important to preserve in-place rather than to recover? | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| 4. Is the impact on the 4(f) site considered minor (i.e.: no effect; or no adverse effect)? <i>There will be no adverse effect to 24BW812.</i> | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| 5. Has the STATE HISTORIC PRESERVATION OFFICE (SHPO) agreed in writing with the assessment of impacts, and the proposed mitigation? | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| 6. Is the proposed action under an <u>Environmental Impact Statement</u> (E.I.S.)? | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| 7. Is the proposed project on a new location?
<i>The new road will be built on and adjacent to the existing alignment. Widening will occur along the east (left) side of the existing roadway due to the proximity of the Montana Rail Link railroad line.</i> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| 8. The Scope-of-Work for the proposed project is one of the following:
a) <i>Improved traffic operation;</i>
b) <i>Safety improvements;</i>
c) 3R; | <input checked="" type="checkbox"/> | <input type="checkbox"/> |

- d) Bridge replacement on essentially the same alignment; or
- e) **Addition of lanes (auxiliary turn lanes and passing lanes).**

ALTERNATIVES CONSIDERED

	<u>YES</u>	<u>NO</u>
1. The "do-nothing" ALTERNATIVE has been evaluated, and is <u>not</u> considered to be feasible and prudent. (SEE Part 3.0 of the Revised EA)	<u>X</u>	<input type="checkbox"/>
<i>The existing highway has physical deficiencies that contribute to reduced safety for users of U.S. Highway 287. The road's substandard width, steep roadsides, and presence of obstructions within the clear zone are related to the design of the road and can be corrected only by reconstruction.</i>		
2. An ALTERNATIVE has been evaluated on the existing alignment which improves the highway without any 4(f) impacts, and is also <u>not</u> considered to be feasible and prudent. (SEE Part 3.0 of the Revised EA)	<u>X</u>	<input type="checkbox"/>
<i>Shifting the road to the west of the existing alignment would eliminate affects to the Wallace House; however, such an alignment shift would result in an unacceptable encroachment on the Montana Rail Link rail line.</i>		
3. An ALTERNATIVE on a new location avoiding the 4(f) site has been evaluated, and is <u>not</u> considered to be feasible and prudent.	<u>X</u>	<input type="checkbox"/>
<i>The location of this project was established by the continuous use of the existing roadway since the 1930's. The road would have to be shifted at least 200 m (650 feet) to the east to avoid structures within the site. Such an alignment shift would result in extensive impacts to area wetlands, convert large areas of important farmland and agricultural land, disrupt existing irrigation systems and utilities, and require significant new right-of-way acquisition.</i>		

MINIMIZATION OF HARM

1. The proposed project includes all possible planning to minimize harm.	<u>X</u>	<input type="checkbox"/>
2. Measures to minimize harm include the following:	<u>X</u>	<input type="checkbox"/>
<i>The project will be accomplished in a manner that does not substantially change the overall setting of the Wallace House. The proposed project avoids the use of any buildings on the site.</i>		

COORDINATION

1. The proposed project has been COORDINATED with the following:		
a) SHPO <i>Concurrence with NRHP-eligibility determination for 24BW812 on July 28, 2003.</i> <i>Concurrence with a Determination of No Adverse Effect for impacts on the Wallace House on April 21, 2004.</i>	<u>X</u>	<input type="checkbox"/>
b) ADVISORY COUNCIL ON HISTORIC PRESERVATION <i>SHPO's concurrence with MDT's no adverse effect determination does not require that coordination be undertaken with the ACHP.</i>	—	<input checked="" type="checkbox"/>
c) Property owners <i>Public Information Meeting -- June 28, 2002</i> <i>Public Hearing – December 15, 2005</i>	<u>X</u>	—

d) Local/State/Federal agencies

YES
X

NO

2. One of the preceding had the following comment(s) regarding this proposed project, and/or the mitigation:

No comments received.

SUMMARY

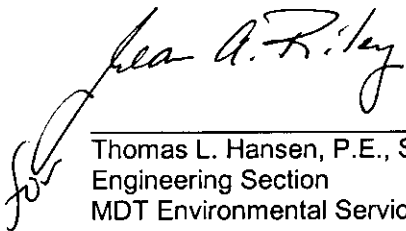
The proposed action is preferred because the No Build Alternative does not satisfy the specified purpose and need for improving U.S. Highway 287 south of Townsend. The No Build Alternative does not meet the traveling public's needs because it does not address the deficient surface width associated with the road and its bridges and does not eliminate or reduce other identified conditions that contribute to safety and operation problems on the existing roadway. The No Build Alternative does not provide a traffic facility consistent with all MDT design standards for Rural Principal Arterials Montana's National Highway System.

Rebuilding the road on an alignment similar to that of the existing highway could be accomplished, however, this alternative would result in an unacceptable encroachment on the nearby Montana Rail Link railroad main line. Shifting the alignment of U.S. Highway 287 to the west of the present highway would avoid any effects to the Wallace House site but would also place the new road too close to the railroad. The road would have to be shifted easterly by some 200 m (650 feet) or more to avoid impacts to the Wallace House. Such an alignment is not feasible because it would substantially increase engineering and construction costs and likely convert large areas of important farmland and agricultural land, disrupt existing irrigation systems and utilities, and require significant new right-of-way acquisition. The design and location alternatives considered for this proposed project are described in Part 3.0 of the EA. Therefore, no feasible and prudent alternatives exist to avoid the minor effects associated with reconstructing U.S. Highway 287 in the vicinity of the Wallace House (24BW812).

Part 3.0 of the attached Revised Environmental Assessment describes the alternatives considered by MDT and the analysis used to identify a preferred alternative for this proposed project. The proposed action meets all criteria regarding the required **Alternatives, Coordination, and Measures to Minimize Harm**. All possible planning to minimize harm to the identified irrigation ditches has been undertaken and will be incorporated in this proposed project. This proposed project therefore complies with the December 23, 1986 Final Nationwide Section 4(f) Evaluation by the U.S. DEPARTMENT OF TRANSPORTATION's Federal Highway Administration.

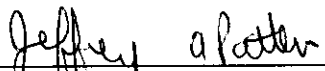
APPROVAL

This document is submitted pursuant to **49 U.S.C. 303** and in accordance with the provisions of **16 U.S.C. 470f**.



Thomas L. Hansen, P.E., Supervisor
Engineering Section
MDT Environmental Services

Date: 10/2/06

Approved: 

Federal Highway Administration

Date: 10-06-06

MONTANA DIVISION
**"NATIONWIDE" SECTION 4(f) EVALUATION FOR MINOR IMPACTS
 ON
 HISTORIC SITES
EXCLUDING HISTORIC BRIDGE REPLACEMENTS**

Project # NH-F 8-4 (16) 78 F, (C.N. #1420)

Date: August 10, 2006

Project Name: TOWNSEND-SOUTH

Location: Big Springs (Hanson) Ditch (24BW836)
 Broadwater County, Montana

The Big Springs (or Hanson) Ditch (24BW836) is a historic irrigation feature crossed by U.S Highway 287 at RP 85.8 near the south end of the Townsend-South project corridor. The Big Springs Ditch, consisting of an unlined earthen canal that begins at Big Springs south of Toston and runs about 9 miles along the east side of the Missouri River before discharging into Dry Creek. The first water rights for the ditch were filed in 1872 and were likely associated with early agriculture and mining uses in the area. The ditch is privately owned and is still used for irrigation. A map showing the location of the Big Springs Ditch is provided in Part 4.0 of the Revised EA.

Reconstruction of U.S. Highway 287 will affect the Big Springs Ditch where the present road crosses the irrigation facility. In the vicinity of this crossing, the centerline of the new road will be shifted to the east shoulder of the existing highway and the road widened to accommodate a new five-lane passing area. The project will install a new concrete or metal culvert beneath the road and make revise the alignment of the canal on both the east and west sides of the road at the Big Springs Ditch crossing.

NOTE: Any response in a box requires additional information. Consult the "Nationwide" Section 4(f) Evaluation criteria.

- | | <u>YES</u> | <u>NO</u> |
|---|-------------------------------------|-------------------------------------|
| 1. Is the 4(f) site adjacent to the existing highway? | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| 2. Does the proposed project require the removal or alteration of historic structures, and/or objects? | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| 3. Does the proposed project disturb or remove archaeological resources which are important to preserve in-place rather than to recover? | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| 4. Is the impact on the 4(f) site considered minor (i.e.: no effect; or no adverse effect)? There would be no adverse effect to 24BW836. | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| 5. Has the STATE HISTORIC PRESERVATION OFFICE (SHPO) agreed in writing with the assessment of impacts, and the proposed mitigation? | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| 6. Is the proposed action under an <u>Environmental Impact Statement (E.I.S.)</u> ? | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| 7. Is the proposed project on a new location? | <input type="checkbox"/> | <input checked="" type="checkbox"/> |

The centerline of the new road will be shifted slightly to the east shoulder of the existing road near the Big Springs Ditch highway crossing. Widening will occur along the east (left) side of the existing roadway due to the proximity of the Montana Rail Link railroad line throughout the corridor.

- | | | |
|---|-------------------------------------|--------------------------|
| 8. The Scope-of-Work for the proposed project is one of the following: | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| a) <u>Improved traffic operation;</u> | | |
| b) <u>Safety improvements;</u> | | |
| c) 3R; | | |
| d) Bridge replacement on essentially the same alignment; or | | |
| e) <u>Addition of lanes. (Left turn lanes and five-lane passing areas will be provided with this project).</u> | | |

ALTERNATIVES CONSIDERED

- | | <u>YES</u> | <u>NO</u> |
|---|------------|--------------------------|
| 1. The "do-nothing" ALTERNATIVE has been evaluated, and is <u>not</u> considered to be feasible and prudent. (SEE Part 3.0 of the Revised EA) | <u>X</u> | <input type="checkbox"/> |
| <i>The existing highway has physical deficiencies that contribute to reduced safety for users of U.S. Highway 287. The road's substandard width, steep roadsides, and presence of obstructions within the clear zone are related to the design of the road and can be corrected only by reconstruction.</i> | | |
| 2. An ALTERNATIVE has been evaluated on the existing alignment which improves the highway without any 4(f) impacts, and is also <u>not</u> considered to be feasible and prudent. (SEE Part 3.0 of the Revised EA) | <u>X</u> | <input type="checkbox"/> |
| <i>Rebuilding U.S. Highway 287 on the existing alignment would be possible. However, the identified ditches would still be crossed by the new highway.</i> | | |
| 3. An ALTERNATIVE on a new location avoiding the 4(f) site has been evaluated, and is <u>not</u> considered to be feasible and prudent. (SEE Part 3.0 of the Revised EA) | <u>X</u> | <input type="checkbox"/> |
| <i>Shifting the alignment east or west of the existing highway would also require crossing this irrigation ditch. Shifting the highway to the east would place the new highway less than 120 feet from the centerline of Montana Rail Link's mainline track, eliminating the ability to provide storage between the highway and the railroad for a tractor-trailer combination attempting to cross the rail line. Shifting the road substantially to the east would result in extensive impacts to roadside wetlands, convert large areas of important farmland and agricultural land, disrupt existing irrigation systems, and require significant new right-of-way acquisition.</i> | | |

MINIMIZATION OF HARM

- | | <u>YES</u> | <u>NO</u> |
|--|------------|--------------------------|
| 1. The proposed project includes all possible planning to minimize harm. | <u>X</u> | <input type="checkbox"/> |
| 2. Measures to minimize harm include the following: | <u>X</u> | <input type="checkbox"/> |
| <i>The alignment of the new highway will follow the existing road's alignment in the vicinity of these irrigation ditch crossings thereby minimizing impacts to this historic feature.</i> | | |

COORDINATION

- | | <u>YES</u> | <u>NO</u> |
|--|------------|--------------------------|
| 1. The proposed project has been COORDINATED with the following: | | |
| a) SHPO
<i>July 28, 2003 – Concurrence with MDT NHRP-eligibility determinations
April 13, 2005 – Concurrence with No Adverse Effect determination</i> | <u>X</u> | <input type="checkbox"/> |
| b) ADVISORY COUNCIL ON HISTORIC PRESERVATION | <u>X</u> | <input type="checkbox"/> |
| c) Property owners
<i>Public Information Meeting – June 28, 2002
Public Hearing – December 15, 2005</i> | <u>X</u> | <input type="checkbox"/> |
| d) Local/State/Federal agencies | <u>X</u> | <input type="checkbox"/> |

2. One of the preceding had the following comment(s) regarding this proposed project, and/or the mitigation:

No comments received.

SUMMARY

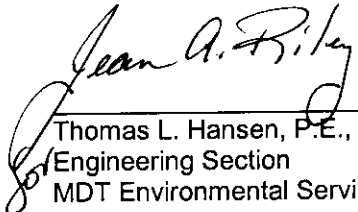
The proposed action is preferred because the No Build Alternative does not satisfy the specified purpose and need for improving U.S. Highway 287 south of Townsend. The No Build Alternative does not meet the traveling public's needs because it does not address the substandard surface width associated with the road and its bridges and does not eliminate or reduce other identified conditions that contribute to safety and operation problems on the existing roadway. The No Build Alternative does not provide a traffic facility consistent with all MDT design standards for Rural Principal Arterials Montana's National Highway System.

Rebuilding the road on an alignment similar to that of the existing highway could be accomplished, however, this alternative would not avoid minor effects to the Big Springs Ditch and would result in an unacceptable encroachment on the nearby Montana Rail Link railroad main line. Similarly, shifting the alignment of U.S. Highway 287 significantly to the east or west of the present highway would also require crossings of this historic ditch or affect facilities associated with other irrigation systems in the area. The design and location alternatives considered for this proposed project are described in Part 3.0 of the Revised EA. Therefore, no feasible and prudent alternatives exist to avoid the minor effects associated with reconstructing U.S. Highway 287 in the vicinity of the Big Springs Ditch (24BW836).

The proposed action meets all criteria regarding the required **Alternatives, Coordination, and Measures to Minimize Harm**. All possible planning to minimize harm to the identified irrigation ditches has been undertaken and will be incorporated in this proposed project. This proposed project therefore complies with the December 23, 1986 Final Nationwide *Section 4(f)* Evaluation by the U.S. DEPARTMENT OF TRANSPORTATION's Federal Highway Administration.

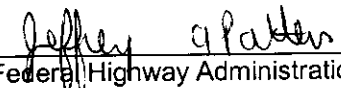
APPROVAL

This document is submitted pursuant to **49 U.S.C. 303** and in accordance with the provisions of **16 U.S.C. 470f**.



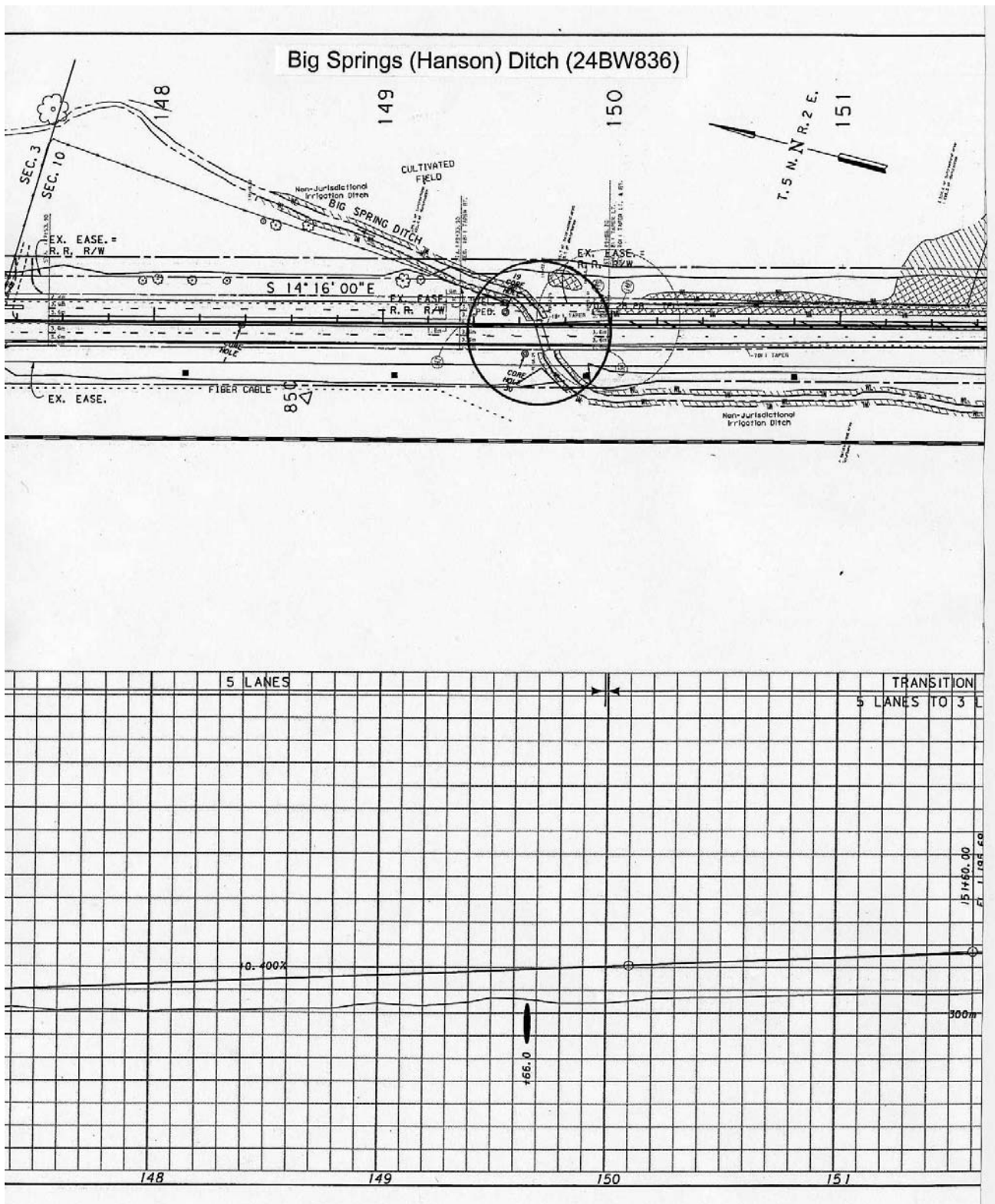
Thomas L. Hansen, P.E., Supervisor
Engineering Section
MDT Environmental Services

Date: 10/2/06

Approved: 

Federal Highway Administration

Date: 10-06-06



MONTANA DIVISION
"NATIONWIDE" SECTION 4(f) EVALUATION FOR MINOR IMPACTS
ON
HISTORIC SITES
EXCLUDING HISTORIC BRIDGE REPLACEMENTS

Project # NH-F 8-4 (16) 78 F, (C.N. #1420)

Date: August 10, 2006

Project Name: TOWNSEND-SOUTH

Location: Broadwater-Missouri Diversion Project
East Side Canal Overflow Channel (24BW837)
Broadwater County, Montana

The Broadwater-Missouri Diversion Project (24BW837) is a large irrigation system with four associated features: the Toston Dam, the Main Canal, the West Side Canal, and the East Side Canal. None of these features is located within the project area; however, an overflow channel associated with the East Side Canal crosses the highway in the northern portion of the project corridor at about RP 80.6. The Broadwater-Missouri Diversion Project was constructed in 1941 and has been in continual use since that time. The irrigation system is owned and maintained by the State Water Projects Bureau of the Montana Department of Natural Resources and Conservation. The ditch is privately owned and is still used for irrigation. A map showing the location of the overflow channel associated with the East Side Canal is provided in Part 4.0 of the Revised EA.

Reconstruction of U.S. Highway 287 will cross the overflow channel associated with the East Side Canal. In the vicinity of this crossing, the centerline of the new road will be shifted slightly east of the existing highway and the road widened to accommodate a new five-lane passing area. The project will install a new concrete or metal culvert beneath the road and require minor revisions to the alignment of the overflow channel at the highway crossing.

NOTE: Any response in a box requires additional information. Consult the "Nationwide" Section 4(f) Evaluation criteria.

- | | <u>YES</u> | <u>NO</u> |
|--|-------------------------------------|-------------------------------------|
| 1. Is the 4(f) site adjacent to the existing highway? | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| 2. Does the proposed project require the removal or alteration of historic structures, and/or objects? | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| 3. Does the proposed project disturb or remove archaeological resources which are important to preserve in-place rather than to recover? | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| 4. Is the impact on the 4(f) site considered minor (i.e.: no effect; or no adverse effect)? <i>There would be no adverse effect to 24BW837.</i> | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| 5. Has the STATE HISTORIC PRESERVATION OFFICE (SHPO) agreed in writing with the assessment of impacts, and the proposed mitigation? | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| 6. Is the proposed action under an <u>Environmental Impact Statement (E.I.S.)</u> ? | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| 7. Is the proposed project on a new location?
<i>The centerline of the new road will be shifted slightly to the east near the East Side Canal overflow channel highway crossing. Widening will occur along the east (left) side of the existing roadway due to the proximity of the Montana Rail Link railroad line throughout the corridor.</i> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| 8. The Scope-of-Work for the proposed project is one of the following: | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| a) <u>Improved traffic operation;</u> | | |
| b) <u>Safety improvements;</u> | | |
| c) 3R; | | |
| d) Bridge replacement on essentially the same alignment; or | | |

- e) **Addition of lanes.** (Left turn lanes and five-lane passing areas will be provided with this project).

ALTERNATIVES CONSIDERED

- | | <u>YES</u> | <u>NO</u> |
|---|-------------------|--------------------------|
| 1. The "do-nothing" ALTERNATIVE has been evaluated, and is <u>not</u> considered to be feasible and prudent. (SEE Part 3.0 of the Revised EA) | <u>X</u> | <input type="checkbox"/> |
| <i>The existing highway has physical deficiencies that contribute to reduced safety for users of U.S. Highway 287. The road's substandard width, steep roadsides, and presence of obstructions within the clear zone are related to the design of the road and can be corrected only by reconstruction.</i> | | |
| 2. An ALTERNATIVE has been evaluated on the existing alignment which improves the highway without any 4(f) impacts, and is also <u>not</u> considered to be feasible and prudent. (SEE Part 3.0 of the Revised EA) | <u>X</u> | <input type="checkbox"/> |
| <i>Rebuilding U.S. Highway 287 on the existing alignment would be possible. However, the overflow channel would still be crossed by the new highway.</i> | | |
| 3. An ALTERNATIVE on a new location avoiding the 4(f) site has been evaluated, and is <u>not</u> considered to be feasible and prudent. (SEE Part 3.0 of the Revised EA) | <u>X</u> | <input type="checkbox"/> |
| <i>Shifting the alignment east or west of the existing highway would also require crossings of this overflow channel. Shifting the highway to the east would place the new highway less than 120 feet from the centerline of Montana Rail Link's mainline track, eliminating the ability to provide storage between the highway and the railroad for a tractor-trailer combination attempting to cross the rail line. Shifting the road substantially to the east would result in extensive impacts to roadside wetlands, convert large areas of important farmland and agricultural land, disrupt existing irrigation systems, and require significant new right-of-way acquisition.</i> | | |

YES **NO**

MINIMIZATION OF HARM

- | | | |
|---|----------|--------------------------|
| 1. The proposed project includes all possible planning to minimize harm. | <u>X</u> | <input type="checkbox"/> |
| 2. Measures to minimize harm include the following: | <u>X</u> | <input type="checkbox"/> |
| <i>The alignment of the new highway is offset slightly to the east of the existing road's alignment in the vicinity of the Montana Ditch crossing thereby minimizing impacts to this historic irrigation feature.</i> | | |

COORDINATION

- | | <u>YES</u> | <u>NO</u> |
|--|-------------------|--------------------------|
| 1. The proposed project has been COORDINATED with the following: | | |
| a) SHPO
<i>July 28, 2003 – Concurrence with MDT NHRP-eligibility determinations
April 13, 2005 – Concurrence with No Adverse Effect determination</i> | <u>X</u> | <input type="checkbox"/> |
| b) ADVISORY COUNCIL ON HISTORIC PRESERVATION | <u>X</u> | <input type="checkbox"/> |
| c) Property owners
<i>Public Information Meeting – June 28, 2002
Public Hearing – December 15, 2006</i> | <u>X</u> | <input type="checkbox"/> |

d) Local/State/Federal agencies

X

2. One of the preceding had the following comment(s) regarding this proposed project, and/or the mitigation:

No comments received.

SUMMARY

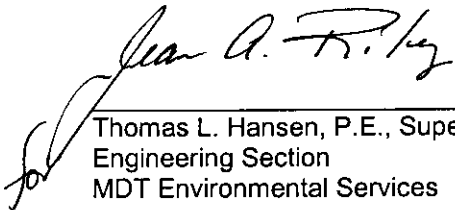
The proposed action is preferred because the No Build Alternative does not satisfy the specified purpose and need for improving U.S. Highway 287 south of Townsend. The No Build Alternative does not meet the traveling public's needs because it does not address the substandard surface width associated with the road and its bridges and does not eliminate or reduce other identified conditions that contribute to safety and operation problems on the existing roadway. The No Build Alternative does not provide a traffic facility consistent with all MDT design standards for Rural Principal Arterials Montana's National Highway System.

Rebuilding the road on an alignment similar to that of the existing highway could be accomplished, however, this alternative would not avoid minor effects to the overflow channel associated with the East Side Canal and would result in an unacceptable encroachment on the nearby Montana Rail Link railroad main line. Similarly, shifting the alignment of U.S. Highway 287 significantly to the east or west of the present highway would also require crossings of this historic ditch or affect facilities associated with other irrigation systems in the area. The design and location alternatives considered for this proposed project are described in Part 3.0 of the Revised EA. Therefore, no feasible and prudent alternatives exist to avoid the minor effects associated with reconstructing U.S. Highway 287 in the vicinity of the overflow channel associated with the East Side Canal of the Broadwater-Missouri Diversion Project (24BW837).

The proposed action meets all criteria regarding the required **Alternatives, Coordination, and Measures to Minimize Harm**. All possible planning to minimize harm to the identified irrigation ditches has been undertaken and will be incorporated in this proposed project. This proposed project therefore complies with the December 23, 1986 Final Nationwide *Section 4(f)* Evaluation by the U.S. DEPARTMENT OF TRANSPORTATION's Federal Highway Administration.

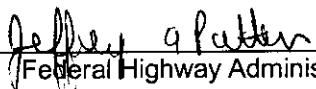
APPROVAL

This document is submitted pursuant to **49 U.S.C. 303** and in accordance with the provisions of **16 U.S.C. 470f**.



Thomas L. Hansen, P.E., Supervisor
Engineering Section
MDT Environmental Services

Date: 10/2/06

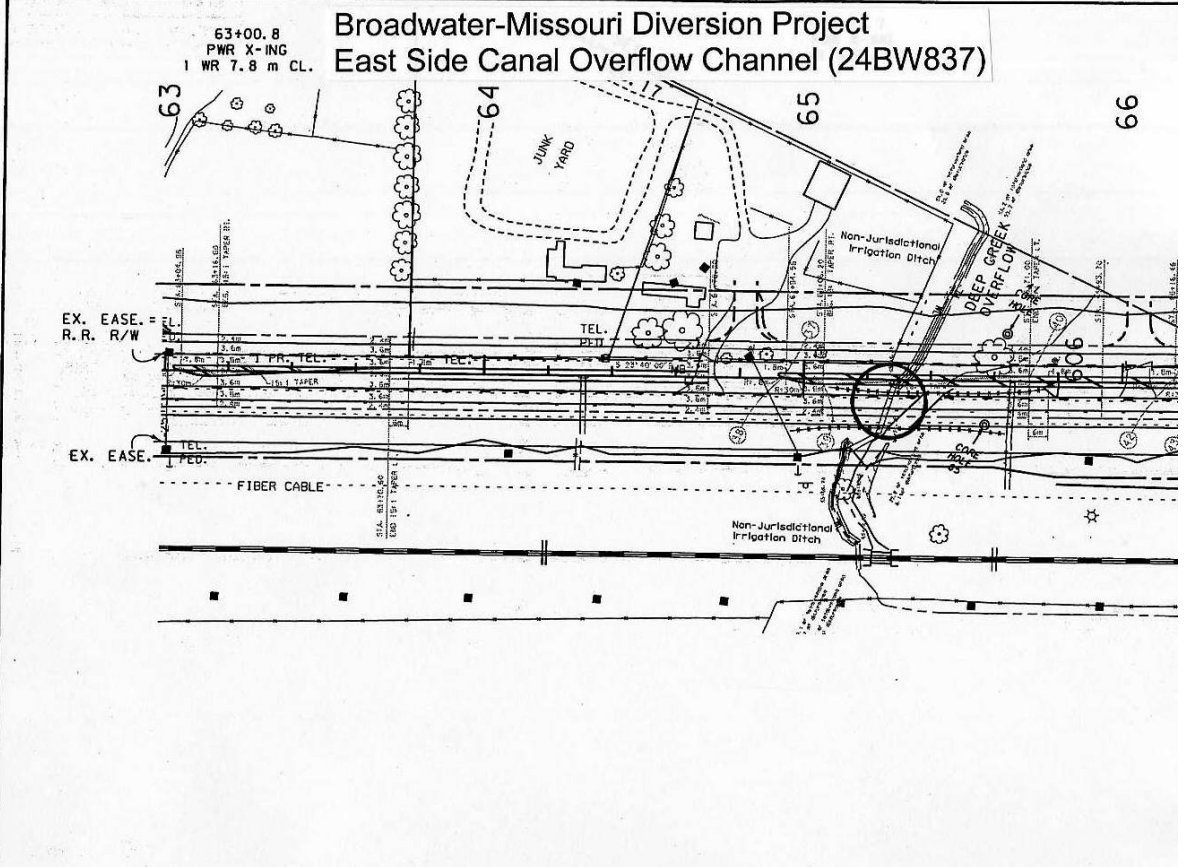
Approved: 

Federal Highway Administration

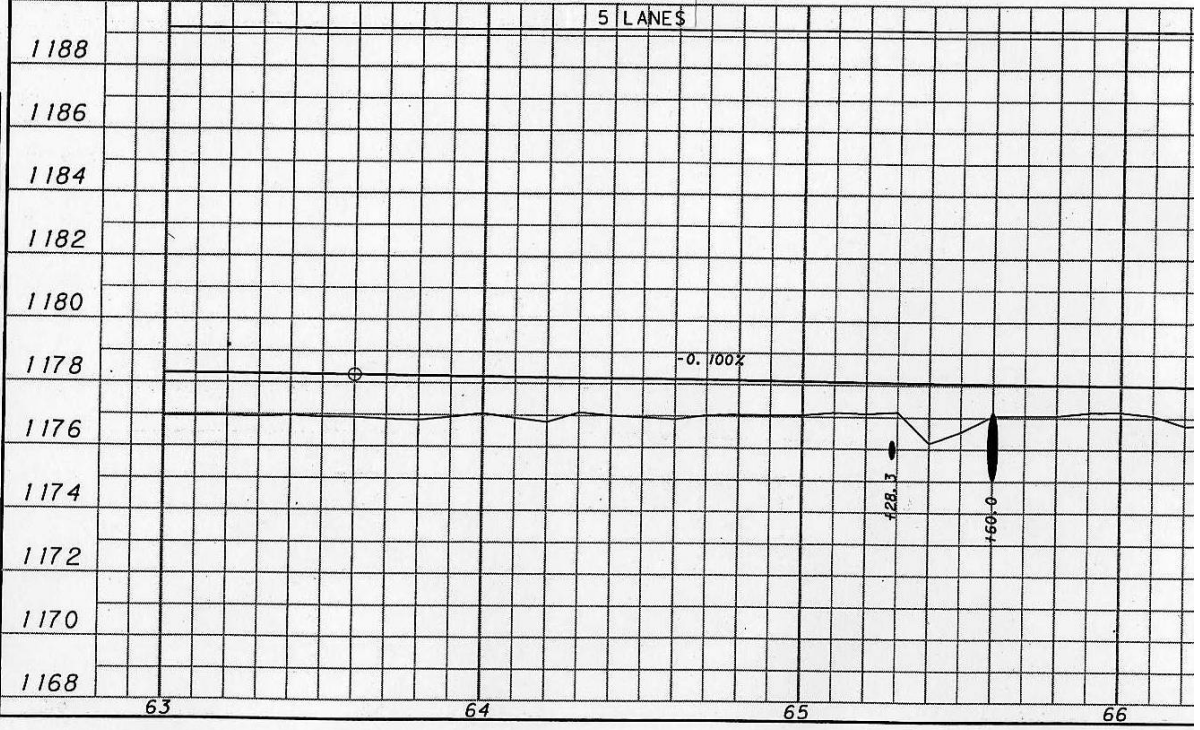
Date: 10-06-06

Broadwater-Missouri Diversion Project East Side Canal Overflow Channel (24BW837)

MONTANA DEPARTMENT OF TRANSPORTATION
 MONTANA CADD



DESIGNED BY: DES
 8/8/2006
 REVIEWED BY: DES
 11/17/02 AM
 CHECKED BY: [Signature]
 UTPS - 0790



Final Nationwide Section 4(f) Evaluation and Approval for Federally-Aided Highway Projects with Minor Involvements with Historic Sites

This programmatic Section 4(f) evaluation has been prepared for projects which improve existing highways and use minor amounts of land (including non-historic improvements thereon) from historic sites that are adjacent to existing highways. This programmatic Section 4(f) evaluation satisfies the requirements of Section 4(f) for all projects that meet the applicability criteria listed below. No individual Section 4(f) evaluations need be prepared for such projects. (Note a similar programmatic Section 4(f) evaluation has been prepared for projects which use minor amounts of publicly owned public parks, recreation lands, or wildlife and waterfowl refuges).

The FHWA Division Administrator is responsible for reviewing each individual project to determine that it meets the criteria and procedures of this programmatic Section 4(f) evaluation. The Division Administrator's determinations will be thorough and will clearly document the items that have been reviewed. The written analysis and determinations will be combined in a single document and placed in the project record and will be made available to the public upon request. This programmatic evaluation will not change the existing procedures for project compliance with the National Environmental Policy Act (NEPA) or with public involvement requirements.

Applicability

This programmatic Section 4(f) evaluation may be applied by FHWA only to projects meeting the following criteria:

1. The proposed project is designed to improve the operational characteristics, safety, and/or physical condition of existing highway facilities on essentially the same alignment. This includes "4R" work (resurfacing, restoration, rehabilitation and reconstruction); safety improvements, such as shoulder widening and the correction of substandard curves and intersections; traffic operation improvements, such as signalization, channelization, and turning or climbing lanes; bicycle and pedestrian facilities; bridge replacements on essentially the same alignment, and the construction of additional lanes. This programmatic Section 4(f) evaluation does not apply to the construction of a highway on a new location.
2. The historic site involved is located adjacent to the existing highway.
3. The project does not require the removal or alteration of historic buildings, structures or objects on the historic site.
4. The project does not require the disturbance or removal of archeological resources that are important to preserve in place rather than to remove for archeological research. The determination of the importance to preserve in place will be based on consultation with the State Historic Preservation Officer (SHPO) and, if appropriate, the Advisory Council on Historic Preservation (ACHP).
5. The impact on the Section 4(f) site resulting from the use of the land must be considered minor. The word minor is narrowly defined as having either a "no effect" or "no adverse effect" (when applying the requirements of Section 206 of the National Historic Preservation Act and 36 CFR Part 800) on the qualities which qualified the site for listing or eligibility on the National Register of Historic Places. The ACHP must not object to the determination of "no adverse effect."
6. The SHPO must agree, in writing, with the assessment of impacts of the proposed project on and the proposed mitigation for the historic sites.
7. This programmatic evaluation does not apply to projects for which an environmental impact statement (EIS) is prepared, unless the use of Section 4(f) lands is discovered after the approval of the final EIS.

Should any of the above criteria not be met, this programmatic Section 4(f) evaluation cannot be used, and an individual Section 4(f) evaluation must be prepared.

Alternatives

The following alternatives avoid any use of the historic site.

1. Do nothing.
2. Improve the highway without using the adjacent historic site.
3. Build an improved facility on new location without using the historic site.

This list is intended to be all-inclusive. The programmatic Section 4(f) evaluation does not apply if a feasible and prudent alternative is identified that is not discussed in this document. The project record must clearly demonstrate that each of the above alternatives was fully evaluated before the FHWA Division Administrator concluded that the programmatic Section 4(f) evaluation applied to the project.

Findings

In order for this programmatic Section 4(f) evaluation to be applied to a project, each of the following findings must be supported by the circumstances, studies, and consultations on the project:

1. **Do Nothing Alternative.** The Do Nothing Alternative is not feasible and prudent because: (a) it would not correct existing or projected capacity deficiencies or (b) it would not correct existing safety hazards; or (c) it would not correct existing deteriorated conditions and maintenance problems; **and** (d) not providing such correction would constitute a cost or community impact of extraordinary magnitude, or would result in truly unusual or unique problems, when compared with the proposed use of the Section 4(f) lands.
2. **Improvement without Using the Adjacent Section 4(f) Lands.** It is not feasible and prudent to avoid Section 4(f) lands by roadway design or transportation system management techniques (including, but not limited to, minor alignment shifts, changes in geometric design standards, use of retaining walls and/or other structures, and traffic diversions or other traffic management measures) because implementing such measures would result in: (a) substantial adverse community impacts to adjacent homes, businesses or other improved properties; **or** (b) substantially increased roadway or structure cost; **or** (c) unique engineering, traffic, maintenance, or safety problems, **or** (d) substantial adverse social, economic, or environmental impacts; or (e) the project not meeting identified transportation needs; and (f) the impacts, costs, or problems would be truly unusual or unique, or of extraordinary magnitude when compared with the proposed use of Section 4(f) lands. Flexibility in the application of American Association (page 4) of State Highway and Transportation officials (AASHTO) geometric standards should be exercised, as permitted in 23 CFR 625, during the analysis of this alternative.
3. **Alternatives on New Location.** It is not feasible and prudent to avoid Section 4(f) lands by constructing on new alignment because (a) the new location would not solve existing transportation safety or maintenance problems; **or** (b) the new location would result in substantial adverse social, economic, or environmental impacts (including such impacts as extensive severing of productive farmlands, displacement of a substantial number of families or businesses, serious disruption of established travel patterns, substantial damage to wetlands or other sensitive natural areas, or greater impacts to other Section 4(f) lands); or (c) the new location would substantially increase costs or engineering difficulties (such as an inability to achieve minimum design standards, or to meet the requirements of various permitting agencies such as those involved with navigation, pollution, and the environment); **and** (d) such problems, impacts, costs, or difficulties would be truly unusual or unique, or of extraordinary magnitude when compared with the proposed use of Section 4(f) lands. Flexibility in the application of AASHTO geometric standards should be exercised, as permitted in 23 CFR 625, during the analysis of this alternative.

Measures to Minimize Harm

This programmatic Section 4(f) evaluation and approval may be used only for projects where the FHWA Division Administrator, in accordance with this evaluation, ensures that the proposed action includes all possible planning to minimize harm. Measures to minimize harm will consist of those measures necessary to preserve the historic integrity of the site and agreed to, in accordance with 36 CFR Part 800 by the FHWA, the SHPO, and as appropriate, the ACHP.

Coordination

The use of this programmatic evaluation and approval is conditioned upon the satisfactory completion of coordination with the SHPO, the ACHP, and interested persons as called for in 36 CFR Part 800. Coordination with interested persons, such as the local government, the property owner, a local historical society, or an Indian tribe, can facilitate in the evaluation of the historic resource values and mitigation proposals and is therefore highly encouraged.

For historic sites encumbered with Federal interests, coordination is required with the Federal agencies responsible for the encumbrances.

Before applying this programmatic evaluation to projects requiring an individual bridge permit, the Division Administrator shall coordinate with the U.S. Coast Guard District Commander.

Approval Procedure

This programmatic Section 4(f) approval applies only after the FHWA Division Administrator has:

1. Determined that the project meets the applicability criteria set forth above;
2. Determined that all of the alternatives set forth in the Findings section have been fully evaluated;
3. Determined that the findings in this document (which conclude that there are no feasible and prudent alternatives to the use of land from or non-historic improvements on the historic site) are clearly applicable to the project;
4. Determined that the project complies with the Measures to Minimize Harm section of this document;
5. Determined that the coordination called for in this programmatic evaluation has been successfully completed;
6. Assured that the measures to minimize harm will be incorporated in the project; and
7. Documented the project file clearly identifying the basis for the above determinations and assurances.

Issued on: 12/23/1986 Approved: /Original Signed By/ Ali F. Sevin, Director Office of Environmental Policy Federal Highway Administration

MONTANA DIVISION

"NATIONWIDE" PROGRAMMATIC SECTION 4(f) EVALUATION FOR HISTORIC BRIDGES

Project # NH-F 8-4 (16) 78 F, (C.N. #1420)

Date: August 10, 2006

Project Name: TOWNSEND-SOUTH

Location: Montana Ditch Bridge (24BW956)

Broadwater County, Montana

The Townsend-South project will reconstruct 13.2 km (8.2 miles) of U. S. Highway 287 beginning immediately south of the City of Townsend at RP 78.1 and ending north of Toston at RP 86.3. The project will be reconstructed to closely follow the existing alignment and will generally provide a two-lane highway with wide shoulders, auxiliary turn lanes, and two five-lane passing sections to improve the facility's operation and safety. The project crosses the Montana Ditch (a historic irrigation system dating to around 1900) at RP 78.9 and will impact the Montana Ditch Bridge (24BW956). The Montana Ditch Bridge is a 10.97 m (36 feet) wide by 7.01 m (23 feet) long single-span, cast-in-place reinforced concrete slab structure built in 1931 and reconstructed in 1939. The bridge has been evaluated by MDT and determined eligible for the National Register of Historic Places (NHRP) under Criterion C as an excellent example of a 1930's concrete slab bridge.

Reconstruction of U.S. Highway 287 will require the removal of the Montana Ditch Bridge. Although the existing bridge is not structurally deficient, the Montana Ditch Bridge is not wide enough to accommodate road widening to at least 12.0 m (about 40 feet). The existing bridge will be replaced with new concrete pipe or box culvert. An improved two-lane will be constructed at this location.

A map showing the location of the 24BW956 is attached.

NOTE: Any response in a box will require additional information, and may result in an individual evaluation/statement.

	<u>YES</u>	<u>NO</u>
1. Is the bridge a NATIONAL HISTORIC LANDMARK?	<input type="checkbox"/>	<input checked="" type="checkbox"/>
2. Have agreements been reached through the procedures pursuant to <i>Section 106</i> of the <i>National Historic Preservation Act (NHPA)</i> with the following:		
STATE HISTORIC PRESERVATION OFFICE (SHPO)?	<input checked="" type="checkbox"/>	<input type="checkbox"/>
ADVISORY COUNCIL ON HISTORIC PRESERVATION (ACHP)?	<input checked="" type="checkbox"/>	<input type="checkbox"/>
<i>MDT's historic roads and bridges Programmatic Agreement with the FHWA, the SHPO, and ACHP was enacted in 1997 in lieu of regular procedures for compliance with Section 106 of the NATIONAL HISTORIC PRESERVATION ACT as applied only to historic roads and bridges in Montana.</i>		
3. Any other agency/ies with jurisdiction at this location?	<input checked="" type="checkbox"/>	<input type="checkbox"/>
a) If "YES" will additional approval(s) for this <i>Section 4(f)</i> application be required?	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b) List of agencies with jurisdiction at this location:		
USA - CORPS OF ENGINEERS (<i>Section 404</i> Permit) – <i>jurisdictional wetlands</i>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
USDA - Forest Service	<input type="checkbox"/>	<input checked="" type="checkbox"/>
USDA - Natural Resources Conservation Service (<i>FPPA</i>)	<input type="checkbox"/>	<input checked="" type="checkbox"/>
FEMA Regulatory Floodway (Permit)	<input type="checkbox"/>	<input checked="" type="checkbox"/>
MDFW&P - Parks Division (Fishing Access Site)	<input type="checkbox"/>	<input checked="" type="checkbox"/>
MDFW&P - Wildlife Division (wetlands)	<input type="checkbox"/>	<input checked="" type="checkbox"/>
MDFW&P - Fisheries Division (<i>MSPA</i>)	<input type="checkbox"/>	<input checked="" type="checkbox"/>
MDNR&C (navigable rivers under state law)	<input type="checkbox"/>	<input checked="" type="checkbox"/>
MDNR&C (irrigation systems)	<input type="checkbox"/>	<input checked="" type="checkbox"/>
MDEQ - Air Quality Division	<input type="checkbox"/>	<input checked="" type="checkbox"/>
MDEQ - Permitting and Compliance - MPDES Permit/SWPPP	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Other: None	<input type="checkbox"/>	<input checked="" type="checkbox"/>

NOTE: Any response in a box will require additional information, and may result in an individual evaluation/statement.

ALTERNATIVES & FINDINGS

EACH of the following **ALTERNATIVES** for this proposed project have been evaluated to avoid the use of the historic bridge:

1. "Do Nothing."
2. Rehabilitate the existing bridge without affecting the historic integrity of the structure in accordance with the provisions of *Section 106* in the *NHPA*.
3. Construct the proposed bridge at a location where the integrity of the existing historic structure will not be affected as determined by the provisions of the *NHPA*.

The above **ALTERNATIVES** have been applied in accordance with this PROGRAMMATIC SECTION 4(f) EVALUATION and are supported by **EACH** of the following **FINDINGS**:

	<u>YES</u>	<u>NO</u>
1. The "Do Nothing" ALTERNATIVE has been evaluated and has been found to ignore the basic transportation need at this location.	<u>X</u>	<input type="checkbox"/>
This ALTERNATIVE is neither feasible nor prudent for the following reasons:		
a) Maintenance — this ALTERNATIVE does not correct the structurally deficient condition and/or poor geometrics (clearances, approaches, visibility restrictions) found at the existing bridge. Any of these factors can lead to a sudden catastrophic collapse, and/or a potential injury including loss of life. Normal maintenance will not change this situation.	—	<input checked="" type="checkbox"/>
<i>The existing bridge is not structurally deficient or at risk of a sudden catastrophic collapse.</i>		
b) Safety — this ALTERNATIVE also does not correct the situation which causes the existing bridge to be considered deficient. Because of these deficiencies, the existing bridge presents a serious and unacceptable safety hazard to the traveling public and/or places intolerable restrictions (gross vehicle weight, height, and/or width) on transport.	<u>X</u>	<input type="checkbox"/>
<i>The existing bridge deck accommodates only a 10.97 m (36 feet) wide roadway. MDT's Road Design Manual and Route Segment Plan call for a <u>minimum</u> road width of 12 m (40 feet) for Rural Principal Arterials on the National Highway System (NHS) with traffic volumes similar to those within the Townsend-South corridor.</i>		
A copy of the MDT Bridge Bureau's Inspection Report for the bridge is attached.	<u>X</u>	<input type="checkbox"/>
2. The rehabilitation ALTERNATIVE has been evaluated with one or more of the following FINDINGS :	<u>YES</u>	<u>NO</u>
a) The existing bridge's structural deficiency is such that it cannot be rehabilitated to meet minimum acceptable load and traffic requirements without adversely affecting the structure's historic integrity.	—	<u>X</u>
b) The existing bridge's geometrics (height, width) cannot be changed without adversely affecting the structure's historic integrity.	<u>X</u>	—
<i>The historic integrity of the structure would be adversely affected by widening.</i>		

ALTERNATIVES & FINDINGS (continued)

	<u>YES</u>	<u>NO</u>
c) This ALTERNATIVE does not correct the serious restrictions on visibility (approach geometrics, structural requirements) which also contributes to an unsafe condition at these locations.	—	<u>X</u>
Is this rehabilitation ALTERNATIVE therefore considered to be feasible and/or prudent based on the preceding evaluations?	<input type="checkbox"/>	<u>X</u>
3. The relocation ALTERNATIVE , in which the new bridges have been moved to sites that present no adverse effect upon the existing structures has also been considered under the following FINDINGS :		
a) Terrain and/or local geology. The present structure is located at the only feasible and/or prudent site for the bridge on the existing route. Relocating to a new site — either up-, or downstream of the preferred location — will result in extraordinary bridge/approach engineering and associated construction costs.	<u>X</u>	
The preferred site is the <u>only</u> prudent location due to the terrain and/or geologic conditions in the general vicinity.	—	<u>X</u>
Any other location would cause extraordinary disruption to existing traffic patterns.	<u>X</u>	
b) Significant social, economic and/or environmental impacts. Locating the proposed bridge in other than the preferred site would result in significant social/economic impacts such as the displacement of families, businesses, or severing of prime/unique farmlands.	<u>X</u>	—
<i>Shifting the alignment east or west of the existing highway would also require crossing the Montana Ditch. Shifting the highway to the east would place the new highway less than 37 m (120 feet) from the centerline of Montana Rail Link's mainline track, eliminating the ability to provide storage between the highway and the railroad for a tractor-trailer combination attempting to cross the rail line. Shifting the road substantially to the east would convert large areas of important farmland and agricultural land, disrupt existing irrigation systems and utilities, and require significant new right-of-way acquisition.</i>		
Significant environmental impacts such as the extraordinary involvement in wetlands, regulated floodplains, or habitat of threatened/endangered species are likely to occur in any location outside the preferred site.	<u>X</u>	—
<i>Shifting the road substantially to the east would result in extensive impacts to roadside wetlands.</i>		
c) Engineering and economics. Where difficulty/ies associated with a new location are less extreme than those listed above, the site may still not be feasible and prudent where costs and/or engineering difficulties reach extraordinary magnitudes. Does the ALTERNATE location result in significantly increased engineering or construction costs (such as a longer span, longer approaches, etc.)?	—	<u>X</u>
d) Preservation of existing historic bridge may not be possible due to either or both of the following:		
the existing structure has deteriorated beyond all reasonable possibility of rehabilitation for a transportation or alternative use;	—	<u>X</u>
no responsible party can be located to maintain and preserve the historic structure.	—	<u>X</u>

ALTERNATIVES & FINDINGS (continued)

Therefore, in accordance with the previously-listed FINDINGS it is neither feasible nor prudent to locate the proposed bridge at a site other than the preferred **ALTERNATE** as described.

<u>YES</u>	<u>NO</u>
<u>X</u>	<input type="checkbox"/>

MEASURES TO MINIMIZE HARM

This "Nationwide" Programmatic Section 4(f) Statement applies only when the following **Measures to Minimize Harm** have been assured; a check in a box MAY void the Programmatic application — if so, a full Section 4(f) Evaluation **will be required**:

- | | <u>YES</u> | <u>NO</u> |
|---|------------|--------------------------|
| 1. Is the bridge being rehabilitated under this proposed project? | ___ | <u>X</u> |
| If "YES", is the historic integrity of the structures being preserved to the greatest extent possible; consistent with unavoidable transportation needs, safety, and load requirements? | <u>N/A</u> | <input type="checkbox"/> |

NOTE:

If "NO", refer to item 2., following, to determine Programmatic applicability.

- | | | |
|--|----------|--------------------------|
| 2. The bridge is being replaced, or rehabilitated to the point where historic integrity is affected. Are adequate records being made of the existing structures under HISTORIC AMERICAN ENGINEERING RECORD standards, or other suitable means developed through consultation with SHPO and the ACHP? | <u>X</u> | <input type="checkbox"/> |
|--|----------|--------------------------|

MDT's 1993 publication "Monuments Above The Water: Montana's Historic Highway Bridges, 1860-1956" and the listing of other similar structures within the state worthy of rehabilitation in MDT's Roads and Bridges Historic Preservation Plan constitutes sufficient documentation for reinforced concrete structures. More than 400 such bridges were built in Montana between 1920 and 1955.

- | | | |
|--|-----|-------------------------------------|
| 3. If the bridge is being replaced, is the existing structure being made available for alternative use with a responsible party to maintain and preserve same? | ___ | <input checked="" type="checkbox"/> |
|--|-----|-------------------------------------|

Due to the one-piece construction of the bridge abutments and the bridge structure itself, reinforced concrete slab bridges cannot be readily moved. If an attempt were made to lift and move the structure, it is possible the bridge would fall apart. Adoption in-place is not feasible because the a new pipe or box culvert for the Montana Ditch will be constructed on the same location as the existing bridge.

- | | | |
|---|--|--|
| 4. If the bridge is being adversely affected, has agreement been reached through the <u>Section 106</u> process of the <u>National Historic Preservation Act</u> on these Measures to Minimize Harm (which will be incorporated into the proposed project) with the following: | | |
|---|--|--|

MDT's historic roads and bridges Programmatic Agreement with the FHWA, the SHPO, and the ADVISORY COUNCIL ON HISTORIC PRESERVATION (ACHP) was enacted in lieu of regular procedures for compliance with Section 106 of the NATIONAL HISTORIC PRESERVATION ACT. The Programmatic Agreement was signed on July 17, 1997.

SHPO?	<u>X</u>	<input type="checkbox"/>
ACHP?	<u>X</u>	<input type="checkbox"/>
FHWA?	<u>X</u>	<input type="checkbox"/>

A copy of the **Memorandum of Agreement (MOA)** signed/approved by these agencies is attached.

The Programmatic Agreement is an attachment to MDT's Roads and Bridges Historic Preservation Plan.

COORDINATION

	<u>YES</u>	<u>NO</u>
1. The proposed project has been COORDINATED with the following:		
a) SHPO <i>Programmatic Agreement – MT historic roads and bridges</i> <i>April 21, 2004 – Concurrence with MDT NHRP-eligibility determinations and Treatment of bridge under terms of 1997 Programmatic Agreement</i>	<u>X</u>	<input type="checkbox"/>
b) ADVISORY COUNCIL ON HISTORIC PRESERVATION <i>Programmatic Agreement – MT historic roads and bridges</i>	<u>X</u>	<input type="checkbox"/>
c) Property owners <i>June 28, 2002 - Public Information meeting</i> <i>December 15, 2005 - Public Hearing</i>	<u>X</u>	___
d) Local/State/Federal agencies (FHWA) <i>Programmatic Agreement – MT historic roads and bridges</i>	<u>X</u>	<input type="checkbox"/>

2. One of the preceding had the following comment(s) regarding this proposed project, and/or the mitigation:

No comments received.

This proposed project is also documented as an **ENVIRONMENTAL ASSESSMENT** under the requirements of the *National Environmental Policy Act (42 U.S.C. 4321, et seq.)*.

SUMMARY & APPROVAL

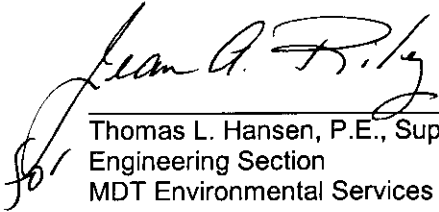
The “Do Nothing” alternative ignores the basic transportation needs for providing a wider roadway surface on the Montana Ditch bridge and two other bridges within this project. The proposed action is preferred because the No Build Alternative does not satisfy the specified purpose and need for improving U.S. Highway 287 south of Townsend. The No Build Alternative does not meet the traveling public's needs because it does not address the deficient surface width associated with the road and its bridges and does not eliminate or reduce other identified conditions that contribute to safety and operation problems on the existing roadway. The No Build Alternative does not provide a traffic facility consistent with all MDT design standards for Rural Principal Arterials Montana's National Highway System.

Rebuilding the road on an alignment similar to that of the existing highway could be accomplished, however, this alternative would not avoid impacts to the Montana Ditch Bridge and would result in an unacceptable encroachment on the nearby Montana Rail Link railroad main line. Shifting the new road west would place the new highway too close to the railroad main line and would require a crossing of the Montana Ditch. Similarly, shifting the alignment of U.S. Highway 287 to the east of the present highway to avoid the Montana Ditch Bridge would also require crossing the Montana Ditch and increase the impacts on other portions of the historic irrigation system in the area. Substantially changing the location of U.S. Highway 287 would likely result in significant social, economic and environmental effects.

The existing bridge cannot be rehabilitated without adversely affecting its historic integrity. Constructing a new bridge at a location which would not adversely affect the existing structure cannot be accomplished without

causing extraordinary environmental impacts or substantially increasing engineering and construction costs. Therefore, no feasible and prudent alternatives exist to avoid the use of the Montana Ditch Bridge (24BW956).

Part 3.0 of the attached Revised Environmental Assessment describes the alternatives considered by MDT and the analysis used to identify a preferred alternative for this proposed project. The proposed action meets all criteria regarding the required **ALTERNATIVES, FINDINGS, and Measures to Minimize Harm** which will be incorporated into this proposed project. All possible planning to minimize harm to 24MA1696 has been undertaken. This proposed project therefore complies with the July 5, 1983 Programmatic Section 4(f) Evaluation by the U.S. DEPARTMENT OF TRANSPORTATION's Federal Highway Administration. This document is submitted pursuant to **49 U.S.C. 303** and in accordance with the provisions of **16 U.S.C. 470f**.



Thomas L. Hansen, P.E., Supervisor
Engineering Section
MDT Environmental Services

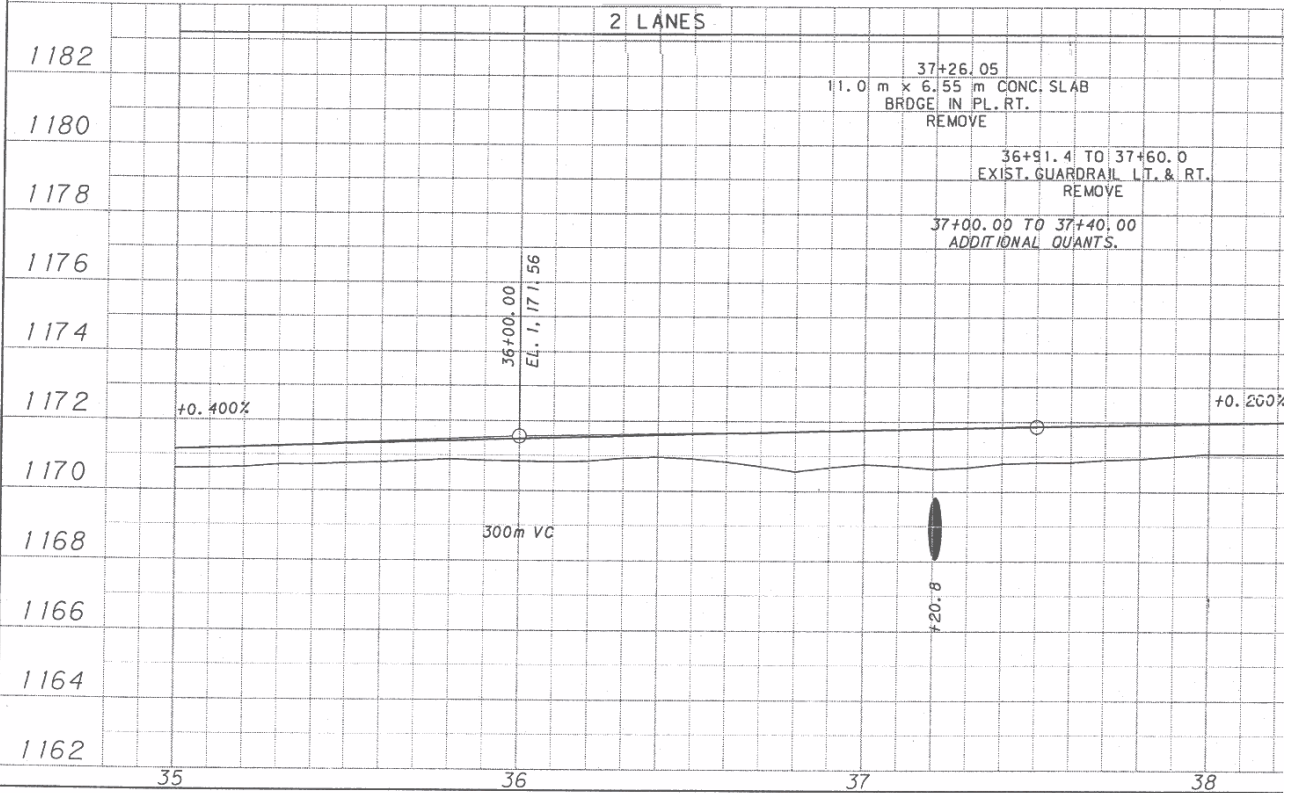
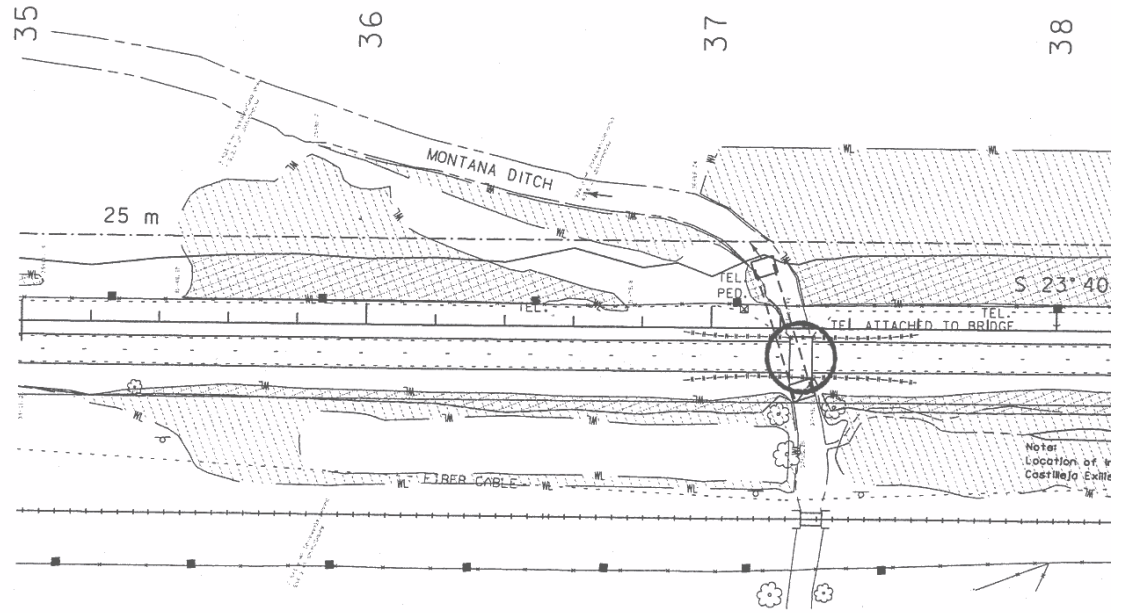
Date: 10/2/04

Approved: 

Federal Highway Administration

Date: 10-06-06

Montana Ditch Bridge (24BW956)



P00008078+09461

Location : 1M S TOWNSEND Structure Name: none

General Location Data

District Code, Number, Location : **02 Dist 2 BUTTE** Division Code, Location :**21 BUTTE**
 County Code, Location : **007 BROADWATER** City Code, Location :**00000 RURAL AREA**
 Kind fo Hwy Code, Description : **2 2 U.S. Numbered Hwy** Signed Route Number :**00287**
 Str Owner Code, Description : **1 State Highway Agency** Maintained by Code, Description :**1 State Highway Agency**
 Intersecting Feature : **IRRIGATION CANAL** Kilometer Post, Mile Post : **127.04 km 78.77**
 Structure on the State Highway System : Latitude : **46°18'00"**
 Structure on the National Highway System : Longitude : **111°30'24"**
 Str Meet or Exceed NBIS Bridge Length :

Construction Data

Construction Project Number : **204 C**
 Construction Station Number : **504+02.00**
 Construction Drawing Number : **710**
 Construction Year : **1931**
 Reconstruction Year : **1939**

Traffic Data

Current ADT : **5,340** ADT Count Year : **2004** Percent Trucks : **2 %**

Structure Loading, Rating and Posting Data

Loading Data :

Design Loading :		2 M 13.5 (H 15)
Inventory Load, Design :	24.4 mton	2 AS Allowable Stress
Operating Load, Design :	57.1 mton	2 AS Allowable Stress
Posting :		5 At/Above Legal Loads

Rating Data :

	Operating	Inventory	Posting
Truck Type 1 :	-1	-1	
Truck Type 2 :	-1	-1	
Truck Type 3 :	97	-1	

Structure, Roadway and Clearance Data

Structure Deck, Roadway and Span Data :

Structure Length : **7.01 m**
 Deck Area : **77.00 m sq**
 Deck Roadway Width : **10.97 m**
 Approach Roadway Width : **10.97 m**
 Median Code, Description : **0 No median**

Structure Vertical and Horizontal Clearance Data :

Vertical Clearance Over the Structure : **99.99 m**
 Reference Feature for Vertical Clearance : **N Feature not hwy or RR**
 Vertical Clearance Under the Structure : **0.00 m**
 Reference Feature for Lateral Underclearance : **N Feature not hwy or RR**
 Minimum Lateral Under Clearance Right : **0.00 m**
 Minimum Lateral Under Clearance Left : **0.00 m**

Span Data

Main Span

Number Spans : **1**
 Material Type Code, Description : **1 Concrete**
 Span Design Code, Description : **1 Slab**

Deck

Deck Structure Type : **1 Concrete Cast-in-Place**
 Deck Surfacing Type : **6 Bituminous**
 Deck Protection Type : **0 None**
 Deck Membrain Type : **0 None**

Approach Span

Number of Spans : **0**
 Material Type Code, Description :
 Span Design Code, Description :



Structure Vertical and Horizontal Clearance Data Inventory Route :

Over / Under Direction Name	Inventory Route	South, East or Bi-directional Travel			North or West Travel		
		Direction	Vertical	Horizontal	Direction	Vertical	Horizontal
Route On Structure	P00008	Both	99.99 m	10.97 m	N/A		

P00008078+09461
Continue

Inspection Data

Sufficiency Rating : **70.6**
Health Index : **99.96**
Structure Status : **Not Deficient**

Inspection Due Date : 11 February 2006
(91) Inspection Frequency (months) : **24**
Next Fracture Critical Due Date : **01 Jan 1901**
Fracture Critical Detail : **No FC Details**

Next Under Water Insp : **01 Jan 1901**
Under Water Insp Type : **None**
Next Other Insp Due Date : **01 Jan 1901**
Other Insp Type : **No Oth Inps**

NBI Inspection Data

(90) Date of Last Inspection : 11 February 2004
(90) Inspection Date :

Last Inspected By : Daniel Gravage - 71
Inspected By :

(58) Deck Rating : 7	(68) Deck Geometry : 4	(36C) Approach Rail Rating : 1	(62) Culvert Rating : N
(59) Superstructure Rating : 7	(67) Structure Rating : 6	(36A) Bridge Rail Rating : 0	(61) Channel Rating : 8
(60) Substructure Rating : 7	(69) Under Clearance : N	(36B) Transition Rating : 1	(71) Waterway Adequacy : 8
(72) App Rdwy Align : 8	(41) Posting Status : A	(36D) End Rail Rating : 1	(113) Scour Critical : 8

Unrepaired Spalls : 0 m sq

Deck Surfacing Depth : 9.00 in

Inspection Hours

Crew Hours for inspection : .5
Helper Hours : -1
Special Crew Hours : -1
Special Equipment Hours : -1

Snooper Required : N
Snooper Hours for inspection : -1
Flagger Hours : -1

Inspection Work Candidates		Status	Priority	Effected Structure Unit	Scope of Work	Action	Covered Condition States
Candidate ID	Date Requested						

No Inspection Work Candidates

P00008078+09461
Continue

Element Inspection Data

***** Span : Main-0 --1 *****

Element Description										
Smart Flag	Scale Factor	Env	Quantity	Units	Insp Each	Pct Stat 1	Pct Stat 2	Pct Stat 3	Pct Stat 4	Pct Stat 5
Element 39 - Unp Conc Slab/AC Ovl										
	1	3	83	sq.m.	X	100	0	0	0	0
						%	%	%	%	%
Previous Inspection Notes :										
02/11/2004 - None										NZKZ
11/20/2001 - None										UKKT
02/07/2000 - None										GBIV
03/09/1998 - None										UJCR
12/01/1995 - None										YDNF
11/01/1993 - None										REFI
Inspection Notes:										
Element 215 - R/Conc Abutment										
	1	3	20	m.		100	0	0	0	0
						%	%	%	%	%
Previous Inspection Notes :										
02/11/2004 - None										NZKZ
11/20/2001 - None										UKKT
02/07/2000 - None										GBIV
03/09/1998 - None										UJCR
12/01/1995 - None										YDNF
11/01/1993 - None										REFI
Inspection Notes:										
Element 331 - Conc Bridge Railing										
	1	2	14	m.		90	10	0	0	0
						%	%	%	%	%
Previous Inspection Notes :										
02/11/2004 - None										NZKZ
11/20/2001 - None										UKKT
02/07/2000 - None										GBIV
03/09/1998 - None										UJCR
12/01/1995 - None										YDNF
11/01/1993 - None										REFI
Inspection Notes:										

MONTANA DIVISION
**"NATIONWIDE" PROGRAMMATIC SECTION 4(f) EVALUATION FOR
 HISTORIC BRIDGES**

Project # NH-F 8-4 (16) 78 F, (C.N. #1420)
 Project Name: TOWNSEND-SOUTH

Date: August 10, 2006
 Location: Deep Creek Overflow Bridge
(24BW958)
Broadwater County, Montana

The Townsend-South project will reconstruct 13.2 km (8.2 miles) of U. S. Highway 287 beginning immediately south of the City of Townsend at RP 78.1 and ending north of Toston at RP 86.3. The project will be reconstructed to closely follow the existing alignment and will generally provide a two-lane highway with wide shoulders, auxiliary turn lanes, and two five-lane passing sections to improve the facility's operation and safety. The project crosses a drainage channel associated with Deep Creek at RP 80.6 and will impact the Deep Creek Overflow Bridge (24BW958). The Deep Creek Overflow Bridge is a 10.97 m (36 feet) wide by 7.01 m (23 feet) long single-span, cast-in-place reinforced concrete slab structure built in 1931 and reconstructed in 1939. MDT determined the bridge eligible for the National Register of Historic Places (NHRP) under Criterion C as an excellent example of a 1930's concrete slab bridge.

Reconstruction of U.S. Highway 287 will require the removal of the Deep Creek Overflow Bridge. Although the existing bridge is not structurally deficient, the Deep Creek Overflow Bridge is not wide enough to accommodate road widening to at least 12.0 m (about 40 feet). The existing bridge will be replaced with new CSP stockpass. The highway will be reconstructed as a five-lane passing area at this location.

A map showing the location of the 24BW958 is attached.

NOTE: Any response in a box will require additional information, and may result in an individual evaluation/statement.

	<u>YES</u>	<u>NO</u>
1. Is the bridge a NATIONAL HISTORIC LANDMARK?	<input type="checkbox"/>	<input checked="" type="checkbox"/>
2. Have agreements been reached through the procedures pursuant to <i>Section 106</i> of the <i>National Historic Preservation Act (NHPA)</i> with the following:		
STATE HISTORIC PRESERVATION OFFICE (SHPO)?	<input checked="" type="checkbox"/>	<input type="checkbox"/>
ADVISORY COUNCIL ON HISTORIC PRESERVATION (ACHP)?	<input checked="" type="checkbox"/>	<input type="checkbox"/>
<i>MDT's historic roads and bridges Programmatic Agreement with the FHWA, the SHPO, and ACHP was enacted in 1997 in lieu of regular procedures for compliance with Section 106 of the NATIONAL HISTORIC PRESERVATION ACT as applied only to historic roads and bridges in Montana.</i>		
3. Any other agency/ies with jurisdiction at this location?	<input checked="" type="checkbox"/>	<input type="checkbox"/>
a) If "YES" will additional approval(s) for this <i>Section 4(f)</i> application be required?	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b) List of agencies with jurisdiction at this location:		
USA - CORPS OF ENGINEERS (<i>Section 404</i> Permit) – <i>jurisdictional wetlands</i>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
USDA - Forest Service	<input type="checkbox"/>	<input checked="" type="checkbox"/>
USDA - Natural Resources Conservation Service (<i>FPPA</i>)	<input type="checkbox"/>	<input checked="" type="checkbox"/>
FEMA Regulatory Floodway (Permit)	<input type="checkbox"/>	<input checked="" type="checkbox"/>
MDFW&P - Parks Division (Fishing Access Site)	<input type="checkbox"/>	<input checked="" type="checkbox"/>
MDFW&P - Wildlife Division (wetlands)	<input type="checkbox"/>	<input checked="" type="checkbox"/>
MDFW&P - Fisheries Division (<i>MSPA</i>) – <i>124SPA Permit</i>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
MDNR&C (navigable rivers under state law)	<input type="checkbox"/>	<input checked="" type="checkbox"/>
MDNR&C (irrigation systems)	<input type="checkbox"/>	<input checked="" type="checkbox"/>
MDEQ - Air Quality Division	<input type="checkbox"/>	<input checked="" type="checkbox"/>
MDEQ - Permitting and Compliance - <i>MPDES Permit/SWPPP</i>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Other: None	<input type="checkbox"/>	<input checked="" type="checkbox"/>

NOTE: Any response in a box will require additional information, and may result in an individual evaluation/statement.

ALTERNATIVES & FINDINGS

EACH of the following **ALTERNATIVES** for this proposed project have been evaluated to avoid the use of the historic bridge:

1. "Do Nothing."
2. Rehabilitate the existing bridge without affecting the historic integrity of the structure in accordance with the provisions of *Section 106* in the *NHPA*.
3. Construct the proposed bridge at a location where the integrity of the existing historic structure will not be affected as determined by the provisions of the *NHPA*.

The above **ALTERNATIVES** have been applied in accordance with this PROGRAMMATIC SECTION 4(f) EVALUATION and are supported by **EACH** of the following **FINDINGS**:

	<u>YES</u>	<u>NO</u>
1. The "Do Nothing" ALTERNATIVE has been evaluated and has been found to ignore the basic transportation need at this location.	<u>X</u>	<input type="checkbox"/>
This ALTERNATIVE is neither feasible nor prudent for the following reasons:		
a) Maintenance — this ALTERNATIVE does not correct the structurally deficient condition and/or poor geometrics (clearances, approaches, visibility restrictions) found at the existing bridge. Any of these factors can lead to a sudden catastrophic collapse, and/or a potential injury including loss of life. Normal maintenance will not change this situation.	—	<input checked="" type="checkbox"/>
<i>The existing bridge is not structurally deficient or at risk of a sudden catastrophic collapse.</i>		
b) Safety — this ALTERNATIVE also does not correct the situation which causes the existing bridge to be considered deficient. Because of these deficiencies, the existing bridge presents a serious and unacceptable safety hazard to the traveling public and/or places intolerable restrictions (gross vehicle weight, height, and/or width) on transport.	<u>X</u>	<input type="checkbox"/>
<i>The existing bridge deck accommodates only a 10.97 m (36 feet) wide roadway. MDT's Road Design Manual and Route Segment Plan call for a minimum road width of 12 m (40 feet) for Rural Principal Arterials on the National Highway System (NHS) with traffic volumes similar to those within the Townsend-South corridor.</i>		
A copy of the MDT Bridge Bureau's Inspection Report for the bridge is attached.	<u>X</u>	<input type="checkbox"/>
2. The rehabilitation ALTERNATIVE has been evaluated with one or more of the following FINDINGS :	<u>YES</u>	<u>NO</u>
a) The existing bridge's structural deficiency is such that it cannot be rehabilitated to meet minimum acceptable load and traffic requirements without adversely affecting the structure's historic integrity.	—	<u>X</u>
b) The existing bridge's geometrics (height, width) cannot be changed without adversely affecting the structure's historic integrity.	<u>X</u>	—
<i>The historic integrity of the structure would be adversely affected by widening.</i>		

ALTERNATIVES & FINDINGS (continued)

	<u>YES</u>	<u>NO</u>
c) This ALTERNATIVE does not correct the serious restrictions on visibility (approach geometrics, structural requirements) which also contributes to an unsafe condition at these locations.	—	<u>X</u>
Is this rehabilitation ALTERNATIVE therefore considered to be feasible and/or prudent based on the preceding evaluations?	<input type="checkbox"/>	<u>X</u>
3. The relocation ALTERNATIVE , in which the new bridges have been moved to sites that present no adverse effect upon the existing structures has also been considered under the following FINDINGS :		
a) Terrain and/or local geology. The present structure is located at the only feasible and/or prudent site for the bridge on the existing route. Relocating to a new site — either up-, or downstream of the preferred location — will result in extraordinary bridge/approach engineering and associated construction costs.	<u>X</u>	
The preferred site is the <u>only</u> prudent location due to the terrain and/or geologic conditions in the general vicinity.	—	<u>X</u>
Any other location would cause extraordinary disruption to existing traffic patterns.	<u>X</u>	
b) Significant social, economic and/or environmental impacts. Locating the proposed bridge in other than the preferred site would result in significant social/economic impacts such as the displacement of families, businesses, or severing of prime/unique farmlands.	<u>X</u>	—
<i>Shifting the alignment east or west of the existing highway would also require crossing the Deep Creek Overflow channel. Shifting the highway to the east would place the new highway less than 37 m (120 feet) from the centerline of Montana RailLink's mainline track, eliminating the ability to provide storage between the highway and the railroad for a tractor-trailer combination attempting to cross the rail line. Shifting the road substantially to the east would convert large areas of important farmland and agricultural land, disrupt existing irrigation systems and utilities, and would likely require significant new right-of-way acquisition including a nearby residential relocation.</i>		
Significant environmental impacts such as the extraordinary involvement in wetlands, regulated floodplains, or habitat of threatened/endangered species are likely to occur in any location outside the preferred site.	<u>X</u>	—
<i>Shifting the road substantially to the east would result in extensive impacts to roadside wetlands.</i>		
c) Engineering and economics. Where difficulty/ies associated with a new location are less extreme than those listed above, the site may still not be feasible and prudent where costs and/or engineering difficulties reach extraordinary magnitudes. Does the ALTERNATE location result in significantly increased engineering or construction costs (such as a longer span, longer approaches, etc.)?	—	<u>X</u>
d) Preservation of existing historic bridge may not be possible due to either or both of the following:		
the existing structure has deteriorated beyond all reasonable possibility of rehabilitation for a transportation or alternative use;	—	<u>X</u>

ALTERNATIVES & FINDINGS (continued)

	<u>YES</u>	<u>NO</u>
no responsible party can be located to maintain and preserve the historic structure.	___	<u>X</u>
Therefore, in accordance with the previously-listed FINDINGS it is neither feasible nor prudent to locate the proposed bridge at a site other than the preferred ALTERNATE as described.	<u>X</u>	<input type="checkbox"/>

MEASURES TO MINIMIZE HARM

This "Nationwide" Programmatic Section 4(f) Statement applies only when the following **Measures to Minimize Harm** have been assured; a check in a box MAY void the Programmatic application — if so, a full Section 4(f) Evaluation **will be required**:

	<u>YES</u>	<u>NO</u>
1. Is the bridge being rehabilitated under this proposed project?	___	<u>X</u>
If "YES", is the historic integrity of the structures being preserved to the greatest extent possible; consistent with unavoidable transportation needs, safety, and load requirements?	<u>N/A</u>	<input type="checkbox"/>
NOTE: If "NO", refer to item 2., following, to determine <u>Programmatic</u> applicability.		
2. The bridge is being replaced, or rehabilitated to the point where historic integrity is affected. Are adequate records being made of the existing structures under HISTORIC AMERICAN ENGINEERING RECORD standards, or other suitable means developed through consultation with SHPO and the ACHP?	<u>X</u>	<input type="checkbox"/>
<i>MDT's 1993 publication "Monuments Above The Water: Montana's Historic Highway Bridges, 1860-1956" and the listing of other similar structures within the state worthy of rehabilitation in MDT's Roads and Bridges Historic Preservation Plan constitutes sufficient documentation for reinforced concrete structures. More than 400 such bridges were built in Montana between 1920 and 1955.</i>		
3. If the bridge is being replaced, is the existing structure being made available for alternative use with a responsible party to maintain and preserve same?	___	<input checked="" type="checkbox"/>
<i>Due to the one-piece construction of the bridge abutments and the bridge structure itself, reinforced concrete slab bridges cannot be readily moved. If an attempt were made to lift and move the structure, it is possible the bridge would fall apart. Adoption in-place is not feasible because the a new pipe or box culvert for the Deep Creek Overflow will be constructed on the same location as the existing bridge.</i>		
4. If the bridge is being adversely affected, has agreement been reached through the Section 106 process of the National Historic Preservation Act on these Measures to Minimize Harm (which will be incorporated into the proposed project) with the following:		
<i>MDT's historic roads and bridges Programmatic Agreement with the FHWA, the SHPO, and the ADVISORY COUNCIL ON HISTORIC PRESERVATION (ACHP) was enacted in lieu of regular procedures for compliance with Section 106 of the NATIONAL HISTORIC PRESERVATION ACT. The Programmatic Agreement was signed on July 17, 1997.</i>		
SHPO?	<u>X</u>	<input type="checkbox"/>

ACHP?	<u>X</u>	<input type="checkbox"/>
FHWA?	<u>X</u>	<input type="checkbox"/>
A copy of the Memorandum of Agreement (MOA) signed/approved by these agencies is attached.	___	<input checked="" type="checkbox"/>

The Programmatic Agreement is an attachment to MDT's Roads and Bridges Historic Preservation Plan.

COORDINATION

- | | <u>YES</u> | <u>NO</u> |
|---|-------------------|--------------------------|
| 1. The proposed project has been COORDINATED with the following: | | |
| a) SHPO
<i>Programmatic Agreement – MT historic roads and bridges</i>

<i>April 21, 2004 – Concurrence with MDT NHRP-eligibility determinations and Treatment of bridge under terms of 1997 Programmatic Agreement</i> | <u>X</u> | <input type="checkbox"/> |
| b) ADVISORY COUNCIL ON HISTORIC PRESERVATION
<i>Programmatic Agreement – MT historic roads and bridges</i> | <u>X</u> | <input type="checkbox"/> |
| c) Property owners
<i>June 28, 2002 - Public Information meeting</i>
<i>December 15, 2005 - Public Hearing</i> | <u>X</u> | ___ |
| d) Local/State/Federal agencies (FHWA)
<i>Programmatic Agreement – MT historic roads and bridges</i> | <u>X</u> | <input type="checkbox"/> |
| 2. One of the preceding had the following comment(s) regarding this proposed project, and/or the mitigation: | | |

No comments received.

This proposed project is also documented as an **ENVIRONMENTAL ASSESSMENT** under the requirements of the *National Environmental Policy Act (42 U.S.C. 4321, et seq.)*.

SUMMARY & APPROVAL

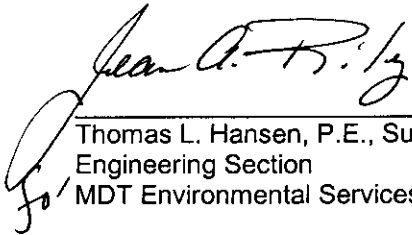
The “Do Nothing” alternative ignores the basic transportation needs for providing a wider roadway surface on the Deep Creek Overflow bridge and two other bridges within this project. The proposed action is preferred because the No Build Alternative does not satisfy the specified purpose and need for improving U.S. Highway 287 south of Townsend. The No Build Alternative does not meet the traveling public's needs because it does not address the deficient surface width associated with the road and its bridges and does not eliminate or reduce other identified conditions that contribute to safety and operation problems on the existing roadway. The No Build Alternative does not provide a traffic facility consistent with all MDT design standards for Rural Principal Arterials Montana's National Highway System.

Rebuilding the road on an alignment similar to that of the existing highway could be accomplished, however, this alternative would not avoid impacts to the Deep Creek Overflow Bridge and would result in an unacceptable encroachment on the nearby Montana Rail Link railroad main line. Shifting the new road west would place the new highway too close to the railroad main line and would require a crossing of the overflow channel. Similarly, shifting the alignment of U.S. Highway 287 to the east of the present highway to avoid the existing bridge would still necessitate building another nearby crossing of the overflow channel and could increase the impacts on wetlands, farmland, and a farmhouse in the area. Substantially changing the location

of U.S. Highway 287 would likely result in significant social, economic and environmental effects.

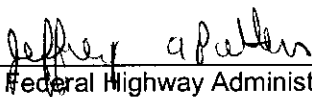
The existing bridge cannot be rehabilitated without adversely affecting its historic integrity. Constructing a new bridge at a location which would not adversely affect the existing structure cannot be accomplished without causing extraordinary environmental impacts or substantially increasing engineering and construction costs. Therefore, no feasible and prudent alternatives exist to avoid the use of the Deep Creek Overflow Bridge (24BW958).

Part 3.0 of the attached Revised Environmental Assessment describes the alternatives considered by MDT and the analysis used to identify a preferred alternative for this proposed project. The proposed action meets all criteria regarding the required **ALTERNATIVES, FINDINGS, and Measures to Minimize Harm** which will be incorporated into this proposed project. All possible planning to minimize harm to 24MA1696 has been undertaken. This proposed project therefore complies with the July 5, 1983 Programmatic Section 4(f) Evaluation by the U.S. DEPARTMENT OF TRANSPORTATION's Federal Highway Administration. This document is submitted pursuant to **49 U.S.C. 303** and in accordance with the provisions of **16 U.S.C. 470f**.

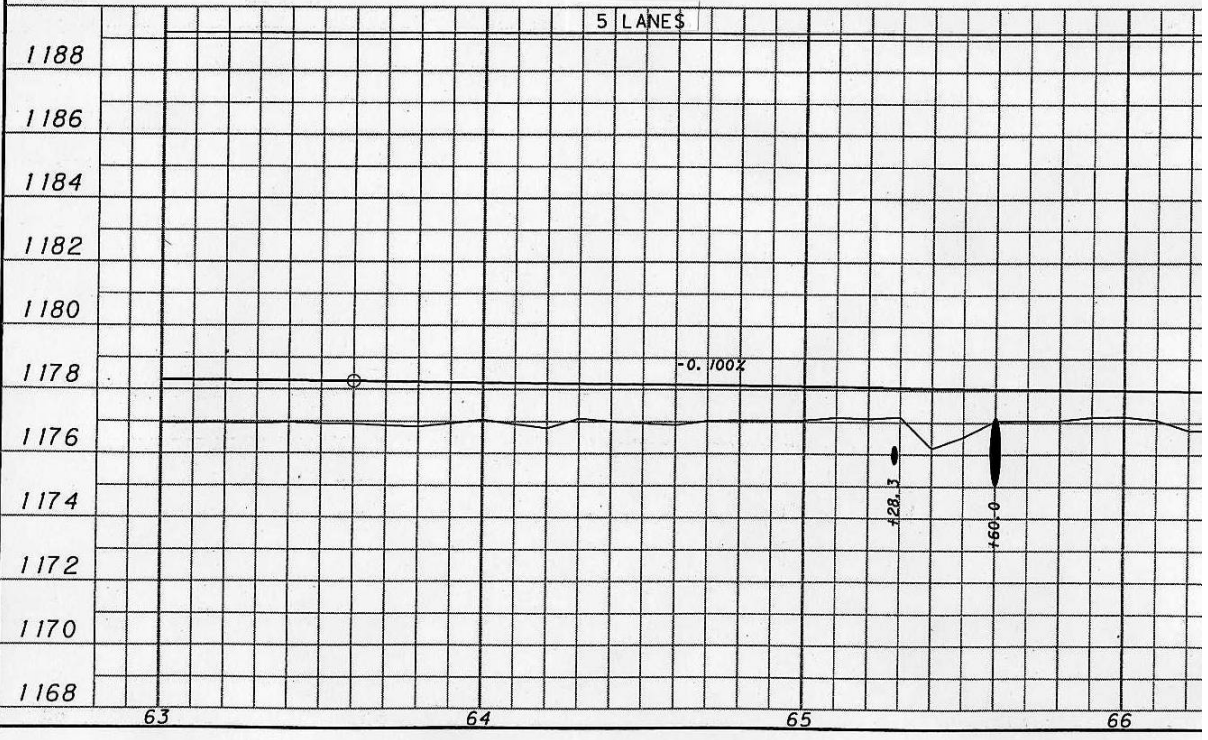
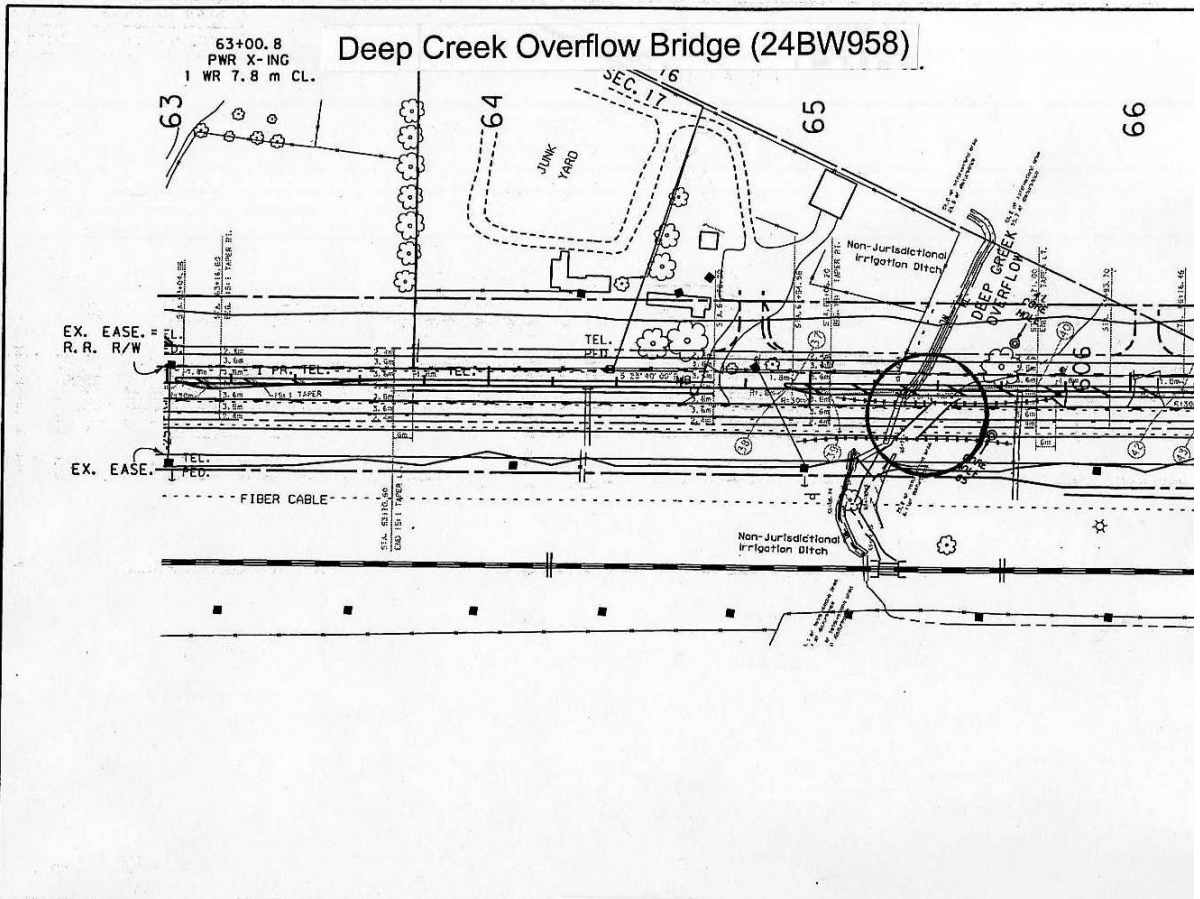


Thomas L. Hansen, P.E., Supervisor
Engineering Section
MDT Environmental Services

Date: 10/2/06

Approved: 
Federal Highway Administration

Date: 10-06-06



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 8/8/2006 REVIEWED BY DES
 7:1:37:02 AM CHECKED BY
 N M CPS - 07901

P00008080+06091

Location : 2M S TOWNSEND Structure Name: none

General Location Data

District Code, Number, Location : **02 Dist 2 BUTTE** Division Code, Location :**21 BUTTE**
 County Code, Location : **007 BROADWATER** City Code, Location :**00000 RURAL AREA**
 Kind fo Hwy Code, Description : **2 2 U.S. Numbered Hwy** Signed Route Number :**00287**
 Str Owner Code, Description : **1 State Highway Agency** Maintained by Code, Description :**1 State Highway Agency**
 Intersecting Feature : **DEEP CREEK OVERFLOW** Kilometer Post, Mile Post : **129.71 km 80.42**
 Structure on the State Highway System : Latitude : **46°16'18"**
 Structure on the National Highway System : Longitude : **111°29'30"**
 Str Meet or Exceed NBIS Bridge Length :

Construction Data

Construction Project Number : **204 C**
 Construction Station Number : **414+76.00**
 Construction Drawing Number : **708**
 Construction Year : **1931**
 Reconstruction Year : **1939**

Traffic Data

Current ADT : **3,630** ADT Count Year : **2004** Percent Trucks : **2 %**

Structure Loading, Rating and Posting Data

Loading Data :

Design Loading :		2 M 13.5 (H 15)
Inventory Load, Design :	24.4 mton	2 AS Allowable Stress
Operating Load, Design :	54.4 mton	2 AS Allowable Stress
Posting :		5 At/Above Legal Loads

Rating Data :

	Operating	Inventory	Posting
Truck Type 1 :	-1	-1	
Truck Type 2 :	-1	-1	
Truck Type 3 :	93	-1	

Structure, Roadway and Clearance Data

Structure Deck, Roadway and Span Data :

Structure Length : **7.01 m**
 Deck Area : **77.00 m sq**
 Deck Roadway Width : **10.97 m**
 Approach Roadway Width : **9.75 m**
 Median Code, Description : **0 No median**

Structure Vertical and Horizontal Clearance Data :

Vertical Clearance Over the Structure : **99.99 m**
 Reference Feature for Vertical Clearance : **N Feature not hwy or RR**
 Vertical Clearance Under the Structure : **0.00 m**
 Reference Feature for Lateral Underclearance : **N Feature not hwy or RR**
 Minimum Lateral Under Clearance Right : **0.00 m**
 Minimum Lateral Under Clearance Left : **0.00 m**

Span Data

Main Span

Number Spans : **1**
 Material Type Code, Description : **1 Concrete**
 Span Design Code, Description : **1 Slab**

Deck

Deck Structure Type : **1 Concrete Cast-in-Place**
 Deck Surfacing Type : **6 Bituminous**
 Deck Protection Type : **0 None**
 Deck Membrain Type : **0 None**

Approach Span

Number of Spans : **0**
 Material Type Code, Description :
 Span Design Code, Description :



Structure Vertical and Horizontal Clearance Data Inventory Route :

Over / Under Direction Name	Inventory Route	South, East or Bi-directional Travel			North or West Travel		
		Direction	Vertical	Horizontal	Direction	Vertical	Horizontal
Route On Structure	P00008	Both	99.99 m	10.97 m	N/A		

P00008080+06091
Continue

Inspection Data

Sufficiency Rating : **70.6**
Health Index : **98.19**
Structure Status : **Not Deficient**

Inspection Due Date : 11 February 2006
(91) Inspection Frequency (months) : **24**
Next Fracture Critical Due Date : **01 Jan 1901**
Fracture Critical Detail : **No FC Details**

Next Under Water Insp : **01 Jan 1901**
Under Water Insp Type : **None**
Next Other Insp Due Date : **01 Jan 1901**
Other Insp Type : **No Oth Inps**

NBI Inspection Data

(90) Date of Last Inspection : 11 February 2004
(90) Inspection Date :

Last Inspected By : Daniel Gravage - 71
Inspected By :

(58) Deck Rating : 7	(68) Deck Geometry : 5	(36C) Approach Rail Rating : 1	(62) Culvert Rating : N
(59) Superstructure Rating : 8	(67) Structure Rating : 6	(36A) Bridge Rail Rating : 0	(61) Channel Rating : 8
(60) Substructure Rating : 7	(69) Under Clearance : N	(36B) Transition Rating : 1	(71) Waterway Adequacy : 8
(72) App Rdwy Align : 8	(41) Posting Status : A	(36D) End Rail Rating : 0	(113) Scour Critical : 8

Unrepaired Spalls : 0 m sq

Deck Surfacing Depth : 3.00 in

Inspection Hours

Crew Hours for inspection : .5
Helper Hours : -1
Special Crew Hours : -1
Special Equipment Hours : -1

Snooper Required : N
Snooper Hours for inspection : -1
Flagger Hours : -1

Inspection Work Candidates		Status	Priority	Effected Structure Unit	Scope of Work	Action	Covered Condition States
Candidate ID	Date Requested						

No Inspection Work Candidates

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Continue

Element Inspection Data

***** Span : Main-0 --1 *****

Element Description										
Smart Flag	Scale Factor	Env	Quantity	Units	Insp Each	Pct Stat 1	Pct Stat 2	Pct Stat 3	Pct Stat 4	Pct Stat 5
Element 39 - Unp Conc Slab/AC Ovl										
	1	3	83	sq.m.	X	100	0	0	0	0
						%	%	%	%	%
Previous Inspection Notes :										
02/11/2004 - None										NTLI
11/20/2001 - None										UKKL
02/07/2000 - None										GBIN
03/09/1998 - None										UJCW
12/01/1995 - None										YDNF
07/01/1994 - None										REFI
Inspection Notes:										
Element 215 - R/Conc Abutment										
	1	3	30	m.		90	10	0	0	0
						%	%	%	%	%
Previous Inspection Notes :										
02/11/2004 - None										NTLI
11/20/2001 - None										UKKL
02/07/2000 - None										GBIN
03/09/1998 - Wingwall on south west side cumbling.										UJCW
12/01/1995 - None										YDNF
07/01/1994 - None										REFI
Inspection Notes:										
Element 331 - Conc Bridge Railing										
	1	2	14	m.		90	10	0	0	0
						%	%	%	%	%
Previous Inspection Notes :										
02/11/2004 - None										NTLI
11/20/2001 - None										UKKL
02/07/2000 - None										GBIN
03/09/1998 - None										UJCW
12/01/1995 - None										YDNF
07/01/1994 - None										REFI
Inspection Notes:										

Programmatic Section 4(f) Evaluation and Approval for FHWA Projects that Necessitate the Use of Historic Bridges

This statement sets forth the basis for a programmatic Section 4(f) approval that there are no feasible and prudent alternatives to the use of certain historic bridge structures to be replaced or rehabilitated with Federal funds and that the projects include all possible planning to minimize harm resulting from such use. This approval is made Pursuant to Section 4(f) of the Department of Transportation Act of 1966, 49 U.S.C. 303, and Section 18(a) of the Federal-Aid Highway Act of 1968 23 U.S.C. 138.

Use

The historic bridges covered by this programmatic Section 4(f) evaluation are unique because they are historic, yet also part of either a Federal-aid highway system or a state or local highway system that has continued to evolve over the years. Even though these structures are on or eligible for inclusion on the National Register of Historic Places, they must perform as an integral part of a modern transportation system. When they do not or cannot, they must be rehabilitated or replaced in order to assure public safety while maintaining system continuity and integrity. For the purpose of this programmatic Section 4(f) evaluation, a proposed action will "use" a bridge that is on or eligible for inclusion on the National Register of Historic Places when the action will impair the historic integrity of the bridge either by rehabilitation or demolition. Rehabilitation that does not impair the historic integrity of the bridge as determined by procedures implementing the national Historic Preservation Act of 1966, as amended (FHWA), is not subject to Section 4(f).

Applicability

This programmatic Section 4(f) evaluation may be applied by the Federal Highway Administration (FHWA) to projects which meet the following criteria:

1. The bridge is to be replaced or rehabilitated with Federal funds.
2. The project will require the use of a historic bridge structure which is on or is eligible for listing on the National Register of Historic Places.
3. The bridge is not a National Historic Landmark.
4. The FHWA Division Administrator determines that the facts of the project match those set forth in the sections of this document labeled Alternatives, Findings, and Mitigation.
5. Agreement among the FHWA, the State Historic Preservation Officer (SHPO), and the Advisory Council on Historic Preservation (ACHP) has been reached through procedures pursuant to Section 106 of the NHPA.

Alternatives

The following alternatives avoid any use of the historic bridge:

1. Do nothing.
2. Build a new structure at a different location without affecting the historic integrity of the old bridge, as determined by procedures implementing the NHPA.
3. Rehabilitate the historic bridge without affecting the historic integrity of the structure, as determined by procedures implementing the NHPA.

This list is intended to be **all-inclusive**. The programmatic Section 4(f) evaluation does not apply if a reasonable alternative is identified that is not discussed in this document. The project record must clearly demonstrate that each of the above alternatives was fully evaluated and it must further demonstrate that all applicability criteria listed above were met before the FHWA Division Administrator concluded that the programmatic Section 4(f) evaluation applied to the project.

Findings

In order for this programmatic Section 4(f) evaluation to be applied to a project, each of the following findings must be supported by the circumstances, studies, and consultations on the project:

1. **Do Nothing.** The do nothing alternative has been studied. The do nothing alternative ignores the basic transportation need. For the following reasons this alternative is not feasible and prudent:
 - a. Maintenance - The do nothing alternative does not correct the situation that causes the bridge to be considered structurally deficient or deteriorated. These deficiencies can lead to sudden collapse and potential injury or loss of life. Normal maintenance is not considered adequate to cope with the situation.
 - b. Safety - The do nothing alternative does not correct the situation that causes the bridge to be considered deficient.

Because of these deficiencies the bridge poses serious and unacceptable safety hazards to the traveling public or places intolerable restriction on transport and travel.
2. **Build on New Location Without Using the Old Bridge.** Investigations have been conducted to construct a bridge on a new location or parallel to the old bridge (allowing for a one- way couplet), but, for one or more of the following reasons, this alternative is not feasible and prudent:
 - a. Terrain - The present bridge structure has already been located at the only feasible and prudent site, i.e., a gap in the land form, the narrowest point of the river canyon, etc. To build a new bridge at another site will result in extraordinary bridge and approach engineering and construction difficulty or costs or extraordinary disruption to established traffic patterns.
 - b. Adverse Social , Economic, or Environmental Effects - Building a new bridge away from the present site would result in social, economic, or environmental impact of extraordinary magnitude. Such impacts as extensive severing of productive farmlands, displacement of a significant number of families or businesses, serious disruption of established travel patterns, and access and damage to wetlands may individually or cumulatively weigh heavily against relocation to a new site.
 - c. Engineering and Economy - Where difficulty associated with the new location is less extreme than those encountered above, a new site would not be feasible and prudent where cost and engineering difficulties reach extraordinary magnitude. Factors supporting this conclusion include significantly increased roadway and structure costs, serious foundation problems, or extreme difficulty in reaching the new site with construction equipment. Additional design and safety factors to be considered include an ability to achieve minimum design standards or to meet requirements of various permitting agencies such as those involved with navigation, pollution, and the environment.
 - d. Preservation of Old Bridge - It is not feasible and prudent to preserve the existing bridge, even if a new bridge were to be built at a new location. This could occur when the historic bridge is beyond rehabilitation for a transportation or an alternative use, when no responsible party can be located to maintain and preserve the bridge, or when a permitting authority, such as the Coast Guard requires removal or demolition of the old bridge.
3. **Rehabilitation Without Affecting the Historic Integrity of the Bridge.** Studies have been conducted of rehabilitation measures, but, for one or more of the following reasons, this alternative is not feasible and prudent:
 - a. The bridge is so structurally deficient that it cannot be rehabilitated to meet minimum acceptable load requirements without affecting the historic integrity of the bridge.
 - b. The bridge is seriously deficient geometrically and cannot be widened to meet the minimum required capacity of the highway system on which it is located without affecting the historic integrity of the bridge. Flexibility in the application of the American Association of State Highway and Transportation Officials geometric standards should be exercised as permitted in 23 CFR Part 625 during the analysis of this alternative.

Measures to Minimize Harm

This programmatic Section 4(f) evaluation and approval may be used only for projects where the FHWA Division Administrator, in accordance with this evaluation, ensures that the proposed action includes all possible planning to minimize harm. This has occurred when:

1. For bridges that are to be rehabilitated, the historic integrity of the bridge is preserved, to the greatest extent possible, consistent with unavoidable transportation needs, safety, and load requirements;
2. For bridges that are to be rehabilitated to the point that the historic integrity is affected or that are to be moved or demolished, the FHWA ensures that, in accordance with the Historic American Engineering Record (HAER) standards, or other suitable means developed through consultation, fully adequate records are made of the bridge;
3. For bridges that are to be replaced, the existing bridge is made available for an alternative use, provided a responsible party agrees to maintain and preserve the bridge; and
4. For bridges that are adversely affected, agreement among the SHPO, ACHP, and FHWA is reached through the Section 106 process of the NHPA on measures to minimize harm and those measures are incorporated into the project. This programmatic Section 4(f) evaluation does not apply to projects where such an agreement cannot be reached.

Procedures

This programmatic Section 4(f) evaluation applies only when the FHWA Division Administrator:

1. Determines that the project meets the applicability criteria set forth above;
2. Determines that all of the alternatives set forth in the Findings section have been fully evaluated;
3. Determines that use of the findings in this document that there are no feasible and prudent alternatives to the use of the historic bridge is clearly applicable;
4. Determines that the project complies with the Measures to Minimize Harm section of this document;
5. Assures that implementation of the measures to minimize harm is completed; and
6. Documents the project file that the programmatic Section 4(f) evaluation applies to the project on which it is to be used.

Coordination

Pursuant to Section 4(f), this statement has been coordinated with the Departments of the Interior, Agriculture, and Housing and Urban Development.

Issued on: July 5, 1983 Approved: /Original Signed By/ Ali F. Sevin, Director Office of Environmental Policy
Federal Highway Administration

APPENDIX F: Comparison of Location Alternatives Considered



COMPARISON OF LOCATION ALTERNATIVES FOR THE TOWNSEND-SOUTH EA PROJECT NH-F 8-4(16) 78; CN 1420

1. Potential Alignments West of the River

Agencies involved in this project have suggested that U.S. Highway 287 south of Townsend should be constructed on a new location west of the Missouri River. The reasons for such an alignment shift are to avoid wetlands impacts within the existing Townsend-South project corridor and to address concerns with the present alignment and narrow bridge over the Missouri River at Toston. As part of the alternatives development process for the EA, two options for routing U.S. Highway 287 west of the river were investigated. The preliminary alignment concepts were developed based on the following assumptions:

- **Shifting the alignment of Highway 287 to the west side of the Missouri River and back to the existing alignment within the limits of the Townsend-South project would not be an environmental or economically sound action.** Such an alignment would require bridges over the Missouri River and overpasses over the Montana Rail Link rail line. This would mean there would be four bridges over the Missouri between Toston and the north edge of Townsend. Such an alignment would require extensive highway construction within the floodplain and has a high potential for disturbing previously disturbed wetland areas.
- **A western alignment needs to begin at a location Highway 12/287 north of Townsend and join the existing alignment of Highway 287 south of Toston.** This assumption was made because no new highway crossings of the Missouri River would be required in the Toston or Townsend areas. Such an alignment may also reduce MDT's safety concerns and bridge replacement needs at the existing Missouri River at Toston.
- **There is no need for a direct connection of U.S. Highway 12 with the new alignment of Highway 287 and an acceptable intersection configuration could be developed near the beginning of the new alignment.**
- **Bypassing the Town of Townsend would be acceptable to the community.** This assumption was made for the purposes of this evaluation only and there is no indication that the community of Townsend wishes to be bypassed. According to State law (**60-2-211, M.C.A.**), communities cannot be bypassed without their prior approval as discussed below.

60-2-211. Bypassing of municipalities -- consent of municipal governing body. (1) The department may not construct highway bypasses or highway relocation projects without prior consent of the governing body of an incorporated municipality when the bypasses or projects:
(a) are not part of the national system of interstate highways built under the National Defense Highway Act; and
(b) divert motor vehicles from an existing highway route through a municipality incorporated prior to January 1, 1965.
(2) The department shall notify the governing body of the municipality by certified mail that it proposes to bypass the municipality. A contract may not be let or work commenced until the governing body notifies the department of its consent or until the elapse of 60 days after the

notice has been sent by the department to the municipality, whichever first occurs. The failure of the municipality to act and notify the department of its action within the 60-day period is implied consent to the bypass.

(3) Actual consent or refusal to bypass shall be in the form of a resolution duly adopted by a majority of the members of the governing body of the municipality.

(4) The governing body may not withdraw consent once the department has been notified of the consent.

- **The alignments would be constructed to follow existing roads to the extent possible to minimize impacts on adjoining rural residences and agricultural operations.**
- **The existing road would remain in service and become a Secondary Highway with MDT retaining maintenance responsibility.** This assumption was made because the existing highway serves many existing residences and agricultural operations. The 1999 Legislature mandated that MDT assume maintenance responsibility for paved Secondary Highways.

The alignment options developed in the area west of the Missouri River are described below and shown on **FIGURE 4** (in Part 3.0 of the EA):

Option "A" This alignment would depart from the existing alignment about 6.5 miles southwest of Toston. The proposed alignment would follow existing county roads (Hossfeld/Ferrat Lanes and River Road) for about 9 miles before reaching the bluffs west and southwest of Townsend. The alignment would generally follow River Road, an existing road paralleling the Missouri River, and rejoin the existing alignment about 5 miles north of Townsend.

Option "B" The alignment departs from the existing road about 3 miles southwest of Toston at Rauser Lane and continue on a NW-SE alignment to join River Road and the proposed alignment of Option A before reaching the bluffs west and southwest of Townsend. This option attempts to reduce the length of the new alignment by more closely paralleling the course of the Missouri River. It also attempts to skirt the wetland areas presumed to exist within the Indian Creek, Crow Creek-Swamp Creek-Springs Creek drainages.

A detailed summary of **Options A** and **B** and the anticipated environmental consequences of implementing such alignments are presented in **TABLES 1** and **2** the following pages.

TABLE 1: Summary of West Alignment Options

DESIGN CONSIDERATIONS	OPTION "A"	OPTION "B"
Description of Alignment Option	This alignment would depart from the existing alignment about 6.5 miles southwest of Toston. The proposed alignment would follow existing county roads (Hossfeld/Ferrat Lanes and River Road) for about 9 miles before reaching the bluffs west and southwest of Townsend. The alignment would generally follow River Road, an existing road paralleling the Missouri River, and rejoin the existing alignment about 5 miles north of Townsend.	The alignment departs from the existing road about 3 miles southwest of Toston at Rauser Lane and continue on a NW-SE alignment to join River Road and the proposed alignment of Option A before reaching the bluffs west and southwest of Townsend. This option attempts to reduce the length of the new alignment by more closely paralleling the course of the Missouri River. It also attempts to skirt the wetland areas presumed to exist within the Indian Creek, Crow Creek-Swamp Creek-Springs Creek drainage.
Length of New construction for Alignment Option	21.5 miles (34.6 km)	18.6 miles (29.9 km)
Mileage of Existing Highway 287 to be Retained as Secondary (MDT Maintained)	17.7 miles (28.5 km) Includes existing bridges at Townsend and Toston	13.7 miles (22.0 km) Includes existing bridges at Townsend and Toston
Estimated Construction Costs	21.5 miles (34.6 km) X \$1.477 million/mi = \$31.76 million	18.6 miles (29.9 km) X \$1.477 million/mi = \$27.47 million
Estimated New R/W Area	403 acres Areas of BLM and State land are crossed by alignment	386 acres Areas of BLM and State land are crossed by alignment
Estimated New R/W Costs	Assume 25% of needed R/W irrigated land @ \$3000/ac and 75% is grazing, hay, pasture @ \$1250/ac \$678,750	Assume 25% of needed R/W irrigated land @ \$3000/ac and 75% is grazing, hay, pasture @ \$1250/ac \$617,250
Estimated Maintenance Costs Associated with Old Facility	17.7 miles (28.5 km) X \$3600/mi \$63,720/yr	13.7 miles (22.0 km) X \$3600/mi \$49,320/yr

TABLE 1: Summary of West Alignment Options (continued)

DESIGN CONSIDERATIONS	OPTION "A"	OPTION "B"
Advantages of the Alignment	<p>Shifting U.S. Highway 287 to the west side of the Missouri River would eliminate two river crossings on the route. Safety and geometric concerns at the Missouri River bridge at Toston would be eliminated.</p> <p>Direct impacts to wetlands in the Townsend-South corridor would be avoided.</p> <p>May facilitate through movements of traffic on the route since highway users would no longer be required to slow down or stop in Townsend.</p> <p>These options cross notable areas of Bureau of Land Management and State land, particularly in the northern portion of the alignments. Right-of-way costs could be reduced somewhat by the existence of these public lands.</p>	
Disadvantages of the Alignment	<p>Requires the extension of project limits to implement these alignment options.</p> <p>Substantially increases magnitude and scope of highway improvements within the corridor. Project costs would delay MDT's ability to make improvements to U.S. Highway 287. There would be no benefit to traffic on the route offered by stage construction since connections to the existing route would be impossible without bridging the Missouri River. Shifting to the other side of the river would likely commit MDT to undertake one massive and expensive project.</p> <p>Bypasses Townsend. Requires approval of municipality before bypassing Townsend.</p> <p>Required new configuration of intersection for Highways 12 and 287 at north edge of Townsend could present design difficulties due to overall skewed alignment/topography.</p> <p>Excessive new construction required with full corridor width right-of-way acquisition.</p> <p>New construction in areas previously undisturbed by highway.</p> <p>Potential exists for grade problems with new railroad grade separation and transition to existing alignment north of Townsend.</p> <p>Dramatically increases mileage under MDT maintenance responsibility (both new road miles and old road miles).</p>	

TABLE 2: West Alignments – Potential Environmental Effects

ENVIRONMENTAL CONSIDERATIONS	OPTION "A"	OPTION "B"
Landforms, Geology and Soils	Large cuts and fills may be required in bluffs west/southwest of Townsend. The bluffs could also pose geotechnical concerns. Other than length of proposed alignment and its associated disturbance there is little difference in impacts between options.	
Important Farmland	Estimated Conversion of 171 acres	Estimated Conversion of 159 acres
Water Resources and Quality	<p>Constructing U.S. Highway 287 along this alignment would affect Warm Springs, Crow, Swamp, Spring Branch Creeks near its southerly end and Indian Creek near the north end of the alignment.</p> <p>Disturbed areas for the new highway would increase the potential for soil erosion and sediment transport. Due to the increased length of this option, the disturbance area and potential for erosion during construction would be greater than those of option B.</p>	<p>Constructing U.S. Highway 287 along this alignment would affect Warm Springs, Crow, Swamp, Spring Branch Creeks near its southerly end and Indian Creek near the north end of the alignment.</p> <p>Disturbed areas for the new highway would increase the potential for soil erosion and sediment transport.</p>
Floodplain Impacts	Neither alignment would cross delineated floodplains. It is assumed the new road would be built above the floodplain of the Missouri River in the bluffs west and southwest of Townsend.	
Air Quality Impacts	Air quality impacts are not a project concern due to relatively low traffic volumes and the high existing air quality of the project area. No discernable difference between proposed realignment options.	
Impacts to Vegetation	Vegetation clearing and grading for the new highway would increase the potential for soil erosion and sediment transport. Due to its length, the disturbance area and potential for erosion during construction would be greater for Option A than for Option B.	
Impacts to Wetlands	These options would likely encounter notable wetland areas associated with Warm Springs, Crow, Swamp, Spring Branch Creeks and irrigation features near its southerly end. The southern portion of these alignment cross four soils (Fa-Fairdale Silt Loam, Fd-Fluvaquentic Haplaquolls, Tu-Toston Silty Clay Loam, and Va-Villy Silty Clay loam) on the NRCS's hydric soil list for Broadwater County. Option B would appear to cross more of these hydric soil types than Option A.	
Impacts to Threatened or Endangered Wildlife	Reconstructing U.S. Highway 287 on either alignment would not be expected to cause major effects to threatened or endangered species. The difference between these alignment options would be minimal with respect to T/E species.	
Impacts to Wildlife Resources	Highway construction on the proposed alignments would result in the permanent loss of minor amounts of habitat and temporarily displace some species. Overall long-term impacts to wildlife would be expected to be minor, however, since the road would be built through relatively undisturbed areas, the effects on wildlife may initially be somewhat greater than reconstructing within the existing highway corridor.	
Impacts to Fisheries Resources	The new road would cross Crow Creek (Class 3 sport fishery), the Crow Creek Spawning Channel (Class 5). Warm Springs Creek (Class 4) and Indian Creek (Class 5). Roadways would also be built above floodplain and riparian zone of Missouri River.	

TABLE 2: West Alignments – Potential Environmental Effects

ENVIRONMENTAL CONSIDERATIONS	OPTION "A"	OPTION "B"
Land Use Impacts	<p>The proposed alignments would be unlikely to cause major changes in the use of adjoining lands - livestock grazing, hay production, and the cultivation of crops would continue. However, there is a long term potential for the development of new commercial uses (with the approval of local government) in the vicinity of the required new intersection for Highway 287/12 north of Townsend.</p> <p>These options would result in the loss of productive agricultural land and affect associated irrigation systems and operations.</p> <p>These options would require the minor amounts of right-of-way from land from the BLM and State of Montana and change the use of the affected lands (e.g. grazing to right-of-way).</p>	
Right-of-Way and Utility Impacts	<p>Both alignments would require substantial amounts of new right-of-way. Estimates for new right-of-way acquisition ranges from 386 acres (Option B) to more than 403 acres for Option A.</p> <p>These options would require cross the Montana Rail Link line north of Townsend and require a grade separation structure.</p> <p>These options have considerable involvement with irrigation ditches along the southern part of the alignments and would require coordination with ditch companies/owners during design.</p> <p>The alignments would be in close proximity to between 6-10 rural residences with outbuildings. The need for relocating any of these residences is unknown and can't be predicted with any certainty until a preliminary design was done.</p>	
Transportation/Circulation Impacts	<p>These options may facilitate through traffic on the route since highway users would no longer be required to slow down or stop in Townsend. The new road could be built without disruptions to traffic on the existing alignment .</p>	
Social Impacts/Environmental Justice	<p>Neither alignment would have any significant impact on the location, distribution, density or growth rate of the population of Townsend or Broadwater County. No social, income, or ethnic groups would be adversely affected and the alignments would not isolate or divide existing residential areas.</p>	
Economic Impacts	<p>Bypassing Townsend has the potential for causing adverse economic effects to highway-oriented businesses within the community.</p> <p>Due to the magnitude of the required construction, the temporary economic benefits associated with construction in the area and local spending by workers would extend over several years.</p>	
Noise Impacts	<p>Due to the proximity of the new road to some residences along the proposed alignments, noise impacts would be expected. Building on a totally new alignment may be more notable than widening along the existing highway corridor with respect to noise impacts. Residents along the new alignment have not previously been exposed to much noise. Development of a highway where none previously existed would likely represent a major change in noise levels for some receivers near the alignments.</p>	
Hazardous Materials/Substances Impacts	<p>Neither alignment possesses much potential for encountering hazardous waste sites or areas of contamination since they pass primarily through agricultural or vacant lands. The site could encounter lands used for military training in the Limestone Hills National Guard Training Facility.</p>	

TABLE 2: West Alignments – Potential Environmental Effects

ENVIRONMENTAL CONSIDERATIONS	OPTION "A"	OPTION "B"
Impacts to Cultural, Archaeological/Historical Resources	The potential for encountering NRHP-eligible historic or archaeological sites along the alignments is unknown without a detailed cultural resources survey. Based on the results of cultural surveys of the existing corridor, the likelihood of encountering historic farms and archaeological sites along both alignments appears high.	
Section 4(f) Impacts	Neither alignment would affect public parks or recreation sites or wildlife and waterfowl refuges. The potential for encountering NRHP-eligible historic or archaeological sites along the alignments is unknown without a detailed cultural resources survey.	
Impacts to Section 6(f) Lands	No lands acquired or improved with funding administered under the Land and Water Conservation Fund Act would be affected.	
Pedestrian and Bicyclist Facilities	The provision of wider shoulders would improve facilities for pedestrians and bicyclists over those associated with the existing highway.	
Visual Impacts	Large cuts and fills may be required in bluffs west/southwest of Townsend. Such cuts and fills may be visible from other parts of the valley or apparent to river users.	

2. Reconstruct on Alignments East of the Existing Road

U.S. Highway 287 south of Townsend could also be constructed on a new location east of the present road corridor. As a starting point for establishing possible new alignments, it was assumed that a departure from the existing alignment would occur south of Townsend near the beginning of the Townsend-South project. Developing a new highway alignment around the eastern edge of Townsend would require that the road cross the Missouri River and pass through the midst of sensitive wetlands/habitat areas adjoining the south end of Canyon Ferry Reservoir. Therefore, it was assumed that the alignment revisions would occur at a point south of Townsend.

The following assumptions were used to develop possible new alignments east of the present roadway:

- **The key aspect of such an alignment would be to avoid impacts to the delineated wetlands in the existing corridor.** These wetlands generally begin in the vicinity of the Montana Ditch crossing (Sta. 37+20) and continue southward to the Litening Barn Lane/Dry Creek Road area (Sta. 100+00). Few delineated wetlands exist beyond Sta. 100+00 to the project end.
- **Minimizing the length of the departure from the existing alignment is a key design consideration.** Other than avoidance of wetlands there appears to be few reasons for varying from the existing tangent alignment in the project area.
- **Following existing county road corridors would be obvious choices for establishing new alignments.** Litening Barn Lane and Flynn Lane present good opportunities for developing new alignments east of the existing road corridor. Both roads offer the ability for connections to the existing highway to be made within (or very near) the Townsend-South project limits.
- **The alignments would be constructed to follow existing roads to the extent possible to minimize impacts on adjoining rural residences and agricultural operations.**
- **The present road would remain in service and become a Secondary Highway with MDT retaining maintenance responsibility.** This assumption was made because the existing highway serves many existing residences and agricultural operations. The 1999 Legislature mandated that MDT assume maintenance responsibility for paved Secondary Highways.

Three alignment options were developed in the area east of the existing highway. These options were identified as:

- Option "C"** This alignment would depart from the existing alignment at the south edge of Townsend and proceed southeast before turning south to follow Litening Barn Lane. The new alignment would rejoin the existing alignment about 5.5 miles south of Townsend. The intent of the alignment is to minimize the departure from the existing alignment but still avoid the concentration of wetlands located between the Montana Ditch and Dry Creek.

Option "D" This alignment would depart from the existing alignment at the south edge of Townsend and proceed southeast before turning south to follow Flynn Lane. The new alignment would rejoin the existing alignment just south of the end of the proposed Townsend-South project.

Option "E" This alignment would depart from the existing alignment at the south edge of Townsend and proceed southeast to the eastern edge of the foothills bench of the valley and then turn due south. A long curve would turn the alignment to the southwest providing a long tangent connection to the existing highway south of the Missouri River bridge at Toston. The new alignment would rejoin the existing alignment about 0.5 miles south of bridge at Toston. The alignment would require the replacement of the Missouri River bridge at Toston.

These options are shown on **FIGURE 4** (in Part 3.0 of the EA):

A detailed summary of **Options A** and **B** and the anticipated environmental consequences of implementing such alignments are presented in **TABLES 3** and **4**.

Assumptions for cost estimates

1. Assumed an average cost figure of \$1.477 million/mile for new road construction. This is based on a 1999 preliminary estimate for old Townsend-Toston project of 10.5 million for the project. The average cost/mile figure assumes minor structures are included. The 1999 cost \$1.3125 million/mile was factored up to 2003 costs by assuming a 3% annual inflation rate.

$$\$1.3125 \text{ million/mile} \times 1.03^4 = \underline{\$1.4772 \text{ million/mile}}$$

- This cost is further verified by a recent Benefit-Cost analysis completed for the US 2 Havre-Fort Belknap EIS. This analysis examined the costs (and benefits) of upgrading 44.9 miles of a similar highway facility in similar terrain with an improved two-lane road, an improved two-lane with passing lanes, and undivided and divided four-lane options. The cost per mile estimates for these alternatives ranged from \$1.4008 million/mi (improved two-lane), \$1.4788 million/mi (improved two-lane with passing lanes), to \$1.8953 million/mi (for an undivided four lane).
2. Bridge cost estimated to be \$90 per square foot for new structure at Toston. The area of the structure was assumed to be 700 feet X 50 feet. It was assumed a two-lane structure accommodating a 44-foot wide road would be provided at this crossing. Applies only to Option E.
 3. It is assumed that portions of the old highway no longer needed would become a secondary route and would be maintained by MDT. Maintenance costs were estimated based on other recent costs obtained from MDT for Secondary Highway (S-540 in Park County). Annual maintenance work (including snowplowing and sanding) was estimated at about \$3,600/mile for 32 miles of S-540.
 4. Right-of-way costs were estimated based on a review of recent listings on a Townsend real estate firm's website. An average cost per acre figure of \$3000/acre was identified for irrigated cropland and \$1250 /acre for grazing, hay, and general agricultural land. Assumptions as to the amount of R/W needed from irrigated land were developed from a review of an agricultural land use map obtained from the Montana NRIS website.
 5. Right-of-way needs were estimated by assuming an average new R/W corridor width of 200 feet through undeveloped areas, a net new R/W area of 140 feet in areas where county roads already exist, and an additional 60 feet of R/W being needed along the existing highway.

TABLE 3: Summary of East Alignment Options

DESIGN CONSIDERATIONS	OPTION "C" (LIGHTNING BARN LANE)	OPTION "D" (FLYNN LANE)	OPTION "E" (EAST BENCH)
Description of Alignment Option	This alignment would depart from the existing alignment at the south edge of Townsend and proceed southeast before turning south to follow Lightning Barn Lane. The new alignment would rejoin the existing alignment about 5.5 miles south of Townsend. The intent of the alignment is to minimize the departure from the existing alignment but still avoid the concentration of wetlands located between the Montana Ditch and Dry Creek.	This alignment would depart from the existing alignment at the south edge of Townsend and proceed southeast before turning south to follow Flynn Lane. The new alignment would rejoin the existing alignment just south of the end of the proposed Townsend-South project.	This alignment would depart from the existing alignment at the south edge of Townsend and proceed southeast to the eastern edge of the foothills bench of the valley and then turn due south. A long curve would turn the alignment to the southwest providing a long tangent connection to the existing highway south of the Missouri River bridge at Toston. The new alignment would rejoin the existing alignment about 0.5 miles south of bridge at Toston. The alignment would require the replacement of the Missouri River bridge at Toston.
Length of New construction for Alignment Option	9.3 miles (15.0 km) Includes 6.5 miles on new alignment plus 2.8 miles of reconstruction on existing alignment	10.0 miles (16.1 km)	11.8 miles (19.0 km) Includes replacement of Missouri River bridge at Toston and about 0.5 miles of reconstruction on existing alignment on south approach to bridge
Mileage of Existing Highway 287 to be Retained as Secondary (MDT Maintained)	5.5 miles (8.9 km)	8.3 miles (13.4 km)	9.5 miles (15.3 km) New connection required to Toston community
Estimated Construction Costs	9.3 miles X \$1.477 million/mi = \$13.74 million	10.0 miles X \$1.477 million/mi = \$14.77 million	11.8 miles X \$1.477 million/mi = \$17.43 million +3.15 million (bridge) \$21.21 million
Estimated New R/W Area	171 acres	210 acres	281 acres
Estimated New R/W Costs	Assume 95% new R/W irrigated @ \$3000/ac and remainder @ \$1250/ac \$486,750	Assume 95% new R/W irrigated \$612,900	Assume 70% new R/W irrigated \$696,000
Estimated Annual Maintenance Costs Associated with Old Facility	5.5 miles X \$3600/mi = \$18,000/yr	8.3 miles X \$3600/mi = \$29,880/yr	9.5 miles X \$3600/mi = \$34,200/yr

TABLE 3: Summary of East Alignment Options (Continued)

DESIGN CONSIDERATIONS	OPTION "C" (LIGHTNING BARN LANE)	OPTION "D" (FLYNN LANE)	OPTION "E" (EAST BENCH)
<p>Advantages of the Alignment</p>	<p>The proposed alignment minimizes the departure from the existing alignment and stays within beginning and end points of Townsend-South project.</p> <p>Does not bypass Townsend.</p> <p>Follows an existing road (Lightning Barn Lane) for portion of alignment - could incorporate some existing R/W.</p> <p>Avoids the concentrated area of wetlands along the existing highway in Townsend-South project area.</p> <p>Does not preclude any alignment options for future Missouri River bridge project at Toston.</p>	<p>Follows an existing road (Flynn Lane) for about half of the new alignment - could incorporate some existing R/W.</p> <p>Does not bypass Townsend.</p> <p>Avoids the concentrated area of wetlands along the existing highway in Townsend-South project area.</p> <p>Does not preclude any alignment options for future Missouri River bridge project at Toston.</p>	<p>Locates road to east bench of valley and avoids agricultural uses over most of the southern half of its length.</p> <p>Does not bypass Townsend.</p> <p>Avoids the concentrated area of wetlands along the existing highway in Townsend-South project area.</p> <p>A tangent alignment across Missouri River at Toston would be developed providing a major improvement over the existing condition.</p>
<p>Disadvantages of the Alignment</p>	<p>1.3 miles longer than existing route between Townsend and project end.</p> <p>Requires a portion of existing route to remain in service as Secondary Highway and provide access to adjoining uses.</p> <p>Requires development of new highway corridor through an area where such facilities have not previously existed.</p> <p>Higher construction and maintenance costs that rebuilding on or near existing alignment.</p>	<p>1.5 miles longer than existing route between Townsend and project end.</p> <p>Requires all of existing route to remain in service as Secondary Highway and provide access to adjoining uses.</p> <p>Involvement with irrigation canals/ditches.</p> <p>Higher construction and maintenance costs that rebuilding on or near existing alignment.</p>	<p>1.3 miles longer than existing route between Townsend and Toston south of bridge (MP 78.1 to 88.6).</p> <p>Requires extension of project limits and replacement of Missouri River bridge at Toston to implement this option.</p> <p>Requires all of existing route to remain in service as Secondary Highway and provide access to adjoining uses. New connection from old highway north of river into Toston required.</p> <p>Involvement with irrigation canals/ditches.</p> <p>Highest construction and maintenance costs of east alignment options.</p>

TABLE 4: East Alignments – Potential Environmental Effects

ENVIRONMENTAL CONSIDERATIONS	OPTION "C" (LIGHTNING BARN LANE)	OPTION "D" (FLYNN LANE)	OPTION "E" (EAST BENCH)
Landforms, Geology and Soils	The new road would be constructed across relatively level terrain associated with the Missouri River valley. Other than length of the proposed alignments and their associated disturbance areas there is little difference in impacts between options.		Highway would encounter steeper terrain associated with foothills northeast of Toston. Larger cuts/fills than other east of road options.
Important Farmland	Estimated Conversion of 100 acres of prime or important farmland to R/W	Estimated Conversion of 133 acres of prime or important farmland to R/W	Estimated Conversion of 145 acres of prime or important farmland to R/W
Water Resources and Quality	<p>Constructing U.S. Highway 287 along these alignments would affect Deep, Greyson, and Dry Creeks. These streams are also crossed by the existing highway.</p> <p>Disturbed areas for the new highway would increase the potential for soil erosion and sediment transport. The disturbance area and potential for erosion during construction would be greater for Options D than for Option C.</p>		<p>Constructing U.S. Highway 287 along this alignment would affect Deep, Greyson, Dry, and Sixmile Creeks and cross the Missouri River.</p> <p>Disturbed areas for the new highway would increase the potential for soil erosion and sediment transport. Due to the increased length of this option, the disturbance area and potential for erosion during construction would be greater than those of Options C or D.</p>
Floodplain Impacts	These options would cross the delineated floodplain associated with Deep Creek.		This option would cross the delineated floodplains associated with Deep Creek and the Missouri River at Toston.
Air Quality Impacts	Air quality impacts are not a project concern due to low traffic volumes and the high existing air quality of the project area. No discernable difference with proposed realignments.		
Impacts to Vegetation	<p>Vegetation clearing and grading for the new highway would increase the potential for soil erosion and sediment transport. Due to variations in length, the disturbance area and potential for erosion during construction would be greater for Options D and E.</p> <p>The alignments would avoid a known population of Ute ladies' tresses located along existing road.</p>		
Impacts to Wetlands	These alignments would encounter wetlands associated with Deep, Greyson, Dry, and Sixmile Creeks (Option E only). Additionally, these alignments cross several soils (Fa-Fairdale Silt Loam, Tu-Toston Silty Clay Loam, and Va or Vd-Villy Silty Clay loam) on the NRCS's hydric soil list for Broadwater County. These potentially hydric soils occurs on the portion of the alignment southeast of Townsend common to Options C, D and E.		
Impacts to Threatened or Endangered Wildlife	Reconstructing U.S. Highway 287 on these alignments would not be expected to cause major effects to threatened or endangered species. The difference between these alignment options would be minimal with respect to T/E species. The Missouri River provides habitat and nesting opportunities for bald eagles. Possible effects would be less for alignments located farthest away from the river corridor.		

TABLE 4: East Alignments – Potential Environmental Effects

ENVIRONMENTAL CONSIDERATIONS	OPTION "C" (LIGHTNING BARN LANE)	OPTION "D" (FLYNN LANE)	OPTION "E" (EAST BENCH)
Impacts to Wildlife Resources	Highway construction on the proposed alignments would result in the permanent loss of minor amounts of habitat and temporarily displace some species. Overall long-term impacts to wildlife would be expected to be minor, however, since the road would be built through relatively undisturbed areas, the effects on wildlife may initially be somewhat greater than reconstructing within the existing highway corridor.		
Impacts to Fisheries Resources	This alignment would cross Deep Creek and Greyson Creek. Deep Creek is considered to be Class 4 fishery resource by the MDFWP	This alignment would cross Deep, Greyson, and Dry Creeks. Only Deep Creek has been assigned a fishery resource value (Class 4) by the MDFWP. value, while other streams crossing the proposed project area are not rated.	This alignment would cross Deep, Greyson, Dry, and Six Mile Creeks. Only Deep Creek has been assigned a fishery resource value (Class 4) by the MDFWP. The alignment would also require the construction of a new bridge across the Missouri River at Toston. The Missouri represents a notable sport fishery (Class 1).
Land Use Impacts	<p>The proposed alignments would be unlikely to cause major changes in the use of adjoining lands - livestock grazing, hay production, and the cultivation of crops would continue.</p> <p>These options would result in the loss of productive agricultural land and affect associated irrigation systems and operations.</p> <p>See discussion below concerning effects on rural residences.</p>		
Right-of-Way and Utility Impacts	<p>These alignments would require varying amounts of new right-of-way. Estimates for new right-of-way acquisition ranges from 171 acres for Option C to more than 280 acres for Option E.</p> <p>These options would require cross the large overhead electrical transmission line corridor and likely encounter other utilities along existing roads.</p> <p>These options have considerable involvement with irrigation ditches along the southern part of the alignments and would require coordination with ditch companies/owners during design.</p> <p>The alignments for Options C and D would be in close proximity to about 5-6 rural residences and in one or more cases, may separate residences from outbuildings or livestock feeding/holding areas. The need for relocating any of these residences is unknown and can't be predicted with any certainty without a detailed preliminary design.</p> <p>Option E would appear to have the least impacts on rural residences.</p>		
Transportation/Circulation Impacts	This option would allow traffic to be maintained on a portion of the existing route. Reconstruction of the existing road along a portion of this alignment would cause traffic disruptions during construction activities.	The existing road could remain in service during construction of this alignment.	The existing road could remain in service during construction of this alignment. A new connection from old highway north of river into Toston would be required.

TABLE 4: East Alignments – Potential Environmental Effects

ENVIRONMENTAL CONSIDERATIONS	OPTION "C" (LIGHTNING BARN LANE)	OPTION "D" (FLYNN LANE)	OPTION "E" (EAST BENCH)
Social Impacts/Environmental Justice	None of the alignments would have any significant impact on the location, distribution, density or growth rate of the population of Townsend or Broadwater County. No social, income, or ethnic groups would be adversely affected and the alignments would not isolate or divide existing residential areas.		
Economic Impacts	Right-of-way acquisition for the proposed alignments would remove between 170 and 280 acres of privately owned land from the tax rolls. Temporary economic benefits associated with construction in the area and local spending by workers would extend over two or more construction seasons.		
Noise Impacts	Due to the proximity of the new road to some residences along the proposed alignments noise impacts would be expected. Residents along the new alignment have not previously been exposed to much noise. Development of a highway where none previously existed would likely represent a major change in noise levels for some receivers near the alignments.	Over most of its length, the new road would be built in an area where few residences exist.	
Hazardous Materials/Substances Impacts	None of the alignments possess any notable potential for encountering hazardous waste sites or areas of contamination.		
Impacts to Cultural, Archaeological/Historical Resources	The potential for encountering NRHP-eligible historic or archaeological sites along the alignments is unknown without a detailed cultural resources survey. Based on cultural surveys of the existing corridor a high potential exists for encountering historic farms and isolated prehistoric sites.		
Section 4(f) Impacts	Neither alignment would affect public parks or recreation sites or wildlife and waterfowl refuges. The potential for encountering NRHP-eligible historic or archaeological sites along the alignments is unknown without a detailed cultural resources survey.	The alignment would not affect public parks or recreation sites or wildlife and waterfowl refuges. The potential for encountering NRHP-eligible historic or archaeological sites along the alignments is unknown without a detailed cultural resources survey. Construction of a new bridge over the Missouri River could require the use of land from the Toston Fishing Access Site and cause other impacts.	
Impacts to Section 6(f) Lands	No lands acquired or improved with funding administered under the Land and Water Conservation Fund Act would be affected.	The possibility exists that the Toston Fishing Access Site was partially funded with LWCF funds.	
Pedestrian and Bicyclist Facilities	The provision of wider shoulders would improve facilities for pedestrians and bicyclists over those associated with the existing highway.		

TABLE 4: East Alignments – Potential Environmental Effects

ENVIRONMENTAL CONSIDERATIONS	OPTION "C" (LIGHTNING BARN LANE)	OPTION "D" (FLYNN LANE)	OPTION "E" (EAST BENCH)
Visual Impacts	These alignments would follow existing county roads for about half their length and then cross lands used for irrigated agriculture. In these areas, a highway would be introduced into the landscape for the first time.		Over much of this alignment, a highway would be introduced into the landscape for the first time. Large cuts and fills may be required in bluffs northeast of Toston. The project would require a new crossing of the Missouri River. The new bridge would change the visual environment at Toston.