

ENVIRONMENTAL ASSESSMENT

for

MT (009)

Billings Airport Road

(CN 4743)

in

Yellowstone County, Montana

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

Submitted pursuant to 42 U.S.C. 4332(2)(c), 49 U.S.C. 303, Sections 75-1-201 & 2-3-104, M.C.A.,
and Executive Orders 11990, 11988, and 12898, by the

U.S. DEPARTMENT OF TRANSPORTATION
Federal Highway Administration

MONTANA DEPARTMENT OF TRANSPORTATION

and

City of Billings and Yellowstone County as Cooperating Agencies

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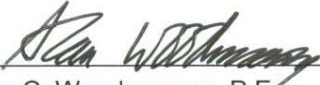
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List of Technical Reports

1. Traffic Volume Summaries & Preliminary Design Traffic Projections, *Marvin and Associates*, June 4, 2002
2. Preliminary Traffic Report, *Marvin and Associates*, July 20, 2002
3. Cultural Resource Inventory, *Ethnoscience*, August 2002
4. Design Year Traffic Projections and Operation Evaluations, *Marvin and Associates*, October 15, 2002
5. Speed Profile, *Marvin and Associates*, October 17, 2002
6. Biological Resources Report, *Garcia and Associates*, January 2003
7. Traffic Noise Study, *Big Sky Acoustics*, February 13, 2002
8. Preliminary Traffic Report Update, *Marvin and Associates*, February 24, 2003
9. Preliminary Hydraulics Report, *HKM Engineering*, February 2003
10. Preliminary Traffic Report Update, Technical Memo, *Marvin and Associates*, August 29, 2003
11. Preliminary Traffic Report Update No. 2, *Marvin and Associates*, January 30, 2004
12. Class III Cultural Resource Survey and Evaluative Testing Results, *Aaberg Cultural Resource Consulting Service*, May 2005
13. Roundabouts: An Informational Guide (Techbrief) FHWA-RD-00-068, March 2000
(Also available on the web at: www.tfhr.gov./safety/00068.htm)

Note: Copies of Technical Reports are available for review at the MDT District Office in Billings at:

Montana Department of Transportation
424 Morey
Billings, Montana 59104
Phone: (406) 252-4138

Metric Conversion/Abbreviations and Acronyms

In accordance with recent Executive Orders and Secretary of Commerce direction, Federal Highway Administration and supporting agency plans are presented in metric units. This document, where appropriate, will reflect both English and metric units side by side to assist the reader. The metric unit is shown first, followed by the English unit in parentheses. For example: 13.7 km (8.5 mi). The following shows the conversion factors and units used in this document:

<u>Metric Units</u>	<u>English Units</u>	<u>Conversion Factor</u> (Metric to English)
Centimeter (cm)	inch (in)	0.3937
Meter (m)	foot (ft)	3.2808
Kilometer (km)	mile (mi)	0.6214
Hectare (ha)	acre (ac)	2.471

Abbreviations and Acronyms

±	.....	Approximately
ac	.....	acre(s)
ACHP	.....	Advisory Council on Historic Preservation
BLM	.....	Bureau of Land Management
BRR	.....	Biological Resource Report
CADD	.....	Computer Aided Design and Drafting
cm	.....	centimeter(s)
COE	.....	U.S. Army Corps of Engineers
DEQ	.....	Department of Environmental Quality
DNRC	.....	Department of Natural Resources and Conservation
EA	.....	Environmental Assessment
EO	.....	Element Occurrence
ESA	.....	Endangered Species Act
ft	.....	foot (feet)
ha	.....	hectare(s)
Hwy.	.....	Highway(s)
in	.....	inch(es)
km	.....	kilometers(s)
LOS	.....	Level of Service
m	.....	meter(s)
mi	.....	mile(s)
MDEQ	.....	Montana Department of Environmental Quality
MDT	.....	Montana Department of Transportation
MFWP	.....	Montana Fish, Wildlife, and Parks
MNHP	.....	Montana Natural Heritage Program
MPDES	.....	Montana Pollution Discharge Elimination System
MRIS	.....	Montana Rivers Information System
NRCS	.....	Natural Resources Conservation Service
NRHP	.....	National Register of Historic Places
SHPO	.....	State Historic Preservation Office
T/E	.....	Threatened and Endangered
USFS	.....	United States Forest Service
USFWS	.....	United States Fish and Wildlife Service
USGS	.....	United States Geological Survey

1.0 PURPOSE OF AND NEED FOR THE PROPOSED ACTION

1.1 Project History

Numerous planning studies and workshops have identified safety and capacity issues at the Montana Highway 3 (MT 3)/ Airport Road intersection at the airport entrance, visible in Photo 1-1. The following summarizes information provided in the *Billings Urban Area 2000 Transportation Plan*.

The airport complex encompasses 2,300 acres of property owned and operated by the City. The site is located on the rims above the Yellowstone River approximately two miles north of the downtown area. Via North 27th Street and MT 3, this is a five minute drive from the heart of downtown. As illustrated in Photo 1-1, the intersection of Airport Road with MT 3 just outside the airport entrance is a 4-legged intersection with stop sign control on only three legs. (See also Photo 1-2). The MT 3 northbound movement into the airport is unrestricted due to steep approach grades, which make a stop/start maneuver difficult, particularly in inclement weather. The current configuration has resulted in 12 recorded vehicular accidents in the period from 1999 to 2001. The intersection is also a recognized impediment to public vehicular access to the airport due to peak period congestion.

It is this public access to the airport that has been the subject of previous evaluations. A consultant for the airport performed an alternatives study of this intersection in January 1997, which recommended a phased implementation of signal control, followed by grade-separated movements. The study recommended improvements to the intersection of MT 3 to address safety and mobility issues; however, with expected growth in vehicle traffic to/from the airport, the study targeted this intersection for capacity improvements.

Connections for commercial movement through the airport are also constrained. The designated truck route through Billings from I-90 to MT 3 is via Airport Road and Main Street. Although not anticipated to occur during the time-frame of this study, substantial growth in airport freight movement will likely accelerate the need for improvements along existing routes, or provisions for alternate routes.

**Photo 1-1
Existing Airport Intersection**



**Photo 1-2
View of Airport Intersection (looking southeast)**



Recommended improvements presented in the Billings Transportation Plan include:

- Widen Airport Road to 4-lane Principal Arterial section from Alkali Creek Road to MT 3 (by 2010)
- Reconstruct the Airport Road / MT 3 intersection to allow grade separation of turning movements (by 2020)

The City of Billings also has plans to reconstruct and widen a portion of Alkali Creek Road westerly of the Airport Road / Alkali Creek Road intersection. While this City project is funded independent of the proposed MDT project, MDT has agreed to assist the City with their bidding of the project by incorporating the City's project into the MDT construction bid package. As such, the City project is subject to NEPA/MEPA analysis and is covered in this document.

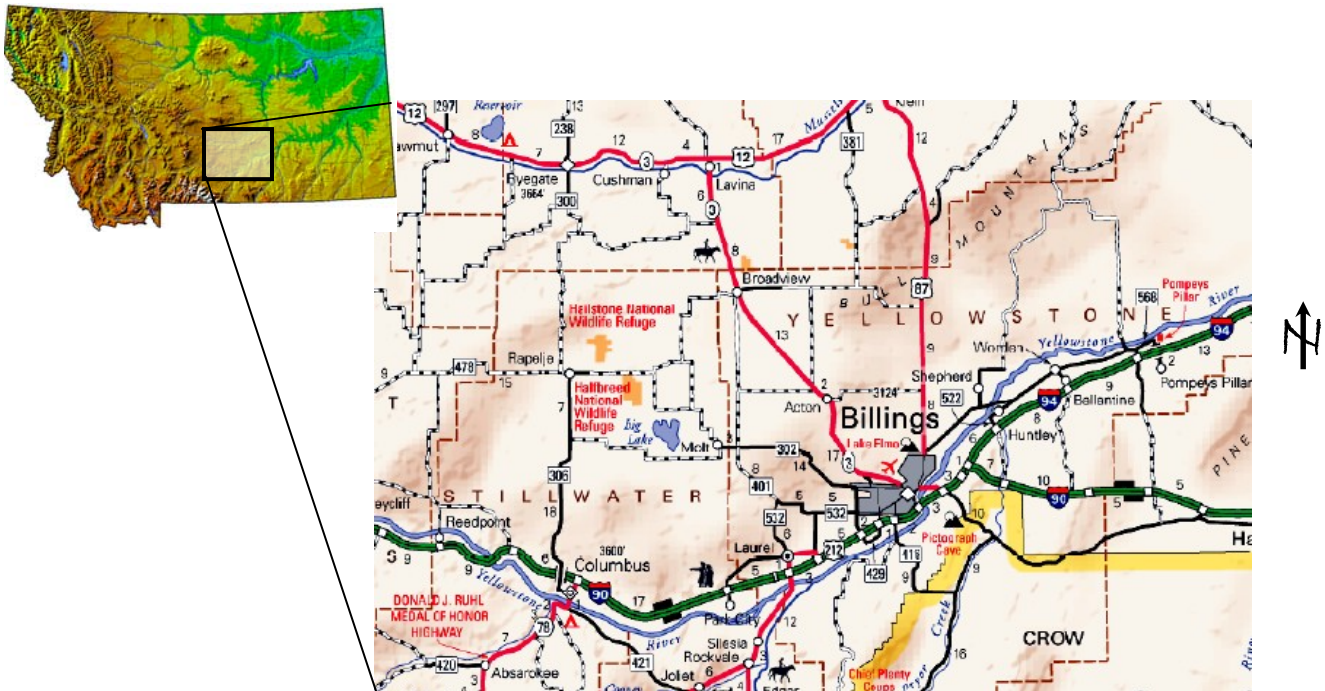
1.2 Proposed Action

The proposed action has four primary parts:

- Reconstruction of the intersection of MT 3 and Airport Road;
- Improvement of MT 3 from a point west of the Airport entrance to the Airport Road intersection;
- Improvement of Airport Road between the MT 3 intersection and the Main Street (US 87) intersection; and
- Reconstruction of the intersection of Airport Road and Alkali Creek Road.

Figure 1-1 illustrates the general project area; Figure 1-2 illustrates the project limits in the immediate project area.

Figure 1-1
General Project Location



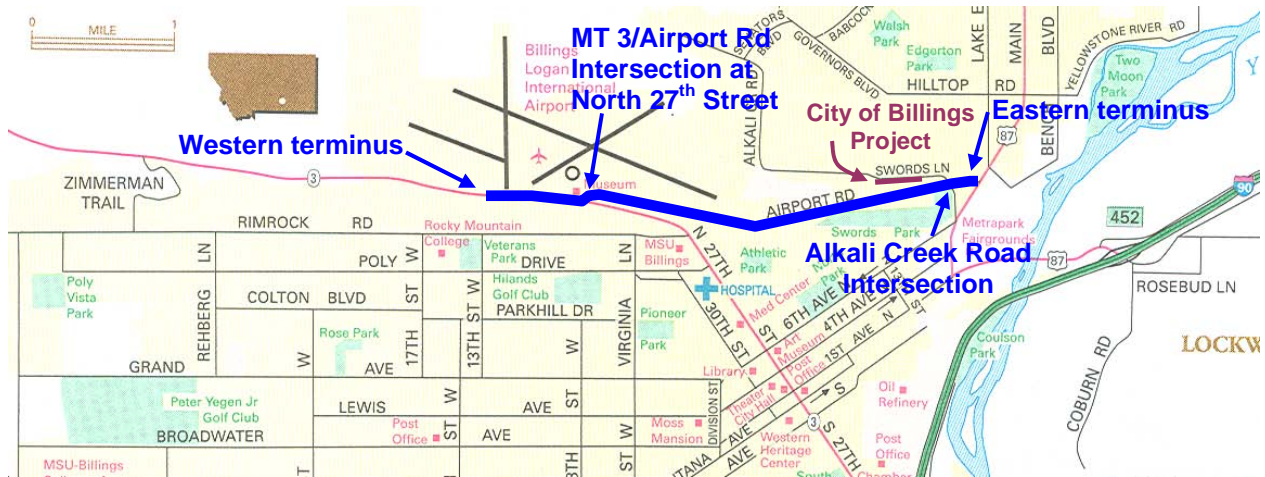
1.3 Project Area Description

The proposed project is located in south-central Montana, in Yellowstone County, within the following legal description(s):

Township	Range	Section(s)
1 N	25 E	25
1 N	26 E	27, 28, 29, and 30

As illustrated in Figure 1-2, the project is located on MT 3 and Airport Road. The project will begin west of the airport intersection of Airport Road and MT 3 near Mile Post/Reference Post (RP) 4 at the west approach to the airport property on MT 3, and travel east past the intersection of Airport Road and Alkali Creek Road to the intersection of Airport Road and Main Street (US 87). The City of Billings project is immediately west of the proposed MDT reconstruction of the Alkali Creek Road intersection.

**Figure 1-2
Project Location and Limits**



1.4 Purpose of the Proposed Action

The project was developed in response to a number of previous planning studies and task force decisions that identified needed improvements in this general area. The primary interest was to update the roadway facilities and intersections with designs that are more consistent with current design standards and projected travel demand.

The purpose of the proposed action is five-fold. The primary goals of the project are to:

- Relieve congestion
- Improve safety
- Improve regional mobility
- Improve local community mobility
- Improve the flow of regional commercial/truck traffic

1.5 Need for the Proposed Action

Current design elements along this portion of Airport Road, such as the intersection operations and lack of truck climbing lanes, do not provide the desirable levels of safety and efficiency in this corridor. Evaluation of roadway facilities typically includes an assessment of roadway deficiencies, traffic operations, accident and safety concerns, system linkage, and modal relationships. These are discussed below.

Roadway Deficiencies

While there are no substantive geometric deficiencies relating to the horizontal and vertical alignment of the existing roadway within the corridor, there are design elements that result in driver confusion and poor traffic operation. One such instance is the MT 3/Airport Road intersection. The existing 3-way stop configuration at this location is confusing to motorists and has limited sight distance, resulting in a substantial decrease in travel speeds for northbound vehicles as they approach the intersection. More detailed traffic operation issues are discussed below.

Traffic Operation

Traffic conditions on a facility such as Airport Road are commonly defined using the Level of Service (LOS) concept. The *Highway Capacity Manual* (HCM) defines LOS for two-lane roadways based on average travel speed, percent time delay, intersection delay, and capacity utilization to provide a qualitative assessment of the driver's experience. Six LOS categories ranging from A to F are used to describe traffic operations. LOS A represents the best free-flow traffic conditions, and LOS F represents the worst gridlock conditions. MDT uses LOS B as the desirable criteria for urban routes such as Airport Road.

According to the *Billings Urban Area 2000 Transportation Plan*, Airport Road is currently over capacity and experiencing congestion. According to the analysis in the Plan, this route currently operates at LOS D between MT 3 and Rimtop Drive, and at LOS E between Rimtop Drive and Main Street.

Airport Road is also designated as a truck route connecting Interstate 90 (I-90) to MT 3, and carries 11,040 vehicles per day, 8.2 percent of which are trucks. The long, steep grades on Airport Road dramatically affect truck speeds which contribute to the existing overall traffic operation problems. Observations also indicate that long queues of vehicles occasionally form behind trucks in both the uphill and downhill directions on Airport Road.

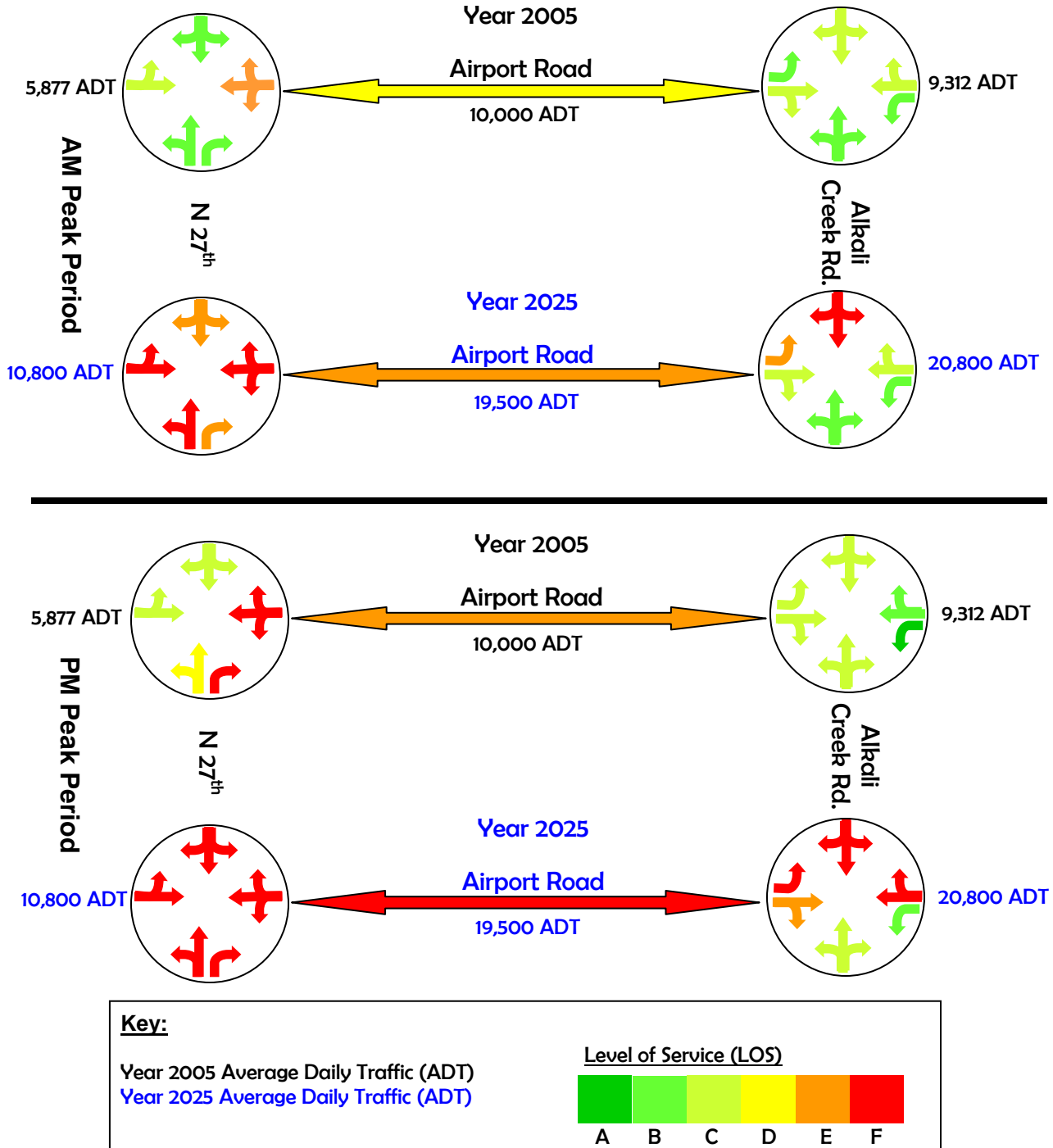
Intersection operations were also considered in the Transportation Plan. As noted above, the intersection of Airport Road and North 27th Street is somewhat confusing to many drivers. Northbound vehicles slow substantially prior to entering the intersection, and approximately 40 percent of all northbound through movement and left turn vehicles actually stop due to uncertainty as to who

Photo 1-3
Airport Road/Alkali Creek Road Intersection



has the right-of-way. As depicted in Figure 3-1, peak hour capacity analysis conducted by a consultant for MDT for this intersection indicates that the intersection will operate at LOS F by the year 2025. The intersection at Airport Road and Alkali Creek Road (depicted in Photo 1-3) currently operates at LOS C, but is projected to operate at LOS F for the southbound and westbound approaches, and LOS E for the eastbound approach within the next 20 years. (See “List of Technical Reports” in the Table of Contents for a listing of the traffic analyses conducted for this proposed project.)

Figure 1-3
Existing and Projected Level(s) of Service



Safety Concerns

This is a designated truck route, and due to crashes involving eastbound trucks, an advance warning sign was integrated with the traffic signal at the Airport Road/Alkali Creek Road intersection and installed on the descending grade in the 1980's. At that time, the City of Billings developed plans for a grade separation at this intersection. Crash data from January 1997 through December 2001 recorded 43 accidents along this portion of Airport Road. The greatest concentration of crashes occurred at the intersection of Airport Road and Alkali Creek Road, where eight crashes were recorded during the five-year study period. Of these eight, five were rear end collisions, three were right angle collisions, and one was a single vehicle collision with a signal pole.

System Linkage

The Billings Heights area has experienced rapid growth in the number of housing developments and overall population in recent decades. The growth has increased the demand for travel between the Heights to the West End and downtown areas of Billings for work and shopping needs. Movement from the Heights to the downtown area and the West End is limited to three primary routes: Zimmerman Trail, North 27th Street, and Main Street. This project includes key portions of two of these routes. Commuter traffic traversing the City between Billings Heights and West End and downtown areas via North 27th Street or Zimmerman Trail must pass through the project area. Mobility through this area is limited by capacity of these existing routes, and future development will rely on improvements to the system to enhance overall connectivity and mobility.

The City of Billings is reconstructing approximately 2,316 m (7,600 ft) of Alkali Creek Road extending from Senators Boulevard to a point easterly of the BBWA siphon. The easterly portion of this reconstruction project lies immediately adjacent to this proposed MDT project. The majority of the route has either been improved or has been let for construction, and this small segment will complete the only unimproved portion of Alkali Creek Road, thus having independent utility. It was neither forced by the MDT action, nor does it require any additional action from MDT to accommodate the City's intention.

Modal Interrelationships

As noted previously, Airport Road is part of the designated truck route from I-90 and US 87 to MT 3. Without capacity improvements, the efficiency of commercial movements in this corridor is anticipated to deteriorate. The intersection of Airport Road and MT 3 has also been identified as a critical link in the surface transportation operation of the Airport. This intersection does not currently operate at a desirable level of service, and is anticipated to worsen without improvements.

1.6 Scope of This Environmental Analysis

This section outlines the social, economic, and environmental considerations in the project area (including the reconstruction and widening of Alkali Creek Road proposed by the City of Billings) and identifies those that are of some level of concern based on their presence and potential impacts, and those that are either non-existent in the study area or have no potential for impact.

Resources Studied in Detail

- **Land Use** – While there would be no impacts affecting existing land uses or impacts that would change the location, distribution, density, or growth rate of the area’s population, right-of-way would be required for this project which would impact adjacent parcels. There are also resources in the immediate project area that are protected by Section 4(f) of the U.S. Department of Transportation Act (43 U.S.C. 303). These have been evaluated using the “Nationwide” Programmatic forms in Appendix A.
- **Social** – While this project would not displace any residences or businesses, there would be several access modifications proposed.
- **Pedestrians and Bicyclists** – The project would have an overall beneficial effect on the non-motorized use in this corridor.
- **Noise** – According to the noise analysis conducted for this proposed project, noise impacts would be anticipated at receptors in the Swords Park area.
- **Water Quality** – Impacts would be anticipated based on the proposed increase in total surface area of the paved road, and the accompanying increased runoff carrying vehicle-related contaminants.
- **Waterbodies, Wildlife Resources, and Habitat** – A number of species have the potential to be impacted during the construction phase of this proposed project. No work in waterbodies is intended.
- **Cultural/Archaeological/Historic Resources** – Several sites of historical significance have been identified in this proposed project area and have affected the proposed alignment alternatives.
- **Visual** – While visual impacts from this proposed project would not be anticipated to be severe, this issue was one of intense public concern.

Resources Eliminated From Further Study

- **Farmlands** – The 1981 *Farmland Protection Policy Act* (FPPA) requires that the effects of proposed highway projects be examined before any farmland is acquired. The FPPA definition of farmlands includes all areas in non-urban use. This does not mean that these lands are currently in crop production, since the definition also includes forested, idle,

pasture, open and recreational lands, as well as unpaved roads, rural residences and farm buildings. No analysis of farmland impacts was necessary since this proposed project lies entirely within the urban built-up area of Billings as shown on the Important Farmlands Map for Yellowstone County.

- ***E.O. 12898/Title VI - Environmental Justice*** – There are no anticipated impacts to minority or low income housing or businesses in the study area; therefore, both the No-Build Alternative and the proposed Build Alternatives are in accordance with E.O. 12898, and would not create disproportionately high and/or adverse impacts on the health or environment of minority and/or low-income populations. These proposed alternatives also comply with the provisions of Title VI of the Civil Rights Act of 1964 (42 U.S.C. 2000(d), as amended) under the FHWA’s regulations (23 CFR 200).
- ***Economic*** – The proposed project is anticipated to have long-term beneficial effects on the local and regional economies by improving the efficiency of this route for the movement of commercial goods via trucking, and the safer and more efficient operation of the facility as it relates to the movement of other goods and services in the community and the Airport facility. By keeping the roadway open during construction, and phasing construction along the corridor, only minor disruptions to business, residential, airport, and tourist traffic are anticipated. Likewise, impacts on the local and regional economies from the No-Build Alternative would be negligible.
- ***Air Quality*** – This proposed project is located in the Billings Planning area which is in non-attainment for Carbon Monoxide (CO). As such, this proposed project must comply with EPA’s “Final Rule” of September 15, 1997 on Air Quality Conformity. This project is included in the Conforming TIP for the Billings Planning area; therefore, the project’s No-Build and Build Alternatives comply with Section 176(c) of the Clean Air Act (42 U.S.C. 7521(a), as amended).
- ***Wetlands*** – No wetlands were encountered during a May 15, 2002 site visit and/or through the National Wetland Inventory (NWI) database search. Wetlands that met the 1987 Wetland Delineation Manual (WTI 1999) were not encountered. A small low-lying area near the eastern terminus of the project did display some evidence of seasonal flooding, but the soils and vegetation did not meet the criteria for a wetland determination.
- ***Floodplains (E.O. 11988)*** – The Alkali Creek Floodplain is northeast of the Billings Logan Airport and located adjacent to Alkali Creek Road. The floodplain and Airport Road are separated by Alkali Creek Road and the floodplain only comes close to the proposed project area at the intersection of Airport Road and Main Street. Encroachment into the floodplain is not anticipated with the Preferred Alternative.
- ***Hazardous Waste*** – An initial site assessment was completed and the environmental data base search showed over 30 Leaking Underground Storage Tanks (LUST) sites in the area. All of the LUST sites are beyond the anticipated roadway construction limits.

2.0 ALTERNATIVES

This chapter describes the process of developing project alternatives and determining which ones could possibly satisfy the purpose and need for the proposed project. A detailed description of the alternatives evaluated in this document is also provided.

2.1 Development of Alternatives

Numerous conceptual alternatives have been proposed at the airport intersection in the past twenty years. This proposed project was initiated in April 2002 with the development of conceptual intersection and corridor alternatives based on preliminary traffic projections and the results of previous studies, and in context with adjacent land use and topography. Conceptual design alternatives were initially developed in response to identified concerns with the existing intersection geometry, traffic accident history, and operational characteristics of the existing facility. These early efforts produced four grade-separated alternatives at the airport intersection, two alternatives at the Alkali Creek Road intersection, and one corridor widening and access management alternative.

These seven alternatives were presented to the public at an Informational Meeting on September 9, 2002, and additional input was solicited from area community members including surrounding residents, elected officials, local businesses, and City and County Departments (Planning, Public Works, Parks, and Aviation and Transit. It should be noted that the Airport is owned and operated by the City of Billings through the Aviation and Transit Department. Staff from this Department played a key role in the development and screening of alternatives.) Feedback from the meeting and discussions with other area interests expressed great concern regarding the visual impacts related to any structures at the Airport intersection. Several suggested relocating the Airport entrance further to the west to minimize the visual impacts.

As a result of this public input and additional review meetings with City staff, three additional alternatives were added for consideration in May 2003. These alternatives included a western entrance for the Airport, and two at-grade alternatives for the Airport intersection. All ten of the alternatives were reviewed and evaluated by the representatives of the affected agencies at a meeting held in March 2004. Three of the seven Airport intersection alternatives were eliminated, and one of the two Alkali Creek Road intersection alternatives was eliminated from further consideration, as discussed in section 2.7 of this chapter.

Alternatives carried forward included two grade-separated and two at-grade intersections at the Airport, and one reconfiguration concept for the Alkali Creek intersection. A four-lane section and Access Management concept was also developed for the area generally between 27th Street and Alkali Creek Road. The proposed project also includes reconstruction of the two-lane section west of the Airport intersection. There is no added capacity proposed in this area, but does include some widening to accommodate turn lanes that flow into the Airport intersection. All of these proposed improvements are discussed in detail in the following sections of this chapter.

2.2 Alternatives Evaluation Process

All of these alternatives, including the No-Build option, were screened through the following five distinct evaluation criteria:

- How well does the option meet the stated Purpose and Need for the proposed project?
- What are the potential impacts from construction and operation of the option?
- How well does the option address the safety and operational needs in the corridor?
- What are the aesthetic impacts of the option?
- What is the construction cost of the option?

Major Constraints

All of the alternatives forwarded satisfy the Purpose and Need for the proposed project and satisfy the safety and operational goals to varying degrees. The primary factors distinguishing these alternatives consist of impacts to the surrounding built and natural environment. These impacts are more fully explored in Chapter 3 of this document, but a summary overview is provided in this section to assist in an understanding of the preliminary evaluation of these alternatives. There are several park, historic resource, and other built environment constraints along this proposed project corridor which are either protected by federal law or very costly to relocate. These constraints include the following:

**Figure 2-1
Constraints Map**

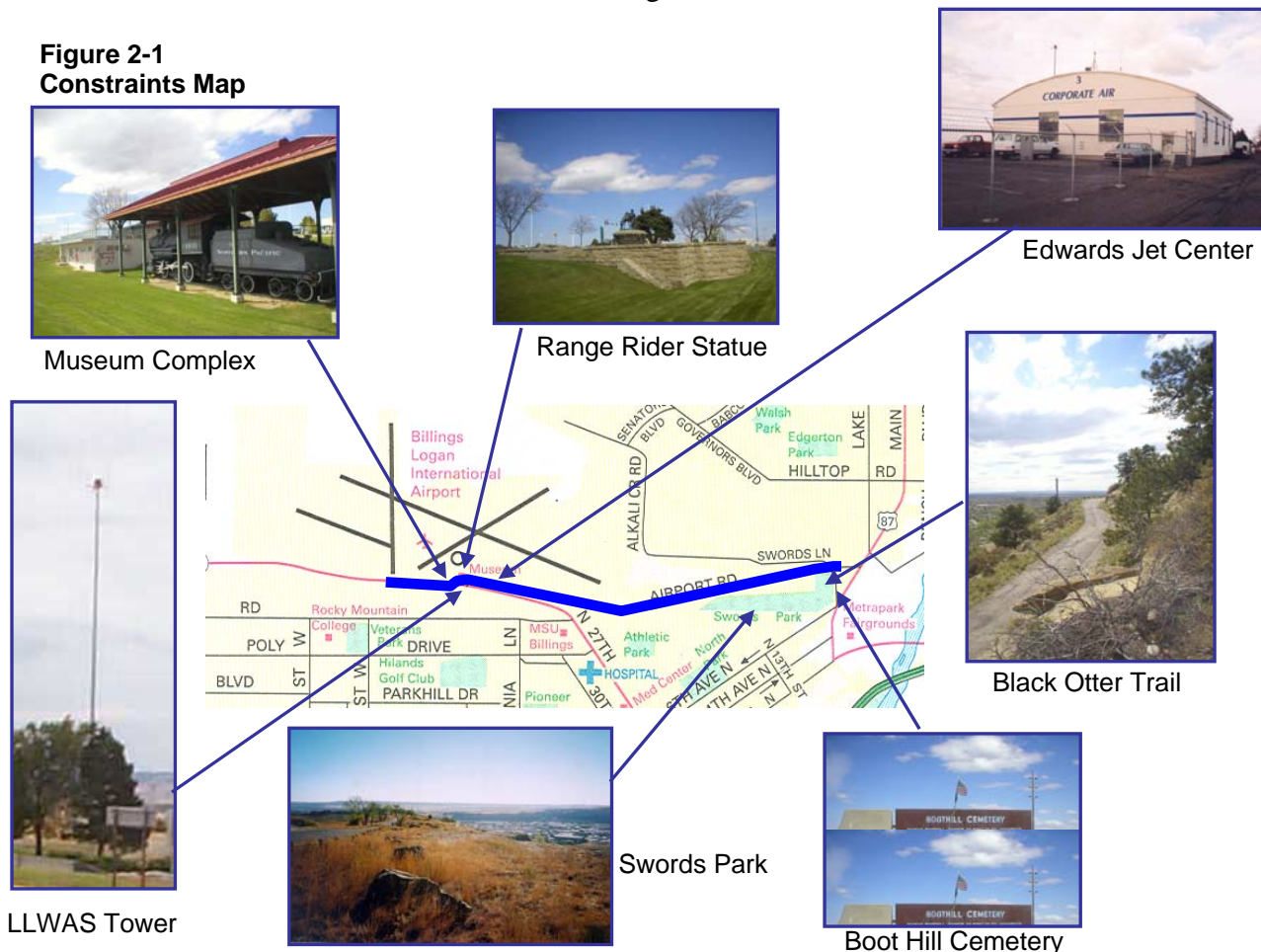


Table 2.1 provides a summary of the early evaluation of the alternatives.

**Table 2.1
Alternatives Evaluation Summary**

Alternative	Description	Screening Result
Airport 1	Urban Interchange – grade-separated interchange with a Single-Point-Urban-Interchange under the Airport Road overpass.	Retained – Provides safer geometry and more efficient operation.
Airport 2A	Overpass with Roundabout – maintains airport access	Retained – Provides safer geometry and more efficient operation.
Airport 2B	Overpass with Roundabout – relocates main airport exit to the west	Eliminated – No operational improvements compared to 2A, but with more impacts and cost.
Airport 3	Directional Interchange	Eliminated – Less efficient and greater accident potential.
Airport 4	At-Grade Signalized Intersection	Retained – Provides safer geometry and more efficient operation.
Airport 5	At-Grade, Multi-lane Roundabout	Retained – Provides safer geometry and more efficient operation.
West Entrance	Relocated Airport entrance	Eliminated – Less efficiency, greater accident potential and cost.
4-Lane/ Access Mgmt	Two through lanes in each direction from MT 3 to Alkali Creek Road. Consolidated access points. Turn bays at select locations.	Retained – Provides safer geometry and more efficient operation.
Alkali Creek 1	Diamond Interchange	Eliminated – Cannot accommodate all traffic movements.
Alkali Creek 2	Modified Trumpet Interchange	Retained – Provides better geometry and can accommodate all traffic movements.

Source: HKM Engineering, 2005

As indicated in the table above, six of the ten intersection build alternatives were retained for further evaluation in the EA. The No-Build Alternative is also described below, and Section 2.7 contains a discussion of the alternatives that were eliminated.

2.3 No-Build

The No-Build Alternative would essentially maintain the existing conditions along the entire length of the proposed project corridor by providing only routine maintenance on Airport Road and MT 3. The objective of upgrading this route to address the lack of truck climbing lanes and deceleration lanes, and the intersection operations at the Airport and Alkali Creek Road areas would not be met under the No-Build Alternative; consequently, there would be no safety or operational improvements. Due to this failure to satisfy any of the stated Purpose and Need, this alternative is not the “Preferred” alternative, but will be forwarded through the analysis in this EA to provide a baseline for comparison.

2.4 Airport Intersection

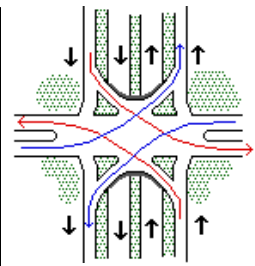
Seven intersection configuration alternatives were initially developed for the intersection of Airport Road and North 27th Street at the airport entrance. Three alternatives were eliminated and are discussed in Section 2.7. Alternatives 1, 2A, 4, and 5 remained viable and are described below.

Airport 1 – Urban Interchange

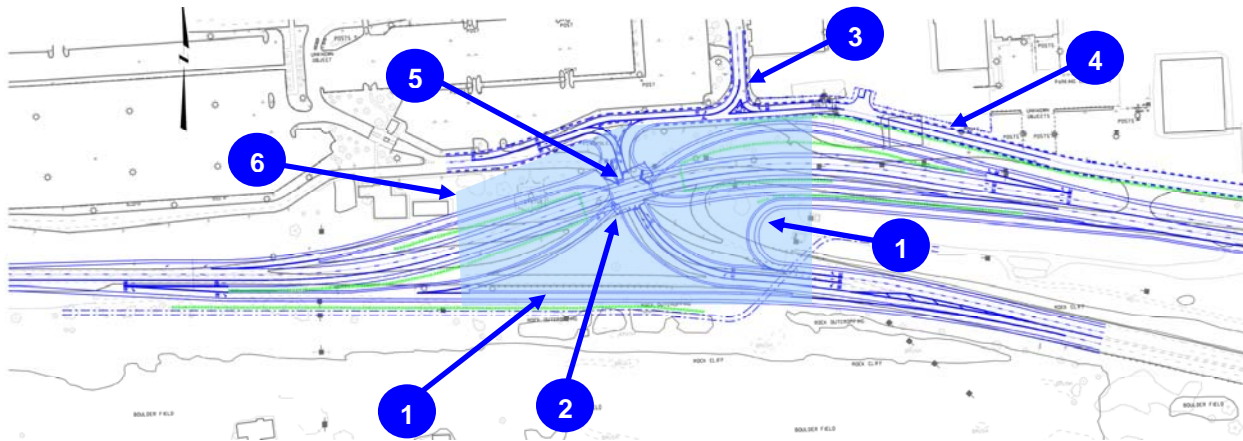
This alternative is centered upon the use of a Single-Point-Urban-Interchange (SPUI) at the intersection. The primary elements of Alternative Airport 1 include:

1. Right turn bypass lanes for 27th Street and
2. A grade separation structure to eliminate the majority of truck traffic from the intersection,
3. Maintaining the existing Airport access,
4. Reconfiguration of the Airport Circulation and
5. A traffic signal for the intersection beneath the overpass structure.
6. Extensive excavation of the existing intersection to improve grades (shaded area).

What is a SPUI?
A SPUI is a relatively new variation of the traditional diamond interchange, but has a more compact layout requiring less right-of-way and allows concurrent left turns for greater capacity.



SPUI: opposing left turns (red pair or blue pair) can proceed concurrently.



Full evaluation of this alternative is included in Appendix A. Results of the evaluation criteria screening for this alternative are as follows:

<u>Criteria</u>	<u>Score/Data</u> <i>(Higher score indicates better fit with criteria)</i>	
<i>Purpose and Need</i>	13 out of 16 points	
<i>Traffic Safety and Operation</i>	52 out of 84 points	
<i>Aesthetics</i>	13 out of 28 points	
<i>Construction Cost</i>	\$9.0 million	
<i>Impacts:</i>	Museum complex	Would require relocation
	Range Rider statue	Would require relocation
	Airport circulation road	Would require relocation
	Edwards Jet Center shop	Would require relocation
	LLWAS tower	Would require relocation

Airport 2A – Overpass with Roundabout

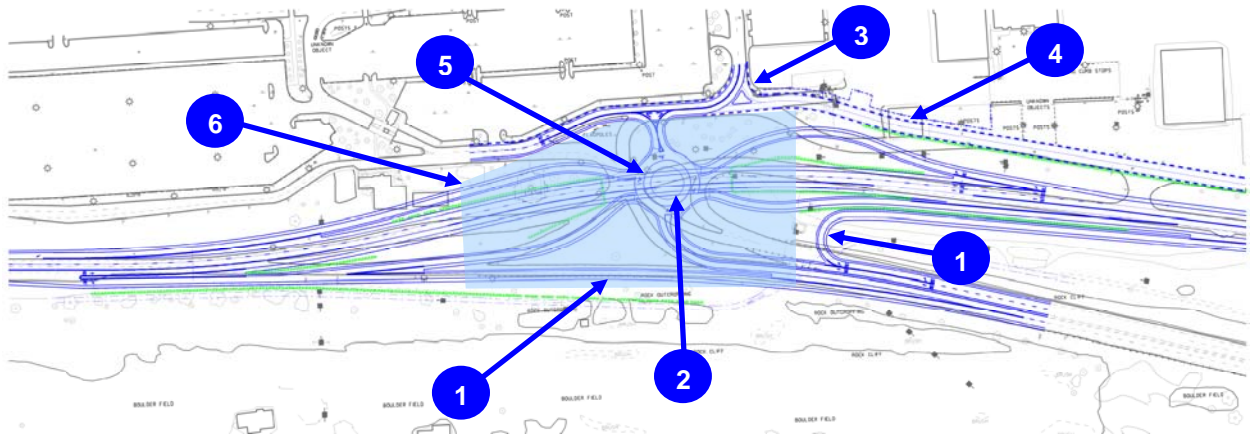
The Airport 2A alternative incorporates a roundabout located beneath an overpass structure.

The primary elements of the Airport 2A concept include:

1. Right turn bypass lanes for 27th Street and MT 3,
2. A grade separation structure to segregate the majority of truck traffic from the intersection,
3. Maintaining the existing Airport access,
4. Minor modification of the Airport Circulation road, and
5. A roundabout located beneath the overpass structure to eliminate the need for a traffic signal.
6. Extensive excavation of the existing intersection to improve grades (shaded area).

What is a roundabout?

A roundabout is an un-signalized intersection requiring all entering traffic to yield to the circulating traffic. Roundabouts typically have slow entering and circulating speeds (less than 30 mph), and consist of a small diameter circle (less than 60 m [200 feet]).



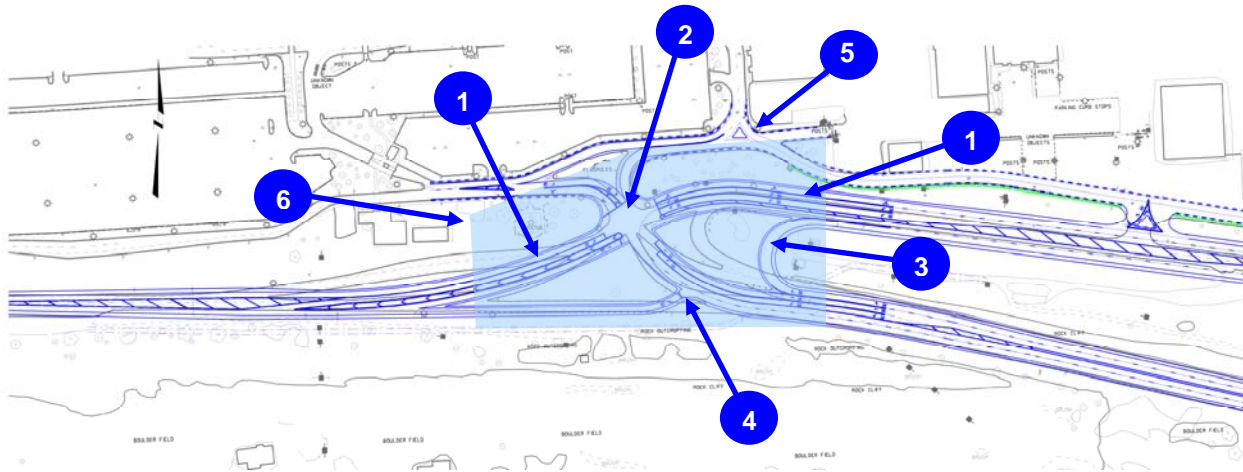
Full evaluation of this alternative is included in Appendix A. Results of the evaluation criteria screening for this alternative are as follows:

<u>Criteria</u>	<u>Score/Data</u> <i>(Higher score indicates better fit with criteria)</i>	
<i>Purpose and Need</i>	13 out of 16 points	
<i>Traffic Safety and Operation</i>	52 out of 84 points	
<i>Aesthetics</i>	15 out of 28 points	
<i>Construction Cost</i>	\$7.6 million	
<i>Impacts:</i>	Museum complex	Would require relocation
	Range Rider statue	Would require relocation
	Airport circulation road	Would require relocation
	Edwards Jet Center shop	Would require relocation
	LLWAS tower	Would require relocation

Airport 4 – At-Grade Signalized Intersection

The Airport 4 alternative provides a standard at-grade intersection with a traffic signal. The primary elements of the Airport 4 alternative include:

1. Additional lanes to accommodate traffic flows,
2. A traffic signal to control movements,
3. A right-turn by-pass lanes for 27th Street,
4. A traffic signal for MT 3 to North 27th Street traffic,
5. Maintaining existing Airport access, and
6. Extensive excavation of the existing intersection to improve grades (shaded area).



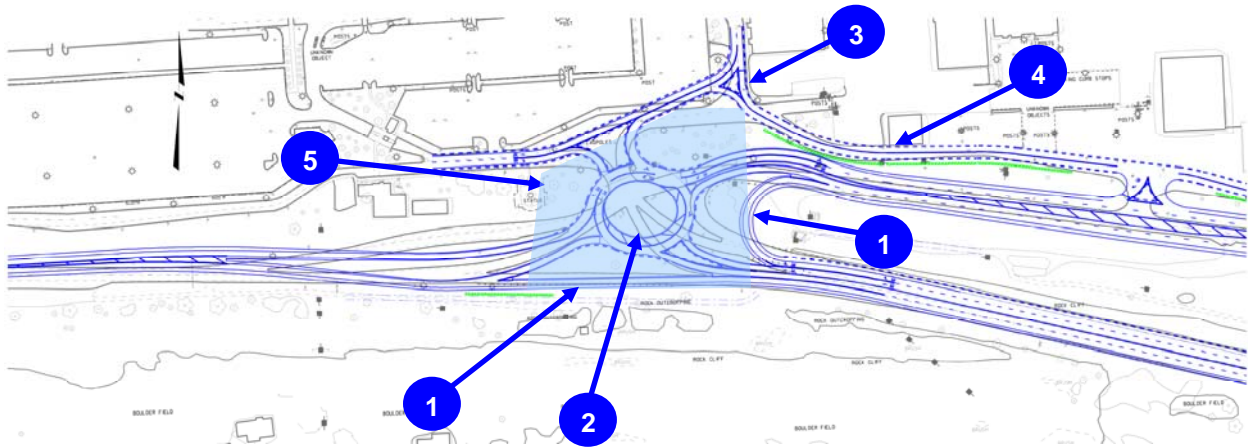
Full evaluation of this alternative is included in Appendix A. Results of the evaluation criteria screening for this alternative are as follows:

<u>Criteria</u>	<u>Score/Data</u> <i>(Higher score indicates better fit with criteria)</i>	
<i>Purpose and Need</i>	9 out of 16 points	
<i>Traffic Safety and Operation</i>	52 out of 84 points	
<i>Aesthetics</i>	20 out of 28 points	
<i>Construction Cost</i>	\$4.9 million	
<i>Impacts:</i>	Museum complex	No impacts
	Range Rider statue	Impacts can be avoided with special design features
	Airport circulation road	Would require reconstruction
	Edwards Jet Center shop	Impacts can be avoided with special design features
	LLWAS tower	Would require relocation

Airport 5 – At-Grade Roundabout

This alternative provides a modern roundabout design as discussed previously, but accommodates all legs of the intersection at-grade. The primary elements of the Airport 5 concept include:

1. Right-turn by-pass lanes for 27th Street and MT 3,
2. A multi-lane roundabout intersection,
3. Maintains Airport entrance/exit location,
4. Reconfiguration of the Airport Circulation Road, and
5. Extensive excavation of the existing intersection to improve grades.



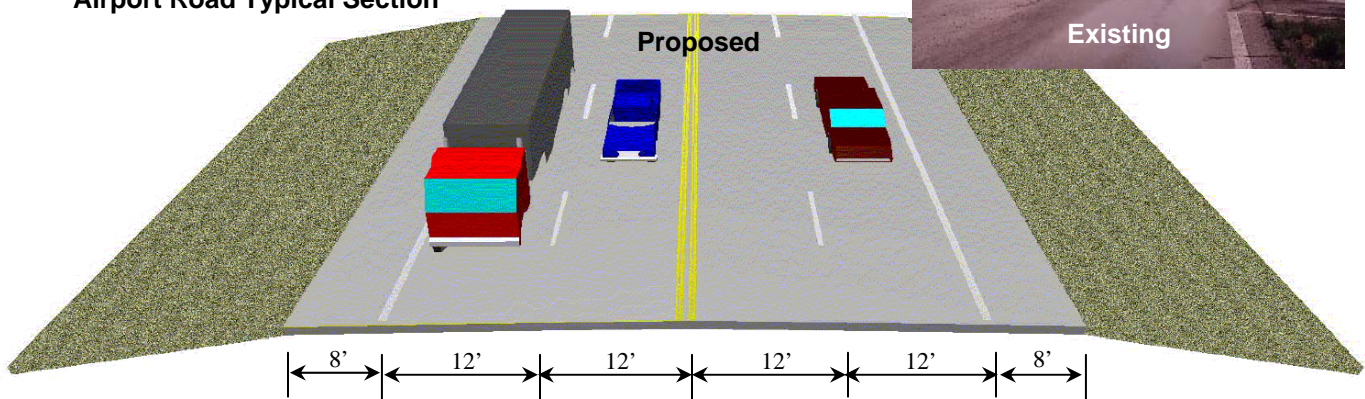
Full evaluation of this alternative is included in Appendix A. Results of the evaluation criteria screening for this alternative are as follows:

<u>Criteria</u>	<u>Score/Data</u> <i>(Higher score indicates better fit with criteria)</i>	
<i>Purpose and Need</i>	13 out of 16 points	
<i>Traffic Safety and Operation</i>	66 out of 84 points	
<i>Aesthetics</i>	20 out of 28 points	
<i>Construction Cost</i>	\$4.5 million	
<i>Impacts:</i>	Museum complex	No impacts
	Range Rider statue	Impacts can be avoided with special design features
	Airport circulation road	Would require reconfiguration
	Edwards Jet Center shop	Impacts can be avoided with special design features including modified ditch sections and retaining walls
	LLWAS tower	No impacts

2.5 Roadway Reconstruction and Widening

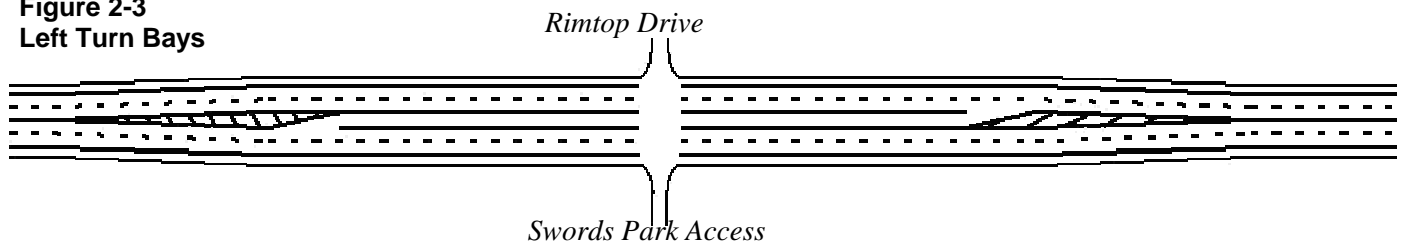
MT 3/Airport Road is proposed to be reconstructed from a point west of the Airport entrance east to Main Street. The portion of MT 3 heading east to the Airport intersection is proposed to be reconstructed as a basic two-lane section (one through lane with shoulders in each direction) but will widen out (or taper) to include turn lanes as it approaches the Airport intersection. A basic four-lane section (two through lanes in each direction), with wider shoulders is proposed for the portion of Airport Road from the airport intersection to the intersection at Alkali Creek Road. (See Figure 2-2.) A two-lane section was considered for this segment, but the need for truck climbing and deceleration lanes through much of this segment led to the proposal for a continuous four-lane section.

Figure 2-2
 Airport Road Typical Section



Left turn bays are also proposed at Rimtop Drive and the relocated Swords Park entrance, as illustrated in Figure 2-3. This improvement alone would provide immediate benefits to the flow of traffic; however, to fully realize the operational and safety benefits of the four-lane section, access management should be considered as an integral part of any improvements in this corridor. The access management concept would improve the safety and operation of Airport Road by better organizing the flow of traffic turning movements.

Figure 2-3
 Left Turn Bays



Little development has occurred along this corridor, with some parcels planned for new development in the near future. The access management concept outlined in this document is built upon existing key access locations, and attempts to retain the spacing already established along the corridor. By defining side street locations, random and uncontrolled access to the highway is eliminated. Vehicles traveling along Airport Road have a better sense of where entering vehicles will approach, thus reducing the distraction associated with “scanning” along the edge of the roadway where vehicles may suddenly appear and access the highway.

Consolidation of driveways and the use of frontage roads are relatively low-cost tools of access management. While some driveways may become longer as a result, the safety of access to the developed properties would be substantially improved. Due to the limited development in the area currently, there are no frontage road systems proposed with this project, but they could be implemented with future improvements.

2.6 Alkali Creek Road Intersection

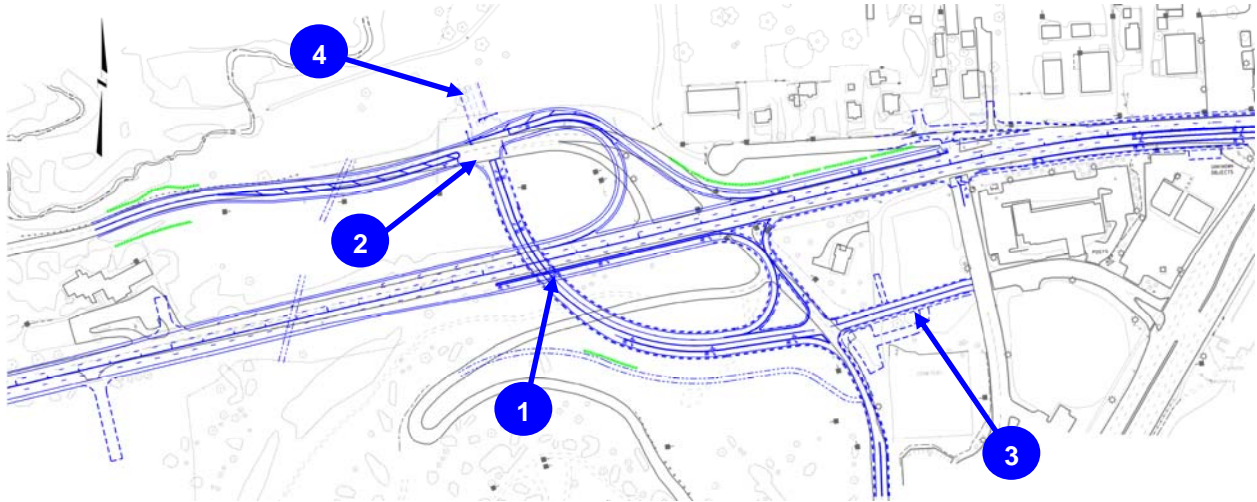
Physical barriers in the area around the Alkali Creek Road intersection present challenges to the design of a conventional interchange at this intersection. These barriers include its close proximity to Main Street, the steep terrain encountered in the park southwest of the intersection, numerous properties protected by Section 4(f) (including: Swords Park, historic homes on Swords Lane, Black Otter Trail, and Boot Hill Cemetery), the City of Billings water distribution pump house located in the southeast quadrant of the intersection, a high pressure gas line, and the commercial developments between the Alkali Creek intersection and Main Street.

Based on the physical limitations in the area, two intersection alternatives were developed for the Alkali Creek Road intersection. Only one has been forwarded for more detailed evaluation.

Alkali Creek 2 – Modified Trumpet Interchange

The primary elements of the Alkali 2 alternative include:

1. A grade separation structure allowing Airport Road to pass over Alkali Creek Road,
2. A traffic signal at the intersection of Alkali Creek Road and the Airport Road ramps,
3. A new subdivision link, and
4. Allowance of the future extension of Aronson Avenue (not part of this project).



Results of the evaluation criteria screening for this alternative are as follows:

<u>Criteria</u>	<u>Score/Data</u> <i>(Higher score indicates better fit with criteria)</i>	
<i>Purpose and Need</i>	13 out of 16 points	
<i>Traffic Safety and Operation</i>	62 out of 84 points	
<i>Aesthetics</i>	9 out of 16 points	
<i>Construction Cost</i>	\$10.4 million	
	Commercial sites	May impact some commercial access
	Water Distribution Pump House	No impacts
	Swords Lane Homes	Minor access modifications
	Boot Hill Cemetery	Impacts can be avoided with special design features
	Black Otter Trail	Would require relocation

2.7 Alternatives Eliminated from Further Evaluation

As a result of the preliminary screening, four alternatives were eliminated from detailed evaluation. A brief summary of those alternatives is provided below, and a more complete overview of the screening analysis is included in the Evaluation Matrix in Appendix A.

Airport 2B – Overpass with Roundabout

This alternative included an overpass roundabout combination very similar to Airport 2A, but included the relocation of the airport exit west of the intersection. It was eliminated from further review because it offered no improvement to operations when compared to Airport 2A, was less efficient than other alternatives, had more impacts, and was more costly than other alternatives.



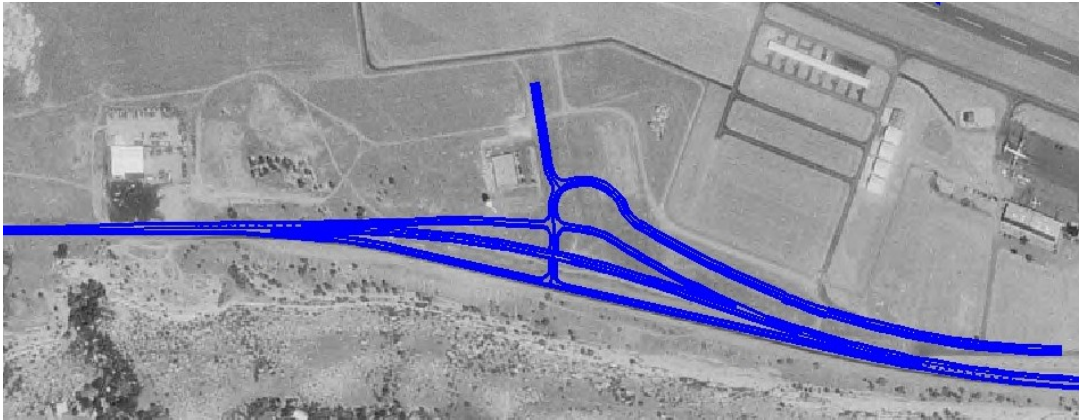
Airport 3 – Directional Interchange

This alternative was a directional interchange that completely closed the existing airport entrance. This alternative was less efficient than others, had increased accident potential, had more impacts, and had greater costs when compared to other alternatives.



West Airport Entrance

An alternative at the airport intersection included the relocation of the airport entrance that worked in conjunction with Airport 3. A grade separation would have been provided at the west edge of the airport property. This alternative was less efficient, had increased accident potential, and had greater costs when compared to other alternatives. It also conflicted with future Airport plans and had the potential to restrict future expansion of the Airport.



Alkali Creek 1 – Conventional Diamond Interchange

The Alkali Creek 1 alternative was a conventional diamond interchange in which Airport Road passed over Swords Bypass. It was eliminated from further consideration due to problems with steep grades on ramps and the crossroad below the structure, and it could not accommodate all traffic operations.



2.8 Identification of the Preferred Alternative

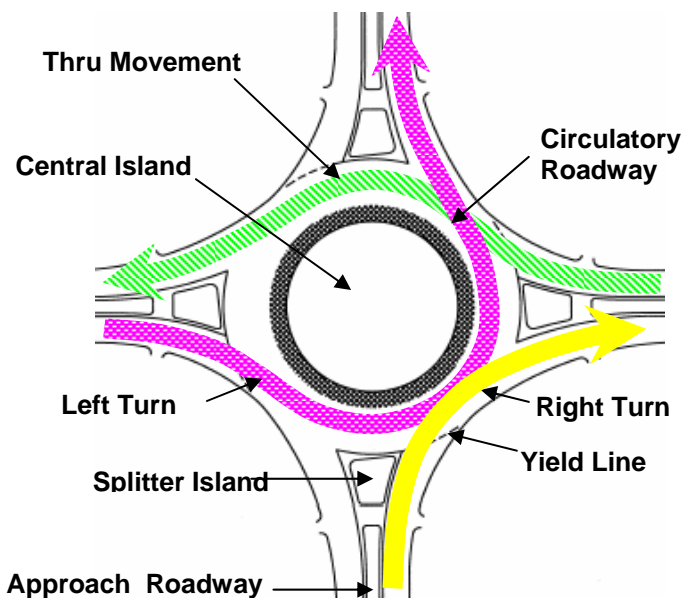
Based on the evaluation conducted during the project development process, as well as input received from the public during the July 2004 project information meeting, a Preferred Alternative was identified for consideration by the City of Billings, and FHWA and MDT staff. During a meeting on July 28, 2004 participants in this interdisciplinary team collectively agreed on a “Preferred Alternative” that would reconstruct MT 3/Airport Road from a point west of the Airport entrance to Main Street, and include the following three main components:

- Airport 5 – At-Grade Roundabout
- Roadway Reconstruction and Widening (generally from a point west of the Airport intersection to Main Street)
- Alkali Creek 2 – Modified Trumpet Interchange

As demonstrated in the Evaluation Matrix in Appendix A, the above components of the Preferred Alternative provided the most optimal concept(s) to address the stated purpose and need, meet the safety and operational goals, minimize impacts to the surrounding built and natural environment, and can be constructed at a lower cost than the other alternatives presented. These alternative components also received broad popular support throughout the public involvement program for this proposed project.

The roundabout concept is relatively new to Montana, but this form of intersection control is increasingly common in western states and has been used throughout the world for many years. More can be read about roundabouts from *Roundabouts: An Informational Guide* (See List of Technical Reports in the Table of Contents of this document). Figure 2-4 and Photo 2-1 illustrate typical roundabout applications and operational features to provide a better understanding of this engineering concept. Figure 2-5 on the following page provides an overview of the Preferred Alternative.

**Figure 2-4
Typical Roundabout Features**

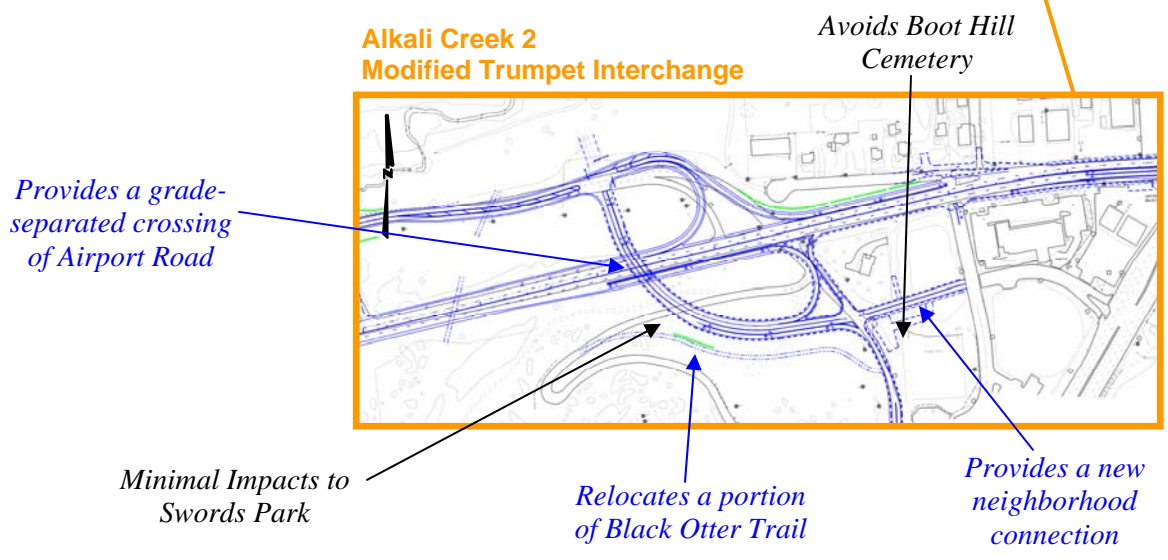
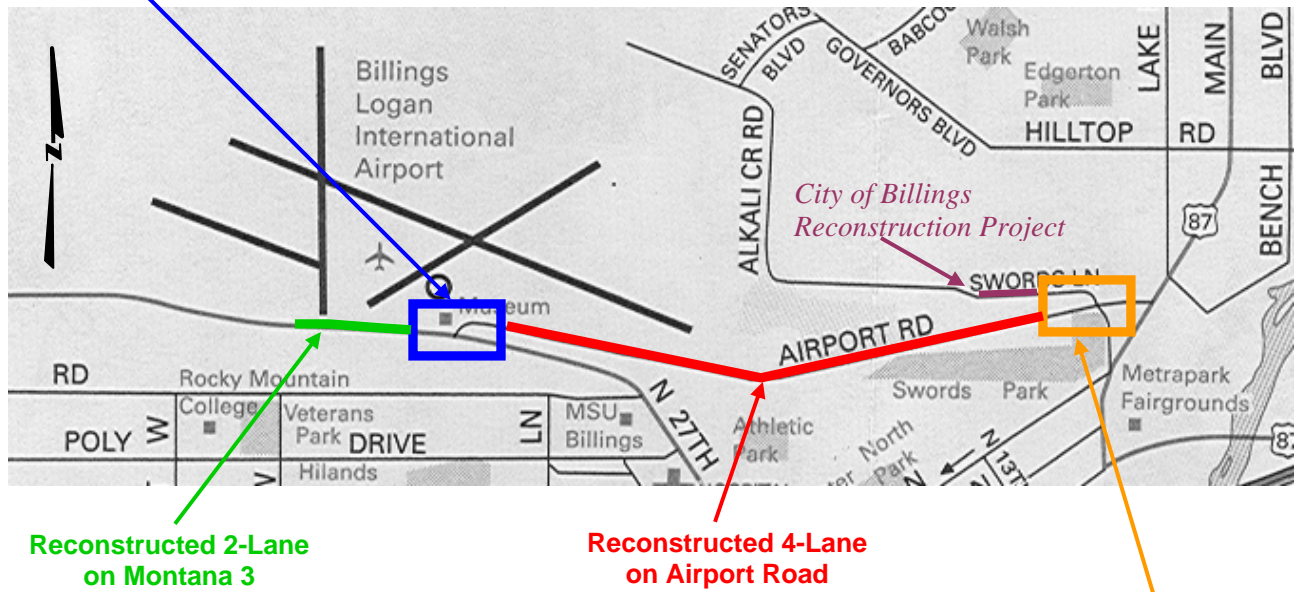
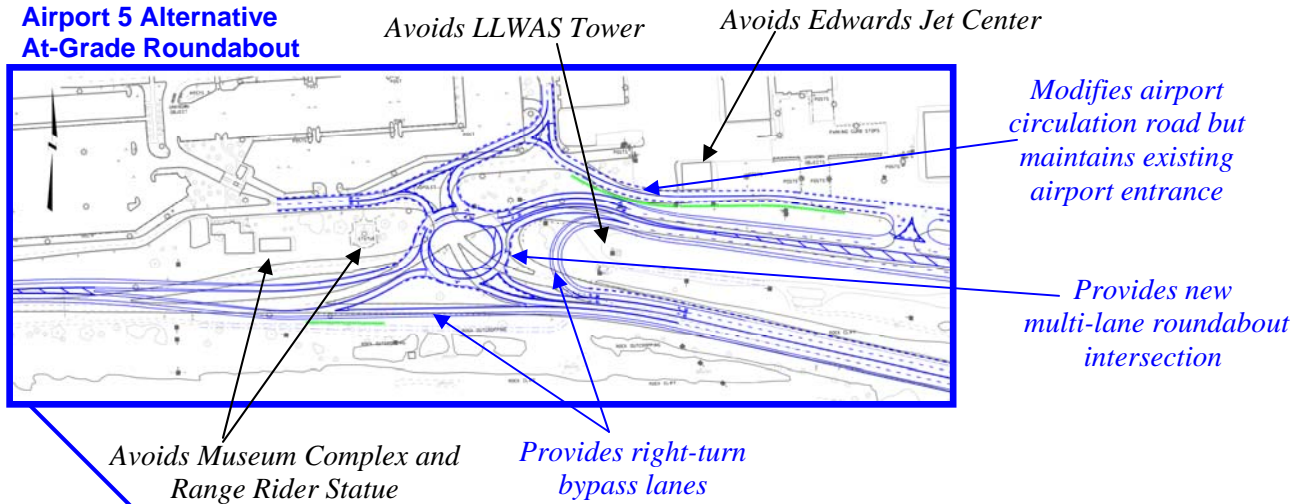


**Photo 2-1
Actual Roundabout Application**



**Figure 2-5
Preferred Alternative**

**Airport 5 Alternative
At-Grade Roundabout**



3.0 IMPACTS AND MITIGATION

This chapter contains information on potential social, economic, and environmental resource impacts due to the proposed action, including the reconstruction project on Alkali Creek Road proposed by the City of Billings. This information was developed in cooperation with state and federal agencies, Yellowstone County officials, City of Billings staff, and members of the general public. NEPA/MEPA and the FHWA Technical Advisory (T6640.8A) outline specific areas of environmental concern to be addressed through environmental analysis. Resources evaluated and found to have no impacts were identified in Chapter 1. These included:

- Farmlands
- Environmental Justice
- Economic Conditions
- Wetlands
- Floodplains
- Hazardous Waste

The following sections provide a description of those resources where impacts are anticipated.

3.1 Land Use/Right-of-Way/Easements

As illustrated in Figure 3-1, land use in the immediate project area is dominated by city-owned properties. The western portion of the project corridor, north of Airport Road, is part of the Billings Logan International Airport facility. The Airport also has jurisdiction over the property to the south of Airport Road east to the electrical sub-station. There are private properties on the north and south sides of Airport Road, east of the sub-station. The city-owned Swords Park lies in the eastern portion of the project area.

Some right-of-way would be required throughout much of the corridor, but no relocations of residences or businesses would be required under the No-Build or the Preferred Build Alternative.

Figure 3-1
Project Area Land Use



All lands needed for right-of-way under the proposed action which are in private ownership would be acquired in accordance with both the *Uniform Relocation Assistance and Real Property Acquisition Act* of 1970 (P.L. 91-646), and the *Uniform Relocation Act Amendments* of 1987 (P.L. 100-17). Compensation for right-of-way acquisitions would be made at “fair market value” for the “highest and best use” of the land.

Neither the No-Build nor any of the proposed Build Alternatives would have any substantive impact on the location, distribution, density, or growth rate of the area’s population.

Parks and Recreation/ NL&WCF - Section 6(f) Lands, and Section 4(f) Properties

No *National Land & Water Conservation Fund (NL&WCF) Act - Section 6(f)* (16 U.S.C.460) properties have been identified within the vicinity of the proposed project. No acquisition of *NL&WCF - Section 6(f)* properties would occur, and there would be no impacts by the proposed project’s Build Alternatives.

Section 4(f) of the *U.S. Department of Transportation Act (49 U.S.C. 303)* provides protection of significant publicly owned public parks, recreation areas, or wildlife and waterfowl refuges, or any significant historic site unless a determination is made that:

- There is no feasible and prudent alternative to the use of land from the property; and
- The action includes all possible planning to minimize harm to the property resulting from such use.

Historic resources are discussed in Section 3.8, and while there are no wildlife and waterfowl refuges in the project area, Swords Park would fall under this protection, and is impacted by this project. Approximately 5.2 acres of new right of way will be required within the park for the southern portion of the Alkali Creek Road interchange. This amounts to approximately 10 percent of the total park area and thus qualifies for a Programmatic evaluation of impacts. This evaluation is included in Appendix A.

Mitigation

Mitigation proposed to offset the impacts to the park would include the following:

- Provision of area mapping to the City for Park Department use,
- Improvements to the park access, including left turn bays,
- Restriction of the uncontrolled access by off-road-vehicles,
- Provision of trail connections, and
- Relocation of the east end of Black Otter Trail.

3.2 Social

This section includes impacts on the traveling public and/or other users of the existing and proposed transportation facility, and/or impacts on community cohesion.

Travel/Access

Overall, the proposed action would enhance highway operation and safety, accommodate the increasing travel volumes on the route, and meet MDT design criteria. The proposed project would improve safety and capacity of Airport Road by organizing the flow of traffic turning movements. A basic four-lane section (two through lanes in each direction with turn bays at select locations) is proposed for the central portion of the study area, and this improvement alone would provide immediate benefits to the flow of traffic.

The access management concept would be built upon existing key access locations and attempt to retain the existing spacing along the corridor. By defining side street locations, random and uncontrolled access to the highway is eliminated and vehicles traveling along Airport Road have a better sense of where entering vehicles will approach.

Provision of a reconstructed and upgraded roadway under any of the Build Alternatives would result in improved access for all area residents, businesses, travelers and truckers who rely heavily on Airport Road. These improvements would not be provided under the No-Build Alternative.

Mitigation

No mitigation required.

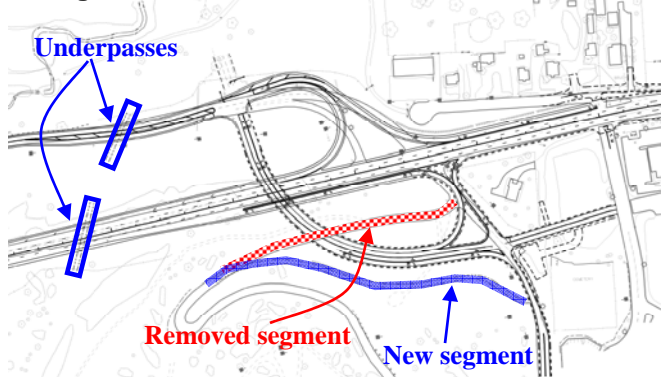
3.3 Pedestrians and Bicyclists

Pedestrian/bicycle traffic in the vicinity of the proposed project is currently limited, and the comparatively narrow paved width and lack of shoulders through much of the corridor does not encourage pedestrian/bicycle use on the existing roadway.

In conjunction with the Swords Park Master Plan recently approved by the City of Billings, a portion of the Black Otter Trail will be relocated as part of this project and will be converted from motor vehicle use to a multi-use trail (See Figure 3-2). This new segment will connect to the city sidewalks with at-grade crossing at Alkali Creek Road.

Pedestrian underpasses will also be provided to connect to Black Otter Trail and the future Swords Park trail.

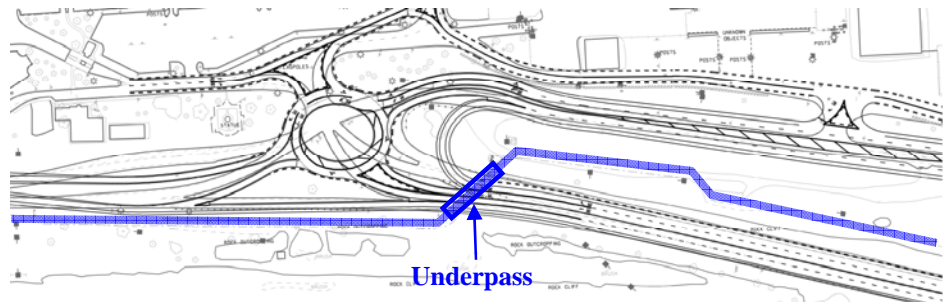
**Figure 3-2
Realignment of Black Otter Trail at Alkali Creek Road**



Additionally, a parallel trail system is planned through city property and Swords Park to connect the city property near the Airport intersection with the east end of Swords Park. This trail will include an underpass at North 27th Street as depicted in Figure 3-3.

All of the Build Alternatives include 2.4 m (8.0 ft) shoulders that can safely accommodate pedestrian/bicycle use and improve visibility for all users of the facility. The proposed project would also include rumble strips in the shoulders. Placement of these rumble strips approximately 0.3 m (1.0 ft) from the travel lane would provide more than the recommended minimum 1.2 m (4.0 ft) clear path for bicycle and pedestrian use.

Figure 3-3
Pedestrian Trail and Underpass at Airport Intersection



The No-Build Alternative would not improve safety for pedestrians/bicyclists or motorists.

Mitigation

The proposed project would include the relocation of a portion of Black Otter Trail to mitigate for the impacts to the trailhead at Alkali Creek Road.

3.4 Noise

FHWA produced guidelines for highway traffic noise analysis in the *Highway Traffic Noise Analysis and Abatement, Policy and Guidance* (revised June 1995), and MDT supports these guidelines through its own *MDT Traffic Noise Analysis and Abatement: Policy and Procedure Manual* (June 2001). This policy defines two conditions under which receptors (i.e. residences, schools, churches) are considered “impacted” by noise. First, receptors are considered impacted if predicted noise levels approach or exceed the Noise Abatement Criteria (NAC) shown in Table 3.1. These noise level criteria are in terms of the A-weighted, hourly averaged equivalent level (Leq) for the loudest hour conditions. The criteria are listed according to activity or land use, with the most sensitive land uses listed first. Residential receptors fall into Category B. To allow for some flexibility in the policy, MDT determined that receptors should be considered impacted where predicted noise levels approached their respective NAC. MDT defines “approach” as within one (1) dBA. Secondly, receptors are considered impacted if predicted design-year noise levels exceed existing noise levels by 13 dBA or more.

**Table 3.1
FHWA and MDT Noise Abatement Criteria
Hourly A-Weighted Sound Level in Decibels (dBA)**

Land Use Activity Category	Leq(h) dBA	Description of Activity Category
A	57 (Exterior)	Lands on which serenity and quiet are of extraordinary significance and where the preservation of those qualities is essential if the area is to continue to serve its intended purpose.
B	67 (Exterior)	Picnic areas, recreation areas, playgrounds, active sports areas, parks, residences, motels, hotels, schools, churches, libraries, and hospitals.
C	72 (Exterior)	Cemeteries, commercial areas, industrial areas, office buildings, and other developed lands, properties, or activities not included in Categories A or B above.
D	No Limit	Undeveloped lands, including roadside facilities and dispersed recreation. (A new or proposed subdivision meeting the requirements of Section A1 is Category B, not D).
E	52 (Interior)	Motels, hotels, public meeting rooms, schools, churches, libraries, hospitals, and auditoriums. (The interior criterion only applies when there are no exterior activities to be affected by traffic noise.)

Note: These sound levels are only to be used to determine impact. These are the absolute levels where abatement must be considered. Noise abatement should be designed to achieve a substantial noise reduction – not the noise abatement criteria.

Source: Federal Highway Administration. *Highway Traffic Noise Analysis and Abatement*, June 1995, and *MDT Traffic Noise Analysis and Abatement: Policy and Procedure Manual* (June 2001).

According to the Federal Aid Policy Guide, “*Procedures for Abatement of Highway Traffic Noise and Construction Noise*” (23 CFR 772), this project qualifies as a Type I project as a “proposed Federal or Federal-aid highway project . . . which increases the number of through-traffic lanes.” The FHWA’s Traffic Noise Model (TNM) Version 1.0 computer program was used to predict the traffic noise levels due to the No-Build Alternative and the project alternatives. Because there did not appear to be noise-sensitive receptors near the airport intersection, the airport intersection alternative was not analyzed for the Traffic Noise Study. However, residences and a motel are located near the Alkali Creek Road intersection, requiring an analysis of the traffic noise levels. The results of the analysis are shown in Table 3.2

Mitigation

Since traffic noise impacts were identified for the Swords Park receptors, traffic noise abatement measures were considered. Modifications (such as shifting the alignment of Airport Road) would not significantly reduce the predicted noise levels, and therefore would not be considered reasonable or feasible. Traffic management measures are not considered reasonable or feasible measures since Airport Road is part of the urban route, a North American Free Trade Agreement (NAFTA) Corridor, and connects the north/south truck routes in Billings. As described in the noise report, a barrier or berm would not be considered reasonable because the noise levels in

Swords Park due to aircraft taking off and landing also exceed the traffic noise impact criteria (69 dBA). Therefore, the noise levels in the park are not solely due to Airport Road traffic, and abatement measures to control traffic noise would not be considered reasonable.

**Table 3.2
Receptors and Predicted Noise Levels for the No-Build and Preferred Alternatives**

Receptor	Description	No-Build Alternative			Preferred Alternative	
		2002 L _{eq} (h) (dBA)	2025 L _{eq} (h) (dBA)	Potential Impact in 2025	2025 L _{eq} (h) (dBA)	Potential Impact in 2025
Swords 1	West entrance to Swords Park and park map location.	64	66	66	NA	NA
Swords 2	Trail closest to Airport Road in Swords Park.	68	70	70	NA	NA
R1	Single-family residence northeast of Alkali Creek Road/Airport Road intersection.	61	63	NA	62	63
R2	Single-family residence northeast of Alkali Creek Road/Airport Road intersection.	60	62	NA	62	62
R3	Single-family residence northeast of Alkali Creek Road/Airport Road intersection.	63	64	NA	63	64
R4	Single single-family residence northeast of Alkali Creek Road/Airport Road intersection.	63	65	NA	64	65
R5	Single-family residence northeast of Alkali Creek Road/Airport Road intersection.	61	63	NA	62	63
R6	Single single-family residence northeast of Alkali Creek Road/Airport Road intersection.	62	64	NA	64	65
Motel	Boot Hill Inn Motel	63	64	NA	64	65

Source: Big Sky Acoustics, 2003

3.5 Water Quality

The quality of runoff from roadways is impacted by vehicle-related contaminants, such as motor oil, grease and tire rubber. In addition, surface water runoff is impacted by herbicides and pesticides that may be used in landscaped or maintained areas along the highway.

There would be an increase in the total surface area of paved road related to widening and reconstruction. This increase in total road surface area decreases the overall permeability of substrate and increases the rate and quantity of surface water runoff from the roadway. However, reconstruction of Airport Road on the existing alignment would likely improve water quality relative to current conditions due to the fact that the reconstructed roadway would meet more rigorous standards (e.g. with respect to grade, surface water runoff controls, sedimentation and erosion control), and reduce impacts to surface water quality due to erosion and siltation.

Mitigation

Each of the proposed Build Alternatives may impact water quality through storm water runoff and erosion. Mitigation of these impacts is achieved through engineering controls, such as grading, revegetation, design of culverts/ditches, and various Best Management Practices. Construction of any of the alternatives will require a Stormwater Pollution Prevention Plan (SWPPP) and field monitoring/oversight to ensure that impacts to water quality due to construction along any of the proposed alternative alignments is minimal.

3.6 Waterbodies, Wildlife Resources, and Habitat

The Biological Resources Report (BRR) prepared for the proposed project provides a detailed accounting of the terrestrial and aquatic species, and species of concern that are known to occur or could occur within the proposed project area. The information below is a summary of potential impacts and mitigation measures for biological resources.

Wildlife Resources

General wildlife species that can be expected to occur in the project area include white-tailed jackrabbit, Richardson's ground squirrel, coyote, spotted skunk, white-tailed deer, mule deer, plains garter snake, prairie rattlesnake, montane shrew, little brown myotis, silver-haired bat, western harvest mouse, deer mouse, Northern harrier, ferruginous hawk, Northern flicker, American robin, cliff swallow, Brewer's sparrow, and killdeer. Species identified during field surveys (by sight or sign) were painted turtles, raccoon, black bear, night hawks, turkey vulture, black-billed magpie, canyon wren, house wren, northern flicker, spotted towhee, violet-green swallow, and mule deer.

Direct impacts to wildlife species may include incidental mortality during construction. The widening of the roadway would disturb additional areas and habitats immediately adjacent to the existing facility, thus mortality from project construction may occur to small animals, ground-nesting birds and their eggs or hatchlings, reptiles or amphibians. Deer mortality on the existing highway was documented during field visits. The project would increase sight distance and shoulder width, and may in fact improve motorists' ability to avoid animals attempting to cross the highway. This may reduce direct impacts to wildlife crossing the road corridor.

The areas that would be affected by the proposed project are currently subject to frequent human disturbance, and represent relatively poor quality habitat for small mammals, birds, ungulates, and herptiles. During construction of the project, if approved, more mobile species such as adult birds, white-tailed deer, and mid-size and large mammals will move to adjacent habitats to avoid direct mortality from construction activities. Upon completion of the project, disturbed areas will have topsoil added and will be seeded, mulched, and fertilized to re-establish desirable vegetation. This restoration will provide habitat similar to what currently exists within a year or two after construction. Therefore the direct impacts to wildlife would be considered to be short-term and minimal.

Other direct impacts on wildlife would include clearing of roadside vegetation used by birds and small mammals. Loss of this vegetation during construction could have a direct impact on wildlife species that rely on the areas for food, cover, or nesting habitat. If clearing were to occur

in the spring, nesting or denning animals and their young may be affected through loss of suitable habitat for these activities. These effects would lessen over time as the disturbed area recovers. Recovery would be facilitated by the restoration plan outlined in the previous paragraph.

Habitat

The study area for this proposed project contains both native and nonnative plant species. Most nonnative species are weedy varieties which were likely introduced from vehicle travel and/or previous construction along Airport Road. There are two distinct plant communities at the project site, mixed-grass prairie and eastern ponderosa pine forest. Mixed-grass prairie tends to occupy areas with less topographical variation while the ponderosa pine forest occupies areas on hills, drainages, and escarpments. Both plant communities have native and nonnative species present with the percent of native species increasing with distance from the road. The majority of native and nonnative weed species are directly adjacent to the road and culverts. In the past, the project area has been seeded with a mix of native and nonnative grasses. These grasses dominate a majority of the grassland vegetation. Native and nonnative trees and shrubs are present throughout the project area. A large portion of the trees are established in ditches and would likely be disturbed by the project. A large variety of plant species were observed in the project corridor and are referenced in the BRR.

Direct impacts to plants would include the removal of vegetation during the clearing and grubbing stages of the proposed construction, and loss of habitat due to road widening. Because of the proposed scope and intent of the project, these are considered unavoidable impacts. In the case of some nonnative species (i.e. Russian olive and weedy forbs), these impacts may be beneficial to the site by removing the seed source in the area.

Species of Concern

The Bractless Hedge-hyssop and the Persistent-sepal Yellow-cress are the two vascular plant species of concern in Yellowstone County, but neither were observed during the field survey of the study area.

Noxious Weeds

Six noxious weeds were observed within the study area. Five of these species are listed on the statewide noxious weeds list and one species is listed as noxious by Yellowstone County. The following weeds were found in the project area; Showy milkweed, Spotted knapweed, Field bindweed, Houndstongue, Leafy spurge, and Dalmatian toadflax. Locations of occurrences of each of the weeds is detailed in the BRR.

Improvements of the intersections and corridor of Airport Road, widening the highway, and filling/removing soils would affect the noxious weeds in the project area to different degrees. Field bindweed is the most prevalent of the noxious weeds in the project area. The proposed construction would likely increase the infestation level of field bindweed along the entire project area. Eradication will be difficult, if not impossible, because of its ubiquitous state. Management of field bindweed should focus on containment. Spotted knapweed and showy milkweed are the

noxious weeds with the greatest potential to increase in the study area. Although their population sizes are relatively small, consisting of scattered individuals, these plants occur over a relatively large portion of the study area. Spotted knapweed and showy milkweed seeds are likely to exist in a majority of the soils within the study area. Any disturbance to the soils during construction could spread the seeds and create optimal habitat for these disturbance-adapted weeds. Leafy spurge, houndstongue, and Dalmatian toadflax were the least common of the noxious weeds in the study area. However, they have a high potential for spread.

Mitigation

Since no impacts related to rare, sensitive, or special concern species, or their habitat, were identified during the site visit or the subsequent review, no mitigation related to the proposed project is anticipated.

All construction activities are required to comply with the Montana Noxious Weed Law, MDT Standard Specification 107.11.5, titled Noxious Weed Management, follow the requirements of the Noxious Weed Management Act, Title 7, Chapter 22, Part 21, and any Yellowstone County requirements.

3.7 Threatened/Endangered (T/E) Species

The BRR prepared for this project identified five federally-listed endangered, threatened, proposed, and candidate species occurring in Yellowstone County. Since the date of that document, all but the bald eagle have been de-listed or otherwise removed from consideration for federal listing.

The MNHP database query identified an occupied bald eagle nest territory approximately 2.5 miles from the study area on the Yellowstone River. Montana Fish, Wildlife & Parks confirmed a second occupied territory on the Yellowstone approximately two miles from the southwest terminus of the proposed project. These locations are as close as the Yellowstone River comes to the study area, thereby making it highly unlikely any relocated nests would be closer to the proposed project.

The majority of suitable foraging habitat for eagles is found to the southeast along the Yellowstone River corridor. However, activities conducted by the contractor such as developing aggregate sources, gravel crushing, and locating staging and stockpile sites could potentially be conducted outside of the proposed project limits and closer to these nests, or other nests along the Yellowstone River. The Montana Bald Eagle Management Plan places limitations on these high intensity activities. They should not be conducted within 0.8 km (0.5 mi) of nest locations or any other known bald eagle nests between March 1 and May 15, or within 0.4 km (0.25 mi) between May 15 and July 15.

Mitigation

Based on known occurrences of migrating and transient bald eagles within the corridor, power lines that are modified or reconstructed as a result of the proposed project will be raptor-proofed in accordance with MDT policy. Due to the proximity of the Airport, all mitigation plans will be coordinated with their Federally-mandated Wildlife Hazard Management Plan.

3.8 Cultural/Archaeological/Historic Resources

A total of 18 sites of cultural, archaeological, or historic significance were identified within the study area. Of these 18 sites, two were previously recorded historic sites, one is a prehistoric occupation site, two are prehistoric sites with buried cultural materials, and 12 are historic sites. The final site was an isolated find consisting of two quartzite flakes located approximately 100 m east of site 24YL1541, on the southwest slope of a large rock outcrop located along the south side of the existing highway.

Table 3.3 provides a summary of the historic properties identified in the area of potential effect from this project.

Table 3.3
Summary of Historic Properties in the Project Area

Site Number	Name	Site Type	National Register Status
24YL755	Boot Hill Cemetery	Cemetery	Eligible
24YL1532/24YL161	Billings Bench Water Assoc. Canal	Irrigation Canal	Eligible
24YL1541	Trench Cut	Fire Hearth	Further Testing Recommended
24YL1542	Commercial Building	Commercial Building	Not Eligible
24YL1543	Crandall House, Garage, & Stable	Craftsman Home	Eligible
24YL1544	House & Shed	Vernacular House	Not Eligible
24YL1545	House, Garage, Sheds, & Shelters	Vernacular House	Not Eligible
24YL1546	Crandall Log Cabin & Garage	Log House	Eligible
24YL1547	House & Shed	Massed Plan, Side-Gabled House	Eligible
24YL1548	House, Garage, Shed, & Dugouts	Vernacular House	Not Eligible
24YL1549	Ruth Rental Property	Pyramidal Vernacular Style House	Eligible
24YL1550	Concrete Chimney	Chimney	Not Eligible
24YL1551	Chief Black Otter Trail Scenic Drive	Trail/Road	Eligible
24YL1552	Billings Logan Airport	Airport Hangars	Feature 1 & 2 Eligible Feature 3 Not Eligible
24YL1553	Bronze Statue	Statue	Eligible
24YL1554	Museum	Log Cabin	Eligible
24YL1606	Morningside prehistoric site	Buried cultural materials	Eligible
24YL1607	Swords Pk-Alkali Cr. prehistoric. site	Buried cultural materials	Eligible

Sources: Ethnoscience, August 2002
 Aaberg Cultural Resource Consulting Service, May 2005

The study area is not recommended as a historic landscape. “In order for the landscape to be considered significant, character-defining features that convey its significance in history must not only be present, but they also must possess historic integrity.” Physical characteristics, such as location, setting, feeling, and association must be present and reflect the characteristics that existed during the property’s historic period. Even if the historic period of the study area is constructed in its broadest terms, the area has been so severely impacted by subsequent development that it no longer conveys sufficient character as a whole to be recommended eligible as a historic landscape. This recommendation, however, does not diminish the eligibility of individual sites within the study area.

Impacts

All but two sites recommended NRHP-eligible have been avoided or the design modified to minimize the potential impacts. The proposed intersection at Alkali Creek Road would also

involve reconstruction of a small portion of Alkali Creek Road associated with the interchange. The City of Billings proposal for reconstruction and widening along Alkali Creek Road westerly of the proposed intersection was also analyzed. During this analysis, it was determined that the prehistoric site on the City project would not be impacted.

The State Historic Preservation Office (SHPO) has concurred with the following findings:

Crandall Place	(24YL1543)	No Effect
Crandall Cabin	(24YL1546)	No Effect
Holfeld Place	(24YL1547)	No Effect
Ruth Rental Property	(24YL1549)	No Effect
BBWA Canal	(24YL1532/1161)	No Effect
Boot Hill Cemetery	(24YL755)	No Effect
Black Otter Trail District	(24YL1580)	No Effect
Airport	(24YL1552)	No Adverse Effect
Museum Complex	(24YL1553/1554)	No Adverse Effect
Morningside Site	(24YL1606)	No Effect*
Swords Pk-Alkali Cr. Site	(24YL1607)	Adverse Effect

*Note: The Morningside Site is located on a portion of Alkali Creek Road that is proposed for reconstruction by the City of Billings.

The Swords Park – Alkali Creek Site (24YL1607) is approximately 14 acres in size, part of which lies within the existing Alkali Creek road and Airport Road right-of-way. Portions of the site would be impacted by the proposed construction of a new interchange at the Airport Road/Alkali Creek Road intersection, the construction of the Aronson Avenue approach roadway, and potentially by the construction of the proposed pedestrian underpasses extending beneath Alkali Creek Road and Airport Road. Although there has been an Adverse Effect determination on this cultural material site, Section 4(f) of the Transportation Act does not apply when FHWA and SHPO have determined that the “archeological resource is important chiefly from what can be learned by data recovery and has minimal value for preservation in place.” In this particular case, SHPO will approve a Data Recovery Plan, and no further protection for the site will be afforded under Section 4(f). The Advisory Council on Historic Preservation (ACHP) will also be contacted to request their comments.

A copy of the SHPO concurrence on these cultural resource impacts is contained in Appendix C.

Following coordination with SHPO on these findings, discussions continued with the Museum Board who expressed concern over the security of the artifacts at their facility. While the facility itself would not be directly impacted by the proposed project, there is some potential for impact to the artifacts due to construction vibration and dust intrusion into the building. An independent conservator was contracted to assess the condition of the facility and the potential risk to the contents of the museum. The results of that analysis indicate that the facility is in “fair condition” and there is no central heating/cooling and ventilating system to control dust. Upon completion of this review of the condition of the facility, the need to stabilize the museum environment, and the documented historical significance of the artifacts, the recommendation was made to provide protection through preventive conservation procedures prior to any construction activity in the vicinity of the museum.

Mitigation

Both prehistoric sites (24YL1606 and 1607) yield lithic debitage, stone tools, bison bone, and heat-altered rock. Site 1606 is within the bounds of the City's proposed project, and has been avoided with a re-design effort. Site 1607 is protected by Section 106 and Section 4(f) of the Transportation Act and impacts would be mitigated by this project if approved. Techniques used to mitigate the identified impacts to this site are being developed in coordination with SHPO. A Data Recovery Plan will be approved by SHPO. Memoranda of Agreement (MOA) between property owners, FHWA, MDT, and SHPO will be developed as necessary to ensure impacts are minimized as much as practicable.

A cultural representative of the Crow Tribe stated that the Crow have a cultural, historical, and spiritual association with the project area. The Crow request that sites related to Native American activities within the project area be protected and preserved, and that all sites be treated in a culturally appropriate manner. Specific locations of culturally sensitive sites have not been identified, but the Crow will also be invited to participate in the MOA.

MDT would also plan to install interpretive markers near the intersection of MT 3/Airport Road and the Sixth Avenue Bypass.

Preventive measures to protect museum artifacts would include wrapping and cushioning existing collections for the duration of the proposed project. Each item requiring such treatment would be re-housed, containerized, or placed in storage cabinets, and labeled. A storage area would be created within the existing facility to minimize handling damages and pre, during, and post construction periods. Specific protection measures and handling procedures would be coordinated with the Museum Board.

3.9 Visual

For the purposes of this discussion, the project area has been divided into five sections, each with distinct landscape characteristics as follows.

View of the Rim Face from the Valley

The extended background view north from downtown is of the steeply sloping, south facing exposure of almost pure rock rims. The 27th Street connection to the airport was constructed up across the face of this rim formation. The manner of construction and subsequent improvements has left the rim face in this area noticeably different from the adjacent undisturbed areas. The cut slope has been laid back in a stair step pattern of smoothed faces and narrow benches. Some vegetation has become established on these narrow benches but it is unlike the natural vegetation on adjacent undisturbed areas in both form and pattern. The fill slope is steeper than the natural talus slopes nearby and lacks the texture of large to small randomly arranged boulders with interspersed conifer and shrub vegetation, and subsequently appears unnatural. Two large billboards are also prominently placed at the curve near the base of the slope.

Airport Intersection

From the arid rim rock face, the view from 27th Street opens onto a green, landscaped intersection. This is a limited foreground view bounded by the rim and the airport. The elevated position and relatively steep slopes to the south result in open panoramic views of the town and a broad swath of the Yellowstone Valley below. The restricted size of the area in which this irregularly configured intersection is placed provides only guarded glimpses as one maneuvers through it. The one exception to this is the airport exit to 27th Street, which is oriented strongly toward the open views of the valley.



*View of
Airport Road
intersection,
looking west.*

Airport Road Between 27th Street and the Electric Substation

This is an elevated plateau area of gentle slopes, grass cover, and highly erosive soils which have been deeply rutted by off-road vehicle use. Where there is a roadside ditch deep enough to discourage off-road vehicle travel, the grassland community is well established and undisturbed. Where this is not the case, off-road vehicle tracks prevail.



View of adjacent grasslands, looking west.

Airport Road Between the Electric Substation and Alkali Creek Road Intersection

In this area, Airport Road slopes from the elevated plateau on the west, down into the Alkali Creek drainage on the east, paralleling the rim. This roadway is not as pronounced as the 27th Street ascent/descent due in part to the fact that portions of the roadway are bordered by conifers that partially screen the traffic. Views to the elevated lands of Sword's Park to the south and to the residential areas to the north are intermittently visible along this segment.

Alkali Creek Intersection

This intersection is located in the enclosed valley of Alkali Creek. Prominent hills and ridges rise to the north and south. To the south, the character is strongly naturally dominated. To the north are residential neighborhoods among heavy landscaping and natural vegetation associated with Alkali Creek. The concentrated strip commercial development along Main Street is clearly visible to the east.



View of Alkali Creek Road intersection, looking southeast.

Impacts

View of Rim Rocks from Valley

The No-Build option would not affect the current view of the rims from the valley. The Preferred Alternative at Airport Road would construct a bypass lane for MT 3 to North 27th Street traffic. This bypass lane would require a slight cut into the rim, which may be visible from the valley. This impact is less obvious than other at grade options which require more severe cuts, and is clearly less intrusive than the grade-separated structure required by other options.

Airport Road Intersection

The No-Build alternative would have no effect on the views of this intersection. The Build alternative would require the removal of a clump of trees and shrub vegetation, which could be replaced as part of this project. The character of the foreground view will not change, but could be enhanced with more desirable vegetation. The more far ranging views from the intersection to the valley floor would also remain unchanged.



Airport Road

Views from the roadway will remain unaffected by the proposed project. The view of the roadway will be altered by the wider roadway itself, and the removal of some trees adjacent to the existing roadway. This view could be improved by replanting vegetation and restoring some of the roadside erosion caused by off-road vehicle use and limiting their access to this area.

Alkali Creek Road

The new overpass structure will be constructed at approximately the same grade as the existing Airport Road elevation, while Alkali Creek Road will be somewhat depressed underneath. This will limit the visual impact to both area residents and travelers.

The relocated Black Otter Trail access into Sword's Park would create an extended area of excavation and retaining walls. It would expand disturbance and the highway further into Swords Park, and result in the removal of trees on the north side of Airport Road.

**Mitigation**

There are three primary means of addressing potential visual impacts in the planning and design phase. In order of effectiveness they are: 1) locating the disturbance in unseen areas, 2) limiting disturbance, and 3) using forms, lines, colors, and texture of materials that borrow from, and blend with, the surrounding landscape. Another acceptable approach (but much more difficult to achieve with any reasonable measure of success) is to accentuate the facility through the use of materials that contrast with, but positively compliment the setting. These principles are the underlying guide while evaluating the site and for all subsequent planning and design efforts from a visual perspective. The existing landscape conditions are therefore important to understand at the outset.

Early concepts incorporated into the Preferred Alternative include landscaping elements and retaining walls and structures that are colored and textured to blend with the surrounding natural environment.

3.10 Construction Impacts

Construction activities from the proposed Build Alternatives would cause temporary inconveniences to area residents and airline travelers accessing the airport by ground. These would occasionally result in longer travel times, detours, temporary closures, and noise and dust due to the use of heavy machinery. These disruptions would occur intermittently throughout the construction period; however, the existing highway would remain in use for continued access during the construction process. While no detailed traffic control plans have been developed for this proposed project to date, it is recognized that continuous access to the airport and minimal disruptions to commuter traffic and regional truck traffic is imperative. Traffic control plans will be developed to provide the least interruption to traffic that is feasible and reasonable to implement.

Asphalt plants and gravel crushers that may be required for roadway construction for any of the alternatives will require air quality permits to be obtained by the contractor. Construction activities are also required to use dust suppression and control measures to minimize short-term impacts related to construction dust.

There would be minor, temporary noise impacts related to construction of any of the alternatives. The project's contractor will be subject to all state and local laws to minimize construction noise by having mufflers on all equipment. Dust control will also be implemented by using either water, or another approved dust-suppressant. During construction, surface water runoff could be contaminated by spills of petroleum products, lubricants, and hydraulic fluid from construction equipment. In general, Best Management Practices will be used to minimize the effect of sedimentation and/or run-off during the roadway construction periods.

A number of public utilities have been identified in this corridor which have the potential to be impacted by the proposed project. These utilities include city water and sewer, electrical and telecommunications transmission lines, natural gas and petroleum pipelines, and cable television lines. Any utility relocations would be coordinated with the lines' owners, and done prior to this proposed project's construction. Notification of service interruptions due to these relocations will be the responsibility of these utility lines' owners. Each of the disruptions are normally minor and are usually limited to the customers on the affected lines.

Mitigation

There is potential for short-term water quality impacts due to increased erosion and sedimentation during construction activities. Mitigation measures following BMP's will be included in the Storm Water Pollution Prevention Plan (SWPPP).

As noted above, it is premature to develop the traffic control plans but it is recognized that continuous access to the airport and minimal disruptions to commuter traffic and regional truck traffic is of utmost importance during construction of this project. Detailed traffic control plans will be developed during final design to provide the least interruption to traffic that is feasible and reasonable to implement.

All advance warning and detour signing would be in accordance with the Manual on Uniform Traffic Control Devices. Therefore, construction impacts from any of the proposed Build Alternatives will be minimized.

3.11 Cumulative Impacts

Connected Action

As part of the proposed Airport Road project, the intersection at Airport Road and Alkali Creek Road is proposed to be reconstructed as a grade-separated intersection. Reconstruction of this intersection would include modification of approximately 305 m (1,000 ft) of Alkali Creek Road west of the intersection. The City of Billings also has plans to reconstruct and widen the adjacent section of Alkali Creek Road continuing to the west. While this City project is funded independent of the proposed MDT project, MDT has agreed to try to assist the City with their bidding of the project by incorporating the City's project into the MDT construction bid package.

The Council on Environmental Quality NEPA regulations state that “Actions are connected if they . . . (ii) Cannot or will not proceed unless other actions are taken previously or simultaneously.” (40 CFR 1508.25) Bidding the rock excavation for these projects under one contract, or to one contractor, would appear to meet this definition, thus the City project has been analyzed for social, economic, and environmental impacts through the NEPA/MEPA project development process in conjunction with the Airport Road project.

Potential impacts to a cultural resource site within the City’s project limits were avoided with a re-design effort conducted by the City. No other impacts are anticipated from the City’s reconstruction of Alkali Creek Road adjacent to this proposed reconstruction of Airport Road and the Airport Road/Alkali Creek Road intersection.

Other Pending Actions

- *Molt Road/Highway 3 Collector Feasibility Study* is a project to develop and evaluate the feasibility of multiple corridor alternatives to provide a connection between Molt Road and MT Highway 3 that was completed in June 2004.
- *Billings North Bypass – Environmental Impact Statement* is the follow up to the Feasibility study completed in January 2001. The current project is to determine the corridor location and environmental impacts to provide a connection between the I-90/94 interchange area east of Billings to MT Highway 3 northwest of Billings.
- *6th Avenue North to Bench Extension* project is intended to prepare Bench Boulevard to carry arterial traffic from Mary Street, at the northern extreme of the Heights, through the Metra property, to access 6th Avenue North at the Main Street intersection. This will include an environmental analysis (documented in a Categorical Exclusion), archeological and historical surveys, and a public hearing process for the location and design of the facilities. An optimistic forecast for construction readiness would be FY 06. The major factor in the timing will likely be the public demand, or lack of demand, to

invest in the improvements. The balance of the corridor must be developed to arterial standards as opportunity occurs and capital improvement funding becomes available.

- *Zimmerman and Rimrock Traffic Signal* – This intersection was identified as a candidate for signalization in a 1998 update of the Traffic Signal Priority Study. Based on its ranking in the 1998 Update, it was the next priority to be considered for installation of a traffic signal, independent of a larger street reconstruction project. Construction of this project was completed during the summer of 2004.
- *Aronson Avenue Extension* project to connect Aronson Avenue with Alkali Creek Road.
- The *Alkali Creek Road* project consists of widening Alkali Creek Road and building a roadside multiuse path. The project is scheduled to be completed in Summer 2006.
- The *Wicks Lane Extension* is a project to determine the feasibility of extending Wicks Lane west, wrapping around the north side of the Airport to connect with MT 3 opposite of Zimmerman Trail.

Each of the above projects has safety enhancement and improved operations as key objectives. Their implementation could have positive cumulative effects on safety, but it is unlikely that they would have cumulative environmental impacts because of their distance from one another. There are no other projects in the area that would contribute to cumulative impacts when considered in conjunction with the proposed project.

Indirect Effects

None of the alternatives assessed would induce significant land use changes or promote unplanned growth. Under the Preferred Alternative, access to the airport, park, and private and commercial properties would continue to be provided, although potentially modified. Access changes are not expected to adversely impact existing or future businesses. Consultation with affected property owners would occur prior to completion of final design to minimize impacts to business operations.

Reconstruction and upgrade of the roadway and intersections in the project area would result in positive impacts of improved access for all area residents, businesses, truckers, tourist travelers, and service and emergency vehicles which rely heavily on this corridor. These improvements would not be provided under the No-Build Alternative.

3.12 Permits Required

The proposed action would require the following permits or authorizations under the Clean Water Act (33 U.S.C. 1251-1376, as amended):

- A Section 402/Montana Pollutant Discharge Elimination System (MPDES) authorization from the MDEQ's Permitting & Compliance Division. The Build Alternatives would require new right-of-way and require an MPDES construction phase permit, which is issued in response to the 1987 re-authorization of the Clean Water Act. The Clean Water Act requires the U.S. Environmental Protection Agency to institute a National Pollutant Discharge Elimination System (NPDES) permitting program for storm drainage systems or to approve the state's programs. EPA approved Montana's program in 1987.

Obtaining the MPDES permit requires development of a storm water pollution prevention plan (SWPPP) that includes a temporary erosion and sediment control plan. The erosion and sediment control plan identifies BMP's as well as site-specific measures to minimize erosion and prevent eroded sediment from leaving the work zone.

All work would also be in accordance with the Water Quality Act of 1987 (P.L. 100-4), as amended.

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4.0 LIST OF PREPARERS

The responsibilities and qualifications of the consultant team that prepared the Billings - Airport Road Environmental Assessment are listed below:

Preparer/Affiliation	Role	Education and Experience
Theodore G. Burch Program Development Engineer FHWA	Lead Agency	B.S. Civil Engineering, Masters of Engineering – Structures, Program Development Engineer and Team Leader for the statewide program areas of planning, environment, safety and design, right-of-way, and materials. 17 years experience in highway engineering, environmental review and program/project management.
Alan C. Woodmansey, P.E. Operations Engineer FHWA	Lead Agency	B.S., Environmental Engineering, M.S., Engineering Management. Eight years experience in transportation engineering.
Bruce H. Barrett Billings District Administrator MDT	Lead Agency, Project Management, Public Participation	38 years with MDT, with experience in construction, equipment, and maintenance.
Gary Neville, P.E. Billings District Engineering Services Supervisor MDT	Lead Agency, Public Involvement	A.S., Civil Engineering Technology. Over 25 years of experience in Transportation in the Engineering, Management & Construction fields; 20 years with MDT, and five years in the private Consulting and Construction sector.
Fred Bente Consultant Project Supervisor MDT	Lead Agency, Project Manager	B.S., Civil Engineering. Responsible for managing and coordinating pre-construction projects being performed by consultants for MDT. Over 20 years experience in highway engineering, environmental review, and project management.
Jean A. Riley, P.E. Environmental Services Bureau Chief MDT	Lead Agency, Project Management	B.S., Civil Engineering. Over 6 years experience in coal mining environmental, over 11 years with DEQ environmental, over two years with CTEP, and three years as MDT Engineering Section Supervisor in Environmental Services.
Thomas L. Hansen, P.E. Engineering Section Supervisor - Environmental Services MDT	Lead Agency, Environmental	B.S. Civil Engineering. Four Years Transportation Planning, 15 years Project Management, and three years Environmental Programming.
John A. Shoff, P.E. HKM Engineering, Inc.	Project Management, Roadway Design	B.S., Civil Engineering. Over 20 years experience in surface transportation design including preparation of environmental documents, design of streets, highways, interchanges, and site plans.
Teri Dewing, P.E. HKM Engineering, Inc.	Roadway Design, Public Participation	B.S., Civil Engineering. Over eight years of experience as a project engineer on various transportation projects. Primarily responsible for development of plans, specifications, and cost estimates.
Darryl L. James, AICP HKM Engineering, Inc.	Project Documentation, Public Participation	M.P.A., with an Environmental Concentration; B.A., Public Affairs and Political Science. Senior consultant with over 10 years of professional experience. Expertise in transportation planning, NEPA analysis, and technical report writing.
Jennifer Peterson, EI HKM Engineering, Inc	Project Coordination, Document Preparation	B.S., Civil Engineering. Over five years experience in environmental technical documentation, public involvement, and traffic engineering.

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5.0 DISTRIBUTION LIST

Federal Agencies

U.S. Department of the Interior
Fish & Wildlife Service
Montana Field Office, 100 N. Park, Suite #320
Helena, MT 59601
Attn: Mark Wilson, Field Supervisor

U.S. Department of the Interior
Fish & Wildlife Service
2900 4th Avenue North, Room 301
Billings, MT 59101-1266
Attn: Lou Hanebury, Biologist

State Agencies

Montana Department of Environmental Quality
1520 East 6th Avenue, P. O. Box 200901
Helena, MT 59620-0901
Attn: Steve Welch, Administrator
Permitting & Compliance Division

Montana Department of Natural Resources &
Conservation
1625 11th Avenue
P.O. Box 201601
Helena, MT 59104-0437
Attn: Mary Sexton, Director

Montana Environmental Quality Council
Office of the Director
Capitol Post Office
P. O. Box 215
Helena, MT 59620

Montana Governor's Office
Executive Office
Room 204, State Capitol
Helena, MT 59620-0801
Attn: Brian Schweitzer, Governor

Montana State Historic Preservation Office
1410 8th Avenue
P.O. Box 201202
Helena, MT 59620-1202
Attn: Dr. Mark Baumler, Historian

U.S. Environmental Protection Agency
Region VIII, Montana Office
Federal Building, 10 NW 15th Street, Suite 3200
Helena, MT 59626-0096
Attn: John F. Wardell, Director

U.S. Department of Transportation
Federal Aviation Administration
1540 Lake Elmo Drive, Suite 6
Billings, MT 59105-1798
Attn: Billings System Support System

Montana Fish, Wildlife & Parks
1420 East Sixth Avenue
P.O. Box 200701
Helena, MT 59620-0701
Attn: M. Jeff Hagener, Director
Glenn R. Phillips, Chief of Habitat and
Protection Bureau, Fisheries Division

Montana Highway Commission
2037 Ridgeview Drive
Billings, MT 59105-3636
Attn: William T. Kennedy, Chairman

Montana State Library
1515 East 6th Avenue, P.O. Box 201800
Helena, MT 59620-1800
Attn: Roberta Gebhardt
Collections Management Librarian

Tribal

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Local Agencies

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Bob Moats, Acting Director
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Yellowstone County Commissioners
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Attn: Bill Kennedy
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510 North Broadway, 4th Floor
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390 North 23rd Street
Billings, Montana 59101

City of Billings – Logan International Airport
Construction Engineering & Facilities Planning
Kim Annin, Manager
1901 Terminal Circle, Room 216
Billings, Montana 59105

City-County Planning Department
Ramona Mattix, Director
519 North Broadway, 4th Floor
Billings, Montana 59101

6.0 COMMENTS AND COORDINATION

6.1 Public Agencies

MDT contacted the following agencies and parties in preparing this EA.

Agencies with Jurisdiction and/or Permitting Authority

Advisory Council on Historic Preservation (ACHP, reviewed “Determinations of Effect”)
Department of the Interior - U.S. Fish & Wildlife Service (USFWS)
Yellowstone County (FEMA Floodplain Development Permit, Weed Control District)
Montana Department of Environmental Quality (MDEQ, MPDES authorization)
State Historic Preservation Office (SHPO, reviewed/concurred with “Determination of Effect”)
U.S. Environmental Protection Agency

Other Agencies, Groups, or Persons Contacted

Federal Aviation Administration
Yellowstone County Commissioners
Yellowstone County Planning Board
City of Billings – Administrator, Aviation and Transit Department
Billings Public Works Director
Montana Department of Natural Resources & Conservation (DNRC)
U.S. Department of Agriculture - Natural Resources Conservation Service (NRCS)

6.2 Cooperating Agencies

In accordance with the provisions of 23 CFR 771.111(d), MDT requested that the Environmental Protection Agency (EPA), Federal Aviation Administration (FAA [District Office]), Montana Department of Environmental Quality (DEQ), Yellowstone County, and the City of Billings participate in the development of this project as Cooperating Agencies. No responses were received from FAA or DEQ. EPA declined to participate. Both Yellowstone County and the City of Billings agreed to participate as Cooperating Agencies. Responses from EPA, Yellowstone County, and the City of Billings are included in Appendix D.

6.3 Public Involvement

Public Meetings

The first public information meeting was held in Billings on September 9, 2002. The meeting took place from 7:30 pm to 9:30 pm in Billings at Rocky Mountain College. Approximately 50 people attended the meeting. The meeting format included an open house, formal presentation, and a question/comment period. The purpose of the meeting was to introduce the project, get public input on design alternatives for safety improvements to the intersections of Airport Road with North 27th Street and Alkali Creek Road, along with the segment of Airport Road in between.

A second public information meeting was held at the MSU-Billings campus on July 27, 2004. The meeting took place from 7:00 pm to 8:45 pm, and was attended by approximately 33 people. The meeting format included an open house, formal presentation, and a question/comment period. The purpose of the meeting was to update the public on the progress of the project since the first meeting, and present the current range of alternatives. The project team explained the NEPA/MEPA process and how the project would proceed after receiving their input at this meeting. At the close of the meeting, MDT asked for a show of hands in support of the various Airport intersection alternatives. Results were as follows: six for grade-separated; one for signal controlled; and nine for the at-grade roundabout.

Press Releases and Mailings

Funding for this project was first announced in an article in October 2000 in the *Billings Gazette*.

MDT issued a press release in April 2002 indicating that HKM Engineering was awarded the contract for the planning and design of the project. This was published in the *Gazette* on April 10, 2002.

Approximately 150 flyers were mailed out in the Billings area on August 20, 2002 and July 14, 2004. The flyers announced the date, time and place of the public meeting and indicated the purpose of the public meetings.

Press releases and display ads were issued for both public meetings. These announcements occurred on August 17, 2002 and July 18 and 25, 2004 in the *Billings Gazette*, and July 22, 2004 in the *Yellowstone County News*.

Website

A project website was established for this proposed project. This site includes a description of the proposed project, outline of the environmental process, a proposed schedule, description of alternatives, list of issues raised through the project development process, notice of public meetings, and opportunities to provide comment. The site also has links to MDT, the City of Billings, Yellowstone County, and HKM Engineering.

Airport Coordination

This project involved extensive coordination with the Airport beginning in June 2002. Airport representatives were provided opportunities to review preliminary alternatives and renderings, review project schedules, and discuss the environmental process requirements. Airport representatives provided electronic files to the design team and provided comments throughout the alternatives development and analysis process, and participated in the selection of the Preferred Alternative.

Organizational Meetings

HKM Engineering staff attended and provided project information at the following meetings in the Billings area:

October 3, 2002 – Chamber of Commerce – Managed Growth Committee Meeting
January 14, 2003 – Planning Board – Regular Business Meeting
April 17, 2004 – Aviation Conference – Rocky Mountain Aviation Conference
May 25, 2004 – Heights Task Force – Regular Business Meeting

Additional Public Involvement Events

A Public Hearing will be conducted to obtain comments on this Environmental Assessment while the document is out for public review and comment. Notice of availability of this document as well as the notice for the Public Hearing has been placed in the Billings Gazette and the Yellowstone County News. Public Hearing notices have also been sent to everyone on the project mailing list, and the notice has been posted on the project website at www.airportroad.info

Comments on the EA can also be provided via the internet by logging onto the MDT web page at www.mdt.mt.gov. There is a “Public Involvement” pull-down menu, and a tab for “Review/Comment on Environmental Documents.” The Billings-Airport Road project will be listed in the “Open for Comment” section of this page for the duration of the public comment period.

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APPENDICES



A. ALTERNATIVES EVALUATION MATRIX

Alternatives Evaluation Matrix

Criteria	Airport Alts.							Alkali Alts.		
	NB	1	2A	2B	3	4	5	NB	1	2
Meets Purpose and Need (16 points possible)	0	13	13	11	9	9	13	0	10	13
Relieves Congestion	0	2	4	4	3	3	4	0	2	3
Improves Safety	0	4	3	2	1	2	4	0	2	3
Improves Regional Mobility	0	4	4	4	4	2	2	0	4	4
Improves Community Mobility	0	3	2	1	1	2	3	0	2	3
Traffic Safety and Operation (84 pts poss.)	31	52	52	43	40	52	66	32	48	62
Geometrics										
Horizontal Alignment	3	2	2	2	3	3	3	1	2	2
Vertical Alignment	3	0	0	0	2	3	3	3	1	3
# of Controlled Intersections	3	4	4	2	0	2	4	3	2	4
# of Merge/Diverge Locations	3	0	0	1	0	3	3	4	2	2
Oversize Load Accommodation	1	1	1	1	1	3	4	2	0	0
Efficiency										
VHT Ranking	0	4	4	2	1	3	3	0	3	4
VKT Ranking	4	4	4	4	0	4	4	4	4	3
LOS Ranking	0	3	3	2	4	2	4	0	3	4
Reserve Capacity Ranking	0	2	3	3	4	1	4	0	2	2
Queue Lengths	0	2	4	4	2	2	4	0	2	3
Safety										
Projected Crash Ranking	0	4	3	1	0	2	4	0	2	4
Projected Injury Ranking	0	4	3	2	0	3	4	0	2	3
Projected Fatality Ranking	0	3	3	3	2	3	4	1	3	3
Least # of Conflict Movements	0	2	3	3	3	0	3	1	3	2
General Operations										
Free Flow for Major Movements	1	3	3	3	4	2	2	0	2	4
Segregation of Truck Movements	0	4	4	4	4	2	0	0	4	4
Minimal Weaving Conditions	3	2	2	1	4	2	3	3	3	4
Driver Familiarity/Expectancy	2	2	1	1	2	4	0	3	3	2
Maintain Existing Travel Speed	4	2	2	2	1	3	4	4	2	2
Adapt to Dir. Demand Changes	0	3	2	2	3	2	3	0	2	4
Accommodate Access Demand	4	1	1	0	0	3	3	3	1	3
Aesthetics (28 points possible)	24	13	15	15	16	20	20	12	9	9
Views/Gateway	4	0	2	2	2	3	3	--	--	--
Skyline	4	0	0	0	0	4	4	--	--	--
Rim Integrity	4	3	3	3	3	2	2	--	--	--
Vegetation Loss	4	3	3	3	3	3	3	4	3	3
Large Cut Faces	4	4	4	4	4	2	2	4	1	0
Large Fill Slopes	4	0	0	0	1	4	4	4	3	4
Opportunity for Enhancement	0	3	3	3	3	2	2	0	2	2
Construction Cost	--	\$9.1	\$7.6	\$8.2	\$7.3	\$4.9	\$4.5	--	\$10.5	\$10.4
Impact Summary										
Museum Complex	○	●	●	●	●	○	○	--	--	--
Range Rider Statue	○	●	●	●	●	○	○	--	--	--
Airport circulation road	○	●	●	●	●	●	○	--	--	--
Edwards Jet Center shop	○	●	●	●	●	○	○	--	--	--
LLWAS Tower	○	●	●	●	●	●	○	--	--	--
Commercial Sites	--	--	--	--	--	--	--	○	●	○
Water Distribution Pump House	--	--	--	--	--	--	--	○	●	○
Swords Lane Homes	--	--	--	--	--	--	--	○	○	○
Boot Hill Cemetery	--	--	--	--	--	--	--	○	●	○
Black Otter Trail	--	--	--	--	--	--	--	○	●	●

Notes: Individual criteria are scored on a scale of 0 (does not address criteria) to 4 (best addressed criteria)
A "●" symbol denotes an impact, a "○" symbol denotes no impact, and a "--" mark indicates that the given site is outside the potential impact area of that particular alternative.

Shaded columns identify the Preferred Alternative.

B. PROGRAMMATIC SECTION 4(F) EVALUATIONS

MONTANA DIVISION
 "NATIONWIDE" SECTION 4(f) EVALUATION
 FOR MINOR USAGE OF
 PUBLIC PARKS, RECREATION LANDS, AND WILDLIFE AND
 WATERFOWL REFUGES

Project # MT (009), P.M.S. C# 4743

Date: November 1, 2005

Project Name: Billings – Airport Road

Location: Swords Park, Yellowstone County

NOTE: Any response in a box requires additional information. Consult the "Nationwide" Section 4(f) Evaluation criteria.

	<u>YES</u>	<u>NO</u>
1. Is the 4(f) site adjacent to the existing highway?	<u>X</u>	<input type="checkbox"/>
2. Does the amount and location of the proposed impact area impair the use of the remaining Section 4(f) land for its intended purpose?	<input type="checkbox"/>	<u>X</u>
3. Does the proposed project require more than a <u>minor</u> amount of the Section 4(f) site for Right-of-Way?	<input type="checkbox"/>	<u>X</u>
4. Are there any proximity impacts which would impair the use of the 4(f) lands for their intended purpose (defined as "constructive use")?	<input type="checkbox"/>	<u>X</u>
5. Have the officials with jurisdiction over the property agreed <u>in writing</u> with the assessment of impacts and the proposed mitigation?	<u>X</u>	<input type="checkbox"/>
6. Have Federal funds — such as the <i>National Land & Water Conservation Fund - Section 6(f)</i> — been used for the acquisition of, or improvements to the 4(f) site?	<input type="checkbox"/>	<u>X</u>
If <u>yes</u> — has the land conversion/transfer been coordinated with the appropriate Federal agency, and are they in agreement?	<u>NA</u> <u>NA</u>	<input type="checkbox"/> <input type="checkbox"/>
7. Is the proposed action under an <u>Environmental Impact Statement (E.I.S.)</u> ?	<input type="checkbox"/>	<u>X</u>
8. Is the proposed project on a new location?	<input type="checkbox"/>	<u>X</u>
9. The Scope-of-Work for the proposed project is one of the following:	<u>X</u>	<input type="checkbox"/>
a) Improved traffic operation;		
b) Safety improvements;		
c) 3R;		
d) Bridge replacement on essentially the same alignment; or		
e) Addition of lanes.		

NOTE: Any response in a box requires additional information. Consult the "NATIONWIDE" SECTION 4(F) EVALUATION criteria.

	<u>YES</u>	<u>NO</u>
<u>ALTERNATIVES CONSIDERED</u>		
1. The "do-nothing" ALTERNATIVE has been evaluated, and is <u>not</u> considered to be feasible and prudent.	<u>X</u>	<input type="checkbox"/>
2. An ALTERNATIVE has been evaluated which improves the highway without any 4(f) impacts, and is also <u>not</u> considered to be feasible and prudent.	<u>X</u>	<input type="checkbox"/>
3. An ALTERNATIVE on a new location avoiding the 4(f) site has been evaluated, and is <u>not</u> considered to be feasible and prudent.	<u>X</u>	<input type="checkbox"/>

MINIMIZATION OF HARM

1. The proposed project includes all possible planning to minimize harm.	<u>X</u>	<input type="checkbox"/>
2. Measures to minimize harm include the following:		
a) Replacement of the lands used with lands of reasonably equivalent usefulness and location, and of at least comparable value.	_____	<u>X</u>
b) Replacement of facilities impacted including sidewalks, paths, benches, lights, trees, and other facilities.	<u>X</u>	_____
c) Restoration/landscaping of disturbed areas.	<u>X</u>	_____
d) Special design features.	<u>X</u>	_____
e) Payment of, or improvements to the remaining 4(f) lands equal in cost to fair market value.	_____	<u>X</u>
f) Other measures, including curb and gutter, steepened backslopes, and/or berms to eliminate off-road-vehicle use in the park. MDT also provided new mapping for the park as part of the mitigation.	<u>X</u>	_____

COORDINATION

1. The proposed project has been coordinated with the Federal, state, and/or local officials having jurisdiction over the 4(f) lands. List: <u>City of Billings</u>	<u>X</u>	<input type="checkbox"/>
2) In the case of non-federal 4(f) lands, the official with jurisdiction has been asked to identify any Federal encumbrances — and none exist.	<u>X</u>	<input type="checkbox"/>

SUMMARY AND APPROVAL

The proposed project meets all criteria under the "Nationwide Programmatic" Section 4(f) Evaluation approved on December 23, 1986, and is submitted pursuant to **49 U.S.C. 303**.

All required alternatives have been evaluated, and the findings made are clearly applicable to this proposed project.

This Programmatic Evaluation includes all possible planning to minimize harm which will be incorporated in this proposed project.



Jean Riley, P.E.
Engineering Bureau Chief
Environmental Services

Date: 10/26/05

Approved: 

Federal Highway Administration

Date: 28 OCT 05

"ALTERNATIVE ACCESSIBLE FORMATS OF THIS DOCUMENT WILL BE PROVIDED ON REQUEST."

Attachments

cc: Bruce Barrett - Billings District Administrator
Paul Ferry, P.E. - Preconstruction Engineer
Kent Barnes, P.E. - Bridge Engineer
John Horton., Right-of-Way Bureau Chief
David W. Jensen, Supervisor - Fiscal Programming Section

MONTANA DIVISION

"NATIONWIDE" SECTION 4(f) EVALUATION FOR MINOR IMPACTS
ON
HISTORIC SITES
EXCLUDING HISTORIC BRIDGE REPLACEMENTS

Project # MT (009), (P.M.S. 4743)

Date: November 1, 2005

Project Name: Billings Airport Road Location: Peter Yegen Jr. Yellowstone County Museum
Yellowstone County

**NOTE: Any response in a box requires additional information.
Consult the "Nationwide" Section 4(f) Evaluation criteria.**

	<u>YES</u>	<u>NO</u>
1. Is the 4(f) site adjacent to the existing highway?	<u>X</u>	<input type="checkbox"/>
2. Does the proposed project require the removal or alteration of historic structures, and/or objects?	<input type="checkbox"/>	<u>X</u>
3. Does the proposed project disturb or remove archaeological resources which are important to preserve in-place rather than to recover?	<input type="checkbox"/>	<u>X</u>
4. Is the impact on the 4(f) site considered minor (i.e.: no effect; or no adverse effect)?	<u>X</u>	<input type="checkbox"/>
5. Has the STATE HISTORIC PRESERVATION OFFICE (SHPO) agreed in writing with the assessment of impacts, and the proposed mitigation?	<u>X</u>	<input type="checkbox"/>
6. Is the proposed action under an <u>Environmental Impact Statement (E.I.S.)</u> ?	<input type="checkbox"/>	<u>X</u>
7. Is the proposed project on a new location?	<input type="checkbox"/>	<u>X</u>
8. The Scope-of-Work for the proposed project is one of the following:	<u>X</u>	<input type="checkbox"/>
a) Improved traffic operation;		
b) Safety improvements;		
c) 3R;		
d) Bridge replacement on essentially the same alignment; or		
e) Addition of lanes.		

ALTERNATIVES CONSIDERED

1. The "do-nothing" ALTERNATIVE has been evaluated, and is <u>not</u> considered to be feasible and prudent.	<u>X</u>	<input type="checkbox"/>
---	----------	--------------------------


NOTE: Any response in a box requires additional information.
Consult the "Nationwide" Section 4(f) Evaluation criteria.

	<u>YES</u>	<u>NO</u>
<u>ALTERNATIVES CONSIDERED</u> (conclusion:)		
2. An ALTERNATIVE has been evaluated on the existing alignment which improves the highway without any 4(f) impacts, and is also <u>not</u> considered to be feasible and prudent.	<u>X</u>	<input type="checkbox"/>
3. An ALTERNATIVE on a new location avoiding the 4(f) site has been evaluated, and is <u>not</u> considered to be feasible and prudent.	<u>X</u>	<input type="checkbox"/>
Descriptions of ALTERNATIVES 2. and 3. are attached.*	<u>X</u>	<input type="checkbox"/>

MINIMIZATION OF HARM

1. The proposed project includes all possible planning to minimize harm.	<u>X</u>	<input type="checkbox"/>
2. Measures to minimize harm include the following:		

COORDINATION

1. The proposed project has been COORDINATED with the following:		
a) SHPO (date: <u>2/4/91</u>) 	<u>X</u>	<input type="checkbox"/>
b) ADVISORY COUNCIL ON HISTORIC PRESERVATION (ACHP, date: <u>3/18/91</u>)	<u>X</u>	<input type="checkbox"/>
c) Property owner (date <u> </u>)	<u> </u>	<input type="checkbox"/>
d) Local/State/Federal agencies	<u> </u>	<input type="checkbox"/>

List:

County Commissioners (date:)

2. One of the preceding had the following comment(s) regarding this proposed project, and/or the mitigation:



SUMMARY

All required **ALTERNATIVES** have been evaluated and the proposed project meets all the criteria included in the "Nationwide Programmatic" *Section 4(f)* evaluation approved on December 23, 1986. This Programmatic Evaluation includes all possible planning to minimize harm which will be incorporated in this proposed project.

APPROVAL

This document is submitted pursuant to **49 U.S.C. 303** and in accordance with the provisions of **16 U.S.C. 470f**.



Jean Riley, P.E.
Engineering Bureau Chief
Environmental Services

Date: 10/26/05

Approved: 

Federal Highway Administration

Date: 28 OCT 05

"ALTERNATIVE ACCESSIBLE FORMATS OF THIS DOCUMENT WILL BE PROVIDED ON REQUEST."

cc:

- Bruce Barrett, Billings District Administrator
- Paul Ferry, P.E. - Highway Engineer
- Kent Barnes, P.E. - Bridge Engineer
- John Horton, Chief, Right-of-Way Bureau
- David W. Jensen, Supervisor - Fiscal Programming Section

C. SHPO CONCURRENCE ON CULTURAL RESOURCES



Montana Department of Transportation

Jim Lynch, Director
Brian Schweitzer, Governor

2701 Prospect Avenue
PO Box 201001
Helena MT 59620-1001

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AUG 17 2005

ENVIRONMENTAL

July 29, 2005

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AUG 17 2005

BY: SHPO

2005
MASTERS COPY

Josef Stan
MDT
Demo-Billings
Airport Road

Stan Wilmoth
State Historic Preservation Office
1410 East 8th Avenue
P.O. Box 201202
Helena, MT 59620

Subject: **Demo-Billings Airport Road
MT (009)
Control Number 4743**

CONCUR
MONTANA SHPO
DATE 8/17/05 SIGNED *Stan Wilmoth*

Dear Stan,

On Thursday 7/21/05, I met with Steve Aaberg, Gary Neville (MDT), Vern Heisler (City of Billings) and consultants from both KLJ and HKM to discuss whether or not it was feasible to avoid impacts to 24YL1606, the Morningside site. As you will recall, 24YL1606 is a prehistoric bison processing site located on a very narrow terrace-remnant sandwiched between Alkali Creek Road and Alkali Creek itself. This site is located along the section of Alkali Creek Road slated to be improved by the City of Billings with city funds.

While on site, we looked at the cutbank exposure on Alkali Creek that contains an easily discernable lens of bison bone and fired rock at close to a meter below the ground surface (In order to understand the stratigraphy at this site it is helpful to refer to the profile on page 65 of Steve's report). Overlying the natural stratigraphy is approximately 60cm of disturbed road-fill mixed with some prehistoric artifacts. This mixed fill-zone obviously lacks archaeological integrity.

In looking for ways to avoid impacts to 24YL1606 Vern Heisler and the KLJ designer said it would be no problem to alter the design to keep disturbance in the vicinity of the

Wilmoth
7/29/05
Page 2

site to with 23 inches or 60cm of the paved road's surface. This design solution ought to keep disturbance well within the existing road fill and above any intact archaeological materials that might (we don't know) lie beneath the existing pavement. I must also note that the road's paved surface sits 20-30cm above the ground surface shown in Steve's stratigraphic profile. In addition, it turns out that there is a water line buried over 6 feet deep within the road prism adjacent to 24YL1606.

Between recognized past disturbance and the design change that all parties agreed to on 7/21/05, I now feel confident that the Alkali Creek road project will have no effect on intact cultural deposits at 24YL1606.

If you have questions about this matter please contact me at 406-444-0455 or splatt@state.mt.us.



Steve Platt, Archaeologist
Environmental Services

Cc: Vern Heisler, City Engineer, Billings
Bruce Barrett, Billings District Administrator
Gary Neville, Billings District Engineering Services Supervisor
Fred Bente, Consultant Design
Bonnie Steg, Supervisor, Resources & Permitting



MONTANA HISTORICAL SOCIETY

225 North Roberts ♦ P.O. Box 201201 ♦ Helena, MT 59620-1201
♦ (406) 444-2694 ♦ FAX (406) 444-2696 ♦ www.montanahistoricalsociety.org ♦

June 20, 2005

Steve Platt
MDT

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JUN 22 2005

ENVIRONMENTAL



RE: Billings Airport Road, MT (009), Control # 4743
Finding of Adverse Effect for 24YL1607

Steve:

Thank you for consulting with us regarding your effect finding for the above referenced project. We concur that Adverse Effects to 24YL1607 will occur if the proposed undertaking proceeds. We agree that it appears that 24YL1523/161 will not be affected.

In so far as 24YL1606 lies outside of the proposed MDT undertaking and is not related to the MDT project, is not based on federal funding or other federal assistance, approval or permitting we agree with your findings and recommendations regarding 24YL1606.

Sincerely,

Stan Wilmoth



Montana Department of Transportation

2701 Prospect Avenue
PO Box 20100
Helena MT 59620-1001

MASTER FILE
JIM LYNCH, Director
BRIAN SCHWEITZER, Governor
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2005052402

MAY 26 2005

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MAY 24 2005

ENVIRONMENTAL

I have report
down stairs
Stan.
MOT
Billings Airport
Road

May 24, 2005

Stan Wilmoth
State Historic Preservation Office
1410 East 8th Avenue
P.O. Box 201202
Helena, MT 59620

Subject: **Billings Airport Road
MT (009)
Control Number 4743**

Dear Stan,

Enclosed for your review and comment is a cultural resource inventory report for the above Montana Department of Transportation (MDT) project. According to HKM Engineering project manager Darryl James,

MDT is proposing to reconstruct Montana Highway 3/Airport Road from a point west of the airport east to Main Street. As part of this proposed project, the intersections of 27th Street at the Airport, and Alkali Creek Road are also proposed to be reconstructed. The intersection at Alkali Creek Road will be reconstructed as a grade-separated interchange, and the project will involve reconstruction of a small portion of Alkali Creek Road associated with the interchange. The City of Billings also has plans to reconstruct and widen a longer portion of Alkali Creek Road westerly of the proposed interchange. While the City project is independent of the proposed MDT project, MDT has agreed to try to assist the City with their bidding of the project by incorporating the City's project into the MDT construction bid package. As such, the City project has been analyzed for social, economic, and environmental impacts through the NEPA/MEPA project development process.

The attached cultural report includes findings for both MDT's proposed project and those in the City's project area.

Wilmoth
5/24/05
Page 2

There are four sites documented in the enclosed report. They are 24YL1606, 24YL1607, 24YL1605 and 24YL1532/161.

Sites 24YL1606 and 24YL1607 represent buried prehistoric archaeological sites with reasonable quantities of fire broken rock, processed large ungulate bone and chipped stone debitage. The sites also contain defined cooking features. Both 24YL1606 and 24YL1607 probably represent campsites where bison processing was a primary activity. The sites are not located far from the old Billings Bison Trap (24YL422), but there appear to be several (closer) small bison kills along the low sandstone rims of Alkali Creek. Both sites are considered significant under criterion D for their potential to produce significant archaeological data.

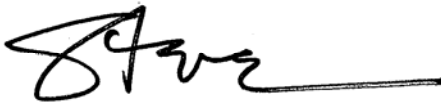
Site 24YL1605 is a historic trash scatter and/or dump deposit that does not appear to contain significant scientific information. It is considered not eligible for the National Register of Historic Places under Criteria A, B, C, or D.

Finally, 24YL161/1382/1532, the BBWA Canal, is considered eligible under criterion A.

A copy of the enclosed report will be sent under separate cover to George Reed at the Crow Cultural Program.

I expect to have plans available so that I can prepare an effect determination within the next few days.

If you have questions about this matter please contact me at 406-444-0455 or splatt@state.mt.us.



Steve Platt, Archaeologist
Environmental Services

CONCUR
MONTANA SHPO
DATE 5/24/05 SIGNED 

Cc: Bonnie Steg, Supervisor, Resources & Permitting
Jon Axline, MDT Historian
Fred Bente, Consultant Design
Darryl James, HKM Engineering



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Montana Department of Transportation

2701 Prospect Avenue
PO Box 201001
Helena MT 59620-1001

David A. Galt, Director
C.R. Judy Martz, Governor

SEP 29 2004

ENVIRONMENTAL

CONCUR
MONTANA SHPO

MASTER FILE
COPY

September 13, 2004

Mark Baumler, Ph.D.
State Historic Preservation Office
1410 8th Avenue
P O Box 201202
Helena, MT 59620-1202

DATE: 28 Sep 04 SIGNED

[Handwritten signature]

BY: _____

- MDT
- Josef
- Billings -
- Airport Rd
- EFFECT FINDING

Subject: MT (009)
Billings - Airport Road
Control No. 4743

MONTANA SHPO

Dear Mark:

Enclosed is the Determination of Effect for the above project in Yellowstone County. We have determined that the project would have **No Effect** to the Crandall Place (24YL1543), the Crandall Cabin (24YL1546), the Holfeld Place (24YL1547), the Ruth Rental Property (24YL1549), BBWA Canal (24YL1532/24Y1161), the Boot Hill Cemetery (24YL755), and the potential Black Otter Trail Historic District (24YL1580). It would have **No Adverse Effect** to Features 1 and 2 of the Billings Logan International Airport (24YL1552), and the Yellowstone County Museum Complex (24YL1553/1554). We request your concurrence. The MDT would also install interpretive markers near the intersection of Montana Highway 3/ Airport Road and the Sixth Avenue Bypass.

If you have any questions, please contact me at 444-6258.

[Handwritten signature: Jon Axline]
Jon Axline, Historian
Environmental Services

Enclosure

cc: Bruce Barrett, Billings District Administrator
Tom Martin, P.E., Consultant Design
Bonnie Steg, Resources Section

file: MDT/2004



Montana Department of Transportation

2701 Prospect Avenue
PO Box 201001
Helena MT 59620-1001

David A. Galt, Director
Judy Martz, Governor

**MASTER FILE
COPY**

August 22, 2002

George Reed
Crow Culture Committee
P O Box 159
Crow Agency MT 59022

Subject: MT (009)
Billings Airport Road
Control No. 4743

Dear Mr. Reed:

Enclosed is the cultural resource report for the MDT's Airport Road project in Billings. As you well-know, the project is located very close to Skeleton Cliff in Billings and other areas that probably have cultural significance to the Crow Tribe. Please review the report and let me know if there are any issues or concerns you may have concerning the project. They will be considered as part of the planning and design phase of this project.

If you have any questions or comments, please contact me at the above address or at (406) 444-6258.

Jon Axline, Historian
Environmental Services

cc: Bruce Barrett, Billings District Administrator
Gordon Stockstad, Resources Section

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OCT 18 2002
ENVIRONMENTAL

Montana Department of Transportation

2701 Prospect Avenue
PO Box 201001
Helena MT 59620-1001

David A. Galt, Director
Judy Martz, Governor

CONCUR
MONTANA SHPO

MASTER FILE COPY

August 22, 2002
Mark Baumler
State Historic Preservation Office
1410 8th Avenue
P.O. Box 201202
Helena, MT 59620-1202

DATE 17 Oct 02 SIGNED *Joseph Billings Airport Rd*

2002101514

Subject: MT (009)
Billings Airport Road
Control No. 4743

Enclosed is the cultural resource report, CRABS, and site forms for the above project in Yellowstone County. Ethnoscience has recommended five sites eligible for the National Register of Historic Places. They are: the Crandall Place (24YL1543), Crandall Cabin (24YL1546), Holfeld Place (24YL1547), Ruth Rental Property (24YL1549), Features 1 and 2 at the Billings Logan International Airport (24YL1552), and the Yellowstone County Museum (24YL1554). The latter, we believe, is eligible for the National Register under Criteria A and C, not under "B" as stated in the report. We do not believe that the "Ranger Rider of the Yellowstone" statue (24YL1553) is individually eligible for the National Register of Historic Places as it does not meet the criteria for eligibility. It would, however, be a contributing feature to the Yellowstone County Museum site which is adjacent to the statue. Indeed, the statue is located about 70 yards east of the museum building in a park area between the airport and Montana Highway 3. The National Register eligibility of 24YL1541 will be left unresolved until the preliminary plans for the project become available. Black Otter Trail (24YL1551) is covered under the historic roads and bridges programmatic agreement and no determination of National Register eligibility is required. Finally, Boot Hill Cemetery (24YL755) is already listed on the National Register and the BBWA Canal (24YL1532/24YL161) is eligible for the Register. We request your concurrence.

If you have any questions, please contact me at (406) 444-6258.

Jon Axline
Jon Axline, Historian
Environmental Services

Enclosures

cc: Bruce Barrett, Billings District Administrator
Carl Peil, P.E., Preconstruction Bureau
Gordon Stockstad, Resources Section

file: MDT/2002

D. COOPERATING AGENCY LETTERS



21A05 317

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

REGION 8, MONTANA OFFICE
FEDERAL BUILDING, 10 West 15th St., Suite 3200
HELENA, MONTANA 59626

RECEIVED
SEP 5 2002
HKM ENGINEERING

Ref: 8MO

September 4, 2002

Mr. John A. Shoff, P.E.
HKM Engineering
222 N. 32nd Street, Suite 700
P.O. Box 31318
Billings, Montana 59107-1318

Re: Billings - Airport Road Project
MT (009); WT 130
Control No. 4743

Dear Mr. Shoff:

This is in response to your letter dated August 28, 2002 requesting EPA to be a cooperating agency with the Federal Highway Administration on the environmental documentation for the proposed Billings Airport Road project.

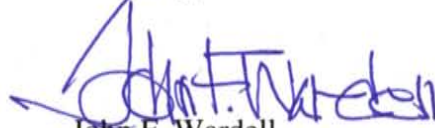
The EPA has resource limitations and other program commitments which limit the degree and extent of EPA's participation in the preparation and review of environmental documentation, particularly for non-EIS projects. The EPA focuses its limited Clean Air Act Section 309 and NEPA review resources upon projects for which EIS's will be prepared, since these projects are more likely to have significant effects on human health and the environment. Our resource constraints and other program commitments make it difficult for me to agree to EPA's participation as a Cooperating Agency for this project (see 40 CFR 1501.6(c)).

However, we do encourage you to send draft environmental documents for this project to our office. We will try to review and comment upon draft or preliminary environmental documents as much as our workload and schedules allow. We are interested in helping to ensure that proper river, wetland, and surface and ground water quality, hazardous waste issues, urban sprawl mitigation, and air quality protection considerations are incorporated into the proposed project. I hope you understand our resource constraints and other program commitments.



If you have any questions or would like to discuss this matter further please feel free to call me at (406) 457-5001. Thank you for your consideration.

Sincerely,



John F. Wardell

Director

Montana Office

cc: Cynthia Cody, EPA, 8EPR-N, Denver
Saul Sternberg, MDOT-Environmental Services Bureau, Helena
Dale Paulson, FHWA, Helena

Yellowstone County

**COMMISSIONERS**

(406) 256-2701
(406) 256-2777 (FAX)

P.O. Box 35000
Billings, MT 59107-5000

September 13, 2002

Mr. John A. Shoff, P. E.
HKM Engineering Inc.
P. O. Box 31318
Billings, MT 59107-1318

RE: AIRPORT ROAD PROJECT

Dear Mr. Shoff:

Thank you for your letter of August 28, 2002, requesting Yellowstone County to be a Cooperating Agency for the environmental documentation on this project. We are vitally interested in this important transportation project, and wish to be included as a Cooperating Agency throughout the course of your firm's work.

We were pleased to participate in the first public meeting on September 9, 2002. Thank you for inviting us to that meeting. We plan to stay involved and participate fully throughout the development and execution of the project. Please keep the County Public Works Department apprised of your progress as well.

Sincerely,

BOARD OF YELLOWSTONE COUNTY COMMISSIONERS

A stylized, handwritten signature in black ink, appearing to be "JR".

Jim Reno, Chair

Absent

James A. Ziegler, Sr., Member

A handwritten signature in blue ink that reads "Bill Kennedy".

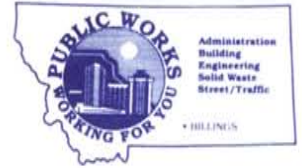
Bill Kennedy, Member

Copy: Bill Gibbs, Public Works Director
File



CITY OF BILLINGS

PUBLIC WORKS DEPARTMENT
Administration Division



510 North Broadway - 4th Floor

Billings, Montana 59101

Office (406) 657-8230

Fax (406) 657-8252

RECEIVED

SEP 17 2002

HKM ENGINEERING

September 13, 2002

John A. Shoff, P.E.
Project Manager
HKM Engineering
222 N 32nd Street, Suite 700
PO Box 31318
Billings, MT 59107-1318

**SUBJECT: CITY OF BILLINGS – COOPERATING AGENCY
BILLINGS – AIRPORT ROAD
MT (009); WT 130
CONTROL NO. 4743**

Dear John:

The City of Billings wishes to be a Cooperating Agency on this proposed project's environmental documentation in accordance with the U.S. Department of Transportation Federal Highway Administration's (FHWA's) regulations (23 CFR 771.111(d)).

We understand that the Montana Department of Transportation will provide a copy of the Preliminary (rough draft) environmental document on this proposed project for review by the City of Billings as a Cooperating Agency.

Please contact me if you need additional documentation or information.

Sincerely,

David D. Mumford, P.E.
Public Works Director

DDM:tlr

E. MITIGATION COMMITMENTS

E: MITIGATION COMMITMENTS

Land Use/Right-of-Way/Easements

Mitigation proposed to offset the impacts to the park would include the following:

- Provision of area mapping to the City for Park Department use,
- Improvements to the park access, including left turn bays,
- Restriction of the uncontrolled access by off-road-vehicles,
- Provision of trail connections, and
- Relocation of the east end of Black Otter Trail.

Social

No mitigation required.

Pedestrians and Bicyclists

The proposed project would include the relocation of a portion of Black Otter Trail to mitigate for the impacts to the trailhead at Alkali Creek Road.

Noise

No mitigation is proposed.

Water Quality

Mitigation of water quality impacts is achieved through engineering controls, such as grading, revegetation, design of culverts/ditches, and various Best Management Practices. Construction of any of the alternatives will require a Stormwater Pollution Prevention Plan (SWPPP) and field monitoring/oversight to ensure that impacts to water quality due to construction along any of the proposed alternative alignments is minimal.

Waterbodies, Wildlife Resources, and Habitat

Since no impacts related to rare, sensitive, or special concern species, or their habitat, were identified during the site visit or the subsequent review, no mitigation related to the proposed project is anticipated.

All construction activities are required to comply with the Montana Noxious Weed Law, MDT Standard Specification 107.11.5, titled Noxious Weed Management, follow the requirements of the Noxious Weed Management Act, Title 7, Chapter 22, Part 21, and any Yellowstone County requirements.

Threatened/Endangered (T/E) Species

Based on known occurrences of migrating and transient bald eagles using suitable habitat within the corridor, power lines that are modified or reconstructed as a result of the proposed project will be raptor-proofed in accordance with MDT policy.

Cultural/Archaeological/Historic Resources

Techniques used to mitigate the identified impacts to prehistoric Site 1607 are being developed in coordination with SHPO. A Data Recovery Plan will be approved by SHPO. Memoranda of Agreement (MOA) between property owners, FHWA, MDT, and SHPO will be developed as necessary to ensure impacts are minimized as much as practicable. The Crow request that sites related to Native American activities within the project area be protected and preserved, and that all sites be treated in a culturally appropriate manner. Specific locations of culturally sensitive sites have not been identified, but the Crow will also be invited to participate in the MOA.

MDT would also plan to install interpretive markers near the intersection of MT 3/Airport Road and the Sixth Avenue Bypass.

Preventive measures to protect museum artifacts would include wrapping and cushioning existing collections for the duration of the proposed project. Each item requiring such treatment would be re-housed, containerized, or placed in storage cabinets, and labeled. A storage area would be created within the existing facility to minimize handling damages and pre, during, and post construction periods. Specific protection measures and handling procedures would be coordinated with the Museum Board.

Visual

Early aesthetic treatment concepts incorporated into the Preferred Alternative include landscaping elements and retaining walls and structures that are colored and textured to blend with the surrounding natural environment.

Construction Impacts

Mitigation measures following BMP's will be included in the Storm Water Pollution Prevention Plan (SWPPP).

In recognizing that continuous access to the airport and minimal disruptions to commuter traffic and regional truck traffic is of utmost importance during construction of this project, detailed traffic control plans will be developed during final design to provide the least interruption to traffic that is feasible and reasonable to implement.

Permits Required

The proposed action would require the following permits or authorizations under the Clean Water Act (33 U.S.C. 1251-1376, as amended):

- A Section 402/Montana Pollutant Discharge Elimination System (MPDES) authorization from the MDEQ's Permitting & Compliance Division. The Build Alternatives would require new right-of-way and require an MPDES construction phase permit, which is issued in response to the 1987 re-authorization of the Clean Water Act. The Clean Water Act requires the U.S. Environmental Protection Agency to institute a National Pollutant Discharge Elimination System (NPDES) permitting program for storm drainage systems or to approve the state's programs. EPA approved Montana's program in 1987.

Obtaining the MPDES permit requires development of a storm water pollution prevention plan (SWPPP) that includes a temporary erosion and sediment control plan. The erosion and sediment control plan identifies BMP's as well as site-specific measures to minimize erosion and prevent eroded sediment from leaving the work zone.

All work would also be in accordance with the Water Quality Act of 1987 (P.L. 100-4), as amended.