Project F 1-2 (39) 138
Reconstruction of U.S. Highway 2
Flathead County, Montana

Re-evaluation

Columbia Heights to Hungry Horse
Final Environmental Impact Statement
and
Section 4(f) Evaluation

Approved 12/22/95

U.S. Department of Transportation
Federal Highway Administration
and
Montana Department of Transportation

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Prepared By:
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September 2002

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Approved 12/22/95

Prepared pursuant to 23 CFR 771.129

U.S Department of Transportation
Federal Highway Administration (FHWA)
and
Montana Department of Transportation (MDT)

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EXECUTIVE SUMMARY

EXECUTIVE SUMMARY

This document is a re-evaluation of the Columbia Heights-Hungry Horse Final Environmental Impact Statement/*Section 4(f)* Evaluation (FEIS) signed in March 1995. The FEIS examined the effects of reconstructing 4.5 miles (7.2 km) of U.S. Highway 2 (US 2) from a two-lane highway to a four- and five-lane road with wider paved shoulders between Columbia Heights and Hungry Horse in Flathead County, Montana. The following pages describe the methods and results of the re-evaluation performed by the FEDERAL HIGHWAY ADMINISTRATION, Montana Division (FHWA) and the MONTANA DEPARTMENT OF TRANSPORTATION (MDT).

Background

In 1989, the FHWA and the MDT initiated work on an Environmental Impact Statement (EIS) for the proposed reconstruction of US 2 between Columbia Heights, located east of Columbia Falls, and Hungry Horse. A Notice of Intent to prepare an EIS was published in the *Federal Register* on July 20, 1989 and work to prepare the Draft EIS (DEIS) and *Section 4(f)* Evaluation began in August 1989. The DEIS/*Section 4(f)* Evaluation was signed by FHWA in June 1992 and after an extended public review and comment period, a public hearing on the document was held in December 1992 in Columbia Falls.

A FEIS/*Section 4(f)* Evaluation consisting of the DEIS, text modifications or additions, and comments from the public and reviewing agencies with appropriate responses was signed on March 15, 1995. A Record of Decision (ROD) on the FEIS was signed by FHWA on December 22, 1995. The ROD approved Alternative 1, a four-lane and five-lane design, for the reconstruction of US 2 after full consideration was given to the costs, the environmental impacts, and the operational and safety benefits associated with the build alternatives evaluated in the FEIS.

Following the signing of the ROD, MDT began design activities for the proposed improvements on US 2. For ease of design and contracting, MDT established two reconstruction projects within the Columbia Heights-Hungry Horse-West corridor. The Columbia Heights-East project begins at MilePost (MP) 138.3 and ends near Berne Road at MP 140.1. The Hungry Horse-West project begins at MP 140.1 and ends at MP142.7 at the west edge of Hungry Horse.

Alternative 1 provides for the development of four travel lanes and a continuous center median/left turn lane and isolated left turn lanes at major intersections between the project's beginning in Columbia Heights and Berne Road. The roadway in this section will vary from about 78 to 82 feet (23.7 to 25 m) in width and will generally match or parallel the existing alignment. Through Columbia Heights, US 2 will have four travel lanes, a continuous center median/left turn lane, and wider shoulders. Curbs and gutters, a storm drain system, sidewalks, and a park and ride facility will be provided within the developed area of Columbia Heights. The intersection of US 2 and Secondary Highway 206 will be reconfigured and signalized to give preference to US 2 traffic.

East of Columbia Heights, the continuous center median/left turn lane would be dropped

between Berne Road and Hungry Horse reducing the typical width of the four-lane roadway to about 64 feet (19.5 m). Left turn lanes would be provided at Monte Vista Drive and Berne Road. Near the intersection of Berne Road and US 2, MDT will develop a new roadside park area with an approach to a future river access on the Flathead River near the House of Mystery.

The alignment of the new road will deviate slightly from the existing alignment along the Flathead River within Badrock Canyon. As initially proposed in the FEIS and ROD, reconstruction of US 2 within Badrock Canyon required a retaining wall along the Flathead River and substantial excavation of rock outcrops adjacent to the highway. However, in November 2001, MDT decided to reexamine the reconstruction plans for US 2 in Badrock Canyon in an effort to identify a new alignment and road design that minimizes or possibly avoids the rock excavation proposed in the FEIS. This decision was made in response to newly identified cultural resource and Native American religious concerns within the Canyon and the high cost and environmental impacts associated with relocating a Northwestern Energy natural gas transmission line adjacent to US 2.

A new four-lane bridge across the South Fork of the Flathead River will be built just downstream of the existing bridge near Hungry Horse. At the east end of the corridor, the new road will transition to match the existing four-lane roadway through Hungry Horse.

Design plans for the Columbia Heights-East project are nearly completed and design activities are well underway for the Hungry Horse-West project. Based on MDT's decision to reconsider the proposed alignment of US 2 in Badrock Canyon, new work will be done to establish an acceptable alignment and road design through Badrock Canyon. The majority of the right-of-way needed for the projects has been acquired. MDT's current planned Letting Date for the Columbia Heights-East project is early 2003 with construction anticipated to begin later in 2003. The Hungry Horse-West project may not be built before 2006 based on the current availability of highway funds.

Purpose of the Re-evaluation

More than six years have passed since the signing of the ROD for the Columbia Heights-Hungry Horse FEIS. Over the intervening years, MDT has undertaken design work for the new highway and these activities have allowed for more accurate quantification of some environmental effects disclosed in the FEIS. Flathead County continues to be one of Montana's fastest growing areas and changes in traffic volumes and motor vehicle accident rates have occurred since the FEIS. Additionally, federal and state regulations relevant to some project activities have changed. Other concerns have been identified that have required MDT to make minor design modifications or that have the potential to dictate new and more notable project design changes. Lastly, public controversy and interest continues over MDT's proposed design for a four-lane highway through Badrock Canyon.

The COUNCIL ON ENVIRONMENTAL QUALITY's (CEQ) and FHWA's regulations require that a Supplemental Environmental Impact Statement (SEIS) be prepared when changes to a proposed action, or new circumstances or information, may result in significant environmental impacts that were not evaluated in the FEIS. To determine if such changes are significant, the

regulations require the development of appropriate environmental studies. The FHWA's accepted practice is to use an Environmental Re-evaluation, like this document, to assess the adequacy of the FEIS and help determine the need for preparing a SEIS.

For these reasons, FHWA and MDT decided to re-evaluate the Columbia Heights-Hungry Horse FEIS in accordance with the provisions of 23 CFR 771.129(b) and (c). As the FHWA's Technical Advisory T 6060.4A states, "the entire project should be revisited to assess any changes that have occurred and their effect on the adequacy of the Final EIS." This re-evaluation discloses new information or circumstances relevant to the development of the project and ensures that all current environmental requirements are addressed. The re-evaluation focuses on the changes within the project corridor and its surroundings, the potential for new or previously undisclosed impacts, and new project-related issues that have arisen since approval of the FEIS.

Therefore, the primary purpose of this re-evaluation is to determine whether or not the approved FEIS for the proposed reconstruction of US 2 between Columbia Heights and Hungry Horse remains valid. Additionally, the findings of this re-evaluation will provide the information needed for FHWA and MDT to determine whether or not a SEIS is needed for the entire Columbia Heights-Hungry Horse project area or for just a limited portion of the overall project corridor as provided for in 23 CFR 771.130(f).

Format and Organization of the Re-evaluation

The Columbia Heights-Hungry Horse FEIS Re-evaluation consists of five major sections:

- **Introduction**
- **Confirmation of Purpose and Need**
- **US 2 Reconstruction As Currently Proposed**
- **Changed Conditions**
- **Conclusions and Recommendations**

The "**Introduction**" section provides background information on the project development activities associated with MDT's Columbia Heights-Hungry Horse EIS and subsequent highway design projects in the US 2 corridor. This section of the document also identifies the reasons why MDT and FHWA re-evaluated the 1995 FEIS.

The second major section of the Re-evaluation "revisits" the purpose and needs for reconstructing US 2 between Columbia Heights and Hungry Horse. This section updates key analyses and information presented in the FEIS as reasons why US 2 between Columbia Heights and Hungry Horse should be reconstructed. The section addresses factors indicating the need to reconstruct this segment of US 2 including: traffic growth and level of service; accident history and safety concerns; deficiencies of the existing facility; transportation demands; and social and economic conditions in the area.

The section of the Re-evaluation titled "**US 2 Reconstruction As Currently Proposed**" provides a detailed discussion of MDT's planned reconstruction in the Columbia Heights-Hungry Horse corridor. This section describes the major design concepts for US 2 reconstruction

identified in the FEIS and ROD and discusses how these concepts have been translated into actual designs. Since many details of the proposed highway reconstruction could not be quantified without first performing detailed design work, this discussion is intended to describe those aspects of the reconstruction proposal not explicitly presented in the FEIS.

The "**Changed Conditions**" section of this document comprises the majority of the Re-evaluation. This section is generally organized according to the environmental subject areas presented in the FEIS. Each section begins with a brief summary of the notable environmental impacts described in the FEIS followed by text discussing changed conditions or providing new information. Finally, an assessment of the adequacy of the FEIS is made for each subject area.

The last major section of the re-evaluation presents the conclusions reached by MDT and FHWA regarding the overall adequacy of the FEIS and the need for preparing a SEIS.

Confirmation of Purpose and Need

The FEIS notes that the primary purpose of reconstruction US 2 between Columbia Heights and Hungry Horse is to provide for the safe and efficient movement of traffic through the project area. The re-evaluation confirms that the fundamental purpose and needs for reconstructing this section of US 2 have changed little since the FEIS and ROD were signed in 1995.

The re-evaluation shows that annual average daily traffic (AADT) volumes within the Columbia Heights-Hungry Horse corridor of have fluctuated since 1995 and that the rates of traffic growth on US 2 and other nearby roads are slightly below those anticipated at the time of the FEIS. However, the analysis of new traffic volume data supports a key assumption for the FEIS that traffic on US 2 in the Kalispell area and within the Columbia Heights-Hungry Horse project corridor will continue to increase over the foreseeable future.

Conclusions presented in the FEIS about capacity and level of service (LOS) changed very little with the consideration of more recent traffic volume data. New analyses yielded results similar to those presented in the FEIS regarding present day and expected future operations of two-lane and four-lane roads in the Columbia Heights-Hungry Horse corridor. The analyses also verify again that, from a capacity standpoint, only a four-lane roadway configuration would provide the desired LOS (LOS B) for this arterial corridor in the design year.

MDT analyzed the operation of transitioning US 2 from a four-lane roadway to two-lane road configuration only in the vicinity of Berne Memorial Park in response to continuing public concerns over widening US 2 to four-lanes through Badrock Canyon. The level of service evaluation performed for this configuration showed that two-lane section of road would operate unacceptably (LOS D/E) but the four-lane road sections to the east and west of the narrowed section would operate at LOS A/B under projected traffic volumes. In addition, this alternative

configuration for US 2 was not recommended due to the traffic safety concerns anticipated to occur at the two-lane to four-lane merge locations.

Traffic safety concerns still exist on US 2 within the project corridor. Although lower than those

presented in the FEIS, accident crash rates for this section of US 2 over a recent ten-year-long period were nearly twice that of the average accident crash rate for all other NHS Primary routes in Montana. Data obtained for this section of US 2 over the 1991-2001 period shows that accident severity rates are also nearly twice as high as for other NHS Primary routes in the state. Geometric and roadside conditions that contribute to safety concerns in the corridor are unchanged from the time of the FEIS.

The existing highway and the South Fork Bridge are both approaching seventy years of age. Both the road and the bridge exhibit notable physical deterioration and geometric deficiencies. Most of these deficiencies can only be remedied through major reconstruction.

Finally, the population and economy of Flathead County and the general project area continue to grow at rates exceeding most other areas in Montana. US 2 will continue to serve as the principal access route for residents and visitors traveling to Glacier National Park and other public lands. Adjoining sections of US 2 have already been upgraded in response to these traffic demands. The reconstruction of US 2 through the project area is necessary to ensure continuity of design on US 2 and to accommodate future growth in this region of Montana in a safe and efficient manner.

US 2 Reconstruction As Currently Proposed

The reconstruction concepts presented in the FEIS and ROD were translated into a detailed design for the highway corridor. MDT retained Robert Peccia & Associates, Inc. (RPA) of Helena, Montana to perform the necessary design work for this section of US 2. The preferred roadway improvements for US 2 have been refined since the FEIS through the development of detailed design plans for the Columbia Heights-East and Hungry Horse-West highway projects. This re-evaluation includes a detailed description of design elements now incorporated into the improvement of the Columbia Heights-Hungry Horse corridor that were not explicitly considered in the 1995 Final EIS. However, specific design information is not recounted in this Executive Summary.

Design work has established the alignment and grade for the highway, the exact roadway width, the required right-of-way, a new layout and configuration for the intersection of US 2 and Secondary 206, and designs for a park and ride lot in Columbia Heights and a roadside park near the House of Mystery. MDT's design work has also resulted in the completion of a preliminary layout for a new bridge across the South Fork of the Flathead River.

Plans for reconstructing US 2 between Columbia Heights and Hungry Horse remain generally unchanged since the FEIS. However, MDT's recent decision to re-evaluate and possibly shift the alignment of the road in Badrock Canyon represents a major departure from the alignment and design direction presented in the FEIS for this portion of the corridor.

Shifting the alignment would minimize or possibly even avoid the excavation of rock outcrops in Badrock Canyon and would require changes to MDT's existing design. The alignment shift may affect the need for and designs for a rock fall ditch and jersey barrier along the highway and a mechanically-stabilized-earth (MSE) retaining wall along the Flathead River. Shifting the

alignment may also reduce conflicts with existing gas transmission line adjacent to US 2 and the temporary gas line installation once proposed may no longer be required. New design work will be accomplished to establish a most desirable alignment and cost-effective design for US 2 in Badrock Canyon.

Changed Environmental Conditions

The majority of the re-evaluation is devoted to a discussion of the potential for changes to the anticipated environmental effects associated with MDT's highway reconstruction proposal. Existing environmental conditions were briefly reviewed and updated if necessary to determine if anticipated impacts have changed notably since the FEIS or if there is a potential for any new and previously undisclosed effects.

Overall, the re-evaluation shows that environmental conditions within the Columbia Heights-Hungry Horse project area have changed little since the time of the FEIS. However, MDT's newly proposed alignment shift for US 2 in Badrock Canyon and several changed environmental conditions since the FEIS present the possibility of new or previously undisclosed impacts. Notable changed conditions are briefly highlighted below:

Badrock Canyon "Cultural Landscape"

In March 2000, the Chairman of the CONFEDERATED SALISH AND KOOTENAI TRIBES (CSKT) sent a letter advising MDT that the outcrops in Badrock Canyon are highly significant to their culture and encouraging MDT to expand the consideration of cultural resources to include "the cultural and historical values of the Badrock Canyon area as a cultural landscape."

The *Historic Preservation Act* obligates MDT and FHWA to consult with any Indian tribe that attaches religious and cultural significance to historic properties that may be affected by an undertaking. This requirement applies regardless of the location of the historic property. Therefore, consultation with the CSKT will be undertaken regarding the potential effects that a new alignment for US 2 may cause to the Tribe's cultural features in Badrock Canyon. MDT believes that the major concerns of the CSKT can be addressed by shifting the road to minimize or avoid rock excavation in the Canyon.

Impacts to Surface Waters

Rebuilding US 2 in Badrock Canyon on an alignment that minimizes or avoids rock excavation would shift portions of the road towards the Flathead River. The supporting structures for the new road on such an alignment (embankments, retaining walls, cantilever supports, or bridge piers) may result in new encroachments on the Flathead River. New environmental analyses and agency coordination will be performed to evaluate the effects of such river encroachments.

Late Discovery of Archaeological Site in Badrock Canyon

An archaeological site was discovered within the Hungry Horse-West project limits in late 1995. The site, identified as 24FH760, is situated on both sides of US 2 east of Berne Memorial Park and has been determined eligible for the *National Register of Historic Places* (NRHP). Coordination with the STATE HISTORIC PRESERVATION OFFICE (SHPO) and Flathead and Kootenai Culture Committees about mitigation of potential effects to the site continues. Shifting the alignment of US 2 in Badrock Canyon may affect 24FH760 differently than the alignment proposed in the FEIS.

Changes in *Endangered Species Act* Listings

Since the 1995 FEIS, the bald eagle (*Haliaeetus leucocephalus*) was reclassified from endangered to threatened by the U.S. FISH &WILDLIFE SERVICE (USFWS). Bull trout (*Salvelinus confluentus)* were listed in 1998 as a threatened species and Canada lynx (*Felis lynx)* were listed as threatened by the USFWS in 2000. Peregrine falcons were removed from the threatened and endangered species list in 1999.

Shifting the road away from the rock outcrops of Badrock Canyon would result in new encroachments on the Flathead River and its riparian area. The potential exists for new or different project-related effects to bull trout and bald eagles and their habitats in and adjacent to the Flathead River. These effects need to be identified and analyzed before a final determination of effects to bull trout and bald eagles can be made for the Badrock Canyon section of the Hungry Horse-West project area.

Minimization/Avoidance of Rock Excavation in Badrock Canyon

MDT will perform additional design work for US 2 in Badrock Canyon to establish an alignment and road design that minimizes or avoids excavation of the rock outcrops in the Berne Memorial Park area. The FEIS did not disclose or fully evaluate the potential impacts associated with reconstructing the highway on an alignment that minimizes or avoids the excavation of the outcrops at Berne Memorial Park.

"Closure" of Berne Memorial Park Spring

The quality of the water from the spring in Berne Memorial Park has become a controversial issue since the FEIS and ROD were completed. The MDEQ has classified Berne Memorial Park spring as groundwater under the influence of surface water and MDT has investigated options to improve facilities at the spring and secure the water source from contamination. Ultimately, MDT concluded the quality of the water from the spring cannot be guaranteed for safe public consumption and posted signs advising against human consumption.
The continued use of the Berne Memorial Park spring is an issue that will continue to involve MDT, MDEQ and other interests. Highway development on a new alignment through the Berne Memorial Park area would be responsive to decisions made about the ultimate disposition of the spring and whether or not vehicle access to the roadside area can be maintained. New alignment

options and road designs for US 2 will be developed to better understand potential effects to the use, characteristics, and features of Berne Memorial Park.

Temporary Northwestern Energy Gas Line Relocation

Shifting the alignment of US 2 in Badrock Canyon could change the need for Northwestern Energy to bore through Columbia Mountain and install a temporary gas transmission line. Ways to minimize the effects of road construction on the gas line and other permanent accommodations for the gas line adjacent to US 2 in Badrock Canyon will be identified with MDT's new design activities.

New or Unanticipated Impacts in Badrock Canyon

In addition, shifting the alignment and/or changing the road's design in Badrock may result in changes to previously anticipated effects to riparian wetlands, base flood elevations, fish and wildlife habitat, visual resources, and *Section 4(f)* properties. These changes, whether beneficial and adverse, cannot be accurately identified until MDT completes new design activities.

Conclusions Reached From This Re-evaluation

Based on the new information obtained and developed for this re-evaluation, MDT and FHWA reached the following conclusions.

CONCLUSION 1: *The FEIS adequately describes the impacts associated with US 2 reconstruction within the limits of the Columbia Heights-East project.*

The Columbia Heights-East project area has few sensitive resources and the anticipated environmental effects associated with US 2 reconstruction initially described in the FEIS were relatively minor. The re-evaluation shows that environmental conditions within the Columbia Heights-East project area have changed little since the time of the FEIS. No new and/or previously undisclosed impacts would result from MDT's planned reconstruction of US 2 within the limits of the Columbia Heights-East project. There are no apparent reasons for not proceeding with the proposed reconstruction project.

CONCLUSION 2: *The FEIS adequately discusses the environmental effects of building a new bridge across the South Fork of the Flathead River*

The condition of the bridge has continued to deteriorate since the FEIS and the need for replacing

the structure is high. Other than the listing of the bull trout by the USFWS, environmental conditions in the vicinity of the South Fork of the Flathead River have not substantially changed since the 1995 FEIS. Preliminary design activities have been completed based directly on the

conceptual alignment and structural needs for the crossing described in the FEIS.

Since a detailed preliminary design and bridge layout drawings were not prepared at the time of the FEIS, few "specifics" about the bridge's design or pier configuration could be presented. Instead, the FEIS relied upon MDT's considerable experience with designing and building similar structures at other sensitive locations to provide an adequate discussion of the environmental effects of building the new bridge. The environmental effects associated with building a new bridge across the South Fork would not be substantially different from those generally described in the FEIS or already known to MDT.

***CONCLUSION 3:* The FEIS *does not* adequately discuss the environmental effects of reconstructing US 2 through Badrock Canyon on an alignment that minimizes or totally avoids rock excavation near Berne Memorial Park.**

The FEIS and the Final *Section 4(f)* Evaluation considered other location alternatives for US 2 in Badrock Canyon, including an alignment shift in Badrock Canyon that would avoid rock excavation and impacts to most features of Berne Memorial Park. However, these location alternatives were dropped from consideration for a variety of reasons including extensive construction required in the Flathead River, potentially high costs, and adverse impacts to riparian vegetation and wetlands.

The FEIS also discussed possible design modifications (steepened embankments, gabions, retaining walls, cantilevers, and structures supported by piers) that could be incorporated with the proposed highway design in Badrock Canyon. These design modifications were developed and evaluated as ways to minimize the necessary encroachment on the Flathead River associated with MDT's preferred alignment through the Canyon.

Therefore, while MDT did consider an alignment that would avoid or reduce the extent of rock excavation in Badrock Canyon, such an alignment was never advanced as part of any of the build alternatives. The potential environmental effects of such an alignment shift were never fully analyzed in the FEIS.

***CONCLUSION 4:* Due to the potential for significant environmental effects not disclosed in the FEIS, a Supplemental EIS (SEIS) must be prepared for the Badrock Canyon section of the Columbia Heights-Hungry Horse corridor.**

This re-evaluation shows that shifting the alignment of US 2 away from Berne Memorial Park and the rock outcrops of the Canyon may result in environmental effects different from those presented in the FEIS. The most notable of these environmental effects would include:

- new or different encroachments on the Flathead River;
- potentially adverse effects to bull trout;
- changes in impacts to overall water quality and wetlands;
- different effects on the 100-year flood elevations;
- changes in visual impacts; and

- new or different effects to cultural resource sites and *Section 4(f)* properties.

Shifting the alignment of US 2 in Badrock Canyon has the strong likelihood of reducing adverse effects to a variety of environmental resources and a new design may be developed that better addresses public concerns in the project area. However, alignment and design options must first be identified before MDT's modified reconstruction proposal in Badrock Canyon before any new or different direct, indirect, and cumulative environmental effects can be adequately identified. The recommendation then is to prepare a SEIS for only the Badrock Canyon section of the Hungry Horse-West project. MDT has established logical beginning and ending points for a future Badrock Canyon SEIS at Project Stations 167+05 and 197+00, respectively, for the following reasons:

- Station 167+05 is the end station for the Columbia Heights-East project and the beginning Station for the Hungry Horse-West project.

- The beginning and end project stations are located on straight (tangent) sections of US 2 on either side of the proposed SEIS area to afford road designers with the most flexibility in establishing a new alignment for the road.

- These stations do not preclude MDT's ability to implement any design change required to the Hungry Horse-West project (including a two-lane design through the Canyon if such a decision were made for any reason).

The purpose and need for reconstructing US 2 in Badrock Canyon remains unchanged from the FEIS -- rebuild a deteriorating traffic facility to current design standards, enhance traffic safety and capacity, and provide continuity in design between adjoining portions of US 2. However, due to changed environmental conditions, MDT will consider modifications to the proposed highway's alignment and design for a relatively short section of the corridor. As a result of MDT's re-evaluation, the ultimate alignment and road design in this section of the corridor may be different from the alternatives presented and analyzed in the FEIS.

INTRODUCTION TO THE RE-EVALUATION

RE-EVALUATION
Columbia Heights to Hungry Horse Final Environmental Impact Statement and *Section 4(f)* Evaluation

Background

In 1989, the FEDERAL HIGHWAY ADMINISTRATION (FHWA) and the MONTANA DEPARTMENT OF TRANSPORTATION (MDT) proposed the reconstruction of U.S. Highway 2 (US 2) between Columbia Heights, located east of Columbia Falls, and Hungry Horse in Flathead County, Montana. A Notice of Intent to prepare an Environmental Impact Statement (EIS) was published in the *Federal Register* on July 20, 1989 and letters advising interested agencies, organizations, and individuals of the pending development of an EIS were issued in August 1989.

The EIS addressed the reconstruction of about 4.5 miles (7.2 kilometers (km)) of US 2 beginning just west of the Montana Secondary Highway 206 intersection and continuing northeasterly to the community of Hungry Horse. **FIGURE 1** shows the location and limits of this project. The beginning and ending termini for the proposed reconstruction are at MilePost 138.3 (Project Station 137+95.88) and MilePost 142.7 (Project Station 211+03.26). These milepost locations were selected as termini because they are the ending or beginning points for recent reconstruction projects along the route. The Columbia Heights-Hungry Horse project(s) also begin at a major intersection (US 2 and Secondary Highway 206) and end at a population center (Hungry Horse).

Columbia Falls is located 1.5 miles (2.4 km) west of the project area. Kalispell, the seat of Flathead County and its largest city, is about 15 miles (24.1 km) southwest of the project area.

The proposed project passes through both rural and urban settings. It begins just outside Columbia Heights and passes through this strip development type community. After leaving Columbia Heights, the project passes through generally flat to rolling terrain with scattered residences and businesses with some open grass fields. Approximately 1.9 miles (3 km) east of Columbia Heights, US 2 enters Badrock Canyon where the roadway has been built between near vertical canyon walls and the Flathead River. Exiting Badrock Canyon, the highway parallels and crosses the South Fork of the Flathead River before entering Hungry Horse.

The Draft EIS (DEIS)/*Section 4(f)* Evaluation was signed by FHWA on June 15, 1992 and a public hearing on the document was held on December 10, 1992 in Columbia Falls. A Final EIS (FEIS)/*Section 4(f)* Evaluation consisting of the DEIS, text modifications or additions, and comments from the public and reviewing agencies with appropriate responses was signed on March 15, 1995. The FHWA signed the Record of Decision (ROD) on the FEIS on December 22, 1995. Since the ROD was signed, MDT has continued project development activities for the proposed

improvements on US 2. For ease of design and contracting, MDT divided the corridor into two projects known as the Columbia Heights-East and Hungry Horse-West projects. The Columbia Heights-East project begins at Station 137+95.88 and ends at Station 167+05.27, near Berne Road. The Hungry Horse-West project begins at Station 167+05.27 and ends at Station 211+03.26 in Hungry Horse. **FIGURE 2** shows the beginning and end stations for MDT's Columbia Heights-East and Hungry Horse-West projects.

PHOTO PLATES 1, 2, and **3** illustrate current conditions within the Columbia Heights-Hungry Horse corridor.

Design plans for both projects are nearly completed and most of the right-of-way needed for the projects has been acquired. MDT's current planned Letting Date for the Columbia Heights-East project is early 2003 with construction anticipated to begin later in 2003. The Hungry Horse-West project is not likely to be built before 2006 based on the current availability of highway funds.

The agencies listed below served as Cooperating Agencies and provided technical reviews and assistance during the development of the EIS.

- U.S. ARMY CORPS OF ENGINEERS (COE) - Montana Regulatory Office
- U.S. DEPARTMENT OF AGRICULTURE, FOREST SERVICE (USFS) - Flathead National Forest
- U.S. DEPARTMENT OF THE INTERIOR, NATIONAL PARK SERVICE (NPS) - Glacier National Park

In addition to these Cooperating Agencies, the U.S. DEPARTMENT OF THE INTERIOR, FISH AND WILDLIFE SERVICE (USFWS), the MONTANA DEPARTMENT OF ENVIRONMENTAL QUALITY (MDEQ), the MONTANA DEPARTMENT OF FISH, WILDLIFE & PARKS (MDFWP), and Flathead County have been routinely consulted with regarding the Columbia Heights to Hungry Horse design projects.

Reasons for the EIS Re-evaluation

The COUNCIL ON ENVIRONMENTAL QUALITY (CEQ) and FHWA's regulations require that a Supplemental Environmental Impact Statement (SEIS) be prepared whenever changes to a proposed action, or new circumstances or information, may result in significant environmental impacts that were not evaluated in the FEIS. To determine if such changes are significant, the regulations require the development of appropriate environmental studies. While the regulations do not give a specific name to these environmental studies, it has been accepted practice by the FHWA to use an Environmental Re-evaluation to determine whether an approved environmental document (FEIS) and environmental approval (ROD) remain valid. The results of the environmental re-evaluation are generally indicative of the need for preparing a supplemental environmental document (SEIS).

Re-evaluations are generally required three or more years after either environmental clearance or approval, if no additional major steps to advance the project have been taken; when design or scope changes occur; when new environmental impacts not discussed in the original

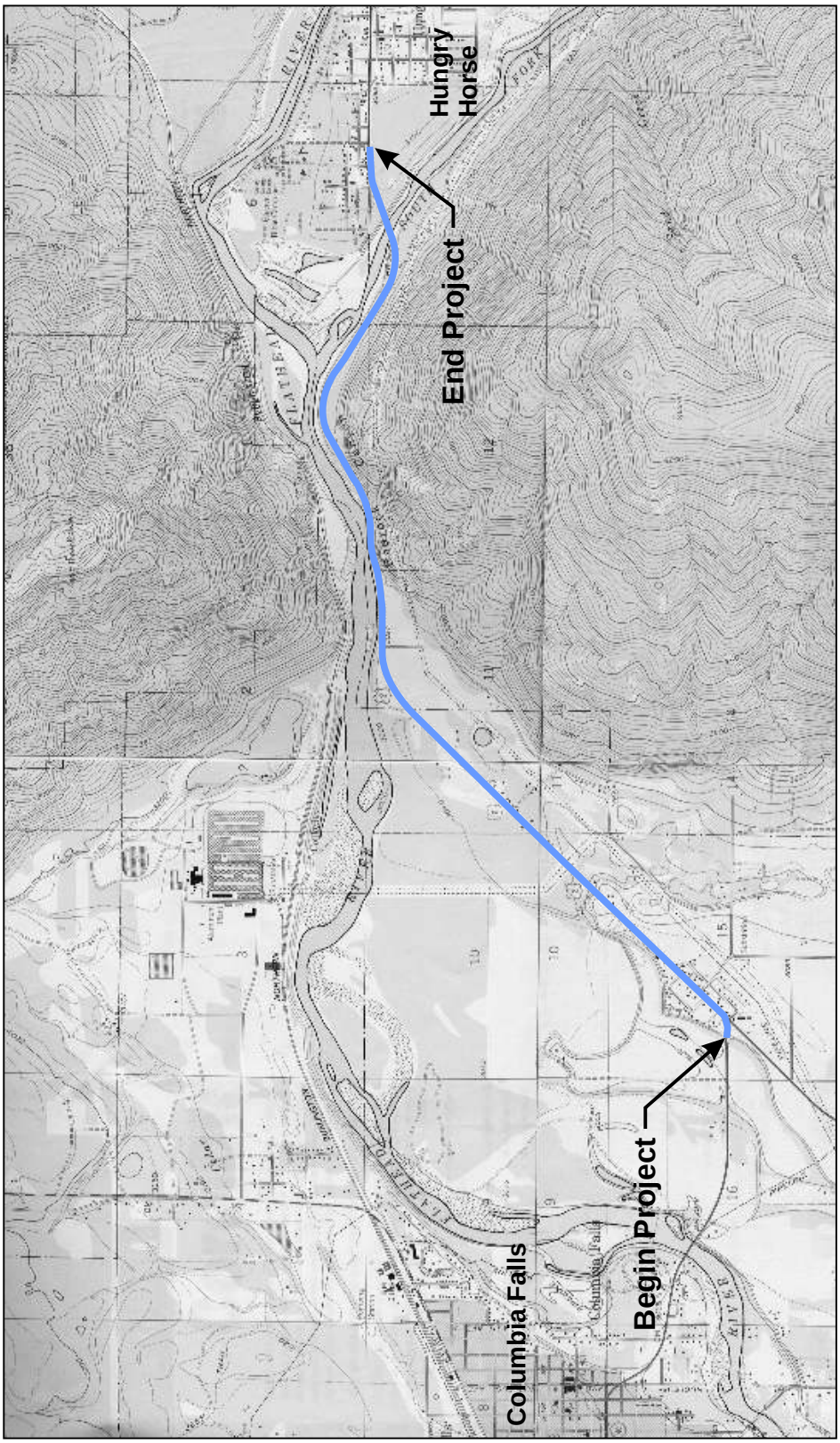


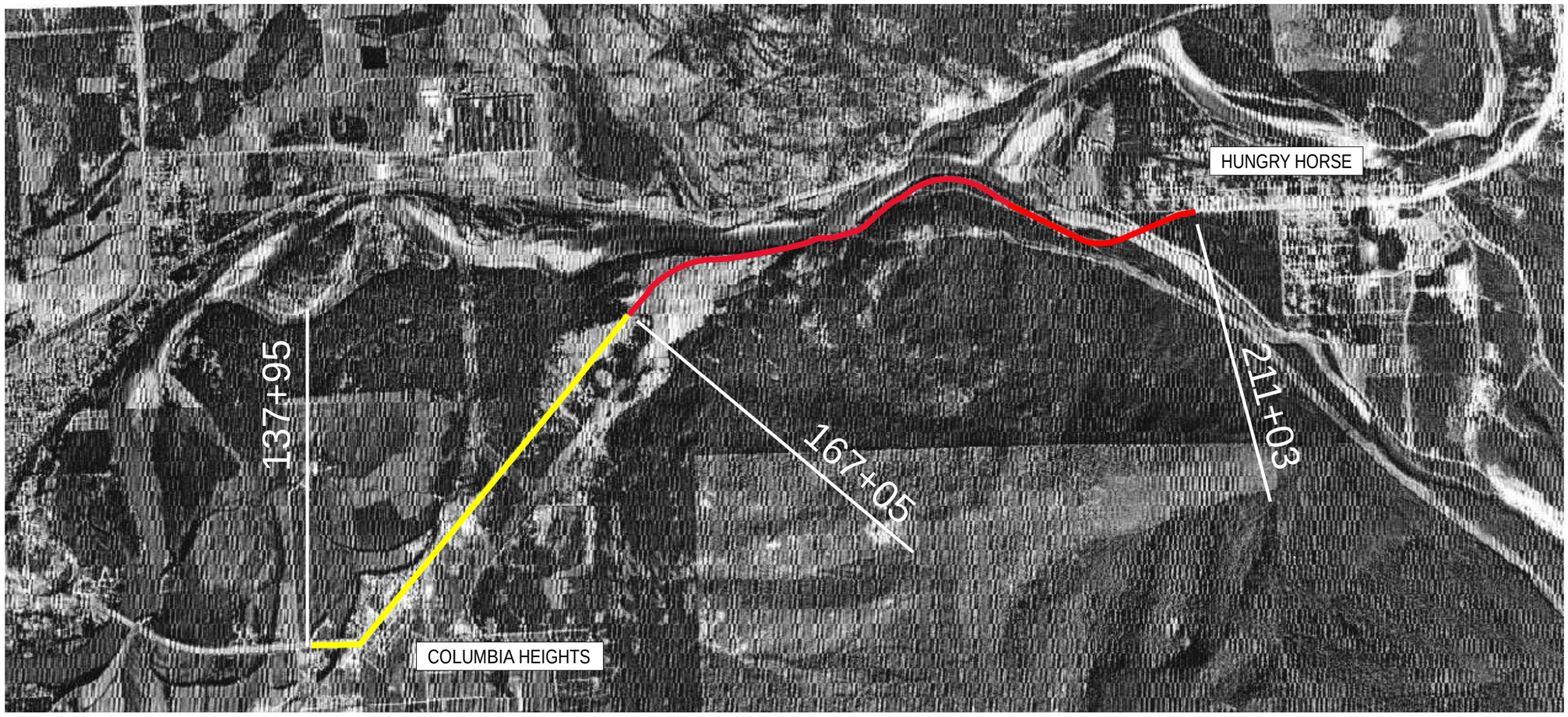
FIGURE 1: PROJECT LOCATION

environmental document are identified or impacts previously discussed change; or when environmental clearance requirements change.

More than six years have passed since the signing of the ROD for the Columbia Heights-Hungry Horse FEIS. Over the intervening years, project development activities have refined the design for the new highway and allowed for more accurate quantification of some environmental effects disclosed in the FEIS. Flathead County continues to be one of Montana's fastest growing areas and changes in traffic volumes and motor vehicle accident rates have occurred since the time of the FEIS. Changes to Federal and state regulations relevant to some project activities have changed. Other concerns have been identified that have required minor design changes or have the potential to dictate some more notable project changes. Lastly, there is continued public controversy and interest associated with the development and effects of providing a four-lane highway through Badrock Canyon. For these reasons, FHWA and MDT decided to re-evaluate the Columbia Heights-Hungry Horse FEIS in accordance with the provisions of 23 CFR 771.129(b) and (c).

As the FHWA's Technical Advisory T 6060.4A states, "the entire project should be revisited to assess any changes that have occurred and their effect on the adequacy of the Final EIS." This re-evaluation discloses new information or circumstances relevant to the development of the project and ensures that all current environmental requirements are addressed. The re-evaluation focuses on the changes within the project corridor and its surroundings, the potential for new or previously undisclosed impacts, and new project-related issues that have arisen since the FEIS was approved.

Therefore, the primary purpose of this re-evaluation is to determine whether or not the approved FEIS for the proposed reconstruction of US 2 between Columbia Heights and Hungry Horse remains valid. Additionally, the findings of this re-evaluation will provide the information needed for FHWA and MDT to determine whether or not a SEIS is needed for the entire Columbia Heights-Hungry Horse project area or for just a limited portion of the overall project corridor as provided for in 23 CFR 771.130(f).



Columbia Heights-East
Hungry Horse-West

FIGURE 2:
COLUMBIA HEIGHTS -
HUNGRY HORSE PROJECTS

Looking northeast at the intersection of U.S. 2 and Secondary Highway 206 in Columbia Heights.

Typical development within Columbia Heights. The center two-way left turn lane was added by MDT in August 2000.

PHOTO PLATE 1

View of U.S. 2 looking east from near the House of Mystery. This location is near the project break between the Columbia Heights - East and Hungry Horse - West projects.

U.S. 2 enters Badrock Canyon just east of Berne Road. This area lies within the Hungry Horse - West Project.

PHOTO PLATE 2

Existing South Fork Bridge west of Hungry Horse. Photo taken looking southwest from approximate location of proposed new bridge.

View looking east toward Hungry Horse from west of the existing bridge.

PHOTO PLATE 3

CONFIRMATION OF PURPOSE AND NEED

CONFIRMATION OF PURPOSE AND NEED

The FEIS noted that the primary purpose of the proposed action is to provide for the safe and efficient movement of traffic through the project area. The FEIS proposed the reconstruction of US 2 between Columbia Heights and Hungry Horse primarily because the existing facility provides a poor level of service (LOS D) under traffic conditions during a substantial portion of the year. Traffic volumes on US 2 in the project area are expected to continue to increase, suggesting further deteriorations in the level of service over the foreseeable future.

The existing highway, constructed in the 1930's, is in a deteriorated condition and does not meet current design standards for horizontal and vertical curves. The accident rate on the existing highway is substantially higher than the statewide average for other National Highway System (NHS) Routes. Adjacent segments of US 2 have also been reconstructed and widened to four-lane facilities. All of these factors indicate the need to reconstruct this segment of US 2.

CAPACITY AND LEVEL OF SERVICE

Changes in Traffic Volumes Since the FEIS

Traffic volumes on US 2 in the project corridor have continued to increase since 1992 (the most recent year of traffic data presented in the FEIS). **TABLE 1** shows the calculated annual average daily traffic (AADT) for Automatic Traffic Recorder (ATR) Station A-60 located near the House of Mystery at about MilePost 139.6. Overall, this data reveals that traffic on US 2 has continued to increase over the 1992-2001 period. The 2001 AADT for the ATR location was about 13.5% higher than the corresponding figure for 1992. This represents an average annual growth rate of +1.35% over the 1992-2001 period.

Table 1
Annual Average Daily Traffic (AADT) Volumes Since 1992
ATR Station A-60 Near House of Mystery

1992	1993	1994	1995	1996	1997	1998	1999	2000	2001
5720	5881	6146	6305	6135	6295	6448	6448	6341	6494

Source: "Montana's Automatic Traffic Recorders, 1999", Montana Department of Transportation, Traffic Data Collection Section and MDT's Internet website (www.mdt.state.mt.us/departments/transportation_planning/pdf/atrbook00.pdf)

If the period of interest at Station A-60 is lengthened to include 1986 (the first full year traffic data was collected at the present site near the House of Mystery), the growth in AADT volumes at this location on US 2 is more notable. Considering the 1986 AADT volume (4,270 vehicles per day) and the 2001 AADT volume (6,494 vehicles per day), this station shows an overall increase in traffic of 52% over the sixteen years of record. This represents an average annual increase in traffic of about 3.25% at this ATR site.

As a means of reviewing overall traffic growth trends on US 2 in this portion of Flathead County

and the Glacier National Park region, the FEIS reviewed data from ATR Station A-24 near Kalispell and at ATR Station A-36 west of Browning. The FEIS indicated that substantial increases in AADT volumes were recorded over the 1982-1992 period. Records from these other ATR stations on US 2 for the 1992 to 2001 period were obtained and reviewed to provide additional insight on traffic volume trends on this route. **TABLE 2** shows the available AADT volumes information for ATR Stations A-24 and A-36 since 1992.

Table 2
Traffic Volumes at Other US 2 ATR Stations Since 1992
Annual Average Daily Traffic (AADT)

ATR STATION A-24 (US 2 NEAR KALISPELL)

1992	1993	1994	1995	1996	1997	1998	1999	2000	2001
6240	6496	6725	7030	6967	7064	7279	7524	7504	7909

ATR STATION A-36 (US 2 WEST OF BROWNING)

1992	1993	1994	1995	1996	1997	1998	1999	2000	2001
1928	1971	2011	2238	2250	US 2 Near ATR Under Construction		1856	1832	1820

Source: "Montana's Automatic Traffic Recorders, 1999", Montana Department of Transportation, Traffic Data Collection Section and MDT's Internet website (www.mdt.state.mt.us/departments/transportation_planning/pdf/atrbook00.pdf)

Since 1992, the AADT on US 2 has shown an overall increase of about 26.7% at Station A-24 near Kalispell and an overall decrease of about 5.6% at Station A-36 west of Browning. This compares to an overall increase in traffic of 13.5% for the same period at Station A-60. The average annual growth rates for the 1992-2001 period at Stations A-24 and A-36 were about 2.7% and minus 0.6%, respectively. It should be noted that AADT volumes for 1997 and 1998 at Station A-36 were not collected due to road construction in the vicinity of the ATR.

The FEIS also presented short-term traffic volume data collected using portable counters at four locations in and near the project corridor. The FEIS presented information for the following portable count locations:

Station No. 1 (4A-1 in FEIS)	Highway 206, 1 mile southwest of US 2
Station No. 3 (4A-3 in FEIS)	US 2, RP 142, west of the South Fork Bridge
Station No. 4 (4A-4 in FEIS)	US 2, RP 143.5, NE of Hungry Horse Dam Road
Station No. 13 (4A-13 in FEIS)	US 2, RP 137.5, 0.5 miles west of US 2/206 junction

Available average daily traffic (ADT) volume information for these stations was obtained and reviewed as another indicator of traffic volume trends on US 2 and Highway 206 in and near the project area. MDT's records for the years 1992 through 2000 show that ADT volumes fluctuated somewhat from year to year and that notable increases in traffic were apparent at three of the count stations. The 2000 ADT volumes for Stations 1, 4, and 13 were about 29.6%, 16.0%, and 12.6% higher, respectively, than comparable volumes in 1992.
The 2001 ADT at Station 3 (US 2 west of the South Fork Bridge) was 10.4% lower than the ADT presented for this station in 1992. The historic ADT volumes at this Station also show large

fluctuations from year to year, particularly over the 1993 to 1996 period. The ADT data for this station appears inconsistent with traffic volume increases shown at other nearby count stations on US 2 east and west of this location, including the continuous recording station near the House of Mystery.

It can be concluded from historical traffic data for roads in the area, the rate of growth in traffic volumes is slightly less than rates discussed in the FEIS. However, the traffic volume statistics presented above demonstrate that steady growth in traffic volumes on US 2 in the Kalispell area and the Columbia Heights-Hungry Horse project corridor has continued since the time of the FEIS.

Variations in Traffic and Its Composition Since the FEIS

The FEIS indicated that traffic volumes on US 2 in the project area were highest during peak summer months (June, July, and August) typically on Fridays, Saturdays, and Sundays. Data from Station A-60 for the year 2001 continues to support these trends. The highest daily traffic volume recorded at the ATR during the entire year of 1992 was 12,253. Traffic volumes at Station A-60 averaged 11,775 and 11,366 vehicles per day, respectively, during the months of July and August 2001. Daily traffic volumes for each Friday and Saturday of July 2001, ranged from about 12,400 to more than 12,700 vehicles.

Other variations in traffic discussed in the FEIS remain similar based on current data from Station A-60.

There are no reasons to suggest that the types of vehicles, turning movements, or directional distribution of traffic on US 2 has notably changed since the time of the FEIS.

Projected Traffic Volumes on US 2 Considering New Data

The FEIS projected future traffic volumes for 2010 by using regression analysis to evaluate the linear relationship between historical traffic volume data points for Station A-60. Based on eleven years of data, the FEIS presented ADT volumes for 1995, 2000, 2005 and 2010.

For this re-evaluation, regression analysis was again used to develop a mathematical representation of the best trend line for estimating future traffic volumes and comparing traffic projections made in the FEIS. Traffic information for the years 1982 through 2001 was considered to generate the projected traffic volumes presented below in **TABLE 3**.

TABLE 3 also provides a comparison of traffic projections presented in the FEIS with the actual AADT volumes for Station A-60 and new projections based on twenty years of data from the ATR site. This comparison shows that for the years 2005 and 2010, future traffic volumes are projected to be about 4-5% below those shown in the FEIS.

Table 3
AADT Volume Projections Through 2025
For ATR Station A-60

	1992	1995	2000	2005	2010	2015	2020	2025
FEIS AADT Projections	5720*	6010	6960	7900	8850	No projections presented		
Projected AADT Based on New Data	5720*	6305*	6341*	7580	8425	9270	10110	10960
% Variation from FEIS Projections	Not Applicable	Actual AADT 4.9% higher than projected	Actual AADT 9.8% lower than projected	New Projected AADT 4.0% lower than projected in FEIS	New Projected AADT 4.8% lower than projected in FEIS	Not Applicable		

* Actual AADT Data based on recorded traffic volumes at ATR Station A-60.

Updated Level of Service (LOS) Information

The overall purpose and need for improving US 2 between Columbia Heights and Hungry Horse presented in the FEIS "is to provide for the safe and efficient movement of traffic." The FEIS states that to help accomplish this purpose, the proposed action must yield an acceptable level of service (LOS) B with sufficient reserve capacity under design year traffic conditions. The FEIS summarized detailed LOS evaluations of the anticipated operational efficiency of several two-lane and four-lane design alternatives. The FEIS also examined the LOS associated with several design modifications that could be used to improve the level of service for two-lane highways including the use of: 1) alternating passing lanes; 2) climbing lanes; 3) turnouts for slower moving vehicles; and 4) short four-lane sections. The analyses done for the FEIS concluded that only a four-lane roadway configuration would provide the desired LOS B in the design year.

For this Re-evaluation, the existing and future LOS on US 2 was analyzed using traffic data for 2001 and newly projected traffic for the year 2025. Robert Peccia & Associates (RPA) followed procedures outlined in the Transportation Research Board's *Highway Capacity Manual (HCM) - Special Report 209* and used the *Highway Capacity Software (HCS)* for rural road sections to complete the LOS evaluation. The capacity of the road corridor was evaluated using both existing traffic volumes and a projected traffic volume for the year 2025 of 10,960 vpd. The traffic volume during the peak month of July in the year 2025 was estimated to be 19,800 vpd.

The LOS analysis considered three typical rural road sections including: 1) the existing road with two 12-foot driving lanes with two-foot wide paved shoulder; 2) an improved two-lane road with 12-foot driving lanes and wider paved shoulders; and 3) the proposed rural road section with four 12-foot-wide driving lanes and 8-foot-wide paved shoulders. The results of these analyses are presented in **TABLE 4** below.

Table 4
Updated Level of Service (LOS) Analysis Results

Traffic Condition	Existing 2-Lane Road	Widened 2-Lane	Proposed 4-Lane Road (64' section)
2001 AADT	LOS C	LOS C	LOS A
2001 Peak Summer Month	LOS D	LOS D	LOS A
Year 2025 AADT	LOS D	LOS D	LOS A
Year 2025 Peak Summer Month	LOS E	LOS E	LOS A

The results of the capacity analysis show that the current road section currently fails under traffic volumes typically experienced during the peak summer month. By 2025, the existing road would be expected to perform poorly (LOS D) throughout most of the year and operate at LOS E (fail) during the summer months. The LOS analysis also shows that, from a capacity perspective, no operational benefits would be gained over the existing facility by providing a wider two-lane roadway. An improved two-lane section would be expected to operate at LOS D during the current peak summer months and at LOS D/E by the year 2025. The analysis showed that the proposed four-lane roadway would operate at LOS A under both current and projected traffic volumes.

These new LOS analyses reaffirmed the conclusions made in the FEIS regarding current and expected future operations of two-lane and four-lane roads in the Columbia Heights-Hungry Horse corridor. The new analyses also verify again that only a four-lane roadway configuration would provide the desired level of service (LOS B) in the design year.

LOS Evaluation of A Reduced Facility in Berne Park Area

In response to public concerns over widening US 2 in the vicinity of Berne Memorial Park in Badrock Canyon, MDT analyzed the operation of providing a widened two-lane road only in Badrock Canyon (between Station 178+00 and 182+00) with the remaining portions of the corridor being four-lanes as currently proposed. Transitions from two-lanes to four-lanes would be required at both ends of the two-lane section under such a development scenario.

In October 2001, RPA completed an analysis for MDT to assess the resulting LOS effects of transitioning from a four-lane roadway section to a short, two-lane road segment through the immediate Berne Park area of the project corridor.

The results of this analysis indicate that the widened two-lane portion of the roadway would operate at LOS C most of the time under current traffic volumes but at LOS D under peak traffic conditions during the summer. Four-lane sections east and west of the two-lane would operate at LOS A at all times under current traffic volumes. The operation of the two lane portion of the roadway would deteriorate over the next twenty years, providing LOS D during most of the design year and LOS E during the peak summer months in the future. Four-lane segments adjoining the two-lane road in Badrock Canyon would operate at LOS A/B under projected traffic volumes. RPA's study concluded that a dedicated left-turn lane must be provided at Berne Park if US 2 were to remain a two-lane roadway through this section of the corridor.

The alternative configuration for US 2 was not recommended due to the traffic congestion anticipated to occur at the two-lane to four-lane merge locations during current peak summer travel periods and as overall traffic continues to increase in the project area over the foreseeable future. The congested conditions would be expected to extend into the adjacent communities at each end of the project area and the potential for traffic conflicts and accidents would be increased at the two-lane to four-lane merge locations.

Traffic Signalization Needs at Highway 206 and US 2

RPA completed a planning report in December 1996 that examined the need for installing a traffic signal to control vehicle movements at the intersection of Secondary Highway 206 and US 2 in Columbia Heights. The report included analyses of capacity and LOS at the existing stop controlled intersection and for the proposed reconfiguration of the intersection. As proposed, US 2 would be realigned and traffic on the route would be given preference over that on Secondary Highway 206.

The 1996 study included an evaluation of eleven warrants for intersection signalization outlined the FHWA's *Manual on Uniform Traffic Control Devices.* The eleven warrants for traffic signal installation were assessed for the years 2000, 2010, and 2020. Satisfaction of any one of the warrants is typically considered sufficient reason to install a traffic signal. The 1996 study showed that at least one warrant was met based on estimated year 2000 traffic, five warrants would be met by the year 2010, and six warrants would be met by 2020. The study concluded that a traffic signal was warranted at the intersection.

SAFETY

Updated Accident Information for the Corridor

The FEIS summarized reported motor vehicle crashes on US 2 between MilePosts 138.3 and 142.7 over the period beginning January 1, 1983 and ending December 31, 1990. The FEIS indicated that a total of 188 accidents were reported during the eight-year long study period, including 6 fatal accidents and 100 injury accidents.

The FEIS also provided detailed accident information for the January 1, 1987 to December 31, 1990. During this period, 112 accidents were recorded and the overall accident rate for the project area was 3.67 accidents per million vehicle miles of travel (ACC/MVMT). The FEIS disclosed that this accident rate was 1.7 times higher than the average accident rate of 2.10 ACC/MVMT for all Primary Roads in Montana over the same four-year period.

Information on reported accidents within the project corridor over a 10-year period beginning July 1, 1991 and ending June 30, 2001 was reviewed for this re-evaluation. Of the 211 accidents that occurred motor vehicle crashes on this section of US 2 during the recent 10-year study period, 3 resulted in fatal injuries to 4 persons and 105 produced injuries to 195 persons. The accident rate for the 1991-2001 period was calculated to be 2.29 ACC/MVMT. This rate is also about 1.7 times above the average accident rate of 1.36 ACC/MVMT for all rural National Highway System (NHS) Primary routes in Montana over the 1996-2000 period.

It should be noted that the average accident rate of 2.10 ACC/MVMT presented in the FEIS was for all Primary highways in Montana while the new rate of 1.36 ACC/MVMT represents the average for only NHS primary routes in the state. The relatively large disparity between these rates can be attributed to the fact that NHS Primary routes generally carry more traffic and are generally wider and constructed to higher design standards than other less important Primary roads.

The *severity index* and *severity rate* are statistics commonly used by MDT as measures of the overall severity of accidents on a road segment or route based on the number and degree of injuries recorded during a given time period. The severity index is a ratio of crashes weighted by severity to the total number of crashes and is expressed by the following formula.

$$\text{Severity Index} = \frac{8(\#\text{ of } \mathbf{K} + \mathbf{A} \text{ crashes}) + 3(\#\text{ of } \mathbf{B} + \mathbf{C} \text{ crashes}) + 1(\#\text{ of } \mathbf{O} \text{ crashes})}{\text{Total \# of crashes}}$$

K = crash with fatality **A** = crash with incapacitating injury **B** = crash with non-incapacitating injury
C = crash with possible injury **O** = crash with property damage only

The severity rate is the number of crashes weighted by severity per million vehicle miles. The severity rate is calculated by multiplying the accident crash rate times the severity index. The accident severity index of 2.78 for the Columbia Heights-Hungry Horse corridor is about 1.18 times greater than the severity index of 2.35 for all rural NHS Primary routes in Montana over the 1996-2000 period. The severity rate of 6.37 for the recent 10-year long period for the project corridor is nearly double the severity rate of 3.20 for all rural NHS Primary routes in Montana over the 1996-2000 period.

TABLE 5 compares accident data disclosed in the FEIS with new accident statistics.

The FEIS also provided information on accident numbers and accident rates for the Columbia Heights to Berne Road and Berne Road to Hungry Horse sections of the corridor and for roadway locations adjacent to Berne Park and at the South Fork Bridge. The number of accidents recorded and changes in accident rates for these sections since the FEIS are discussed below.

- **Columbia Heights to Berne Road (RP 138.3 to 140.2)**
  Forty-two of the 112 accidents (about 37%) in the project corridor over the 1987-1990 period analyzed in the FEIS occurred between the project's beginning in Columbia Heights and Berne Road. The accident rate presented in the FEIS for the Columbia Heights to Berne Road section was 3.18 ACC/MVMT. This rate was 1.5 times higher than the average accident rate of 2.10 ACC/MVMT for all Primary Roads in Montana over period considered in the FEIS.

  Based on the data from the 1991-2001 period, 100 accidents representing about 47% of the 211 reported accidents in the project corridor occurred in this 1.9-mile-long section. The new accident rate for this section of the project corridor was calculated to be 2.44 ACC/MVMT. While this rate is lower than the rate presented in the FEIS, the "new" accident rate is about 1.8 times above the average accident rate of 1.36 ACC/MVMT for

all rural NHS Primary routes in Montana over the 1996-2000 period.

Table 5
Motor Vehicle Accident Numbers and Accident Severity Trends Since the FEIS

Accident Severity Characteristic or Indicator	As Disclosed in FEIS 1/01/87 - 12/31/90	New Data for EIS Re-Evaluation 7/1/91 -6/30/01	Accident Severity Trend Since FEIS
Total Number of Accidents	112	211	N/A
Number of Fatal Injury Accidents	2 (2% of acc)	3 (1.4% of acc)	Little Change
Number of Injury Accidents*	56 (50% of acc)	105 (49.8% of acc)	No Change
Number of Property Damage Only (PDO) Accidents	54 (48% of acc)	103 (48.8% of acc)	No Change
Average Number of Accidents/Year	28.0	21.1	Overall Number of Accidents/Year Down by 24.6%
Accident Crash Rate for Period	3.67	2.29	Crash Rate is 1.7 times higher than the statewide average of 1.36**
Severity Rate for Period	Not presented In FEIS	6.37	Crash Rate is nearly 2.0 times higher than the statewide average of 3.20**
Severity Index for Period	Not presented In FEIS	2.78	Severity Index is about 1.2 times higher than the statewide average of 2.35**

* **Injury Accidents** include accidents with incapacitating, non-incapacitating, and possible injuries.
** 1996-2000 Average for all Rural NHS Primary Routes in Montana

- **Berne Road to Hungry Horse (RP 140.2 to 142.7)**

  The FEIS indicated that 70 accidents, representing 63% of the 112 accidents reported in the project corridor during the 1987-1990 period, occurred between Berne Road and Hungry Horse. The accident rate for the 2.5 mile-long segment of the US 2 that parallels the Flathead River was shown as 4.04 ACC/MVMT in the FEIS. This rate was 1.9 times higher than the average accident rate for all Primary Roads in Montana over period considered in the FEIS.

  During the 1991-2001 period, 111 accidents or 53% of the 211 reported accidents in the project corridor occurred in the Berne Road to Hungry Horse section. The new accident rate for this section of the project corridor was calculated to be 2.06 ACC/MVMT. This new accident rate is substantially lower than the rate presented in the FEIS, but still 1.5 times higher than the average accident rate for all rural NHS Primary routes in Montana over the 1996-2000 period.

- **Berne Memorial Park Area (RP 140.5 to 141.2)**

  The FEIS showed that 23 accidents occurred in the vicinity of Berne Memorial Park during the 1987-1990 study period The corresponding accident rate for this 0.7-mile long section

of US 2 was shown as 4.74 ACC/MVMT in the FEIS. This rate was 2.3 times higher than the average accident rate for all Primary Roads in Montana over period considered in the FEIS.

Over the 1991-2001 period, 32 accidents occurred on this road section with a calculated accident rate of 2.12 ACC/MVMT. This rate is well below that presented in the FEIS; however, the rate remains about 1.5 times above the average accident rate for all rural NHS Primary routes in Montana over the 1996-2000 period.

- **South Fork Bridge (RP 142.0-142.6)**

  The FEIS indicated that 25 accidents occurred on the South Fork Bridge or in the curves approaching the structure during the 1987-1990 study period and that this section of US 2 had a corresponding accident rate of 6.00 ACC/MVMT. This rate was 2.8 times higher than the average accident rate for all Primary Roads in Montana over period considered in the FEIS.

  Based on accident summaries for the 1991-2001 period, 32 accidents were reported in this 0.6-mile-long section of US 2. The calculated accident rate for the South Fork Bridge over this ten-year period was 2.47 ACC/MVMT. Again, this rate is well below that presented in the FEIS, but it still exceeds the average accident rate for all rural NHS Primary routes in Montana over the 1996-2000 period by about 1.8 times.

Variances from Statewide Averages for Accident Characteristics

The FEIS indicated the most common single-vehicle accidents in the corridor were collisions with fixed-objects along the road or run-off-the-road rollover incidents. The new accident data shows little change in this general trend. Rollover accidents accounted for 14.7% of all reported accidents over the 1991-2001 period and collisions with fixed-objects comprised about 22% of the reported accidents during the recent 10-year-long period.

The summary of accident data in the FEIS (Table I-2), shows that accidents involving two or more vehicles (angle, rear end, sideswipes, and head on collisions) accounted for about 41% of all reported accidents during the study period. New accident data shows that such accidents accounted for 47.4% of all reported accidents during the 1991-2001 period. The incidence of multi-vehicle accidents in the project corridor during the recent 10-year period exceeded the average occurrence of such accidents on other NHS Primary routes during the 1996-2000 period by nearly 11.5%.

An analysis of the accidents and their key characteristics for this segment of US 2 during the 1991-2001 period showed other variations exceeding the average occurrences on other rural NHS Primary routes in Montana including:

65.9% daylight accidents versus 58.3% statewide;
19.9% rear end collisions versus 16.0% statewide;
26.0% icy road conditions accidents versus 18.3% statewide;
21.8% accidents occurring at off road locations versus 17.6% statewide;
18.5% other injury accidents versus 14.0% statewide;

17.5% non-incapacitating injury accidents versus 11.9% statewide; and
13.7% incapacitating injury accidents versus 11.6% statewide

Based on the above comparison, the prevalence of injuries related to accidents in the corridor and the frequency of off-road accidents, rear-end collisions and accidents on icy road surfaces are conditions or characteristics that notably exceed those recorded on other NHS Primary routes. However, these factors or characteristics were mentioned in the FEIS and they remain important reasons why this section of US 2 should be improved.

ROADWAY DEFICIENCIES

Changes in the Geometry and/or Physical Conditions of US 2

The FEIS explained that the existing two-lane highway, constructed during the 1930s, is not consistent with geometric design policies for rural arterials established by the AMERICAN ASSOCIATION OF STATE HIGHWAY AND TRANSPORTATION OFFICIALS (AASHTO) guidelines or with MDT's design standards. The existing highway has inadequate width based on its functional classification and traffic characteristics. The present alignment of US 2 has three horizontal curves and several vertical curves that do not meet standards for the chosen design speed of 62 mph (100 km per hour). Some portions of the corridor also have roadsides that do not meet design standards for slopes and ditches. The existing facility also has several horizontal and vertical curves having substandard sight distance.

The existing highway exhibits many forms of pavement distress (such as raveling, bleeding, pot holes, rutting, and various types of surface cracking) that affect the quality of the riding surface. MDT annually collects data on pavement condition and rates the roughness of pavements on the state road system. MDT uses the Average Ride Index (ARI), a measurement of pavement roughness, as an indicator of pavement performance factors like driving comfort, vehicle operating cost, and safety. The ARI is a 0 to 100 scale that represents the ride quality of the pavement. The ARI scale values ranging from 80 to 100 indicate "Good" ride quality and values from 60 to 79.9 indicate "Fair" ride quality. ARI values of less than 59.9 suggest the ride quality of pavements are "Poor."

MDT's most recent (May 15, 2002) ARI for the Columbia Heights-Hungry Horse section of US 2 was 74 for the eastbound lane and 75 for the westbound lane, suggesting the road's pavement has a fair ride quality. This higher than expected rating is due to the pavement overlay and seal and cover installed on the roadway during August 2000.

MDT has not implemented any improvements to US 2 between Columbia Heights and Hungry Horse that have changed the overall roadway width or geometric deficiencies identified in the FEIS.

However, various maintenance activities have been performed on US 2 within the project corridor since the completion the FEIS. These activities include:

- **Surfacing Material Placed in the Berne Memorial Park Turnout.** During the summers of 1998 and 1999, MDT placed and compacted road millings in the turnout at Berne Memorial Park. The millings were used to surfacing the turnout to eliminate rutting problems with the existing gravel surface.

- **Pavement Overlay.** MDT overlaid the existing pavement between MilePosts 138.2 and 142.4 in August 2000. This work also included a seal and cover of the new pavement overlay and striping.

- **Addition of Center Two-way Left Turn Lane in Columbia Heights.** During August 2000, MDT also modified US 2 to include a center two-way left turn lane within developed area of Columbia Heights. Additional surface width for the roadway was gained by making use of an area along the south side of the highway formerly occupied by a weigh station. New pavement was laid and the roadway was sealed, covered and striped to designate the center two-way left turn lane.

- **Other Miscellaneous Maintenance Actions.** During the fall of 2001, stop signs were installed at the junction of US 2 and Secondary Highway 206. Additionally, the flashing light at the intersection had its lenses changed from yellow to red to warn motorists of the stop condition.

Condition of the South Fork Bridge

The FEIS also stated that the bridge over the South Fork of the Flathead River was constructed in 1938 and does not provide sufficient surface width to meet minimum standards for driving lanes and shoulders on rural arterials.

MDT routinely evaluates the structural condition and functional adequacy of highway bridges to rate each structure's ability to meet the transportation needs of the public. The rating system, called the Sufficiency Rating (SR), is a composite of several ratings of individual items that consider the structural condition and geometry of the bridge. A bridge with a low rating on structural items will be designated as structurally deficient and a bridge with a poor rating for geometry items will be designated as functionally obsolete.

According to MDT's most recent bridge inspection report of March 2001 for the South Fork Bridge (Structure Number P00001142+02631), the existing bridge had a Sufficiency Rating of 43.6 on a 100-point scale based on the results of a September 1999 inspection. This rating means that MDT considers the structure to be functionally obsolete and eligible for replacement.

SYSTEM LINKAGE

As indicated in the FEIS, the proposed action will link two recently reconstructed sections of US 2 and will substantially complete the renovation of the route between Kalispell and West Glacier. Four-lane roads adjoin both ends of the Columbia Heights-Hungry Horse project corridor and have been in place since 1986. The proposed action is needed to provide design continuity between

adjoining sections of US 2.

TRANSPORTATION DEMAND

Relationship to Local Transportation Plans

The Columbia Heights-Hungry Horse section of US 2 is not specifically addressed in any local transportation plans.

The proposed action remains consistent with the policies and overall transportation goals contained in the *Flathead County Master Plan*, the *Canyon Plan,* and the *Columbia Falls Planning Jurisdiction Master Plan.*

NHS Designation for US 2

The FEIS indicated that US 2 and other principal arterial routes in Montana were part of the Interim National Highway System (NHS). On November 28, 1995, MDT officially approved US 2 as a designated NHS route. The NHS in Montana consists of over 3,850 miles of the state's most important transportation routes including the Interstate highway system, other principal arterials, and highways essential to the nation's strategic defense policy or that link military installations. The formal NHS designation validates the importance of US 2 to the national and state transportation systems.

SOCIAL DEMANDS OR ECONOMIC DEVELOPMENT

Social Demands

The FEIS discussed US 2's importance as the primary access route to Glacier National Park, the Great Bear Wilderness, the Flathead Wild and Scenic River system, and lands within the Flathead National Forest. The FEIS disclosed historic annual visitation statistics for Glacier National Park and suggested that the data showed an overall trend of steadily increasing visitation to the park. The FEIS indicated that the 1992 total visitation of 2,199,767 was one of the highest totals recorded by the NATIONAL PARK SERVICE (NPS) at Glacier National Park. According to the NPS statistics, total visitation to Glacier National Park was 1.688 million during 2001 (http://www2.nature.nps.gov/stats/).

The recently completed *Going to the Sun Road Socioeconomic Study*, (NPS, August 2001, viewable at (http://www.nps.gov/glac/gtsr/advisory/final_reports.htm), shows that visitation to Glacier National Park has fluctuated but generally declined since 1992. Over the last 20 years, visitation to Glacier has averaged about 1.866 million visitors with about 1.729 million visits in 2000. The NPS study shows that between 1990 and 2000, visitation declined by about 1.4%. The "Going to the Sun Road Socioeconomic Study" also projected future visitation for the park through the year 2020. According to these projections, future visitation levels are expected increase slightly

from their current levels until 2009 and then remain fairly constant at about 1.868 million through the foreseeable future.

Population Growth

As at the time of the FEIS, Flathead County remains one of Montana's fastest growing regions. Flathead County's population was 74,471 at the time of the 2000 Census, nearly 26% higher than in 1990. During the same ten year period the State's population grew by less than 13%. Population forecasts through the next decade suggest the County's population will continue to grow. According to the "Montana Population Projections" (NPS Data Services, Inc., September 2001) prepared for the MONTANA DEPARTMENT OF COMMERCE, Flathead County's population is expected to be 90,430 by the year 2010 and may be approaching 114,000 by the year 2025.

The project lies within two County Census Divisions (CCD) established by for the purposes of recording the Census. According to the FEIS, the populations of the Badrock-Columbia Heights CCD and the South Fork CCD were 3,230 and 1,957, respectively, in 1990. The 2000 Census reports the corresponding populations of these CCDs at 4,372 and 2,407. These figures represent increases in population of more than 35% for the Badrock-Columbia Heights and nearly 23% for the South Fork CCD over the 1990-2000 period. The community of Hungry Horse currently has 934 people. Census figures for Hungry Horse were not available from 1990.

Economic Development

The economy of Flathead County continues to be very diversified and strong as compared to many other counties in Montana. The county's economy remains dependent on its natural resource base that provides opportunities for timber harvesting, hydroelectric power generation, and tourism on National Forest lands and in Glacier National Park. The county is also home to high tech industry, metals refining, and forest products processing. According to the *Going to the Sun Road Socioeconomic Study*, (NPS, August 2001), key economic indicators (total employment, per capita income, and bed tax revenues) showed increases of 4-7% increases over the 1990 to 1998 period.

Since the FEIS, Kalispell's importance as a regional trade center has continued to increase. Economic development has continued to occur in Columbia Falls, most notably with the addition of new service businesses along the US 2 corridor in the community. Electric power rates have fluctuated in recent years creating an uncertain future for the aluminum processor at Columbia Falls. The aluminum plant was shut down in January 2001 due to the high cost of electricity. However, favorable electricity rates allowed the plant to be restarted in February 2002.

The most notable economic activity in the project area since the FEIS is the construction of the Super 8 Motel adjacent to US 2 in Columbia Heights. The level and types of businesses present in the project corridor has changed little since the time of the FEIS.

CONCLUSIONS REGARDING PURPOSE AND NEED

The preceding discussions indicate that the fundamental purpose and needs for reconstructing US 2 between Columbia Heights and Hungry Horse has changed little since the ROD was signed in 1995. Although AADT volumes have fluctuated since that time, historical data indicates that traffic will continue the increase over the foreseeable future. Conclusions presented in the FEIS about capacity and LOS change little with the consideration of more recent traffic volume data. New analyses verified that from a capacity standpoint, only a four-lane facility would provide the desired LOS for this arterial corridor.

Traffic safety concerns still exist on US 2 within the project corridor. Although lower than those presented in the FEIS, accident crash rates for this section of US 2 over a recent ten-year-long period were nearly twice that of the average accident crash rate for all other NHS Primary routes in Montana. Data obtained for this section of US 2 over the 1991-2001 period shows that accident severity rates are also nearly twice as high as for other NHS Primary routes in the state. Geometric and roadside conditions that contribute to safety concerns in the corridor are unchanged from the time of the FEIS.

The existing highway and the South Fork Bridge are both approaching seventy years of age. Both the road and the bridge exhibit notable physical deterioration and geometric deficiencies. Most of these deficiencies can only be remedied through major reconstruction.

Finally, the population and economy of Flathead County and the general project area continue to grow at rates exceeding most other areas in Montana. US 2 will continue to serve as the principal access route for residents and visitors traveling to Glacier National park and other public lands. Adjoining sections of US 2 have already been upgraded in response to these traffic demands. The reconstruction of US 2 through the project area is necessary to ensure continuity of design on US 2 and to accommodate future growth in this region of Montana in a safe and efficient manner.

US 2 RECONSTRUCTION AS CURRENTLY PROPOSED

US 2 RECONSTRUCTION AS CURRENTLY PROPOSED

This section of the re-evaluation summarizes the overall design for US 2 reconstruction identified in the FEIS and ROD and discusses specific aspects of the proposed project(s) that could not be quantified without performing detailed design work. This discussion is intended to describe aspects of the reconstruction proposal not explicitly presented in the FEIS.

Project Overview

The ROD approved Alternative 1, a four-lane design, for the reconstruction of US 2 after full consideration was given to the costs, the environmental impacts, the operational and safety benefits, and the savings in property, lives, and natural resources associated with the build alternatives evaluated in the FEIS.

Alternative 1 includes full reconstruction of the 4.5 miles (7.2 km) of US 2 between Columbia Heights and Hungry Horse. This alternative would provide four travel lanes and a continuous center median/left turn lane from the project's beginning in Columbia Heights to Berne Road. The roadway in this section would vary in width from about 78 to 82 feet (23.7 to 25 m) and would accommodate four travel lanes and a continuous center median/left turn lane through the Columbia Heights. Left turn lanes would be provided at Monte Vista Drive and Berne Road. Curbs and gutters would be provided within the developed area at Columbia Heights. The project would completely reconfigure the intersection of US 2 and Highway 206 and give preference to traffic on US 2 in Columbia Heights.

The continuous center median/left turn lane would be dropped between Berne Road and Hungry Horse reducing the typical width of the four-lane roadway to about 64 feet (19.5 m). A vertical retaining wall between the highway and the Flathead River was proposed in Badrock Canyon to reduce the encroachment on the stream. A four-lane bridge over the South Fork of the Flathead River would be built on a new alignment west of Hungry Horse. The FEIS indicated a new park area and river access site would be jointly developed with the U.S. FOREST SERVICE-FLATHEAD NATIONAL FOREST (USFS) on a site west of Badrock Canyon. Additionally, a park-and-ride lot for commuters would be provided near the intersection of US 2 and Highway 206.

The road will be designed and reconstructed to meet the standards for a Rural Principal Arterial roadway using a design speed of about 62 miles per hour (100 km per hour) for rolling terrain.

Montana highways and bridges are designed to meet or exceed recommended minimum geometric standards. These geometric standards are based on design policies and guidelines established by MDT and the AMERICAN ASSOCIATION OF STATE HIGHWAY AND TRANSPORTATION OFFICIALS (AASHTO). The design of the proposed highway reconstruction projects has been advanced to conform to MDT's "Road Design Manual" and "Bridge Design Standards" and AASHTO's Standard Specifications.

Design Information Not Disclosed in the FEIS

The preferred roadway improvements for US 2 have been refined since the FEIS through the development of detailed design plans for the highway project. Robert Peccia & Associates, Inc. (RPA) is performing the design work for this section of US 2 for MDT. The following sections of this Re-evaluation describe elements incorporated into the improvement of the Columbia Heights-Hungry Horse corridor that were identified but not explicitly considered in the 1995 Final EIS.

1. ALIGNMENT

MDT's design plans for the Columbia Heights-Hungry Horse projects were initially advanced based on the alignment that was generally established during the development of the EIS. An alignment review for the project corridor was conducted on May 21, 1997 at MDT's offices in Kalispell. The results of that meeting were used to establish the proposed horizontal and vertical alignments of US 2. The results of the alignment review are summarized in MDT's Alignment Review Report of August 1997.

In general, the horizontal alignment of the project would follow or parallel that of the existing alignment, with slight deviations both entering and leaving Badrock Canyon. The alignment identified in the FEIS for Badrock Canyon attempted to minimize effects to the Flathead River, Berne Memorial Park, habitat for bald eagles, and cultural resources. However, as a result of a new cultural resource concerns, MDT decided to re-evaluate the alignment of US 2 in Badrock Canyon in an effort to avoid or minimize rock excavation in the outcrops near Berne Memorial Park. Substandard curves would be flattened to meet current design standards.

The proposed vertical alignment would meet the standards for 62 mph (100 km per hour) design speed for rolling terrain. All crest and sag vertical curves would meet desirable stopping sight distances and provide intersection sight distances at all approaches.

2. DESIGN SPEED/POSTED SPEED LIMIT

The project is being designed in accordance with the Geometric Design Standards for Rural Principal Arterials as described in the *Montana Road Design Guide*. A 62 mph (100 km per hour) design speed for rolling terrain is being used in the design.

The posted speed limits for this section of the route would remain unchanged with the project. The posted speed limits are as follows:

Project beginning through Columbia Heights - 45 mph
Rural US 2 (Cars/Light Trucks)- 70 mph (day)/65 mph (night)
Rural US 2 (Heavy Trucks) - 60 mph (day)/55mph (night)
South Fork Bridge/Hungry Horse - 45 mph

MDT could elect to perform speed studies after the project has been constructed to determine the need for adjusting posted speeds.

3. REQUIRED RIGHT-OF-WAY

The widening of the existing route and its realignment will require the acquisition of additional right-of-way. Seventy-nine (79) parcels would be affected by the proposed construction, many of them being in the urban portions of the project. Attempts have been made to minimize the amount of right-of-way required by adjusting the grade line and horizontal alignment. Required right-of-way widths generally range from 65 to 147 feet (20 to 45 m) on each side of the proposed centerline with the exception of a short section through Badrock Canyon where the right-of-way limit is nearly 328 feet (100 m) on the south side of the road. This variation in right-of-way is due to the presence of Berne Memorial Park and past right-of-way acquisition.

Of the 79 total parcels, 65 are located within the Columbia Heights-East project and the remaining 14 are within the Hungry Horse-West project. The total acquisition area for the Columbia Heights-Hungry Horse projects is approximately 116 acres (47 hectares (ha)). Of that total, approximately 12 acres (4.8 ha) was required for the Columbia Heights-East project. The Hungry Horse-West project requires a total of 104 acres (42 ha) of new right-of-way. This total includes 24 acres (9.7 ha) of USFS easement and 61 acres (24.7 ha) of whole parcels MDT purchased as advanced acquisitions. Negotiations have been completed on all parcels and condemnation procedures are currently in progress on four of the parcels.

The FEIS indicated that about 48.8 acres (19.7 ha) of additional (net) right-of-way would be required for the Preferred Alternative. The new right-of-way total shown in the FEIS did not include any advance acquisitions of land by MDT. If MDT's advance acquisition lands are not included in the estimated 116 acres (47 ha) presented above, the total net right-of-way area for the Columbia Heights-Hungry Horse projects would be about 54.4 acres (22.0 ha) as compared to the 48.8 acres (19.7 ha) in the FEIS.

4. ACCESS CONTROL

The Columbia Heights-Hungry Horse project is being developed as an Access Control project. Access Management Guidelines were developed for the project with the following classifications:

> ***Rural Access Control*** for use in primarily undeveloped areas that exhibit an agricultural or natural character.
>
> ***Developed Access Control*** for use in developed or developing areas where a high degree of access is required.
> ***Intermediate Access Control*** for use in areas where developed ends and before rural begins.

Specific locations for application of these classifications were determined and shown in the Access Control Plans.

The access management guidelines are intended to provide "reasonable" access to all existing properties/parcels. To the extent possible, existing accesses would be made to conform to the guidelines set forth in this document. New accesses, subdivisions, or changes in use would be required to meet the guidelines. Exceptions to the guidelines may be made on a case-by-case basis upon review by state and local officials. MDT would administer the Access Management Plan and would be responsible for all decisions on access requests.

5. TYPICAL ROAD CROSS-SECTIONS

The project consists of both rural and urban settings requiring four typical sections. Typical sections for the project with approximate Project Stations and Mileposts and section lengths are as follows:

Sta. 138 to 151 (MP 138.3-139.1)

The typical section for this 0.8 mile (1.3 km) long portion of the project consists of a five-lane urban section with an overall top paved width of 76.8 feet (23.4 m). The new road consists of four 12 foot wide (3.6 m) travel lanes, a 14 foot (4.2 m) turning lane, and two 8 foot (2.4 m) shoulders. A 2.0 foot (0.6 m) curb and gutter and 5 foot (1.6 m) sidewalks on each side of the roadway are necessary to facilitate drainage and pedestrian traffic. The total back of curb to back of curb width is 80.7 feet (24.6 m). A buffer behind the sidewalk of about 1.5 feet (0.5 m) in cut areas and 3 feet (1.0 m) in fill areas leads to the standard cut and fill slopes.

Sta. 151 to 177 (MP 139.1-140.7)

The typical section for this 1.61 mile (2.6 km) long portion of the project consists of a five-lane rural section with an overall paved top width of 76.8 feet (23.4 m) having the same configuration as the five-lane urban section. Inslopes from the shoulder would be 6:1 leading to a 10 foot (3.0 m) wide ditch with a 20:1 slope in cut sections. MDT's standard cut and fill slopes would be used.

Sta. 177 to 202 (MP 140.7-142.1)

The turning lane would be dropped and a four-lane rural section with an overall top paved width of 63 feet (19.2 m) would be built in this 1.55 mile (2.5 km) portion of the project. This consists of four 12 foot wide (3.6 m) travel lanes and two 8 foot (2.4 m) shoulders and has the same inslope and ditch section as the five-lane rural section. MDT will undertake new design work that may result in typical section changes within in this section of the Hungry Horse-West project area.
From stations 178+80 to 183+60 (MP 140.8 to 141.1) and 186+20 to 187+00 (approximate MP 141.3), MDT's initial design included a rock fall

ditch would be added on the south side of the road. Through these areas of the project, 4 feet (1.2 m) of pavement widening was proposed to accommodate a jersey barrier. Shoulder inslopes would be steepened to 2:1 and the ditch widened. New design work will be accomplished to identify the most appropriate typical section for this portion of the Hungry Horse-West project.

Sta. 202 to 204 (MP 142.1-142.25) — This portion of the roadway would be a four-lane bridge crossing the South Fork of the Flathead River. An overall top paved width of 63 feet (19.2 m) would be used for this 0.12 mile (0.2 km) long portion of the project. This consists of four 12 foot (3.6 m) wide travel lanes and two 8 foot (2.4 m) shoulders.

Sta. 204 to 211 (MP 142.25-142.7) — This 0.43 mile (0.7 km) long portion of the project would have a four-lane urban design with an overall top paved width of 61.0 feet (18.6 m) accommodating four 12-foot wide (3.6 m) travel lanes and two 7 foot (2.1 m) wide shoulders. Each side of the roadway will have a 2 foot (0.6 m) wide curb and gutter with some areas having a 5 foot (1.6 m) wide sidewalk. The total back of curb to back of curb width is about 65.0 feet (18.6 m).

Shifting the alignment of US 2 to minimize or possibly avoid the excavation of rock outcrops in Badrock Canyon would require changes to MDT's existing design between Project Stations 167+05 and 197+00. The alignment shift and associated design changes may affect the need for a rock fall ditch and jersey barrier and retaining along this section of US 2.

6. DESIGN EXCEPTIONS

One design exception has been identified for the Columbia Heights-East project. The exception involves a deviation from the standard superelevation on the curve at the intersection of US 2 and Secondary Highway 206. The designed 5 percent superelevation deviates from MDT's standard of 8 percent. The reason for this exception is to provide a safer stopping and turning condition at the intersection. A design exception report has been prepared to document the reasons for the deviation from standards. No design exceptions have been identified on the Hungry Horse – West project.

7. GRADING AND SURFACING

Grading for MDT's initial design amounted to approximately 393,000 cubic yards (300,000 cubic meters) of excavation, most of which would come from the rock cuts proposed in Badrock Canyon. This material would be mostly rock and any excess could possibly be used for surfacing material, or stockpiled for future use as surfacing material or riprap.

Shifting the alignment of US 2 to minimize or possibly avoid the excavation of rock outcrops in Badrock Canyon would change grading amounts and would drastically reduce excavation quantities. New design work will be done to determine changes to excavation and fill quantities for the section of US 2 in Badrock Canyon.

A pavement design was completed on the project with one surfacing recommendation to meet the design R-Value of 54. The recommended surfacing consists of the following:

120 mm (0.40 feet) - Plant Mix Bituminous Surfacing
50 mm (0.15 feet) - Crushed Aggregate Top Surfacing
360 mm (1.20 feet) - Crushed Aggregate Base

This surfacing would be used for each typical section of the project.

8. US 2/SECONDARY 206 INTERSECTION

The proposed reconstruction work begins just before the intersection of US 2 and Secondary Highway 206. A 1,296 foot (395 m) radius curve left would tie the beginning tangent to the tangent in Columbia Heights. The intersection would be realigned to give preference to through traffic on US 2. Secondary Highway 206 would intersect perpendicular to US 2 at Station 140+20.

A Traffic Signal Planning Report was prepared by RPA in September 1998. This report indicated that three signalization warrants were satisfied using existing average summer weekday traffic volumes at the intersection and that a fourth warrant is expected to be met in 2003. The report recommended that a semi-actuated signal be installed with the Columbia Heights-East project. A semi-actuated operation would allow the traffic signal to better accommodate left turning movements from US 2 onto Highway 206 during peak hours. The report also stated that several signal warrants were also met by using the existing geometry of the intersection (without changing any lane configurations) and weekday traffic volumes collected during traffic movement counts in the summer of 1998.

Based on this report, the design for a semi-actuated traffic signal at the intersection of US 2 and Secondary Highway 206 has been advanced and completed. MDT proposes to install a signal with the implementation of the Columbia Heights-East project.

9. PARK AND RIDE LOT IN COLUMBIA HEIGHTS

A park-and-ride lot for commuters would be provided near the intersection of US 2 and Highway 206 as part of the Columbia Heights-East project. The lot would be located in an area where excess right-of-way will be available as a result of the realignment of the intersection.

The paved facility can be accessed from both US 2 and Highway 206 and would provide parking

for approximately 30 vehicles. Handicap-accessible spaces would be provided and a median/sidewalk area would be included to provide a safe waiting spot for commuters.

10. REPLACEMENT PARKLAND/FUTURE RIVER ACCESS

A replacement park and river access area would be constructed on property near the House of Mystery as part of the proposed Hungry Horse-West project. MDT agreed to provide the replacement park as part of the mitigation for adverse effects to public recreation at Berne Memorial Park. MDT's project as presented in the FEIS would require the removal of several large interpretive signs and inhibit some informal recreational activities that occur within the roadside park. The replacement facilities would be located near the House of Mystery and the newly configured Berne Road intersection. Two access points would be provided and parking would be sufficient for approximately fifteen passenger cars, including handicap accessible stalls and spaces for eight trucks or recreation vehicles.

During the development of the EIS, the USFS and MDT recognized the opportunity to develop a new river access on the Flathead River on a portion of the property MDT acquired for replacement park land near the House of Mystery. MDT agreed to provide sufficient land adjacent to the replacement park to allow for the development of a new public river access site by the USFS. The USFS has not yet designed the river access site but plans to provide a boat ramp and parking for river users adjacent to MDT's facility. The USFS hopes to build the recreation site during the construction of MDT's Hungry Horse-West project. The layout of the replacement parkland/river access site is similar to the concept presented in the FEIS (see **Figure V-7**).

11. RETAINING WALL ALONG FLATHEAD RIVER

The proposed improvements would include realignment and widening through Badrock Canyon. In this location, US 2 is bordered by the Flathead River and by steep rock cliffs. A retaining wall along the river from Station 182+32.68 to 188+88.62 was proposed in the FEIS to minimize necessary rock cuts and encroachment on the river. Public input dictated that an aesthetically pleasing structure be built along and/or in the Flathead River. Consequently, a decision was made at the time of the FEIS to use a vertical retaining wall constructed of welded wire facing with wire mesh reinforcement. This type of wall is referred to as a mechanically-stabilized-earth (MSE) wall.

MDT is considering shifting the alignment and redesigning US 2 in Badrock Canyon which may change the need for a retaining wall along the Flathead River. Future design activities will determine the need for a retaining wall(s) or other supporting structures for the road. Until a new design is completed for US 2, it is impossible to accurately predict the need for or location(s) where retaining structures might be employed.

12. BERNE MEMORIAL PARK TURNOUT AND SPRING

The currently proposed, MDT's design would perpetuate vehicular access to and from the roadside turnout at Berne Memorial Park. MDT's current design also provides for continued public access to obtain water from the spring in the park. Accommodations for short-term vehicle parking in the vicinity of the existing spring have been incorporated into the new road design as part of the Hungry Horse-West project.

Water samples taken from the spring since 1996 have frequently shown the presence of coliform bacteria. During 2000, MDEQ classified the Berne Memorial Park spring as groundwater under the influence of surface water and subsequently issued an order requiring MDT to treat the water, find an approved water source, or permanently disconnect the spring box and eliminate access to the water. After considering a variety of alternatives for maintaining and/or treating water from the spring and public comments, MDT removed the piping for the spring outlet in October 2001. Shortly after MDT action, new piping was installed by an unknown party and consumption of water from the spring continues.

Due to the continued public consumption of the spring water, MDT reconsidered its options for the Berne Park spring. MDT ultimately concluded that the quality of the water from the spring cannot be guaranteed for safe public consumption given the influence of surface water. Treating the water is cost prohibitive and would require the construction of treatment facilities in Badrock Canyon. An alternate water source is generally unacceptable to those using the spring. On May 24, 2002, MDT decided not to perform any improvements and to post signs warning the public that water may be contaminated and advising against human consumption. MDT posted advisory states that those who choose to drink the water from the spring, do so at their own risk.

Based on this recent decision regarding the spring, MDT will review design and access provisions for the roadside turnout at Berne Memorial Park.

13. SLOPE DESIGN AND ROCK EXCAVATION

Braun Intertec performed the geotechnical investigation and prepared a *Soil Survey and Geotechnical Report* which contains a discussion of the required slopes for this project. Their investigation indicated that the majority of the roadway construction extending from the beginning of the project to approximately Station 180+00 would pass through primarily glacial outwash deposits of sands and gravels. Materials for the remainder of the project would consist of mixed alluvium fills and possibly talus deposits. With the exception of the section of the project that passes through Badrock Canyon, the cut and fill slopes for the project match MDT’s recommended slopes for Rural Principal Arterials in level to rolling terrain.

Armstrong and Associates completed an in-depth rock monitoring program and developed rock slope design recommendations based on the design and alignment concepts established in the FEIS, between Stations 178+00 to 188+00 in Badrock Canyon. Through this area, Armstrong's initial design proposed rock cuts that would be slightly past vertical with several benches. Benches would be strategically located to match the existing rock bedding planes. Other

recommendations included rock bolting, a detailed rock blasting and controlled excavation plan, a rock fall protection berm, and an onsite Geotechnical Specialist during construction. Armstrong's *Rockslope Design Report* contains a detailed description of the geotechnical analysis and recommendations.

MDT advanced its design for US 2 in Badrock Canyon based on the rock slope recommendations made by Armstrong and Associates. However, shifting the alignment of US 2, may result in a design that requires far less rock excavation or possibly even avoids the need to excavate the rock outcrops in the Canyon. New slope design recommendations will be developed for US 2 in Badrock Canyon if the alignment of the road is changed. Until a new design is completed for US 2, it is impossible to accurately state whether rock excavation will be required or how rock slopes would be constructed.

14. NORTHWESTERN ENERGY GAS TRANSMISSION LINE

Northwestern Energy (formerly Montana Power Company) maintains a 10-inch diameter gas transmission line buried adjacent to US 2 in Badrock Canyon. The line is in conflict with the proposed roadway improvements and requires relocation. Because the line comprises the sole gas transmission line feeding the Flathead Valley, providing uninterrupted service is critical.

During the early coordination, MDT and Montana Power Company (MPC) agreed that protecting the line during rock excavation in Badrock Canyon is vital. MPC consulted with Terracon and hired the firm to study potential gas line relocation alternatives. MPC determined that the most viable alternative was to temporarily relocate the gas line prior to the highway reconstruction and subsequent blasting to remove rock in Badrock Canyon. The temporary relocation would eliminate the potential for damage to the gas line and would assure uninterrupted service to the Flathead Valley. This temporary gas line relocation would include a combination of an overland reroute of the gas line and lengthy bore through the rock outcrops of Badrock Canyon. MPC's estimated cost of the **temporary relocation** is just over $2.5 million.

Following the roadway reconstruction, the gas transmission line would be permanently relocated within the highway right-of-way. Plans called for the portion of the temporary gas line bored through the mountain to be abandoned in place.

During 2001, MDT authorized MPC to begin work on the temporary gas line relocation. However, concerns arose in September 2001 regarding the need to prepare environmental compliance documents for the temporary gas line relocation and the action's potential effects to groundwater and historic or archaeological resources not previously considered in the FEIS. Due to these concerns, MDT instructed MPC to suspend previously authorized utility relocation work in October 2001.

While the FEIS disclosed the gas line would be in conflict with the proposed highway reconstruction and must be relocated, the methods and details of this utility relocation were unknown. Therefore, the FEIS did not discuss any alternatives for the gas line relocation or the

possible impacts associated with the relocating the line.

Shifting the alignment of US 2 as now planned may reduce conflicts with existing gas transmission line and the temporary gas line installation once proposed may no longer be required. New design work will be accomplished to establish a most desirable alignment and cost-effective design for US 2 in Badrock Canyon. The effects of highway reconstruction on the gas line and the need for relocation can not be determined until an alignment and design are established for US 2 in Badrock Canyon.

15. SOUTH FORK BRIDGE

The existing bridge crossing the South Fork of the Flathead River would be replaced by a four-lane structure located on a new alignment just downstream. This concept remains unchanged from the FEIS and ROD.

The FEIS did not provide specifics on the bridge's design, number of piers in the river, or dimensions because considerable amounts of hydraulic, subsurface testing, and structural design are typically required to generate such information. Since a detailed preliminary design for the required structure was not prepared, the FEIS discussed the environmental effects of building a bridge only in general terms.

Other than the specific impacts associated with MDT's selected bridge design, the only new impacts not considered in the FEIS are potential effects on bull trout and Canada lynx and their habitats. At the time of the FEIS, these species were not listed as threatened species by the USFWS. Until the completion of bridge construction, the *Endangered Species Act* (**16 U.S.C. 1531-1543**) obligates MDT to consult with the USFWS regarding the proposed bridge design and construction methods and to consider potential effects on all listed and candidate species, including any species that may be newly listed during the development of this highway and bridge reconstruction project.

Preliminary design activities have been completed based on the concept for the South Fork crossing described in the FEIS. A preliminary Bridge Layout has been developed and a *Bridge Design Report* has been completed. Subsurface borings necessary for the foundation design of the bridge have also been completed. Coordination is currently underway with the permitting agencies to discuss the bridge design concept and determine the feasibility of decreasing the number of piers. Once the pier configuration is finalized, the bridge design will proceed.

16. TRAFFIC CONTROL

Much of the new alignment follows that of the existing roadway, therefore, the existing roadbed cannot be left in place during the construction. Traffic would have to be routed through construction zones with appropriate traffic control. Construction of the roadway through

Badrock Canyon would require blasting on several large rock cuts. This work would require temporary road closures and should not be done during peak travel months to minimize traffic conflicts. Construction staging or sequencing would be necessary to minimize traffic conflicts. Traffic control signing would be accomplished according to the *Manual of Uniform Traffic Control Devices*.

CHANGED CONDITIONS

CHANGED CONDITIONS

This part of the Re-evaluation discusses the potential for changes to the anticipated environmental effects associated with implementing MDT's Preferred Alternative as described in the FEIS. Existing environmental conditions are briefly reviewed to provide a basis for determining if anticipated impacts have changed notably since the FEIS or if there is a potential for any new and previously undisclosed effects.

The following discussion is organized to address three broad categories: the physical environment, the biological environment, and the human environment. Within each of these general categories, the environmental effects are discussed for specific topics listed in the FHWA's Technical Advisory T 6640.8A, more recent agency guidance materials, and other relevant topics contained in the FEIS.

Physical Environment

1. FARMLAND IMPACTS

Four soils associations exist between the beginning of the project in Columbia Heights and the west entrance to Badrock Canyon that are classified by the NATURAL RESOURCES CONSERVATION SERVICE's (NRCS) as "locally important farmland." Soils meeting this farmland classification were shown in the FEIS (see **FIGURE III-1)**.

A "Farmland Conversion Impact Rating Form" (Form AD-1006) for the proposed action was processed for the FEIS in accordance with the *Farmland Protection Policy Act (FPPA*) and included in the FEIS. The Land Evaluation and Site Assessment scores on the form totaled only 52 points. Because this score was less than 160 points, it was determined that reconstructing US 2 would convert farmland with low potential.

None of the "locally important farmland" adjoining US 2 was used for raising cultivated crops at the time of the FEIS. Most such areas were developed with roadside businesses, industrial operations, rural residences, or were vacant.

Changed Conditions Since the FEIS. Soils and farmland classifications have not been revised since the FEIS. Land uses adjacent to US 2 in the project area remain similar to those that existed at the time of the FEIS. None of the soils meeting the locally important farmland classification within the project corridor are cultivated for crops.

The FEIS assessed both the direct and indirect conversion of farmland and concluded the Preferred Alternative would directly convert about 37.3 acres (15.1 ha) of locally important farmland to highway right-of-way. The FEIS predicted that about 1.4 acres (0.6 ha) of locally important farmland would be indirectly converted as a result of the proposed highway reconstruction. The conversion areas were calculated based on the anticipated right-of-way needs for the preliminary designs evaluated in the EIS.

Right-of-Way plans, based on a refined highway design for this US 2 corridor, have been developed since the ROD was signed. The Right-of-Way plans show the area of additional land needed for the proposed highway and make accurate calculations of the direct and indirect conversion of farmland possible for the proposed road design.

Potential for New Impacts. Other than minor changes in the estimated areas of direct and indirect farmland conversion, there is no potential for any new impacts to farmland in the project area.

Effects on Adequacy of FEIS Conclusions. Although the areas of direct and indirect conversion of farmland differ slightly from that presented in the FEIS, the overall conclusions regarding impacts to important farmland in the FEIS remain valid.

2. IMPACTS ON GEOLOGIC FEATURES OF BADROCK CANYON

The principal geologic feature present in the Columbia Heights-Hungry Horse corridor is the group of rock outcrops adjacent to US 2 in Badrock Canyon. The outcrops, generally consisting of fractured quartzite and argillite, range from 25 to 60 feet (7.6 to 18.3 m) high in the area affected by the proposed highway reconstruction. The bedding and joint structure of the rocks in Badrock Canyon provide a potential for rockfalls. Geotechnical investigations identified tension cracks and evidence of past movements in the large rock plates that comprise the outcrops.

The FEIS indicated the outcrop at the west end of Berne Memorial Park in Badrock Canyon must be excavated to improve the horizontal alignment of US 2. The FEIS stated that excavation of the outcrop would occur for a distance of about 1,100 feet (335 m) along the roadway with the heights of the newly exposed rock cut for the highway ranging from 25 to 150 feet (7.6 to 45.7 m) high along the area of excavation. MDT proposed to design rock cuts using □:1 maximum slopes and employ "rock sculpting" to produce a rough textured cut surface which will reflect the existing terrain and accent natural fracture lines in the rock.

The FEIS disclosed that blasting to excavate the west outcrop in Badrock Canyon would produce several indirect impacts including noise and vibration impacts, traffic delays during blasting and clean-up activities, and the loss of vegetation on portions of the outcrop where excavation would occur. Excavation could affect the output from springs that surface on the outcrops in Berne Memorial Park. Residual nitrates from the explosive compounds used to excavate rock could potentially cause minor degradation of surface waters in the project area.

Changed Conditions Since FEIS. MDT performed new geologic investigations of the west outcrop and upper cliffs in Badrock Canyon between Project Stations 178+00 and 188+00 during 1996. The additional design study was conducted as a follow-up to a rockslope design report prepared by Armstrong & Associates of Helena, Montana in October 1994.

The 1996 study, also completed by Armstrong & Associates, focused on the higher cliffs above MDT's anticipated rock excavation limits and discussed ongoing efforts to monitor rock movements. Information collected for the study was used to develop measures to ensure cut

slope stability due to the potential for rockfall hazards in this area. The report resulted in several recommendations incorporated into the rockslope design for the project. The report also affirmed the need for bolting to prevent toppling of large blocks of rock, rock containments, and benching in the upper cliffs.

During 1999, MDT conducted subsurface investigations for the foundation analysis and design of the proposed mechanically-stabilized earth (MSE) retaining wall along the Flathead River and the proposed new bridge across the South Fork of the Flathead River. The investigations consisted of drilling sub-surface soil borings at locations where the retaining wall and piers for the new bridge would be constructed. The purpose of the borings was to obtain scientific information about existing soil and geologic materials and characteristics that must be considered in the design of the retaining wall and bridge.

Potential for New Impacts. As indicated earlier in this re-evaluation, MDT has determined a new alignment for US 2 should be evaluated in Badrock Canyon in an effort to minimize or totally avoid rock excavation in the vicinity of Berne Memorial Park.

The FEIS and *Section 4(f)* Evaluation identified and described an alignment through Badrock Canyon that avoided rock excavation and impacts to most features of Berne Memorial Park. However, this alignment option was dropped from consideration due the extent of construction required in the Flathead River, adverse impacts to riparian vegetation and wetlands, and potentially higher costs than other proposals. Therefore, while an alignment avoiding rock excavation was previously considered by MDT, it was never advanced as part of any of the build alternatives and its potential environmental effects were not fully analyzed in the FEIS.

MDT will undertake new design activities for the section of US 2 in Badrock Canyon to determine if rock excavation can be avoided. Although the rock excavation and its potentially adverse effects could likely be avoided with an alignment shift, other new and possibly significant adverse effects (e.g., encroachment on the Flathead River; effects to bull trout and its habitat; loss of riparian vegetation; and floodplain concerns) could result from such a design change. New environmental analyses and agency coordination will also be completed to evaluate the effects of the shifting the road's alignment away from the rock outcrops.

Effects on Adequacy of FEIS Conclusions. The FEIS did not disclose or fully evaluate the potential impacts associated with reconstructing the highway on an alignment that minimizes or totally avoids the excavation of the outcrops at Berne Memorial Park.

3. WATER QUALITY IMPACTS

Surface Water Quality. Surface waters in the project corridor that would be affected by the proposed action include the main stem of the Flathead River and the South Fork of the Flathead River. Highway reconstruction, the replacement of the South Fork Bridge and the subsequent operation of the new facility could adversely affect the quality of surface waters in the project area unless preventative measures are taken. Degradation of surface water quality in the project area could potentially occur due to physical or chemical pollution during and after construction of the

new road and bridge.

Reconstruction of US 2 from Columbia Heights eastward to Badrock Canyon does not encounter or cross any streams.

The FEIS stated that the primary direct water quality impacts associated with the proposed action would be degradation of surface waters due to the placement of fill materials or excavation below the ordinary high water marks of the Flathead River and the South Fork. The FEIS disclosed that excavation and the placement of fill below the ordinary high water mark would be necessary to construct a vertical retaining wall along the Flathead River and piers for the new bridge across the South Fork. Fill placement would also be necessary in several small wetlands in the project corridor.

The FEIS also disclosed that the proposed project had a low potential for causing indirect adverse effects to surface water quality from contaminated highway runoff. Storm water runoff from the pavement surface contains organic and inorganic chemicals and suspended solids. These materials are primarily derived from combustion products, vehicle and pavement wear, and highway maintenance. The increased width of the paved surface area proposed for US 2 would result in greater quantities of runoff, more rapid runoff, and in less infiltration during precipitation events or snowmelt.

Changed Conditions Since FEIS. In 1997, the State Legislature assigned MDEQ 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 also has the authority to set limits, known as Total Maximum Daily (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 waterbody can receive without violating water quality standards.

The MDEQ identifies streams or lakes that do not fully meet water quality standards and support the appropriate beneficial uses or that are fully supporting their uses as stipulated in the standards but are threatened. Every two years, the MDEQ prepares and submits a list of these impaired or threatened waters to the EPA as required under *Section 303(d)* of the *CLEAN WATER ACT*. The South Fork of the Flathead River from Hungry Horse Dam to its mouth is on MDEQ's Final Year 2000 *303(d)* List and is designated as a low priority for TMDL development. The main stem of the Flathead River is not listed on MDEQ's Final Year 2000 *303(d)* List. MDEQ has established a target date of 2003 for the establishment of TMDL's for the "Flathead Headwaters" which include both the main stem of the Flathead and the South Fork.

Flathead Lake is listed on the Final Year 2000 *303(d*) List and is considered as impaired for the beneficial use of aquatic life due to a serious nutrient loading problem. The Flathead Basin Commission, MDEQ, the MONTANA DEPARTMENT OF NATURAL RESOURCES AND CONSERVATION (DNRC), and the CSKT are currently working to create an effective plan to reduce levels of nutrients entering the lake through upstream tributaries and shoreline sources. The principal goals of this plan are to achieve established TMDLs for pollutants and remove Flathead Lake from the list of impaired water bodies. TMDL standards developed for Flathead Lake depend on

actions to reduce nutrient loadings within the Flathead River system, including the main stem of the Flathead and the South Fork. Such actions include the reduction of runoff from construction activities on or near the river's tributaries.

Potential for New Impacts to Surface Waters. An alignment for US 2 in Badrock Canyon that minimizes or totally avoids rock excavation would shift portions of the road towards the Flathead River. The supporting structures for the new road on such an alignment (embankments, retaining walls, cantilever supports, or bridge piers) may result in new encroachments on the Flathead River. New environmental analyses and agency coordination will be performed to evaluate the effects of such river encroachments.

MDT is currently evaluating alternate pier configurations for the proposed bridge over the South Fork of the Flathead River. Comments on desirable pier configurations for the proposed bridge have been solicited from the MONTANA DEPARTMENT OF FISH, WILDLIFE & PARKS (MDFWP), U.S. ARMY CORPS OF ENGINEERS (CoE), and the U.S. FISH AND WILDLIFE SERVICE (USFWS). In general, these agencies asked MDT to consider pier configurations that maximize span lengths and minimize the number of piers in the river channel and that reduce potential effects to the thalweg at the crossing location.

Ground Water Quality. The FEIS indicated that the proposed highway construction had little if any probability of directly affecting ground water resources or altering the quality of ground water. The blasting associated with rock excavation would have the potential for causing indirect impacts to groundwater flows at the Berne Memorial Park spring and at seeps on nearby outcrops.

The Berne Memorial Park fountain is considered to be a transient non-community public water supply system by the MDEQ since it is freely flowing and many residents and visitors to the area consume water from this source. MDT is considered to be the operator of the water supply system because the agency has maintained the roadside turnout where the spring is located for many years, making this water source accessible to the public. The FEIS indicated that MDT's sampling had not identified any bacteriological contamination in water samples taken from the spring.

A notable indirect impact described in the FEIS was the reconfiguration of access to the fountain at Berne Memorial Park. The FEIS indicated that public access to water from the free-flowing spring would be maintained and that the existing stone fountain at Berne Memorial Park would not be affected. However, a one-way traffic loop with controlled approaches to US 2 and a small parking area for users of the spring would be constructed in this roadside area. This would restrict vehicle movements and reduce the area presently available for parking by spring users in the vicinity of the spring and stone fountain.

Changed Conditions Since FEIS. The quality of the water from the spring in Berne Memorial Park has become a controversial issue since the FEIS and ROD were completed. Since MDT is considered to be the owner of the water supply system, state law requires the collection of samples and monthly water testing. Since 1996, water samples take from the spring have frequently shown the presence of coliform bacteria. Due to these findings, signs have been posted at the water source in Berne Memorial Park advising the public of potential contaminants in the spring water.

During 2000, MDEQ classified Berne Memorial Park spring as groundwater under the influence of surface water. MDEQ subsequently issued an order requiring MDT to treat the water, find an approved water source, or permanently disconnect the spring box and eliminate access to the water. MDT reviewed their options for making the spring box for the existing water source more secure from contamination, developing a new spring water source, and treatment options. Each option examined required significant investments of time and money without a guarantee that the efforts and investment would yield a secure water source.

During the summer of 2001, testing confirmed the presence of fecal coliform bacteria and the MDEQ issued a "boil order" recommending water from the spring be boiled before being consumed. On September 13, 2001, MDT and MDEQ conducted a public meeting to discuss water quality problems and MDT's options for addressing the water contamination. Comments from the public expressed concerns over the possible closure of the spring since a sizable number of area residents claim the spring is their only source of water. Other comments challenged that MDT's motivation for closing the spring was somehow related to its plans to rebuild US 2 through the area.

Following the consideration of alternatives relating to maintaining and/or treating water from the spring and public comments heard at the September 13 meeting, MDT decided that the piping for the spring outlet should be removed. MDT's maintenance staff removed the piping for the spring on October 4, 2001. Within a few days, someone installed a section of PVC piping which continues to deliver spring water. Residents and others continue to consume water from the spring regardless of contamination warnings.

Earlier this year, MDT again examined the feasibility of constructing improvements to the existing spring box for the Berne Park spring. Ultimately MDT concluded that even if the spring box were improved, the quality of the water from the spring cannot be guaranteed for safe public consumption given the influence of surface water. On May 24, 2002, MDT decided not to perform any improvement to the spring box or any other enhancements to the natural flow of the spring. MDT posted signs warning the public that water may be contaminated and advising against human consumption. MDT's signs also clearly state that those who choose to drink the water from the spring, do so at their own risk. Despite these warnings, some members of the public continue to use water from the spring.

Potential for New Impacts. A change in the road's alignment in the vicinity of Berne Memorial Park would likely reduce the potential for effects to ground water resources. If blasting to excavate rocks were no longer necessary, there would little if any chance of affecting the quantity of flows from springs and seeps in the outcrops at Berne Memorial Park. There would be no change in the locations where seeps and springs currently surface on the outcrops.

The continued use of the Berne Memorial Park spring is an issue that will continue to involve MDT, MDEQ and other interests. Highway development on a new alignment through the Berne Memorial Park area will be responsive to decisions made about the ultimate disposition of the spring and whether or not vehicle access to the roadside area will be maintained. The potential effects of highway reconstruction on the use, characteristics, and features of Berne Memorial Park will be considered during the review of new alignment and design options for US 2 through Badrock Canyon.

Effects on Adequacy of FEIS Conclusions. The FEIS provided a sufficient general discussion of the types of permanent and temporary effects to water quality that may result from the highway and bridge construction. The impacts to surface and ground waters likely to occur with the implementation of MDT's proposed action would be similar in nature to those described in the FEIS. The design of the proposed bridge over the South Fork of the Flathead has not advanced to the point where specific impacts (fill quantities, excavation below the ordinary high water mark, etc.) can be quantified.

The FEIS did not evaluate the potential direct, indirect, and cumulative effects to surface waters or surface water quality associated with reconstructing the highway on an alignment that minimizes or totally avoids the rock excavation in Badrock Canyon. Such an action could result in new areas of encroachment on the Flathead River, depending on the type of supporting structure determined to be most appropriate for the new road. Because the Flathead River provides habitat for the threatened bull trout, there is a possibility that a new design could adversely affect individual fish and habitat for the species. Consultation with the USFWS regarding the potential effects to bull trout will be necessary before assessing the significance of impacts.

4. WILD AND SCENIC RIVER IMPACTS

Within the project corridor, only the Middle Fork of the Flathead, upstream from its confluence with the South Fork of the Flathead near Hungry Horse, has been designated as a Recreational River. A Management Corridor for the Middle Fork Recreational River segment has been designated and is administered by the USFS. The FEIS indicated the proposed action would cross about 0.84 acres (0.34 ha) of land within the Recreational River Corridor in Section 6 of Township-30-North; Range-19-West, M.P.M. The South Fork Bridge does not lie within the designated Management Corridor for the Middle Fork Recreational River.

Like the existing highway, the new road and bridge across the South Fork would be visible from some portions of the Recreational River Corridor. Some vegetation adjacent to the existing highway in Badrock Canyon and near the South Fork Bridge would be cleared to construct new transportation facilities. Based on extensive coordination with the U.S. FOREST SERVICE - FLATHEAD NATIONAL FOREST (USFS), the managers of the Wild and Scenic River segment, it was determined the proposed highway and bridge construction would have no foreseeable adverse effects on the free-flowing nature, the setting, or the water quality of the Middle Fork Recreational River Corridor.

At the time of the FEIS, efforts were underway by a group of federal, state, and county agencies to develop a river management plan known as the Flathead Multi-Objective River Corridor (MORC) Plan. The intent of the MORC was to address fisheries, wildlife, recreation, agriculture, and water quality issues along the Flathead River from the confluence of the South Fork and the main stem to the north shore of Flathead Lake. The planning effort, facilitated by the NATIONAL PARK SERVICE (NPS), involved Flathead County, the Flathead Basin Commission, the Flathead Regional Development Office, the Flathead Conservation District, the MONTANA DEPARTMENT OF STATE

LANDS, the BUREAU OF RECLAMATION, the CoE, and the USFS.

Changed Conditions Since FEIS. MDT's Right-of-Way plans show that this project crosses 0.25 ha (0.62 acres) of the Recreational River Corridor in Section 6 of Township-30-North; Range-19-West, M.P.M. MDT has already obtained an easement from the USFS for US 2 reconstruction on this and other Forest lands in the project corridor.

A few public comments received by MDT since the FEIS and ROD continue to request MDT and various public land managers to add the Flathead River in Badrock Canyon to the National Wild and Scenic Rivers System. As indicated in the FEIS, rivers can be added to the Wild and Scenic Rivers System only by an act of Congress or the Secretary of the Interior upon application by the Governor of Montana. Neither Congress nor the Governor of Montana (current or past) has requested that the Flathead River in Badrock Canyon be added to the Wild and Scenic Rivers System.

The Flathead MORC Plan was not completed as initially proposed by the NPS and other involved agencies. Instead, the Flathead River Partnership produced a document titled "State of the River Report and Users' Map" that focused on issues related to the Flathead River. The map was used as a mechanism to increase public awareness about conservation issues and management concerns for the river and adjoining lands. The cooperative planning effort did not produce a river management plan or result in the implementation of any regulatory changes for the control of lands adjacent to the river.

Potential for New Impacts. The proposed action as currently designed would not result in any new effects to the Middle Fork Recreational River or its management corridor. Shifting the alignment of US 2 to minimize or avoid rock excavation in Badrock Canyon would not affect the Middle Fork Recreational River.

Effects on Adequacy of FEIS Conclusions. The overall conclusions regarding impacts to Wild and Scenic Rivers presented in the FEIS remain valid.

5. FLOODPLAIN IMPACTS

Floodplains within the US 2 corridor occur where the existing alignment parallels the main stem of the Flathead River and where the road crosses the South Fork of the Flathead River. THE FEDERAL EMERGENCY MANAGEMENT AGENCY (FEMA) conducted studies and prepared a Flood Boundary and Floodway Map for parts of the project corridor. A broad "floodprone" area exists near the confluence of the South Fork at Hungry Horse. **FIGURE III-3** in the FEIS depicted the floodplains in the project area.

The FEIS disclosed that the proposed action would result in a longitudinal encroachment on the floodplain of the Flathead River adjacent to Berne Memorial Park where an MSE-retaining wall would be constructed. The FEIS concluded that incorporating a vertical retaining wall with the new highway would result in negligible effects to the elevation of the 100-year flood. Indirect effects to the floodplain would result due to the anticipated loss of riparian vegetation that provides habitat

for bald eagles and the elimination of four small wetlands along the river that retain sediments during periods of flooding and capture contaminants in runoff from the nearby highway.

A transverse encroachment on the floodplain would result from the construction of a new bridge across the South Fork. The FEIS concluded that the impacts resulting from the encroachment on the floodplain of the South Fork would be minor since the new bridge would have fewer spans than the existing structure and the proposed bridge opening would be as large, or larger than that of the existing structure.

Changed Conditions Since FEIS. As part of MDT's design activities for US 2 and the new South Fork Bridge, a variety of analyses have been conducted to determine hydrologic characteristics of the Flathead River and South Fork at the site of the new bridge. The work has included the assembly of data on river flows, surveying of river channels, agency coordination, and HEC-RAS water surface profile modeling. These activities were completed to provide the information needed to locate and size necessary storm drainage structures in urban and rural portions of the corridor and determine the required bridge opening at the South Fork crossing.

The specific floodplain impacts of constructing a new bridge over the South Fork will not be known until the pier configuration for the new bridge is determined and other design activities for the bridge are completed. However, preliminary hydraulic analyses have shown that the base flood and backwater elevations at the crossing would change little over present conditions.

Potential for New Impacts. As indicated previously, MDT will investigate new alignments and road designs for US 2 through Badrock Canyon in an effort to minimize or avoid rock excavation. Since the road would be shifted away from the rock outcrops at Berne Memorial Park to accomplish this, the new facility may encroach on the Flathead River in a manner not considered in the FEIS. New design work must be done to determine the most appropriate alignment for the new road and how the road would be designed and constructed in areas where new encroachments may occur. The new road could be supported by any combination of steepened embankments, retaining walls, cantilevers, or piers in the realignment area.

MDT is considering a minor shift in the alignment of the South Fork Bridge. A slight shift in the bridge's alignment would not result in any new or unanticipated floodplain impacts since the number, size, and location of supporting piers for the bridge are more important floodplain considerations than alignment. MDT has prepared a design report for the proposed bridge and coordinated the proposed work at the South Fork crossing with a number of interested agencies. The agencies consulted suggested that MDT modify its layout for the structure to use longer spans and fewer piers than initially proposed. MDT is currently reviewing options related to span lengths and pier configurations for the bridge.

Effects on Adequacy of FEIS Conclusions. The FEIS adequately discussed the types of effects likely to result from both longitudinal and transverse encroachments on the Flathead River and the South Fork of the Flathead River. However, realigning US 2 in Badrock Canyon to avoid rock excavation may result in new encroachments on the Flathead River and its floodplain that were not analyzed or disclosed in the FEIS.

6. AIR QUALITY IMPACTS

Due to improvements in traffic operations within the project corridor, the proposed highway reconstruction would be expected to result in net reductions in pollutants emitted by vehicles and improved air quality.

The FEIS disclosed that the only air pollutant of concern in the project area is PM-10 (particulate matter less than 10 microns in diameter). Sources of PM-10 include residential wood burning, dust from paved roads, emissions by vehicles from engine exhaust, wear of bearings and brake linings, and the abrasion of tires on the road surface. PM-10 is a concern due to the proximity of the Columbia Falls PM-10 Nonattainment Area. Although the proposed project does not lie within the nonattainment area, it is within 0.25 miles (0.4 km) of the east boundary of the nonattainment area.

The FEIS summarized the results of a PM-10 analysis done for the project that considered emissions generated by current and future (2010) traffic volumes in the corridor, by equipment and vehicles operating during reconstruction of the highway, and by gravel crushing and asphalt paving operations. The FEIS identified several measures to be incorporated into the highway reconstruction activities to reduce PM-10 emissions during construction and ensure project activities do not cause new violations or worsen the violations of PM-10 standards in the Columbia Falls nonattainment area.

Changed Conditions Since FEIS. The Columbia Falls PM-10 Nonattainment Area boundary as described by 56 CFR 56794, November 6, 1991 remains in effect.

Air quality has at least temporarily improved in the Columbia Falls-Columbia Heights area since the FEIS was issued in 1995. The Columbia Falls Aluminum Company (CFAC) bought the City of Columbia Falls a street sweeper as part of a negotiated settlement with the MDEQ for an air quality violation. This equipment helps control emissions of particulate matter from road dust.

CFAC also temporarily ceased its operations in 2001 after the Montana Legislature deregulated the generation and distribution of power. Emissions of chloride hydrocarbons, sulfur dioxide, fluoride and other hazardous air pollutants were halted during the period when the plant was shut down. Early in 2002, CFAC began limited operations again as electric rates fell.

Potential for New Impacts. The PM-10 analysis completed for the FEIS considered traffic volumes through the year 2010. The predictions of annual PM-10 emissions from the traffic on US 2 in the FEIS were based on a year 2010 traffic volume of 8,400 vehicles per day. As discussed earlier in this re-evaluation, MDT's traffic projections were reviewed and new projections were made using regression analysis based on several additional years of data from the permanent traffic counter in the project corridor. MDT's revised estimated traffic volume for the year 2010 is 8,425 vehicles per day. Since MDT's "revised" projection of traffic for the year 2010 (the time period addressed in the FEIS) is nearly the same, it is reasonable to assume that the conclusions about vehicle-generated PM-10 emissions remain valid.

Since measures recommended in the FEIS to reduce PM-10 emissions during construction will be

incorporated into the project, the project would not be expected to cause violations of PM-10 standards in the Columbia Falls nonattainment area.

Effects on Adequacy of FEIS Conclusions. The FEIS adequately discussed the types of air quality impacts associated with the construction US 2 and vehicle use of the traffic facility.

7. NOISE IMPACTS

The FEIS indicated that noise impacts may occur at eight residences and one cabin located within 45 m (150 feet) of the existing centerline of US 2 between Columbia Heights and the House of Mystery. Modeling showed that noise levels at these sites would increase by 4 to 5 dBA by the year 2010 as traffic volumes continue to increase on US 2, regardless of whether or not reconstruction occurs. The FEIS stated that the anticipated increase in noise would exceed the FHWA's Noise Abatement Criteria (NAC) for Activity Category B (67 dBA). However, the predicted noise levels would not be a "substantial" increase over existing peak hour noise levels at the impacted locations. The FEIS disclosed that the acquisition of new right-of-way for the proposed action would relocate residents from five of the nine affected residential properties and eliminate the possibility of noise impacts at these sites.

The calculations indicate that noise levels would increase substantially (more than 10 dBA) by the design year at Berne Memorial Park. The FEIS noted that noise levels at the roadside park are difficult to assess due to the rock cliffs that reflect traffic noise. Measured and predicted noise levels at the park were increased by 4 dBA to account for the sound reflected from the rock formations.

The FEIS included an examination of noise mitigation measures for impacted sites but concluded there were no reasonable or feasible measures that could be readily implemented to offset expected increases in noise levels.

Changed Conditions Since FEIS. MDT has not performed any new noise modeling within the project corridor since the FEIS.

The centerline of the new highway would be about 13 to 16 feet (4 to 5 m) closer than that of the existing highway at few homes located between 6th Street West and 7th Street West in Hungry Horse. A resident of this area contacted MDT and requested that the alignment of the highway be shifted further to the southeast, away from the homes in this area and toward vacant land managed by the USFS.

Potential for New Impacts. The noise levels at several scattered residences along the proposed alignment would increase with the proposed action. However, increases in noise levels of more than 10 dBA over present conditions (a significant impact) would be unlikely. Analyses done for the FEIS show that traffic noise levels would increase as traffic volumes in the corridor increases. Current traffic noise levels likely already exceed those presented in the FEIS.

MDT has not yet made a decision to implement a minor alignment shift for US 2 at the west

edge of Hungry Horse. If the alignment were shifted in this area, the centerline for the new road would be closer to that of the existing facility. Shifting the alignment would not be expected to substantially change noise levels for the residents near 6th Street West since the elevation of the new road relative to these residences would be somewhat lower than the existing highway and because travel speeds in this area would be similar to those within the rest of the community.

A proposed shift in the alignment of US 2 within Badrock Canyon would be expected to have some beneficial effects on traffic noise levels at Berne Memorial Park over the proposed action described in the FEIS. The centerline for US 2 would likely be shifted away from the park if rock excavation were to be minimized or avoided. Such a shift would place traffic lanes slightly farther from the roadside area than initially proposed resulting in a minor decrease in traffic noise levels at public use areas in Berne Memorial Park.

Effects on Adequacy of FEIS Conclusions. The FEIS adequately discussed traffic-related noise impacts and the temporary noise impacts associated with the construction of US 2.

Biological Environment

1. VEGETATION IMPACTS

The FEIS disclosed that the reconstruction of US 2 between Columbia Heights and Hungry Horse would remove varying amounts of vegetation and topsoil from areas needed for right-of-way. Between Columbia Heights and the House of Mystery, the project closely follows the existing alignment requiring the expansion of the current right-of-way corridor for the highway. Alignment changes would be more notable east of the House of Mystery and new areas of right-of-way would have to be cleared. The FEIS stated that the most adverse effects on vegetation would be the loss of riparian vegetation along the Flathead River near Berne Memorial Park and clearing within stands of Englemann spruce and lodgepole would be removed on the approaches to the new South Fork Bridge west of Hungry Horse.

The FEIS disclosed that the removal of cottonwoods along the Flathead River in Badrock Canyon was an adverse indirect effect of highway construction since perching and roosting opportunities for bald eagles would be lost.

The FEIS stated that suitable habitat for several plant species of concern exists in the general project area. However, impacts to sensitive plants were not anticipated since occurrences have been previously recorded on lands in the highway corridor and such species were not observed by biological resource consultants during field work in the project area.

Changed Conditions Since FEIS. In May 1997, a rare species of moss (*Grimmia brittoniae*) was rediscovered on a partially shaded, seasonally west vertical cliff face near US 2 within Badrock Canyon. The moss is one of the rarest mosses in the interior Pacific Northwest and is known to occur at only four locations in western Montana. Prior to finding the species in Badrock Canyon, the moss had not been seen since 1896 in the Columbia Falls area and the last collection of the species occurred in 1960 in the Cabinet Mountains of northwestern Montana. The moss species is at risk of extinction due to a variety of human activities including road

building, timber harvest, and mining.

Potential for New Impacts. There is little, if any, potential for new or previously undisclosed impacts to vegetation in the project area.

Impacts to *Grimmia brittoniae* could be minimized or if the new alignment of US 2 were shifted away from the outcrops where the species is known to occur in Badrock Canyon.

Effects on Adequacy of FEIS Conclusions. The FEIS adequately discussed the direct, indirect, and cumulative effects of the proposed highway reconstruction activities on vegetation in the Columbia Heights-Hungry Horse project area. Mitigating measures for adverse effects to vegetation identified in the FEIS will be implemented with the project.

2. WETLANDS IMPACTS

The FEIS stated that the proposed highway reconstruction would affect jurisdictional wetlands in three sites (identified as Wetland Sites 2, 4, and 5) within the project area. Wetland Site 5 consisted of nineteen individual, non-contiguous areas within the riparian community along the Flathead River.
The FEIS disclosed that the proposed highway reconstruction and bridge replacement would impact type W-1 wetlands (areas having permanent standing water and rooted emergent vegetation like cattails) and type W-2 wetlands (areas having seasonal or permanently high water tables and graminoid and herbaceous cover like redtop, reed canarygrass, bluejoint, and beaked sedge) in Sites 2 and 4. Type W-7 wetlands, characterized by areas with seasonal or permanent high water tables subject to temporary flooding with a deciduous overstory of cottonwood and conifers and a dense shrub understory, would be affected in Site 5.

The FEIS indicated that direct impacts to wetlands from the proposed action include clearing, excavation, filling, and grading of portions to each wetland site. These activities would result in a loss of wetlands. The total acreage of wetlands impacted by the project is 2.17 acres (0.87 ha). This total includes 0.18 acres (0.7 ha) of wetland type W-1 (rooted emergent vegetation), 0.84 acres (0.34 ha) of wetland type W-2 (graminoid/herbaceous cover), and 1.15 acres (0.46 ha) of wetland type W-7 (forested cottonwood/conifer).

The FEIS also stated that construction of a boat ramp at the proposed river access near the House of Mystery would eliminate less than 0.1 acres (0.04 ha) of wetland.

Opportunities for on-site mitigation of wetland impacts were described and presented in the FEIS.

Changed Conditions Since FEIS. Due to the amount of time that has passed since the completion of wetland delineations in the project corridor, MDT retained a biological resources consultant to verify wetland boundaries delineated in 1993 in support of the FEIS. Wetland impacts were recalculated and function assessments were completed for each site using the 1999 MDT Montana Wetland Assessment Method. The new information will be used to establish goals and objectives for project mitigation.

MDT's consultant re-evaluated wetlands in the Columbia Heights-Hungry Horse project corridor. The portion of the corridor within the limits of the Columbia Heights-East project was reviewed during October 2000 and the Hungry Horse-West project area was examined during August 2001. The results of the re-evaluation are summarized in the Columbia Heights-Hungry Horse Draft Wetland Re-Evaluation Report prepared by Land & Water Consulting, Inc. on April 25, 2002.

Because the wetlands that would be affected are the same as those identified in the 1995 FEIS, loss of wetland functions would be similar to those previously described.

On-site mitigation opportunities remain as described in the FEIS. MDT is actively pursuing wetland mitigation opportunities in the watershed, but has no specific projects currently in development to offset the loss of wetlands resulting from the Columbia Heights-Hungry Horse projects. Mitigation will seek to restore or enhance wetlands to replace functions lost by project impacts. Mitigation plans will be developed in coordination with the CoE. All mitigation sites will be monitored to ensure long-term success. Additional opportunities to minimize impacts will be examined as final designs are developed.

Potential for New Impacts. The 2002 wetlands re-evaluation report showed that 0.57 acres (0.24 ha) of Category III wetland within Site 2 would be affected by fill placement the proposed Columbia Heights-East highway project.

The report contained new wetland delineations, mapping, and functional assessments for wetland sites within the Hungry Horse-West project area. However, wetland impacts were not estimated because of MDT's pending alignment changes within Badrock Canyon and near the South Fork Bridge. Wetland impact areas cannot be calculated for these areas until the alignment has been established and the design for the road and bridge have been established.

Effects on Adequacy of FEIS Conclusions. The FEIS adequately discussed the types of effects likely to result from the reconstruction of US 2 within the Columbia Heights-East section of the project corridor and at the South Fork crossing. However, realigning US 2 in Badrock Canyon in a manner different from that presented in the FEIS may result in new or changed impacts to isolated wetland sites or riparian wetlands along Flathead River within the Hungry Horse-West project area.

3. WILDLIFE AND FISHERIES IMPACTS

As described in the FEIS, this proposed project would have little direct impact on birds, reptiles, amphibians, small mammals, predators, furbearers and ungulates. The FEIS stated that the proposed action has the potential to produce the following direct impacts: 1) loss of habitat resulting in less forage and cover for small mammals and birds; 2) displacement of species from habitats adjacent to the road due to widening; 3) increased mortalities of small mammals due to

road widening, alignment improvements, increased travel speeds, and the projected increases in traffic volumes; and 4) interruption of animal movements or migration patterns. Overall, these impacts would not have substantial adverse effects to local or regional wildlife populations.

The FEIS disclosed that the principal threat to fisheries posed by highway and bridge construction was sediments transported by runoff from disturbed areas or from fill placement in the Flathead River and South Fork of the Flathead. Without erosion control and other protective measures, sedimentation could increase silt in spawning gravels and rearing habitat, suffocate eggs or fry, and adversely affect habitat for the aquatic life comprising an important food source for fish.

The FEIS identified westslope cutthroat trout and the bull trout as fish species of special concern that may occur in the Flathead River system and the Coeur d'Alene salamander that may occur in the rock outcrops of Badrock Canyon as a wildlife species of special concern.

The FEIS discussed a variety of mitigating measures to be incorporated with the proposed project including measures to control erosion and sediment transport, revegetation of disturbed areas with plants not highly palatable to ungulates (deer) or bears, and monitoring whitetail deer mortalities.

Changed Conditions Since FEIS. As described in the FEIS, most notable affects to wildlife habitat would be occur in MDT's Hungry Horse -West project area where US 2 would be reconstructed adjacent to the Flathead River and through forest habitat. MDT's Columbia Heights-East project generally passes through areas previously disturbed by road building, residential and commercial development and other human activities making affected lands less important habitat for wildlife.

The Columbia Heights-East project would not directly affect fish species because the existing road does is not adjacent to and does not cross surface waters providing habitat for fish. However, the Hungry Horse-West project would require encroachments on the main stem of the Flathead River and the South Fork.

Since the FEIS, the only notable changed conditions or new information regarding wildlife and fish relate to changes in the management status of bull trout and westslope cutthroat trout. Additionally, the USFWS has changed the listing status of several threatened or endangered species that may occur in the project area. These changes and their implications for the proposed action are described later in this re-evaluation.

Potential for New Impacts. In general, the reconstruction of US 2 as proposed would have effects on wildlife and fisheries in the project corridor similar to those described in the 1995 FEIS. With the exception of the Badrock Canyon section, the proposed reconstruction and road widening would generally follow the existing highway's alignment. As a result, the majority of habitat disturbance would occur within and adjacent to the right-of-way associated with the existing alignment. Mitigation measures as described in the FEIS would also be implemented to minimize project impacts on wildlife.

Alignment changes in Badrock Canyon have the potential to result in new or additional encroachments on the Flathead River. Such encroachments may affect habitat for fish differently than those described in the FEIS. Coordination with the USFWS, CoE, and MDFWP conducted

in 2001 suggest that adverse effects to fish habitat may be reduced somewhat if the new road through Badrock Canyon were supported on isolated piers instead of a continuous, vertical retaining wall within a portion of the river channel.

A slight shift in the alignment of the new South Fork Bridge and modifications to the pier configuration for the new bridge would not result in any new or increased effects to the fishery in the South Fork of the Flathead River.

MDT will reinitiate consultations with the USFWS and MDFWP about project-related effects to bull trout and habitat for the species in the main stem of the Flathead River and the South Fork of the Flathead near Hungry Horse.

Effects on Adequacy of FEIS Conclusions. With the exception of the area within Badrock Canyon where the alignment may change, discussions in the FEIS about impacts to wildlife and fisheries are adequate. MDT will undertake additional work to develop a new alignment and design configuration for US 2 in Badrock Canyon. Shifting the alignment to minimize or avoid rock excavation would likely require moving the road toward and even into the Flathead River. The effects of such an alignment modification on wildlife and fisheries will be analyzed to determine the potential for any new and significant impacts.

4. THREATENED OR ENDANGERED SPECIES IMPACTS

The 1995 FEIS described MDT's coordination efforts with the USFWS regarding potential effects to threatened or endangered species in the project area. In accordance with *Section 7(a)* of the *Endangered Species Act* (**16 U.S.C. 1531-1543**), MDT contacted and obtained a list of endangered, threatened, proposed, and candidate species that could occur in the project area from the USFWS. At the time of the FEIS, the following threatened or endangered species were listed by the USFWS:

- Grizzly bear *(Ursus arctos horribilis)* - threatened
- Bald eagle (*Haliaeetus leucocephalus*) - endangered
- Peregrine falcon (*Falco peregrinus*) - endangered
- Gray wolf (*Canis lupus*) - endangered

The USFWS indicated at the time that the grizzly bear resided on lands near the project area and the bald eagle breeds in the general vicinity and winters along the main stem and South Fork of the Flathead Rivers. The peregrine falcon was listed as a seasonal migrant to the US 2 corridor. The gray wolf was listed as a potential resident of lands near the proposed project.

The FEIS indicated that in 1991, a Biological Assessment (BA) was prepared for the proposed reconstruction of US 2 from Columbia Heights easterly through Badrock Canyon to Hungry Horse. The 1991 BA addressed the project effects to the four listed species that may occur in the project area. Formal consultation with the USFWS was undertaken principally over project-related effects on bald eagles and important habitat for the species in Badrock Canyon. The USFWS issued a Biological Opinion on March 24, 1992 that determined the project would not adversely affect gray wolf, peregrine falcon, and grizzly bear, and would not likely jeopardize

the continued existence of the bald eagle.

The FEIS presented a variety of measures to be implemented with the proposed project to avoid or reduce adverse effects to bald eagles and grizzly bears. Such measures were not necessary for gray wolves and peregrine falcons due to the low possibility for adverse effects to these species.

Changed Conditions Since FEIS. Due to the amount of time that has elapsed since the FEIS and the ROD were completed for this proposed project, MDT determined that a Supplemental BA was needed to reflect changes in the listing status of affected species and to update conditions related to threatened or endangered species occurring in the project area.

During 2000, MDT retained a consultant to prepare a Supplemental BA addressing the potential effects to threatened or endangered species within the Columbia Heights-Hungry Horse corridor. Western EcoSystems Technology, Inc. (WEST) completed the BA on October 11, 2000. Due to MDT's decision to advance the reconstruction US 2 under two projects, the Supplemental BA was "repackaged" by WEST during 2001 to provide Supplemental BAs addressing impacts specific to the Columbia Heights-East and Hungry Horse-West projects. MDT elected to prepare separate BA documents because the designs for the projects were in different stages of completion and because the project had substantially different construction dates.

Changes in Species Listings. The Supplemental BAs for the project indicated that since the 1995 FEIS, the bald eagle was reclassified from endangered to threatened by the USFWS in 1995. Bull trout (*Salvelinus confluentus)* were listed in 1998 as a threatened species and Canada lynx (*Felis lynx)* were listed as threatened species by the USFWS in 2000.

The peregrine falcon, which was addressed in the 1995 FEIS, was not analyzed in the Supplemental BAs. Peregrine falcons were removed from the threatened and endangered species list in 1999.

MDT's Supplemental BAs did not address grizzly bears or gray wolves because the status of these species has changed little since the time of the FEIS. As before, the proposed highway reconstruction and bridge replacement is not likely to adversely affect grizzly bears or gray wolves or habitats used by these species.

Westslope cutthroat trout *(Onchorhynchus clarki lewsi)* were also not addressed in the Supplemental BAs. The westslope cutthroat had been petitioned for listing, but the USFWS determined that listing was not warranted during 2000. However, the westslope cutthroat trout is listed as a "sensitive species" by the USFS and has been given "special status" by the BUREAU OF LAND MANAGEMENT (BLM).

Potential for New Impacts. The BA examined the potential effects on the threatened bull trout (*Salvelinus confluentus)* and the threatened Canada lynx (*Felis lynx).* The BA also reevaluated the findings of the 1991 BA regarding potential project effects to bald eagles. Key findings from the Supplemental BAs are summarized below:

- **Bull Trout**

Bull trout are native to the tributaries of the Columbia River drainage. Bull trout occurring in the Flathead River near the project area are part of the Flathead Lake/River subpopulation. The Flathead Lake/River subpopulation of bull trout migrates to tributaries of the North and Middle Forks to spawn. Both fluvial (river) and adfluvial (Flathead Lake dwelling) bull trout are likely to occur in the project area. The Flathead River serves as an important migratory corridor for adfluvial bull trout; however, some of the bull trout in the Flathead River and South Fork may reside for extended periods, if not entirely, in the Flathead River.

Since Hungry Horse Dam blocks upstream migration by fish, bull trout in the South Fork below the dam are also considered part of the Flathead Lake/River subpopulation that migrates up the main stem of the Flathead River to spawn in tributaries of the North and Middle Forks but not in tributaries to the South Fork below Hungry Horse Dam. The South Fork below Hungry Horse dam does support migratory bull trout. The Montana River Information System database rates the reach of the South Fork below Hungry Horse as “substantial habitat value” for bull trout, but notes the population status as "declining."

The Supplemental BA for the Columbia Heights-East and Hungry Horse-West projects listed the following potential effects on the aquatic resources could occur due to the proposed reconstruction of US 2:

- sedimentation from construction activity;
- oil/gas contamination from equipment working in the rivers and/or spills within the project area;
- channel modification;
- loss of riparian vegetation;
- direct mortality of fish in the river during in-stream construction;
- long-term increase in runoff from an increased area of impervious surfaces;
- long-term increase in sediment loads from sanding/graveling of the wider highway during winter months;
- introduction of contaminants such as petroleum products from the highway during runoff events;
- unanticipated events such as a traffic accident which leads to stream impacts.

However, such impacts to the river are unlikely since only a short segment of US 2 at the eastern end of the Columbia Heights-East project area lies within 500 feet (150 m) of the Flathead River. Because the effects listed above are unlikely to occur or would be insignificant, it was concluded that the construction of the Columbia Heights-East project is **not likely to adversely affect** bull trout or habitat used by the species.

Supplemental BA for the Hungry Horse-West project described in detail the types of direct, indirect, and cumulative effects on bull trout resulting from highway reconstruction in Badrock Canyon and building a new bridge across the South Fork of the Flathead River. Much of the impact discussion in the Supplemental BA focused on the effects on bull trout associated with constructing a vertical retaining wall along the Flathead River in Badrock Canyon. Given MDT's decision to re-evaluate the alignment of US 2 in Badrock Canyon, any new design developed and advanced by MDT will be analyzed for potential effects to bull trout and their habitat. The impacts of MDT's new design may differ from those described in the Supplemental BA.

Effects to bull trout associated with the construction of the new South Fork Bridge has been adequately discussed in the Supplemental BA. These impacts are highlighted below:

- Construction of the supports (piers) for the bridge over South Fork would disturb the river bed offering the potential for sediments to be introduced into the river channel. Construction of the foundations by using drilled shafts will cause some river bed disturbance. A minor amount of sediment disturbed by the drilled shaft construction could enter the river but most would be contained within the casings used to construct the piers. Water and sediment "drilled" from within the shafts would be deposited in settling ponds to minimize sediment loads reintroduced to the river.

- The bridge over the South Fork River will slightly modify the river channel by altering the current configuration of bridge supports in the river. The existing bridge has four bents in the river channel; the new bridge may have fewer bents in the channel and will be constructed further downstream. Debris inhibitors will be installed between the columns of each bent to prevent debris jams between the columns. The new bridge is not expected to significantly alter river flows over existing conditions.

- The possibility of in-stream construction causing the death of a bull trout is considered possible, but unlikely. Construction of the new bridge and demolition of the old bridge may require construction of a temporary bridge or trestle in the river between the two structures for access. Alternately, some type of temporary structures could be erected from each bank out into the river to provide suitable work platforms. If a temporary bridge or work platforms from each bank are used by MDT's contractor, heavy machinery will be located on the temporary bridge and not within the river flow. The new bridge foundations will be constructed using drilled shafts which do not require construction of large cofferdams which can potentially trap fish. Demolition of the old bridge, which may require blasting, may cause fish mortality, however, blasting of the bridge supports would be confined with the use of "blankets" to control debris.

- Additionally, during the construction period, there is the potential for an oil/gas spill or accident from construction equipment entering the rivers. This indirect effect is considered immeasurable and the increase in highway safety should help offset the potential for this type of accidental event affecting bull trout populations in the Flathead River.

The Supplemental BA for the Hungry Horse-West project provided a list of recommended conservation measures to minimize potential adverse effects to bull trout and other listed species. The Supplemental BA states that while conservation measures can offset most adverse effects to bull trout, construction within the river associated with the replacement of the bridge at the South Fork has the potential for causing a "take" of bull trout. The determination made in the BA was that the proposed replacement of the bridge is **likely to adversely affect** bull trout.

MDT continues design work for the proposed new South Fork Bridge. The intent is to complete the design of the new structure in advance of other work associated with the Hungry Horse -

West project. The **likely to adversely affect** determination indicates the need to undertake formal consultation with the USFWS regarding the bridge replacement and its potential effects to bull trout. MDT has coordinated the bridge design with the USFWS and other environmental permitting agencies. The USFWS has indicated a willingness to work with MDT and make separate *Endangered Species Act* decisions for the South Fork Bridge replacement and future improvements to US 2 in Badrock Canyon.

❖ **Bald Eagle**

Based on current information provided by the MDFWP, no bald eagle nests occur within the townships in which the highway reconstruction projects are located. While MDFWP reports that there are currently no bald eagle nests within or near the project area, eagles have been sighted in the area and they do use the area on a casual basis for foraging. Bald eagles are known to nest and roost in the Flathead River basin including locations at Hungry Horse Reservoir, Flathead Lake, and on both the North and Middle Forks of the Flathead River.

The Flathead River and the South Fork rivers in the project area provide foraging habitat and a flyway for bald eagles. The adjacent riparian vegetation along these rivers provides perching sites, as well as screening for eagles to forage along the river bank. The riparian vegetation consists of mixed cottonwood and conifers with an understory of shrubs, grasses, and saplings. Such habitats are generally absent from the Columbia Heights-East project area. In the 1992 Biological Opinion issued for this project, it was reported that the Flathead River, including Badrock Canyon, serves as a major flyway and foraging area for bald eagles. It was also reported that bald eagles occur on a year-round basis in the project area.

Direct effects to bald eagles from the project may include loss of riparian habitat, disturbance, and displacement.

Direct loss of cottonwood and conifer riparian habitat would occur in the Badrock Canyon area, and at the new bridge site over the South Fork. The total estimated loss of riparian habitat associated with construction of the new bridge would be about 0.35 acres (0.14 ha) on the south side of the new bridge and 0.3 acres (0.12 ha) on the north side of the new structure. The removal of this riparian habitat would mean the loss of some perch sites for bald eagles, the loss of some screening vegetation between the highway and the Flathead River in Badrock Canyon, and the loss of potential nesting vegetation. The habitat loss would be long-term since the riparian vegetation would be replaced by the highway and bridge.

The riparian loss at the South Fork bridge crossing is insignificant because the crossing is perpendicular to the river and would only impact a small amount of riparian vegetation relative to the many kilometers of riparian vegetation upstream and downstream from the project. Revegetation efforts and natural regeneration at the old bridge site, once it is removed and restored, would essentially replace the riparian loss at the new bridge site over time.

The project may result in some disturbance and displacement impacts to bald eagles, particularly during project construction. No bald eagle nests are known to occur within one-half mile of the project, so nesting eagles would not be affected. Blasting, tree-harvesting operations, or operation of loud equipment can temporarily disrupt feeding activities, displacing eagles to

other, potentially less desirable, habitats. Construction-related impacts would be short-term and temporary displacement would likely be to other foraging areas and the region surrounding the project area with other favorable feeding habitats (e.g. Flathead Lake, Hungry Horse Reservoir, Flathead River). Any temporary displacement is expected to be insignificant considering other foraging habitat is available in the area.

Degradation of water quality from project-related sources and direct mortality resulting from vehicle collisions with eagles were the principal indirect effects cited for bald eagles in the Supplemental BAs. Water quality degradation has the potential to affect the downstream aquatic ecosystems, and thus may affect some prey (i.e., fish) for bald eagles in the Flathead River. Neither effect was considered significant by the wildlife biologists that prepared the BAs.

The Supplemental BAs for the reconstruction of US 2 in the Columbia Heights-East project area and for the South Fork Bridge segment of the Hungry Horse-West project determined the proposed action is **not likely to adversely affect** bald eagles. Concurrence with these determinations must be obtained from the USFWS.

❖ Canada Lynx

Canada lynx are short-bodied, medium sized cats that feed primarily on snowshoe hares (*Lepus americanus)*, grouse, squirrels, mice and carrion. They depend on densely forested mountain habitat for survival.

Canada lynx was proposed for listing as threatened in the lower 48 states in July 1998 and was listed as a threatened species in March 2000. The primary threats to the species include human alteration of lynx habitat, past exploitation, range expansion of competitors (e.g. coyote, bobcat), and elevated human access into lynx habitat

In Montana, the majority of lynx records have been in the western Rocky Mountains region of the state. Other records of lynx in Montana come from the eastern Great Plains Region but these are suspected to be dispersing lynx from Canada following cyclical snowshoe hare populations. Researchers with the University of Montana have been studying lynx in the Flathead and Lolo National Forests east of Seeley Lake since 1998 where there appears to be a reproducing population. Dispersing lynx from Canada likely contribute to many of the Montana lynx records, however, Montana is believed to contain one of the few resident lynx populations in the lower 48 states.

Disturbance is the most likely direct effect that may occur to lynx but this is considered a remote possibility. Depending on the proximity of resident lynx, habitat within 1 mile (1.6 km) of the highway corridor may occasionally be used by lynx. Should a lynx occur within the area affected by the project during construction, it may be disturbed by the high human occupation, activity, noise, or machinery. The BAs concluded other effects to lynx such as habitat loss, fragmentation, and mortality, are not expected to occur.

Based on this analyses in the Supplemental BAs, the reconstruction of US 2 between Columbia Heights and Hungry Horse is **not likely to adversely affect** Canada lynx. Concurrence with this determination must be obtained from the USFWS.

Effects on Adequacy of FEIS Conclusions. MDT coordinated this action with the USFWS and the agency agreed to conduct separate reviews the Columbia Heights-East project, MDT's design for the South Fork Bridge, and a future reconstruction proposal for US 2 in Badrock Canyon (a major portion of MDT's Hungry Horse-West project). MDT has already submitted its Supplemental BA for the Columbia Heights-East project to the USFWS for concurrence with not likely to adversely affect determinations for bull trout, bald eagles, and Canada lynx.

Since MDT has determined that an alignment change will be reviewed in Badrock Canyon, the potential exists for new or different project-related effects to bull trout and bald eagles and their habitats in and adjacent to the Flathead River. These effects will be identified and analyzed before a final determination of effects to bull trout and bald eagles can be made for the Badrock Canyon section of the Hungry Horse-West project area.

Section 7 of the *Endangered Species Act* outlines four general conditions for reinitiating formal consultation: (1) the amount or extent of incidental take is exceeded; (2) new information reveals effects of the action that may affect listed species or critical habitat in a manner or to an extent not previously considered; (3) the action is modified in a manner causing effects to listed species or critical habitat not previously considered; (4) a new species is listed or critical habitat designated that may be affected by the action.

The relatively recent listing of bull trout and the Canada lynx as threatened species and the possibility that new alignment revisions for US 2 in Badrock Canyon could affect threatened and endangered species in a manner not previously considered in the FEIS. These conditions indicate the need to reinitiate formal consultation with the USFWS about threatened and endangered species effects associated with highway reconstruction in the Hungry Horse - West project area.

MDT will prepare and submit a Supplementary BA to the USFWS for the new South Fork of the Flathead River bridge once a pier configuration and new layout for the structure is determined. A Supplementary BA will be prepared for the remainder of the Hungry Horse-West project area once an alignment and design for US 2 through Badrock Canyon has been firmly established.

5. IMPACTS TO ENVIRONMENTALLY SENSITIVE AREAS

The FEIS indicated that reconstruction of US 2 between Columbia Heights and Hungry Horse would not directly cause impacts on the UNESCO-designated Biosphere Reserve that includes Glacier National Park and Waterton Lakes National Park in Alberta, the Great Bear Wilderness and adjoining Wilderness Areas, the Coram Experimental Forest, or the Mission Mountains Tribal Wilderness Area.

The FEIS further stated that reconstruction of US 2 through Badrock Canyon to Hungry Horse would directly affect the Northern Continental Divide Grizzly Bear Ecosystem (NCDE). The proposed highway reconstruction would directly affect the NCDE by removing vegetation from new right-of-way areas where the alignment of US 2 is improved. This vegetation is one of many

habitat components that may be used by grizzly bears. However, the portion of the NCDE through which US 2 passes may occasionally support grizzly bears but is not critical habitat for the species.

The FEIS also identified Badrock Canyon as an environmentally sensitive area. The document listed a variety of potential effects to Badrock Canyon including visual impacts due to the excavation of the rock outcrop at the west end of Berne Memorial Park, removal of riparian vegetation, and impacts to the features and use of Berne Memorial Park.

Changed Conditions Since FEIS. The only changed condition associated with the environmentally sensitive areas listed in the FEIS involves project-related effects to Badrock Canyon. In March 2000, the Chairman of the CSKT sent a letter to MDT and expressed a desire to expand the consideration of cultural resources to include "the cultural and historical values of the Badrock Canyon area as a cultural landscape." The CSKT also stated their "desire to minimize impacts from planned construction through a process of negotiations and consultation." Following the receipt of the CSKT's letter, MDT (Joel Marshik and Steve Platt) spoke with Tribal representatives about the significance of the outcrops in Badrock Canyon. MDT was advised that the CSKT consider the outcrops in Badrock Canyon to be a "10" on a 1 to 10 scale with 10 being the most culturally important.

Potential for New Impacts. MDT has decided to review the proposed reconstruction of US 2 in Badrock Canyon in an effort to identify an alignment that would minimize or avoid rock excavation of outcrops considered "culturally significant" to the CSKT. According to *Section 101(d)(6)(B)* of the *Historic Preservation Act*, MDT and FHWA must consult with any Indian tribe that attaches religious and cultural significance to historic properties that may be affected by an undertaking. This requirement applies regardless of the location of the historic property. Therefore, consultation with the CSKT will be undertaken regarding the potential effects that a new alignment for US 2 may cause to the Tribe's cultural features in Badrock Canyon.

A change in the road's alignment and design in Badrock Canyon would: 1) affect visual resources differently than described in the FEIS; 2) result in new or different encroachments on the Flathead River and its riparian zone; and 3) change anticipated impacts to the features and use of Berne Memorial Park.

Effects on Adequacy of FEIS Conclusions. Overall, impacts to environmentally sensitive areas in the vicinity of the Columbia Heights-Hungry Horse corridor were adequately identified and considered in the FEIS. Although the proposed action was coordinated with Tribal representatives during the development of the FEIS, the document did not consider the "cultural landscape" issues raised by the CSKT. New design work and coordination with the CSKT will be undertaken to adequately address cultural landscape issues in Badrock Canyon.

Human Environment

1. LAND USE IMPACTS

The FEIS indicated that few notable changes in land use in the corridor were likely to occur due to

the proposed improvement of US 2. Highway commercial uses were expected to continue in Columbia Heights and be enhanced by improved access in Columbia Heights. The FEIS predicted no major changes in land use for parcels between Columbia Heights and the House of Mystery.

The FEIS stated that planned highway improvements would indirectly contribute to additional growth within the project corridor by providing improved facilities and access. The FEIS also acknowledged that the improvements to US Highways 2 and 93 may induce development along these major travel corridors and contribute to continuing residential and commercial growth in Flathead County. Such growth has the potential to affect the quality of life for some residents and alter the perceptions of the Flathead region for visitors.

Changed Conditions Since FEIS. With the exception of the construction of the Super 8 Motel in Columbia Heights in 1995, there have been no major changes in the use of lands within the Columbia Heights-Hungry Horse corridor. Several businesses have changed ownership or names and remodeling has occurred at some businesses in the corridor.

Flathead County land use planning and regulations for lands within the project area have not changed since the FEIS.

MDT's acquisition of right-of-way for the proposed reconstruction has affected land uses within the project corridor. To date, nearly all lands needed for US 2 reconstruction have been acquired. Residential and commercial relocations have occurred as part of MDT's right-of-way acquisition.

MDT has also purchased the Simpson Family Trust properties, a large private landholding south of US 2 between Berne Road and Hungry Horse. This acquisition not only provides MDT with the right-of-way needed for the highway improvements, it also prevents the development of incompatible land uses along US 2 by placing nearly all of Badrock Canyon in the public domain. MDT has previously discussed the exchange or transfer of ownership of excess lands in Badrock Canyon to the USFS-Flathead National Forest to ensure these lands remain in public ownership.

Potential for New Impacts. For the most part, lands adjacent to US 2 in Columbia Heights are nearly fully developed with highway commercial uses like motels, restaurants, gas station/convenience stores, tourist-dependent shops, and other miscellaneous businesses. Unless a major redevelopment effort is undertaken, land uses in this suburban area of Columbia Falls would be expected to change little over the foreseeable future. At this time, there are no known private redevelopment efforts proposed for Columbia Heights. Future development in Columbia Heights may also be inhibited by an inadequate public water supply and distribution system.

The present facility lacks "urban" roadway components and access to and from US 2 can occur at nearly any location adjacent to the road within the developed area of Columbia Heights. The highway improvements will provide a transportation facility with features like a traffic signal, a continuous center left turn lane, pedestrian crossing provisions, sidewalks, curb and gutter and a storm drain system in Columbia Heights. Access control will also be employed to adequately serve roadside development while increasing safety and roadway capacity in the area. The proposed highway improvements represent a notable expansion and significant modernization of the roadway in Columbia Heights. However, the "character" of the new road will be very similar to other improved sections of US 2 in and around Columbia Falls.

The segment of the project corridor between Columbia Heights and Berne Road has been developed with a mix of highway commercial, industrial, and scattered residential uses. Since the time of the FEIS, there has been little change in the use of lands adjacent to US 2 in this portion of the project area other than right-of-way acquisition and relocations for MDT's project.

Shifting the alignment of US 2 to avoid rock excavation in Badrock Canyon would not cause any change in land use. Berne Memorial Park is currently open and accessible to the public. Shifting the alignment would not change access to this roadside park in any way that is apparent at this time. The USFS and MDT (through advance acquisitions, the purchase of the Simpson Family Trust lands in Badrock Canyon, and right-of-way purchases) own the majority of the land adjacent to US 2 east of Berne Road. Future development opportunities in this portion of the project corridor will be restricted by public land ownerships, the presence of the Flathead River and South Fork of the Flathead River, and steep mountainous terrain.

MDT acknowledges that highway improvements can both directly and indirectly contribute to land uses changes and induce new growth. MDT does not believe the reconstruction of US 2 from two-lanes to a four-lane configuration will substantially change the character of the Columbia Heights-Hungry Horse area or cause current property owners and developers to build faster or any differently than they would have without MDT's highway improvements.

The likelihood that reconstruction of US 2 between Columbia Heights and Hungry Horse project would cause significant new land development or would induce substantial new growth in the project area or other portions of Flathead County is viewed as low. This conclusion is based on the following considerations.

- While Flathead County has generally experienced rapid population growth and development over the past two decades, growth and new development in the Columbia Falls area has lagged notably behind other communities in the County. Reports prepared by the Flathead County and Tri-City Planning Offices websites show that the rates of residential development, land subdivisions, and annexations in the Columbia Falls area have been consistently below those in the Kalispell and Whitefish area.

- Unless developers acquire and consolidate ownership on adjoining properties, current landholdings are relatively small and offer few opportunities for major new developments adjacent to US 2 in the project corridor.

- Travel times through the corridor would be reduced and accessibility enhanced with the proposed improvements, particularly during peak summer travel months. However, since the project is only 4.5 miles (7.2 km) in length, the overall savings in travel time resulting from highway reconstruction would be small for residents commuting between "Canyon" communities and other Flathead Valley locations. The savings in travel times would not be substantial enough to cause major changes in development patterns in this portion of Flathead County.

- Capacity and water quality problems exist with the privately owned water distribution system in Columbia Heights. Without substantial improvements to the system by the

present owner or the acquisition and subsequent upgrading of the system by a local water district, the domestic water supply will continue to pose a limitation on the development potential of the area.

- An expanding County population, high numbers of seasonal visitors to the Flathead-Glacier Region, convenient highway access, and a sufficient quantity of affordable land are all factors viewed as favorable to new land development. These attractive conditions have existed in the area for at least the past twenty years, yet very little new development has occurred in or near the project corridor.

In short, there are few, if any, reasons to believe that upgrading this section of US 2 from two-lanes to a four-lane configuration will cause current property owners and developers to build faster or any differently than they would have without MDT's highway improvements.

Effects on Adequacy of FEIS Conclusions. The FEIS discussed the direct, indirect, and cumulative land use effects of reconstructing US 2 between Columbia Heights and Hungry Horse. Uncertainty about the indirect and cumulative effects on land use existed at the time of the FEIS and continues today because such impacts occur (if at all) in the future and they involve a number of dynamic variables that are difficult, if not impossible, to accurately predict.

It is apparent that that any land development or population growth in Flathead County and the Columbia Falls-Hungry Horse area may occur whether or not MDT improves this section of US 2. Factors conducive to new development have been present for many years but little new development has happened in the project area. Future growth would likely be driven by factors other than improving US 2 in the Columbia Heights-Hungry Horse project area. Such factors are primarily related to the natural resource and tourism industry, the health of industries in Columbia Falls, the local, national and global economies, and the price of energy.

Further, there is no guarantee that there would be development in the Columbia Heights-Hungry Horse area, or if there is, when such growth might occur. For these reasons, it is impossible to predict what types of indirect and cumulative land use impacts might occur. It is certain though, that such development would occur independently of the highway reconstruction proposed for the Columbia Heights-Hungry Horse area of Flathead County.

The FEIS did not specifically discuss land use changes in Badrock Canyon associated with an alignment shift to minimize or avoid rock excavation. However, such an alignment shift would be unlikely to cause any notable land use changes in this portion of the corridor. As with the reconstruction proposal presented in FEIS, Berne Memorial Park would remain accessible from US 2 and available for public use.

Due to water contamination concerns, MDT removed piping from the spring in Berne Memorial Park and posted signs warning against public consumption of the water. The public continues to use water from the spring despite these actions. Future highway reconstruction through the Berne Memorial Park area would be responsive to agency decisions about the ultimate disposition of the spring and continued vehicle access to the roadside area. The potential effects to the use, characteristics, and features of Berne Memorial Park Road will be considered in the development of new alignment and design options for US 2 in Badrock Canyon. The impacts to

Berne Memorial Park will also be considered further in the SEIS for the Canyon area.

2. RIGHT-OF-WAY AND RELOCATION IMPACTS

The FEIS indicated that about 48.8 acres (19.7 ha) of additional (net) right-of-way would be required for the Preferred Alternative.

The FEIS indicated that between four and six residences would be displaced by the proposed highway reconstruction. Residential displacements would directly affect some 10 to 20 residents of the project corridor. Most of the residential displacements would occur east of Columbia Heights in the vicinity of Monte Vista Drive. The FEIS predicted that a building associated with the Old Time Photo Company located at the east end of Columbia Heights and a home/taxidermy shop located near the intersection of US 2 and Monte Vista Drive would be affected by new highway construction.

The FEIS disclosed that the proposed action would also acquire minor amounts of new right-of-way in the corridor from lands presently used as residential yards or commercial parking areas. These acquisitions would not displace affected households or businesses but would indirectly impact uses at each location.

Changed Conditions Since FEIS. Since the FEIS, MDT completed right-of-way plans based on its initial design for the proposed reconstruction of US 2 between Columbia Heights and Hungry Horse. The Right-of-Way Plans identified seventy-nine (79) parcels affected by the proposed highway improvements. To date, right-of-way necessary for the project has been acquired from all but seven parcels within the corridor. The remaining four parcels are in condemnation proceedings. These parcels and their locations are listed below:

Parcel No.	Owners	Project Area	General Location
50	Meyer	Columbia Heights-East	W of Monte Vista Drive
51	Stere	Columbia Heights-East	W of Monte Vista Drive
58	Wendlick	Columbia Heights-East	E of Monte Vista Drive
74	Broers	Hungry Horse-West	In Hungry Horse

The total net right-of-way acquisition area for the Columbia Heights-Hungry Horse projects is approximately 116 acres (47 ha). Of that total, approximately 12 acres (4.8 ha) of new right-of-way is required for the Columbia Heights-East project and 104 acres (42 ha) for the Hungry Horse-West project. This total includes 24 acres (9.7 ha) of USFS easement and 61 acres (24.7 ha) of whole parcels MDT purchased as advanced acquisitions.

MDT has also developed an Access Control Plan for the Columbia Heights-Hungry Horse corridor. The Access Control Plan was developed to deal with the problems of congestion and accidents within the US 2 corridor. The Plan sets forth guidelines for managing and spacing approaches and consolidating or eliminating unnecessary approaches. The goals of access management are to make the new road safer, function more efficiently, and help maintain its capacity. Access control also affords some measure of control over future development adjacent

to the highway since new access provisions will be consistent with the access management guidelines established for the corridor.

Efforts are underway to negotiate access rights for properties adjoining the highway. MDT has currently completed administrative settlements for access control with about 75% of the owners of the eighty-three parcels shown in the access control plan.

Potential for New Impacts. Right-of-way acquisition for the reconstruction of US 2 between Columbia Heights and Hungry Horse is nearly completed. Other than a slight variance in the total amount of new right-of-way needed, the resulting impacts of acquiring new right-of-way and relocations have been similar to those disclosed in the FEIS.

The FEIS discussed the overall need for and benefits of implementing access control in the project corridor. The specific details of the access control plan were not described because MDT had not yet completed a full access management plan for the project area. MDT's access control plans show the locations of all approaches to US 2 including field access, residential, commercial, and public road approaches. The plan provides for reasonable future access to all parcels adjoining US 2. The plan includes minor modifications to existing commercial approaches but does not eliminate access or otherwise affect businesses within the corridor.

Effects on Adequacy of FEIS Conclusions. The FEIS adequately discussed right-of-way and relocation issues associated with the proposed reconstruction of US 2 between Columbia Heights and Hungry Horse.
The FEIS indicated that about 48.8 acres (19.7 ha) of additional (net) right-of-way would be required for the Preferred Alternative. The new right-of-way total shown in the FEIS did not include any advance acquisitions of land by MDT. If MDT's advance acquisition lands are not included in the estimated 116 acres (47 ha) of new right-of-way for the Columbia Heights-Hungry Horse projects, the total net right-of-way area would be about 54.4 acres (22.0 ha) as compared to the 48.8 acres (19.7 ha) in the FEIS. This difference in net right-of-way areas (about 11%) is judged to be minor given that the right-of-way requirements in the FEIS were estimated based on a preliminary design.

3. SOCIAL IMPACTS

The FEIS disclosed that reconstructing US 2 would have little impact on the population and social nature of the project area since a small number of resident (10 to 20 people) would be directly affected. The document also stated that the proposed project would not cause direct changes to neighborhoods or community cohesion for project area residents and would not disproportionately benefit or harm any social, handicapped, minority, or ethnic groups.

The FEIS described the direct traffic safety benefits for users of US 2 between Columbia Heights and Hungry Horse. Such benefits included improved horizontal and vertical alignments to eliminate sight distance restrictions; limited access control and provision of medians and left turn lanes to help eliminate traffic conflicts and relieve congestion; and safer facilities for pedestrians or bicyclists on the highway.

The potential for inducing growth due to the improved access and transportation facilities was cited in the FEIS as the most apparent indirect impact of highway reconstruction in the corridor. The proposed project, along with other developments in Flathead County, could contribute to increased commercial and residential development in the general area.

Changed Conditions Since FEIS. Few, if any, notable changes in social conditions have occurred in the project area since the FEIS was completed.

Potential for New Impacts. The reconstruction of US 2 as now proposed by MDT would not result in any new or different social impacts.

Effects on Adequacy of FEIS Conclusions. The FEIS adequately discussed the direct, indirect, and cumulative effects of reconstructing US 2 on social conditions in the Columbia Heights and Hungry Horse corridor and Flathead County.

4. ECONOMIC IMPACTS

The FEIS disclosed the displacement of one home/business near the intersection with Monte Vista Drive and adverse effects to the Old Time Photo Company. Completing the project would also remove portions of the parking lots serving several businesses along US 2 in Columbia Heights. The FEIS stated that highway reconstruction would have positive effects on businesses in Columbia Heights since the proposed design would incorporate left turn lanes, curbing, and other measures improving the safety, ease of access and the aesthetics of shopping areas along US 2. The FEIS described other possible economic effects associated with highway reconstruction including:

- improved safety and reduced travel times for residents and visitors traveling between Columbia Heights, Hungry Horse, Glacier National Park, and other Flathead County population centers;
- facility improvements making the project corridor more attractive for new businesses investment;
- short-term adverse economic effects during construction with the possibly of a temporary loss of jobs; and
- removing small amounts of residential, commercial, and agricultural property from local tax bases.

Changed Conditions Since FEIS. The Super 8 Motel was constructed in Columbia Heights during 1995 creating new employment opportunities. Several other businesses in the project area have changed ownership or names and some property owners have made improvements to their businesses. Other than these changes, economic conditions have not changed in the immediate project area.

As indicated earlier in this document, Flathead County continues to be one of Montana's fastest growing counties. The economy of Flathead County has continued to expand and diversify since the 1995 FEIS.

The Columbia Falls Aluminum Company (CFAC) temporarily ceased its operations in 2001 after the Montana Legislature deregulated the generation and distribution of power. The shutdown resulted in the loss of more than 250 jobs in the Columbia Falls area. After a 13-month shutdown brought on by high electricity prices, the CFAC plant resumed operations in March 2002 and announced plans to further increase its production during April 2002.

MDT's acquisition of right-of-way acquisition has provided fair compensation to the affected business owners in the corridor.

Potential for New Impacts. No new significant corridor-wide impacts to development, tourism, property values, or taxes would result from the reconstruction of US 2 as currently proposed by MDT.

Effects on Adequacy of FEIS Conclusions. The potential economic impacts of reconstructing US 2 between Columbia Heights and Hungry Horse were adequately addressed in the FEIS.

5. HISTORICAL AND ARCHAEOLOGICAL PRESERVATION

The FEIS indicated that several cultural resources surveys were conducted to identify historic properties that may be affected by the proposed US 2 reconstruction. The FEIS considered the historical significance of six cultural properties and the existing South Fork of the Flathead River Bridge. However, only one site, the Badrock Canyon Tote Road (24FH583), was determined eligible for the NRHP. The Tote Road was built in 1890-1891 as a supply route for transporting material for construction of the Great Northern Railroad. The Tote Road served as a travel route through Badrock Canyon until it was replaced by another road in 1911.

The FEIS contained discussions of potential effects to all historic properties within the project area, regardless of their eligibility for the NRHP. The most notable effect to historic sites described in the FEIS was the potential loss of about 82 m (270 feet) of the Tote Road's 2,100 feet (640 m) of documented length. The *Section 4(f)* Evaluation included with the FEIS described impacts to the Tote Road, examined alternatives to the use of the historic site, and posed mitigation for impacts to the old road.

Changed Conditions Since FEIS. A late discovery of an archaeological site occurred within the project corridor in late 1995. The site, identified as 24FH760, is situated on both sides of US 2 east of Berne Memorial Park. Testing by MDT shows the site is eligible for the *National Register of Historic Places* (NRHP) under Criterion D (for its potential to yield information). Information about the location of the site and test results has been shared with the Flathead and Kootenai Culture Committees. Coordination continues with the STATE HISTORIC PRESERVATION OFFICE (SHPO) and Tribal Culture Committees about mitigating of potential effects to the site.

In March 2000, the Chairman of the CSKT sent a letter to MDT that expressed a desire to expand the consideration of cultural resources to include "the cultural and historical values of the Badrock Canyon area as a cultural landscape." The CSKT also stated their "desire to minimize

impacts from planned construction through a process of negotiations and consultation."

Since MDT will consult with the CSKT under Section 106 of the *HISTORIC PRESERVATION ACT*, it was recognized that delays to US 2 reconstruction in this area could result unless the design for the highway in Badrock Canyon proposed in the FEIS was modified. On November 1, 2001, MDT decided to identify and evaluate design options through the Canyon that would minimize impacts to the rock outcrops. These options will include alternate alignments along with the use of cantilever or bridge structures and/or retaining walls to minimize effects to the Flathead River.

MDT will involve the CSKT in the development and review of various options to ensure that selected designs avoid or minimize impacts to features of the Canyon important to the Tribes. Analyzing new options will allow MDT to develop a design that maintains the integrity of the "cultural landscape" while minimizing impacts to the river.

Potential for New Impacts. Changing the alignment or design of US 2 in Badrock Canyon to minimize or avoid rock excavation would likely reduce impacts to the Tote Road.

Impacts to site 24FH760 from road reconstruction appear unavoidable since the site encompasses a sizable area on each side of the existing roadway in Badrock Canyon. Mitigation for impacts to the site will require an extensive data gathering and recovery effort and will be completed prior to reconstruction.
MDT will prepare a *Section 4(f)* Evaluation due to the anticipated adverse effect to 24FH760. *Section 4(f)* applies to all archaeological sites on or eligible for inclusion on the NRHP and which warrant preservation in place (including those discovered during construction). *Section 4(f)* requires that planning be undertaken to consider alternatives that would not require the use of such properties and to minimize harm to the archaeological site should adverse effects be unavoidable.

As indicated earlier in this re-evaluation, an alignment change in Badrock Canyon could minimize or avoid the excavation of rock outcrops considered "culturally significant" to the CSKT. MDT will consult with the CSKT about the potential effects of a new alignment for US 2 on cultural features in Badrock Canyon of significance to the Tribes.

Effects on Adequacy of FEIS Conclusions. Potential effects to cultural properties within the Columbia Heights-Hungry Horse corridor were generally adequately addressed in the FEIS. However, the potential effects to 24FH760 were not described in the document due to the late discovery of the archaeological site. More work is necessary to document the potential effects of US 2 reconstruction through the site. A data recovery plan will be prepared and implemented as mitigation for the unavoidable impacts to the archaeological site prior to reconstructing the highway. A *Section 4(f)* Evaluation will be prepared due to the expected adverse effect to 24FH760.

Similarly, the FEIS did not consider the "cultural landscape" issues raised by the CSKT during March 2000. New coordination will be undertaken with the CSKT regarding potential effects to the cultural landscape of the area during the evaluation of new alignments and design options for US 2 in Badrock Canyon.

6. SECTION 4(F) RESOURCES

A Final *Section 4(f)* Evaluation for this project was prepared in conjunction with the FEIS. The Final *Section 4(f)* Evaluation initially examined eleven properties located within the project corridor for their applicability to *Section 4(f)*. Of these properties, only Berne Memorial Park and the Badrock Canyon "Tote" Road (24FH583) were determined eligible for *Section 4(f)* protection according to 23 CFR 771.135(d).

The *4(f)* Evaluation provided a complete description of each property and detailed discussions of the potential impacts to each protected property. The document analyzed the effects of the "build" alternatives considered by MDT and a variety of avoidance alternatives comprised of measures to avoid or minimize effects to protected properties. The evaluation ultimately concluded that due to the extraordinary costs and environmental impacts resulting from the use of location or design alternatives that avoid Berne Memorial Park and the Badrock Canyon "Tote" Road, there are no feasible and prudent alternatives to the use of these *Section 4(f)* lands.

Several measures to minimize the impacts of highway reconstruction on Berne Memorial Park and the "Tote" Road were identified in the Final *Section 4(f)* Evaluation prepared in 1995. The mitigating measures MDT committed to are described below.

- **Perpetuation of the Spring at Berne Memorial Park.** Public use of the spring at Berne Memorial Park would be perpetuated at its present site. However, the access, parking, and internal circulation would be modified to improve traffic safety at the site.

- **Provision of Replacement Parkland.** The development of replacement parkland in the immediate corridor is proposed as a mitigating measure for impacts to Berne Memorial Park. The proposed replacement parkland would be constructed on land already acquired by MDT near the House of Mystery and would consist of a two-way circulation loop with controlled approaches on US 2 and an area to relocate roadside exhibit signs from Berne Memorial Park.

- **Development of a New River Access Site.** A new river access on the Flathead River will be jointly developed with the USFS in conjunction with the replacement parkland discussed above. This action presents an opportunity to enhance recreational use of the Flathead River for the public.

- **Acquisition of Private Lands in Badrock Canyon.** The acquisition of some 100 acres of private landholdings within Badrock Canyon was proposed to provide the necessary right-of-way for the proposed highway reconstruction, to place nearly all of Badrock Canyon in public ownership, and enhance public recreational opportunities in the Canyon.

- **Revegetation of Riparian Areas.** Fill or cleared areas adjacent to the Flathead River will be revegetated with appropriate ground cover.

- **Mitigation for Impacts to Tote Road.** MDT proposed to maintain access to the Tote Road from Berne Memorial Park and to install an interpretive marker discussing the

construction and use of the old road will be provided for pedestrians and other trail users.

Changed Conditions Since FEIS. As indicated earlier in the re-evaluation, water contamination has been apparent at the Berne Memorial Park spring since 1996. To remedy this public health concern, MDT examined the feasibility of constructing improvements to the spring system and treating the spring water. MDT ultimately concluded that treatment of the water was not feasible and that the quality of the water from the spring cannot be guaranteed for safe public consumption with the type of spring system improvements that could be readily implemented. In May 2002, MDT posted signs warning the public that water from the spring may be contaminated and that human consumption of the water is done at one's own risk.

MDT acquired private landholdings within Badrock Canyon formerly held by the Simpson Family Trust.

A late discovery of an archaeological site (identified as 24FH760) occurred within the project corridor in 1995. The site is eligible for the NRHP and subject to *Section 4(f)*.

Potential for New Impacts. Any new alignment or design for US 2 through Badrock Canyon will be evaluated relative to its impacts on the features of Berne Memorial Park and the Tote Road.
The quality of the water from the Berne Memorial Park spring was not a major concern when MDT made the commitment perpetuate public use of the spring at its present site in the FEIS and Final *Section 4(f)* Evaluation. However, continuing and unresolved concerns over contamination led MDT to "close" the spring by removing the piping that conveyed the water and placing signs advising against human consumption of water from the spring. Continued public use of the "closed" spring, traffic safety, and parking in this roadside area will be important issues for MDT's redesign of US 2 in Badrock Canyon. These issues will also be considered in a new *Section 4(f)* Evaluation since the spring is associated with Berne Memorial Park, a *Section 4(f)* property.

As indicated above, MDT will prepare a *Section 4(f)* Evaluation due to the anticipated adverse effect to 24FH760.

Effects on Adequacy of FEIS Conclusions. The properties subject to protection under *Section 4(f)* are situated in Badrock Canyon and lie within the portion of the project corridor that MDT now proposes to realign. The FEIS and Final *Section 4(f)* Evaluation completed in 1995 do not adequately discuss the impacts associated with an alignment modification intended to avoid or minimize rock excavation. In fact, such an alignment was initially dismissed from consideration because it was not a feasible and prudent alternative. Detailed preliminary designs were not completed for such an alignment shift so only a generalized discussion of the environmental impacts could be presented in the documents.

The alignment and design concept for US 2 in Badrock Canyon must be firmly established before any changes to the direct, indirect, and cumulative effects to *4(f)* properties can be accurately predicted.

The existing *Section 4(f)* document remains adequate for other properties within the Columbia Heights-Hungry Horse corridor that were considered for *Section 4(f)* applicability. These

properties include: the historic remains of a small logging operation (24FH455); two prehistoric sites (24FH453 and 24FH454); remains associated with the Frieda Wilkes Herrig/Berne homesite (24FH419); a carving on an outcrop of Badrock Canyon near Berne Memorial Park (24FH420); publicly owned multiple-use lands of the Flathead National Forest; the Flathead Recreational Waterway; the Middle Fork Recreational River (Wild & Scenic River segment); and the South Fork of the Flathead River Bridge west of Hungry Horse.

7. PEDESTRIAN AND BICYCLIST CONSIDERATIONS

The FEIS indicated that sidewalks would be provided at appropriate locations in Columbia Heights and between the new South Fork Bridge and the existing pedestrian facilities in Hungry Horse. The document also stated that the need for pedestrian crossing provisions and necessary lighting or signalization would be identified during the design of the proposed improvements.

The FEIS stated that separated bicycle paths would not be constructed with the proposed action since bicycle use of the highway corridor and accident records do not suggest the need for such facilities. Bicycle traffic would be required to use the 2.4 m (8-foot) wide shoulder of the new highway.

Changed Conditions Since FEIS. Forest Service Road Number 2861R which passes beneath the east end of the existing and proposed South Fork Bridges will be abandoned as directed by the USFS-Flathead National Forest. The USFS wishes to abandon the road but intends to maintain pedestrian use of the old facility. Therefore, a 3 m (10-foot) wide path will be perpetuated under the eastern abutment of the new bridge.

Potential for New Impacts. The alignment and highway design ultimately chosen for US 2 in Badrock Canyon must adequately accommodate pedestrian and bicycle traffic.

Effects on Adequacy of FEIS Conclusions. The FEIS adequately discussed new pedestrian and bicycle facilities and the potential effects that reconstruction of US 2 may have on these facility users.

8. JOINT DEVELOPMENT

The FEIS indicated that as mitigation for the anticipated loss of facilities and recreational opportunities at Berne Memorial Park, MDT would jointly develop a new river access with the USFS to provide replacement parkland and pursue the acquisition of private landholdings adjacent to US 2 in Badrock Canyon. The proposed river access would be constructed on land near the House of Mystery purchased through advanced acquisition procedures by MDT.

The FEIS disclosed that development of a new river access site would benefit recreational river users because it is a logical location for floaters on the Middle Fork Recreational River segment to leave the river and is easily accessed from US 2. Development of the site would result in minor changes to travel patterns within the corridor because the river access site could become a major seasonal generator of traffic on US 2. Due to the potential for substantial public use, MDT

proposed the installation of a high design intersection capable of safely accommodating turning movements and through traffic. The FEIS also cited the potential for commercial river outfitters based in the West Glacier area to use new access site as a take-out point for float trips through the Middle Fork Recreational River segment.

The proposed acquisition of private lands in Badrock Canyon provides the opportunity for lands not needed for highway right-of-way to be exchanged or transferred to the USFS. Public ownership of these lands would prohibit the development of incompatible land uses and provide new opportunities for public access to lands in Badrock Canyon.

Changed Conditions Since FEIS. MDT has completed a design for the replacement parkland area and the intersections from US 2 that would provide access to the new river access site. However, the USFS has not yet analyzed potential effects or prepared a design for the proposed public recreation site. Coordination with the USFS indicates that the agency would initiate design activities for the site when a firm construction date is known for the of the Hungry Horse-West project. The USFS desires to coordinate construction of the new river access site with the road project and has even discussed the financial benefits that could be realized if MDT's contractor also built the recreation site.
As indicated previously, MDT has purchased the Simpson Family Trust properties, a large private landholding along US 2 between Berne Road and Hungry Horse.

Potential for New Impacts. The reconstruction of US 2 as now proposed would not result in any new or previously undisclosed effects.

Effects on Adequacy of FEIS Conclusions. The FEIS identified joint development opportunities within the project corridor and provided an acceptable general discussion of their associated environmental effects. However, the specific environmental impacts of the development of a new public recreation facility on the Flathead River by the USFS cannot be determined until the agency prepares a design for the proposed river access site. The USFS will analyze all potential environmental effects associated with the development of the proposed recreation site prior to its construction.

9. RECREATION IMPACTS

The FEIS stated that the right-of-way necessary for reconstructing US 2 would encroach on the Grizzly Go-Carts and Batting Cages, a privately-owned recreation site located east of Columbia Heights. The FEIS also disclosed that lands adjacent to the Flathead Recreational Waterway would be directly affected by the removal of riparian vegetation and placement of fill in the river in Badrock Canyon.

Reconstruction of US 2 would have no notable direct effects on opportunities for dispersed recreation in the project area. However, recreational use of the Flathead River could be enhanced through the future development of a new river access by the USFS.

Changed Conditions Since FEIS. MDT's Right-of-Way plans show that a minor amount of new right-of-way is needed but no modifications would be required to the track at Go-Carts and

Batting Cages. Right-of-way has already been acquired from the owner of this parcel.

As indicated previously, has purchased the Simpson Family Trust properties, a large private landholding along US 2 between Berne Road and Hungry Horse. The acquisition the Simpson Family Trust properties provides new opportunities for public access to lands in Badrock Canyon.

Potential for New Impacts. New and previously undisclosed effects on informal recreation along the Flathead River in Badrock Canyon could result from the reconstruction of US 2 on an alignment to avoid rock excavation in the vicinity of Berne Memorial Park. Shifting the road away from the rock outcrops in the Canyon may require the use of a cantilever or bridge structures to support the highway. These structures could inhibit the ability of anglers and others to access and move along portions of the riverbank.

Effects on Adequacy of FEIS Conclusions. In general, the FEIS adequately discussed the direct, indirect, and cumulative effects to recreation sites and opportunities associated with the proposed reconstruction of US 2. However, additional analysis will be done to determine the potential effects on recreation associated with the reconstruction of US 2 on an alignment that moves the road away from the outcrops in Badrock Canyon. These effects cannot be predicted until preliminary design activities are completed to identify an appropriate alignment and construction methods for rebuilding US 2 through Badrock Canyon.

10. VISUAL IMPACTS

The FEIS described that the proposed highway reconstruction would provide a wider pavement area and expanded cleared right-of-way corridor for US 2, increasing the visual scale of the roadway. The FEIS stated that minor adverse visual effects would occur in Columbia Heights where the alignment closely follows that of the existing highway.

The FEIS indicated that the visual continuity of both treelines and landforms adjacent to the road in Badrock Canyon would be adversely affected by the proposed highway reconstruction. The FEIS disclosed that the most evident change in the appearance of the project area would occur at the extreme west end of Berne Memorial Park where an outcrop must be excavated and the existing vegetation removed. Rock cuts were expected to range from about 40 to 150 feet (12 to 45 m) in height.

The FEIS and ROD described a variety of measures to be implemented by MDT as mitigation for adverse visual impacts including:

- Implementing limited access control to help minimize the number of approaches along US 2 and improve the appearance of the corridor.
- Pursuing the acquisition of private lands to control incompatible development and maintain the natural appearance of Badrock Canyon.
- Working with the National Park Service and the USFS to develop scenic enhancement

measures that can be incorporated in the design of the new facility.

- Varying the tree line during right-of-way clearing to avoid creating a "tunnel effect" where the road passes through dense timber.

- Establishing strict construction limits and employing selective tree cutting in areas adjacent to the Flathead River to preserve visual qualities and habitat for bald eagles and other wildlife.

- Requiring prompt revegetation of areas disturbed by construction.

The FEIS also described numerous mitigating measures to offset the adverse visual effects of rock excavation in Badrock Canyon.

Changed Conditions Since FEIS. The existing landscape of the project area, affected viewer groups, and views of and from the road have changed little since the FEIS.

MDT has advanced the design of this project to include the mitigating measures committed to in the ROD.

Potential for New Impacts. The reconstruction of US 2 as now proposed would minimize or avoid rock excavation in Badrock Canyon. Realignment of the highway would result in new effects to riparian vegetation and encroachments on the Flathead River. Additional design work is required to identify and assess the significance of visual impacts that would result from an alignment shift in Badrock Canyon.

Effects on Adequacy of FEIS Conclusions. The FEIS adequately describes the visual effects associated with reconstruction along or near the existing alignment. However, the FEIS does not contain a detailed discussion of the direct, indirect, and cumulative effects to visual resources that would result from an alignment shift to minimize or avoid rock excavation in Badrock Canyon. Shifting the road further toward the Flathead River could create new and/or different visual effects than those described in the FEIS.

11. HAZARDOUS WASTE SITES

The FEIS indicated that minor amounts of right-of-way would be required from two properties adjacent to US 2 in Columbia Heights developed with gas stations. Highway reconstruction would not disturb underground storage tanks at these facilities.

The design as currently proposed would not result in any substantial change to the energy or resource impacts described in the FEIS.

There are no federal Superfund Sites in or near the project corridor.

Changed Conditions Since FEIS. Other than the closure of one of the two gas stations in

Columbia Heights, conditions relating to hazardous waste sites in the project corridor have changed little since the 1995 FEIS.

Beaver Wood Products, a business located south of US 2 and east of Columbia Heights, is listed on the *Montana Comprehensive Environmental Cleanup and Responsibility Act* (CECRA) Priority List. CECRA is the State of Montana's counterpart regulations to the federal Superfund Program. The MDEQ lists Beaver Wood Products as a high priority for remediation activities. The proposed highway reconstruction would not affect this CECRA site.

Two gas stations in Hungry Horse were investigated for leaking underground storage tanks in 1998. Only one of the stations was found to have a leaking tank. Both stations remain in operation within the community. Neither would be affected by the proposed project.

The only known sources of hazardous wastes for the proposed highway reconstruction and bridge replacement are 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 the contractor's vehicles and equipment. A slight 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.

Potential for New Impacts. As at the time of the FEIS, the proposed reconstruction of US 2 has little, if any, potential to impact hazardous waste sites.

Rebuilding US 2 on an alignment to minimize or avoid the need to excavate rock in Badrock Canyon may reduce or even eliminate the need to conduct work with explosives. The potential for hazardous constituents associated with explosives to be introduced to the environment in Badrock Canyon would be completely eliminated if no rock excavation is necessary with MDT's new alignment. However, blasting compounds would likely be required for the demolition of the piers of the old South Fork Bridge.

All work related to the proposed Columbia Heights-Hungry Horse reconstruction 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. MDT will include a special provision for contaminated soil should any such material be encountered during the highway reconstruction project. MDT's contractor(s 0 will be required to have plan for implementing appropriate measures in the event of an accidental spill. The contractor(s) 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.

Effects on Adequacy of FEIS Conclusions. The FEIS adequately discusses hazardous waste involvement and potential effects to hazardous waste sites in the project area.

12. ENERGY AND COMMITMENT OF RESOURCES

The design as currently proposed would not result in any substantial change to the energy or resource impacts described in the FEIS.

13. CONSTRUCTION IMPACTS

The FEIS described numerous direct and indirect impacts of construction activities on the physical, biological, and human environments of the project area. The document indicated such impacts would be unavoidable with the implementation of the reconstruction proposal. The following impacts were mentioned in the FEIS:

- Alteration and redistribution of surface and subsurface materials.
- Blasting to remove necessary rock in Badrock Canyon.
- Short-term decreases in water quality in the Flathead River and South Fork of the Flathead River.
- Short-term increases in the level of particulates (dust) caused by the operation of construction equipment.
- Short-term noise and vibration impacts from construction equipment.
- Removal of existing vegetation from the work area.
- Temporary displacement of wildlife species (including threatened or endangered species) that may occur in the area during the construction period.
- Temporary detours and traffic delays.
- Short-term creation of jobs and increased spending by contractors and construction workers in the Flathead County area.

Changed Conditions Since FEIS. MDT has coordinated with and provided information to the CoE, MDFWP, and USFWS about construction activities and sequencing required to build a vertical retaining wall in the Flathead River in Badrock Canyon and a new bridge across the South Fork of the Flathead.

The estimated dates for reconstruction of the corridor have been revised by MDT since the FEIS. The estimated duration of major construction activities remain similar to that described in the FEIS.

Potential for New Impacts. A realignment of US 2 in Badrock Canyon may be identified through MDT's future work that would minimize or avoid the need to excavate rock outcrops. The construction-related impacts associated with the blasting and removal of a large quantity of rock as described in the FEIS would not occur. However, such an alignment shift could result in new or different encroachments on the Flathead River because the new road may need to be supported by pilings or piers.

An alignment shift would also avoid the need for Northwestern Energy to bore through Columbia Mountain and install a temporary gas transmission line. Other accommodations for the gas line that exists adjacent to US 2 in Badrock Canyon will be identified with MDT's new design activities.

Effects on Adequacy of FEIS Conclusions. The FEIS adequately discussed the types of construction-related impacts likely to occur with the reconstruction of US 2 through the project

area. However, not all construction-related impacts can be predicted until preliminary design activities are advanced and construction methods for rebuilding US 2 through Badrock Canyon are known by MDT.

14. PERMITS REQUIRED

The FEIS indicated that the following permits and/or authorizations would be required for the reconstruction of US 2 between Columbia Heights and Hungry Horse.

- **Section 404 Permit.** The CoE must issue a permit for the proposed placement of fill along the banks of the Flathead River; the construction of piers for a new bridge over the South Fork of the Flathead River; and the project's effects on wetlands. The type of permit authorization (Nationwide, Regional, or Individual) required depends on the size and scope of the intended project.
- **Section 401 Water Quality Certification.** MDEQ must certify that any discharges into state waters will comply with certain water quality standards before federal permits or licenses can be granted. This certification must be provided to the COE by MDHES prior to the issuance of a Section 404 permit.

- **NPDES/MPDES Permit.** MDEQ would likely require a permit for dewatering of coffer dams used in the construction of the vertical retaining wall or South Fork Bridge

- **124 Permit.** The MDFWP would have to issue a permit for project-related work on the bed or banks of the Flathead River and South Fork of the Flathead River.

- **3A Authorization.** The MDEQ may need to authorize temporary exemptions from surface water quality standards for turbidity, total dissolved solids, or temperature. The Authorization may be waived by FWP during its review process under the *Natural Streambed and Land Preservation Act* or the *Stream Protection Act*.

- **Floodplain Development Permit.** A floodplain development permit will be required from Flathead County for new road and bridge construction affecting designated 100-year floodplains of the Flathead River system.

- **Memorandum of Agreement and Authorization (MAA).** This agreement between MDT and MDFWP, stipulates the provisions that will be used to maintain the quality of streams and fisheries affected by highway-related construction.

- **Temporary Water Use Permit.** MDT's contractor may need to obtain this permit from the MONTANA DEPARTMENT OF NATURAL RESOURCES AND CONSERVATION (DNRC) Water Rights Field Office if water is needed for dust control or other construction-related purposes.

- **Land Use License.** MDT must obtain a land use license from the DNRC and a permanent right-of-way for the new bridge over the South Fork of the Flathead River west of Hungry Horse.

The FEIS also described the need for other construction-related permits or authorizations including: an air quality permit for suppliers of asphalt and crushed rock; a construction blasting permit; and a permit for open burning if the activity occurs with right-of-way clearing.

Changed Conditions Since FEIS. Permit requirements described in the FEIS for the proposed project are still generally applicable. However, some agencies have implemented slight changes to their permitting procedures or use new terminology when describing permits. The items shown below summarize such changes.

> ***Mining Permit.*** - The FEIS should have mentioned that a mining permit for borrow sources may be required from MDEQ. The need for such a permit was unclear at the time of the FEIS since the excavated rock from the outcrop in Badrock Canyon could be crushed used as a source for road building material.
> ***Section 402 Permit.*** The proposed project would be required to comply with the *Clean Water Act* **(33 U.S.C. 1251 - 1376)** - *Section 402/*Montana Pollutant Discharge Elimination System (MPDES). Accordingly, MDT would notify the MDEQ of the intent for the proposed project to be covered under the General Permit for storm water discharges associated with construction activity. MDEQ may also require a MPDES Dewatering General Discharge Permit.
>
> ***318 Authorization*** - This proposed project would require a Short-Term Water Quality Standard for Turbidity Related to Construction (*318 Authorization*) under **75-5-318, M.C.A.** from the MDEQ Permitting and Compliance Division.

Further coordination with issuing agencies will occur as designs for the proposed highway reconstruction and bridge replacement are advanced. MDT has coordinated the proposed Columbia Heights-East and Hungry Horse-West projects with the USFWS, the CoE, and the MDFWP. Favorable discussions have occurred with these agencies about the issuance of permits for MDT's Columbia Heights-East project and for the replacement of the South Fork Bridge (a part of MDT's Hungry Horse-West project). This discussion was initiated since the designs for these aspects of corridor reconstruction will be completed well ahead of the design work required for any realignment of US 2 in Badrock Canyon.

15. OTHER MDT PROJECTS IN THE AREA

Projects under construction, planned, or recently completed by MDT in the Columbia Heights area were reviewed for this re-evaluation to help assess the potential for additional cumulative impacts. According to the Final Version of the *2002-2004 Statewide Transportation Improvement Program* (STIP) issued in September 2001 and the Draft 2003-2005 STIP issued in June 2002, MDT currently has three planned projects on US 2 in the vicinity of the Columbia Heights-Hungry Horse project corridor. These active and planned projects are described below:

- **Hungry Horse-West Glacier; SFCN-STPHS 1-2(105) 14; Control No. 4271** - a planned overlay and seal and cover project on 11.0 miles (7.73 km) of US 2 between Hungry Horse and West Glacier. The project will be constructed during Fiscal Year

2002. This project begins immediately east of the Columbia Heights-Hungry Horse corridor.

- **Signal-Columbia Heights; NH 1-2(107) 138; Control No. 4578** - a planned project to improve the existing flashing signal at the intersection of US 2 and Secondary Highway 206. The STIP identified this project as being in the right-of-way and incidental construction phase. Completion of the project is shown during Fiscal Year 2003.

- **Columbia Falls-North; SFCS 486-1(6) 2; Control No. 4284** - a planned resurfacing project on 10.5 miles (16.9 km) of Montana Secondary Highway 486 north of Columbia Falls. The project is planned for construction in Fiscal Year 2004. This project begins about 5 miles (8 km) north of the Columbia Heights-Hungry Horse corridor.

Major highway reconstruction projects are underway and in development for US Highway 93 North in the Kalispell area and on US 2 between Kalispell and Libby. Together with the planned reconstruction projects in the Columbia Heights-Hungry Horse area, expectations are for a notable amount of highway-related work to occur in Flathead County in the foreseeable future.

At this time, it does not appear that the reconstruction of US 2 between Columbia Heights and Hungry Horse would occur at the same time as other major highway reconstruction projects in this portion of Flathead County. On this basis, the potential for other cumulative effects would appear to be low.

Although the Columbia Heights-Hungry Horse projects and other major reconstruction projects on US 2 and Highway 93 occur in this portion of Flathead County and would likely be implemented relatively close together, the planning, design, and construction of each project could proceed (and in many instances has proceeded) independently. Implementing the Columbia Heights-East and Hungry Horse-West projects would not trigger the need for improvements to other adjoining segments of the road system. Likewise, implementation of other road projects in this portion of Flathead County would not require that US 2 be rebuilt from Columbia Heights to Hungry Horse.

MDT will 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 adverse effects as projects are developed and implemented.

16. OTHER PLANNED PROJECTS IN THE AREA

Projects planned by other agencies and private developers in the vicinity of the Columbia Heights-Hungry Horse corridor were also reviewed to help assess the potential for cumulative impacts.

Flathead National Forest Projects. The USFS administers much of the land south of US 2 between Berne Road and Hungry Horse and US 2 crosses land within the Flathead National Forest. Contacts were made with the USFS (Fred Flint-Hungry Horse/Glacier View Ranger District) to determine planned projects on Flathead National Forest lands in the vicinity of the

Columbia Heights-Hungry Horse corridor. Projects planned by the USFS are described below.

- **Moose Post-Fire Project.** The USFS is in the midst of preparing a Draft EIS for timber salvage and restoration activities on about 35,000 acres (14,160 hectares) of Flathead National Forest lands burned during 2001 by the Moose Fire. This Moose Fire burned over 71,000 acres (28,733 hectares) in an area encompassing land within the Flathead National Forest, the Coal Creek State Forest, private lands, and Glacier National Park. The southern boundary of the burn area is located about 10 miles (16 km) north of Columbia Falls.

  The Moose Post-Fire DEIS will examine the effects of activities proposed by the USFS to: decrease potential mortality from bark beetles to remaining live Douglas-fir and spruce trees within and outside the Moose Fire area; recover merchantable trees; and reduce future fire risk in the fire area. Public meetings for the DEIS are presently underway.

- **Hungry Horse-Glacier View Fuels Project.** The USFS has initiated work on a fuels reduction project on Flathead National Forest in the West Glacier area. The environmental analysis work for this proposed project to reduce the risk of fire is underway but a decision on the proposal is not expected until late 2003.

The projects planned by the USFS have little, if any, possibility to result in new cumulative effects due to the distance from the Columbia Heights-Hungry Horse corridor.

NPS-Glacier National Park Projects. The NPS has long-range plans to rehabilitate the Going-to-the-Sun Road and presently has several projects in development within the Apgar-West Glacier area located about 15 miles (24 km) north of Hungry Horse. These projects, identified from public notices and the agency's website, are summarized below:

- **Going-to-the-Sun Road Rehabilitation/Restoration.** Glacier National Park is in the midst of planning for the rehabilitation and restoration of the Going-to-the-Sun Road. In FY 1999, $1 million was authorized as part of the Congressional House Bill H11485 for an engineering study and socioeconomic analysis of the Going-to-the-Sun Road and the formulation and administration of the Going-to-the-Sun Road Advisory Committee. To date, the engineering study of alternatives for rehabilitating the road and the socioeconomic analysis for the proposed rehabilitation have been completed.

  In November 2001, the Advisory Committee recommended a "Shared Use" approach employing an extended construction season to accomplish critical work associated with rehabilitating the historic Going-to-the-Sun Road. The Committee believes the approach provides acceptable visitor use and effective construction access to the Going-to-the-Sun Road at a reasonable cost to the public. The Advisory Committee's recommended approach would take between seven and nine years to complete at an estimated cost of between $126 and $155 million.

  Glacier National Park must still prepare an EIS for the proposed Going-to-the-Sun Road plan. The EIS will serve as the decision document for the rehabilitation/ reconstruction of

the Going-to-the-Sun Road including engineering and construction as well as any transportation visitor use or socio-economic enhancements. The EIS will analyze the environmental effects of the Advisory Committee's recommended alternatives and other alternatives considered. The NPS anticipates releasing a draft Going-to-the-Sun Road Rehabilitation Plan/EIS for public review and comment by fall 2002.

- **Water System Rehabilitation for Apgar and NPS Headquarters.** The NPS recently signed a Finding of No Significant Impact (FONSI) on the Environmental Assessment for a project to improve the water system serving Apgar and the NPS Headquarters at West Glacier. The project would improve the water source (Rubideau Spring), convert the existing distribution system to a fully pressurized system, provide new distribution pipelines throughout the service area, and construct an additional storage tank. The NPS estimates that completion of the water system upgrade project would require 12 months of construction time over an 18-month to 24-month period.

- **Stabilization and Rehabilitation of the Belton Bridge.** The NPS also recently signed a recently signed a FONSI on the Environmental Assessment for a project to rehabilitate the historic Belton Bridge that crosses the Middle Fork of the Flathead River approximately 0.5 miles (0.8 km) east of Glacier National Park Headquarters in West Glacier. The Belton Bridge was originally constructed in 1920 and is currently used as a pedestrian bridge only providing access to hiking trails in the area.

- **West Entrance Station Improvements.** In July 2001, Glacier National Park released an Environmental Assessment for a proposed project to modify the West Entrance Station to improve the flow of traffic, visitor experience, and the working environment for park employees. The West Entrance Station is located in the center of the Park entry road about one mile (1.6 km) north of West Glacier near the Park Headquarters. The West Entrance Station is the primary entrance to the park from the west and receives heavy use during the summer months. The existing lane configuration at the entrance station is often insufficient to handle traffic volumes during peak summer months due to the narrow approach to the entrance station, which causes lengthy vehicle backup.

Of these NPS projects, only the Going-to-the-Sun Road rehabilitation offers the potential for new cumulative effects due to the anticipated duration of the proposed work and potential for regional socioeconomic impacts. Many of the alternatives for rehabilitating the Going-to-the-Sun Road to be considered in the EIS involve temporary or extended road closures. The socioeconomic impact studies already completed for the Going-to-the-Sun Road rehabilitation identified several critical concerns regarding visitation to the park (and to the region) including: reduced or flat visitation during and after construction; potential loss of income for local businesses; and potential economic effects on rest of Montana, the Inland West, and southwest Alberta.

US 2 serves as the principal access route for visitors to Glacier National Park and periods of high traffic volumes on US 2 within the Columbia Heights-Hungry Horse project area typically coincide with peak visitation periods within the Park. If visitation to the Park falls while the Going-to-the Sun Road is reconstructed or remains stable after construction, it is reasonable to expect that traffic volumes on US 2 within the project area may be similarly affected during and

after reconstruction of the Park road. Such traffic fluctuations, should they occur, would be a relatively short-term condition and may be negligible if strategies by the NPS and local economic development agencies are successful in bringing visitors to other areas of the Park and to the Flathead Region.

The reconstruction approach recommended by the Going-to-the-Sun Road Advisory Committee would result in short delays for traffic on the road throughout peak visitation periods and close the road for only about 20 working days during in September and October of each year. The Going-to-the-Sun Road EIS must consider the effects of road closures on the local and state road system near Glacier National Park.

Private Projects in Flathead County. No major new residential and commercial development proposals exist for lands in or near the Columbia Heights-Hungry Horse corridor. The majority of new development within Flathead County is occurring and planned for the Kalispell and Whitefish areas and other rural areas of the County. Notable current and future development projects in the County include:

- The completion of a new $75 million thin medium-density fiberboard line to the existing plant at the Plum Creek Timber Company in Columbia Falls with 20 new employee positions.

- A development for 300 home sites with an assisted-living complex and a small shopping-office center has been approved for a site near the intersection of Highway 93 and Montana Highway 40, located about 10 miles (16 km) west of the project area.

- The Mountain View Plaza, with Home Depot and Target stores, is under construction at the intersection of Highway 93 and Reserve Drive in Kalispell.

- A 750,000-square foot shopping mall proposal in Evergreen, located on the northeast edge of Kalispell. If approved, the mall would be the largest commercial center in Montana.

- Business park development on "Section 36" school trust land on Highway 93 at the north edge of Kalispell.

Due to the distance from the Columbia Heights-Hungry Horse project area and unlikely possibility of these projects coinciding with highway reconstruction activities, the identified projects would have little, if any, possibility to result in new cumulative effects.

CONCLUSIONS AND RECOMMENDATIONS

CONCLUSIONS AND RECOMMENDATIONS

As discussed at the beginning of this document, the reasons for conducting this re-evaluation were to assess the adequacy of the Columbia Heights-Hungry Horse FEIS and to determine whether or not a Supplemental EIS is required for all or only part of the project corridor. This re-evaluation updates environmental conditions within the Columbia Heights-Hungry Horse corridor and assesses whether or not MDT's current reconstruction proposal has the potential for causing significant environmental effects not identified in the FEIS.

This re-evaluation effort shows that the purpose and need for reconstructing US 2 between Columbia Heights and Hungry Horse described in the FEIS remain valid. Flathead County continues to be one of Montana's fastest growing areas, both in its population and economy. Traffic volumes have continued to increase at a rate slightly lower than anticipated in the 1995 FEIS. Accident rates in the corridor remain above statewide averages for other NHS Primary Routes. To accommodate the continuing increases in traffic, the facility needs reconstruction to enhance its capacity, operational efficiency, and safety. Analyses again verified that only a four-lane roadway configuration would provide the desired level of service within the corridor.

For ease of design and contracting, MDT divided the corridor into projects identified as Columbia Heights-East and Hungry Horse-West. In the years since the approval of the FEIS, project development activities for these projects corridor have allowed several environmental effects to be more accurately quantified. However, the anticipated environmental effects remain generally as described in the 1995 FEIS.

In November 2001, MDT determined that a significant change in the planned reconstruction of US 2 may be necessary within the Badrock Canyon section of the project corridor. MDT's decision will require that new alignment and road design options be investigated in an effort to minimize or avoid the excavation of rock outcrops in the Canyon. The high costs and environmental impacts of proposed temporary gas line relocation, the potential impacts on cultural sites of the CSKT in the rock outcrops of Badrock Canyon, and continued public opposition to rock excavation were the principal factors that led MDT to the decision to re-evaluate the alignment and proposed design for US 2 in Badrock Canyon.

Based on the new information obtained and reviewed for this re-evaluation, MDT reached the following conclusions.

CONCLUSION 1: ***The FEIS adequately describes the impacts associated with US 2 reconstruction within the limits of the Columbia Heights-East* project.**

The Columbia Heights-East project area has few sensitive resources and the anticipated environmental effects associated with US 2 reconstruction described in the FEIS are relatively minor. Except for the fundamental disagreement with the need for upgrading this corridor from a two-lane to a four-lane highway, all of the potentially significant environmental resources and controversy associated with reconstruction of US 2 between Columbia Heights and Hungry

Horse relates to resources or issues in Badrock Canyon.

The re-evaluation shows that environmental conditions within the Columbia Heights-East project area have changed little since the time of the FEIS. This document also shows that no new and/or previously undisclosed impacts would result from the construction of US 2 in the project area.

Design plans for the Columbia Heights-East project are essentially complete. MDT has already acquired the necessary right-of-way from all but three property owners within the project area. MDT has not yet obtained all necessary environmental permits, but this project is on schedule to be let for construction in early 2003. Based on the findings of this re-evaluation, there are no reasons for not proceeding with the proposed reconstruction project.

CONCLUSION 2: ***The FEIS adequately discusses the environmental effects of building a new bridge across the South Fork of the Flathead River.***

The condition of the bridge has continued to deteriorate since the FEIS and the need for replacing the structure is high. Other than the listing of the bull trout by the USFWS, environmental conditions in the vicinity of the South Fork of the Flathead River have also not substantially changed since the 1995 FEIS. Preliminary design activities have been completed based on the concepts for the crossing described in the FEIS. Since a detailed preliminary design for the required structure was not prepared, the FEIS discussed the environmental effects of building a bridge only in "general" terms. The FEIS presented few specifics about the bridge's design or pier configuration because considerable amounts of hydraulic, subsurface testing, and structural design are typically required to generate such information.

There is also no need to reconsider the bridge's need to accommodate four travel lanes. All build alternatives considered in the FEIS included four-lane structures on an alignment similar to what's currently being proposed.

The work remaining for the South Fork Bridge involves design-related activities and further coordination with permitting agencies and the USFWS regarding the selected design and its effects on aquatic resources and bull trout. The issue of primary importance with the design of the structure relates to the number of piers in the river and span lengths. Coordination with environmental permitting agencies will ensure that effects to the aquatic environment and bull trout are minimized. Continued coordination activities (including the preparation of a Supplemental BA and likelihood of reinitiating formal consultation with the USFWS) will be undertaken to establish timing restrictions or other mitigating measures for potential adverse water quality and fisheries impacts.

MDT has evaluated a minor alignment modification for US 2 on the east approach to the bridge that would place the road slightly further away from several homes. The alignment change would also require a minor adjustment to the location of the new bridge across the South Fork of the Flathead River. However, the resulting environmental effects would not change from those generally described in the FEIS or already known to MDT.

CONCLUSION 3: ***The FEIS does not adequately discuss the environmental effects of reconstructing US 2 through Badrock Canyon on an alignment that minimizes or totally avoids rock excavation near Berne Memorial Park.***

The FEIS considered an alignment shift in Badrock Canyon that would avoid rock excavation and impacts to most features of Berne Memorial Park. Three location alternatives for US 2 in Badrock Canyon were presented in Part II of the FEIS (see **Figure II-8**); however, building US 2 on an alignment to avoid the park (and rock excavation) was dropped from consideration primarily because of the associated high construction cost. Other reasons for eliminating this alignment included the extensive construction required in the Flathead River and adverse impacts to riparian vegetation and wetlands.

The FEIS also included a discussion of possible design modifications (steepened embankments, gabions, retaining walls, cantilevers, and structures supported by piers) that could be incorporated with the proposed highway design in Badrock Canyon. The document identified ten design alternates for reconstructing US 2 near Berne Memorial Park that incorporated such measures and presented the results of study of the costs and environmental effects of each option.
These design alternates were developed and analyzed as measures that could be incorporated with MDT's "Preferred Alignment" as ways to minimize the encroachment on the Flathead River over the initial fill proposal presented in the Draft EIS. As a result of MDT's design study, all design modifications in Badrock Canyon except for a vertical retaining wall were eliminated from the build alternatives analyzed in the FEIS.

The Final *Section 4(f)* Evaluation included a lengthy discussion of an "avoidance alignment" for US 2 that would minimize impacts on Berne Memorial Park and the Badrock Canyon Tote Road. The Final *Section 4(f)* Evaluation presented a figure (**Figure V-4**) showing the avoidance alignment and described how the road would have to be shifted toward the river and supported by cantilever or bridge structures and retaining walls since much of the new roadway would be directly above the river or its banks. The associated environmental effects of the avoidance alignment were also generally discussed in the Final *Section 4(f)* Evaluation. The Final *Section 4(f)* Evaluation concluded that alignment shifts in Badrock Canyon were not "feasible or prudent" means to avoid impacts to Berne Memorial Park and the Badrock Canyon Tote Road.

Therefore, while MDT did consider an alignment to avoid rock excavation in Badrock Canyon, such an alignment was never advanced as part of any of the build alternatives and was not fully analyzed in the FEIS.

PHOTO PLATE 4 shows the riparian area that would be affected by a realignment of US 2 in Badrock Canyon.

Berne Memorial Park spring. Continued public use and access to the spring are issues that must be considered in the SEIS for U.S. 2 in Badrock Canyon.

Photo of riparian area opposite Berne Memorial Park that could be affected by an alignment shift for U.S. 2.

PHOTO PLATE 4

CONCLUSION 4: ***Due to the potential for significant environmental effects not disclosed in the FEIS, a Supplemental EIS (SEIS) must be prepared for the Badrock Canyon section of the project corridor.***

Previous sections of this re-evaluation have described in detail the changed environmental conditions and the potential for new and previously undisclosed impacts to occur if US 2 is reconstructed on a new alignment through Badrock Canyon.

23 CFR 771.130(a) states that "… An EIS shall be supplemented whenever the Administration determines that:

(1) Changes to the proposed action would result in significant environmental impacts that were not evaluated in the EIS; or

(2) New information or circumstances relevant to environmental concerns and bearings on the proposed action or its impacts would result in significant environmental impacts not evaluated in the EIS.

It is apparent that shifting the alignment of US 2 away from Berne Memorial Park and the rock outcrops of the Canyon would likely result in new and unanticipated encroachments on the Flathead River. The extent of such encroachments and their potential effects to water quality in the Flathead River, wildlife and fisheries, wetlands, and base flood elevations is unknown. An accurate assessment of such effects and their significance can only be made after new work is done to identify appropriate alignments and road designs. Encroachment on the river presents the potential for causing significant adverse effects to bull trout because the river contains migratory and resident fish and provides important habitat for this federally-listed species.

Shifting the alignment of US 2 in Badrock Canyon has the strong likelihood of reducing adverse effects to a variety of environmental resources and a new design may be developed that better addresses public concerns in the project area. However, viable alignment and design options need to be identified before any modified reconstruction proposal in Badrock Canyon can be evaluated for changes to visual resources, cultural resources, and Berne Memorial Park and other *Section 4(f)* sites. These items are highly important to various segments of the general public and new work must be done to determine how a new alignment and design each of these resources as compared to the reconstruction proposal advanced in the FEIS.

The recommendation then is to prepare a SEIS only for a portion of the Hungry Horse-West project within Badrock Canyon. This is consistent with 23 CFR 771.130 (f) that says,

> "In some cases, a supplemental EIS may be required to address issues of limited scope, such as the extent of proposed mitigation or the evaluation of location or design variations for a limited portion of the overall project."

Logical beginning and ending points for a future Badrock Canyon SEIS have been established at Project Stations 167+05 and 197+00, respectively, within the Hungry Horse-West project. The

approximate limits proposed for the SEIS are shown on **FIGURE 3**. This portion of the Hungry Horse-West project was selected for the following reasons:

1) Station 167+05 is the ending station for the Columbia Heights-East project and the beginning Station for the Hungry Horse-West project.

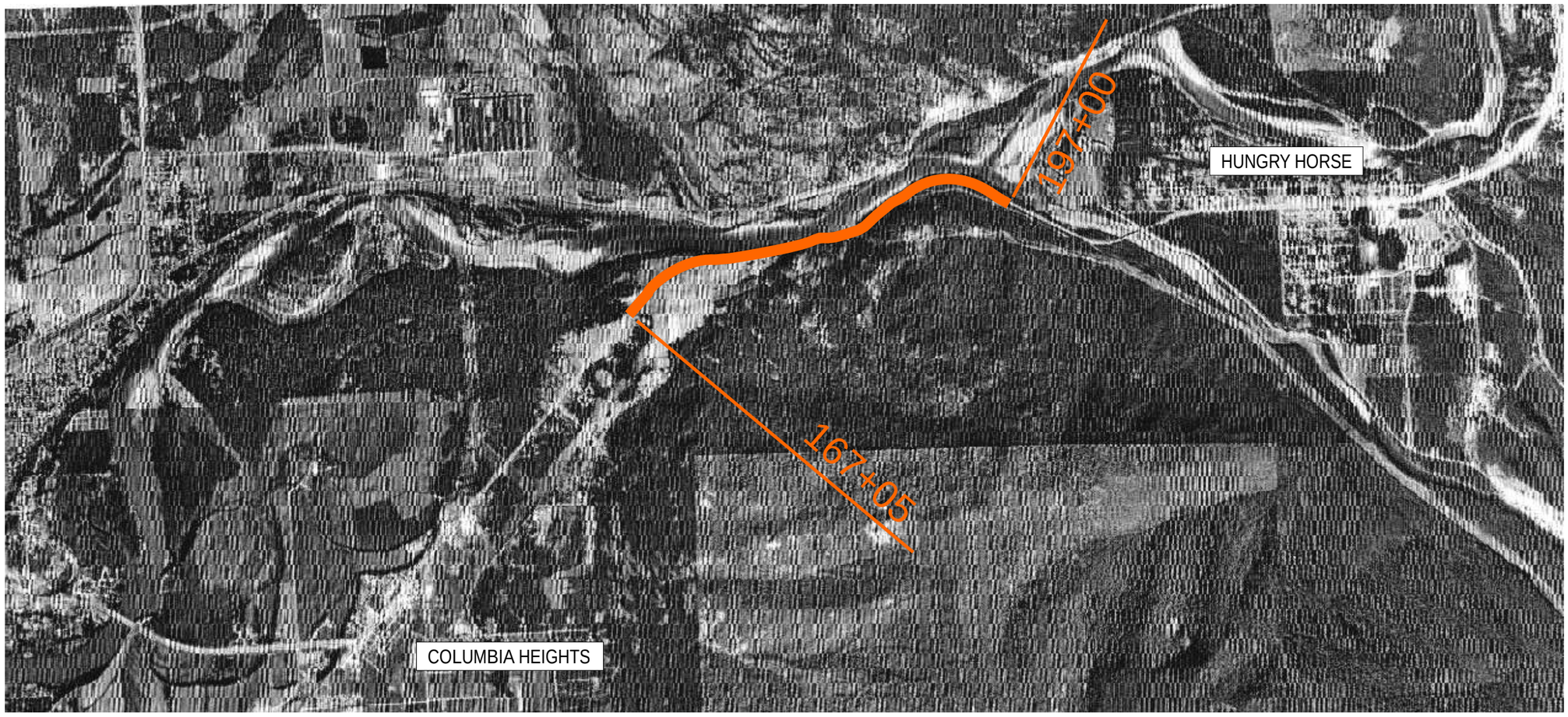
2) The project stations are located on tangent (straight) sections of US 2 on either side of the proposed SEIS area. This will allow road designers the most flexibility in establishing a new alignment for the road and transitioning to and from horizontal curves.

3) These stations do not preclude MDT's ability to implement any design change required to the project (including a two-lane design through the Canyon if such a decision were made for any reason).

4) The purpose and need for a SEIS for US 2 in Badrock Canyon would the same -- rebuild a deteriorating traffic facility to current design standards, enhance traffic safety and capacity, and provide continuity in design between adjoining portions of US 2. However, due to changed environmental conditions, MDT must examine new alignment and design options for a relatively short section of the corridor that are different from the alternatives presented in the FEIS.

A FHWA memo ("Development of Logical Termini" dated November 5, 1993) says that in "developing a project concept which can be advanced through the stages of planning, environment, design, and construction, the project sponsor needs to consider a "whole" or integrated project." The memo continues, "related improvements within a transportation facility should be evaluated as one project, rather than selecting termini based on what is programmed as short-range improvements. The FEIS and this re-evaluation have fully considered the effects of reconstructing US 2 between Columbia Heights and Hungry Horse.

The FHWA's Memo also goes on to state that, "choosing a corridor of sufficient length to look at all impacts need not preclude staged construction." Construction may then be "staged," or programmed for shorter sections or discrete construction elements as funding permits." MDT has continued to advance the design of the Columbia Heights-East and Hungry Horse-West projects and MDT's intention has been to rebuild the corridor as soon as practical and as funding allows. Advancing the Columbia Heights-East project, building a new bridge across the South Fork, and developing and implementing a new reconstruction proposal for US 2 in Badrock Canyon is consistent with this FHWA guidance.



Project Area To Be Addressed in SEIS

FIGURE 3:
PROPOSED SEIS PROJECT LIMITS