Chapter 2.0: Alternatives

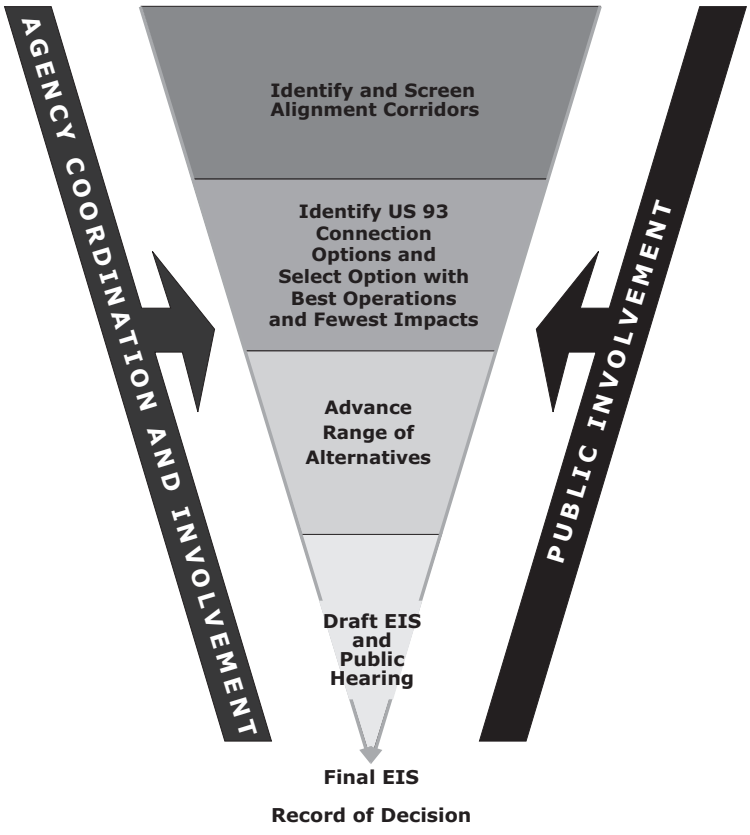
2.1 Introduction

The National Environmental Policy Act (NEPA) of 1969 requires that a reasonable range of alternatives, including a No-Action Alternative, be presented and objectively evaluated in detail in an Environmental Impact Statement (EIS). The Council on Environmental Quality (CEQ) has described reasonable alternatives as those that are practical and feasible from a technical and economic standpoint and that achieve the purpose and need for the proposed action.

This chapter describes the process used to identify and evaluate a reasonable range of alternatives for the Miller Creek project area and provides the criteria used to assess each of the alternatives. The following steps were taken to develop and evaluate alternatives:

- **Definition of Purpose and Need Statement**: The project purpose and needs were identified in the early project scoping process based on public and agency input. Based on public input and project scoping, the original purpose and need statement was revisited and it was determined that the statement contained text that narrowly limited the range of alternatives to construction of a bridge. The revised purpose and need resulted in a broader range of alternatives to be identified and evaluated in this FEIS. This is defined in Chapter 1.
- **Develop Goals and Evaluation Criteria**: Early agency coordination and public involvement identified project issues, opportunities, and constraints. Local, state, and federal agencies, along with the project team, developed goals and evaluation criteria.
- **Transportation Analysis**: The analysis compared existing conditions to a future year 2025 No-Action Alternative. Build alternatives were then compared to the No-Action Alternative to determine the potential benefits and impacts that could result from each. Evaluation criteria were refined to address the transportation issues that were identified in the transportation analysis.
- **Social, Economic, and Environmental Data Collection**: Information was collected for the project area through field investigations; research of existing, available data; and coordination with local, state, and federal agencies and tribal organizations.

Figure 2-1
Alternatives Screening Process



- **Alternatives Development and Screening Process**: The process to develop and screen alternatives is depicted in **Figure 2-1**. Alignment corridors were identified and screened, and US 93 connection options were developed and combined with the advanced alignment corridors to develop the comprehensive range of alternatives. A comparative evaluation was conducted to identify the US 93 connection option that had the fewest impacts and that would have more desirable operations for each alignment corridor. Four build alternatives (three of which are a combination alternative) and the No-Action Alternative were advanced and are analyzed in Chapter 4.0 of this Final Environmental Impact Statement (FEIS).

2.2 Project Goals

The project goals are defined as:

- Provide a transportation solution for efficient and safe access between US 93 and the Miller Creek area, including access to US Forest Service System lands.
- Maintain or improve future operations of US 93.
- Create a transportation solution that is long term and consistent with area comprehensive and transportation plans and accommodates planned growth within the Miller Creek area.
- Design an economically and environmentally responsible project.
- Preserve and enhance the character of the neighborhood.

More detail on the issues identified to develop the project goals can be found Section 5.3.4, page 5-5.

2.3 Development of Evaluation Criteria

The following questions, based on the project goals and purpose and need, comprised the major categories of evaluation criteria. The evaluation criteria were developed at the May 20, 2003, Social Economic and Environmental (SEE) Team meeting. More detail on the role and members of the SEE Team is included in Chapter 5, Section 5.2.4, page 5-3.

- Does the alternative meet purpose and need?
- Is the alternative safe?
- Is the alternative consistent with local plans?
- Will the alternative provide an environmentally responsible transportation solution?
- Will the alternative minimize impacts to the character of the neighborhood?

2.4 Corridor Development and Screening Process

This section provides a description of the general setting of the project area, the initial range of nine corridors, the alignment corridors that were advanced for further analysis, and those that were dismissed. Local land use and transportation plans were considered during development of the corridors and resulting alternatives. For those alignments dropped from further analysis, the reasons why they were dismissed are included in **Table 2-1, page 2-7**. Twelve build alternatives were developed from these alignments and screened against evaluation criteria comprised of project goals and the purpose and need. This second screening process is documented in **Table 2-2, page 2-13.**

The No-Action Alternative was fully assessed and used as a baseline against which the build alternatives were evaluated. In addition, the No-Action Alternative assumed completion of those

transportation and infrastructure projects that already are in progress, or are programmed by FHWA, the Montana Department of Transportation (MDT), Missoula County, or the City of Missoula. These include the projects described in Section 4.23.2, page 4-162.

2.4.1 Corridors Development and Screening

Six alignment corridors that would provide access between US 93 and the Miller Creek area were initially identified. The alignments were chosen based on the horizontal and vertical alignment of US 93 between Buckhouse Bridge and Hayes Creek Road, where the adjacent terrain was generally favorable for making a connection to US 93, and in consideration of existing and future development of the Miller Creek area. Additionally, based on public input the Gharrett Street Connector (a proposed connection using Gharrett Street to access 39th Street and Reserve Street from Miller Creek Road), the Orchard Street Connector (similar to the Gharrett Street Connector but utilizing Orchard Street), and Miller Creek Road corridors were added to the list of corridors.

These nine corridors are depicted on **Figure 2-2**:

- Lolo South
- South Lower Miller Creek
- Maloney Ranch
- Blue Mountain
- North Lower Miller Creek
- Linda Vista
- Gharrett Street Connector
- Orchard Street Connector
- Miller Creek Road

To enhance connectivity within the Miller Creek area, existing and future planned development were considered in defining and evaluating the alignment corridors. South and east of the Bitterroot River, about one-third of the land within the Miller Creek area is actively used agricultural/ranch land. The remaining land is developed or planned for development with residential neighborhoods comprised of single-family residences (see **Figure 2-3**). The Linda Vista Golf Course and privately owned open space used as hunting grounds and retriever club are located northeast of Linda Vista Boulevard. In the area south of Miller Creek, much of the land is undeveloped, but there are plans for future development. Commercial development is located north of US 93, east and west of Blue Mountain Road. Commercial development is also scattered along US 93 between the highway and the Bitterroot River.

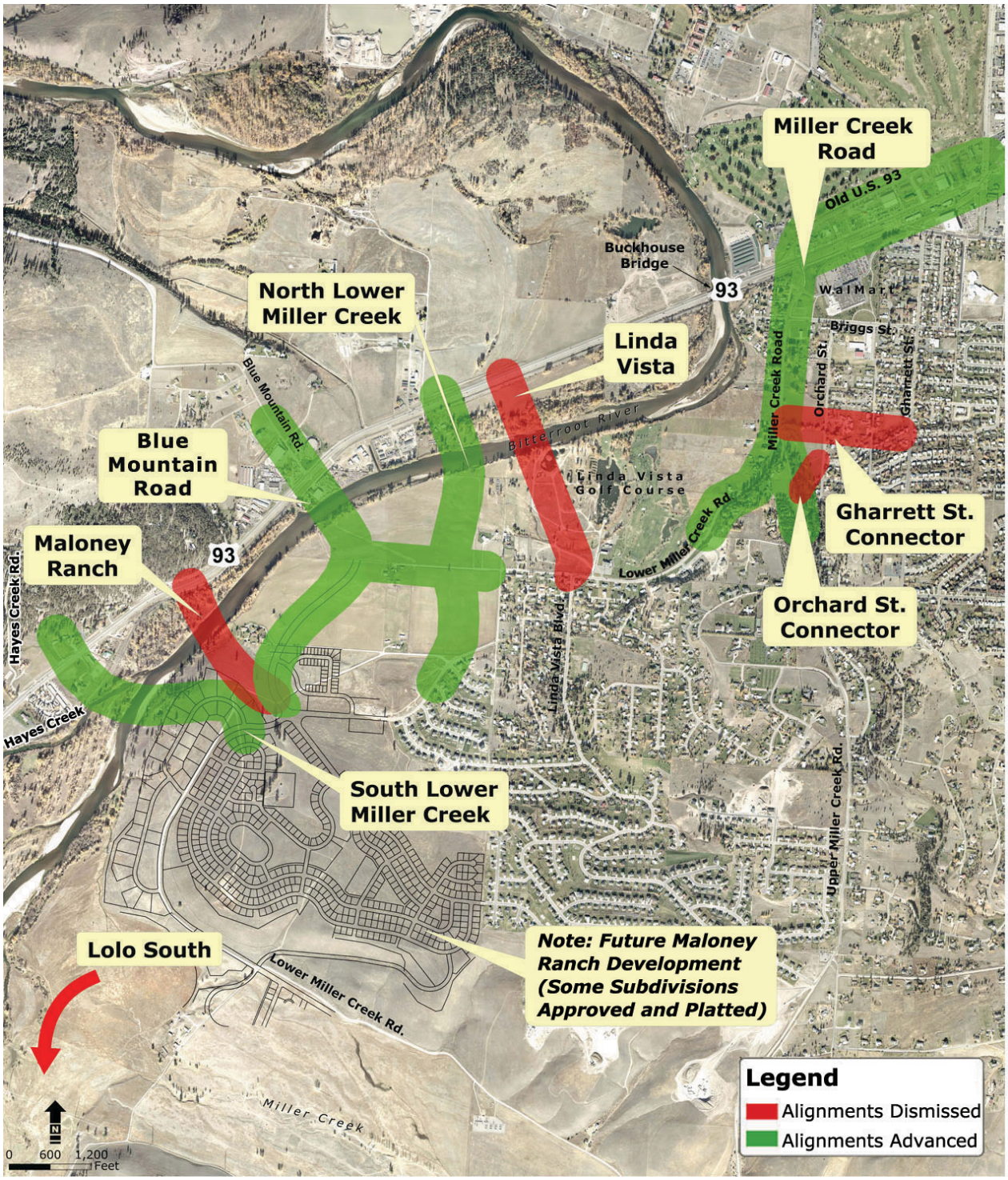
2.4.2 Corridor Screening

2.4.2.1 Alignment Corridors Dismissed[1]

Each of the nine corridors were evaluated against the project purpose and need and project goals described in Section 2.2. **Table 2-1, page 2-7** describes the summary of the evaluation process used to screen the nine corridors. The screening process was conducted with input from public workshops and the SEE Team and Interdisciplinary (ID) Team (see Section 5.2.3, page 5-1, for details on the role and members of the ID Team). The screening process evaluated alternatives for each of the criteria using a qualitative evaluation rating system of "acceptable," "adequate/fair," to "unacceptable/fatal flaw" condition. If a corridor was rated with an "unacceptable/

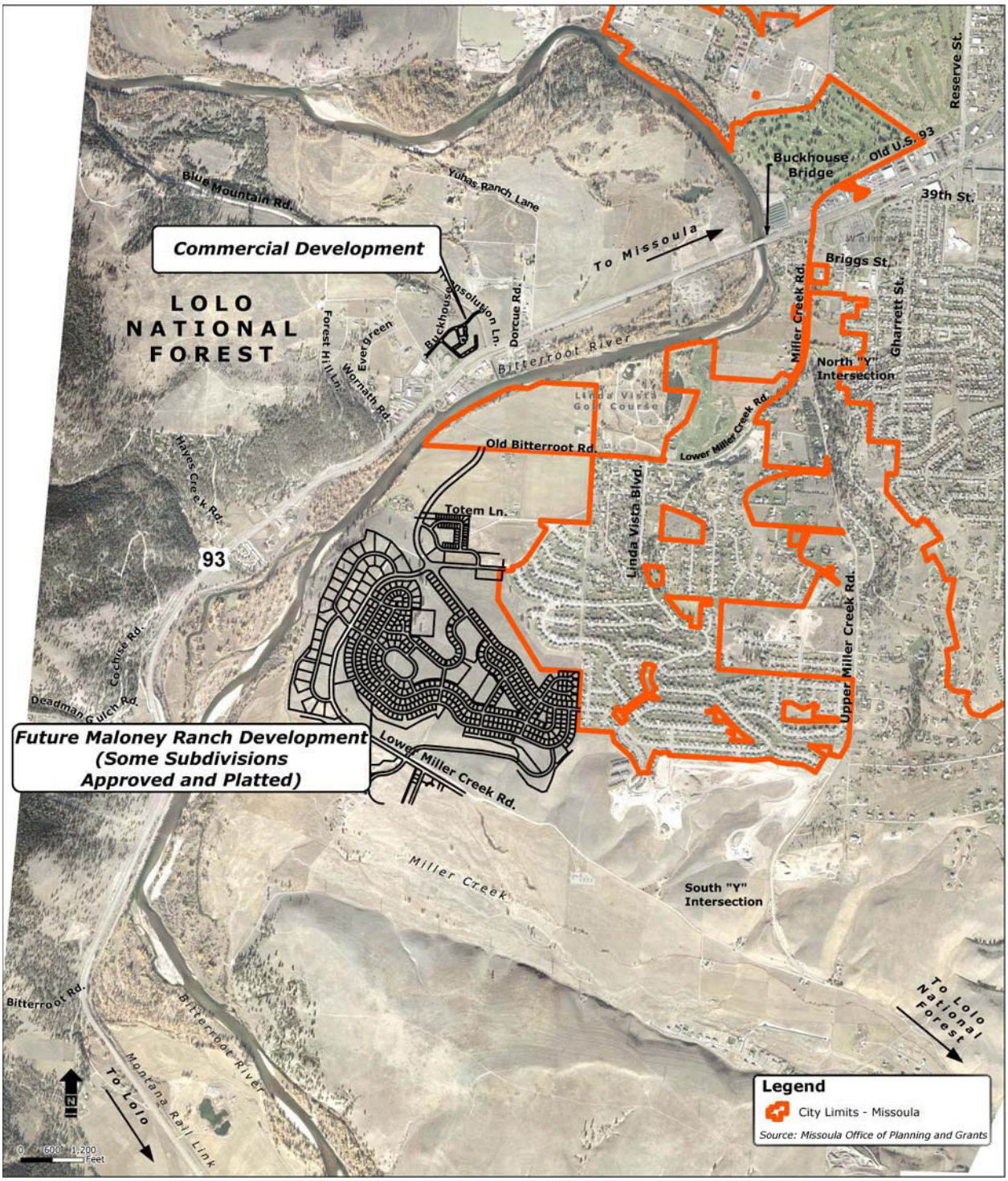
1. Detail on this phase of the screening process can be found in the *Transportation Analysis Technical Report* (November 2004 and amended March 2006) and Table 2-1 of this FEIS.

Figure 2-2
Initial Alignment Corridors



**Note that more development has occurred in this area since this aerial photo was taken.*

Figure 2-3
Existing Land Use and Future Development Plans



**Note that more development has occurred in this area since this aerial photo was taken.*

fatal flaw" condition (red oval), then it was dismissed from further consideration. The following alignment corridors were dismissed from further consideration because of a fatal flaw or unacceptable condition. The ovals depicted in **Table 2-1** were not quantified.

- Lolo South
- Maloney Ranch
- Linda Vista
- Gharrett Street Connector
- Orchard Street Connector

2.4.2.2 Alignment Corridors Advanced

The following alignment corridors were advanced for additional design development and environmental screening. The following discussion details opportunities, constraints, and other considerations identified in the evaluation of these alignment corridors (see **Figure 2-2, page 2-4; Figure 2-12, page 2-28** to **Figure 2-18, page 2-35;** and **Table 2-1**).

- **North Lower Miller Creek:** The North Lower Miller Creek corridor would provide access between US 93 and the Miller Creek area with a new road and a new bridge over the Bitterroot River. An approximate 70-foot-wide corridor would be needed for a new two-lane road with bicycle lanes and sidewalks. The new road would extend north from the junction of Maloney Ranch Road and Lower Miller Creek Road and cross over the Bitterroot River to a new intersection with US 93. This corridor would provide the most direct new connection to US 93 for the currently developed areas of Miller Creek area.

  The new intersection on US 93 would occur in an area that is currently underdeveloped, reducing impacts to residential and commercial properties along US 93. The southern connection would occur in an area that is currently developed. Widening of local roads and Lower Miller Creek Road would be required at the new intersection and could impact existing homes with property frontage on these roads.

- **Blue Mountain Road:** The Blue Mountain Road corridor would provide access between US 93 and the Miller Creek area with a new road and a new bridge over the Bitterroot River. An approximate 70-foot-wide corridor would be needed for a new two-lane road with bicycle lanes and sidewalks. The new road would originate within the future Maloney Ranch development and extend north over the Bitterroot River and connect to the existing intersection of US 93 and Blue Mountain Road. This corridor would provide a direct connection between the Miller Creek area and commercial properties located adjacent to Blue Mountain Road and Lolo National Forest recreation areas along Blue Mountain Road. Providing a new roadway from the Miller Creek area to this corridor would utilize the existing intersection at US 93 and thus eliminate the need for a new intersection on US 93.

  The corridor's connection within the future Maloney Ranch development would occur in an area that is planned for development and has initial subdivisions approved and platted by Missoula County. The connection would provide access to adjoining neighborhoods via extensions of local streets. The connection is consistent with the planned development concept shown in the adopted *1997 Maloney Ranch Amendment to the Missoula Comprehensive Plan*, but would remain flexible to tie into future development.

  The corridor's connection at US 93 and Blue Mountain Road would occur in an area that is currently occupied by numerous commercial properties and several residential properties. The new intersection with US 93 and Blue Mountain Road would impact several of these properties and could result in changes to business and residential access.

Table 2-1
Alignment Evaluation Matrix

Criteria	Corridors									
	No-Action	**Lolo South**	**South Lower Miller Creek**	**Maloney Ranch**	**Blue Mountain**	**North Lower Miller Creek**	**Linda Vista**	**Gharrett Street Connector**	**Orchard Street Connector**	**Miller Creek Road**
Does the alternative meet purpose and need?	Would not meet the purpose and need for the project.	Would not sufficiently meet the purpose and need for the project. The out-of-direction travel to the Miller Creek area would not address the existing or future travel needs.	Would meet the purpose and need for the project.	Would meet the purpose and need for the project.	Would meet the purpose and need for the project.	Would meet the purpose and need for the project.	Would meet the purpose and need for the project.	Would not sufficiently meet the purpose and need for the project. Would not provide sufficient capacity in appropriate location to address the existing or future travel needs.	Would not sufficiently meet the purpose and need for the project. Would not provide suf-ficient capacity in appropriate location to address the existing or future travel needs.	Would meet the purpose and need for the project.
Is the alternative safe?	An average of 15 crashes per year were reported at the US 93/Miller Creek Road intersection from 1999 through 2002. Future travel demands along Miller Creek Road and at the "Y" and US 93 intersections will result in increased congestion and potential for more accidents. Does not provide a safe connection for non-motorists between the Miller Creek area and US 93.	This alignment would introduce traffic to a high-speed section of US 93. More circuitous emergency access.	This alignment would introduce traffic to a high-speed section of US 93. More circuitous emergency access.	Alternative location would not be safe. Steep slopes on north face of US 93 in canyon area could provide for design challenges, including steep grades where roadway icing would be a concern and restricted sight dis-tances at the con-nection to a high-speed section of US 93. More circuitous emergency access.	Alternative would provide safe travel. Currently, accident rates at the existing intersection are equal to or less than statewide average rates for similar types of intersections. Provides alternative access for emergency service.	Alternative would provide safe travel. Connection constraints due to the close proximity of the railroad to US 93. Provides alternative access for emergency service.	Alternative would provide safe travel. Provides alternative access for emergency service.	Alternative would not provide safe travel for the majority of trips between the Miller Creek area and US 93. Safety effects would be similar to those described for the No-Action Alternative. Portion of existing local street would be upgraded to a collector with a new roadway connection. Would divert additional traffic through residential streets and school zones.	Alternative would not provide safe travel for the majority of trips between the Miller Creek area and US 93. Safety effects would be similar to those described for the No-Action Alternative. Portion of existing local street would be upgraded to a collector with a new roadway connection. Would divert additional traffic through residential streets and school zones. Potential conflicts with existing Wal-Mart access on US 93.	Alternative provides safe travel on primary route serving the Miller Creek area. Does not provide second emergency access.
Is the alternative consistent with local plans?	Does not provide a second access as with the *1997 Miller Creek Area Comprehensive Plan Amendment*.	This alternative does not appear on any existing adopted plans and does not provide direct access into the Miller Creek area per the *1997 Miller Creek Area Comprehensive Plan Amendment* or *2004 Missoula Urban Transportation Plan Update*.	Alternative is consistent with the *1997 Miller Creek Area Comprehensive Plan Amendment* and *2004 Missoula Urban Transportation Plan Update* for a second access.	Alternative is consistent with the *1997 Miller Creek Area Comprehensive Plan Amendment* and *2004 Missoula Urban Transportation Plan Update* for a second access.	Alternative is consistent with the *1997 Miller Creek Area Comprehensive Plan Amendment* and *2004 Missoula Urban Transportation Plan Update* for a second access.	Alternative is consistent with the *1997 Miller Creek Area Comprehensive Plan Amendment* and *2004 Missoula Urban Transportation Plan Update* for a second access.	Alternative is consistent with the *1997 Miller Creek Area Comprehensive Plan Amendment* and *2004 Missoula Urban Transportation Plan Update* for a second access.	This alternative does not appear on any existing adopted plans and does not provide direct access between US 93 and the Miller Creek area per the *1997 Miller Creek Area Comprehensive Plan Amendment* or the *2004 Missoula Urban Transportation Plan Update.*	This alternative does not appear on any existing adopted plans and does not provide direct access between US 93 and the Miller Creek area per the *1997 Miller Creek Area Comprehensive Plan Amendment* or the *2004 Missoula Urban Transportation Plan Update.*	Upgrade of Miller Creek Road to an urban collector standard is consistent with the *2004 Missoula Urban Transportation Plan Update* and *1997 Miller Creek Area Comprehensive Plan Amendment*.

(continued)

Note: Corridors with a fatal flaw or unacceptable condition (red oval) were dismissed from further consideration.

Fatal Flaw/ Unacceptable Condition   Adequate/Fair   Acceptable

Table 2-1
Alignment Evaluation Matrix
(continued)

Criteria	Corridors									
	No-Action	**Lolo South**	**South Lower Miller Creek**	**Maloney Ranch**	**Blue Mountain**	**North Lower Miller Creek**	**Linda Vista**	**Gharrett Street Connector**	**Orchard Street Connector**	**Miller Creek Road**
Will the alternative provide an environmentally responsible transportation solution?	From a natural / cultural resource perspective the alternative avoids direct impacts. The alternative will not address travel delays or multimodal connectivity. Future travel demands will result in increased congestion on US 93 and on Miller Creek Road.	Potential for significant environmental impacts due to extensive length of new roadway required. An alignment through the river corridor would result in substantial impacts to riparian areas in the river corridor and visual impacts to previously undeveloped areas. The alternative will not address travel delays or vehicle miles traveled and will not relieve current or future congestion problems on US 93 or Miller Creek Road.	The alternative would impact a portion of the riparian and river corridor and would be visually intrusive within a pristine undeveloped area. Potential for substantial impacts to wildlife habitats. Some business and residential impacts. The alternative would provide some relief to current and future congestion on US 93 and on Miller Creek Road. However, requires out of direction travel.	4(f) impacts through Montana Fish, Wildlife & Parks property. The alternative would provide relief to current and future congestion on US 93 and on Miller Creek Road.	Some business and residential impacts. Relocation would be required. Provides system continuity. Minimal impacts to riparian and associated wetlands and wildlife habitat. The alternative would provide relief to current and future congestion on US 93 and on Miller Creek Road.	Wide floodplain crossing. Impacts to riparian and associated wetland and wildlife habitat. Residential and business relocations would be required. The alternative would provide relief to current and future congestion on US 93 and on Miller Creek Road.	Substantial impacts to floodplain, riparian and associated wetlands and wildlife habitat. The alternative would provide relief to current and future congestion on US 93 and on Miller Creek Road.	Alternative will not sufficiently address travel delays or multimodal connectivity. Some residential impacts. Relocation would be required. Provides enhanced connectivity. Minimal impacts to riparian and wildlife habitat. Impact to Floral Park	Alternative will not sufficiently address travel delays or multimodal connectivity. Some residential property impacts. Provides enhanced connectivity. Some impacts to riparian and wildlife habitat by new connection road.	Some business and residential impacts. Relocation would be required. Provides system continuity. Minimal impacts to riparian and associated wetlands and wildlife habitat.
Will the alternative minimize impacts to the character of the neighborhood?	Alternative would limit the direct land use impacts. The increase and anticipated delays of traffic flows and congestion due to lack of an alternate connection may redefine the character of the eastern portion of the Miller Creek area as more urban than suburban. Cut-through traffic on adjacent neighborhoods would have negative effects.	The alternative would promote US 93 diversion through the Miller Creek area. The increase and anticipated delays of traffic flows and congestion may redefine the character as more urban than suburban. Cut-through traffic on adjacent neighborhoods may have negative effects.	Impacts to Miller Creek and surrounding neighborhoods would be improved by limiting delays, traffic congestion and cut-through potential.	Impacts to Miller Creek and surrounding neighborhoods would be improved by limiting delays, traffic congestion and cut-through potential.	May increase cut-through traffic for northern neighborhoods. Land acquisition would impact open space agriculture/ranch use.	Land acquisition would impact open space agriculture/ranch use.	Land acquisition would impact open space currently occupied by the Retriever Club. The character and operations of Linda Vista Blvd. would dramatically change.	Gharrett Street and the surrounding street network would have substantial increase in traffic volumes and speed. Residences on 0.75-mile long segment of Gharrett Street south of 39th St. would experience a substantial increase in traffic diverted from Miller Creek Road as a result of the proposed connector.	Orchard Street and the surrounding street network would have substantial increase in traffic volumes and speed. Residences on Orchard St. near 39th St. would experience a substantial increase in traffic diverted from Miller Creek Road as a result of the proposed connector.	Increased capacity on Miller Creek Road would reduce traffic diversion from primary route. The increase of traffic flows due to lack of an alternate connection may redefine the character of the eastern portion of the Miller Creek area as more urban than suburban.
Overall Assessment	**Advanced**	Dismissed	**Advanced**	Dismissed	**Advanced**	**Advanced**	Dismissed	Dismissed	Dismissed	**Advanced**

Fatal Flaw/ Unacceptable Condition

Adequate/Fair

Acceptable

Note: Corridors with a fatal flaw or unacceptable condition (red oval) were dismissed from further consideration.

- **South Lower Miller Creek:** The South Lower Miller Creek corridor would provide access between US 93 and the Miller Creek area with a new road and bridge over the Bitterroot River. An approximate 70-foot-wide corridor would be needed for a new two-lane road with bicycle lanes and sidewalks. The new road would connect to Lower Miller Creek Road and extend northwest over the Bitterroot River to a new intersection with US 93 near Hayes Creek Road. This corridor is the southernmost alignment of the advanced corridors and would require the greatest distance of out-of-direction travel for commuters destined for the Missoula urban core. However, it would provide the most direct connection to US 93 for traffic traveling south on US 93.

  The corridor's connection at Lower Miller Creek Road would occur near an area this is currently undeveloped, but planned and platted for future development. The corridor would provide access to the adjoining neighborhood via extensions of Christian Drive and Maloney Ranch Road.

  The corridor's connection at US 93 would occur in an area that is currently occupied by several commercial properties, a trailer park, and several residential properties. The new intersection with US 93 would impacts several of these properties and could result in changes to business and residential accesses.

- **Miller Creek Road:** The Miller Creek Road corridor is the existing access to the Miller Creek area from US 93. Miller Creek Road is a two- to three-lane minor arterial with minimal to no shoulders. This corridor would include improvement along Miller Creek Road, the north "Y" intersection of Upper and Lower Miller Creek Roads, and the intersection at US 93. The improvements associated with this corridor include provisions for the necessary capacity to accommodate forecasted traffic volumes and improve traffic operations at the Miller Creek Road/US 93 intersection. Old US 93 would be utilized to improve full-movement circulation to US 93. Improving Old US 93 would require a signal at Old US 93 and Reserve Street.

2.4.3 Transportation Demand Management (TDM)/Alternative Modes

In addition to the build alternatives, a Transportation Demand Management (TDM) Alternative was developed that incorporated Transportation System Management (TSM) strategies. TDM strategies are designed to improve the efficiency of the existing transportation system by reducing or redirecting the demand for use of roadways and other facilities rather than increasing road capacity. They are typically designed to influence travel choices by providing alternatives to driving alone, and to emphasize reduction of peak-period and home-based work (commuter) trips. Using strategies that promote alternative modes, increase vehicle occupancy, reduce travel distances, and ease peak-hour congestion, TDM strategies could extend the useful life of transportation facilities and enhance mobility options by maximizing the transportation usage of facilities. Within the Miller Creek area there is no known participation in existing TDM programs by businesses or residences.

TSM strategies manage the flow of traffic on existing major roadways through operational-oriented strategies without adding substantial new infrastructure that is typically more costly.

Application of TSM measures to support continued acceptable operations of US 93 through the Miller Creek area will include traffic signal timing modifications at the intersections of US 93/Blue Mountain Road and US 93/Miller Creek Road.

TDM coordinators within the Missoula area include Missoula in Motion (MIM), the Missoula-Ravalli Transportation Management Association (MR TMA), and the Associated Students of the University of Montana (ASUM). The *2004 Missoula Urban Transportation Plan Update* describes current

TDM programs promulgated by MIM, MR TMA, and ASUM. MIM coordinates efforts of all Missoula agencies involved in TDM, works with employers to establish and maintain TDM programs, provides public awareness and marketing of TDM programs, and evaluates programs. MR TMA has primary responsibility for administering a ride-matching program for carpools and vanpools, and operates a regional vanpool program. ASUM sponsors multiple TDM programs focused on travel associated with the University of Montana. These are described further in Section 3.4.5.1, page 3-44.

The formation of a Miller Creek Transportation Management Association (TMA) was recommended in the *Maloney Ranch Transportation System Study*, July 1996, to coordinate transportation issues for the Miller Creek area. The TMA would help coordinate ridesharing and transit service and promote alternate modes of transportation. At the time of this document preparation, a TMA for the Miller Creek area had not been formed.

The provision of improved access for transit and ridesharing, and addition of pedestrian and bicycle facilities as part of the Miller Creek Road project would accommodate TDM strategies and would be compatible with the transportation plan and comprehensive plans for the area.

- **Transportation Demand Management/Alternative Modes**: A stand-alone TDM alternative would not meet purpose and need for the proposed action. None of the build alternatives that are being evaluated would preclude the incorporation of TDM elements. The bicycle and pedestrian facilities are the TDM elements that would be included in the build alternatives. Future extension of the Mountain Line transit service was also considered during the evaluation process.

  The Miller Creek area is outside of the Missoula Urban Transportation District, and Montana state law requires a 51 percent vote of landowners in an area to be added to the district. The issue of transit expansion into the Linda Vista area would be beneficial in reducing some vehicular trips. The provision of public transit and ridesharing would be under the jurisdiction of local agencies rather than the FHWA.

- **Transportation System Management (TSM)**: A stand-alone TSM alternative would not meet purpose and need for the proposed action. None of the build alternatives that are being evaluated would preclude the incorporation of TSM elements. The following TSM elements would be included in the build alternatives: bicycle and pedestrian facilities and coordinated signals.

2.5 Range of Alternatives Development and Screening

2.5.1 Development of the Connection Options to US 93

Three options for connection to US 93 were considered for each of the four advanced corridors: at-grade signalized intersection, grade-separated intersection (with or without signal), and interchange. Selection of the connection type at US 93 for each corridor location was based upon roadway functional classifications, turning volumes of the intersecting roadways, available space, and whether the connection was in an urban or rural area. Based on visioning session considerations and MDT access permits for US 93, no alternatives were advanced that degraded US 93 operations.

Based on the identified opportunities and constraints and potential access operations, US 93 connection options were coupled with the advanced alignment corridors to be included in the comprehensive range of alternatives. This created 12 potential combinations, which became the range of alternatives considered in addition to a stand-alone TDM Alternative and No-Action Alternative.

2.5.2 Screening of the Range of Alternatives

Each of the 12 build alternatives, the TDM Alternative, and the No-Action Alternative were evaluated against the criteria defined in Section 2.3. **Table 2-2,** describes the summary of the evaluation process used to screen the 12 build alternatives, the stand-alone TDM Alternative, and the No-Action Alternative. The screening process was conducted with input by the SEE Team and ID Team, which include local, state, and federal government and resource agencies. The screening process evaluated alternatives for each of the criteria using a qualitative evaluation rating system of acceptable, adequate/fair to unacceptable/fatal flaw condition. The goal of the screening process was to identify the option/alternative for each corridor that met the purpose and need for the project and provided a balance between operations and minimizing environmental impacts. If an option/alternative was rated with an unacceptable or fatal flaw condition (red oval on **Table 2-2**), then it was dismissed from further consideration. One connection option for each corridor was advanced for complete evaluation in this FEIS. They are described in detail in Section 2.6. The following list identifies whether an alternative was advanced or dismissed:

- **1: No-Action Alternative—Advanced**
- 2A: North Lower Miller Creek At-Grade Intersection—Dismissed
- **2B: North Lower Miller Creek Grade-Separated Intersection—Advanced**
- 2C: North Lower Miller Creek Interchange—Dismissed
- 3A: Blue Mountain Road At-Grade Intersection—Dismissed
- **3B: Blue Mountain Road Grade-Separated Intersection—Advanced**
- 3C: Blue Mountain Road Interchange—Dismissed
- 4A: South Lower Miller Creek At-Grade Intersection—Dismissed
- 4B: South Lower Miller Creek Grade-Separated Intersection—Dismissed
- **4C: South Lower Miller Creek Interchange—Advanced**
- **5A: Miller Creek Road At-Grade Intersection—Advanced**
- 5B: Miller Creek Road Grade-Separated Intersection—Dismissed
- 5C: Miller Creek Road Interchange—Dismissed
- Transportation Demand Management (TDM)—Dismissed

2.5.3 Additional Design Options to Improve Traffic Operations Based on Revised 2025 Volumes

Several related factors warranted revision of the 2025 forecasted ADT volumes on US 93 south of Reserve Street to levels that are substantially greater than the 2025 ADT volumes presented in the Missoula Urban Transportation Plan (MUTP) and in the Miller Creek Road Transportation Analysis Technical Report, November 2004 and amended 2006. These factors include:

- Current (2003) US 93 ADT volumes from MDT that already approach forecasted 2025 ADT volumes conveyed in the MUTP.
- Foreseeable population growth trends and development proposals in Ravalli County and in the Lolo area that exceed the demographic baseline forecasts used to prepare the MUTP.
- Forecasted volumes displayed in the MUTP that were based on a desired regional constrained "smart growth" policy objective, which were not consistent with more current trends based on accelerated recent and foreseeable growth.

The revised 2025 forecast ADT volumes on US 93 at Buckhouse Bridge, south of the Miller Creek Road intersection, are based on the 2004 ADT count of 25,120 vehicles per day (vpd) [reported in Montana Department of Transportation (MDT) Count Program] and a proposed annual average growth rate based on ten-year historic ADT counts along US 93 at the Buckhouse Bridge between 1994 and 2004. The computed annual average growth rate for this ten-year period is 2.22 percent, which was applied to existing traffic volumes along US 93 to estimate the 2025

volumes. This results in a 2025 forecasted ADT of 39,900 vpd on US 93 at the Buckhouse Bridge. This growth rate was applied to estimate 2025 traffic volumes along US 93.

The MUTP and roadway capacity information provided by MDT were both used as references to assess the approximate daily capacity for this four-lane facility (including turn lanes at intersections). Estimated daily vehicle capacity for US 93 in the vicinity of Buckhouse Bridge could be 44,000 vpd, assuming LOS E operations for the existing facility. Estimated daily vehicle capacity represents a maximum finite capacity where extended vehicular delays occur when traffic flow is interrupted, such as at a signal, as experienced on Miller Creek Road and Reserve Street.

The estimated daily vehicle capacity of the facility (approximately 44,000 vpd) when compared to the estimated forecast 2025 ADT (39,900 vpd) indicates that the applied growth rate is reasonable for a four-lane principal arterial, but would likely represent restricted flow conditions with regular delays during peak travel periods. The recommended projection for the Miller Creek and US 93 study analyses would suggest that peak period traffic may begin to divert to other facilities and spread to more hours to some extent due to restricted flow. This peak period diversion and spreading were accounted for in the related analysis of traffic distribution and peak hour factors.

As the alternatives were originally defined and subject to the transportation analysis with updated year 2025 forecast traffic volumes, the build alternatives were revised due to intersection operational flaws. In addition to Alternative 1 - No-Action, which was not revised from the previous description, these alternatives include:

- Alternative 2B - North Lower Miller Creek Road (Grade Separated Intersection with Signal);
- Alternative 3B - Blue Mountain Road (Grade Separated Intersection);
- Alternative 4C - South Lower Miller Creek Road (Interchange);
- Alternative 5A - Miller Creek Road (At Grade Connection)

Operations at major intersections, including the US 93 intersections with Miller Creek Road and Reserve Street, would fail to meet acceptable levels of service (LOS) for major intersection movements under these alternatives as they were defined, analyzed, and documented in the November 2004 transportation analysis report. See Section 3.4, page 3-18 for a more detailed discussion of the traffic modeling.

Given the relatively constrained area in which the alternatives connect with US 93, there are limited solutions available to remedy the increased congestion that would result on US 93 from the build alternatives as they were originally designed. The following sections describe the two design options identified to address the revised 2025 traffic volumes and resulting operations on US 93. There were no other design options identified to address traffic operations on US 93 as part of this project.

2.5.3.1 Improvements on Old US 93 and Adjacent Intersections

The majority of traffic traveling to and from the Miller Creek area merges with existing traffic on US 93 between the intersections of Reserve Street/US 93 and Miller Creek Road/US 93, resulting in high travel demand between these two primary intersections. Proposed improvements to Old US 93 would reduce travel demand on US 93 between these intersections by creating a second, parallel access from Miller Creek Road to Reserve Street. By splitting the traffic flows between US 93 and Old US 93, the roadway system would operate more efficiently and reduce intersection queuing and delay, reducing travel times both near-term and within the 20-year design horizon.

Table 2-2
Fatal Flaw Screening of Range of Alternatives Evaluation Matrix

Criteria	Alternatives												
		North Lower Miller Creek Road			Blue Mountain Road			South Lower Miller Creek Road			Miller Creek Road			
	No-Action	2A: Intersection	2B: Grade-Separated	2C: Interchange	3A: Intersection	3B: Grade-Separated	3C: Interchange	4A: Intersection	4B: Grade-Separated	4C: Interchange	5A: Intersection	5B:Grade-Separated	5C: Interchange	TDM/TSM Alternative*
Does the alternative meet purpose and need?	Would not meet the purpose and need for the project.	Somewhat meets the purpose and need. New signal is undesirable in rural segment of US 93. Alt. 2B provides better operations on US 93.	Generally meets the purpose and need.	Generally meets the purpose and need.	Generally meets the purpose and need.	Generally meets the purpose and need.	Generally meets the purpose and need.	Somewhat meets the purpose and need. New signal is undesirable in rural high speed segment of US 93.	Generally meets the purpose and need.	Generally meets the purpose and need.	Generally meets the purpose and need.	Generally meets the purpose and need.	Generally meets the purpose and need.	Does not meet purpose and need because it would not sufficiently reduce congestion and enhance safety without additional improvements to increase vehicular capacity.
Is the alternative safe?	Does not serve future increased travel demands for the Miller Creek area. Increases accident potential due to increased congestion along Miller Creek Road and through the north "Y" intersection, and due to traffic diversion to other local roads. Does not provide a safe route for nonmotorized travel between the Miller Creek area and US 93. Does not provide a safe route for transit (buses) to serve the Miller Creek area. Restricts emergency response capabilities for the Miller Creek area and for forest lands served by Miller Creek Road.	Provides a safe route for nonmotorized travel between the Miller Creek area and US 93. However, would not provide safe nonmotorized access across US 93. Provides for safe transit and enhances emergency response capabilities for the Miller Creek area. Provides new roadway segments and intersections in Miller Creek area with potential for conflicts. Requires a new highway approach road with a traffic signal on US 93, increasing potential for rear-end and turn-related collisions at this location, and increases congestion on US 93 approaching the new intersection. Signal would slow traffic traveling along this section of US 93, which could reduce potential number and severity of crashes at the US 93/Blue Mountain Road intersection. Requires a new at-grade crossing of the MRL track.	Provides a safe route for nonmotorized travel between the Miller Creek area and US 93. Provides safe transit and enhances emergency response capabilities for the Miller Creek area. Provides new roadway segments and intersect-ions in Miller Creek area with potential for conflicts. Unsignalized option would not interrupt US 93 traffic flow, nor increase traffic conflicts from stopping and turning movements. Unsignalized option would require accel and decel lanes, which would limit collisions resulting from vehicles entering and existing US 93. Unsignalized option requires new at-grade crossing of the MRL track. Signalized option would require a new highway approach, increase potential for rear-end and turn-related collisions at this location, and increase congestion on US 93 approaching the new intersection. Signal would slow traffic traveling along this section of US 93, which could reduce potential number and severity of crashes at the US 93/Blue Mountain Road intersection.	Provides safe transit and enhances emergency response capabilities for the Miller Creek area. Provides new roadway segments and intersections in Miller Creek area with potential for conflicts. Uninterrupted and higher speed traffic flow through interchange would compromise safety for nonmotorized travel between the Miller Creek area and US 93. Ramp approaches designed for higher speeds would not be compatible with the surrounding local road network. Traffic entering US 93 could create merge and weave conflict sections on US 93 for northbound and south-bound traffic and could increase potential rear-end collisions approaching the signalized intersection at Blue Mountain Road.	Provides a safe route for nonmotorized travel between the Miller Creek area and US 93/Blue Mountain Road. Provides for safe transit and emergency response capabilities for the Miller Creek area. Provides new roadway segments and intersections in Miller Creek area with potential for conflicts. Would increase potential for accidents due to additional turn conflicts, increased congestion and stopping on US 93 approaching Blue Mountain Road. Requires a new at-grade crossing of the MRL track. More safety issues than Alt. 3B.	Provides a safe route for nonmotorized travel between the Miller Creek area and US 93/Blue Mountain Road. Provides safe transit and emergency response capabilities for the Miller Creek area. Provides new roadway segments and intersections in Miller Creek area with potential for conflicts. Would reduce potential conflicts at US 93/Blue Mountain Road by reducing traffic flow interruptions and by eliminating turn movements. Would reduce gaps for turn movements, particularly left turns, from minor approaches to US 93 located near Blue Mountain Road.	Uninterrupted and higher-speed traffic flow through interchange would compromise safety for nonmotorized travel between the Miller Creek area and US 93. Provides safe transit and emergency response capabilities for the Miller Creek area. Provides new roadway segments and intersections in Miller Creek area with potential for conflicts. Ramp approaches designed for higher speeds would not be compatible with the surrounding local road network. Would reduce potential conflicts at US 93/Blue Mountain Road by reducing traffic flow interruptions and by eliminating turn movements. Would reduce gaps for turn movements, particularly left turns, from minor approaches to US 93 located near Blue Mountain Road. Has fewer safety benefits than Alt. 3B.	Encourages the least amount of diversion of traffic from Miller Creek Road and does not fully serve future travel demands for the Miller Creek area. Requires a new highway approach road with a traffic signal on rural, high-speed section of US 93, which would not meet many driver's expectations, thus increasing potential for rear-end and turn-related collisions at this location. Increases congestion on US 93 approaching the new intersection. Signal would slow traffic traveling along this section of US 93, which could reduce potential number and severity of crashes at the US 93/Blue Mountain Road intersection. Provides a safe route for nonmotorized travel between the Miller Creek area and US 93, but con-nects to rural, high-speed section of US 93 that is not compatible with nonmotor-ized use. Provides safe emergency response capabilities for the Miller Creek area. Provides new roadway segments and intersections in Miller Creek area with potential for conflicts. Steep slopes on north face in canyon area could provide design challenges, including steep grades and roadway icing. Provides safe access to US 93 from Hayes Creek Road	Encourages the least diversion of traffic from Miller Creek Road and does not fully serve future travel demands for the Miller Creek area. Provides a safe route for nonmotorized travel between the Miller Creek area and US 93 but connects to rural, high-speed section of US 93. Provides for safe emergency response capabilities for the Miller Creek area. Provides new roadway segments and intersections in Miller Creek area with potential for conflicts. Steep slopes on north face in canyon area could provide for design challenges, including steep grades and roadway icing. Provides safe access to US 93 from Hayes Creek Road. The signal would be unsafe.	Encourages the least diversion of traffic from Miller Creek Road and does not fully serve future travel demands for the Miller Creek area. Interchange design is most compatible with rural, high-speed section of US 93. Uninterrupted and higher speed traffic flow through interchange would compromise safety for nonmotorized travel between the Miller Creek area and US 93, and connects to rural, high-speed section of US 93. Provides safe emergency response capabilities for the Miller Creek area. Provides new roadway segments and intersections in Miller Creek area with potential for conflicts. Steep slopes on north face in canyon area could provide for design challenges, including steep grades and roadway icing. Provides safe access to US 93 from Hayes Creek Road.	Provides a safe route for nonmotorized travel between the Miller Creek area and US 93. Provides for safe transit service and enhances emergency response for the Miller Creek area. Increased capacity of at-grade intersection would result in increased number of conflict points but reduced congestion. Would provide a safe connection for nonmotorists between the Miller Creek area and US 93.	Provides a safe route for nonmotorized travel between the Miller Creek area and US 93. Provides safe transit and emergency response capabilities for the Miller Creek area. A grade-separated intersection would reduce the potential for accidents. Would provide a safe connection for nonmotor-ists between the Miller Creek area and US 93.	Grade-separation of traffic would reduce the potential for accidents. Provides safe transit and emergency response capabilities for the Miller Creek area. Does not require high-speed ramps and could accommodate nonmotorized travel. Would create merge/weave issue and access constraint for northbound Miller Creek Road to northbound Brooks Street.	Alternative would provide bicycle and pedestrian facilities and easement under bridge alternatives for recreation and transportation use. Future expansion of the mountain Line transit is also an option (by others).

*TDM/TSM Alternative will be carried forward as a part of all the build alternatives.

(continued)

Note: Alternatives with a fatal flaw or unacceptable condition (red oval) were dismissed from further consideration.

Fatal Flaw/ Unacceptable Condition

Adequate/Fair

Acceptable

Table 2-2
Fatal Flaw Screening of Range of Alternatives Evaluation Matrix
(continued)

Criteria	Alternatives													
		North Lower Miller Creek Road			Blue Mountain Road			South Lower Miller Creek Road			Miller Creek Road			
	No-Action	2A: Intersection	2B: Grade-Separated	2C: Interchange	3A: Intersection	3B: Grade-Separated	3C: Interchange	4A: Intersection	4B: Grade-Separated	4C: Interchange	5A: Intersection	5B:Grade-Separated	5C: Interchange	TDM/TSM Alternative
Is the alternative consistent with local plans?	Not consistent with the adopted comprehensive plan and transportation plan which recommends improvements to Miller Creek Road and provision of a Miller Creek Road bridge across the Bitterroot River.	Generally consistent with the adopted comprehensive plan and transportation plan. New signal on US 93 is not in plans.	Generally consistent with the adopted comprehensive plan and transportation plan.	Not consistent with the theme of the adopted transportation plan: "prioritizing the needs of nonmotorized…users." Interchange may limit future improvements on US 93.	Generally consistent with the adopted comprehensive plan and transportation plan.	Generally consistent with the adopted comprehensive plan and transportation plan.	Not consistent with the theme of the adopted transportation plan: "…prioritizing the needs of nonmotorized…users…" Interchange may limit future improvements on US 93.	Alignment not consistent with the theme of the adopted transportation plan: "…satisfies mobility and accessibility needs of the community, prioritizing the needs of nonmotorized and transit users…"	Alignment not consistent with the theme of the adopted transportation plan: "…satisfies mobility and accessibility needs of the community, prioritizing the needs of nonmotorized and transit users…"	Alignment and interchange not consistent with the theme of the adopted transportation plan: "…satisfies mobility and accessibility needs of the community, prioritizing the needs of nonmotorized and transit users…"	Generally consistent with the adopted comprehensive plan and transportation plan. Signal at Reserve Street and Old US 93 is not in plan.	Generally consistent with the adopted comprehensive plan and transportation plan.	Generally consistent with the adopted comprehensive plan and transportation plan. Signal at Reserve Street and Old US 93 is not in plan. An interchange at Miller Creek Road is not included in the Missoula Urban Transportation Plan.	Consistent with adopted plans.
Will the alternative provide an environmentally responsible transportation solution?	From a natural/cultural resource perspective, limits direct impacts. The alternative would not address travel delays or vehicle miles traveled.	Serves future increased vehicular travel demands for the Miller Creek area. Wide floodplain crossing. Impacts to riparian and associated wetland and wildlife habitat. One residential relocation would be required.	Serves future increased vehicular travel demands for the Miller Creek area. Wide floodplain crossing. Impacts to riparian and associated wetland and wildlife habitat. One residential relocation would be required. Avoids direct impact to railroad, an historic and Section 4(f) property.	Serves future increased vehicular travel demands for the Miller Creek area. Wide floodplain crossing. Impacts to riparian and associated wetland and wildlife habitat. One residential relocation would be required.	Serves future increased vehicular travel demands for the Miller Creek area. Some business and residential impacts. Four business relocations would be required. Provides system continuity. Minimal impacts to riparian and associated wetlands and wildlife habitat. More disruption to US 93 operations than Alt. 3B. Greatest fill in floodplain of bridge alternatives.	Serves future increased vehicular travel demands for the Miller Creek area. Some business and residential impacts. Four business relocations would be required. Provides system continuity. Minimal impacts to riparian and associated wetlands and wildlife habitat. Greatest fill in floodplain of bridge alternatives.	Serves future increased vehicular travel demands for the Miller Creek area. Some business and residential impacts. Four business relocations would be required. Provides system continuity. Minimal impacts to riparian and associated wetlands and wildlife habitat. Greatest fill in floodplain of bridge alternatives.	Longest bridge (over 1,000 feet) with five piers (two in river, three on islands). Most impact to wetlands, fisheries, wildlife. Tribes consider this an "Area of Interest." Least fill in floodplain of bridge corridors.	Some residential/ business relocations. Longest bridge (over 1,000 feet) with five piers (two in river, three on islands). Most impact to wetlands, fisheries, wildlife. Tribes consider this an "Area of Interest." Least fill in floodplain of bridge corridors.	Substantial (12) residential/ business (3) relocations. Longest bridge (over 1,000 feet) with five piers (two in river, three on islands). Most impact to wetlands, fisheries, wildlife. Tribes consider this an "Area of Interest." Least fill in floodplain of bridge corridors.	Serves future increased vehicular travel demands for the Miller Creek area. Minimal natural resources impacts. One residential impact. No business relocation. Least right-of-way impacts. No farmland impacts. No Bitterroot River or habitat impacts.	Serves future increased vehicular travel demands for the Miller Creek area. Minimal natural resources impacts. Primary access to US 93 eliminated for some businesses. One residential impact. Potential hazardous material site impacts. Does not accommodate future widening of US 93 without substantial environmental impacts.	Serves future increased vehicular travel demands for the Miller Creek area. Minimal natural resources impacts. Minor access changes. Some business and residential impacts. More traffic on Old US 93. Requires more access changes and right-of-way than Alt. 5A.	Minimal environmental impacts.
Will the alternative minimize impacts to the character of the neighborhood?	Limits the direct land use impacts. The increase and anticipated delays of traffic flows and congestion may redefine the character as more urban than suburban. Cut-through traffic on adjacent neighborhoods may have negative effects.	Land acquisition would impact open space agriculture/ranch use. More property impacts than Alt. 2B.	Land acquisition would impact open space agriculture/ranch use. Results in visual impacts of elevated structure over US 93.	Land acquisition would impact open space agriculture/ranch use.	Some increase in cut-through traffic for northern neighborhoods served by Blue Mountain Road. Land acquisition would impact open space agriculture/ ranch use.	Some increase in cut-through traffic for northern neighborhoods served by Blue Mountain Road. Land acquisition would impact open space agriculture/ranch use.	Some increase in cut-through traffic for northern neighborhoods served by Blue Mountain Road. Land acquisition would impact open space agriculture/ ranch use. More extensive property and access impacts than Alt. 3B.	Impacts to Miller Creek neighborhood would be improved by limiting delays, traffic congestion, and cut-through potential. Impacts to US 93 neighborhood would be degraded by large number of relocations and visual impact of large bridge and interchange structure in relatively rural/pristine area.	Impacts to Miller Creek neighborhood would be improved by limiting delays, traffic congestion, and cut-through potential. Impacts to US 93 neighborhood would be degraded by large number of relocations and visual impact of large bridge and interchange structure in relatively rural/pristine area.	Impacts to Miller Creek neighborhood would be improved by limiting delays, traffic congestion, and cut-through potential. Impacts to US 93 neighborhood would be degraded by large number of relocations and visual impact of large bridge and interchange structure in relatively rural/pristine area.	Miller Creek Road improvements would change character of corridor from rural to suburban. Miller Creek area traffic would be less evenly dispersed without second access. Impacts to neighborhoods directly east of Miller Creek would be improved by limiting cut-through potential.	Miller Creek Road improvements would change character of corridor from rural to suburban. Miller Creek area traffic would be less evenly dispersed without second access. Impacts to neighborhoods directly east of Miller Creek would be improved by limiting cut-through potential.	Miller Creek Road improvements would change character of corridor from rural to suburban. Character of commercial area surrounding US 93/Miller Creek Road would be degraded. Miller Creek area traffic would be less evenly dispersed without second access. Impacts to neighborhoods directly east of Miller Creek would be improved by limiting cut-through potential.	Minimal neighborhood character affects.
Overall Assessment	**Advanced**	Dismissed	**Advanced**	Dismissed	Dismissed	**Advanced**	Dismissed	Dismissed	Dismissed	**Advanced**	**Advanced**	Dismissed	Dismissed	Dismissed as Stand Alone

Fatal Flaw/ Unacceptable Condition

Adequate/Fair

Acceptable

Note: Alternatives with a fatal flaw or unacceptable condition (red oval) were dismissed from further consideration.

The need for improved traffic flow on the section of US 93 between Miller Creek Road and Reserve Street is reinforced by year 2025 forecasts of substantial traffic growth on the major roadways serving this area, including US 93, Reserve Street, and Miller Creek Road, and the limited capacity of the current roadway system to accommodate the forecasted traffic. Approximately 50 percent of the traffic heading toward Missoula from the Bitterroot Valley and from the Miller Creek area is destined northbound along Reserve Street in the morning peak hour (AM peak) and conversely returning southbound along Reserve Street during the afternoon peak hour (PM peak).

Additional lanes on Old US 93 and on Reserve Street between US 93 and Old US 93 add capacity to serve the northbound and southbound peak travel under all of the build alternatives. The capacity added through the new lanes relieves a bottleneck on US 93 at its intersections with Miller Creek Road and Reserve Street. Traffic operations throughout the study area improve with the removal of the bottlenecks on US 93.

Old US 93 would be reconstructed with an additional northbound travel lane. This improvement to Old US 93 improves traffic flow along all study area roadways (US 93, Miller Creek Road, Reserve Street, Old US 93).

Major travel movements are improved through the addition of intersection approach lanes and improved traffic signalization for US 93/Old US 93/Miller Creek Road, US 93 (Brooks)/Reserve and Reserve/Old US 93 intersections. Traffic patterns would be more evenly distributed between US 93 and Old US 93. Evenly distributed traffic would provide for a more efficient network, reduce intersection queuing, and reduce travel delay.

Traffic signal improvements would provide coordination and timing of the signals at the three major intersections. The two closely-spaced signals along Reserve Street at US 93 and at Old US 93 would operate as an integrated signal system to minimize intersection delay by reducing the number of total stops (one or none) the average vehicle must make when traversing through both intersections.

Coordinating the signals along Reserve Street at US 93 and Old US 93 in concert with the other proposed capacity improvements to Old US 93 would maximize utilization of the existing infrastructure by ensuring optimum travel speeds while reducing intersection delays. Signal coordination on Reserve Street would be most efficient with the proposed improvements to Old US 93 due to the more balanced dispersion of traffic through these coordinated intersections that would occur with the additional capacity on Old US 93.

Traffic signal coordination would reduce the number of stops, thereby reducing the crash potential at intersections. Signal coordination can also have a positive effect on air quality because moving vehicles produce fewer emissions than vehicles idling in congested traffic conditions.

2.5.3.2 US 93 Widening

An option for accommodating 2025 forecasted traffic volumes on US 93 would be to provide additional capacity on US 93 by adding travel lanes. Currently there are two through travel lanes in each direction on US 93. Under this option, US 93 would be widened by adding a third travel lane, where needed, to accommodate 2025 forecasted traffic volume.

For all alternatives, improvements to US 93 would be needed north of Miller Creek Road. Additional capacity would be obtained by adding a third northbound and third southbound travel lane to US 93 between Miller Creek Road and Reserve Street and making intersection improvements at the US 93 (Brooks Street) and Miller Creek Road intersection, at the Brooks Street and Reserve Street intersection, and at the Reserve Street and Old US 93 intersection.

To obtain the third northbound and the third southbound through lane, US 93 would be widened on both sides of the existing highway. The widening would extend through the Brooks Street and Reserve Street intersection and be accommodated by eliminating the existing planting strip between the highway and the sidewalk and constructing a new sidewalk and curb and gutter without a planting strip.

Under the bridge alternatives (2B, 3B, and 4C), acceptable traffic operations for major travel movements could be achieved by adding a third northbound and third southbound lane to US 93 south of the Miller Creek Road and US 93 intersection. For Alternative 2B, the third northbound and third southbound through lane on US 93 would be added between the North Lower Miller Creek connection and Miller Creek Road. For Alternatives 3B and 4C, the third northbound and third southbound lane on US 93 would be added between Blue Mountain Road and Miller Creek Road. South of Buckhouse Bridge, the additional through lanes would be obtained by widening US 93 to the west away from the existing railroad. The edge of the existing highway would move approximately 24 feet (two new 12-foot travel lanes) to the west impacting adjacent private property and affecting access to the adjacent businesses. The Buckhouse Bridge over the Bitterroot River would need to be widened or replaced. Between the Miller Creek Road intersection and Buckhouse Bridge, the widening would be transitioned from both sides of US 93 to the west side.

2.5.3.3 Comparison and Screening of US 93 Design Options - Alternative Not Advanced

The option of widening US 93 south of Miller Creek Road by adding additional through travel lanes was dismissed for the following reasons:

- Widening the Buckhouse Bridge would result in additional environmental resource impacts to fisheries, wetlands, vegetation, floodplain, and the Bitterroot River and would increase project costs by $2.0 to $5.0 million for the upgraded bridge.
- Brooks Street and Reserve Street intersection would fail to meet operational standards (LOS D for urban, LOS C for rural).
- The urban area includes closely spaced accesses that are potential conflict points that could be exacerbated by adding a third through travel lane in each direction on US 93. More specifically, the potential for side-swipe crashes resulting from vehicles changing lanes due to merging within a relatively short distance would likely increase with an additional travel lane. Part of this merge problem would be caused by traffic from the Miller Creek area having to cross three lanes of traffic in a short distance to get into the left-turn lane for Reserve Street.
- Pedestrians crossing at the Brooks Street/Reserve Street intersection and the Miller Creek Road/US 93 intersection would need to cross six through travel lanes and two left-turning lanes.
- Widening US 93 near Blue Mountain Road would impact a protected historic ditch, requiring appropriate approvals and mitigation.

For these reasons, widening US 93 south of Miller Creek Road was not considered to be an acceptable solution due to the additional impacts to environmental resources and private property, and increased cost. However, even with widening US 93 south of Miller Creek Road, traffic projections and resulting congestion would require either widening US 93 north of Miller Creek Road or Old US 93 and adjacent intersection improvements.

2.6 Alternatives Advanced

Only one connection option at US 93 was advanced for each corridor. The connection option/alternative that best balanced traffic operations and safety, impacts to US 93, and environmental

impacts was advanced. The No-Action Alternative and four connection option/alternatives were advanced for full analysis in Chapter 4.0 of this FEIS:

- Alternative 1: No-Action Alternative
- Alternative 2B: North Lower Miller Creek Grade-Separated Intersection
- Alternative 3B: Blue Mountain Road Grade-Separated Intersection
- Alternative 4C: South Lower Miller Creek Interchange
- Alternative 5A: Miller Creek Road At-Grade Intersection (Preferred Alternative)

All of the build alternatives include improvements on Old US 93 and at the intersections of Old US 93/Brooks Street, Old US 93/Reserve Street, and Brooks and Reserve Streets. Alternatives 2B, 3B, and 4C include the bridge crossing over the Bitterroot River and require the Miller Creek Road Limited Improvements. Alternative 5A includes improvements to Miller Creek Road and Old US 93 and adjacent intersections, but does not cross the Bitterroot River.

Under all alternatives, the MRL crossing of Miller Creek Road would be reconstructed so that the traffic signal has a "clear-out" cycle that provides a green light to clear traffic off the railroad crossing prior to the crossing gates going down. This "clear-out" cycle would run in conjunction with the left-turn lane signals defaulting to a stop condition to prevent turning movements off US 93 into the railroad crossing.

Based on revised traffic volume forecasts, these advanced alternatives were found to have unacceptable traffic operations at major intersections, including the US 93 intersections with Miller Creek Road and Reserve Street that would fail to meet acceptable levels of service (LOS) for major intersection movements. The revised 2025 traffic volumes necessitated additional capacity improvements for the build alternatives to achieve acceptable traffic operations. The lower impact and lower cost option to achieve additional capacity that met acceptable or near acceptable peak hour operations was to combine these alternatives with the improvements along Miller Creek Road and improvements to Old US 93 and adjacent intersections. The intersections of Reserve Street and Old US 93, Reserve Street and US 93, and US 93 and Miller Creek Road are in close proximity to one another. By splitting the traffic flows between US 93 and Old US 93 the roadway system will operate more efficiently and reduce intersection queuing and delay, ultimately reducing travel times both near-term and within the 20-year design horizon. By creating an integrated signal system between the three intersections and removing/reducing signal green times of redundant movements between these intersections, traffic can flow through the system more efficiently. Therefore, the build alternatives were revised to accommodate the updated 2025 forecast volumes.

Alternatives 2B, 3B, and 4C were modified to include Limited Improvements on Miller Creek Road in order to more adequately accommodate forecasted traffic volumes without substantial impacts associated with adding capacity to US 93 between Blue Mountain Road and Reserve Street. Improvements are needed at the intersections of Miller Creek Road at US 93 and Briggs Street and Lower Miller Creek Road to meet operational standards and safety concerns. The improvements also provide better mobility for non-motorized travel within the Miller Creek area.

As discussed in the previous paragraphs, Old US 93 and Miller Creek Road improvements are needed to achieve additional capacity for each connection option. Old US 93 improvements alone would not meet the project's purpose and need, nor would they sufficiently improve traffic operations for traffic exiting the Miller Creek area. Additionally, Miller Creek Road improvements alone would not provide sufficient capacity to meet acceptable intersection peak period operations.

2.6.1 No-Action Alternative

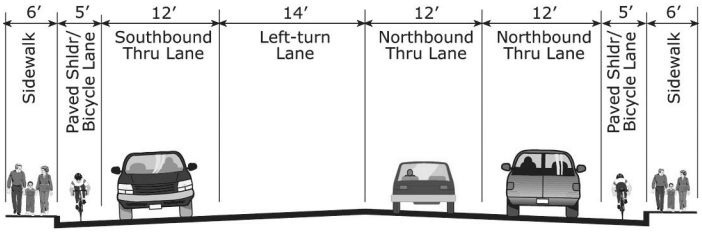
The No-Action Alternative assumes completion of those reasonably foreseeable transportation, development, and infrastructure projects that are already in progress; have committed funds for

improvements; are programmed by MDT or FHWA, Missoula County, the City of Missoula; or are required as a condition of future development. These improvements would be made whether or not any other improvements are made in conjunction with the Miller Creek Road EIS project. This alternative is fully evaluated and is used as a baseline comparison for environmental analysis purposes. Under the No-Action Alternative, improvements within the project area would consist of planned roadway modifications and additions, residential and commercial development, and sewer system expansion within the Miller Creek area required under the approved development plans. The improvements would be locally funded and are reasonably forseeable.

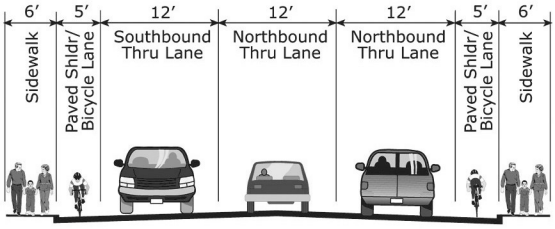
Based on conversations with the City of Missoula and Missoula County Public Works personnel, widening of Miller Creek Road has been included in the Missoula Federal Fiscal Years (FFY) 2007-2011 Transportation Improvement Program as a locally fully funded project. While some additional capacity would be provided on Miller Creek Road to accommodate future and existing traffic volumes, it is not anticipated to meet the future capacity needs to access US 93. Therefore, locally-funded improvements as part of the No-Action Alternative are not considered to meet the purpose and need for the project.

Under the No-Action Alternative, the following modifications to Miller Creek Road are assumed (see **Figure 2-4**):

Figure 2-4
No-Action Alternative Typical Sections



Miller Creek Road
Briggs Street to US 93



Miller Creek Road
North "Y" to Briggs - Rural Section

- Lower Miller Creek Road would be realigned at the north "Y" (Upper/ Lower Miller Creek Roads) intersection to form a "T" intersection with a traffic signal. A left turn would be accommodated at the northbound and eastbound approaches to this intersection.
- A northbound travel lane would be added on the segment of Miller Creek Road from the north "Y" intersection to Briggs Street, providing two northbound travel lanes on this segment. Traffic traveling northbound from Upper Miller Creek Road to Miller Creek Road would not be controlled by the proposed signal, allowing uninterrupted flow for northbound travel through the north "Y" intersection. A raised barrier would be required along the west edge of the northbound through lane at the intersection to prevent vehicles from turning into this free-flowing travel lane.
- Paved shoulders and sidewalks would be added along both sides of Miller Creek Road between Briggs Street and the north "Y" intersection.
- Traffic signal at Miller Creek Road is currently warranted.

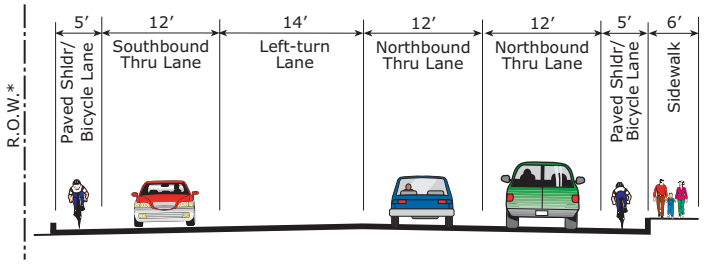
2.6.2 Build Alternatives

2.6.2.1 Design Features Common to All Build Alternatives: Old US 93 and Adjacent Intersections

All of the build alternatives include improvements to Old US 93, the intersection of Old US 93 and Brooks Street, the intersection of Old US 93 and Reserve Street, and the intersection of Reserve Street and Brooks Street. As proposed in the DEIS, Old US 93 between Brooks Street and Reserve Street (US 93) would be widened to provide three travel lanes (two northbound and one southbound): a center left-turn lane; and bicycle lanes and sidewalks (see **Figure 1-4, page 1-9**, **Photo A**, and **Photo B** for existing conditions along Old US 93). **Figure 2-5** shows the proposed typical section along Old US 93 and **Figure 2-6** shows the improvements in plan view. A new signal would be installed at the intersection of Old US 93 and US 93 (Reserve Street) (see **Photo C**). Additionally, parking in the right-of-way adjacent to the businesses on the south side of Old US 93 would be eliminated. The Old US 93 approaches to Brooks Street and Reserve Street (US 93) would be widened to accommodate additional turning lanes as follows:

- Old US 93 eastbound approach to US 93 (Reserve Street): two left-turn lanes and one combined through/ right-turn lane.
- Old US 93 westbound approach to US 93 (Reserve Street): one combined through, right-turn lane, and left-turn lane.
- Old US 93 southbound approach to US 93 (Miller Creek Road intersection): one shared left-through lane, one shared through/ right-turn lane, and one right-turn lane.

Figure 2-5
Old US 93 Typical Section (looking east toward Reserve Street)



**Northern Right-of-Way line is Missoula Country Club and Larchmont Golf Course property lines.*

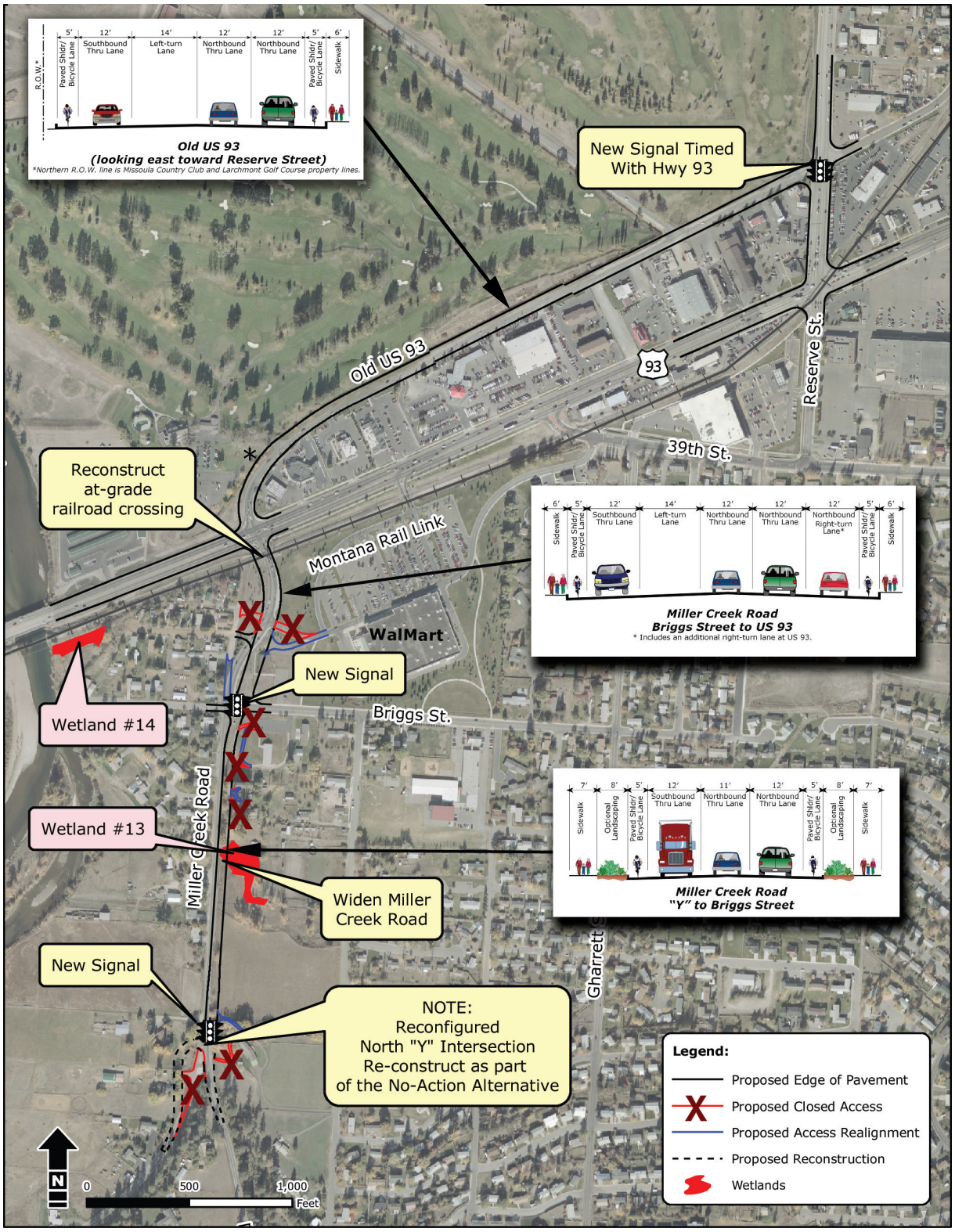
Based on public concerns regarding impacts to the Missoula Country Club, the Old US 93 typical section was revised from the design proposed in the DEIS to further minimize impacts to the Missoula Country Club. The modified typical section for Old US 93 eliminates the proposed drainage ditch and eight-foot shoulder and replaces it with an underground stormwater system with curb and gutter and a five-foot bicycle lane. The five-foot bicycle lane would replace the existing shoulder that may be currently used as a bicycle lane. Three-foot-high retaining walls are anticipated to be used behind the curb to further reduce right-of-way impacts, but the actual need for, and location of the retaining walls will be determined during final design. The revised cross-section for Old US 93 is shown in **Figure 2-5**.

The Old US 93 revised construction footprint would include the following:

- From the existing driveway entrance along the southwest property line toward US 93, approximately 30 feet of right-of-way would be acquired from the Country Club in order to accommodate the additional turning lanes at the Old US 93 and US 93 intersection. The area impacted is the landscaped area adjacent to the parking lot and entrance road. No impacts would occur to the parking lot.

Figure 2-6

Old US 93 and Miller Creek Road Limited Improvements Common to Alternatives 2B, 3B, and 4C



**See Figure 4-7, page 4-60, for detail of impacts at Missoula Country Club.*

- The existing entrance road to the Country Club would remain in its current location but would be shortened by approximately 30 feet to match the new Old US 93 edge of pavement.
- The only holes in the vicinity of Old US 93 are holes 8 and 9. The only impact that would occur to the Country Club along the southern property line east of the entrance road in the area of holes 8 and 9 fairway and rough is to portions of the vegetative hedge or gravel maintenance area. In order to accommodate the wider Old US 93 typical section, an area of right-of-way approximately 250 feet long by five feet wide would be acquired as permanent right-of-way. No impacts to the 8th and 9th holes, fairways, or trees along the fairways would occur.
- For the remainder of the property line to Post Siding Road, all permanent improvements would remain within the existing highway right-of-way. However, to provide access for construction of the improvements, a five- to ten-foot temporary construction easement may be needed from the Missoula Country Club. It is not anticipated that use of the golf course would be limited by the construction easement. The temporary construction easement would be defined during final design and coordinated between the property owner and the project owner.

  A temporary construction easement may be necessary because the implementation of Alternative 5A (Preferred Alternative) would temporarily disturb land on the Missoula Country Club due to construction of a retaining wall(s). A temporary construction easement would allow construction access onto the Missoula Country Club property for a specific time and use. The property owner retains ownership and use of the property and may be compensated depending on the terms of the easement agreement. No permanent structure (wall or fence) would be located within the easement boundaries.

In the DEIS, it was proposed that the left-turn movement from Old US 93 to US 93 be eliminated for Alternative 5A. That movement could be maintained during non-peak hours; however, it may need to be restricted in the future depending on intersection operations. While the exclusive left-turn lane is provided in other build alternatives (2B, 3B, and 4C); this left-turn movement under Alternative 5A is designed to occur as a shared left/through traffic lane when not restricted. This condition would result in increased delay for through traffic on Old US 93 destined to the Miller Creek area as drivers wait for left-turn movements to occur. The difference between Alternative 5A and the No-Action Alternative is that Alternative 5A would provide additional capacity in the form of an adjacent southbound through lane into the Miller Creek area, whereas the shared left/through lane provides the only through movement capacity under the No-Action Alternative.

Photo A: Existing Old US 93 between Brooks and Reserve Streets on the west end would be widened to three travel lanes, bike lane, and a left-turn lane, and current sidewalk would be maintained (looking south on Old US 93 toward west).

Photo B: Existing Old US 93 between Brooks and Reserve Streets would be widened to three travel lanes and a left-turn lane with addition of sidewalk and bike lanes (looking north on Old US 93 toward east).

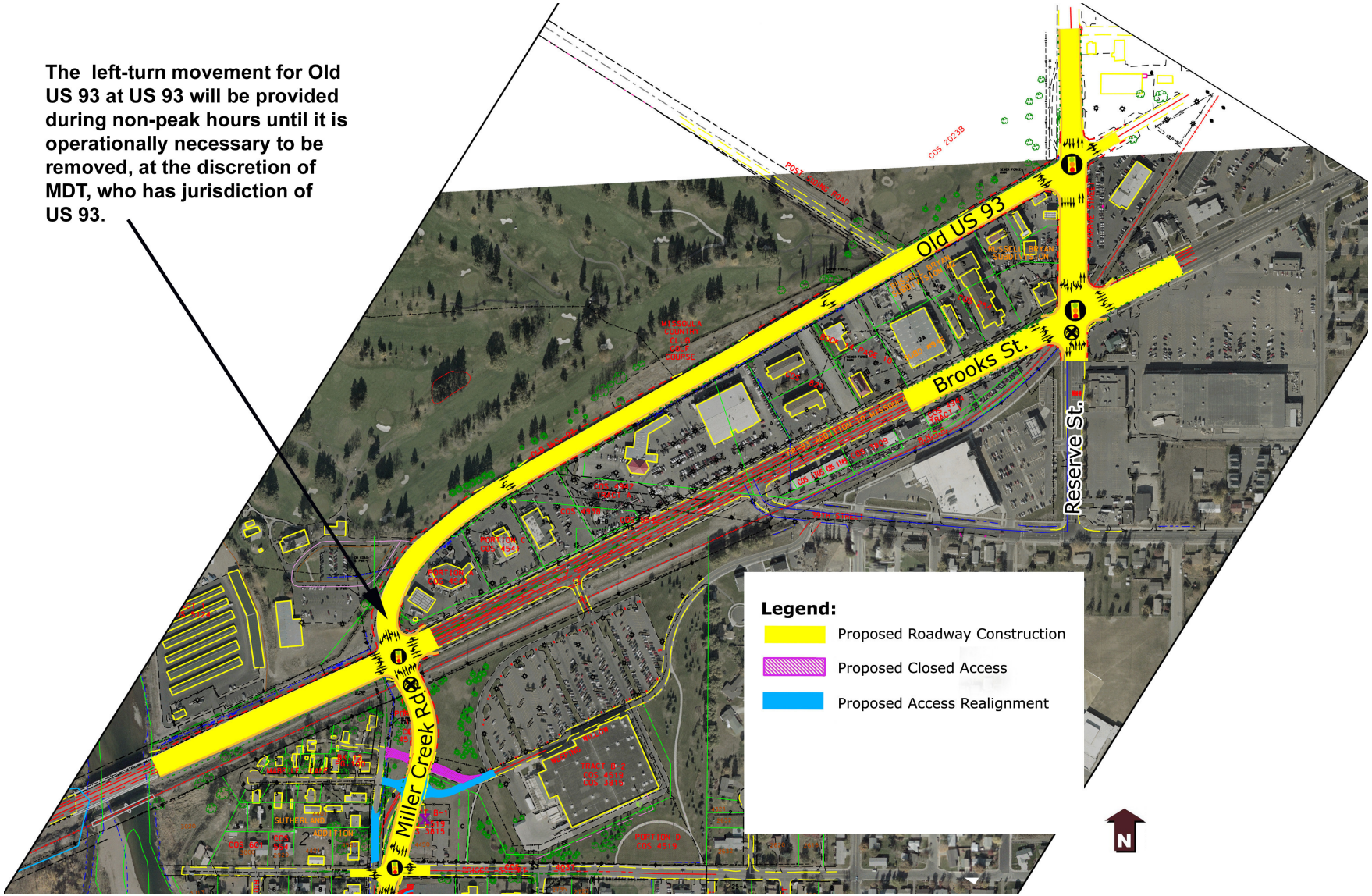
With projected traffic increases, it will eventually be necessary to further increase or provide more efficient use of the available capacity of the Old US 93/Miller Creek Road/US 93 intersection. Increasing the capacity using available approach lanes would require a longer signal cycle length, beyond what may be acceptable to most drivers and to affected jurisdictions. Alternately, it is possible to maximize the available capacity by removing an underutilized turn movement from the intersection. The left-turn lane from Old US 93 to US 93 has a low volume during peak and off-peak periods compared to other movements. Complete restriction of this left-turn movement may be warranted in the future at the discretion of the Montana Department of Transportation (MDT), who has jurisdiction of US 93.

US 93 (Brooks and Reserve Streets) would be modified at the intersections of Reserve/Old US 93, Reserve/Brooks, and US 93/Miller Creek Road. Modifications would include widening of the highway to accommodate additional turning lanes. New sidewalks would be added where widening would impact existing walks. Modifications to the intersections would be made as follows:

Photo C: Existing Old US 93 and Reserve Street intersection would include a new signal (looking east towards Reserve Street).

- US 93 (Brooks Street) at the Miller Creek Road intersection:
  - A second left-turn lane would be added to US 93 on the northbound approach.
  - No changes would be made to the lane configuration on the southbound approach. *Note: Alternative 5A would add a second left-turn lane to US 93 on the southbound approach.*
- US 93 at the Brooks Street and Reserve Street intersection (see **Figure 2-7**):
  - A second southbound through travel lane would be added on Reserve Street by modifying the striping to permit two through lanes. Currently, there are two southbound lanes south of the intersection, but the intersection is configured for only one southbound through lane. The other existing lane accommodates right-turns from Brooks Street to southbound Reserve Street.

Figure 2-7
Proposed US 93 and Adjacent Intersection Configurations



- The intersection configuration on Reserve Street would be changed on southbound approach to Brooks Street from one left-turn lane, one through lane and two right-turn lanes to two left-turn lanes, one through lane, one through/right-turn lane, and one right-turn lane. This additional lane on Reserve Street north of Brooks Street would be accommodated by removing the existing left-turn lane between Old US 93 and Brooks Street.

- Reserve Street at the Old US 93 intersection:
  - A traffic signal would be added.
  - The intersection lane configuration of the Reserve Street southbound approach to Old US 93 would be changed from one left-turn lane, one through lane and one through/right-turn lane to two through lanes and one right-turn lane. Left-turns from southbound Reserve to Old US 93 would be prohibited.
  - The northbound and southbound left-turn lanes would be removed from the Reserve Street approaches to Old US 93.

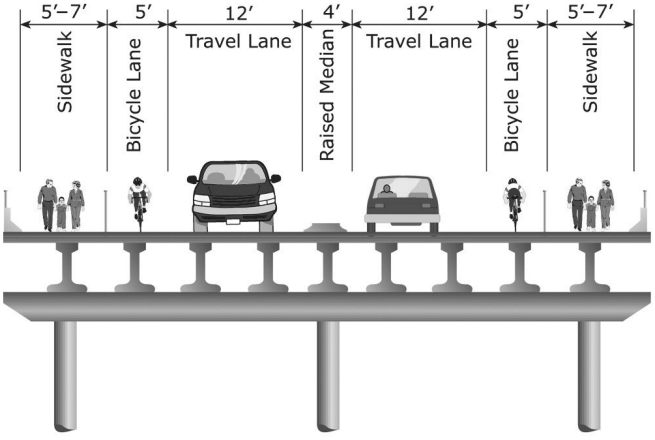
2.6.2.2 Design Features Common to Bridge Alternatives (Alternatives 2B, 3B and 4C)

Bridge Design Considerations

The criteria and practices of the MDT Bridge Design Section were assumed to represent modern, economical bridge practice within this region. It is anticipated that these criteria would be supplemented to a limited extent by applicable City of Missoula and Missoula County criteria; however, the MDT criteria should adequately represent regional bridge practice for the purposes of this initial, conceptual selection study.

Bridge deck width: An overall deck width of 48 to 66 feet, including bridge barrier railings, was assumed for all bridges depending on turn lane configurations (see **Figure 2-8**).

Figure 2-8
Bridge Typical Section



Vertical clearance over US 93: The specified minimum vertical clearance of overpasses over US 93 is 16.6 feet.

Vertical clearance over MRL track: The required minimum vertical clearance for railroad grade separations is 23.3 feet (MRL).

Bridge length over US 93 and Bitterroot River: US 93 is a four-lane principal arterial within the project area. Future widening of US 93 is not included in any local, state, or federal plans. However, MDT criteria requires a life span for a bridge of at least 75 years. Therefore, it would be reasonable to assume that widening of US 93 could occur within the lifetime of a bridge and that bridges should be of sufficient length to accommodate adding one lane to US 93 in each direction.

The bridge alternatives include a span over the Bitterroot River long enough to accommodate a 20-foot-wide envelope for a trail under the bridge along the southern bank of the river. The trail would be constructed and maintained by others. The bridge would be designed with adequate vertical clearance to accommodate equestrians and other wildlife.

Hydraulic considerations for bridges over Bitterroot River: The minimum waterway opening would be determined by hydraulic analysis of the design year flood. The actual bridge length used for this study includes an initial assessment of the waterway opening required, plus a determination of abutment location relative to the waterway in accordance with county, state, and federal floodplain regulations. Missoula County floodplain regulations require a minimum two feet of freeboard. Freeboard is the vertical distance between the water elevation (such as the 50- or 100-year flood) and the bottom of the bridge (usually the bottom of the girders). For purposes of this FEIS, five feet of freeboard is recommended to accommodate drift boats during high flow events. For both environmental and hydraulic reasons, the number of piers located in the river was kept to a minimum, consistent with providing an economical structure. Pier shape and orientation would be carefully evaluated during final design to minimize the trapping of debris on the pier and to minimize the possibility of creating local scour at the pier.

Bridge superstructure types: The primary element that determines the bridge configuration, cost, and appearance is the type of superstructure selected. The superstructure is the portion of the bridge above the supports. Everything below the girders is considered substructure. Everything from the bottom of the girders on up is considered superstructure. The alternative bridge configurations for the Miller Creek project utilize spans in the range of 100 to 200 feet, which has proven to be an economical span range for conventional water crossings and roadway/railroad overpasses.

Miller Creek Road Limited Improvements:

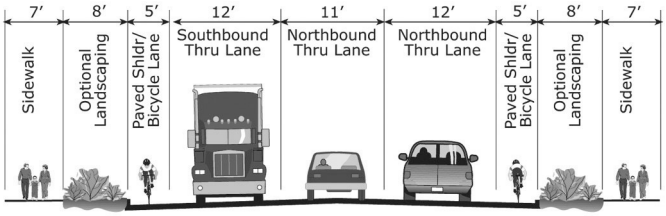
Alternatives 2B, 3B, and 4C would require the limited improvements to Miller Creek Road to accommodate forecasted AM and PM peak period traffic volumes on US 93 and Miller Creek Road (see **Figure 2-6, page 2-20**).

Miller Creek Road widening: Miller Creek Road between the north "Y" intersection and US 93 would be widened to provide three through travel lanes (two northbound and one southbound), bicycle lanes, and sidewalks (see **Figure 2-9**).

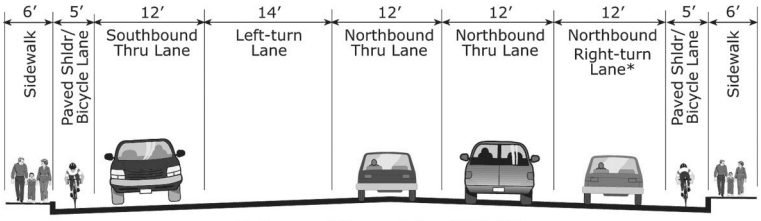
Briggs Street/Miller Creek Road intersection: The intersection approach lanes at Briggs Street and US 93 would be configured as follows:

- Miller Creek Road northbound approach to Briggs Street: one through lane, one combination through lane/right-turn lane, and one left-turn lane.
- Miller Creek Road southbound approach to Briggs Street: one combination through lane/right-turn lane and one left-turn lane.

Figure 2-9
Miller Creek Road Limited Improvements



"Y" to Briggs Street



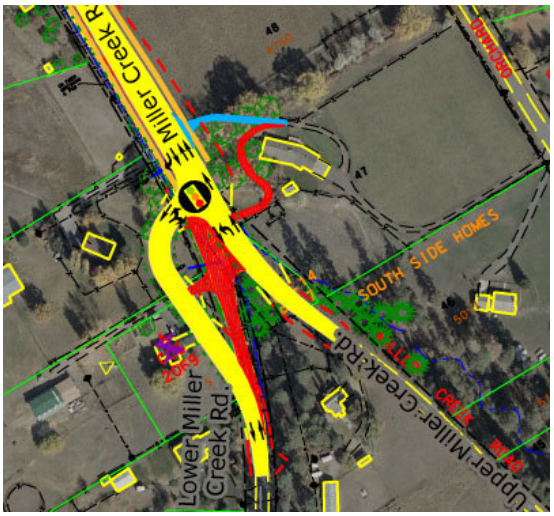
Briggs Street to US 93

* Includes an additional right-turn lane at US 93.

US 93/Miller Creek Road approach: Miller Creek Road northbound approach to US 93 would include two through lanes, two right-turn lanes, and one left-turn lane.

North "Y" intersection: It is assumed that a portion of these intersection modifications would occur as part of the City of Missoula and Missoula County locally funded and planned improvements to Miller Creek Road anticipated for 2007, but have not yet occurred. Lower Miller Creek Road at its approach to Upper Miller Creek Road would be realigned to the north and west of its current configuration to form a perpendicular "T" intersection with Upper Miller Creek Road at the north "Y" intersection (see **Figure 2-10**). A new signal would be installed at this intersection, and the intersection approach lanes would be configured as follows:

Figure 2-10
Proposed North "Y" Intersection Configuration



- Miller Creek Road southbound approach: one through lane and one right-turn only lane.
- Lower Miller Creek Road eastbound approach: one lane for left and right turns.
- Upper Miller Creek Road northbound approach: one left-turn lane and one through lane with a raised curb barrier located between the lanes and extending north through the intersection area to allow for unrestricted (not signal-controlled) northbound travel and to prevent vehicles from turning into this lane in the intersection area.

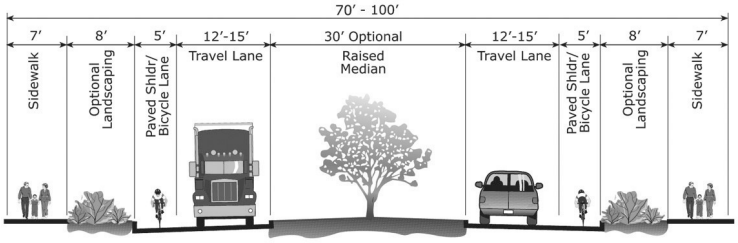
The proposed improvements at the northern "Y" intersection of Upper and Lower Miller Creek Roads include flattening of the grade on both Upper Miller Creek Road and Lower Miller Creek Road as they approach the intersection. The existing grade of Upper Miller Creek Road at the intersection is approximately 12 percent and the proposed new grade would be 8 percent. The existing grade of Lower Miller Creek Road at the intersection is approximately 6 percent and the proposed new grade would be 4 percent.

Property and access impacts: A private residence on the east side of the north "Y" intersection and a former church (currently owned by Wal-Mart) at the Miller Creek Road and Briggs Street intersection would be acquired. Access changes would include modification of the entrance into the subdivision on the west side of Miller Creek Road between Briggs Street and US 93 (see **Figure 2-6, page 2-20**); closure and relocation of a residential driveway at a property on the west side of the north "Y" intersection that would be relocated; relocation of a driveway at a residence located on the east side of the north "Y" intersection; and closure of two driveways on the east side of Miller Creek Road for a church located south of Briggs Street. The proposed improvements to Miller Creek Road also include a slightly modified access to Wal-Mart, rather than a new access. The existing access is proposed to be relocated approximately 100 feet away from the Miller Creek Road and US 93 intersection to better accommodate proposed turning lanes and the intersection. Additionally, it is recommended that turn movements from this relocated access be restricted to right-in/right-out only. However, many of these access changes may occur as part of the City of Missoula/Missoula County Miller Creek Road No-Action locally funded improvements.

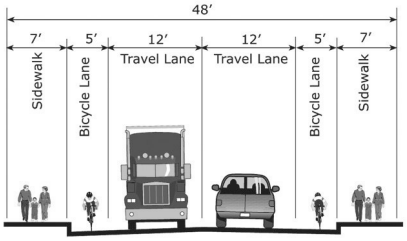
2.6.2.3 Alternative 2B: North Lower Miller Creek Grade-Separated Intersection

With Alternative 2B, a bridge crossing and new roadway would be constructed into the Miller Creek area (see **Figure 2-11** for typical section). The new road would connect to Lower Miller Creek Road, then extend to a new intersection with US 93. One of the approach roads would be constructed along the Missoula County-owned Old Bitterroot Road right-of-way (see **Figure 2-11** for typical section). The road would cross over the MRL railroad track (avoiding an at-grade railroad crossing) and US 93 on a bridge, then descend to a location approximately 660 feet north of US 93 near Yuhas Ranch Lane. From this point, the new roadway would curve to the east and south to a new intersection with US 93 approximately 350 feet northeast of the proposed bridge crossing over US 93 (see **Figure 2-11,** which depicts the typical section of the proposed roadway and **Figure 2-12**).

Figure 2-11
Alternative 2B, 3B, and 4C Typical Sections



New Roadway Concept
Alternatives 2B, 3B, and 4C



Old Bitterroot Road
Alternatives 2B and 3B

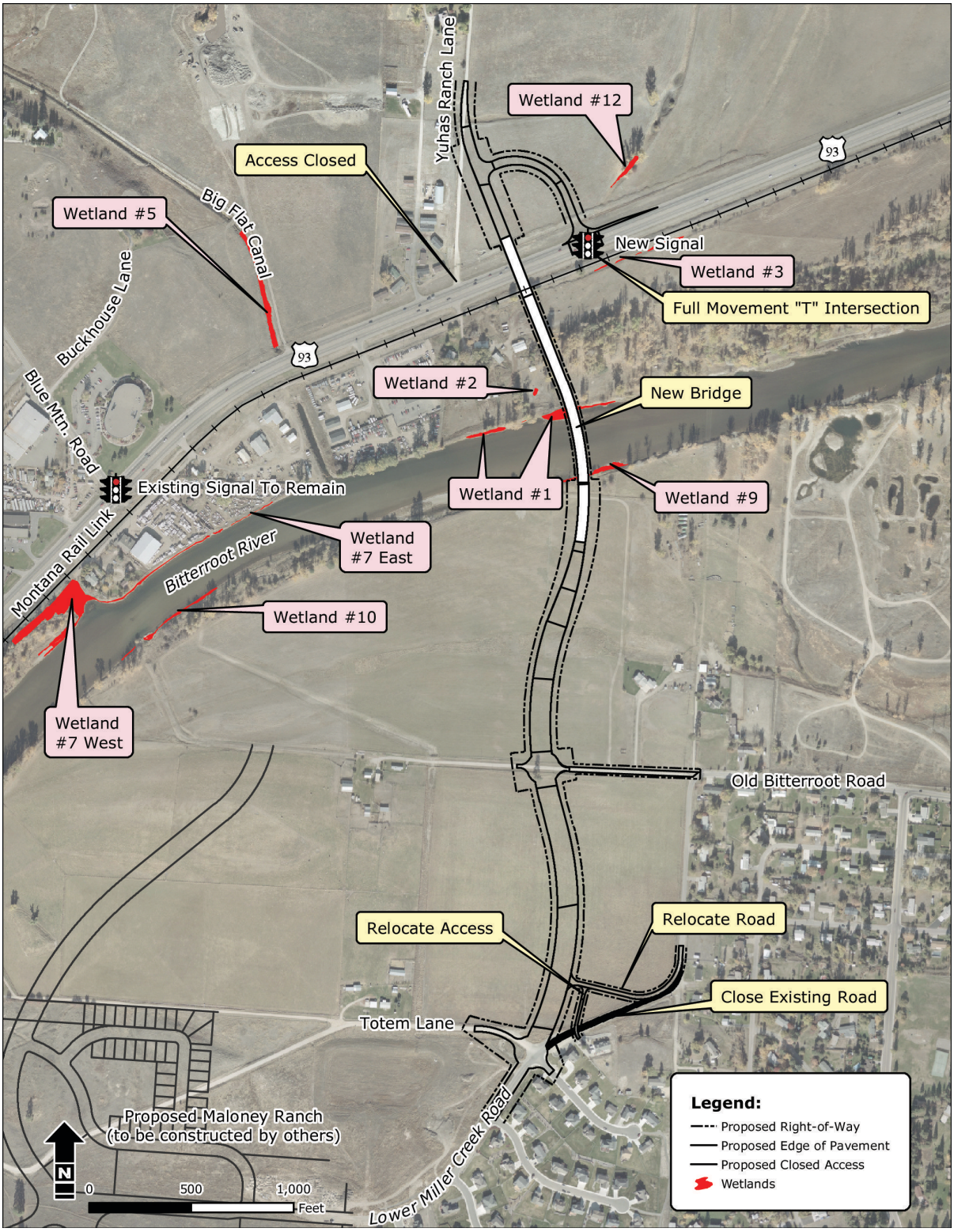
This alternative would require an approximately 1,560-foot-long bridge to cross the Bitterroot River, the MRL railroad track, and US 93. Proposed intersections at Old Bitterroot Road and Totem Lane could be conventional or roundabouts (see **Figure 4-6, page 4-35**).

Both signalized and unsignalized intersections were initially considered at US 93. Both types of intersection treatments have similar impacts. The primary disadvantage of the unsignalized option is the proximity of the southbound (westbound) acceleration/merge lanes that would terminate near the Blue Mountain Road intersection. The proximity of this lane to the Blue Mountain Road intersection would result in an undesirable condition when a vehicle that is accelerating to merge onto US 93 conflicts with another vehicle on US 93 that is decelerating to turn from the highway onto Blue Mountain Road. Therefore, the signalized grade-separated intersection is fully analyzed in Chapter 4.0 of this FEIS.

2.6.2.4 Alternative 3B: Blue Mountain Road Grade-Separated Intersection

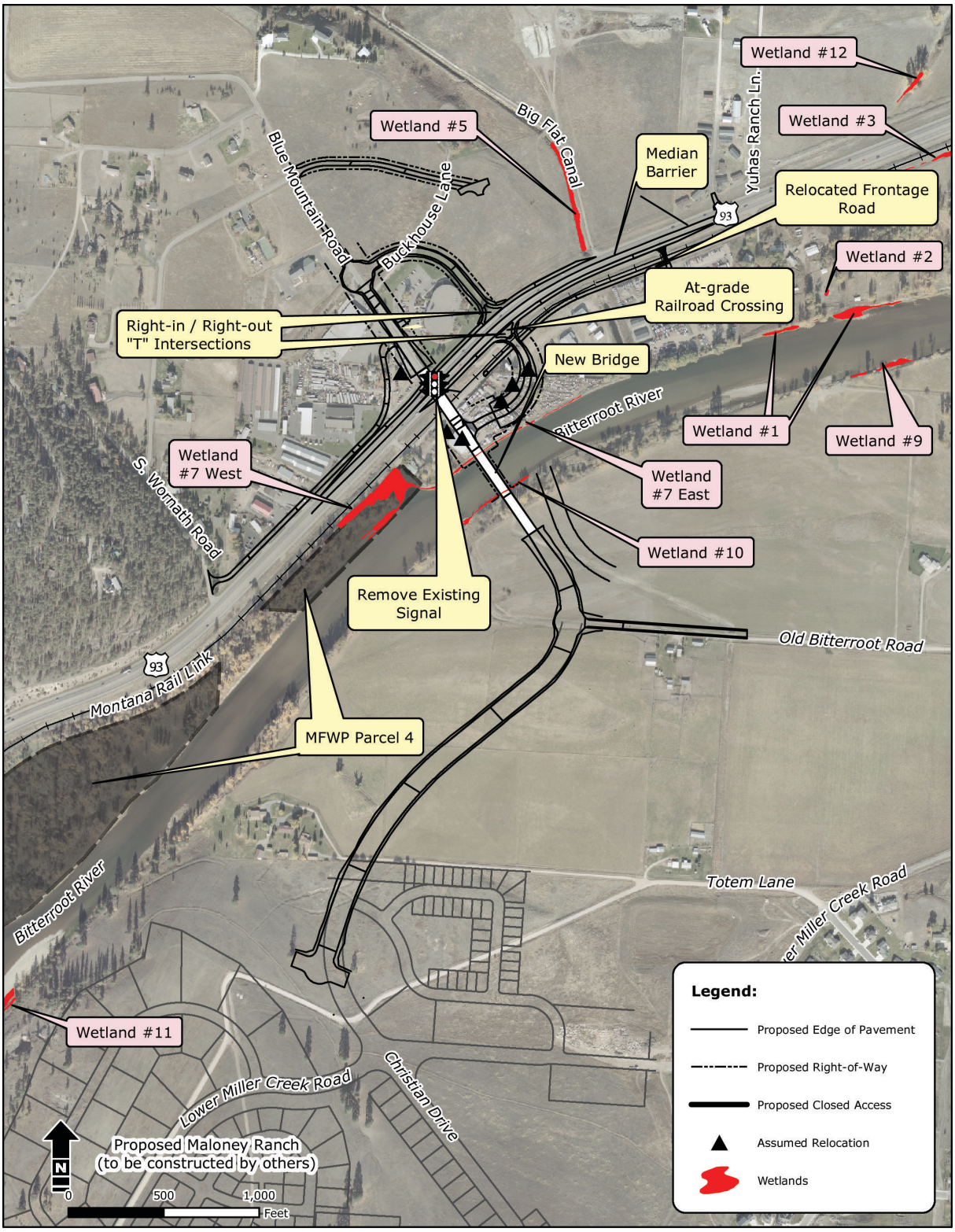
Alternative 3B would align with Blue Mountain Road and cross over US 93, the MRL railroad track, and the Bitterroot River on a bridge structure connecting to Lower Miller Creek Road. A new two-lane access road would connect US 93 and Blue Mountain Road with right-in/right-out unsignalized intersections (see **Figure 2-11**, **Figure 2-13,** and **Figure 2-14)**. Beginning at a location approximately 270 feet north of Buckhouse Lane, Blue Mountain Road would be reconstructed as a two-lane roadway with bicycle lanes and sidewalks that would elevate to a bridge crossing over both US 93, the MRL track, and the Bitterroot River. South of the river, the two-lane extension of Blue Mountain Road would intersect with two new two-lane approach roads

Figure 2-12
Alternative 2B Conceptual Layout, North Lower Miller Creek Grade-Separated Intersection



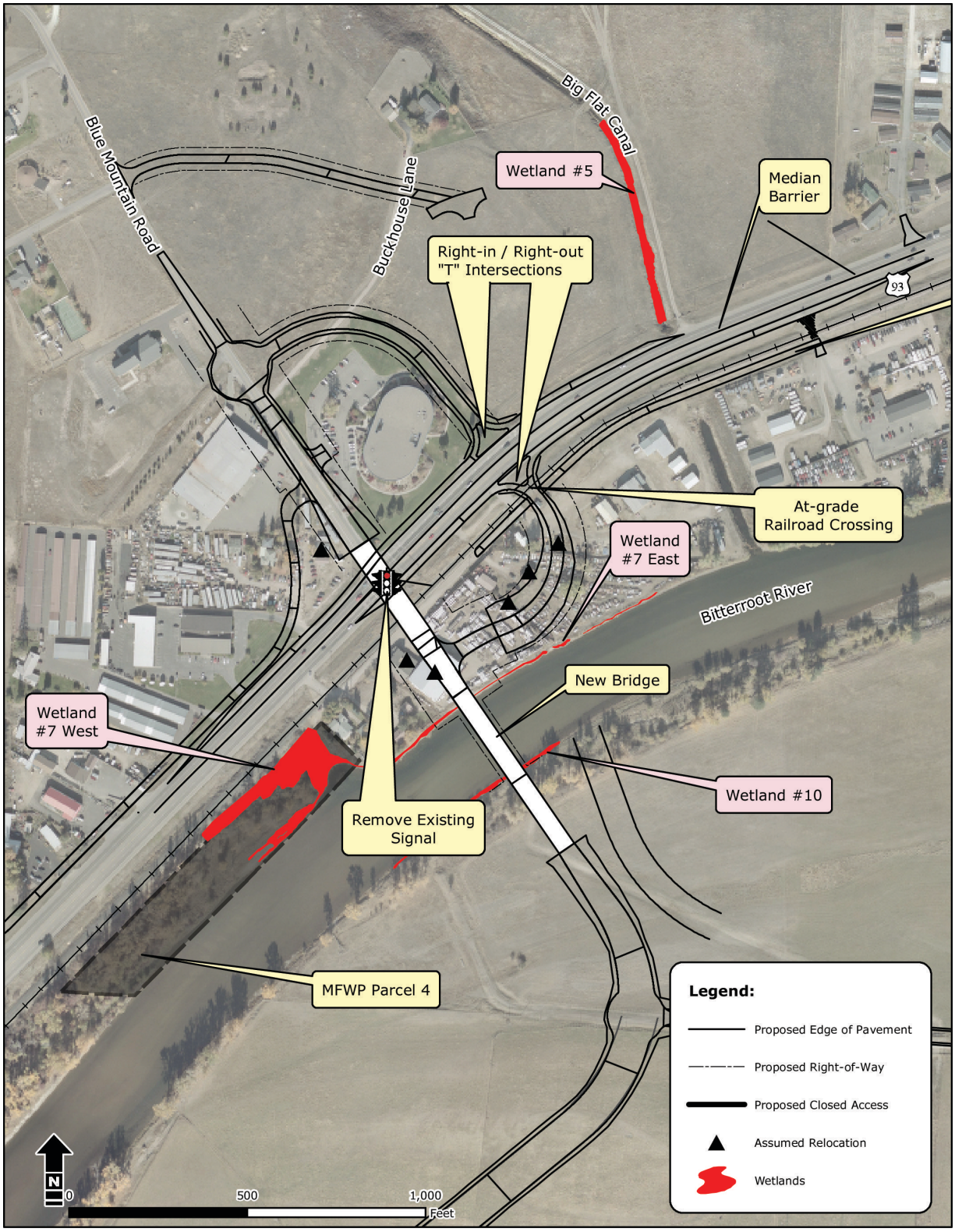
**Note that more development has occurred in this area since this aerial photo was taken.*

Figure 2-13
Alternative 3B Conceptual Layout, Blue Mountain Road Grade-Separated Intersection



**Note that more development has occurred in this area since this aerial photo was taken.*

Figure 2-14
Alternative 3B Detail of Blue Mountain Road Grade-Separated Intersection



**Note that more development has occurred in this area since this aerial photo was taken.*

that would provide connections to Lower Miller Creek Road. One of the approach roads would be constructed along the Missoula County-owned Old Bitterroot Road right-of-way (see **Figure 2-11** for typical section). The other approach road would be a new road extending south from the intersection of the Blue Mountain Road and Old Bitterroot Road extensions to a new intersection with Lower Miller Creek Road. From Lower Miller Creek Road, the proposed approach road would continue south to a new intersection with the extension of Maloney Ranch Road as shown on the approved Maloney Ranch development plan. This intersection would be located approximately 600 feet east of the extension of Christian Drive, also shown on the Maloney Ranch development plan. Proposed intersections at Old Bitterroot Road/Lower Miller Creek Road and Christian Drive, and Blue Mountain Road could be conventional or roundabout (see **Figure 4-6, page 4-35**).

The existing Blue Mountain Road approach to US 93 would be closed, and the signal at this intersection would be removed. US 93 traffic would no longer be required to stop at Blue Mountain Road. Blue Mountain Road would be reconstructed and continue to an intersection at Buckhouse Lane. Buckhouse Lane would be relocated to the north and would maintain access to a retail establishment, Loren's House of Carpet.

Approximately 1,200-foot-long acceleration/merge lanes would be constructed on each side of US 93 to accommodate traffic entering the highway from the proposed connecting road in the northbound (eastbound) and southbound (westbound) directions. Approximately 600-foot-long deceleration/diverge lanes would be added on each side of US 93 to accommodate traffic exiting the highway to the proposed new road in both directions. A raised median or barrier would be added to prevent left-turn movements between US 93 and the new approaches to the highway.

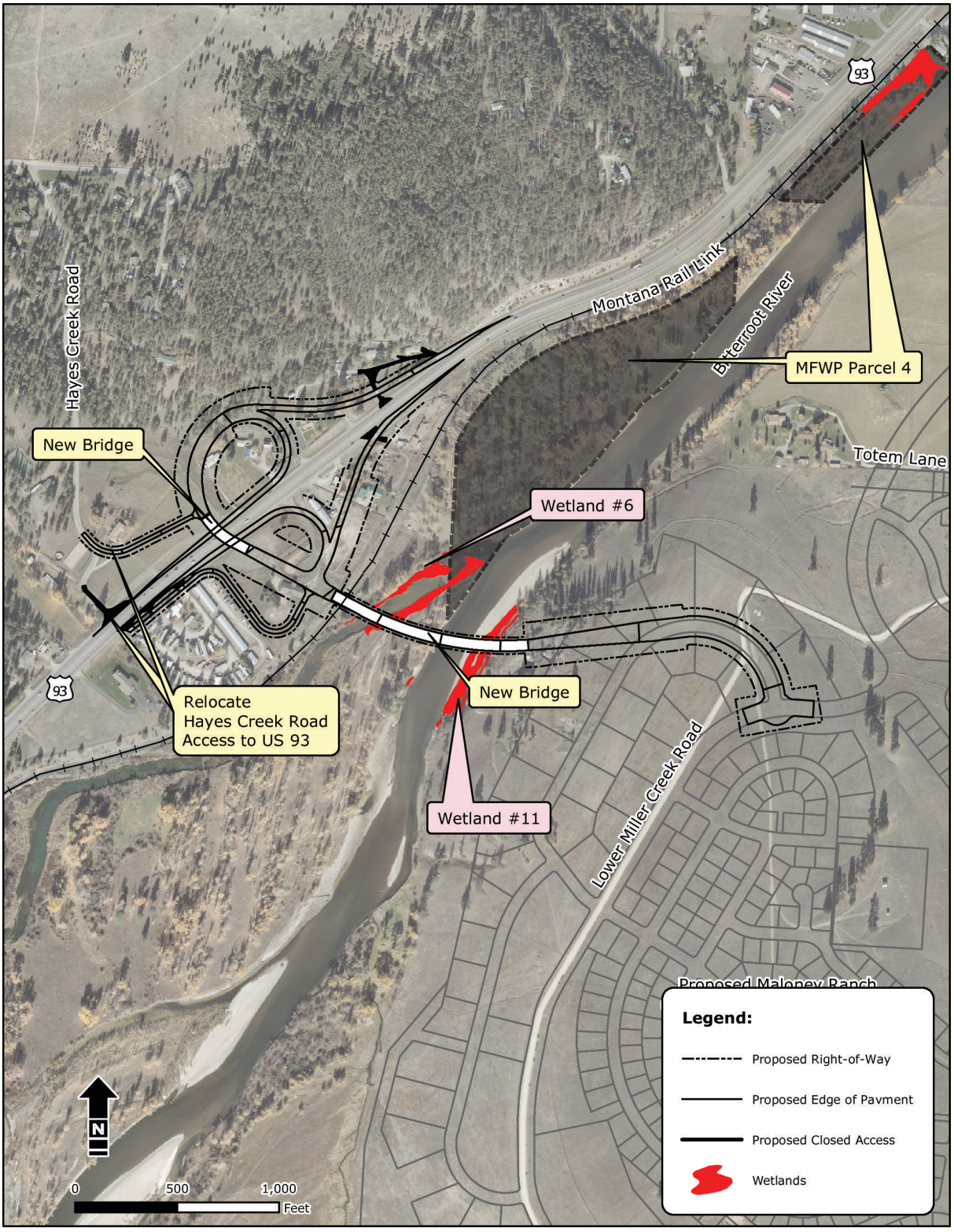
An at-grade railroad crossing would be required at the access ramp to US 93 on the south side. Northbound (eastbound) traffic turning right from US 93 would queue for trains in the deceleration lane. Traffic turning right onto US 93 from the Miller Creek area would not be required to stop and should be able to clear off the tracks prior to closing of the crossing signals. Traffic control mechanisms, such as flashing signals and crossing gates, signage, and pavement striping, would be applied at the railroad crossing. The two at-grade railroad crossings would be consolidated to the one new crossing required for the access ramp.

This alternative would require an approximately 1,030-foot-long bridge to cross the Bitterroot River, the MRL railroad track, and US 93. Right-of-way acquisitions, relocations, and access changes affecting multiple private properties on both sides of US 93 and in the Miller Creek area would be required. Access to local businesses and residences on both sides of US 93 would be consolidated and linked to the intersection connection to reduce entry points onto US 93 consistent with MDT's access control plans for US 93. Frontage roads would be constructed along both sides of US 93 for this purpose. Traffic would access US 93 southbound by proceeding north to the access ramp. Traffic desiring to access US 93 northbound would proceed south across the new bridge and utilize the access ramp on the south side of US 93.

2.6.2.5 Alternative 4C: South Lower Miller Creek Interchange

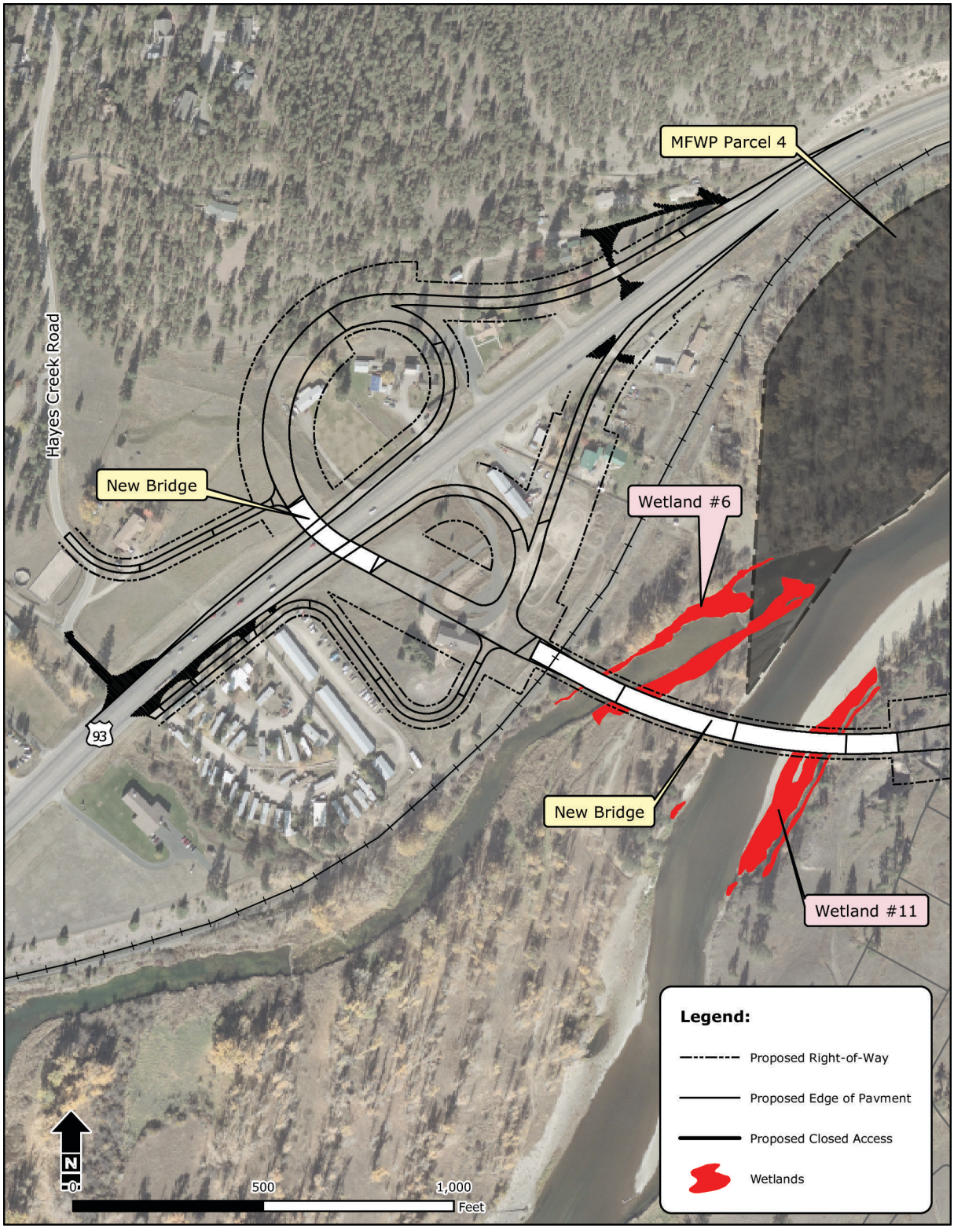
Alternative 4C would provide a fully directional interchange with the addition of ramp merge and diverge lanes at US 93, north of the intersection of US 93 and Hayes Creek Road (see **Figure 2-15** and **Figure 2-16**). Two 2-lane bridges would be required for this configuration: a six-span bridge of an approximately 1,000-foot overall length over the Bitterroot River and MRL track, and a two-span bridge of 265-foot overall length over the US 93 mainline and interchange ramp transitions. The grade of the railroad at this location is sufficiently lower than the grade of the highway and would permit a grade-separated crossing with an interchange. Discussions have occurred with Montana Fish, Wildlife & Parks (MFWP) representatives regarding the possible incorporation of a formal fishing access to Parcel 4 as part of the bridge construction.

Figure 2-15
Alternative 4C Conceptual Layout, South Lower Miller Creek Interchange



**Note that more development has occurred in this area since this aerial photo was taken.*

Figure 2-16
Alternative 4C Detail of South Lower Miller Creek Interchange



**Note that more development has occurred in this area since this aerial photo was taken.*

East of the bridge that would cross the Bitterroot River, the two-lane roadway (see **Figure 2-11**) would connect with an intersection or roundabout at the realigned segment of Lower Miller Creek Road, as proposed under the Maloney Ranch development plan.

Alternative 4C would require right-of-way acquisition, relocations, and access changes affecting multiple private properties. These access changes would include closure of the existing Hayes Creek Road approach to US 93 and realignment of the south end of Hayes Creek Road to connect with the proposed roadway alignment on the north side of US 93. This alternative would create an opportunity to consolidate a number of highway approaches and to relocate and link Hayes Creek Road to the interchange, reducing potential traffic conflicts attributed to turn movements at these approaches. Access to some properties south (east) of US 93 would be directed to a new frontage road. These actions would be consistent with MDT's access control plans for US 93. The proposed intersection at Lower Miller Creek Road could be conventional or roundabout (see **Figure 4-6, page 4-35**).

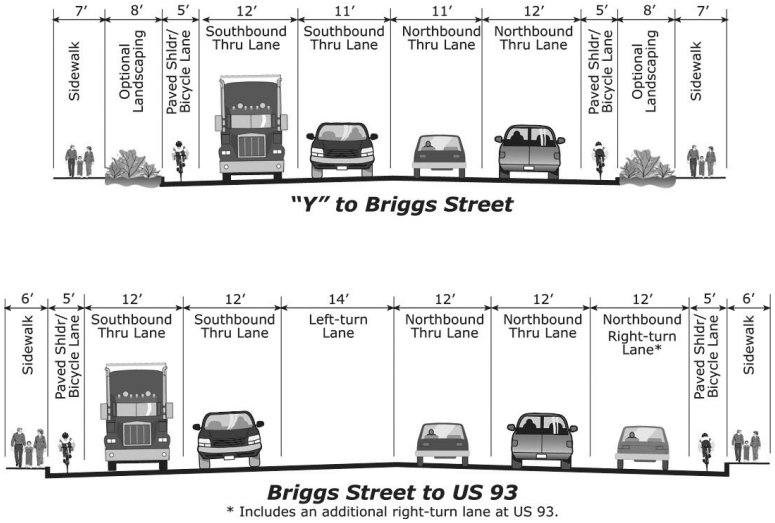
2.6.2.6 Alternative 5A: Miller Creek Road At-Grade Intersection (Preferred Alternative)

Alternative 5A would not require a bridge crossing of the Bitterroot River or a new roadway. This alternative includes improvements to Miller Creek Road and Old US 93 and the US 93 Brooks and Reserve Streets intersection, as described in Section 2.6.2.1.

Alternative 5A would provide the following modifications to improve access between US 93 and the Miller Creek area:

- Miller Creek Road between the north "Y" intersection and Briggs would be widened to provide four through travel lanes (two northbound and two southbound), bicycle lanes, and sidewalks. Miller Creek Road between Briggs and US 93 would include additional widening to accommodate two northbound right-turn lanes at US 93, and a left-turn lane (with signal-controlled left-turn arrow) at Briggs and US 93 (see **Figure 2-17** and **Figure 2-18)**. Intersection approach lanes at Briggs and US 93 would be configured as follows:

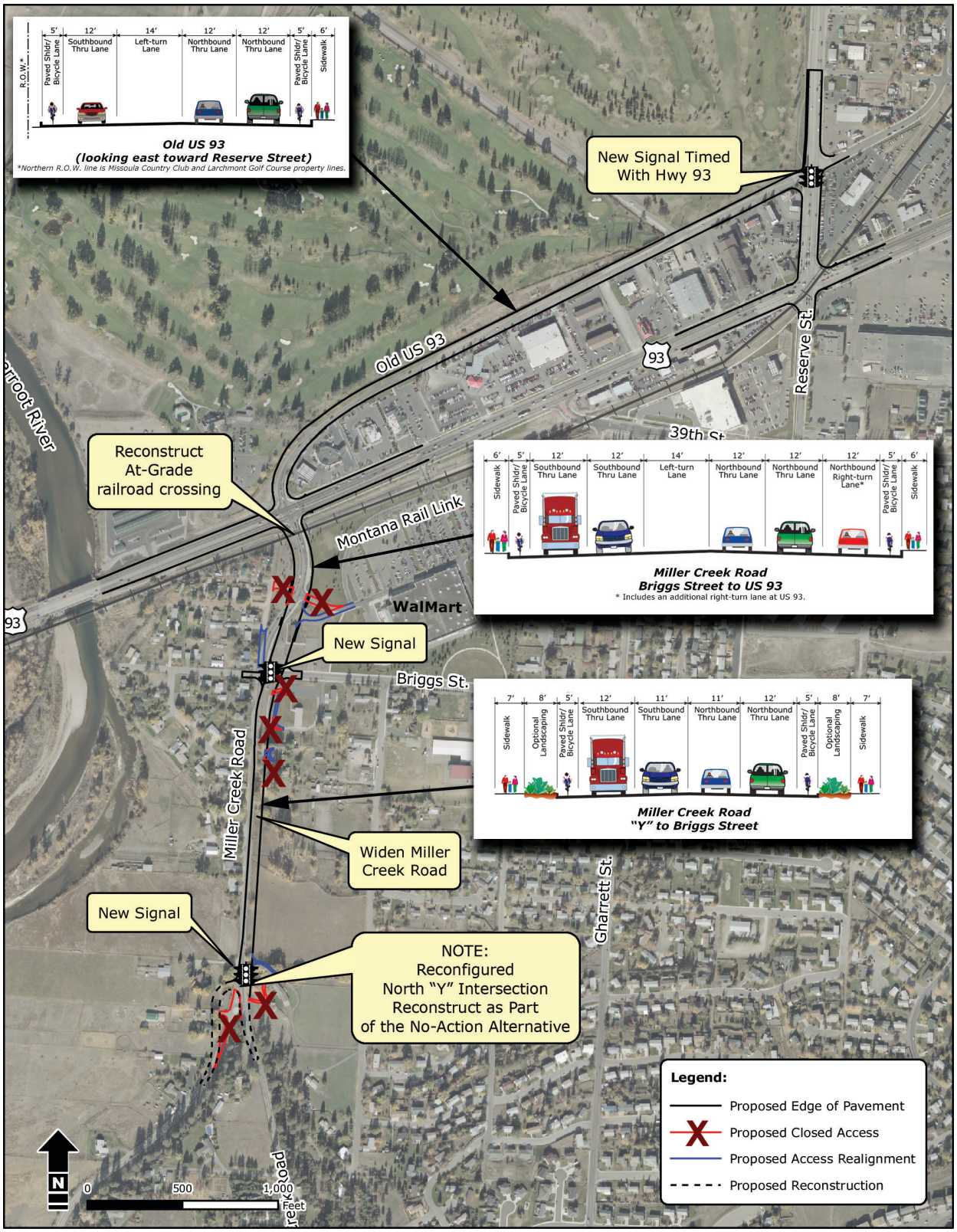
Figure 2-17
Alternative 5A Typical Sections



  - A signal is warranted and necessary at Briggs Street to allow safe left and right turns onto Miller Creek Road. The light would provide the additional benefit of a protected crossing of Miller Creek Road for pedestrians and bicyclists.
  - Miller Creek Road northbound approach to Briggs: one through lane, one combination through lane and right-turn lane, and combination through lane and one left-turn lane.
  - Miller Creek Road southbound approach to Briggs: one through lane, one combination through lane and right-turn lane, and one left-turn lane.

Figure 2-18

Alternative 5A Conceptual Layout, Miller Creek Road At-Grade Intersection (Preferred Alternative)



  - Miller Creek Road northbound approach to US 93: two through lanes, two right-turn lanes; and one left-turn lane.
  - US 93 southbound approach to Miller Creek Road: a second left-turn lane would be added.
- The north "Y" intersection of Upper Miller Creek Road and Lower Miller Creek Road would be realigned to the north and west of its current configuration to form a perpendicular "T" intersection, as shown on **Figure 2-10, page 2-26**. A new signal would be installed at this intersection, and the intersection approach lanes would be configured as follows:
  - Miller Creek Road southbound approach: one through lane and one right-turn only lane.
  - Lower Miller Creek Road eastbound approach: one lane for left and right turns.
  - Upper Miller Creek Road northbound approach: one left-turn lane and one through lane with a raised curb barrier located between the two lanes and extending north through the intersection area to allow for unrestricted (not signal-controlled) northbound travel and to prevent vehicles from turning into this lane in the intersection area.

Alternative 5A would require right-of-way and access changes affecting multiple private properties. A private residence on the east side of the north "Y" intersection and a former church (currently owned by Wal-Mart) at the Miller Creek Road and Briggs intersection would be acquired. Access changes would include modification of the entrance into the subdivision on the west side of Miller Creek Road between Briggs Street and US 93. The proposed improvements to Miller Creek Road include a slightly modified access to Wal-Mart, rather than a new access. The existing access is proposed to be relocated approximately 100 feet away from the Miller Creek Road and US 93 intersection to better accommodate proposed turning lanes at the intersection. Additionally, from a traffic operations standpoint, it is recommended that turn movements from the relocated Wal-Mart access be restricted to right-in/right-out only. Access changes would also include closure and relocation of a residential driveway at a property on the west side of the north "Y" intersection, relocation of a driveway at a residence located on the east side of the north "Y" intersection, and closure of two driveways on the east side of Miller Creek Road for a church located south of Briggs Street. The MRL crossing of Miller Creek Road would be reconstructed so that the traffic signal has a "clear-out" cycle that provides a green light to clear traffic off the railroad crossing prior to the crossing gates going down. This "clear-out" cycle would run in conjunction with the left-turn lane signals defaulting to a stop condition to prevent turning movements off US 93 into the railroad crossing. Proposed intersection configurations are shown in **Figure 4-6, page 4-35.**

Improvements proposed under Alternative 5A are similar to the Miller Creek Road Limited Improvements proposed for the bridge alternatives, except that Miller Creek Road would have an additional southbound through travel lane from US 93 to the north "Y" intersection, and there would be two left-turn lanes allowing southbound traffic on US 93 to turn onto Miller Creek Road.

2.7 Preferred Alternative Identification

Comparison of Alternatives

Section ES.5, page ES-4; **Table ES-2, page ES-13**; and **Table 2-1, page 2-7** describe the major impacts associated with all of the alternatives evaluated in this FEIS. While Alternative 5A has been identified as the Preferred Alternative because it meets the purpose and need for the project, was found to be acceptable when evaluated against criteria established for the project (see **Table 2-2, page 2-13**), and is supported by the assessment conclusions documented in Chapter 4, other alternatives have strengths that are worthy of mention. The bridge alternatives

(2B, 3B, and 4C) provide the additional emergency evacuation benefits associated with a second access.

Alternative 5A provides the best operational performance based upon future traffic projections, costs the least, and has the least impact to the human and natural environment. In addition, the US Army Corps of Engineers (USACE) regulations require selecting the Least Environmentally Damaging Practicable Alternative (which is Alternative 5A) for issuance of a 404 Permit (see Section 4.4.10.9, page 4-101).

Based upon the projected increase in traffic on US 93, the majority of traffic exiting the Miller Creek area via a second bridge during the AM peak period would be forced to merge into a long queue of traffic extending to, or past Blue Mountain Road. Furthermore, most drivers would still have to travel through the Miller Creek Road intersection. Traffic modeling shows that with a bridge at Blue Mountain Road, the AM Peak queue would extend to Blue Mountain Road.

While Alternative 5A is expected to function at an acceptable LOS during typical weekday peak travel periods through the year 2025, a second connection to the Miller Creek area and other system improvements (including measures to reduce travel demand and/or increase capacity on the US 93 corridor) may be warranted if future traffic volumes on US 93 and Miller Creek Road exceed the year 2025 forecasts.

The Preferred Alternative is identified as the alternative that best meets the project purpose and need after consideration of environmental impacts, technical feasibility, and cost. The purpose of the Miller Creek Road project is to provide for safe and improved access between US 93 and the Miller Creek area. The Miller Creek area is situated in one of the fastest growing areas in Missoula County. Population growth is expected to continue into the future, and current development plans would result in approximately 3,000 dwelling units by 2025, thereby affecting the capacity, mobility, and safety of project area roads, including US 93 and Miller Creek Road. The existing primary roadway access to and from the project area is at capacity and traffic volumes are expected to increase over the next 20 years with expected full build-out of the Miller Creek area. Alternative 5A has been identified as the Preferred Alternative because it meets the purpose and need for the project, was found to be acceptable when evaluated against criteria established for the project (see **Table 2-2, page 2-13**), and is supported by the assessment conclusions documented in Chapter 4. **Table 2-3** summarizes the reasons and findings that Alternative 5A would meet the project needs best of the alternatives in this FEIS. However, it is not possible to move forward with Alternative 5A or any other build alternative until funding and planning issues are resolved.

Table 2-3
Comparison of Project Needs and the Build Alternatives

Project Needs		Build Alternatives Comparison
1.	Address high congestion levels on Miller Creek Road and at the Miller Creek Road/US 93 intersection.	Compared to the No-Action Alternative, all alternatives have comparable intersection operations at US 93/Miller Creek Road. Alternative 5A addresses the high congestion issue with fewer impacts to the natural area than other build alternatives. Additionally, Alternative 5A, as compared to other build alternatives, will result in higher VMT on collector/local roadways within the Miller Creek area and a reduction in VMT along US 93 (i.e., less congestion compared to other build alternatives) east/south of the Miller Creek Road/US 93/Old US 93 intersection (see **Table 4-7, page 23**).

Table 2-3 (Continued)
Comparison of Project Needs and the Build Alternatives

Project Needs		Build Alternatives Comparison
2.	Address roadway deficiency and safety concerns at the Upper Miller Creek Road and Lower Miller Creek Road "Y" intersection, at the Miller Creek Road and US 93 intersection, and on US 93.	All of the alternatives would enhance safety at the north "Y" intersection of Upper Miller Creek Road and Lower Miller Creek Road with the addition of a traffic signal and reconfiguration of the intersection. Compared to Alternatives 2B and 4C, Alternative 5A would not include a new connection to US 93 and thus would not introduce interruption to the traffic flow along US 93. Minimizing interruptions to traffic flow is especially important along congested roadways because interruptions slow down traffic when merging is required or a signal is present and thus increases the crash potential in the area of the interruption. Compared to the other build alternatives, Alternative 5A would have the least impact to traffic operations on US 93.
3.	Provide pedestrian and bicycle facilities and public transportation access.	All of the alternatives would provide pedestrian and bicycle facilities along Miller Creek Road and would remove existing roadway deficiencies (i.e., narrow width and lack of pedestrian facilities) that could discourage future expansion of transit service. Alternative 5A would not provide a second connection to US 93 and would potentially limit viable circulation route options for public transit; however, there is no current transit service to the area.
4.	Improve access for emergency service providers.	Compared to the No-Action Alternative, all of the build alternatives would result in improved traffic conditions and reduced traffic travel times, thus improving emergency response times. Alternative 5A would not provide a second connection to US 93 for emergency service providers, whereas the other build alternatives would provide a second access via the new bridge. However, the new fire station in the Miller Creek area (see **Figure 3-4, page 3-14**) completed in March 2007 and traffic lanes being added to Miller Creek Road will improve emergency response times and help during emergency evacuation.

In addition, the social, economic, transportation, and environmental assessments documented in Chapter 4 support identifying Alternative 5A as the Preferred Alternative.

- All of the build alternatives would require acquisition of private property for right-of-way purposes. Alternative 5A would require acquisition of the least amount of private property with 7.9 acres, and would not require any commercial relocations. Alternative 2B would require 24.2 acres, Alternative 3B would require 35.8 acres, and Alternative 4C would require 66.7 acres of private property. In addition, Alternatives 3B would require 4 commercial relocations and Alternative 4C would require 3 commercial relocations; both of these alternatives would also require more access closures.
- Alternative 5A would convert the fewest amount of residential and commercial land to a transportation use with 7.9 acres. Alternatives 2B, 3B, and 4C would result in the direct conversion of 24.2 acres, 35.8 acres, and 66.7 acres, respectively, of residential, commercial, agricultural, open space, and undeveloped land to a transportation use.
- Alternative 5A and 4C would not require conversion of farmlands. Alternatives 2B and 3B would directly impact 7.6 and 4.8 acres, respectively, of Farmland of Prime, Statewide, and/or Local Importance by converting land to a non-agricultural use.

- Alternatives 3B and 5A are most effective at improving overall operations on US 93 and key intersections. Alternative 3B would enhance traffic flow along the rural segment of US 93 south/west of Buckhouse Bridge to greatest extent, and Alternative 5A would most effectively improve traffic flow and operations through the US 93 intersections at Miller Creek Road/Old US 93 and Brooks/Reserve Streets. Alternative 5A adequately accommodates and enhances mobility and safety for multiple transportation modes through 2025.
- Alternatives 2B, 3B and 5A would impact the fewest acres of wetlands with 0.2 acre of impact each. Alternative 4C would impact 0.3 acre of wetlands. However, Alternatives 2B, 3B, and 4C would also impact minor amounts of riparian vegetation along the Bitterroot River associated with bridge construction.
- Alternative 5A would have no river impacts or piers in the river because it does not include a bridge. Alternatives 2B, 3B, and 4C require a bridge to cross the Bitterroot River and have associated piers below the ordinary high water mark (OHWM). Alternatives 2B and 3B have two piers in the active channel and 4C would require three piers in the channel. These impacts require permits from regulatory agencies (US Army Corps of Engineers, Montana Department of Environmental Quality, and US Fish and Wildlife Service).
- The determination of effect for bald eagles under all alternatives is *may affect, not likely to adversely affect*. This species was delisted on August 8, 2007. However, the species is still protected by the Bald and Golden Eagle Protection Act and the Migratory Bird Treaty Act. The proposed alternatives would have *no effect* on grizzly bears, gray wolves, or Canada lynx. The proposed alternatives would not destroy or adversely modify proposed critical habitat for Canada lynx. Should critical habitat be designated prior to construction of a Preferred Alternative, the project would have *no effect* on designated critical habitat for Canada lynx.
- Alternative 5A would have *no effect* to bull trout or designated critical habitat. Alternatives 2B, 3B, and 4C, which cross the Bitterroot River, *may affect, and are likely to adversely affect*, bull trout and designated critical habitat.
- The build alternatives have the potential to increase wildlife mortality. Alternative 5A would have the least impact to wildlife because it is located in a more urbanized area. Alternatives 3B and 4C have been determined to have the highest potential for increased impact to wildlife.
- All of the build alternatives would result in noise impacts. Alternative 2B is predicted to impact 14 residential properties due to noise increase over the FHWA Noise Abatement Criteria (NAC). Alternative 3B was predicted to impact 17 properties (14 residences and 3 businesses) by noise increases over the FHWA NAC and a property that has substantial increase over existing noise levels. Alternative 4C was predicted to impact 21 properties (20 residences and 1 church) by noise level increases. Preferred Alternative 5A is predicted to impact 20 properties (19 residences and one church) due to noise increases over the FHWA NAC. The No-Action Alternative is predicted to impact 32 properties (28 residences, 1 church, and 3 commercial properties).
- All of the build alternatives would increase the amount of impervious surface area. Alternative 5A would have the smallest increase of impervious surface area with 6.0 acres. Alternatives 2B, 3B, and 4C would increase the amount of impervious surface area by 13.5 acres, 19.0 acres, and 14.5 acres, respectively.
- Alternative 5A would require the least amount of fill within the floodplain at 0.6 acre. Alternative 4C would require 0.7 acre of fill within the floodplain. Alternatives 2B and 3B would require approximately 3 to 4 acres of fill, respectively, within the 100-year floodplain due to construction of the new road extension south of the Bitterroot River into the Miller Creek area. Alternatives 2B, 3B, and 4C would cause an increase in the flood surface elevation that is below the 0.25-foot increase regulation by Missoula County.

- All of the build alternatives have the potential to impact hazardous waste sites. Alternative 5A and 3B would each impact the fewest potential hazardous waste sites with 5 potential sites impacted. Alternative 3B would impact 9 potential sites and Alternative 4C would impact 7 potential sites.
- All of the build alternatives impact the following National Register of Historic Places (NRHP) eligible historic properties: The Bitterroot Branch of the Northern Pacific Railroad (MRL line) and the Miller-Kelley and Cave-Gannon Ditch, which crosses Miller Creek Road. Impacts are minor and do not affect the historical character or function of the properties.
- None of the build alternatives would impact public parks or public recreation sites.
- The privately-owned Missoula Country Club would be impacted by Old US 93 road widening associated with all build alternatives. The only impact that would occur to the Country Club in the area of holes 8 and 9 is to the area northeast of the driveway for a length of approximately 250 feet and width of 5 feet, impacting some of the vegetative hedge along Old US 93. To the west, adjacent to the Missoula Country Club parking area, the encroachment would extend approximately 30 feet onto Missoula Country Club property for the distance between the driveway and US 93 right-of-way. However, the existing parking lot would not be impacted. Landscaping located between the highway and the parking lot, within the new highway right-of-way, would be removed. This represents approximately 0.2 acre of right-of-way impact to the Missoula Country Club.
- Alternative 5A is estimated to have the shortest construction period of all the build alternatives.

In conclusion, Alternative 5A was found to have the fewest impacts, and most reasonable cost of all the alternatives considered. The relatively low cost of Alternative 5A as the Preferred Alternative compared to the other build alternatives may make it easier to identify funding to include the project in the local fiscally-constrained Transportation Improvement Program (TIP). See Section ES.7, page ES-9, for a definition of these planning terms.

2.7.1 Why a Bridge Alternative Was Not Identified as the Preferred Alternative

Based upon the projected increase in traffic on US 93, the majority of traffic exiting the Miller Creek area via a bridge during the AM peak period would be forced to merge into a long queue of traffic on US 93 extending to, or past, Blue Mountain Road. Furthermore, most drivers would still have to travel through the Miller Creek Road/US 93 intersection. Traffic modeling shows that with a bridge alternative, the AM Peak queue on US 93 would extend from Miller Creek Road to 1/2 the distance (Alternative 2B), 3/4 the distance (Alternative 4C), or the entire distance (Alternative 3B) to Blue Mountain Road.

US Army Corps of Engineers (USACE) regulations require selecting the Least Environmentally Damaging Practicable Alternative (LEDPA) (which is Alternative 5A) for issuance of a 404 Permit. As long as an alternative that avoided a bridge over the Bitterroot River effectively met the purpose and need, the USACE would not approve a permit for construction of a bridge.

The relatively low cost of Alternative 5A as the Preferred Alternative compared to the other build alternatives, may make it easier to identify funding to include the project in the local fiscally-constrained TIP. See Section ES.7, page ES-9, for a definition of these planning terms.

While Alternative 5A is expected to function at an acceptable LOS during typical weekday peak travel periods through the year 2025, a second connection to the Miller Creek area and other system improvements (including measures to reduce travel demand and/or increase capacity on the US 93 corridor) may be warranted if future traffic volumes on US 93 and Miller Creek Road exceed the year 2025 forecasts.

2.8 Preliminary Conceptual Cost Consideration

Preliminary assumptions of costs were developed based on the conceptual designs prepared for this EIS analysis. The construction costs include excavation, borrow, bituminous pavement, aggregate base course, curb and gutter construction, sidewalk or bicycle lane, bridges, retaining walls, railroad relocation, traffic signal, drainage and irrigation, utility relocation, noise abatement/environmental mitigation, signing/striping, construction traffic control, urban design/landscaping, mobilization, contingencies, design engineering, construction management, and generalized estimates for right-of-way. **Table 2-4** documents the conceptual preliminary cost assumptions in 2007 dollars. **Table 2-5** presents estimated construction costs for year 2012, which was assumed to be a future construction year within the five-year 2008 to 2012 TIP planning timeframe. These cost assumptions are subject to further change as the design of each improvement and the Preferred Alternative is fully defined. As of the time of the writing of this document, no construction funding has been identified for build alternatives.

All bridge alternatives (2B, 3B, and 4C) include costs associated with the bridge and associated new roadway, Miller Creek Road Limited Improvements, Old US 93 improvements, and Old US 93 intersections with Brooks Street and Reserve Street and the Brooks/Reserve Street intersection. The cost estimate for Alternative 5A (Preferred Alternative) includes costs associated with Miller Creek Road improvements, Old US 93 improvements, and same adjacent intersections.

Table 2-4
Preliminary Assumption of Costs (2007 Dollars)

Item	Alt. 2B* N. Lower Miller Creek	Alt. 3B* Blue Mtn. Road	Alt. 4C* S. Lower Miller Creek	Alt. 5A** Miller Creek Road (Preferred Alternative)
Construction Cost	$27.5 million	$26.0 million	$26.1 million	$7.7 million
Mobilization and Contingencies	$15.7 million	$14.9 million	$14.9 million	$4.4 million
Total Construction Costs	$43.2 million	$40.9 million	$41.0 million	$12.1 million
Total Right-of-Way	$1.4 million	$2.7 million	$5.5 million	$1.2 million
Total Project Cost**	**$44.6 million**	**$43.6 million**	**$46.5 million**	**$13.3 million**

**Includes all costs associated with the bridge and new roadway, Miller Creek Road Limited Improvements, Old US 93, and adjacent intersections.*
*** Includes costs associated with Old US 93 and adjacent intersection improvements that resulted in a $500,000 cost increase.*

Table 2-5
Preliminary Assumption of Costs (2012 dollars)

Item	Alt. 2B* N. Lower Miller Creek	Alt. 3B* Blue Mtn. Road	Alt. 4C* S. Lower Miller Creek	Alt. 5A** Miller Creek Road (Preferred Alternative)
Construction Cost	$30.0 million	$29.0 million	$28.0 million	$9.7 million
Mobilization and Contingencies	$17.1 million	$16.6 million	$16.0 million	$5.5 million
Total Construction Costs	$47.1 million	$45.6 million	$44.0 million	$15.2 million
Total Right-of-Way	$1.8 million	$3.1 million	$6.7 million	$1.6 million
Total Project Cost**	**$48.9 million**	**$48.7 million**	**$50.7 million**	**$16.8 million**

**Includes all costs associated with the bridge and new roadway, Miller Creek Road Limited Improvements, Old US 93, and adjacent intersections.*
*** Includes costs associated with Old US 93 and adjacent intersection improvements that resulted in a $500,000 cost increase.*

2.9 Relationship to Long-Term Planning Process

Alternative 5A is not in Missoula's current TIP (2007-2011). The project would need to be included in a fiscally constrained LRTP (and currently it is not) prior to inclusion in the TIP. The preferred alternative is not considered to be of regional significance to the area. However, it would be in the mix of projects used to evaluate conformity during the current transportation plan process if the alternative proceeds successfully through the local transportation planning process. In addition, at least one subsequent phase (e.g., preliminary engineering, final design, right-of-way, utility relocation, or construction) of the project has to be included in the approved TIP (and it currently is not) before FHWA can sign the Record of Decision (ROD). The Miller Creek Road reconstruction project included in the current TIP will construct a portion of the No-Action Alternative using local funds.

Missoula is currently working on the 2008 LRTP, and it is scheduled for completion in June 2008. During the long range transportation planning process, the project is weighed against other projects competing for local funding to develop a fiscally-constrained plan. All projects in the process are evaluated to determine the optimum mixture that best meets the development of an integrated multimodal transportation system to facilitate the safe and efficient movement of people and goods.

If the preferred build alternative is included in a fiscally constrained conforming transportation plan and TIP, the FHWA can sign a Record of Decision (ROD) for Alternative 5A. Conversely, if it is not in such plans, then FHWA could not sign a ROD advancing a build alternative. In addition, FHWA can delay issue of a ROD until the LRTP and TIP include the project or can select the No-Action Alternative. The relatively low cost of the preferred alternative compared to the other build alternatives may make it easier to identify funding to include the preferred alternative in local planning documents, given that this alternative adequately meets and enhances the overall plan’s goals and objectives to facilitate the safe and efficient movement of people and goods for current and future transportation demand.

See Section ES.7, page ES-9, for a definition of these planning terms.