

III. Alternatives Considered

Six alternatives are evaluated in the FEIS. Other alternatives and several realignment options were also considered in the DEIS and SDEIS, but, based on public and agency comment, were eliminated from further consideration in the FEIS. Information on the exact locations of the surface types in particular sections of the road can be found in Table 2. More details on the alternatives (including figures) are presented in **FEIS Chapter II: Alternatives**. The following alternatives were evaluated in the FEIS.

A. ALTERNATIVE 1: NO ACTION

Guanella Pass Road is left in its existing condition. The road width remains inconsistent, varying from 5.5 meters (18 feet) to 7.2 meters (24 feet). No improvements are made to existing drainage, surfacing, safety, slope stability, vegetation, or inconsistent geometry. Alternative 1 addresses Project Objective VIII and partially addresses Project Objective VII.

B. ALTERNATIVE 2: RECONSTRUCT AND PAVE

Guanella Pass Road is reconstructed and paved with asphalt along its entire length. The roadway alignment generally follows the existing alignment with horizontal and vertical improvements. The road is reconstructed and widened where necessary to achieve a consistent width of 7.2 meters (24 feet) to include one 3-meter (10 feet) lane and a 0.6-meter (2 feet) shoulder in each direction. Drainage, surfacing, safety, slope stability, vegetation, culvert, and small-stream crossing improvements are included.

Alternative 2 addresses Project Objectives I, II, III, IV, V, and VI, and partially addresses Project Objectives VII and VIII.

C. ALTERNATIVE 3: RECONSTRUCT TO EXISTING SURFACE TYPE

Guanella Pass Road is reconstructed and resurfaced to its existing surface type. Those portions of Guanella Pass Road that are currently paved are resurfaced with an asphalt surface and those portions of the road that are currently dirt/gravel are resurfaced with a gravel surface. The roadway alignment generally follows the existing alignment, with the same horizontal and vertical improvements as in Alternative 2. The road is reconstructed to a consistent width of 7.2 meters (24 feet) to include one 3-meter (10 feet) lane and a 0.6-meter (2 feet) shoulder in each direction. Drainage, surfacing, safety, slope stability, vegetation, culvert, and small-stream crossing improvements are included. Under Alternative 3, the road is reconstructed with 52 percent gravel surface and 48 percent paved.

Alternative 3 addresses Project Objectives I, II, III, V, and VI, and partially addresses Project Objectives IV, VII, and VIII.

D. ALTERNATIVE 4: PARTIALLY RECONSTRUCT AND PAVE

Four sections of Guanella Pass Road are reconstructed and paved with asphalt to the same standard as Alternative 2, with a consistent width of 7.2 meters (24 feet). Additional information

on the exact locations of the surface types in particular sections of the road can be found in Table 2. Drainage, surfacing, safety, slope stability, vegetation, culvert, and small-stream crossing improvements are included along the four sections. The remainder of the road is left unchanged. Under Alternative 4, 51 percent of the road is reconstructed and paved, 15 percent is left unchanged with a gravel surface, and 34 percent is left unchanged with a paved surface.

Alternative 4 partially addresses Project Objectives I, II, III, IV, V, VI, VII, and VIII.

E. ALTERNATIVE 5: PARTIALLY RECONSTRUCT AND PAVE/ PARTIALLY REHABILITATE

Guanella Pass Road is reconstructed and paved to a consistent width of 7.2 meters (24 feet) in the same manner and locations as Alternative 4, and the remainder of the route is rehabilitated. The rehabilitated sections receive the following improvements: a pavement overlay or gravel overlay consistent with the existing surface type, drainage improvements, and revegetation of existing barren slopes to the extent possible without changing the existing slope angle. The rehabilitated sections of Guanella Pass Road are not widened, but match the existing roadway widths. Under Alternative 5, 51 percent of the road is reconstructed and paved, 15 percent is rehabilitated with a gravel surface, and 34 percent is rehabilitated with asphalt pavement.

Alternative 5 addresses Project Objectives III, and partially addresses Project Objectives I, II, IV, V, VI, VII, and VIII.

F. ALTERNATIVE 6: THE PREFERRED ALTERNATIVE

Alternative 6 includes a change in the functional classification of the roadway from a rural collector road, as proposed for the other build alternatives, to a rural local road. The change in functional classification allows a lower design speed with sharper roadway curves and a narrower roadway width than what was proposed for the alternatives in the DEIS. The roadway is constructed to a consistent width of 6.6 meters (22 feet) to include travel lanes 2.7 meters (9 feet) wide and shoulders 0.6 meter (2 feet) wide. In addition, the new functional classification allows for the use of a smaller design vehicle, which enables the design of a roadway containing sharper switchback curvature. Each of these changes in the design criteria permits Alternative 6 to follow more closely the existing roadway. Road surface, safety, drainage, access control, slope stability, and revegetation improvements are proposed for inclusion in the roadway reconstruction and rehabilitation areas. Under Alternative 6, approximately 63 percent of the road is rehabilitated, 18 percent undergoes light reconstruction, and 19 percent undergoes full reconstruction.

Several alternative surface types have been proposed to replace the existing gravel surfacing for approximately 30 percent of the route. These surface types were evaluated in the FEIS, and macadam has been selected as the preferred surface.

For Alternative 6, the current paved sections of the road will be resurfaced using asphalt pavement with chip seal. Most of the current gravel or dirt sections will have either a gravel/dust suppressant surface or a macadam surface. There is one current gravel section where paving with an asphalt pavement with chip seal is proposed at the request of the road maintaining agency, Park County: the section of road 3.0 kilometers (1.8 miles) long near the Park County and Clear Creek County line (Shelf Road - Stations 16+140 to 19+140). A gravel section in Park

County between Stations 1+770 and 5+500 (3.7 kilometers [2.3 miles] long) and another gravel section in Clear Creek County between Stations 22+450 and 30+220 (7.8 kilometers [4.8 miles] long) will be surfaced with macadam at the request of the maintaining agencies (the Counties) and the FS to reduce costs associated with maintenance of the road and to reduce sedimentation and gravel runoff into the wetland ecosystems. Additional information on the exact locations of the surface types in particular sections of the road can be found in Table 2.

Alternative 6 was selected as the preferred alternative in the FEIS based on environmental studies and consultation with the public, Town of Georgetown, Clear Creek and Park County Commissioners, State of Colorado, FS, United States Fish and Wildlife Service (USFWS), United States Army Corps of Engineers (USACE), Environmental Protection Agency (EPA), and local tribes. This alternative best balances efforts to address the Purpose and Need for the action while at the same time minimizing social, economic, and environmental impacts. Alternative 6 addresses Project Objectives I, and III and partially addresses Project Objectives II, IV, VI, V, VII, and VIII.

Table 2
Identification of Proposed Improvements*

Segment	Station	Length km (mi.)	Existing	Alternative 1 – No Action	Alternative 2	Alternative 3	Alternative 4	Alternative 5	Alternative 6
Grant	1+000 to 1+770	0.77 (0.48)	Paved	No Action	Full Reconstruct & Pave	Full Reconstruct & Pave	No Action	Rehabilitate & Pave	Rehabilitate & Pave
Geneva Canyon A	1+770 to 5+500	3.73 (2.32)	Gravel	No Action	Full Reconstruct & Pave	Full Reconstruct with Gravel	No Action	Rehabilitate with Gravel	Rehabilitate with Macadam
Geneva Canyon B	5+500 to 7+000	1.50 (0.93)	Gravel	No Action	Full Reconstruct & Pave	Full Reconstruct with Gravel	No Action	Rehabilitate with Gravel	Rehabilitate with Gravel
Falls Hill A	7+000 to 7+500	0.50 (0.31)	Gravel	No Action	Full Reconstruct & Pave	Full Reconstruct with Gravel	Full Reconstruct & Pave	Full Reconstruct & Pave	Rehabilitate with Gravel
Falls Hill B	7+500 to 8+100	0.60 (0.37)	Paved	No Action	Full Reconstruct & Pave	Full Reconstruct & Pave	Full Reconstruct & Pave	Full Reconstruct & Pave	Rehabilitate & Pave
Falls Hill C	8+100 to 9+380	1.28 (0.80)	Paved	No Action	Full Reconstruct & Pave	Full Reconstruct & Pave	Full Reconstruct & Pave	Full Reconstruct & Pave	Full Reconstruct & Pave
Geneva Park	9+380 to 16+140	6.76 (4.20)	Paved	No Action	Full Reconstruct & Pave	Full Reconstruct & Pave	No Action	Rehabilitate & Pave	Rehabilitate & Pave
Shelf Road – Park Co.	16+140 to 17+800	1.66 (1.03)	Gravel	No Action	Full Reconstruct & Pave	Full Reconstruct with Gravel	Full Reconstruct & Pave	Full Reconstruct & Pave	Full Reconstruct & Pave
Shelf Road – Clear Creek Co.	17+800 to 19+140	1.34 (0.83)	Gravel	No Action	Full Reconstruct & Pave	Full Reconstruct with Gravel	Full Reconstruct & Pave	Full Reconstruct & Pave	Full Reconstruct & Pave
Duck Lake A	19+140 to 19+440	0.30 (0.19)	Gravel	No Action	Full Reconstruct & Pave	Full Reconstruct with Gravel	Full Reconstruct & Pave	Full Reconstruct & Pave	Rehabilitate with Gravel
Duck Lake B	19+440 to 19+530	0.09 (0.06)	Gravel	No Action	Full Reconstruct & Pave	Full Reconstruct with Gravel	Full Reconstruct & Pave	Full Reconstruct & Pave	Full Reconstruct with Gravel
Duck Lake C	19+530 to 20+080	0.55 (0.34)	Gravel	No Action	Full Reconstruct & Pave	Full Reconstruct with Gravel	Full Reconstruct & Pave	Full Reconstruct & Pave	Rehabilitate with Gravel
Above Duck Lake	20+080 to 20+480	0.40 (0.25)	Gravel	No Action	Full Reconstruct & Pave	Full Reconstruct with Gravel	Full Reconstruct & Pave	Full Reconstruct & Pave	Light Reconstruct with Gravel
Above Duck Lake to Pass	20+480 to 21+870	1.39 (0.86)	Gravel	No Action	Full Reconstruct & Pave	Full Reconstruct with Gravel	Full Reconstruct & Pave	Full Reconstruct & Pave	Rehabilitate with Gravel
Pass to Upper Switchbacks	21+870 to 22+450	0.58 (0.36)	Gravel	No Action	Full Reconstruct & Pave	Full Reconstruct with Gravel	Full Reconstruct & Pave	Full Reconstruct & Pave	Rehabilitate with Gravel
Upper Switchbacks	22+450 to 24+180	1.73 (1.08)	Gravel	No Action	Full Reconstruct & Pave	Full Reconstruct with Gravel	Full Reconstruct & Pave	Full Reconstruct & Pave	Light Reconstruct with Macadam

Segment	Station	Length km (mi.)	Existing	Alternative 1 – No Action	Alternative 2	Alternative 3	Alternative 4	Alternative 5	Alternative 6
Upper Clear Creek	24+180 to 24+480	0.30 (0.19)	Gravel	No Action	Full Reconstruct & Pave	Full Reconstruct with Gravel	Full Reconstruct & Pave	Full Reconstruct & Pave	Rehabilitate with Macadam
Naylor Creek	24+480 to 25+360	0.88 (0.55)	Gravel	No Action	Full Reconstruct & Pave	Full Reconstruct with Gravel	Full Reconstruct & Pave	Full Reconstruct & Pave	Full Reconstruct with Macadam
South Clear Creek A	25+360 to 25+700	0.34 (0.21)	Gravel	No Action	Full Reconstruct & Pave	Full Reconstruct with Gravel	Full Reconstruct & Pave	Full Reconstruct & Pave	Rehabilitate with Macadam
South Clear Creek B	25+700 to 27+560	1.86 (1.16)	Gravel	No Action	Full Reconstruct & Pave	Full Reconstruct with Gravel	Full Reconstruct & Pave	Full Reconstruct & Pave	Full Reconstruct with Macadam
South Clear Creek C	27+560 to 28+140	0.58 (0.36)	Gravel	No Action	Full Reconstruct & Pave	Full Reconstruct with Gravel	Full Reconstruct & Pave	Full Reconstruct & Pave	Rehabilitate with Macadam
South Clear Creek D	28+140 to 29+400	1.26 (0.78)	Gravel	No Action	Full Reconstruct & Pave	Full Reconstruct with Gravel	Full Reconstruct & Pave	Full Reconstruct & Pave	Light Reconstruct with Macadam
South Clear Creek E	29+400 to 29+700	0.30 (0.19)	Gravel	No Action	Full Reconstruct & Pave	Full Reconstruct with Gravel	Full Reconstruct & Pave	Full Reconstruct & Pave	Rehabilitate with Macadam
South Clear Creek F	29+700 to 30+220	0.52 (0.32)	Gravel	No Action	Full Reconstruct & Pave	Full Reconstruct with Gravel	Full Reconstruct & Pave	Full Reconstruct & Pave	Light Reconstruct with Macadam
Cabin Creek	30+220 to 32+260	2.04 (1.27)	Paved	No Action	Full Reconstruct & Pave	Full Reconstruct & Pave	No Action	Rehabilitate & Pave	Rehabilitate & Pave
Clear Lake	32+260 to 32+400	0.14 (0.09)	Paved	No Action	Full Reconstruct & Pave	Full Reconstruct & Pave	No Action	Rehabilitate & Pave	Light Reconstruct & Pave
Green Lake	32+400 to 33+580	1.18 (0.73)	Paved	No Action	Full Reconstruct & Pave	Full Reconstruct & Pave	No Action	Rehabilitate & Pave	Rehabilitate & Pave
Switchbacks	33+580 to 34+300	0.72 (0.45)	Paved	No Action	Full Reconstruct & Pave	Full Reconstruct & Pave	No Action	Rehabilitate & Pave	Light Reconstruct & Pave
South Clear Creek	34+300 to 34+680	0.38 (0.24)	Paved	No Action	Full Reconstruct & Pave	Full Reconstruct & Pave	Full Reconstruct & Pave	Full Reconstruct & Pave	Rehabilitate & Pave
Waldorf Road	34+680 to 34+920	0.24 (0.15)	Paved	No Action	Full Reconstruct & Pave	Full Reconstruct & Pave	Full Reconstruct & Pave	Full Reconstruct & Pave	Light Reconstruct & Pave
Silverdale A	34+920 to 36+320	1.40 (0.87)	Paved	No Action	Full Reconstruct & Pave	Full Reconstruct & Pave	No Action	Rehabilitate & Pave	Rehabilitate & Pave



Segment	Station	Length km (mi.)	Existing	Alternative 1 – No Action	Alternative 2	Alternative 3	Alternative 4	Alternative 5	Alternative 6
Silverdale B	36+320 to 36+600	0.28 (0.17)	Paved	No Action	Full Reconstruct & Pave	Full Reconstruct & Pave	No Action	<i>Rehabilitate & Pave</i>	Light Reconstruct & Pave
Silverdale C	36+600 to 37+200	0.60 (0.37)	Paved	No Action	Full Reconstruct & Pave	Full Reconstruct & Pave	No Action	<i>Rehabilitate & Pave</i>	<i>Rehabilitate & Pave</i>
Georgetown Switchbacks A	37+200 to 38+060	0.86 (0.53)	Paved	No Action	Full Reconstruct & Pave	Light Reconstruct & Pave			
Georgetown Switchbacks B	38+060 to 38+300	0.24 (0.15)	Paved	No Action	Full Reconstruct & Pave	<i>Rehabilitate & Pave</i>			
Georgetown Switchbacks C	38+300 to 38+640	0.34 (0.21)	Paved	No Action	Full Reconstruct & Pave	Light Reconstruct & Pave			
Georgetown Switchbacks D	38+640 to 38+800	0.16 (0.10)	Paved	No Action	Full Reconstruct & Pave	<i>Rehabilitate & Pave</i>			
Georgetown Switchbacks E	38+800 to 39+200	0.40 (0.25)	Paved	No Action	Full Reconstruct & Pave	Light Reconstruct & Pave			

* The information provided in this table may be subject to minor modification as the final design is further developed. All paved sections will be surfaced with a chip seal over the asphalt pavement. All gravel sections will be treated with a dust suppressant.

FONT KEY: **Red = Gravel with a dust suppressant**; **Blue = Macadam**; Black = Paved with a chip seal overlay; *Italics = Rehabilitate*; **Bold = Reconstruct**