

Record of Decision



Beartooth Highway construction
circa 1934
© Flashes, Red Lodge, MT



Beartooth Highway 2001



Visual simulation of the reconstructed road at 8.4 meters (28 feet)

Wyoming Forest Highway 4 U.S. 212 (KP 39.5 to KP 69.4) Project WY HPP-4-1(0) The Beartooth Highway Park County, Wyoming

February 2004



United States Department of Transportation
Federal Highway Administration
Central Federal Lands Highway Division



**METRIC TO ENGLISH/ENGLISH TO METRIC
CONVERSION FACTORS (APPROXIMATE)**

When You Know:	Multiply By:	To Find:
meters (m)	3.281	feet
feet (ft.)	0.3048	meters
kilometers (km)	0.621	miles
miles (mi.)	1.609	kilometers
hectares (ha)	2.471	acres
acres (ac.)	0.405	hectares

LIST OF ACRONYMS AND ABBREVIATIONS USED IN THIS DOCUMENT

AASHTO	American Association of State Highway and Transportation Officials	NRHP	National Register of Historic Places
BMPs	Best Management Practices	SADT	Seasonal Average Daily Traffic
CFR	Code of Federal Regulations	SEE	Social, Environmental, and Economic (Team)
EIS	Environmental Impact Statement	SHPO	State Historic Preservation Office
FHWA	Federal Highway Administration	SNF	Shoshone National Forest
km/h	Kilometers per hour	USFS	U.S. Forest Service
KP	Kilometer post	USFWS	U.S. Fish and Wildlife Service
mph	Miles per hour	WDEQ	Wyoming Department of Environmental Quality
NEPA	National Environmental Policy Act	WYDOT	Wyoming Department of Transportation
NPDES	National Pollutant Discharge Elimination System	YNP	Yellowstone National Park
NPS	National Park Service		

Wyoming Forest Highway 4
U.S. 212 (KP 39.5 to KP 69.4)
Project WY HPP-4-1(0)
The Beartooth Highway
Park County, Wyoming

RECORD OF DECISION

Submitted Pursuant to 42 U.S.C. 4332(2)(c)
and 49 U.S.C. 303 by the
U.S. Department of Transportation
Federal Highway Administration
Central Federal Lands Highway Division

Cooperating Agencies

U.S. Forest Service
National Park Service
U.S. Army Corps of Engineers
U.S. Fish and Wildlife Service

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Shoshone National Forest
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Yellowstone National Park
Park Headquarters
Mammoth, Wyoming

Park County Library
1057 Sheridan Avenue
Cody, Wyoming

Federal Highway Administration
2880 Skyway Drive
Helena, Montana

Custer National Forest
6811 Highway 212 South
Red Lodge, Montana

Federal Highway Administration
1916 Evans Avenue
Cheyenne, Wyoming

Carnegie Library
3 West 8th Street
Red Lodge, Montana

Cooke City Chamber of Commerce
Cooke City, Montana

Red Lodge Chamber of Commerce
Red Lodge, Montana

This Record of Decision also is available for review at the Top of the World Store along the Beartooth Highway.

It can be found on the Beartooth Highway website at: www.cflhd.gov/projects/wy/beartooth/index.cfm

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Record of Decision

1.1 INTRODUCTION

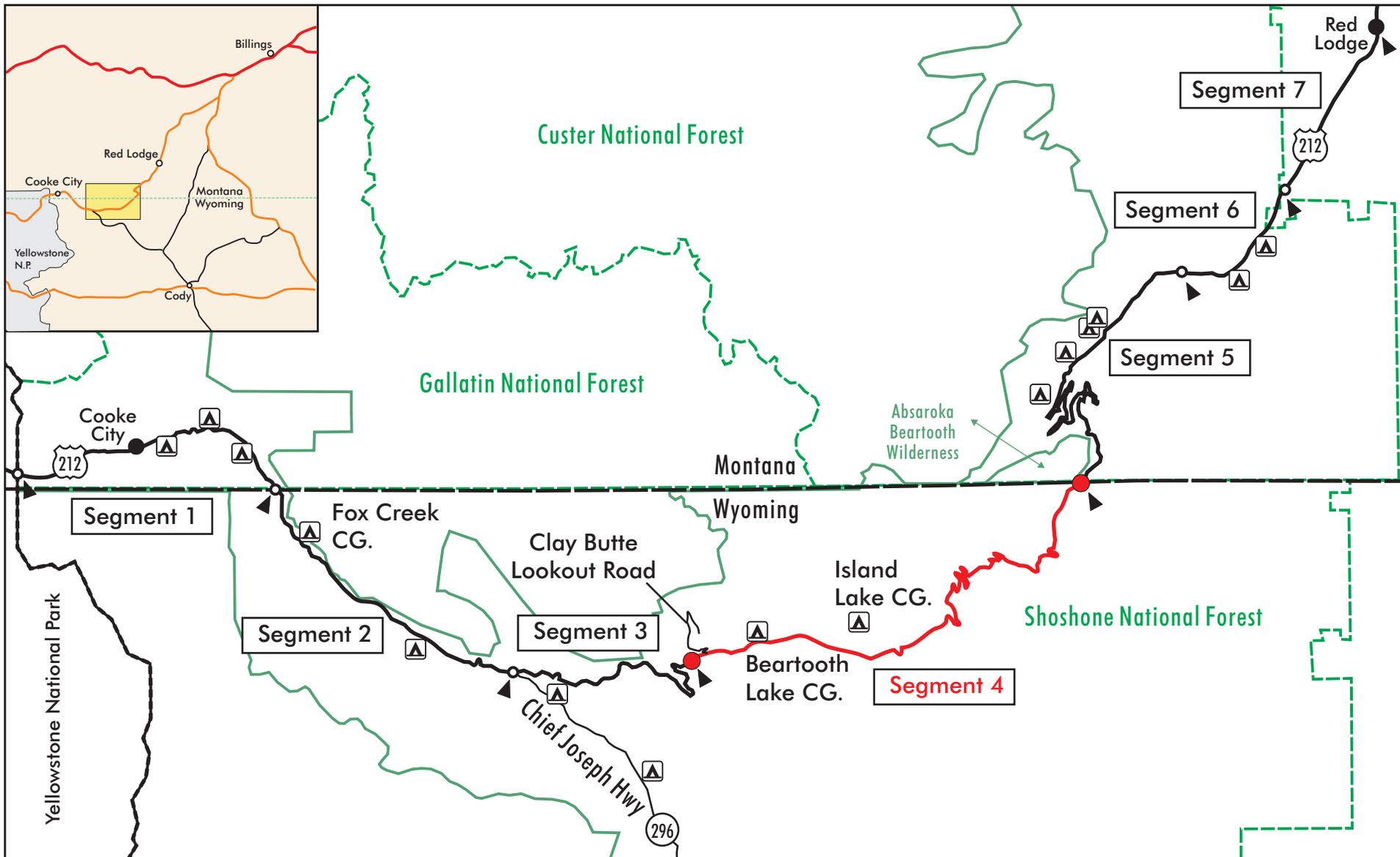
This Record of Decision (ROD) for the Beartooth Highway Reconstruction Project provides the basis for a decision by the Federal Highway Administration (FHWA) on the proposed reconstruction of Segment 4 of the Beartooth Highway. It has been prepared in compliance with the National Environmental Policy Act (NEPA), the regulations implementing NEPA (40 CFR 1505.2, and FHWA's Environmental Impact and Related Procedures (23 CFR 771.127). The FHWA, in cooperation with the U.S. Forest Service (USFS) and the National Park Service (NPS), proposes to reconstruct a 30-km (18-mi.) segment of the Beartooth Highway in Park County, Wyoming in accordance with guidelines adopted by the FHWA and the Wyoming Department of Transportation (WYDOT). The proposed project will begin at kilometer post 39.5 (MP 24.5), just west of the Clay Butte Lookout turnoff, traverse over Beartooth Pass, and end at the Montana/Wyoming state line at kilometer post 69.4 (MP 43.1). This segment of the road is referred to as Segment 4 (Figure 1). Kilometer post 39.5 and

kilometer post 69.4 are logical ends or termini for the project because the Beartooth Highway has been reconstructed previously up to both ends of the proposed project. Construction is expect to begin in 2005 and last 6 years, until 2010.

Purpose and Need

The three reasons to reconstruct Segment 4 are:

- Support management of National Forest lands adjacent to the road, including maintaining the Scenic Byway/All-American Road qualities
- Maintain an efficient transportation link between Red Lodge, Montana and Yellowstone National Park (YNP) that safely accommodates projected traffic in 2025
- Provide a roadway that can be reasonably maintained in a sustainable manner by a maintaining agency



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- Segment 4 of the Beartooth Highway
- Project Start and End
- Other segments of the Beartooth Highway
- Forest Boundary
- ▲ Existing Forest Service campground

Source: 1:100,000 BLM topographic maps

Figure 1
 Project Location

1 Inch = 4 Miles

521-PROJECT location 4-02.cdr

Location and History

The Beartooth Highway is a 108-km (67-mi.) route that begins at the northeast entrance to YNP and ends in Red Lodge, Montana. The Beartooth Highway also is known as the Red Lodge-Cooke City Highway and is designated as U.S. 212 over its entire length. The section of the road in Wyoming is designated as Wyoming Forest Highway 4. In addition to being a Forest Highway, the road also is a National Park Approach Road.

The Beartooth Highway was built between 1931 and 1936 as an access road to YNP, and opened to traffic in 1936. Segment 4 currently consists of two 2.75-m (9-ft.) wide travel lanes for a total width of about 5.5 m (18 ft.). In most locations, there is little or no shoulder. In 1994, a FHWA needs assessment was completed for the Beartooth Highway in cooperation with the USFS and the NPS. This assessment concluded that many road components of Segment 4 were inadequate and substandard, and the segment should be reconstructed.

SEE Team and Cooperating Agencies

When the FHWA starts an environmental review process for a major road project, it convenes a Social, Economic and Environmental (SEE) study team consisting of federal, state and local agencies with project involvement. The SEE Team assists in identifying major issues associated with the proposed project, developing the project purpose and need, developing project alternatives, and assessing environmental impacts. The SEE Team for this project comprises representatives from the following six agencies:

- Federal Highway Administration
- U.S. Forest Service
(Shoshone National Forest)

- National Park Service
(Yellowstone National Park)
- U.S. Fish and Wildlife Service
- U.S. Army Corps of Engineers
- Wyoming Department of Transportation

Under NEPA, the FHWA can request assistance from other federal and state agencies via cooperating agency status in preparing the Environmental Impact Statement. Among the agencies invited to be cooperating agencies for the project, the USFS, NPS, U.S. Army Corps of Engineers, and U.S. Fish and Wildlife Service (USFWS) agreed to be cooperating agencies for the project. Appendix A provides a chronology of coordination activities that have occurred among the FHWA, the cooperating agencies, and other agencies.

Major Issues

Based on comments received during the public scoping meetings and in consultation with the cooperating agencies, the SEE Team identified ten major issues regarding the proposed action that were used to develop alternatives. The issues are:

1. Changes in amount, function, and value of waters of the U.S., including wetlands
2. Changes in cultural resources along the road that are eligible for listing in the National Register of Historic Places
3. Changes in wildlife habitat and population, particularly the grizzly bear and lynx, both listed as threatened with extinction
4. Changes in vegetation along the road, and the ability to revegetate alpine areas
5. Compliance with SNF land management plan
6. Changes in the road's visual quality
7. Changes in the recreation experiences along the road corridor
8. Changes in the area's economy

9. Changes in safety and traffic operations of Segment 4
10. Changes in maintenance costs and responsibilities of Segment 4

1.2 DECISION

Selected Alternative

The FHWA has selected to implement Alternative 6 as described in the Final EIS. Alternative 6 will have pullouts that will access popular recreational or scenic amenities while also providing adequate sight distance and safety features. As shown in Figure 2, alignment options for Alternative 6 are:

- Beartooth Ravine Option A (55 km/h; 34 mph)
- Top of the World Store Option A (60 km/h; 37 mph)
- Little Bear Lake Fen Bridge Option (60 km/h; 37 mph)
- Frozen Lake Existing Alignment Option (40 km/h; 25 mph)
- Bar Drift Existing Alignment Option (30 km/h; 19 mph)
- Albright Curve Option A (40 km/h; 25 mph)

The selected alternative will include:

- Constructing a new road surface composed of crushed aggregate base and asphalt concrete pavement
- Installing adequate drainage structures
- Installing sub-surface drainage features and subgrade stabilization measures
- Widening the road to safely accommodate current and projected vehicular and recreational use and necessary maintenance activities
- Removing existing historic bridges where necessary and building new bridges
- Constructing and improving 66 parking areas or pullouts that access recreational and scenic amenities

- Improving access road intersections adjacent to the road
- Upgrading signs, striping, guardrails, and other safety-related features
- Implementing environmental commitments to avoid, minimize or mitigate environmental impacts

Construction is expected to begin in 2005 and last 6 years, until 2010. A site at Ghost Creek, about 4 km (2.5 mi.) west of the project area, will be the primary materials source as a supplement to rock blasting along the road. Ghost Creek also will be used as a staging area for equipment, personnel, and aggregate and asphalt production. A second materials site, Island Lake moraine, located south of the road and the Island Lake Campground entrance (KP 46.7), will be used only if the quantity and/or quality of material from rock blasting along the road and Ghost Creek are not adequate. Four identified staging areas are an existing pullout south of Top of the World Store, an area near the Sawtooth Lake jeep trail/Beartooth Highway intersection, an area near Forest Road 151 west of Long Lake, and an area at the West Summit. A site near Pilot Creek (at KP 20.2; MP 12.6) also may be used for staging. Other areas may be identified in consultation with the Shoshone National Forest (SNF) and other agencies as appropriate before and during construction. If additional sites are identified and environmental studies for them have not been conducted, the contractor will be responsible for completing all studies prior to issuance of a Special Use Permit by the SNF.

A temporary workcamp for construction employees will be developed at the SNF's Fox Creek Campground. A workcamp is proposed because lodging in surrounding towns such as Crandall or Cooke City is typically in extremely short supply, and the commute from Cody and other surrounding

areas would be an hour and a half or more each day. The long commute would pose a safety risk for construction employees and would increase the risk of wildlife/vehicle accidents.

To use the campground as a workcamp, it will be modified to accommodate up to 80 workers within the existing disturbed area. The campground will be closed to the public during the 6-year road construction period. To be available for construction crews starting in 2005, the campground will be rebuilt to meet current SNF campground standards during 2004. The campground will be modified to better accommodate recreational vehicles and trailers by adding potable water and sewer facilities. Common area restrooms and showers also will be provided. The existing surface water distribution system will be eliminated. Electrical power will be provided from the nearby Cooke City power line. Limited surface disturbance and tree clearing will be needed to provide for additional trailer pads and to improve air circulation. These measures, which are necessary to provide an adequate workcamp, will also enhance future visitor experience at the campground by updating services and reducing the number of mosquitoes.

Basis for Decision

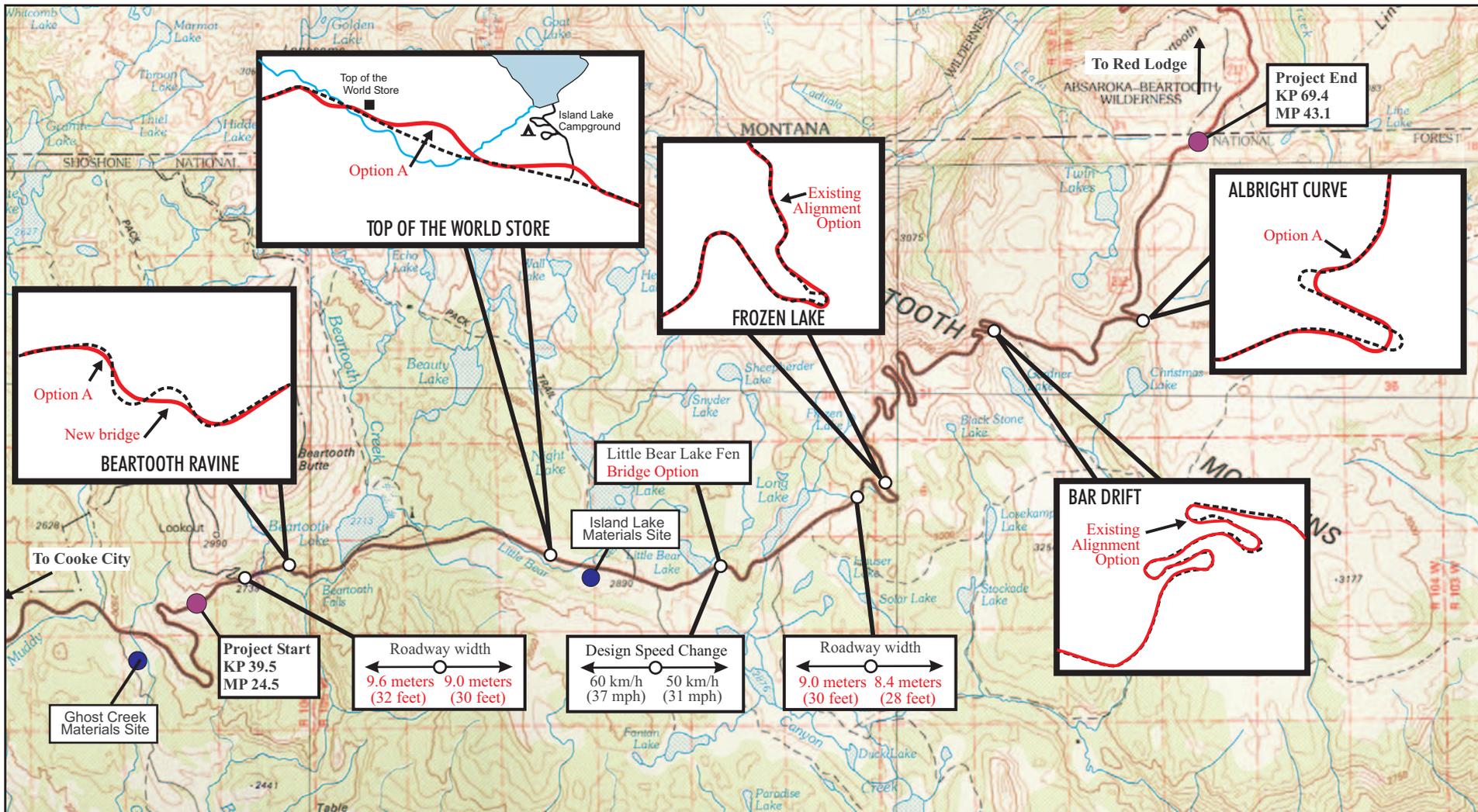
Alternative 6 was selected because it fully meets all three needs for the project, and best balances avoidance and minimization of environmental impacts, safety, maintenance, land management, and traffic operation needs. The basis for the selected roadway width and alignment options incorporated into Alternative 6 is discussed in the following sections.

Roadway Width

Three travel lane and shoulder width options (8.4 m [28 ft.]; 9.0 m [30 ft.]; and 9.6 m [32 ft.]) are incorporated into the build alternatives analyzed in detail in the Final EIS. These widths are consistent with the adjoining road sections. Based on the type of road, projected travel traffic volumes and types, and the rural minor arterial classification, a roadway width of 10.2 m (34 ft.) is the minimum recommended by American Association of State Highway and Transportation Officials (AASHTO) design standards. In the Final EIS, the FHWA eliminated two other roadway width options (7.2 m, 24 ft.; and 10.2 m, 34 ft.) from detailed analysis. The roadway width will be 9.6 m (32 ft.) from the project start to the Clay Butte Lookout turnoff, 9.0 m (30 ft.) from the Clay Butte Lookout turnoff to the road closure gate, and 8.4 m (28 ft.) from the road closure gate to the project end. Cross sections of the existing and proposed road are shown in Figure 3.

Accommodating Land Management Goals.

The SNF management of the corridor emphasizes rural and roaded natural recreation opportunities. Motorized and non-motorized recreation activities such as driving for pleasure, viewing scenery, bicycling, picnicking, fishing, camping, hiking, snowmobiling, and cross-country skiing are emphasized. Although the entire road corridor is in the same Management Area, the SNF manages Segment 4 for two distinct types of road use. The SNF manages the section west of Long Lake for more intensive recreational activity, including pedestrian and bicycle use. All of the developed recreation sites along the road are found west of Long Lake. The two campgrounds along Segment 4, Beartooth Lake and Island Lake, are popular camping locations and provide access to area lakes.



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- Existing road
- Proposed alignment
- Materials source
- Project start and end

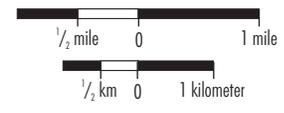
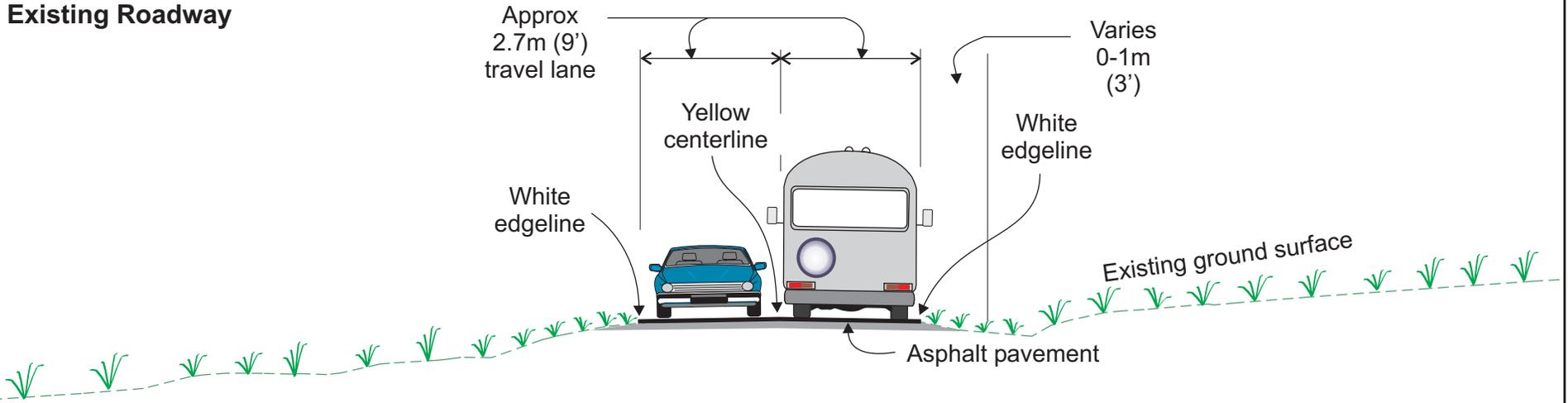
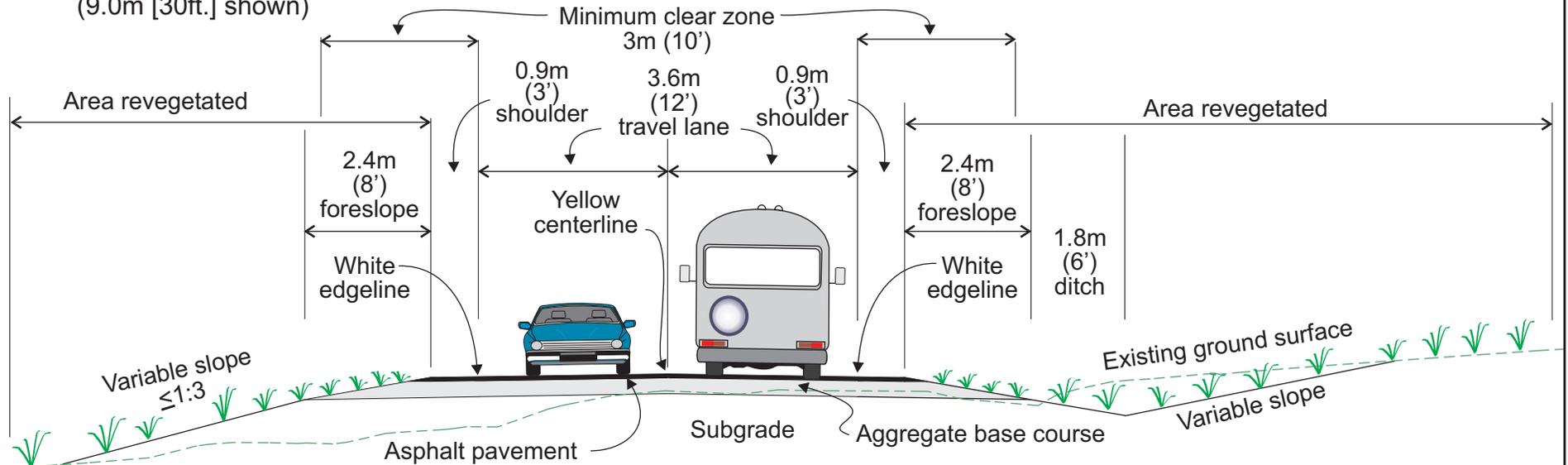


Figure 2
Major Components of
Alternative 6
Blended Emphasis (Selected)

Existing Roadway



Proposed Project Typical Section (9.0m [30ft.] shown)



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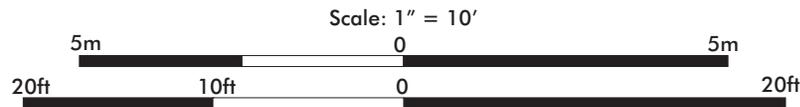


Figure 3
Typical Cross Section of
Existing and Proposed Road

521\ROD\road sections-typ 8-03.cdr

Wilderness trails originate at both Beartooth Lake and Island Lake campgrounds. Because of their proximity to the road, Beartooth Lake and Long Lake are frequent stopping spots for tourists. Top of the World Store, the only location offering supplies, is between Island Lake and Beartooth Lake.

Given the presence of these recreational facilities in the western section, travelers are more likely to stop along the road shoulder, use bicycles, motorcycles, and all-terrain vehicles in family groups and engage in roadside viewing and related activities. These activities involve frequent stops, slow moving motorized and non-motorized vehicles and a variety of user ages. Although a 1.2-m (4-ft.) shoulder is the minimum standard in AASHTO, the SNF, in cooperation with the FHWA and other cooperating agency members, agreed a 0.9-m (3-ft.) shoulder will meet the recreation use needs and adequately provide for safety from the Clay Butte Lookout turnoff to the road closure gate. The selection of a 0.9-m (3-ft) shoulder allows environmental impacts to be minimized while providing a margin of safety for recreational uses.

The incidence of family group activities, bicycles, and road-side stops and other day-use activities diminishes significantly east of Long Lake. The steep terrain, lack of trees for shelter, steep road grade, lack of camping facilities, and frequent, severe, and cold weather at all times of the year limit road use east of Long Lake primarily to driving and viewing. The SNF discourages over-snow recreation east of Long Lake due to frequent hazardous snowstorms. Because of the more limited roadside activities in the eastern section of the project, wider shoulder widths are less essential. A narrower shoulder width (0.6 m/2 ft.) in the alpine (eastern) section will serve to

minimize environmental effects while meeting the project purpose and need.

The selected alternative will maintain the character and scenic qualities of the existing road. The curvilinear nature of the road will be maintained in the selected alternative. The characteristics of setting, feeling, and location of the switchbacks will be preserved. The proposed alignment near Top of the World Store will eliminate the existing straight section and will be a more scenic drive, in keeping with the character of Segment 4. Pullouts and parking areas will be better designed and located, and will provide the opportunity to safely enjoy the spectacular scenery, area lakes and streams, and alpine vegetation and wildlife. The extensive revegetation studies and landscaping and revegetation plans proposed for the foreslopes and other disturbances will promote successful re-establishment of the roadside vegetation. Various wildlife, biological, geological, and historic/cultural interpretive displays at pullouts throughout the project will be designed to encourage visitor appreciation and stewardship of the area.

Accommodating Projected Traffic. The selected roadway width will accommodate current vehicle types and future traffic projected in 2025. The width of each travel lane (3.6 m [12 ft.]) will provide adequate room for two recreational vehicles to pass each other without encroaching on the shoulder. The selected shoulder width of 1.2 m (4 ft.) from the project start to the Clay Butte Lookout turnoff will provide a transition from the 1.2-m (4-ft.) shoulders of Segment 3. A 0.9-m (3-ft.) shoulder from there to the road closure gate, and a 0.6-m (2-ft.) shoulder east of the road closure gate will provide the widths needed for the shoulders to function adequately (see *7.2-m (24-ft.) Width Options* section of Final EIS).

These lane and shoulder widths are the minimum needed to safely accommodate traffic, maintenance, and recreational activities in each section. In addition to lane and shoulder widths, improvements will be made to horizontal and vertical alignments to improve stopping sight distances, allow more uniform operating speeds, and provide better transitions in and out of curves. Upgraded guardrail, improved intersections, and curve widening to accommodate large vehicles will also be provided.

Accommodating Maintenance Needs. A primary impetus for the reconstruction of the roadway is to prevent accelerated deterioration of the surface caused by inadequate structural support and poor roadside drainage. The factors contributing to deterioration, and thus increased maintenance cost, will be corrected with the new design.

The wider travel lanes and shoulders will also provide a roadway that will be more easily and safely maintained by a maintaining agency. A wider roadway will make snowplowing safer in traffic, and will provide for more efficient snow removal and storage.

The proposed roadway width will accommodate multiple future road surface overlays, including recycle overlays, with minimal environmental impact. Specifically, the proposed roadway design: 1) provides a shoulder width that will either not be narrowed or narrowed minimally with any future resurfacing; 2) provides a foreslope ratio that will minimize or avoid disturbance to revegetated foreslopes and not require reconstructing ditches and cut/fill slopes during future resurfacing; and, 3) maintains adequate future foreslope ratios for recovery of errant run-off-the-road vehicles.

A foreslope with a fixed or constant width of 2.4 m (8 ft.) is part of the selected alternative primarily because it will accommodate a future overlay of 50

mm (2 in.) without disturbing the revegetated foreslopes in the alpine area and will not result in a paved taper that will be too steep for errant vehicle recovery after the overlay. In the typical section in the eastern section of the road, the foreslope will have a slope of 1:6.9. An overlay of 50 mm (2 in.) will extend down to the taper of the old asphalt and not affect the revegetated foreslope. Not disturbing the revegetated foreslope in the alpine area is important because revegetation and subsequent plant succession of the foreslopes in the alpine area is expected to be slow. Foreslopes of 1:6 or 1:4 will not accommodate an overlay without requiring disturbance of the revegetated foreslopes.

A 2.4-m (8-ft.) foreslope will also be easier to construct and provide a more uniform roadway cross section. When coupled with a 0.6-m (2-ft.) shoulder, a 2.4-m (8-ft.) foreslope will not require any additional clearing to meet the minimum clear zone of 3 m (10 ft.).

Realigned Sections

The alignment of all build alternatives will closely follow the existing alignment throughout most of the route. Generally, the reconstructed road will be widened to one side or the other, encompassing the existing road. Closely following the existing alignment will minimize the amount of new disturbance. Various realignment options were considered at six areas to minimize wetland impacts, or to improve the operation and safety of the road. Realignment options will depart from the existing alignment to differing degrees, with one option (Existing Alignment Option), most closely following the existing alignment. In some realignment options, the reconstructed road will be built outside the “footprint” or disturbance of the existing road. The existing road will be removed and the disturbed area reclaimed. In some locations where wetlands are adjacent to the

abandoned road, the land will be reclaimed using wetland species to restore the wetlands currently filled by the existing road. The six areas considered for realignment options are:

- An area near Beartooth Falls
- The area in the vicinity of the Top of the World Store, from west of the first bridge crossing of Little Bear Creek to east of the entrance to the Island Lake Campground
- A wetland area east of Little Bear Lake
- An area near Frozen Lake
- The “Bar Drift” area east of the West Summit
- Albright Curve east of the East Summit

All alignment options discussed below meet the needs of the project.

Beartooth Ravine. The Final EIS analyzed three options at the Beartooth Ravine. One alignment would closely follow the existing alignment and have a design speed of 40 km/h (25 mph) (Existing Alignment Option). Retaining walls would be needed to provide adequate roadway width. Two other options will use a bridge to traverse the area—one with a design speed of 55 km/h (34 mph) (Option A), and one with a design speed of 60 km/h (37 mph) (Option B). Option B would be consistent with the proposed design speed for the western section and will not be a design exception. The other two options (Existing Alignment and Option A) will be design exceptions.

The selected option at Beartooth Ravine is Option A, a new bridge with a design speed of 55 km/h (34 mph). The primary reason for using a bridge at Beartooth Ravine in the selected alignment is safety. The design speed in the section that includes the Beartooth Ravine is 60 km/h (37 mph). Although the 55 km/h (34 mph) bridge will be a design exception to this design speed, a bridge

will require less of a speed change than the 40 km/h (25 mph) Existing Alignment Option. Consequently, accident rates are expected to be lower than the Existing Alignment Option. The Beartooth Ravine area was the location of about 25 percent of the reported accidents along the road, with unsafe speed cited as a cause in 60 percent of the accidents in this area. The existing curves in the Beartooth Ravine require a sudden speed reduction, and do not meet driver’s expectations.

The bridge will be more easily constructed and will disturb less area than other options considered. Ease of construction includes factors such as construction safety, traffic control during construction, structure complexity, and construction duration. The environmental effects of the three options considered at the Beartooth Ravine will be similar. A bridge will accommodate wildlife movement better than a road with retaining walls (Existing Alignment Option) by providing passage beneath it. Abandoned road sections will be graded to match existing grades and revegetated. A parking area is proposed at the location of the existing pullout, and will incorporate some of the abandoned road at this location.

Both Options A and B will have bridges at the Ravine. Option B offers similar advantages over the Existing Alignment Option as Option A; however, Option B was not selected because it would be harder and more expensive to construct and is less curvilinear than Option A.

Top of the World Store. The Final EIS analyzed three options at the Top of the World Store. One option (Existing Alignment Option) would follow the existing alignment from KP 45.0 to 47.7, with the reconstructed road widened on both sides of the existing road. Options A and B are more curvilinear, cross Little Bear Creek in a more perpendicular manner, and depart from the

existing alignment to the southwest of Top of the World Store and to the northeast of the store.

Option A at the Top of the World Store is selected primarily to minimize wetlands impact. Option A will affect less wetlands and riparian areas than the other two options. Option A also offers the opportunity to restore four different wetlands affected by the existing road, more than the other two options. Because of the favorable climatic and moisture conditions at Top of the World Store area, the likelihood of successful wetland restoration and revegetation of abandoned road sections is high compared to areas at higher elevations.

Option A will address the flooding and icing problems associated with the Little Bear Creek bridge #1 by providing a bridge alignment perpendicular to Little Bear Creek. A new interpretative area will be developed near Little Bear Creek bridge #2. Because Option A has more curves than the other two options considered, it will have the slowest operating speeds, which is more consistent with adjacent sections, and provide a “sinuosity” of driving experience and viewing consistent with the driving-for-pleasure management objective of the SNF.

Little Bear Lake Fen. Two options, a new bridge or retaining walls, were considered in the Final EIS at Little Bear Lake fen. The selected option at Little Bear Lake fen is the Bridge Option. The Bridge Option will be constructed on piers or pilings placed in the existing road fill without filling into the adjacent fen, and the hydrology supporting the fen will be maintained or restored. The existing road fill will be removed where possible and restored to a wetland. The bridge option is selected because it will be easier to construct and to maintain traffic during construction than a retaining wall option, and the possibility of long-term effects to the hydrology supporting the fen will be

eliminated. Also, more fill would likely remain with a retaining wall option than with the bridge option.

Frozen Lake and Bar Drift. At these two locations, two options were considered in the Final EIS. The Existing Alignment Option for both areas will closely follow the existing alignment; Option A at both locations has higher design speeds and is less curvilinear.

The Existing Alignment Option is the selected option at both locations. The Existing Alignment Option will closely follow the existing road, and will maintain the curvilinear road character. The design speed of the curves will be similar to the existing design speeds.

At the Frozen Lake switchback, the new alignment will diverge from the existing alignment at the switchback to increase sight distance. The abandoned road section may be used as a parking area or pullout. At Frozen Lake, the Existing Alignment Option will disturb less area and have less environmental impacts than the realignment option, Option A. Disturbance of wetlands and existing rock cuts will be minimized with the Existing Alignment Option.

Because it is longer, the Existing Alignment Option at the Bar Drift will disturb 1.5 ha (3.8 ac.) more alpine meadows between the switchbacks than Option A, and require more revegetation. Option A at the Bar Drift will abandon 0.8 ha (1.9 ac.) of existing roadway. No existing road sections will be abandoned in the Existing Alignment Option. Revegetation at the Bar Drift with either option will be difficult.

In the Bar Drift Option A, two switchbacks would be eliminated, thereby shortening the road and affecting the overall character of the road. The steeper grade (7%) necessary to produce this

shortened alignment, however, will present safety concerns for vehicles during snowy or icy conditions. The selected Existing Alignment Option will be less steep and safer. The Existing Alignment Option at the Bar Drift also supports the curvilinear driving experience characterizing the Beartooth Highway. In addition, the Existing Alignment Option will provide continued opportunities for snow play activities that occur in the Gardner headwall area by adding a parallel parking area at the easternmost switchback to accommodate visitor use.

Albright Curve. The Final EIS considered three options at Albright Curve. The options vary by the turning radius of the switchbacks and consequently, the design speed. The Existing Alignment Option would closely follow the existing alignment and have a design speed of 30 km/h (19 mph). It would be a design exception. Option A will have a design speed of 40 km/h (25 mph) and also will be a design exception. Option B would have a design speed of 50 km/h (31 mph) and would not be a design exception.

The selected alternative at Albright Curve is Option A, which will have a design speed of 40 km/h (25 mph). The design speed in the section that includes the Albright Curve is 50 km/h (31 mph). Although Option A will be a design exception, it will require less of a speed change than the 30 km/h (19 mph) Existing Alignment Option. Option B would affect a small fen; Option A will not affect any of the fens in the area. To accommodate visitor use, parking areas will be built in the abandoned road sections of both switchbacks. Option A best balances safety and traffic operations with avoidance and minimization of environmental impacts.

1.3 OTHER ALTERNATIVES CONSIDERED BUT NOT SELECTED

Six alternatives were analyzed in detail in the Final EIS. The six alternatives provide a full range of reasonable alternatives that minimize environmental effects. These alternatives are described briefly below. More detailed information about the six alternatives, as well as alternatives considered but eliminated from detailed analysis is presented in Chapter 2, Alternatives, of the Final EIS.

Six alternatives, including the selected alternative (Alternative 6) discussed in the previous section, were analyzed in detail in the Final EIS. The five alternatives not selected were:

- Alternative 1–No Action (No Road Reconstruction)
- Alternative 2–Recreation and Cultural Resource Emphasis
- Alternative 3–Wildlife Resource Emphasis
- Alternative 4–Highway Operations, Safety, and Maintenance Emphasis
- Alternative 5–Biological Resource Emphasis

These five alternatives, along with the selected alternative, provide a range of reasonable alternatives that meet or partially meet the three purposes and needs for the project. In addition to these alternatives, a number of alternatives were considered but eliminated from further review because they failed to adequately address any of the three purpose and need statements. The selected alternative, the five alternatives considered in detail in the Final EIS, and the alternatives considered but eliminated from further review in the Final EIS, present a full range of alternatives as required by 40 CFR Section 1502.14.

The five alternatives considered in detail are described briefly below. More detailed information about these alternatives as well as the selected alternative and the alternatives considered, but eliminated from detailed analysis, is presented in Chapter 2, Alternatives, of the Final EIS.

Alternative 1 (No Action)

In Alternative 1, No Action, the FHWA would not reconstruct Segment 4 of the Beartooth Highway, and road funds will not be expended on this project. The road would remain 5.5 m (18 ft.) wide and in its existing alignment. The historic bridges would not be dismantled. The maintenance needed on the bridges would not be completed. Existing pullouts would remain in their same location and condition. Maintenance responsibilities would remain with the Department of the Interior. The deteriorating road would be increasingly difficult to maintain; no mechanism to acquire funds to perform this maintenance would be in place. Alternative 1 was not selected because it would not support the SNF's land management goals; would not safely accommodate current or future vehicle types or volumes; and would not provide a road that can be easily maintained.

Alternatives 2-5 (Build Alternatives)

The build alternatives other than the selected alternative (Alternative 6) consist of various combinations of alignment options and width options (Table 1). Alternative 2 has a recreation and cultural resource emphasis; the roadway width would be 9.6 m (32 ft.) to better accommodate larger recreation vehicles, pedestrians and bicyclists. With Alternative 2, the road would deviate from the existing alignment in the Top of the World Store area and preserve Little Bear Creek bridge #2. Alternative 3 has a wildlife emphasis; the new alignment would closely follow

the existing alignment. The roadway width would be 8.4 m (28 ft.). Alternative 4 has a highway operations, safety, and maintenance emphasis. The roadway width would be 9.6 m (32 ft.). The alignment options for Alternative 4 would have the highest design speeds and be less curvilinear. Alternative 5, with a biological resource emphasis, would have a road width of 8.4 m (28 ft.), and the alignment options will minimize disturbance to wetlands, riparian areas, sensitive plants, and wildlife species that depend on these habitats. Estimated construction cost of the build alternatives would range from \$44.4 million for Alternative 3 to \$50.8 million for Alternative 4, with the selected alternative estimated at \$47.8 million.

The five build alternatives carried forward for detailed analyses were considered initially to meet all three needs based on preliminary studies. However, subsequent analyses revealed that Alternatives 3 and 5 would not adequately address one or more of these needs. Specifically, the narrow shoulders proposed under Alternatives 3 and 5 would not adequately accommodate the existing and future mix of motorized and non-motorized uses of the roadway west of the road closure gate, would not adequately accommodate non-motorized uses, including bicycle and pedestrian use west of the road closure gate, and would not support the safe enjoyment of All-American Scenic Byway amenities. Consequently, Alternatives 3 and 5 were not selected. Alternatives 2 and 4 were not selected because they would have wider shoulders, which would result in greater environmental impact. Impacts on wetlands and alpine vegetation would be higher in Alternatives 2 and 4 than the selected alternative. Alternative 4 also would likely have higher operating speeds because it incorporates alignment options that are less curvilinear than the other alternatives.

Table 1. Major components and alignment options of each alternative.

Component	Alternative 1 No Action (No Road Reconstruction)	Alternative 2 Recreation and Cultural Resource Emphasis	Alternative 3 Wildlife Resource Emphasis	Alternative 4 Highway Operations, Safety, and Maintenance Emphasis	Alternative 5 Biological Resource Emphasis	Alternative 6 Blended Emphasis (Selected)
Roadway Width						
<i>Total width</i>	5.5 m (18 ft.)	9.6 m (32 ft.)	8.4 m (28 ft.)	9.6 m (32 ft.)	8.4 m (28 ft.)	8.4 m (28 ft.) [†] 9.0 m (30 ft.)
<i>Travel lane width</i>	2.75 m (9 ft.)	3.6 m (12 ft.)	3.6 m (12 ft.)	3.6 m (12 ft.)	3.6 m (12 ft.)	3.6 m (12 ft.)
<i>Shoulder width</i>	0	1.2 m (4 ft.)	0.6 m (2 ft.)	1.2 m (4 ft.)	0.6 m (2 ft.)	0.9 m (3 ft.) [†] 0.6 m (2 ft.)
Number of Pullouts	114	78	36	62	31	66
Number of Switchbacks	12	12	12	9	10	12
Disturbed Area Summary						
<i>New disturbed area</i>	0 ha (0 ac.)	78 ha (194 ac.)	71 ha (176 ac.)	74 ha (183 ac.)	73 ha (180 ac.)	76 ha (187 ac.)
<i>Abandoned road sections</i>	0 ha (0 ac.)	6 ha (14 ac.)	4 ha (9 ac.)	6 ha (14 ac.)	7 ha (16 ac.)	8 ha (19 ac.)
Estimated Construction Cost	\$0	\$45,700,000	\$44,400,000	\$50,800,000	\$47,600,000	\$47,800,000
Alignment Options						
<i>Beartooth Ravine</i>	Existing Alignment	Existing Alignment Option 40 km/h (25 mph)	Existing Alignment Option 40 km/h (25 mph)	Option B 60 km/h (37 mph)	Option A 55 km/h (34 mph)	Option A 55 km/h (34 mph)
<i>Top of the World Store</i>	Existing Alignment	Option B	Existing Alignment Option	Existing Alignment Option	Option A	Option A
<i>Little Bear Lake Fen</i>	Existing Alignment	Retaining Wall Option	Retaining Wall Option	Retaining Wall Option	Bridge Option	Bridge Option
<i>Frozen Lake</i>	Existing Alignment	Existing Alignment Option 40 km/h (25 mph)	Existing Alignment Option 40 km/h (25 mph)	Option A 50 km/h (31 mph)	Existing Alignment Option 40 km/h (25 mph)	Existing Alignment Option 40 km/h (25 mph)
<i>Bar Drift (near West Summit)</i>	Existing Alignment	Existing Alignment Option	Existing Alignment Option	Option A	Option A	Existing Alignment Option
<i>Albright Curve (near East Summit)</i>	Existing Alignment	Existing Alignment 30 km/h (19 mph)	Existing Alignment 30 km/h (19 mph)	Option B 50 km/h (31 mph)	Existing Alignment 30 km/h (19 mph)	Option A 40 km/h (25 mph)

Note: The existing alignment option is the new alignment that would most closely follow the road's existing alignment.

[†]The roadway width will be 9.6 m (32 ft.) — (3.6 m (12 ft.) lanes with 1.2 m (4 ft.) shoulders) from the project start to the Clay Butte Lookout turnoff, 9.0 m (30 ft.) — (3.6 m (12 ft.) lanes with 0.9 m (3 ft.) shoulders) from the beginning of the project to the road closure gate past Long Lake, and 8.4 m (28 ft.) — (3.6 m (12 ft.) lanes with 0.6 m (2 ft.) shoulders) from the gate to the end of the project.

1.4 ENVIRONMENTALLY PREFERABLE ALTERNATIVE

The environmentally preferable alternative is defined as the “alternative that will promote the national environmental policy as expressed in NEPA’s Section 101. Typically, this means the alternative that causes the least damage to the biological and physical environment. It also means the alternative that best protects, preserves and enhances historic, cultural and natural resources” (*Forty Most Asked Questions Concerning Council of Environmental Quality’s National Environmental Policy Act Regulations*, 1981). According to this definition, Alternative 1, the No Action Alternative, is the environmentally preferable alternative in the short-term. However, it fails to meet any of the three purpose and need statements for this project.

Of the alternatives that fully meet the purpose and need, the selected Alternative 6 is the environmentally preferable alternative. Although Alternatives 3 and 5 have less initial impacts, they fail to fully meet the purpose and need and would result in additional impacts from long-term maintenance overlays. The other two alternatives analyzed in detail in the Final EIS that fully meet the purpose and need are Alternatives 2 and 4. Alternative 6 will disturb less wetlands and fens than Alternatives 2 and 4. Although Alternative 6 will have slightly more overall new ground disturbance than these two alternatives, most of the additional disturbance is due to the realignment in the Top of the World Store area. This realignment will move the existing road out of the wetland area in the Little Bear Creek valley, and allow for restoration of those wetlands that were filled by the existing road construction. In addition, the realignment at Top of the World Store will provide a driving experience more consistent with the other road sections.

1.5 MEASURES TO MINIMIZE HARM

Continued Agency and Public Involvement

Public Input to Design. In all build alternatives, coordination and field reviews will continue after the release of the Record of Decision and as the design progresses. To address public concerns about the proposed reconstruction in the upper section east of the road closure gate, the FHWA will hold an open house for the interested public after the 30 percent design field review of the upper section. At the open house, information about techniques to avoid or minimize impacts will be discussed. The public will be provided the opportunity to sign-up to attend a field review the following day to review specific locations along the corridor where the minimization techniques are proposed. Then, after the 70 percent design field review of the upper section, the FHWA will conduct another public open house demonstrating how the public comments received at the 30 percent design level were evaluated for incorporation into the design.

Contractor Selection. Because of the sensitive environmental setting of the road and the anticipated complexity of the construction, the selection of a highway contractor and oversight of their operations will be a critical component of the success of the selected alternative. The FHWA will use a contracting technique called “Best Value Procurement,” which allows the FHWA to award the construction project to a contractor on the basis of selected rating criteria rather than simply low bid. Selection criteria, such as compliance with environmental commitments and performance on past projects of a similar nature, can be considered with Best Value Procurement. The FHWA has used this contracting technique successfully in YNP and Rocky Mountain National Park. The

FHWA will involve SEE Team agencies in developing contractor selection criteria, reviewing contractor qualifications, and in making recommendations for contractor selection.

Contractor Timing. Working with the SEE Team and cooperating agencies, the FHWA will develop environmental training for the selected contractor. The training will cover topics such as minimizing grizzly bear and human conflicts, minimizing disturbance to roadside wetlands and fens, salvaging and replacing topsoil, and implementing the landscaping and revegetation techniques. The training will be required for all contractor and subcontractor personnel.

Environmental Compliance Monitoring. The FHWA will have an on-site construction Project Engineer, as the Contracting Officer's representative, responsible for overseeing the construction contract and ensuring the environmental commitments described in Chapter 4 are fulfilled. The FHWA also will fund a seasonal full-time environmental compliance position through the SNF to assist the FHWA Project Engineer in monitoring all contractors' operations. An FHWA representative with experience in landscape architecture and revegetation also will be available on-site to coordinate implementation of the landscaping and revegetation plan, and direct contractor operations through the FHWA Project Engineer, as required. A construction partnering agreement will be developed among the FHWA, SNF, NPS, and other interested agencies that will describe agency communication and coordination to be followed to progress construction work in an environmentally responsive and efficient manner and to resolve conflicts arising during construction.

During construction, the FHWA, in conjunction with the SEE Team, will conduct one or more project site visits to observe contractors' com-

pliance with the environmental commitments made in this document. After Phase I of the project is completed in 2007, the FHWA will convene the SEE Team to review and discuss their observations of the Phase I construction project. The SEE Team will identify any social, economic, or environmental problems or issues associated with Phase I construction and recommend appropriate modifications to Phase II construction methods or procedures.

Wetland Resources

Final environmental commitments for unavoidable permanent impacts to wetlands and waters of the U.S. will be presented in the Final Wetland Mitigation Plan, to be prepared as part of the final design package. The FHWA will incorporate all terms and conditions of the U.S. Army Corps of Engineers 404 permit into the final plans, specifications, and special contract requirements for the project.

Cultural Resources

The FHWA will incorporate all stipulations described in the Memorandum of Agreement among the FHWA, the USFS, the NPS, and the Wyoming State Historic Preservation Office (SHPO) concerning cultural resources. The Memorandum of Agreement is presented in Appendix B.

Wildlife Resources

The FHWA will incorporate all terms and conditions of the USFWS' Biological Opinion into the final plans, specifications, and special contract requirements for the project. The Biological Opinion is presented in Appendix C.

Vegetation, Timber and Old Growth Forest

Impacts to vegetation have been minimized during the design process using the techniques described in the *Techniques to Avoid and Minimize Impacts* section of the Final EIS, and will be implemented during construction. These techniques include:

- Shifting alignment to affect only one side of the road
- Using existing disturbed areas
- Reducing shoulder widths
- Using design criteria exceptions
- Using paved ditches
- Using retaining walls
- Using slope exceptions
- Reducing foreslope widths
- Adjusting pullouts and parking area locations

New impacts will be avoided to the extent possible. The FHWA will implement a landscaping and revegetation plan to mitigate unavoidable effects on vegetation. Mitigation to reduce impacts on vegetation resources and promote revegetation of disturbed areas will include the following measures:

- Collecting native seed before construction for use in revegetation
- Using native species common on the Beartooth Plateau when collected seed is not sufficient
- Establishing well defined construction limits to minimize vegetation disturbance
- Using Best Management Practices (BMPs) to prevent wind and water erosion
- Using salvaged topsoil and its associated seed and plant parts
- Using native seed and planting shrubs and trees according to site-specific conditions and vegetation communities

- Applying soil amendments, mulches, organic matter, and other measures to facilitate revegetation
- Using a soil-aggregate blend to replace base course taper at the pavement edge and seed to promote revegetation near pavement
- Partnering with the SNF to monitor vegetation cover and implement contingency and maintenance plans until vegetation cover is 70 percent of the original background vegetation cover in accordance with the Wyoming National Pollutant Discharge Elimination System (NPDES) permit requirements. Monitoring will include inspection of the revegetated areas after significant precipitation events and at least twice every year, during snowmelt when the road is opened, and prior to closure, until the NPDES permit requirements are met.

Specific additional measures to prevent the introduction and spread of noxious weeds during construction will include some or all, as applicable, of the following:

- Implementing a weed management plan to be incorporated into the landscaping and revegetation plan.
- Minimizing the area of disturbance and the length of time that disturbed soils are exposed
- Minimizing weed seed in imported soil materials
- Limiting the use of fertilizers that may favor weeds over native species
- Using periodic inspections and spot controls to prevent weed establishment
- Requiring that earth moving equipment be washed and inspected prior to entering the project area to prevent importing weeds, seeds, and mud on vehicle tires

In 2002, the FHWA completed a survey of historical disturbances along the highway that have

not revegetated naturally. The evaluation considered each site's existing conditions and the potential to revegetate. The FHWA will reclaim and restore the following areas as part of Phase I construction:

- Little Bear Lake access road
- Abandoned road segment FR 151
- Long Lake borrow area
- Frozen Lake borrow area
- Albright Curve eroded drainage

As the FHWA develops and finalizes the design for Phase II construction, the FHWA will further evaluate areas preliminarily identified during the 2002 survey as feasible for revegetation.

Visual Resources

For all build alternatives, views from some locations during the construction period will be altered by the presence of construction vehicles, equipment, personnel, and emerging new road facilities. This impact will be considered adverse by some viewers and will be an unavoidable consequence of project construction. The following mitigation measures will reduce impacts on visual resources during construction:

- Instituting dust control procedures throughout the construction process
- Locating staging areas and equipment and material storage facilities at sites with minimum visibility from the road, where possible

FHWA representatives with experience in landscape architecture and revegetation will be on-site as required to coordinate implementation of the landscaping and revegetation plans.

For all build alternatives, the road will alter views of some locations in the project area. The

following mitigation measures will minimize the contrasts between the road and its surroundings.

Apply to Soil Cuts:

- Smoothly transition the top of cut faces into undisturbed ground by rounding, to diminish visible edges. Vary the size and shape of the rounding to match the adjacent landform.
- Preserve selected existing individual trees, shrubs and/or rocks outside clear zone and within construction limits to match adjacent landforms and diminish visible edges.
- For placement of surface stones, use only stones salvaged from the ground surface prior to construction.
- Revegetate by seeding and/or planting with native plants.
- Place dry-stacked rock against cutslopes in select locations to avoid laying back slopes and to minimize erosion.
- Selectively place natural appearing, uncut felled trees, tree stumps and rocks onto cut face surfaces. Place these materials in patterns and at densities similar to the undisturbed adjacent forest. Felled trees with rock supports and staking may be located to enhance erosion control (not applicable in all areas).
- Undulate or roughen cut face slopes to match adjacent landforms.

Apply to Rock Cuts:

- Preserve existing rock outcrops outside of clear zone and within construction limits to vary cut face slope, composition, color and texture.
- Undulate or roughen cut face slopes to match adjacent rock outcrops and landforms.
- Manipulate blasting patterns to create rock surfaces, terraces, and ridges similar to undisturbed rock faces and outcrops.
- Shape cut faces to blend with adjacent undisturbed rock faces.

- Create soil pockets within the terraces and ridges of cut faces to accommodate and promote revegetation. Locate, size, and shape soil pockets to replicate the planting areas of undisturbed rock faces.

Apply to Fills:

- Construct new fill slopes using terraces, native stones and native plants. The size, shape, and location of terraces should be similar to the adjacent undisturbed landforms. The density and placement of stones and plants also should be similar to the density and placement of adjacent undisturbed stones and plants.
- Connect new fills to adjacent undisturbed slopes by developing similar landforms and drainage patterns.
- Revegetate by seeding and/or planting with native species.
- Compose terracing, surface stone placement, and revegetation similar to adjacent undisturbed ground surfaces and land forms.

Apply to Retaining Walls:

- Treat exposed and visible concrete retaining wall faces and tops with form liners or stone facing to be similar to the historical bridge abutments, historical roadway retaining walls, and/or the undisturbed boulder field surfaces. This treatment may not be applicable in all talus locations.
- Treat mechanically stabilized earth wall face and tops with pre-cast concrete panels or dry-laid stone. Pre-cast panels should replicate the historical bridge abutments, historical roadway retaining walls, and/or the undisturbed boulder field surfaces.

Apply to Roadway Facilities:

- Use rock excavated within the project construction limits for aggregate base and exposed soil-aggregate blend at pavement edge.

- Use asphalt-coated, stained, or painted culvert pipe end sections to diminish their visibility in the most visible locations.
- Use alternative materials for guardrails to minimize reflectivity and eliminate the silver color of galvanized steel guardrails.
- Use wood or alternative materials for guardrail posts to minimize reflectivity and provide a color that blends with the surrounding plant colors.
- Select guardrail designs that minimize the width of the metal exposed to view and allow snow to be ejected during snowplowing from the road through the rail.

Recreation and Socioeconomics

Traffic Management. Traffic Control Plans will be developed to minimize motorist delays during construction. Frequent night closures will be allowed and intermittent short-duration daytime closures will be allowed for special situations and with advance notice. Normal daytime delays, however, will be limited to 30 minutes through any work zone. Immediate access will be afforded to emergency vehicles and access to campgrounds and the Top of the World Store will be maintained at all times, when open.

Public Information. To assist local business owners in Red Lodge, Cooke City and Cody, as well as the traveling public, with delays and closures, the FHWA will develop a Public Information Program in coordination with those communities and other agencies. The FHWA will use various forms of communication, such as ads, signs, newsletters, and brochures, and via radio, TV, toll-free phone, and the Internet, to inform road users and local business owners about the construction schedule, progress, and delays. Specific partial day or nighttime road closure times will be coordinated and announced well in advance to assist motorists with trip planning.

Water and Aquatic Resources

The FHWA will use BMPs to minimize soil erosion and adverse effects on surface water quality. Construction requirements described in FHWA's Standard Specifications for Road and Bridge Construction will be used to minimize erosion and sedimentation during and after construction. The WDEQ's BMPs designed to reduce or eliminate water quality degradation due to physical modifications of surface water will be used for this project.

The FHWA will seek authorization from the WDEQ to discharge storm water associated with construction activities under the NPDES permit. The NPDES permit requires a Stormwater Pollution Prevention Plan for the construction activities to minimize impacts on surface waters. The plan will be monitored during and after construction until all disturbed areas are stabilized. FHWA will be responsible for compliance with the NPDES permit, and will turn over monitoring duties to the SNF and the NPS after final acceptance of the roadway project.

The contractor will obtain all permits and approvals for use of water for construction purposes.

Air Quality

All construction activities will be conducted in compliance with WDEQ requirements for construction-related fugitive dust. Dust abatement measures, such as watering unpaved disturbed areas, will be implemented. Disturbed areas will be revegetated or stabilized as soon as possible after construction of a given road section is completed.

Soils, Geology, and Paleontology

Mitigation measures to protect and preserve soil resources in the project area will be incorporated in the landscaping and revegetation plan and are incorporated into FHWA's and WDEQ's BMPs. Components of this plan include the implementation of measures to minimize the loss of soil material before, during, and after construction. General erosion control measures will include minimizing the area of disturbance to defined construction limits and limiting the time bare soil is exposed. Suitable temporary sediment control measures such as silt fences, sediment logs, trenches, and sediment traps will be used to contain soils within the project area.

No earthwork operations will be allowed until after the removal of topsoil. Woody vegetation will be removed prior to topsoil salvage. Topsoil within tree stump roots will be salvaged to the extent possible. Topsoil salvage methods include windrowing topsoil at the limits of construction and pulling the soil back on slopes during reclamation. Selective topsoil redistribution to soil deficient areas will be used as needed. Soil amendments, mulches, and seeding will be selectively applied to match site conditions and revegetation goals. Long-term soil protection will come from prompt revegetation of disturbed areas following construction.

Noise

The FHWA will limit nighttime construction in the vicinity of the campgrounds and adjacent to the Top of the World Store, when they are open. The decision will be made in cooperation with the SNF, based on the type of construction required under the selected alternative. The FHWA will describe expected construction noise in the Public Information Program.

Hazardous Materials

Any petroleum-contaminated soils encountered during construction will be removed and transported off-site to a solid waste landfill in accordance with the WDEQ's solid waste guideline on the management of petroleum-contaminated soils. Creosote-containing guardrails will be disposed of at an appropriate facility or reused for an intended purpose.

1.6 RECORD OF DECISION APPROVAL AND SECTION 4(F) FINDING

Section 4(f) Finding

Section 4(f) properties are publicly owned parks, recreation areas, wildlife and waterfowl refuges of national, state, or local significance, and historic resources eligible for listing in the National Register of Historic Places or are locally significant. Ten section 4(f) properties are found along Segment 4: the Beartooth Lake Campground, the Island Lake Campground, three recreation trails, and five resources determined to be eligible for listing in the National Register of Historic Places. The five historic eligible resources are Segment 4 of the road and the four bridges along Segment 4: the historic Beartooth Lake bridge, the historic Little Bear Creek bridge #1, the historic Little Bear Creek bridge #2, and the historic Long Lake bridge. In addition to these 10 properties, the area adjacent to the Lake Creek bridge, west of Segment 4, will be developed as a cultural resource mitigation site; the bridge is also eligible for listing and is a Section 4(f) property. The Fox Creek Campground, west of Segment 4 along U.S. 212, is also a Section 4(f) property.

Noise from construction will increase in the two campgrounds in the selected alternative. In the

selected alternative, the road will be about 100 m (330 ft.) closer to the Island Lake Campground than the existing road. The closer alignment will not substantially impair the use of the campground and will not be a constructive use.

In the selected alternative, the Gardner Lake parking area will be paved and access to the Beartooth Recreation Trail will be maintained during and after construction. Access to the Hauser Lake and Deep Lake trails will be maintained during construction and after construction is completed in the selected alternative. The selected alternative will not result in a Section 4(f) use of the recreation trails.

The use of Fox Creek Campground as a workcamp will not be a Section 4(f) use because:

- Duration will be temporary and there will be no change in ownership of the land
- Scope of the work will be minor
- No permanent adverse physical impacts are anticipated, nor will there be interference with the activities or purpose of the resource, on either a temporary or permanent basis
- The land being used will be returned to a condition that will be at least as good as that which existed prior to the project
- Agreement of the SNF, the managing agency of the campground, with these conditions has been documented

The selected alternative will adversely affect the historic road and the four historic bridges. It will alter the footprint and location of the roadway. The centerline will vary from the existing centerline in some locations. Dismantling the masonry culvert headwalls, which will be necessary to widen the road, will remove a feature associated with the historic road. Alternative 6 will remove the four historic bridges and construct new ones.

No feasible and prudent alternatives to the use of land from the historic Beartooth Highway, the historic Beartooth Lake Bridge, the historic Little Bear Creek Bridge #1, the historic Little Bear Creek Bridge #2, and the historic Long Lake Bridge were identified. The No Action Alternative and rehabilitation of the current alignment would avoid widening and realigning the road. These options, however, would not fulfill the project purpose and need, and are not feasible and prudent alternatives. Several options were considered to avoid dismantling the historic bridges while ensuring all new bridges would be suitable for current and future vehicle volumes and types. The options considered were widening bridges on one side, using a divided highway, and realigning the road and retaining bridges for interpretive purposes. These options are either not technically feasible or would result in substantially more environmental impact, and are therefore not prudent.

FHWA has incorporated all possible planning to minimize harm to the Section 4(f) properties. The FHWA will limit nighttime construction in the vicinity of the campgrounds when they are open. Under the Memorandum of Agreement for Cultural Resources (see Appendix B) signed by representatives of the FHWA, SNF, NPS, and Wyoming SHPO, the FHWA will research the ethnohistory of the Beartooth Highway corridor, complete Historic American Building Survey/ Historic American Engineering Record (HABS/HAER) documentation of the five realignment locations and the four historic bridges and culvert headwalls, and complete the forms necessary to nominate the road corridor to the National Register of Historic Places (NRHP). In addition, interpretation of the history and construction of the road and bridges will be displayed at interpretive kiosks

constructed by the FHWA at two scenic pullout areas along the road.

Pursuant to Section 4(f) of the Department of Transportation Act, 49 U.S.C. 303, and 23 U.S.C. 138, it is hereby determined that there is no feasible and prudent alternative to the use of land from the historic Beartooth Highway, the historic Beartooth Lake Bridge, the historic Little Bear Creek Bridge #1, the historic Little Bear Creek Bridge #2, and the historic Long Lake Bridge. All possible planning has been undertaken to minimize harm to the Section 4(f) properties.

Record of Decision Approval

Alternative 6 was selected because it fully meets all three needs for the project, and best balances safety, maintenance, land management, and traffic operation needs with avoidance and minimization of environmental impacts. The decision to select Alternative 6 was made in cooperation with the NPS and the SNF. Letters of concurrence from the NPS and the SNF are presented in Appendix D. All public and agency comments received during the environmental process were reviewed. Comments and responses on the Final EIS are presented in Appendix E.

Alternative 6 will most effectively balance the competing concerns expressed in the purpose and need for the project, information provided in environmental impact studies contained in the Final EIS, comments received from the public, and recommendations from the NPS, the SNF, participating Native American tribes, the USFWS, the Corps, the U.S. Environmental Protection Agency, WYDOT, the Wyoming Game and Fish Department, the Wyoming SHPO, and Park County, Wyoming.

Based on the above information, the FHWA has selected Alternative 6 for implementation.

Larry C. Smith, P.E.
Division Engineer
Central Federal Lands Highway Division
Federal Highway Administration

Date

