

### 3.15 Historic Properties and Native American Consultation

The I-70 Corridor is rich in history and contains many recorded and unrecorded properties of historic significance. This section includes a summary of applicable regulations; project coordination; Native American consultation; a summary of the known cultural resources; and Tier 1 level direct, noise, and visual effects discussions.

#### 3.15.1 Regulations, Coordination, and Approach

##### 3.15.1.1 Regulatory Environment

A number of laws, regulations, executive orders, and guidelines establish the need and process for considering historic properties and the cultural heritage of Native Americans and others in the planning process for federal undertakings. In addition to the National Environmental Policy Act of 1969 (NEPA), applicable federal laws and regulations are listed below.

- **Antiquities Act of 1906 (P.L. 59-209; 16 USC 461-471).** This was the federal enabling legislation for the setting aside and protection of “historic landmarks, historic and prehistoric structures and other objects of historic or scientific interest.”
- **Historic Sites Act of 1935 (P.L. 74-292; 16 USC 461-471).** This act expanded the role of the Department of the Interior (DOI) in determining and protecting “historic and archaeological sites, buildings and objects.” In addition, a policy to protect nationally significant properties was initiated. Out of this law came the National Historic Landmark (NHL) program. The NHL program recognizes the importance of sites and areas across the country from battlefields to mining districts and others associated with our heritage.
- **National Historic Preservation Act of 1966 (NHPA), as amended (P.L. 89-665; 16 USC 470, as amended; 80 Stat.915).** This act mandates that all federal agencies must consider the effects of their projects and programs on cultural resources listed or eligible for inclusion in the National Register of Historic Places (NRHP). Later amendments include **P.L. 91-243, P.L. 93-54, P.L. 94-422, P.L. 94-458, P.L. 96-199, P.L. 76-244, and P.L. 96-515.** Section 106 of the NHPA requires federal agencies to take into consideration any effects of their undertakings on historic properties, and afford the Advisory Council on Historic Preservation (ACHP) a reasonable opportunity to comment on such undertakings. Provisions of the NHPA are implemented through 36 CFR 800. Section 110 of the NHPA protects NHLs.
- **Archaeological and Historic Preservation Act of 1974.** This act preserves significant historical and archaeological data from loss or destruction. Secretary of the Interior will be notified of any adverse effect on archaeological or historical properties, and a data recovery or mitigation program will be implemented if appropriate.
- **American Indian Religious Freedom Act of 1978.** Consultation will be made with Native American traditional religious leaders to protect and preserve Native American cultural and religious practices under this act.
- **Archaeological Resources Protection Act of 1979, as amended (P.L. 96-95; 93 Stat. 721; 16 USC 470a).** This act supersedes the 1906 Antiquities Act and provides that prior to excavations on federal or Native American lands, permits for archaeological investigations must be obtained.

**Historic Site Issues**  
 Direct and indirect effects on:

- Properties listed on or eligible for the National Register of Historic Places (NRHP)
- National Historic Landmarks (NHL)
- Properties on or eligible for the State Register of Historic Places (SRHP)
- Local landmarks and sites of local interest
- Traditional cultural properties of concern to Native Americans

- **Native American Graves Protection and Repatriation Act of 1990.** This act requires consultation with appropriate Native American tribes for activities on federal lands before excavation or removal of cultural items. This act also provides for repatriation of items from federal agencies and federally assisted museums and other repositories.
- **Section 4(f) of the US Department of Transportation Act 49 USC 303(c).** This act offers protection to historic properties from transportation projects and is specifically addressed in section 3.16, Section 4(f) Evaluation, of this document.

The state of Colorado also has enacted laws to protect and preserve historic properties. The Colorado laws generally mirror the federal processes and establish a state interest in the process. In addition, the state has encouraged local governments to protect historic properties. House Bills 1034 and 1041 require that historic property values be considered when development plans are begun. Finally, various local governments along the Corridor have enacted ordinances to protect locally significant historic properties. The two key Colorado laws are:

- **Colorado Register of Historic Places Act (CRS 24-80.1 as amended)**
- **Historical, Prehistorical, and Archeological Resources of Colorado Act (CRS 24-80-401ff)**

In Colorado, responsibility for cultural resources lies with the Office of Archaeology and Historic Preservation (OAHP) within the Colorado Historical Society. The State Historic Preservation Officer (SHPO), the Executive Director of the Colorado Historical Society, the Deputy Historic Preservation Officer, and the professional staff participate with federal agencies, local governments, and individuals in the Section 106 review process. OAHP is used throughout this document to refer to this group, which includes the SHPO.

At the local level, the Certified Local Government (CLG) program is the result of the success of the federal-state relationship mandated by the 1966 NHPA that encouraged preservation partnerships. Amendments in 1992 expanded the program and allowed SHPO and National Park Service (NPS) representatives to certify local governments to participate in this partnership. CLGs are designed to strengthen existing preservation programs and encourage development of new ones. CLGs usually are the local leaders identifying, evaluating, and protecting historic resources within a community. CLGs can assume other roles including participating in reviews of federal projects and acting as a consulting party.

A local government with jurisdiction over the area in which the effects of an undertaking may occur is entitled to participate as a consulting party per 800.2(c)(3). The agency official will invite any local governments or applicants that are entitled to be consulting parties under 800.2(c).

**Supporting Documentation**

- Appendix A, Environmental Analysis and Data
- Appendix L, Visual Resources
- Appendix N, Historic Property Survey, Native American Consultation, and Paleontological Resources

##### 3.15.1.2 Tier 1 Coordination

Section 106 consultation was initiated through a series of agency meetings held January 22, 2004; May 3, 2004; June 16, 2004; and August 3, 2004 with the SHPO and staff. Additional meetings were held with agencies and consulting parties in August and September 2004.

The Tier 1 level agency coordination and consultation was initiated with the OAHP, ACHP, DOI, NPS, and Colorado Commission of Indian Affairs (CCIA), through a series of nine historic properties and 4(f)/6(f) committee (Committee) meetings held between April 2001 and March 2003 (see Chapter 6, Public and Agency Involvement). The Committee did not reconvene in 2004. The Committee provided direction for Section 106 and Section 4(f) Tier 1 level of studies, including the

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definition of the Area of Potential Effect (APE), data gathering methods, and criteria for assessing effects. The Committee provided direction for the programmatic Tier 1 level of identification and assessment of effects of alternatives on historic properties in a manner consistent with Section 106 Regulations, 36 CFR 800:

- 800.4(b)(2) – Phased identification and evaluation of historic properties
- 800.5 (a)(3) – Phased application of criteria for assessment of adverse effects

Representatives from Clear Creek County local preservation groups participated in two of the Committee meetings. All local and county governments with historic preservation ordinances or boards were also contacted, including CLGs, to identify sites of local interest that have not been inventoried. The identification of local interest resources in Clear Creek County included contacts with individuals with local knowledge of historic and archaeological resources, and mining history (see Appendix N, Historic Property Survey, Native American Consultation, and Paleontological Resources).

Native American consultation involved contacts with 16 federally recognized tribes with an established interest in one or more of the counties bisected by the Corridor between west Denver and Glenwood Springs. Two meetings and a field trip were held with interested tribes, and a Tribal Consultation PA was drafted to formalize the consultation process and address all issues pertinent to both the agencies and tribes. The partially executed PA is included in Appendix N, and subsequent signed versions up to and including the fully executed document will be included in the Record of Decision. This process meets the Section 106 responsibilities of the NHPA and 36 CFR 800 (see section 3.15.2.3).

Compliance with Section 106 will be completed during subsequent Tier 2 project-level environmental analysis, documentation, and review. A programmatic agreement (PA) for 106 compliance involving FHWA, ACHP, DOI, NPS, Bureau of Land Management (BLM), US Forest Service (USFS), SHPO, CDOT and other agencies or consulting parties, as appropriate, will be executed for the PEIS before preparation of a Record of Decision. The PA will include the steps for Section 106 agency responsibilities at the Tier 2 level.

#### 3.15.1.3 Definitions

A cultural resource is the physical remains of past human activity having demonstrable association with prehistoric events, historical events, individuals, or cultural systems. Cultural resources may include archaeological sites, districts, and objects; standing historical structures, objects, or groups of resources; locations of important historic events; or places, objects, and living or non-living things that are important to the practice and continuity of traditional cultures. Under the broader heading of cultural resources are three more restrictive terms: “historic property,” “traditional use area,” and “sacred or religious site.”

A “historic property” is defined in 36 CFR 800.16(l) as “...any prehistoric or historic district, site, building, structure, or object included in, or eligible for inclusion in, the National Register of Historic Places...” A historic property may be an archaeological site, a historical site, or a traditional use area. Not all such sites meet the specific NRHP criteria for historic property designation. (Colorado State Register-only properties have been identified separately.) If a property is not included in or eligible for inclusion in the NRHP, it is not a historic property for purposes of the NHPA and does not need to be considered under Section 106. (NEPA has similar requirements for full disclosure but does not require consultation.)

At the Tier 1 level analysis, many cultural resources have been identified. Completion of NRHP eligibility evaluations is not a part of the Tier 1 process. In addition to properties listed on or eligible for the NRHP, the following properties are acknowledged in this report:

- Sites that have been recorded at the OAHP but for which evaluations have not been completed
- Traditional cultural properties of concern to Native Americans
- Properties on or eligible for the State Register of Historic Places (SRHP)
- Local landmarks and sites of local interest that are not yet recorded or evaluated at the OAHP

When a collection of “historic properties” and other sites are discussed in this document, the term “historic sites” may be used to denote the inclusion of properties for which NRHP eligibility status has not yet been determined. Eligibility determination will be made during appropriate Tier 2 studies.

A “traditional use area” is a place or landscape that is important to a traditional culture. It may include a community, a sacred site, or an area from which food and nonfood resources were obtained.

“Sacred sites” are places important to the practice of traditional religions. Their relationship to traditional religions makes it possible for sacred sites to become historic properties, but they are also considered under statutes designed to protect First Amendment guarantees to the free practice of religions.

#### 3.15.1.4 Methods

As defined in 36 CFR 800.16 (d), “area of potential effects” is the “geographic area or areas within which an undertaking may directly or indirectly cause changes in the character or use of historic properties, if any such properties exist. The area of potential effects is influenced by the scale and nature of an undertaking and may be different for different kinds of effects caused by the undertaking.” In many instances, the APE is not simply the project’s physical boundaries, or right-of-way. The methods of determining the APE, identifying historic properties, and assessing effects for purposes of the I-70 PEIS are described below.

#### Determination of Area of Potential Effects

Determination of the APE involved consultation with the SHPO and consulting parties. Typically, all areas where the undertaking may cause changes to land or structures, or to their uses, whether the changes would be direct or indirect, beneficial or adverse, are part of the APE. In addition to areas of ground disturbance, this would include all locations from which elements of the undertaking (such as structures or land disturbance) may be visible. The boundaries of an APE may be flexible, such as ridge tops or valleys. The identification of an APE does not dictate what an agency must do to identify, avoid, or mitigate effects within it.

For the I-70 PEIS, a flexible APE has been defined at this Tier 1 level. The flexible APE definition is the result of input and coordination with the SHPO, consulting parties, and the Committee. The APE has been defined to include the localized potential direct effects area and an area from which I-70 could be seen. The APE runs along the Corridor and extends between the project termini at Glenwood Springs (milepost 116) and C-470 (milepost 260). The width of the APE varies along the Corridor. Between the Glenwood Springs interchange (milepost 116) and approximately 9 miles east of the Garfield/Eagle County line (milepost 139.5), no width is added to the roadway for the APE because, except for the interchange itself, minimal changes to the existing I-70 are expected to occur. In other areas, the APE extends up to 3 miles either side of the interstate, to follow ridgelines for the I-70 viewshed area (area from which I-70 can be seen). The APE for Tier 2 analyses may not be the same.

Within the APE, direct, noise, and visual effects to historic properties were assessed for Tier 1 analyses. For the examination of possible direct impacts from alternative footprints and construction disturbance zones, an analysis was conducted for an area 500 feet from the outer edges of each side of the existing pavement of I-70.

Within the APE, the potential for noise impacts would be in close proximity to I-70. Although there are no specific noise guidelines or regulations pertaining to historic properties, the standard noise abatement criteria would apply. These would require that mitigation be considered for receptors when the Leq exceeds 66 dB(A) (for residential areas, churches, schools, libraries and hospitals) or when predicted noise levels for future conditions exceed the existing noise levels by 10 dB(A) or more. Noise increases are perceived as noticeable with even a 5 dB(A) increase. Section 3.12, Noise, provides a complete discussion on Corridor noise issues.

Within the APE, the potential for visual effects would encompass the area that is visible to I-70 within up to a 3-mile viewshed. The visual analysis for historic properties is based on a broad landscape and viewshed approach. This area is consistent with the criteria applied for the visual resource assessment. Section 3.13, Visual Resources, provides a complete discussion on Corridor visual issues.

### Types of Historic Properties Within the Area of Potential Effect

Once the APE has been identified, the focus shifts to the search for historic properties. The NRHP is the nation's official list of cultural resources worthy of preservation. Authorized under the National Historic Preservation Act of 1966, the National Register is part of a national program to coordinate and support public and private efforts to identify, evaluate, and protect our historic and archeological resources. Properties listed in the Register include districts, sites, buildings, structures, and objects that are significant in American history, architecture, archeology, engineering, and culture. Many properties are considered officially eligible for listing on the register. Actual listing on the NRHP is a time-consuming effort, and officially eligible properties are offered the same protection as those listed on the register.

National Historic Landmarks (NHLs) are nationally significant historic places designated by the Secretary of the Interior because they possess exceptional value or quality in illustrating or interpreting the heritage of the US. While there are many historic places across the nation, only a small number have meaning to all Americans; these are called National Historic Landmarks. NHLs are listed on the NRHP.

Historic districts (and NHL districts) are treated as a single entity on the NRHP. Every property in a district can be identified as contributing or non-contributing. Individual properties within a district will often contain a point number tying them to the district as a whole. Other individual properties in a district may have their own unique site number. The Corridor contains a number of districts and potential historic areas. The Corridor also includes numerous historic properties, listed or eligible to the NRHP, and some are listed on the State Register. Many identified sites have been determined not eligible for the NRHP; depending on the age of this determination and the reason, some may need to be re-evaluated. Many sites need additional information before their eligibility can be determined. A specific set of criteria is used to determine eligibility to the NRHP.

### Eligibility Criteria, National Register of Historic Places

A historic property must meet one or more of the following contexts, and be fifty (50) years old or older, to be eligible for the National Register of Historic Places (36 CFR 60.4). In addition a property must retain integrity and have significance within the context to be eligible for the National Register.

*The quality of significance in American history, architecture, archaeology, engineering, and culture is present in districts, sites, buildings, structures, and objects that possess integrity of location, design, setting, materials, workmanship, feeling and association and:*

*(a) that are associated with events that have made a significant contribution to the broad patterns of our history; or*

*(b) that are associated with the lives of persons significant in our past; or*

*(c) that embody the distinctive characteristics of a type, period, or method of construction, or that represent the work of a master, or that possess high artistic values, or that represent a significant and distinguishable entity whose components may lack individual distinction; or*

*(d) that have yielded, or may be likely to yield, information important in prehistory or history.*

The Tier 1 Draft PEIS provides the following for the I-70 Corridor: an APE for historic properties and a Reconnaissance Survey. The Reconnaissance Survey included a records or file search conducted at the Colorado OAHP for the defined APE, a windshield survey along I-70, and gathering of local input. The windshield survey (an informal survey, a drive-by observation level of effort that does not require property access) was done along the Corridor to identify properties that may not have been previously recorded. Local input has also been used to identify previously unrecorded properties. The entire text of the *Reconnaissance Survey of the I-70 Mountain Corridor Between Glenwood Springs, and C-470 in Colorado* is included in Appendix N, Historic Property Survey, Native American Consultation, and Paleontological Resources.

The process for identifying historic properties within the APE was developed in consultation with the Committee and is consistent with 36 CFR 800.4(b)(2) – Phased identification and evaluation of historic properties. Historic properties were identified within the APE described above from currently available data and from contacts with agencies and local entities about their concerns for prehistoric and historic resources. Contacts were made and coordination conducted with the SHPO, NPS, ACHP, CLGs, consulting parties, local historic preservation groups, commissions, and boards, and Native American tribes.

Historic property data, initially gathered within a 2-mile wide study corridor along I-70, were obtained from a file search conducted at the OAHP in 2000. Subsequently, specific areas within the viewshed of I-70 that are wider than the 2-mile corridor were searched for historic sites. The file search was updated for a 3-mile corridor either side of I-70 at the OAHP in the fall of 2003.

In addition, the entire I-70 right-of-way was inventoried for the 1999 Adesta Communications Fiber Optics System project. The SHPO has concurred with the determinations of eligibility for properties inventoried within the right-of-way, and this inventory of historic sites was included in the 2003 database gathered from OAHP.

### Assessment of Effects

The process and criteria for assessing effects on historic properties were developed with concurrence from the Committee and input from the consulting parties, and were conducted in a manner consistent with 36 CFR 800.5(a)(3), which allows for a “phased application” for the determination of effects for the PEIS. The Tier 1 level of assessment of effects on historic properties is considered “conceptual,” due to the programmatic level of planning for alignments, footprints, and construction areas for alternatives. This Tier 1 assessment was conducted for properties within the APE, listed on or eligible

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for listing in the NRHP, and for additional properties identified as the result of the Reconnaissance Survey, windshield survey, and gathering of local input. The Tier 1 assessment provides an indication of where there may be potential effects. The following are examples of the types of effects considered at the Tier 1 level of assessment, relative to 36 CFR 800.5:

- **36 CFR 800.5(a)(2)(i) Physical destruction of or damage to all or part of the property and 36 CFR 800.5(a)(2)(iv) Change of the character of the property's use of or physical features within the property's setting that contribute to its historic significance.** Assessments of these effects are based on the overlay of the footprint and construction disturbance zone of an alternative onto maps of known historic properties to determine the potential for effects.
- **36 CFR 800.5(a)(2)(v) Introduction of visual or audible elements that diminish the integrity of the property's significant historic features.** Assessment of these effects is based on the application of noise and visual criteria to determine the potential for effects.
  - Potential noise effects consider the introduction of audible elements that would potentially diminish the integrity of the property's significant historic features. Because there are no established noise evaluation criteria for historic properties under Section 106 regulations or under Council on Environmental Quality (CEQ) for NEPA, FHWA noise abatement criteria and the CDOT Noise Analysis and Abatement Guidelines have been adopted. FHWA considers a noise impact to occur if predicted Leq(h) noise levels approach within 1 dB(A) of the noise abatement criteria, or where design-year peak-hour noise levels are predicted to exceed existing noise levels by 10 dB(A) or more. The process for assessing noise effects was coordinated with the noise evaluations in section 3.12, Noise.
  - Potential visual effects consider the distance of the historic property from I-70 and the proposed alternatives, the landscape setting and sense of place of the property, and the visual contrast of the alternative to the setting (see section 3.15.3.3).

The final determinations of effects on historic properties will be completed at the Tier 2 level of NEPA analysis, when the requirements of 36 CFR 800.5 will be completed.

#### Tier 2 Level Studies

Tier 2 level studies and the Section 106 process will be guided by the PA created during Tier 1 studies. Tier 2 studies will identify historic properties (36 CFR 800.4), determine effects (36 CFR 800.5), and resolve adverse effects (36 CFR 800.6). These studies may include and are not limited to:

- Determining an APE for a specific project.
- Updating file search for the APE. Many of the individual sites found in the OAHP file search have only preliminary evaluations or are listed as needing data (see Table N-1 in Appendix N, Historic Property Survey, Native American Consultation, and Paleontological Resources). Determination of the eligibility of these resources will be made in consultation with SHPO during the Tier 2 analysis for determinations of eligibility.
- Conducting intensive level inventory of the project-specific Tier 2 APE, as needed, including new sites identified during Tier 1.
- Determining eligibility of inventoried resources.
- Determining effects on eligible or listed resources.
- Developing plans to avoid, minimize, and mitigate adverse effects.

- Providing consultation that culminates in the development of a Record of Decision (ROD) or Memorandum of Agreement (MOA) for adverse effects, if any.
- Implementing mitigation plans.

### 3.15.2 Affected Environment

The affected environment section provides the following descriptions: a definition of the APE, file search results, identification of known resources, and Native American consultation. Appendix N provides additional detailed information.

#### 3.15.2.1 Area of Potential Effect

The APE runs along the I-70 Corridor and extends between the project termini at Glenwood Springs (milepost 116) and C-470 (milepost 260). The Tier 1 APE is shown on Figure 3.15-1. The width of the APE varies along the Corridor. Between the Glenwood Springs interchange (milepost 116) and the Garfield/Eagle County line (milepost 130), no width is added to the roadway for the APE because, except for the interchange itself, minimal changes to the existing I-70 are expected to occur. In other areas, the APE extends up to 3 miles either side of the interstate, to follow ridgelines for the I-70 viewshed area (area from which I-70 can be seen). The viewshed area definition is simple; for properties located within 3 miles either side of I-70, if I-70 can be seen from that location, it is in the APE. Due to the number of historic areas within Clear Creek County, a more detailed map is provided on Figure 3.15-2.

#### 3.15.2.2 File Search Results

The file search of the OAHP records found 1,477 previously recorded historic properties within 3 miles on either side of I-70 (October 2003). No local landmarks or traditional cultural properties of concern to Native Americans have been identified to date. The full file search list is provided in Appendix N (see Table N-1). Table 3.15-1 identifies the NRHP and SRHP listed and eligible properties from this file search. Items shaded in blue represent properties with point numbers that are included in the Georgetown-Silver Plume National Historic Landmark (NHL) District. Additional individual properties are also in the Georgetown-Silver Plume NHL District.

Table 3.15-2 lists the additional sites identified through a windshield survey and local input during the Reconnaissance Survey.

#### NRHP and SRHP Properties

A number of individual properties are present within the boundaries of the Georgetown-Silver Plume NHL District (5CC.3), the Idaho Springs Commercial District (5CC.201), and the Hot Springs Historic District (5GF.1050). Many of these properties have not been formally evaluated as contributing (adding to the significance of the respective historic district) or non-contributing to their respective districts. Table 3.15-1 includes the landmark and historic districts, and eligible and contributing properties within these districts based on current file information. Additional potential districts include the Glenwood Springs Commercial District; additional areas around Idaho Springs; and the Lawson, Downieville, Dumont area. Tier 1 studies do not include evaluation of eligibility or updates of eligibility status of recorded sites or these potential districts. As appropriate, such updates will occur during Tier 2 analyses. Additional sites may also be identified during Tier 2.

The Reconnaissance Survey in Appendix N includes a detailed discussion of the three districts—Georgetown-Silver Plume NHL (5CC.3), Idaho Springs Commercial District (5CC.201), and the Hot Springs Historic District (5GF.1050)—and the individual NRHP eligible or listed properties located

within 500 feet either side of I-70. Also described in detail are the 29 resources identified from the windshield survey and local input: 26 individual sites; the potential Glenwood Springs Commercial District; and the Lawson, Downieville, Dumont area (with 38 individual components). This provides a better sense of the variety, qualities, and characteristics of the historic properties in the Corridor.

**Table 3.15-1. NRHP and State Listed or Eligible Cultural Resources from File Search**

Site Number	Site Name	Type	NRHP/SRHP Listed NRHP Eligibility
<b>Garfield County</b>			
5GF.1000.3	Denver & Rio Grande	Historical Archaeology	Officially eligible
5GF.1000.4	Denver & Rio Grande	Historical Archaeology	Officially eligible
5GF.1022	Citizens National Bank Building - New Citizens Building - Deacon Building	Historic	Listed on National Register
5GF.1050	Hot Springs Historic District	Historic District	Officially eligible
5GF.1050.2	Hot Springs Lodge and Pool (Glenwood Hot Springs Bathhouse; Natatorium; Yampa Spring)	Historic	Officially eligible
5GF.1050.3	Denver & Rio Grande Railroad Station	Historic	Officially eligible
5GF.1549	Federal Building (Glenwood Springs) – Post Office – Glenwood Springs	Historic	Officially eligible
5GF.1654	Shelton-Holloway House	Historic	Listed on the State Register Officially eligible for the State Register
5GF.1661	Denver & Rio Grande Western Railroad	Historic	Officially eligible
5GF.2441	Glenwood Springs Hydroelectric Plant - Glenwood Light & Water Co. Hydroelectric Plant - Glenwood Center For The Arts	Historic	Listed on National Register Listed on the State Register
5GF.2456.5	Shoshone to Hopkins Transmission Line Segment	Historical Archaeology- Historic	Officially eligible
5GF.270	Bair Ranch	Historic	Officially eligible
5GF.2717	Glenwood Springs Viaduct - milepost 0.23 - CDOT No. F-07-A	Historic	Officially eligible
5GF.285	Starr Manor	Historic	Listed on National Register
5GF.286	Edward T. Taylor House - Taylor House	Historic	Listed on National Register
5GF.414	Shoshone Hydroelectric Power Plant	Historic	Officially eligible
5GF.767	Hotel Colorado	Historic	Listed on National Register Field eligible
<b>Eagle County</b>			
5EA.1273	N/A	Archaeological	Officially eligible
5EA.128	Dotsero Burial	Archaeological	Officially eligible
5EA.1289	N/A	Archaeological	Officially eligible
5EA.1555	Grouse Creek Lithic Scatter	Archaeological	Officially eligible
5EA.1590	Eagle River Bridge - milepost 155.98 - CDOT No. F-10-E (The bridge was removed in 1999.)	Historic	Officially eligible
5EA.1595.1	Dotsero Cutoff	Historical Archaeology	Officially eligible

Site Number	Site Name	Type	NRHP/SRHP Listed NRHP Eligibility
5EA.1595.3	Denver & Rio Grande Railway Company Line	Historical Archaeology	Officially eligible
5EA.1595.4	Denver & Rio Grande Railway Company Line	Historical Archaeology	Officially eligible
5EA.1595.5	Denver & Rio Grande Railway Company Line	Historical Archaeology	Officially eligible
5EA.1595.6	Denver & Rio Grande Railroad	Historical Archaeology- Historic	Field eligible
5EA.1604	Dotsero Bridge - CDOT No. F-08-F - milepost 133.51	Historic	Listed on National Register
5EA.1608	Eagle River Bridge - CDOT No. F-09-H - milepost 150.24	Historic	Listed on National Register
5EA.1614	Wolcott Bridge - CDOT No. F-10-B - milepost 0.07	Historic	Listed on National Register
5EA.1735	N/A	Archaeological	Officially eligible
5EA.1736	N/A	Archaeological	Officially eligible
5EA.1803	N/A	Archaeological	Officially eligible
5EA.1808	N/A	Archaeological	Officially eligible
5EA.198.1	Denver & Rio Grande Railroad – Bridge	Historic	Officially eligible
5EA.433	Bead 'N' Tinkle Site	Archaeological	Officially eligible
5EA.47	N/A	Historic	Officially eligible
5EA.647	Church - First Evangelical Lutheran	Historic	Listed on National Register
5EA.67	N/A	Historical Archaeology	Officially eligible
5EA.727	F-11-AU Vail Pass Bridge	Historic	Officially eligible
5EA.728	F-11-AV Vail Pass Bridge	Historic	Officially eligible
5EA.737	Bridge F-12-AS - Bridge F-1	Historic	Officially eligible
5EA.739	F-10-AA/F-10-AB Bridges	Historical Archaeology- Historic	Officially eligible
5EA.740	Vail Road Bridge	Historic	Officially eligible
5EA.795	Tigiwon Community House, Tigiwon Community	Historic	Officially eligible
5EA.902	Eagle Ranger Station	Historic	Officially eligible
5EA.956	No Name	Archaeological	Officially eligible
<b>Summit County</b>			
5ST.258	Frisco Schoolhouse	Historic	Listed on National Register
5ST.326	Wildhacks Grocery Store, Post Office	Historic	Listed on National Register
5ST.395.4	Denver South Park & Pacific Railroad	Historical Archaeology	Officially eligible
5ST.426	Bridge F-12-AK	Historic	Officially eligible
5ST.450	Masontown	Historical Archaeology	Officially eligible
5ST.805	No Name	Historical Archaeology	Officially eligible

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Site Number	Site Name	Type	NRHP/SRHP Listed NRHP Eligibility
5ST.811	No Name	Historical Archaeology	Officially eligible
5ST.85	Vail Pass Camp	Archaeological	Officially eligible
<b>Clear Creek County</b>			
5CC.11	McClellan House	Historic	Listed on National Register Within NR district
5CC.12	Alpine Hose Company No. 2	Historic	Listed on National Register Within NR district
5CC.13	Toll House, Mine Managers House, Julius G. Pohle House	Historic	Listed on National Register Within NR district
5CC.15	Evans Elbert Ranch	Historic	Listed on National Register Within NR district
5CC.173.1	Argentine Central Railroad (Portion Within NHL District)	Historical Archaeology- Historic	Officially eligible
5CC.173.2	Argentine Central Railroad (Portion Outside of NHL District)	Historical Archaeology- Historic	Officially eligible
5CC.181	Lawson School	Historic	Officially eligible
5CC.194	Squaw Mountain Fire Lookout Complex	Historic	Listed on the State Register
5CC.201.0	Idaho Springs Commercial District	Historic District	Field eligible
5CC.201.35	Colorado & Southern Build	Historic	?
5CC.229	Charlie Taylor Water Wheel	Historic	Listed on the State Register
5CC.231	Miner Street Bridge, Bridge Over Clear Creek	Historic	Listed on National Register
5CC.241	Methodist Episcopal Church	Historic	Listed on National Register
5CC.247	John Owen House	Historic	Officially eligible
5CC.3	Georgetown-Silver Plume Historic District	Historic District	Listed on National Register as NHL district
5CC.3.10	Bowman-White House	Historic	Within Georgetown-Silver Plume NHL District
5CC.3.100	Pelican Mine	Historic	Within Georgetown-Silver Plume NHL District
5CC.3.101	Dives Mines	Historic	Within Georgetown-Silver Plume NHL District
5CC.3.102	Griffin Monument	Historic	Within Georgetown-Silver Plume NHL District
5CC.3.103	Seven-Thirty Mine	Historic	Within Georgetown-Silver Plume NHL District
5CC.3.105	Silver Plume Cemetery	Historic	Within Georgetown-Silver Plume NHL District
5CC.3.106	Silver Plume Schoolhouse	Historic	Within Georgetown-Silver Plume NHL District
5CC.3.107	Dunderberg Mine	Historic	Within Georgetown-Silver Plume NHL District
5CC.3.108	Burleigh Tunnel Mine	Historic	Within Georgetown-Silver Plume NHL District
5CC.3.109	Bailey & Nott House – Maxwell House	Historic	Within Georgetown-Silver Plume NHL District
5CC.3.110	First United Presbyterian	Historic	Within Georgetown-Silver Plume NHL District

Site Number	Site Name	Type	NRHP/SRHP Listed NRHP Eligibility
5CC.3.111	Georgetown School	Historic	Within Georgetown-Silver Plume NHL District
5CC.3.113	Wiseman Building	Historic	Within Georgetown-Silver Plume NHL District
5CC.3.120	International Mercantile	Historic	Within Georgetown-Silver Plume NHL District
5CC.3.121	Cushman Opera House – Cushman Block – Silver Queen Building	Historic	Within Georgetown-Silver Plume NHL District
5CC.3.13	Pollard House - Lee House	Historic	Within Georgetown-Silver Plume NHL District
5CC.3.135	John Church House – Church – Hamilton House	Historic	Within Georgetown-Silver Plume NHL District
5CC.3.14	Peedie House	Historic	Within Georgetown-Silver Plume NHL District
5CC.3.140	Morris House – De Pew House	Historic	Within Georgetown-Silver Plume NHL District
5CC.3.146	Mendenhall House – Pierson House	Historic	Within Georgetown-Silver Plume NHL District
5CC.3.151	Grandma McClellan House	Historic	Within Georgetown-Silver Plume NHL District
5CC.3.152	Alpine Inn – Georgetown Depot	Historic	Within Georgetown-Silver Plume NHL District
5CC.3.153	Mahany Building – BOB (Burned out Building)	Historic	Within Georgetown-Silver Plume NHL District
5CC.3.154	N/A	Historic	Within Georgetown-Silver Plume NHL District
5CC.3.216	The Barn	Historic	Within Georgetown-Silver Plume NHL District
5CC.3.217	Mendota Mine	Historic	Within Georgetown-Silver Plume NHL District
5CC.3.219	Georgetown Water Works	Historic	Within Georgetown-Silver Plume NHL District
5CC.3.220	Chicago Lake Wagon Road	Historical Archaeology	Within Georgetown-Silver Plume NHL District
5CC.3.221	Colorado Central Railroad Grade	Historical Archaeology- Historic	Within Georgetown-Silver Plume NHL District
5CC.3.222	Haskins House	Historic	Within Georgetown-Silver Plume NHL District
5CC.3.230	Grace L. Ferguson Cottage	Historic	Within Georgetown-Silver Plume NHL District
5CC.3.273	N/A	Historic	Within Georgetown-Silver Plume NHL District
5CC.3.30	Thomas Cornish House	Historic	Within Georgetown-Silver Plume NHL District
5CC.3.355	N/A	Historic	Within Georgetown-Silver Plume NHL District
5CC.3.356	Mine Site #7, South of Loop Valley	Historical Archaeology	Within Georgetown-Silver Plume NHL District
5CC.3.357	Major Mine	Historical Archaeology	Within Georgetown-Silver Plume NHL District
5CC.3.358	Wide West Mine	Historical Archaeology	Within Georgetown-Silver Plume NHL District

3.15 Historic Properties and Native American Consultation

Site Number	Site Name	Type	NRHP/SRHP Listed NHL Eligibility
5CC.3.359	Encampment	Historical Archaeology	Within Georgetown-Silver Plume NHL District
5CC.3.383	Welch Mine, Youngs Cabin	Historic	Within Georgetown-Silver Plume NHL District
5CC.3.384	Stone Cabin	Historical Archaeology	Within Georgetown-Silver Plume NHL District
5CC.3.55	Masonic Hall	Historic	Within Georgetown-Silver Plume NHL District
5CC.3.61	Streeter-Rutledge House	Historic	Within Georgetown-Silver Plume NHL District
5CC.3.70	Robeson House - Bolander House	Historic	Within Georgetown-Silver Plume NHL District
5CC.3.76	Old Missouri Fire House	Historic	Within Georgetown-Silver Plume NHL District
5CC.3.81	Stable Building - Miner's Office	Historic	Within Georgetown-Silver Plume NHL District
5CC.3.82	J.T. & R.P. Reynolds House – Miner's Office – Goat House	Historic	Within Georgetown-Silver Plume NHL District
5CC.3.88	Mundy's Store - Neuman & Sprankle Building	Historic	Within Georgetown-Silver Plume NHL District
5CC.3.89	Silver Plume Methodist Church	Historic	Within Georgetown-Silver Plume NHL District
5CC.3.90	Morganthau Store – Stevens & Rowe Building – Stone Building	Historic	Within Georgetown-Silver Plume NHL District
5CC.3.91	Silver Plume Hose Co. and City Hall	Historic	Within Georgetown-Silver Plume NHL District
5CC.3.92	Silver Plume Jail	Historic	Within Georgetown-Silver Plume NHL District
5CC.3.93	Buckley House	Historic	Within Georgetown-Silver Plume NHL District
5CC.3.94	St. Patrick's Catholic Church	Historic	Within Georgetown-Silver Plume NHL District
5CC.3.95	Clair Hall - Silver Plume Large Town Hall	Historic	Within Georgetown-Silver Plume NHL District
5CC.3.96	Silver Plume Bandstand	Historic	Within Georgetown-Silver Plume NHL District
5CC.3.97	Knights of Pythias Hall	Historic	Within Georgetown-Silver Plume NHL District
5CC.3.99	Diamond Tunnel	Historic	Within Georgetown-Silver Plume NHL District
5CC.328	Big Five Mines	Historical Archaeology	Officially eligible
5CC.389	Multicomponent Site	Archaeological historic	Officially eligible
5CC.4	Silver Plume Depot	Historic	Listed on National Register
5CC.427.1	Colorado Central Railroad Grade	Historical Archaeology-Historic	Officially eligible
5CC.432	Dunkirk	Historic	Contrib. to Officially elig. dist.
5CC.433	Peralto	Historic	Contrib. to Officially elig. dist.
5CC.434	E.K. Baxter	Historic	Contrib. to Officially elig. dist.

Site Number	Site Name	Type	NRHP/SRHP Listed NHL Eligibility
5CC.435	N/A	Historic	Contrib. to Officially elig. dist.
5CC.436	Aunt Jack	Historic	Contrib. to Officially elig. dist.
5CC.437	Kirklington	Historic	Contrib. to Officially elig. dist.
5CC.438	N/A	Historic	Contrib. to Officially elig. dist.
5CC.439	Loranzie	Historic	Contrib. to Officially elig. dist.
5CC.440	Diamond Millsite	Historic	Contrib. to Officially elig. dist.
5CC.461	Georgetown Hydroelectric	Historic	Officially eligible
5CC.461.1	Georgetown Hydroelectric Plant and Penstock	Historic	Contrib. to Officially elig. dist.
5CC.461.3	Georgetown Forebay Dam and Reservoir	Historical Archaeology	Contrib. to Officially eligible district
5CC.5	Grace Episcopal Church	Historic	Listed on National Register
5CC.545	Anne Evans Mountain Home, Evans-Mayer Mountain Home	Historic	Listed on National Register
5CC.571	No Name	Historical Archaeology	Officially eligible
5CC.585	Camp Wilaha	Historical Archaeology	Officially eligible
5CC.597	No Name	Historical Archaeology	Officially eligible
5CC.633	Turntable Bridge	Historic	Officially eligible
5CC.64	Hamill House	Historic	Listed on National Register
5CC.653	Idaho Springs Ranger Station Historic District	Historic	Officially eligible
5CC.654	Dumont School	Historic	Officially eligible
5CC.67	Ptarmigan Site	Archaeological	Officially eligible
5CC.68	Ore Processing Mill, Lebanon Mill	Historic	Listed on National Register
5CC.7	Lebanon and Everett Mine Tunnels	Historic	Listed on National Register
5CC.746	No Name	Archaeological	Officially eligible
5CC.747	No Name	Archaeological	Officially eligible
5CC.76	Argo Tunnel and Mill, Newhouse Tunnel	Historic	Listed on National Register
5CC.791.1	Highline Wagon Road	Historical Archaeology	Officially eligible
5CC.8	Hotel De Paris	Historic	Listed on National Register
5CC.859	B.P.O.Elks Lodge #607	Historic	Listed on the State Register
5CC.87	Masonic Hall	Historic	Within NR district
5CC.9	Georgetown Loop Railroad	Historic	Listed on National Register
5CC.966	Bryan Hose House, Sunny Side Hose House	Historic	Listed on National Register
5CC.967	Hose House No. 2, West End Hose House, 6th	Historic	Listed on National Register
5CC.985	Darragh Placer	Historical Archaeology	Officially eligible
5CC.988	Kirtley Mine Tailing Pile	Historical Archaeology	Officially eligible
5CC.989	No Name	Historical Archaeology	Officially eligible
5CC.990	No Name	Historical Archaeology	Officially eligible

### 3.15 Historic Properties and Native American Consultation

Site Number	Site Name	Type	NRHP/SRHP Listed NRHP Eligibility
5CC.991	No Name	Historical Archaeology	Officially eligible
5CC.992	No Name	Historical Archaeology	Officially eligible
5CC.993	No Name	Historical Archaeology	Officially eligible
5CC.994	Farwell Reduction Works, Smelter	Historical Archaeology	Officially eligible
Jefferson County			
5JF.184	Humphrey House, Kinnikinnik Ranch	Historic	Listed on National Register
5JF.185	Mount Vernon House - Robert W. Steele House	Historic	Listed on National Register
5JF.2212	Queen of Heaven Orphanage Summer Camp - Mother Cabrini Orphanage Summer Camp	Historic	Listed on National Register
5JF.290	Bergen Park, Bergen Park and Shelter House	Historic District	Listed on National Register
5JF.291	Filius Shltr House	Historic	Officially eligible
5JF.323	Lorraine Lodge, Charles Boettcher Summer	Historic	Listed on National Register
5JF.398	Genesee Park Bridge	Historic	Officially eligible
5JF.590	Genesee Park	Historic District	Listed on National Register Multiple Resource Component
5JF.976	Filius Park, Denver Mountain Parks	Historic District	Listed on National Register
5JF.977	Little Park, Denver Mountain Parks	Historic District	Listed on National Register
5JF.979	Katherine Craig Park, Denver Mountain Parks	Historic District	Listed on National Register

County	Land Use/Function	Name	Source
Summit County	Mining	Mines southeast of Officers Gulch	Windshield survey
	Mining	Buffalo Placer Mine and other placer sites	Local input
	Mining	Water flume on Chief Mountain	Local input
	Mining	Excelsior Mine	Local input
	Mining	Frisco area silver mines and tunnels (>6)	Local input
Clear Creek County	Transportation	Curtin railroad community	Local input
	Recreation	Loveland Ski Area Lease	Local input
	Mining	Silver Mining Heritage Area (quasi-official status from Governor Romer)	Local input
	Recreation and education	Scout Camp	Local input
	Residential	Graymount	Local input
	Mining	Jonny Bull Mine	Local input
	Mining	Mining area above/north of Silver Plume	Local input
	Mining	Bethel Hudson Mine	Local input
	Ethnic	Gypsie Camp	Local input
	Mining/residential	Lawson, Downieville, Dumont historic area (see Appendix N, Table N-5 for additional details on 38 site components). The Two Barns site is a part of this area.	Local input
	Mining	Lincoln Mine	Local input
	Mining	Hukill Mine	Local input
	Mining	Stanley Mine Complex	Local input
	Mining/residential/recreation	Idaho Springs	Local input
	Idaho Springs	Mining/ethnic	Chinese Mines
Transportation		Old US 6 and US 40, multiple segments	Windshield survey
Prehistory		Twin Tunnels Archaeological Area	Local input

#### Reconnaissance Survey Sites

After the file search was completed, the Reconnaissance Survey of the Corridor used two data sources: (1) input from local knowledgeable individuals gathered from local representatives through the summer of 2001 and (2) a windshield survey completed in October 2000. This effort resulted in the identification of 29 additional properties not previously recorded (Table 3.15-2). These are described in detail in the Reconnaissance Survey in Appendix N, Historic Property Survey, Native American Consultation, and Paleontological Resources.

**Table 3.15-2. Resources Identified by Local Input and Windshield Survey Along the Corridor**

County	Land Use/Function	Name	Source
Garfield	Commercial/mixed	Glenwood Springs Commercial District	Local input
Eagle	Residential	Housing area at Dotsero	Windshield survey
	Ranch	Hoft Ranch	Windshield survey
	Irrigation	Sherwood Ditch	Windshield survey
	Irrigation	Holland Ditch	Windshield survey
	Irrigation	O'Neill Ditch	Windshield survey
	Railroad area	Wilmor	Windshield survey

#### 3.15.2.3 Native American Consultation

In April 2001, 16 federally recognized tribes with an established interest in one or more of the counties bisected by the Corridor between Glenwood Springs and west Denver were contacted, as mandated by Section 106 of the NHPA (as amended) and the Advisory Council on Historic Preservation regulations (36 CFR 800). Consultation with a Native American tribe recognizes the government-to-government relationship between the federal government and tribal groups. Federal agencies must be sensitive to the fact that historic properties of religious and cultural significance to one or more tribes may be located on ancestral, aboriginal, or ceded lands beyond modern reservation boundaries. Tribes invited to participate as consulting parties included the Apache of Oklahoma, Comanche of Oklahoma, Southern Cheyenne and Southern Arapaho (known as the Cheyenne and Arapaho Tribes of Oklahoma), Kiowa, Northern Arapaho, Northern Cheyenne, Cheyenne River Sioux, Crow Creek Sioux, Oglala Sioux, Rosebud Sioux, Standing Rock Sioux, Ute Mountain Ute, Southern Ute, Northern Ute, and the White Mesa Ute. The Comanche, Cheyenne River Sioux, and Oglala Sioux tribes indicated that they were not interested in consulting, and the Apache of Oklahoma and the Crow Creek Sioux tribes did not respond. The remaining eleven tribes requested consulting party status for the project.

Nine of the eleven consulting tribes sent at least one representative to a January 2002 consultation meeting in Denver involving CDOT, FHWA, USFS, BLM, the Colorado Commission of Indian

Affairs (CCIA), and the Colorado State Archaeologist. The consultation entailed an overview of the PEIS goals and objectives, focusing specifically on issues related to sites and/or places of interest to the tribes. Known archaeological sites within and near the Corridor were identified, and discussions centered on the disposition, management, and preservation of these properties in the context of proposed transportation improvements. The topic of inadvertent discoveries of Native American sites during future construction projects, including human remains and associated funerary objects, also dominated much of the session, as did the issue of the identification of and respect for traditional cultural properties and sacred sites.

In mid-September 2002, representatives of eight consulting tribes, in coordination with CDOT, FHWA, USFS, BLM, and CCIA participated in a field trip along the Corridor between Glenwood Springs and Denver. The trip provided the tribal representatives with an opportunity to visit the Corridor and simultaneously receive information about the nature and extent of proposed improvements, and how future projects may affect the natural and cultural environment.

A PA was drafted to formalize the consultation process and address all issues pertinent to both the agencies and tribes. Beginning in late 2003, the PA was circulated among the agencies and tribes for signatures. All of the partnering agencies, as well as the Southern Ute Indian Tribe and the Cheyenne and Arapaho Tribes of Oklahoma, signed the agreement as of the publication date of the Draft PEIS. These parties are, therefore, bound by the terms of the PA for the duration of transportation projects within the defined PEIS Corridor. It is anticipated that additional tribes will become signatories to the agreement as the Tier 1 NEPA process proceeds toward the Record of Decision. The partially executed PA is included in Appendix N, and subsequent signed versions up to and including the fully executed document will be included in the Record of Decision. Tribal consultation is a dynamic, long-term process that will continue throughout the PEIS documentation; the PA ensures a consistent approach to Section 106 and other relevant compliance and coordination with the consulting tribes for all future undertakings proposed for the Corridor.

### 3.15.3 Environmental Consequences

#### 3.15.3.1 Potential Damage or Alteration per 36 CFR 800.5(a)(2)(i-iv)

##### Methods

To fulfill and initiate phases of the Section 106 compliance process, the assessment of potential direct effects involved GIS overlaying of alternatives with the historic properties located within a 500-foot boundary from the outer edge of the pavement on either side of I-70. The sites identified in Table 3.15-1 and Table 3.15-2 within the alternative footprint or construction disturbance area are considered to be susceptible to direct encroachment and operational and construction effects. This is an initial and conceptual assessment of effects at the Tier 1 level, not a final determination of effects according to Section 106 regulations. A final determination of effects will be conducted at the Tier 2 level, as appropriate.

For sites locally identified or otherwise, where eligibility has not been determined, the sites are being treated the same as sites previously listed or determined eligible for the purposes of the Tier 1 Decision. Official eligibility determinations will be made in Tier 2.

##### Potential Damage or Alteration by Resource

Alternative footprint and construction disturbance related potential damage or alteration was identified for 12 historic properties listed on Table 3.15-1 and Table 3.15-2. Table 3.15-3 lists the possible damage or alteration to known historic properties by alternative. The number of properties

and types of effects vary depending on the alternative. All potentially affected properties are described in detail in Appendix N. These properties are:

- Hot Springs Historic District (5GF.1050)
- Hot Springs Lodge and Pool (Glenwood Hot Springs Bathhouse, Natatorium, Yampa Spring, 5GF.1050.2) in the Hot Springs Historic District
- Glenwood Springs Viaduct F-07-A (5GF.2717)
- Georgetown-Silver Plume NHL District (5CC.3)
  - Dunderberg Mine (5CC.3.107) eligible as a contributing element to Georgetown-Silver Plume NHL District
  - Mendota Mine (5CC.3.217) eligible as a contributing element to Georgetown-Silver Plume NHL District
- Toll House or Mine Manager's House (Julius G. Pohle House, 5CC.13) property and structures in Georgetown-Silver Plume NHL District
- Big Five Mines (5CC.328)
- Darragh Placer (5CC.985)
- Multicomponent site (5CC.389)
- Two Barns in Lawson (identified in Reconnaissance Survey, not evaluated at this time)
- Loveland Ski Area (identified in Reconnaissance Survey, not evaluated at this time)

##### Hot Springs Historic District (5GF.1050)

The hot springs bathhouse, natatorium, and Yampa Spring were developed between the late 1880s and early 1990s on what was at that time an island in the Colorado River by the Glenwood Hot Springs Company, a combination of local, East Coast, and English investors, led by prominent mining engineer and Glenwood developer, Walter Devereux. With the completion of the Hotel Colorado (5GF.767) to the north of the natatorium in 1893, the resort was visited by many of the business and social elite of Colorado. The district also includes the Glenwood Springs Train Station (Denver and Rio Grande Railroad Station, 5GF.1050.3).

Identification of impacts to the Hot Springs Historic District as a whole will depend on the uses assessed for the properties contained in the District. The Minimal Action alternative would include improvements to the Glenwood Springs interchange 116 that would involve upgrades to all existing ramps, including widening and lengthening, and signalization of the intersections on SH 82 at the bottom of the I-70 ramps. The proposed action could have the potential to affect access and parking to the Hot Springs Lodge and Pool. The intention is to avoid this historic property. Tier 2 studies and design can employ context sensitive design for any project improvements in this area. This Minimal Action component would be included in all of the alternatives.

##### Hot Springs Lodge and Pool (Glenwood Hot Springs Bathhouse, Natatorium, Yampa Spring, 5GF.1050.2) in the Hot Springs Historic District

The Hot Springs Resort was developed between the late 1880s and 1890s on what was at that time an island in the Colorado River. The river was diverted to the south of the island (its current location) by the construction of a large rock wall, and the Yampa Spring was lined with stone in 1886-1887. The natatorium (swimming pool) was then excavated and finished in 1888, in what is essentially the original river bed along the north edge of the island. Finally, the bathhouse (and other small buildings no longer present) was constructed between 1888 and 1890 to complete the spa.

### 3.15 Historic Properties and Native American Consultation

The Minimal Action alternative would include improvements to the Glenwood Springs interchange 116 that would involve upgrades to all existing ramps, including widening and lengthening, and signalization of the intersections on SH 82 at the bottom of the I-70 ramps. The proposed action could have the potential to affect access and parking to the Hot Springs Lodge and Pool. The intention is to avoid this historic property. Tier 2 studies and design can employ context sensitive design for any project improvements in this area. This Minimal Action component would be included in all of the alternatives.

#### Glenwood Springs Viaduct F-07-A (5GF2717)

**Description of Resource.** Built in 1953 to replace one of the most important bridges in the state, the Glenwood Springs Viaduct is historically significant for its role in regional transportation. The bridge is technologically significant as a long-span example of its structural type. During the 1920s and 1930s, the Colorado Highway Department began building steel deck girder structures in lieu of trusses. Not many steel girder bridges were built, limiting their use to particular circumstances such as long-span urban crossings. The Glenwood Springs Viaduct is distinguished as a well-preserved, large-scale example of beam bridge construction in Colorado.

The Minimal Action alternative would include minor improvements to intersections and roads that provide for the movement of vehicles from I-70 interchange 116 to and from SH 82. Although it is remotely possible that there would be an effect to the viaduct, none is identified at this time. No modifications have been identified for the viaduct as a part of these improvements. This Minimal Action component would be included in all of the alternatives.

#### Georgetown-Silver Plume NHL District (5CC.3)

The Georgetown-Silver Plume NHL District represents one of the most scenic and historic of all of Colorado's mining districts. Gold was first discovered along Clear Creek in 1859 and resulted in Georgetown's first boom. Prospectors moved into the area establishing satellite villages such as Silver Plume. The area also became the center of the silver craze of 1867. The district was listed on the NRHP as a National Landmark on November 13, 1966, under all four criteria:

- It is significant under NRHP Criterion A for its associations to the early mining history of Colorado.
- Some of the elements within the NHL District are also considered significant for the associations with persons of note (Criterion B).
- There are architectural values in the Landmark (Criterion C).
- Information contained in other features of the Landmark is important to history (Criterion D).

The Georgetown-Silver Plume NHL District includes many contributing and non-contributing resources. To date, 384 individual properties have been recorded within the district boundaries. Most of these, however, have not been formally evaluated regarding their individual eligibility or contributing status within the NHL District. The file search results identified 57 listed or eligible resources that carry associated point numbers connected to the NHL District and 19 additional sites with separate numbers located within the NHL District.

The Georgetown-Silver Plume NHL District includes the entire commercial and residential areas of both the Georgetown and Silver Plume communities, as well as the Georgetown Loop Railroad grade between them. The Victorian homes and buildings represent the peak of the silver mining industry from 1885 to 1905. The Georgetown Loop Railroad was an engineering marvel of the late nineteenth century when it was built. After the line was abandoned and the tracks removed before World War II, it sat derelict until the 1970s when the historic rail line was rebuilt as a tourist attraction.

Because the landmark extends from the ridge to the north to the ridge to the south of Clear Creek Canyon, an avoidance alternative that would have traveled completely around the National Historic Landmark would require impacts associated with a new alignment spreading into adjacent undeveloped sub-basins of the watershed, with tremendous amounts of engineering, and excessive cost. Therefore, it would not be a prudent and feasible alternative.

The potential for physical damage or alteration of properties in the NHL is directly related to NHL properties that are adjacent to I-70. An unusual situation occurs for this project in that three historic properties are located within the existing I-70 right-of-way. Two mine sites, the Dunderberg Mine (5CC.3.107) and the Mendota Mine (5CC.3.217), are both eligible as contributing elements to the NHL. The Toll House (5CC.13) structures and property, located within the NHL, are individually eligible to the NRHP. All three of these properties are located partially or fully within I-70 right-of-way. All three of these properties are potentially subject to physical impact. Potential impacts are described below.

**Dunderberg Mine (5CC.3.107) eligible as a contributing element to Georgetown-Silver Plume NHL District.** The Dunderberg Mine, one of the largest silver-producing mines within the Georgetown-Silver Plume NHL District, is located on the south slope of Republican Mountain in the Brown Gulch area above and northwest of Silver Plume. It was patented in 1868, and by 1914 it was operated as part of the Terrible Mine. In 1990, the Colorado Mined Land Reclamation Division of the Inactive Mine Program sealed one adit (horizontal entrance to a mine) and two stopes (excavations from which ore has been removed in a series of steps) on the Dunderberg claim. As a result of a subsequent re-evaluation of this property, it was officially determined on June 5, 2000, that it is not individually eligible for the NRHP; however, it was officially determined to be a contributing element to the Georgetown-Silver Plume NHL District on June 13, 1990.

Impacts to this mine would be related to project encounters with mine tailings that overlap the I-70 right-of-way. It is important to note, however, that the Dunderberg Mine tailings are also a Superfund site, and while valuable and historic, they are detrimental in other ways. Most of the former mining operations throughout the Corridor have produced mine waste, including mill tailings. Although there is little mining activity in the area today, precipitation is still leaching residual metals out of old tailings/waste rock piles and from bedrock exposed in the mine drainage tunnels. Section 3.4, Water Resources, addresses the potential for disturbance of historic mine waste materials associated with project alternatives to cause the release of contaminants (such as heavy metals) into streams. I-70 construction activities have played a role in the exposure and disturbance of mine waste and mineralized rock. Historic mining in the Clear Creek watershed is discussed in section 3.8, Regulated Materials and Historic Mining.

**Mendota Mine (5CC.3.217) eligible as a contributing element to Georgetown-Silver Plume NHL District.** The Mendota Mine, located west of Silver Plume and the Burleigh Tunnel and Mine, is one of the mines that contributed to the growth and development of the Georgetown-Silver Plume NHL District. The Mendota veins (101 to 112) were all fissures 3 to 5 feet wide with an 8-inch pay vein. The claims producing gold, silver, lead, and zinc were patented by 1865. A mill on the site was torn down and rebuilt in 1922. A re-evaluation of the veins by the Colorado Inactive Mine Reclamation Program in 2000 indicated that all the veins would be backfilled except 101, 102, 104, and 112; these would be closed with grates. In addition, the boiler on 105 was to be stabilized by construction. The Mendota Mine is considered eligible as a contributing element to the Georgetown-Silver Plume NHL District.

Impacts to this mine would be related to project encounters with mine tailings that overlap the I-70 right-of-way. It is important to note, however, that the Mendota Mine tailings are also a Superfund

site, and while valuable and historic, they are detrimental in other ways. Most of the former mining operations throughout the Corridor have produced mine waste, including mill tailings. Although there is little mining activity in the area today, precipitation is still leaching residual metals out of old tailings/waste rock piles and from bedrock exposed in the mine drainage tunnels. Section 3.4, Water Resources, addresses the potential for disturbance of historic mine waste materials associated with project alternatives to cause the release of contaminants (such as heavy metals) into streams. I-70 construction activities have played a role in the exposure and disturbance of mine waste and mineralized rock. Historic mining in the Clear Creek watershed is discussed in section 3.8, Regulated Materials and Historic Mining.

**Toll House or Mine Manager's House (Julius G. Pohle House, 5CC.13) Property and Structures Individually Eligible and Eligible as a Contributing Element to Georgetown-Silver Plume NHL District**

This site is located in the Georgetown-Silver Plume NHL District within the I-70 right-of-way and would be potentially affected by all alternatives. The site consists of two structures, the main house and an outbuilding built in 1878 by an unknown builder. Although called the Toll House, it is locally known as the Mine Manager's or Pohle House. This site has been listed on the NRHP. The Toll House was moved during the initial construction of I-70. Eligibility criteria for the property are based on Criterion 36 CFR 60.4 (c) relating to architectural characteristics. The integrity of this site is related to the materials and workmanship of the structure. The land does not contribute to the integrity of setting or location for this site. The Toll House is currently leased to the Colorado Historical Society by CDOT. See Appendix N for additional information.

Due to the constraining topography and rockfall hazards along Georgetown Hill, each alternative would involve widening to the south side of I-70 along the eastbound lane, which is adjacent to the Toll House (5CC.13). As a result, there would be a potential for rockfall hazard associated with all alternatives for the Toll House location. A tunneling option through the Georgetown Incline to avoid historic properties adjacent to I-70 was also studied and found to be infeasible due to the extent of historic underground mining tunnels that would be encountered by a transportation tunnel and conflicts with the town of Silver Plume at the western terminus of the tunnel.

**Big Five Mines (5CC.328)**

These mines are dispersed in various locations along the north and south sides of Clear Creek, south of Idaho Springs, between Chicago Creek on the east and a concrete tunnel under I-70. The sites consist of mine waste piles on both sides of Clear Creek Canyon on a slope above an alluvial terrace. One mine portal is located at the base of the hill on the north side of the creek. It encompasses several miles and had been operating since the 1880s. The Big Five Tunnel, Ore Reduction and Transportation Company was organized in 1900. The historic mine operation constructed a tramway tunnel to haul ore east from the mine portal to the mills near the mouth of Chicago Creek. Gordon Tucker of Golder and Associates, Inc., re-evaluated a portion of the site in 1998. The western edge of the property has been affected by highway construction, and portions of the tramway have collapsed into Clear Creek. Remnants of an iron bridge that may have carried the tramway over Clear Creek have been piled next to a chain-link fence at the east end of the north waste pile. These mines were officially determined NRHP-eligible on August 6, 1998, under Criteria A and C.

Impacts to these mines would be related to project encounters with mine tailings that overlap the I-70 right-of-way. It is important to note, however, that the Big Five Mine tailings are also a Superfund site, and while valuable and historic they are detrimental in other ways. Site cleanup was conducted under the Superfund program, which included construction of retaining walls for the tailing piles and capping of toxic waste material. Most of the former mining operations throughout the Corridor have produced mine waste, including mill tailings. Although there is little mining activity in the area today, precipitation is still leaching residual metals out of old tailings/waste rock piles and from bedrock

exposed in the mine drainage tunnels. Section 3.4, Water Resources, addresses the potential for disturbance of historic mine waste materials associated with project alternatives to cause the release of contaminants (such as heavy metals) into streams. I-70 construction activities have played a role in the exposure and disturbance of mine waste and mineralized rock. Historic mining in the Clear Creek watershed is discussed in section 3.8, Regulated Materials and Historic Mining.

**Darragh Placer (5CC.985)**

The Darragh Placer is located along the south side of Clear Creek at the west end of Idaho Springs and about 1,500 feet west of the Clear Creek Ranger Station. Gordon Tucker with Golder and Associates, Inc., originally recorded it in 1998. The property consists of a placer mine with associated mining tailings. It most likely dates to between 1860 and 1900 and predates the Big Five Mines South Waste Pile (5CC.328) located to the south and overlying the Darragh tailings. A steep cut bank and large depressions on the site are the result of scooping out gravel on the south side of Clear Creek. The site was officially determined eligible for the NRHP under Criterion A on August 6, 1998. The property is significant because it is in relatively good condition and illustrates late nineteenth century placer mining techniques.

Impacts to this site would be related to project encounters with mine tailings that overlap the I-70 right-of-way. It is important to note, however, that the Darragh Placer tailings are also a Superfund site, and while valuable and historic, they are detrimental in other ways. Most of the former mining operations throughout the Corridor have produced mine waste, including mill tailings. Although there is little mining activity in the area today, precipitation is still leaching residual metals out of old tailings/waste rock piles and from bedrock exposed in the mine drainage tunnels. Section 3.4, Water Resources, addresses the potential for disturbance of historic mine waste materials associated with project alternatives to cause the release of contaminants (such as heavy metals) into streams. I-70 construction activities have played a role in the exposure and disturbance of mine waste and mineralized rock. Historic mining in the Clear Creek watershed is discussed in section 3.8, Regulated Materials and Historic Mining.

**Multicomponent Site (5CC.389)**

The multicomponent site (5CC.389) contains both prehistoric and historic components and is located east of Idaho Springs. The Colorado Department of Highways recorded it during the survey of Highway Project IR-70-3(154) Twin Tunnels East. Although the historic component of the site is not NRHP eligible, the prehistoric component was officially determined eligible under Criterion D on October 12, 1990. A re-evaluation of the site in 1999 during the survey for the Adesta Communications Fiber Optic System found no changes in the condition of the site. This historic property would be subject to direct effects from the Minimal Action and all other alternatives because it is located partially within the existing right-of-way.

**Two Barns Site**

Two rustic log barn structures occupy a lot that also includes a vernacular bungalow residence with a side gable roof on County Road 308 in Lawson. This property was identified during the Reconnaissance Survey (see Appendix N) and presents a potential for impact in the Lawson area. Only the barns themselves are subject to a potential physical impact; hence, the reference to the Two Barns site. This site falls within the area for potential construction impacts related to the Combination and the Reversible/HOV/HOT Lanes alternatives. This site has not been evaluated for eligibility to the NRHP at this time.

**Loveland Ski Area**

The 2,300-acre Loveland Ski Area is Colorado's closest major ski area to Denver, located on the Continental Divide and just short of the Eisenhower-Johnson Memorial Tunnels (EJMT) in the

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Arapaho and Roosevelt National Forests. Loveland Ski Area is the 10th largest ski resort in Colorado. This complex of skiing and outdoor recreation features dates to the early to mid- twentieth century. This complex was identified during the Reconnaissance Survey (see Appendix N). The complex has the potential to be considered eligible for the NRHP as a historic place, and it has not been evaluated at this time. Local parties identified this resource. All build alternatives (other than Minimal Action) would affect the Loveland Ski Area. The proposed third tunnel bore at the EJMT would use the base of “The Face” ski run at milepost 215.3 and could also disrupt access under I-70, which provides return to the base area from slopes located to the north of I-70. At this Tier 1 level of analysis, new tunnel bores are only conceptually designed, and differentiating among alternatives is not possible.

#### Potential Damage or Alteration by Alternative

Table 3.15-3 summarizes potential impacts to known historic properties by alternative.

##### No Action

The No Action alternative would include several planned or permitted projects, which are described in detail in Chapter 2, Description and Comparison of Alternatives. Effects to historic properties associated with these projects are addressed in other environmental documents, including the *Eagle County Airport Interchange EA*, the *SH 9 EIS*, the *Gaming Area Access EIS*, and the *Hogback Parking Facility EA*. No additional effects to historic properties are anticipated to occur under the No Action alternative.

##### Minimal Action

Design details have not been determined for the Minimal Action alternative at this Tier 1 level. Tier 2 details will determine effects on any properties affected by the Minimal Action alternative. The following describes the types of Minimal Action-related improvements anticipated in proximity to historic properties. Minimal Action improvements would automatically be included in all of the other build alternatives. The Minimal Action alternative footprint is expected to damage or alter eight known historic properties. Construction impacts on 10 properties would be possible.

**Glenwood Springs Interchange 116.** The Minimal Action alternative would include improvements to the Glenwood Springs interchange 116 that would involve upgrades to all existing ramps, including widening and lengthening, and signalization of the intersections on SH 82 at the bottom of the I-70 ramps. Although it is possible that potential damage or alteration to the Hot Springs Historic District (5GF.1050) and Hot Springs Lodge and Pool (5GF.1050.2) property could be identified in Tier 2, effects have not been identified at this time. The intention is to avoid this historic property. Tier 2 studies and design can employ context sensitive design for any project improvements in this area. No impacts to the Glenwood Springs Viaduct (5GF.2717) have been identified at this time, although there is a remote possibility of some effect to this historic bridge. This Minimal Action component would be included in all of the alternatives.

**General Alignment Between Mileposts 226 and 228.** The Georgetown-Silver Plume NHL District (5CC.3) would be potentially physically affected by any impacts to the Toll House or Mine Manager’s House (Julius G. Pohle House, 5CC.13) structures. The house was moved during the previous construction of I-70 and is located within the I-70 right-of-way. The Minimal Action alternative would expand I-70 even closer to the Toll House and could potentially affect the historic structures. Determination of effects will occur during Tier 2 analyses.

**Modification of Silver Plume Interchange 226.** For this study, it is assumed that the westbound ramps at the Silver Plume interchange 226 would be moved to a location approximately 1 mile to the west where the interstate goes over the frontage road. Small encroachments would occur to the

Georgetown-Silver Plume NHL District (5CC.3) at the Dunderberg Mine (5CC.3.107) and Mendota Mine (5CC.3.217) properties. The Mendota Mine would be minimally affected by construction activities only. The surface area has previously been disturbed by construction of I-70 and reclamation of tailings piles. The areas of disturbance to both of these sites are within the existing I-70 right-of-way. Determination of effects will occur during Tier 2 analyses.

**Idaho Springs between mileposts 239 and 240.** Modification at milepost 239 would provide increased capacity at the intersection of the ramps and the frontage road. Ramps would be widened and left-turn bays provided on the crossroad at the interchange at milepost 240. Portions of the Big Five Mines (5CC.328) sites are already overlain by the interstate. Small additional encroachments would occur with any modification. The Darragh Placer (5CC.985) is located adjacent to the highway and would be minimally affected by construction activities only.

**East of Idaho Springs.** The multicomponent site (5CC.389) would be directly affected by any highway modifications or disturbance within the I-70 right-of-way. Data recovery could be initiated for this location if needed.

##### Transit

The Transit alternatives (Rail with IMC, AGS, Dual-Mode and Diesel Bus in Guideway) would potentially damage or alter up to 11 properties.

- Hot Springs Historic District (5GF.1050)
- Hot Springs Lodge and Pool (Glenwood Hot Springs Bathhouse, Natatorium, Yampa Spring, 5GF.1050.2) in the Hot Springs Historic District
- Glenwood Springs Viaduct F-07-A (5GF.2717)
- Georgetown-Silver Plume NHL District (5CC.3)
  - Dunderberg Mine (5CC.3.107)
  - Mendota Mine (5CC.3.217) – construction impacts only
- The Toll House (5CC.13) structures would be potentially affected by the Transit alternatives. Due to this individually eligible site’s location within the Georgetown-Silver Plume NHL District (5CC.3), these impacts could also affect the NHL District. There is little potential to avoid the structures, located in I-70 right-of-way, by shifting the alignment of the alternatives due to the constraining topography and rockfall hazards along Georgetown Hill. Avoidance would not be possible because of local terrain. Shifting alignment to the north would cut into the rockfall hazard area along Georgetown Hill, potentially putting motorists at risk. Historic preservation would be possible, but *in situ* preservation may not be feasible.
- Big Five Mines (5CC.328)
- Darragh Placer (5CC.985) – Rail with IMC and AGS only, and construction impacts for all
- Multicomponent site (5CC.389)
- Loveland Ski Area (no site number)

Table 3.15-3. Potential Physical Destruction or Damage to Known Properties By Alternative per 36 CFR 800.5 (a)(2)(v)

Site Number	Name	Transit Alternatives								Highway Alternatives						Combination Highway/Transit Alternatives									
		1		2		3		4		5		6		7		8		9		10		11		12	
		Minimal Action	Rail with IMC	AGS	Dual-Mode Bus in Guideway	Diesel Bus in Guideway	6-Lane Highway 55 mph	6-Lane Highway 65 mph	Reversible/HOV/HOT Lanes	6-Lane Highway with Rail and IMC	6-Lane Highway with AGS	6-Lane Highway with Dual-Mode Bus in Guideway	6-Lane Highway with Diesel Bus in Guideway												
FP	CD	FP	CD	FP	CD	FP	CD	FP	CD	FP	CD	FP	CD	FP	CD	FP	CD	FP	CD	FP	CD	FP	CD		
5GF.1050	Hot Springs Historic District	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	
5GF.1050.2	Hot Springs Lodge and Pool	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	
5GF.2717	Glenwood Springs Viaduct F-07-A	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	
5CC.3	Georgetown-Silver Plume National Historic Landmark District	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	
5CC.3.107	Dunderberg Mine (tailings only) - contributing to NHL	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	
5CC.3.217	Mendota Mine (tailings only) - contributing to NHL		X		X		X		X		X		X		X		X		X		X		X		
5CC.13	Toll House, Mine Manager's House, Pohle Property - individually eligible and contributing element in NHL	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	
5CC.328	Big Five Mines Site (tailings only)	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	
5CC.985	Darragh Placer (tailings only)		X	X	X	X	X		X		X		X		X		X		X		X		X		
5CC.389	Multicomponent Site (Prehistoric and Historic)	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	
No Number	2 Barns from Lawson Area															X		X		X		X		X	
No Number	Loveland Ski Area Lease			X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	
	<b>FP / CD Total</b>	<b>8</b>	<b>10</b>	<b>10</b>	<b>11</b>	<b>10</b>	<b>11</b>	<b>9</b>	<b>11</b>	<b>9</b>	<b>11</b>	<b>9</b>	<b>11</b>	<b>9</b>	<b>12</b>	<b>9</b>	<b>12</b>	<b>9</b>	<b>12</b>	<b>9</b>	<b>12</b>	<b>9</b>	<b>12</b>		

LEGEND:

FP = Resource within footprint

CD = Resource within construction disturbance zone

X Potential Damage or Alteration

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#### Highway

Potential damage or alteration due to Highway alternatives has been identified for up to 12 properties.

- Hot Springs Historic District (5GF.1050)
- Hot Springs Lodge and Pool (Glenwood Hot Springs Bathhouse. Natatorium, Yampa Spring, 5GF.1050.2) in the Hot Springs Historic District
- Glenwood Springs Viaduct F-07-A (5GF.2717)
- Georgetown-Silver Plume NHL District (5CC.3)
  - Dunderberg Mine (5CC.3.107)
  - Mendota Mine (5CC.3.217) - construction impacts only
- The Toll House (5CC.13) structures would be potentially affected by the Highway alternatives. Due to this individually eligible site's location within the Georgetown-Silver Plume NHL District (5CC.3), these impacts could also affect the NHL District. There is little potential to avoid the structures, located in I-70 right-of-way by shifting the alignment of the alternatives due to the constraining topography and rockfall hazards along Georgetown Hill. Avoidance would not be possible because of local terrain. Shifting alignment to the north would cut into the rockfall hazard area along Georgetown Hill, potentially putting motorists at risk. Historic preservation would be possible, but *in situ* preservation may not be feasible.
- Big Five Mines (5CC.328)
- Darragh Placer (5CC.985) - construction impacts only
- Multicomponent site (5CC.389)
- Loveland Ski Area Resort (no site number)

The Reversible/HOV/HOT Lanes alternative would also have potential construction impacts on the Two Barns site in Lawson (no site number).

#### Combination

Potential direct effects due to the Combination alternatives have been identified for up to 12 properties:

- Hot Springs Historic District (5GF.1050)
- Hot Springs Lodge and Pool (Glenwood Hot Springs Bathhouse. Natatorium, Yampa Spring, 5GF.1050.2) in the Hot Springs Historic District
- Glenwood Springs Viaduct F-07-A (5GF.2717)
- Georgetown-Silver Plume NHL District (5CC.3)
  - Dunderberg Mine (5CC.3.107)
  - Mendota Mine (5CC.3.217) – construction impacts only
- The Toll House (5CC.13) structures would potentially be affected by the Combination alternatives. Due to this individually eligible site's location within the Georgetown-Silver Plume NHL District (5CC.3), these impacts could also affect the NHL District. There would be little potential to avoid the structures, located in the I-70 right-of-way by shifting the alignment of the alternatives due to the constraining topography and rockfall hazards along Georgetown Hill. Avoidance would not be possible because of local terrain. Shifting alignment to the north would

cut into the rockfall hazard area along Georgetown Hill, potentially putting motorists at risk. Historic preservation would be possible, but *in situ* preservation may not be feasible.

- Big Five Mines (5CC.328)
- Darragh Placer (5CC.985) - construction impacts only
- Multicomponent site (5CC.389)
- Two barns in Lawson (no site number) – construction impacts only
- Loveland Ski Area (no site number)

#### Mitigation of Damage or Alteration

Mitigation strategies would include avoiding or minimizing effects on historic properties. Avoidance of potential effects to historic properties at the Tier 1 level is the goal of the PEIS. Mitigation for any adversely affected properties would be determined in consultation with the SHPO and consulting parties at the Tier 2 level after eligibility and effects determinations are made. Construction monitoring of any archaeological sites would be performed in consultation with Native American tribes, as appropriate, according to the stipulations present in the Tribal Consultation PA (see Appendix N, Historic Property Survey, Native American Consultation, and Paleontological Resources).

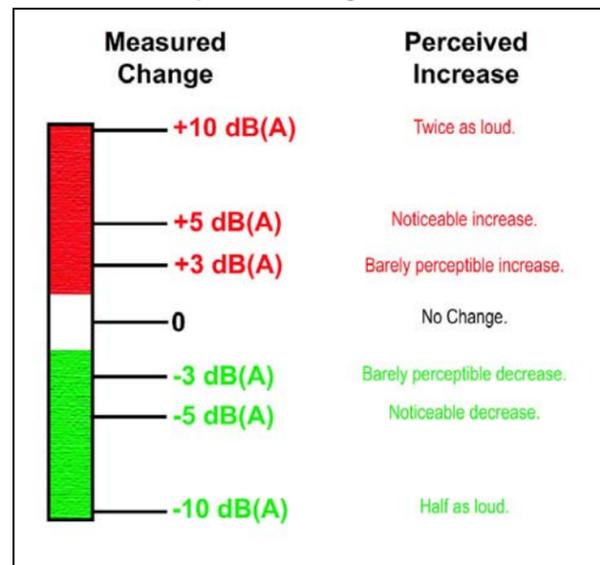
As a result, at the Tier 1 conceptual level of study, damage or alteration to properties in the Corridor, including those in historic districts and historic areas, would have the potential to be avoided and minimized. Final determination for all effects (damage or alteration, noise and visual) on the significance of the historic properties will be made in Tier 2.

#### 3.15.3.2 Potential Noise Effects per 36 CFR 800.5(a)(2)(v)

Potential noise-related effects were identified based on the noise analysis presented in section 3.12, Noise. Noise-related definitions and regulations are summarized in that section. Findings from the PEIS noise analysis that are relevant to historic properties are summarized below.

Chart 3.15-1 provides information about the relationship between actually measured noise changes and perceived sound increases.

Chart 3.15-1. Perception of Changes in Traffic Noise Levels



Affected Noise Environment

Noise analyses were not conducted for individual historic properties or sites identified during the Reconnaissance Survey. Existing noise levels were measured at four historic community locations: Silver Plume; Georgetown; Lawson, Downieville, Dumont; and Idaho Springs. Table 3.15-4 illustrates this information.

Table 3.15-4. Existing Noise Level Measurements (2001 and 2003) for Historic Communities

Town	Location	Site No.	Day of Week	Peak Hour Leq (dB(A))
Silver Plume (includes National Historic Landmark District)	Behind existing noise wall	M1	Wednesday	57
	Near interchange	M2	Wednesday	59
	East end of town	M3	Wednesday	68
	RR depot		All	63
Georgetown (includes National Historic Landmark District)	Below I-70 bench	M1	Friday	52
	East of interchange	M2	Friday	68
Lawson, Downieville, and Dumont (potential historic area)	Lawson: South side of I-70, along Silver Lakes Drive	M1	All	65
	Dumont: South side of I-70, along Stanley Road	M2	All	68
Idaho Springs (includes Historic Commercial District and potential historic area)	Residences on east end of town	M1	Sunday	65
	Downtown	M2	Sunday	65
	Residences on west end of town	M3	Tuesday	64
	Charlie Tayer Water Wheel	M4	All	72

Potential Noise Effects on Historic Communities

Table 3.15-5 summarizes predicted noise levels at historic community locations within the Corridor. Noise levels were predicted for the “loudest hour” at a distance of 250 feet. This table provides general quantitative information by alternative for these locations. Note that a maximum increase of up to 10 dB(A) is predicted for any alternative. The Bus in Guideway, Highway, and Combination alternatives would generate the highest increases in “loudest hour” noise levels.

Potential noise effects on each historic community are described below by alternative. Final determination for noise effects on the significance of the historic properties will be made in Tier 2.

Potential Noise Effects by Alternative

No Action

Increases in noise levels under the No Action alternative would be barely perceptible (ranging from 0 to 1 dB(A)) to most people in the historic communities, provided traffic volumes do not more than double at night. This is due to the fact that the predicted increases would be relatively small, there would be no physical changes made to the highway, and there would be no change in the character of the sound. Aside from average traffic noise levels, there would be the issue of the loud bursts of noise from the use of unmuffled “jake brakes,” which are engine compression brakes equipped on many large trucks. Maximum noise levels from individual truck pass-bys and from “jake brake” events would be 5 to 10 dB(A) above average traffic noise levels (see section 3.12, Noise).

Table 3.15-5. Properties Subject to Audible Intrusions per 36 CFR 800.5(a)(2)(v)

Area (West to East)	Alternative	Existing “Loudest Hour” Noise Level 250 Feet from Center of I-70 (dB(A)) <sup>1</sup>	2025 “Loudest Hour” Noise Level 250 Feet from Center of I-70 (dB(A))	Comments
Silver Plume (includes National Historic Landmark District)	No Action	57	58	Assumes existing noise wall remains or is rebuilt
	Minimal Action		58	
	Rail with IMC		59	
	AGS		58	
	Dual-Mode Bus in Guideway		58	
	Diesel Bus in Guideway		59	
	Highway Alternatives		60	
	Combination 6-Lane Highway with Rail and IMC		61	
	Combination 6-Lane Highway with AGS		60	
Georgetown (includes National Historic Landmark District)	No Action	53	54	Location analyzed is 350 feet from center of I-70, near the Loop RR depot in Georgetown
	Minimal Action		56	
	Rail with IMC		55	
	AGS		54	
	Dual-Mode Bus in Guideway		54	
	Diesel Bus in Guideway		55	
	Highway Alternatives		56	
	Combination 6-Lane Highway with Rail and IMC		57	
	Combination 6-Lane Highway with AGS		56	
Lawson, Downieville, and Dumont (potential historic area)	No Action	65	66	Assumes transit in median
	Minimal Action		66	
	Rail with IMC		67	
	AGS		66	
	Dual-Mode Bus in Guideway		66	
	Diesel Bus in Guideway		67	
	Highway Alternatives		68	
	Combination 6-Lane Highway with Rail and IMC		69	
	Combination 6-Lane Highway with AGS		68	
Idaho Springs (includes Historic Commercial District and potential historic area)	No Action	65	65	Assumes structured elements
	Minimal Action		65	
	Rail with IMC		67	
	AGS		66	
	Dual-Mode Bus in Guideway		66-72	
	Diesel Bus in Guideway		67-72	
	Highway Alternatives		68-73	
	Combination 6-Lane Highway with Rail and IMC		69-75	
	Combination 6-Lane Highway with AGS		69-75	
Combination 6-Lane Highway with Bus in Guideway	69-75			

<sup>1</sup> Values modeled for year 2000 using year 2000 data, for the purpose of providing an appropriate comparison point.

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#### Minimal Action

The changes in noise levels under this alternative would, for the most part, be the same as those for the No Action alternative. The only difference is that approximately 180 buses per hour would be added to the traffic stream during peak times. Standard diesel buses are approximately equivalent to a semitrailer in terms of noise. This is predicted to result in an increase of approximately 1 to 2 dB(A) in the “loudest hour” noise level over existing conditions. Again, because this alternative would involve adding more of the same type of noise source that exists presently and making no physical change to the existing highway, the projected noise level increases should be imperceptible to most people in the historic communities.

#### Rail with IMC

Unlike the Bus in Guideway and Highway alternatives, which would involve adding more internal combustion, rubber tire vehicles to the highway, the Rail with IMC alternative would introduce an entirely new and different noise source into the area. On a 1-hour average basis, this alternative would produce relatively little noise compared to that of the existing highway. Assuming 40 trains per hour during peak service, overall noise levels are predicted to increase by approximately 2 dB(A). The projected noise level increases should be imperceptible to most people in the historic communities.

#### AGS

The AGS alternative also would introduce an entirely new and different noise source into the area. The AGS currently under consideration is the urban magnetic levitation (maglev), which would be suspended above the guideway with electromagnetic force. As a result, there would be no noise from the interaction of the train and the guideway. On a 1-hour average basis, this alternative would produce relatively little noise compared to that of the existing highway. Assuming 40 trains per hour during peak service, overall noise levels are predicted to increase by 1 dB(A) or less. This system would also be completely grade-separated from surface traffic, thus no warning signals would be required. The projected noise level increases should be imperceptible to most people in the historic communities.

#### Dual-Mode Bus in Guideway

Under the Dual-Mode Bus in Guideway alternative, buses would be propelled by electric motors while in the guideway. Electric buses would have the advantage of no engine noise, but tire noise, gear noise, and cooling system noise would still be present. Overall, this alternative is predicted to increase existing loudest hour noise levels increase by 1 to 6 dB(A). When operating outside the guideway, these buses would have noise characteristics similar to those of standard diesel buses. The projected noise level increases should be imperceptible to most people in the historic communities.

#### Diesel Bus in Guideway

Under the Diesel Bus in Guideway alternative, diesel buses would operate in a guideway located in the median of I-70 from Silverthorne to C-470. The operation of the buses would increase “loudest hour” noise levels by 2 to 7 dB(A) over existing conditions, and overall the changes would be similar to the buses in mixed traffic in the Minimal Action alternative. When operating outside the guideway, these buses would have noise characteristics similar to those of standard diesel buses. There would be physical changes to the existing highway to accommodate this alternative, the effects of which are discussed in section 3.12.2.2. The projected noise level increases should be imperceptible to most people in the historic communities.

#### Six-Lane Highway (55 mph or 65 mph)

The amount of noise produced by a highway depends on the volume, speed, and type of traffic traveling on it. Under the Six-Lane Highway (55 mph or 65 mph) alternatives, one lane would be added in each direction on I-70. This would allow more traffic to travel at free-flow speed and would

result in noise level increases of 3 to 8 dB(A) during peak times. The projected noise level increases should be barely perceptible to most people in the historic communities.

#### Combination

Each Combination alternative would include three implementation scenarios:

- Build Combination Simultaneously
- Build Transit and Preserve for Highway
- Build Highway and Preserve for Transit

For Combination alternatives where Highway and Transit components would be built simultaneously, noise impacts would be a total of the Highway alternative impacts and the Transit alternative impacts.

For Combination alternatives where Transit components would be built first, noise impacts would be the same as those under the Transit-alone alternatives, until the point in time when the full combination has been completed.

For Combination alternatives where Highway components would be built first, noise impacts would be the same as those under the Highway-alone alternatives, until the time when the full combination has been completed.

Noise level increases would range from 3 to 10 dB(A) for these Combination alternatives. Where noise level increases of 4 dB(A) would occur, the increase would be perceptible to people in the historic communities. Where noise levels would increase by 10 dB(A), the increase in noise level would double over existing conditions.

#### Other Potential Noise Effects

One potential indirect noise impact on this project would be traffic traveling to transit stations. The main roads that feed the stations would see an increase in traffic volume. Noise levels would increase 3 dB(A) for every doubling of traffic volume, provided there would be no congestion.

A second potential indirect noise impact would be related to induced growth. Additional growth in the area would result in more background noise, such as that from traffic on local streets, building construction, and people going about daily activities such as mowing the lawn. On a long-term average basis, noise levels would increase by 3 dB(A) for every doubling of the population. Higher, shorter term increases would result, such as those that would exist near a new home being constructed.

Construction of the action alternatives would generate noise from diesel-powered earthmoving equipment such as dump trucks and bulldozers, backup alarms on certain equipment, compressors, or pile drivers. There would be the potential for impact because this equipment would need to operate in close proximity to residences and businesses. Additional information is found in section 3.12.2.5.

#### Noise Effect Mitigation Strategies

Mitigation strategies described in section 3.12 would include noise walls, noise berms, small concrete barriers (“Jersey barriers”), reduction of speed limits, acquisition of property to form buffer zones, alteration of vertical and/or horizontal alignments, enforcement of state law for mufflers regarding “jake” brakes, noise insulation for buildings, pavement type variations, and active noise control techniques.

These measures will be considered where applicable in future Tier 2 studies. Noise mitigation measures will be evaluated for properties during these studies that meet the impact criteria under the appropriate regulations (FHWA/FTA) based on the future proposed alternatives.

**3.15.3.3 Potential Visual Effects per 36 CFR 800.5(a)(2)(v)**

Visual impacts are evaluated under Section 106 of the NHPA using the criteria for adverse effect (36 CFR 800.5(1)). The criteria indicate that an adverse effect is found when an undertaking alters directly or indirectly any of the characteristics of a historic property that qualify the property for inclusion in the NRHP in a manner that would “diminish the integrity of the property’s location, design, setting, materials, workmanship, feeling, or association.” (36 CFR 800.9(a) and (b))

Integrity of historic setting has been modified in the past in varying degrees throughout the Corridor by I-70. Much of the Corridor is still rural, however, and the visual contrast of alternatives could further diminish the setting: the higher the contrast, the greater the loss of the character.

At this Tier 1 level of analysis, visual resources have been assessed for the general setting of historic properties. Due to the size of the Corridor and number of properties, it is not feasible to conduct an analysis of potential adverse effects under the NHPA. Such a site-specific analysis of visual effects will be conducted at Tier 2, as appropriate.

As the potential visual effects analysis under the NHPA is consistent with the approach to assessing visual impacts to other sensitive resources, such as communities and recreations (see section 3.13), an analysis for Tier 1 has been established to provide relative comparisons between alternatives. Note that these impact assessments do not represent effects determinations under Section 106 of the NHPA for Tier 2 studies. However, the degree of visual impact assessed in this section is an indicator of the level of potential effect to historic districts and sites under the NHPA.

**Scenery Inventory and Impact Assessment Methods**

The first step in completing a visual resource inventory was the development of 27 distinct **Scenery Analysis Units (SAUs)** across the Corridor as defined by distinct landform character, vegetative appearance, and community values or place identity. Community values and place identity were initially identified through review of local town and county plans. Inventory methods for visual analysis are documented in section 3.13. A more detailed description is available in Appendix L, Visual Resources.

Details of the inventory and landscape characteristics at this detailed level are also available in Appendix L, Visual Resources. Table 3.15-7 lists SAUs by county. The SAUs discussed in this section are only those that contain historic properties that might be affected by their proximity to project alternatives.

Once the inventory is completed and the affected environment is described, a systematic approach is applied to the analysis of impacts on the landscape character for each project alternative. The first step is the identification of anticipated changes associated with alternative elements, whether the changes are in terms of change to landform, or change or addition to structures. Each anticipated change created by project elements is ranked from weak to very strong denoting the extent of change (potential level of visual contrast independent of setting context or views). This part of the assessment is independent of the surrounding landscape. The assessment of visual contrast of project alternatives is discussed in section 3.13, and the method is described in more detail in Appendix L, Visual Resources.

These project elements are then assessed in terms of their level of impact based on setting and viewer characteristics. Considered in terms of the setting, the assessment of impacts is made based on proximity to views; that is, whether the project element is within the foreground, middleground, or background in relation to the viewpoint. The visual impact assessment consists of an overlay of

contrast (alternative-specific), landscape characteristic, and views to determine whether the alternative is dominant to the characteristic landscape, subordinate to the characteristic landscape, or somewhere in between. The methods used to assess visual impacts are discussed in section 3.13 and described in more detail in Appendix L, Visual Resources.

At the Tier 1 level, analysis is not property-specific – rather, it addresses the setting in which a historic property exists. A certain degree of generalization is therefore necessary. Table 3.15-6 illustrates levels of visual impact based on degree of contrast and proximity of sensitive views. Note that certain contrast levels have been grouped (both very strong and strong are shaded red, moderate to strong and moderate are shaded yellow). This allows for a more generalized discussion of impacts to historic properties, which can be refined at Tier 2.

**Table 3.15-6. Generalized Visual Impacts Model**

		Visibility Distance Zones	
		Foreground Views (FG) 0 to 0.5 Mile	Middleground Views (MG) 0.5 to 3 Miles
Structure/Landform Contrast	Very Strong	High	Moderate to High
	Strong		
	Moderate to Strong	Moderate to High	Low to Moderate
	Moderate		
	Weak	Low to Moderate	Low

The following provides an overview of the Corridor setting, including landscape characteristics (existing visual conditions and scenic attractiveness), and key viewpoints within the five counties along the Corridor. A detailed visual inventory was conducted at a smaller scale, within visually distinct segments of the Corridor identified as SAUs (see Appendix L, Visual Resources). Table 3.15-7 provides visual influence of alternatives on SAUs and historic sites, also discussed by county.

**Affected Visual Environment and Environmental Consequences**

Table 3.15-7 documents the range of visual influence associated with properties listed on or eligible to the NRHP and SRHP, as well as properties identified as a result of the windshield survey and local input from the Reconnaissance Survey. Representative properties from historic districts (including national landmarks) are included. National landmark and other historic districts are identified separately. Archaeological sites are not included. Many additional sites have been identified as a result of the file search for this Corridor. Tier 2 analyses will address these sites as appropriate.

**Garfield County SAU**

The range of visual influence associated with historic site project elements in Garfield County is documented in Table 3.15-7. This SAU includes the Hot Springs Historic District (5GF.1050) and a potential Commercial Historic District, both in Glenwood Springs.

**Setting and Sense of Place**

Only a small portion of eastern Garfield County is within the Corridor. This portion includes some of the more dramatic and diverse scenery that exists within the entire Corridor. Corridor settings within Garfield County include an urban mountain setting, a narrow canyon environment (Glenwood Canyon), and an agriculturally developed broad river valley, all centered on the Colorado River

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between the communities of Glenwood Springs and Dotsero. Except for the area adjacent to Glenwood Springs interchange 116, the remainder of Garfield County outside I-70 right-of-way has not been included in the APE.

Several characteristics contribute to the sense of place within the Garfield County SAU around Glenwood Springs. Glenwood Springs, now highly valued for its recreational amenities, also has a long history associated with the hot springs resort and silver mining. Glenwood Springs is a historic community located at the confluence of the Colorado and Roaring Fork rivers and is known for the Hotel Colorado and the surrounding Hot Springs Historic District (5GF.1050). In close proximity to the Hot Springs Historic District, the Glenwood Springs Viaduct (5GF.2717) provides passage over the Colorado River. A total of nine historic sites have been identified in the APE within this SAU.

#### *Visual Influence of Alternative*

The only alternative proposed within Garfield County would be in the vicinity of the Glenwood Springs interchange 116. Minimal Action improvements would involve reconstructing the intersections and roads that provide for the movement of vehicles from the interstate off-ramps to the SH 82 overpass. Due to lack of conceptual design information for the Glenwood Springs interchange 116, there is limited ability to describe potential impacts to these historic properties. Potential effects may occur to the Glenwood Springs Viaduct (5GF.2717) over I-70. Widening of SH 82 and the Glenwood Springs Viaduct could also encroach upon the Hot Springs Historic District (5GF.1050). It is assumed that avoidance, minimization strategies, and context sensitive designs will be applied at the Tier 2 level design. The compatibility of alternatives with local settings will need to be evaluated in the context of these designs.

#### Eagle County SAUs

The range of visual influence associated with project elements in Eagle County is illustrated in Table 3.15-7.

#### *Setting and Sense of Place*

Eagle County was divided into nine SAUs for the purposes of detailed assessment (provided in Appendix L). This large number of units in one county is an indication of the various landscape characteristics present in the county. Stretching from the broad river valley at Dotsero to the spectacular red rock escarpments at Red Canyon, through the Eagle Valley to Dowd Canyon, where views are dominated by the striking banded cliffs of the Minturn formation, and on through Vail Valley to Vail Pass, this County has much to offer in terms of sightseeing and recreation. The portion of I-70 from the Garfield County line to milepost 139.5 in Eagle County is outside the APE.

The sense of place within the Eagle County SAUs has traditionally been recreation oriented. While numerous historic and archaeological resources have been identified within the APE (a total of 18 properties), they do not contribute largely to its sense of place.

#### *Visual Influence of Alternatives*

The Rail with IMC, AGS, and Combination alternatives are proposed within the Eagle County SAUs. Additionally, several Minimal Action components associated with all other action alternatives would occur within the Eagle County SAUs. Minimal Action alternative components proposed within Eagle County SAUs would include interchange modifications, curve safety modifications, and auxiliary lanes.

Within the Eagle County SAUs, the Rail with IMC alternative would consist of (1) the Intermountain Connection, which would involve use of the UPRR track from the Minturn interchange to the Eagle County Airport, combined with (2) a new electric rail facility. Because no new structures or landform

changes would be necessary with the use of the existing UPRR track, this portion of the Rail with IMC alternative would result in no visual contrast or impact. In areas where the new rail facility would be elevated (approximately 15 miles in select locations between Dowd Canyon and east Vail Pass), it is anticipated to dominate the setting and result in very strong contrast. The on-grade portions of the Rail with IMC alternative are anticipated to result in moderate contrast. The AGS alternative would be a completely elevated system. AGS, while relatively less visually complicated and obtrusive than the elevated rail, is anticipated to result in changes that attract attention and result in strong visual contrast. Rail with IMC and AGS alternatives within the Eagle County SAUs are anticipated to range from low to moderate to high visual impacts.

The curve safety modification at Dowd Canyon and the auxiliary lanes along Vail Pass, associated with the Highway and the Combination alternatives, are anticipated to result in moderate and moderate to strong contrast where major landform changes would be necessary to accommodate the alternatives in this mountainous terrain. Elements such as long, continuous large-scale walls or major cut-and-fill slopes are anticipated to attract attention and dominate the setting. The Minimal Action components associated with the Highway and Combination alternatives are anticipated to range from low to moderate and moderate to high visual impacts throughout the Eagle County SAUs.

#### Summit County SAUs

The range of visual influence associated with project elements in Summit County is shown in Table 3.15-7.

#### *Setting and Sense of Place*

I-70 passes through numerous scenic areas in Summit County. Entering the county (from the west) at Copper Mountain, I-70 traverses the dramatic canyon environment of Officers Gulch and Tenmile Canyon. The highway then passes through the Blue River and Straight Creek stream valleys to the county line at the Continental Divide, which features panoramic views west to the Gore and Tenmile mountain ranges.

The sense of place within the Summit County SAUs has traditionally been recreation and mining oriented. Few known historic sites have been identified in this SAU within the APE (a total of seven properties), and they do not contribute largely to its sense of place.

#### *Visual Influence of Alternatives*

The Rail with IMC, AGS, Bus in Guideway, and Combination alternatives are proposed within the Summit County SAUs. Minimal Action components proposed within Summit County SAUs are limited to interchange modifications. Minimal Action components are anticipated to create localized changes and primarily result in changes that do not attract attention and are subordinate to the setting (weak contrast). **Only the Minimal Action components associated with Highway alternatives would occur in Summit County and are anticipated to result in low to moderate visual impacts.**

The portion of the Rail with IMC alternative within the relevant Summit County SAUs (those including historic properties) would be primarily on grade and anticipated to result mainly in moderate contrast. Due to the proposed design of the alternative, this alternative is anticipated to result in low to moderate and moderate to high visual impacts within the Summit County SAUs.

The AGS alternative would be a completely elevated system. AGS, while relatively less visually complicated and obtrusive than the elevated rail, is anticipated to result in changes that would attract attention and result in strong visual contrast. Due to the proposed design of the AGS alternative and its proximity to sensitive historic properties, it is anticipated to result in moderate to high and high visual impacts within the Summit County SAUs.

The Dual-Mode and Diesel Bus in Guideway alternatives are anticipated to result in primarily moderate visual contrast. Due to the proposed design of the alternatives and their proximity to sensitive historic properties, these alternatives are anticipated to result in low to moderate and moderate to high visual impacts within the Summit County SAUs.

**Clear Creek County SAUs**

The range of visual influence associated with project elements in Clear Creek County is illustrated in Table 3.15-7. Figure 3.15-3 and Figure 3.15-4 provide visual simulations for existing conditions and proposed alternatives for Silver Plume. Figure 3.15-5 provides a look at historic Georgetown, the existing I-70 through Georgetown, and a simulation for the Six-Lane Highway alternative through Georgetown. Figure 3.15-6 provides existing and proposed alternative simulations for Idaho Springs.

*Setting and Sense of Place*

Clear Creek County is best known for its mining history, the Loveland Ski Area, Clear Creek Canyon, and 14,000-foot peaks. I-70 enters Clear Creek County from the west through the EJMT, where dramatic views are enclosed by the Continental Divide. The rugged and rural Clear Creek Canyon and the historic mining area are the primary contributors to the identity of Clear Creek County. The Georgetown-Silver Plume NHL District encompasses an area of extensive historic mining activities with many mine tailings, shafts, tipples, and mill remains visible from I-70 and surrounding areas, as well as many colorful and historic buildings. The road fill associated with I-70 dominates views from the Georgetown SAU. Clear Creek County SAUs also include the historic cities of Lawson, Downieville, and Dumont; the Idaho Springs Commercial District; and a potential Idaho Springs historic area. The state designated Silver Heritage Area encompasses several SAUs. Many historic and archaeological resources exist within the APE and contribute largely to its sense of place. Table 3.15-7 includes 62 representative properties.

*Visual Influence of Alternatives*

Alternatives proposed within Clear Creek County SAUs include Transit, Highway, and Combination alternatives.

Within Clear Creek County SAUs, the Rail with IMC alternative would be elevated for a distance of approximately 7 miles in select locations, where it is anticipated to dominate the setting and result in very strong contrast. The remainder of the Rail with IMC alternative throughout the county would be on grade, and anticipated to result primarily in moderate contrast. Due to the proposed design of the alternative and proximity to sensitive historic properties, this alternative is anticipated to result in low to moderate, moderate to high, and high visual impacts within the Clear Creek County SAUs.

The AGS alternative would be a completely elevated system. AGS, while relatively less visually complicated and obtrusive than the elevated rail, is anticipated to result in changes that attract attention and result in strong visual contrast. Due to the proposed design of the alternative and proximity to sensitive historic properties, this alternative is anticipated to result in moderate to high and high visual impacts within the Clear Creek County SAUs.

With the exception of the Minimal Action alternative, all other build alternatives are anticipated to dominate the setting within the Idaho Springs/Chicago Creek and Floyd Hill SAUs, resulting in strong and very strong visual contrast levels and moderate to high and high visual impacts.

Areas of on-grade Bus in Guideway could result in visual contrast ranging from moderate to moderate to strong depending on the necessary landform change. Due to the proposed design of the alternatives and proximity to sensitive historic properties, these alternatives are anticipated to result in low, low to moderate, moderate to high, and high visual impacts within the Clear Creek County SAUs.

With the exception of the Minimal Action alternative, all other build alternatives are anticipated to modify the visual character of the landscape setting and historic properties within the Silver Plume SAU to varying extents. Due to the proximity and orientation of I-70 (approximately 100 feet lower than I-70) to project alternatives in the Georgetown SAU, a lesser degree of visual influences is anticipated than is anticipated in Silver Plume. In Silver Plume, the AGS and Combination Six-Lane Highway with AGS alternatives are anticipated to dominate the setting and result in strong visual contrast. In Georgetown, AGS and Combination Six-Lane Highway with AGS alternatives are anticipated to dominate the local setting and result in strong visual contrast, and in both the Georgetown and Silver Plume SAUs, these alternatives are anticipated to result in moderate to high and high visual impacts. The elevated portion of the Rail with IMC alternative would be beyond the viewshed of Georgetown and would result in low to moderate and moderate to high visual impacts.

In the Lawson, Downieville, and Dumont SAU, the AGS and Combination Six-Lane Highway with AGS alternatives are anticipated to result in strong visual contrast and high visual impacts and to modify the visual character and the landscape setting and historic properties.

**Jefferson County SAUs**

The range of visual influence associated with project elements in Jefferson County is illustrated in Table 3.15-7. Seven properties are identified for this table.

*Setting and Sense of Place*

I-70 extends west from Beaver Brook through a V-shaped valley until reaching the sharp crest of Hogback Ridge. East of the Hogback is Rooney Valley, a flat terrain with open and expansive views to the Front Range. The landscape transitions to the closed canyon environment of Mount Vernon Canyon with panoramic views at the west end high point. The sense of place within the Jefferson County SAUs is oriented on the historic park lands (Denver Mountain Parks) and open space, which surrounds much of the Hogback Ridge and is highly valued for recreational and educational opportunities and for geological and paleontological resources.

In proximity to Genesee Park, the Genesee Park Bridge (5JF.398) provides spectacular framed views of the Continental Divide. The American Institute of Steel Construction recognized it as one of the Prize Bridges in 1971. It has been officially determined eligible for inclusion in the NRHP.

*Visual Influence of Alternatives*

Alternatives proposed within Jefferson County SAUs would include Transit, Highway, and Combination alternatives.

The Rail with IMC alternative would transition between elevated and on grade throughout Jefferson County and is anticipated to result in moderate and strong visual contrast and in moderate to high and high visual impacts. AGS, a completely elevated system, is anticipated to result in strong visual contrast, and moderate to high and high visual impacts. Although the alignment for the proposed AGS and Rail with IMC alternatives has been planned to cross over highway interchanges, due to the significance of the Genesee Park Bridge, the preliminary design locates the alignment of these alternatives in the median and under the bridge to avoid affecting views in this area. Initially the contrast associated with the Rail with IMC alternative is assumed to be a moderate contrast; however, through mitigation (avoiding an overhead catenary line by using a third rail) in the vicinity of the Genesee Park Bridge, visual contrast could be reduced to weak.

The Bus in Guideway and Combination Six-Lane Highway with Bus in Guideway alternatives are anticipated to result primarily in moderate visual contrast. Due to the proposed design of the

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alternatives and their proximity to sensitive historic properties, these alternatives are anticipated to result in low to moderate and moderate to high visual impacts within the Jefferson County SAUs.

#### Conclusions

All build alternatives are anticipated to result in potential visual impacts to historic districts and sites ranging from low to high depending on the level of visual contrast anticipated within the setting and the proximity in which it is viewed. The AGS alternative, which would be a completely elevated system, is anticipated to result in changes that attract attention and dominate the setting (strong contrast). The AGS alternative is anticipated to result in the greatest visual impacts throughout the Corridor. The Minimal Action alternative is anticipated to result in the least visual impacts.

#### Visual Effect Mitigation Strategies

Mitigation measures for visual resources center on reducing visual contrast associated with the implementation of project alternatives. Because visual contrast is most closely associated with the addition of structural elements and change to landform characteristics, the following mitigation measures are organized into those related to landform and those related to structures.

Mitigation measures for visual resources will be developed and refined at the Tier 2 level of study in context of a project. However, techniques to reduce impacts could include the following:

#### Landform

- Implement sensitive grading techniques that blend grading with the natural terrain.
- Treat all disturbed slopes for erosion control; revegetate using native plant species as appropriate for adjacent land use and terrain.
- Reduce color contrast through rock staining in areas of new rock cuts.
- Selectively clear where alternatives encroach on forest edge.

#### Structures

- To the extent possible, use structures that are simple, slim, and low profile with minimal bulk and horizontal emphasis, avoiding over-monumentation, reducing structure depth as compared to deck edge, and keeping structures proportional.
- Design colors of structures to complement the natural landscape.
- Design tapered and rounded forms and edges where appropriate to soften appearance and reduce perceived bulk (for example, on bridge piers).
- Repeat colors and textures to provide continuity with other structural features such as retaining walls.

#### 3.15.3.4 Conceptual Effects of Sun Shadows in Clear Creek Canyon

##### Overview

As a result of local concerns regarding potential effects of increased shadows on Clear Creek Canyon communities, a sun angle and shadow study was conducted. The potential for the elevated structures associated with Transit, Highway, and Combination alternatives to cast shadows on the historic communities in Clear Creek County is addressed in this section. Clear Creek Canyon trends generally in an east-west direction, with steep mountainous ridges that cast shadows due to low winter sun angles from the south. Silver Plume, Georgetown, and Idaho Springs are historic communities that are currently influenced by winter shadows in the canyon.

The study of potential increased shading to historic structures focused on Silver Plume and the Idaho Springs because elevated alternatives are located along the southern edge of these historic communities. Three seasonal solar events were initially evaluated, utilizing AutoDesk VIZ 4 software: spring equinox, summer solstice, and winter solstice. Shading to Silver Plume and Idaho Springs was identified for the winter timeframe, based on model studies. The study was conducted at 12:00 PM when the sun was at its highest angle above the horizon.

The mountain ridges to the south of Silver Plume and Idaho Springs are the primary cause of winter shadows. The ridges found along both sides of the canyon rise abruptly for several hundred feet above the communities. The southern ridges of the canyon cast variable shadows onto these communities, which are located along Clear Creek in the canyon floor. Shadows are most invasive over an average of the 60 days between November and January. At the winter solstice, shadows are cast across the canyon and, in some cases, onto the lower portions of the northern ridges. Modeling studies indicate limited additional shadowing impact for the two communities studied, as described below.

#### Idaho Springs

For Idaho Springs, most of the existing shadow conditions are due to the ridges immediately south of the town and I-70. The existing I-70 contributes little to the blocking of sunlight. The peak shadowing occurs during the period between mid-November and mid-January. The most extensive shadow impact to Idaho Springs would result from the Six-Lane Highway structured alternative (see section 2.2) just east of the Highway 103 interchange, where shadows would be cast into portions of the historic areas in Idaho Springs by elevated alternatives.

#### Silver Plume

The southern ridges of the canyon have the most extensive shadow effects on the western portions of Silver Plume, to the west of the Silver Plume interchange, where much of the town is completely within naturally occurring shadows throughout the entire day as the sun moves into the winter solstice, from early December into January.

The evaluation of potential shadow effects focused on some of the residences closest to the I-70 interchange in Silver Plume. Model studies indicate that the elevated project alternatives may cause limited shadows on the buildings.

Table 3.15-7. Properties Subject to Potential Visual Intrusion per 36 CFR 800.5(a)(2)(v)

Scenery Analysis Unit	Property Site Number or Name	0 to 0.5 mile	0.5 to 3 miles	No Action Alternative	Transit Alternatives												
					1 Minimal Action Alternative	2 Transit Alternatives			3 Highway Alternatives			4 Combination Highway/Transit Alternatives					
						2 Rail with IMC	3 Advanced Guideway System (AGS)	4 Dual-Mode Bus in Guideway	5 Diesel Bus in Guideway	6 6-Lane Highway 55 mph	7 6-Lane Highway 65 mph	8 Reversible/HOV/HOT Lanes	9 6-Lane Highway with Rail and IMC	10 6-Lane Highway with AGS	11 6-Lane Highway with Dual-Mode Bus in Guideway	12 6-Lane Highway with Diesel Bus in Guideway	
GARFIELD COUNTY	Glenwood Springs	5GF.1661	x	N/A	Alternative Not Defined	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
		5GF.1022	x														
		5GF.1050 HD	x														
		Commercial District	x														
		5GF.1549	x														
		5GF.1654	x														
		5GF.2441	x														
5GF.2717	x																
5GF.767	x																
EAGLE COUNTY	Eagle Valley / Eagle-Gypsum	5EA.1595.6	x	N/A	Low to Moderate	Low to Moderate	High	Low to Moderate	Low to Moderate	Low to Moderate	Low to Moderate	Low to Moderate	Low to Moderate	High	Low to Moderate	Low to Moderate	
		5EA.1608	x														
		5EA.647	x														
		5EA.902	x														
	Red Canyon & Wolcott	5EA.1590	x	N/A	Low to Moderate	Moderate to High	High	Low to Moderate	Low to Moderate	Low to Moderate	Low to Moderate	Low to Moderate	Low to Moderate	High	Low to Moderate	Low to Moderate	
		5EA.1595.3	x														
		5EA.1614	x														
		5EA.198.1	x														
		5EA.739	x														
		Hoft Ranch	x														
Sherwood Ditch	x																
O'Neill Ditch	x																
Holland Ditch	x																
Eagle Valley/Avon	5EA.1595.4	x	N/A	Moderate to High	Moderate to High	Moderate to High	Moderate to High	Moderate to High	Moderate to High	Moderate to High	Moderate to High	Moderate to High	Moderate to High	Moderate to High	Moderate to High		
	Wilmor Railroad Area	x															
Dowd Canyon	5EA.1595.4 - 5	x	N/A	Moderate to High	Moderate to High	Moderate to High	Moderate to High	Moderate to High	Moderate to High	Moderate to High	Moderate to High	Moderate to High	Moderate to High	Moderate to High	Moderate to High	Moderate to High	
	5EA.727	x															
	5EA.728	x															
Vail Pass / Black Gore Creek	5EA.727	x	N/A	Moderate to High	High	Moderate to High	Moderate to High	Moderate to High	Moderate to High	Moderate to High	Moderate to High	Moderate to High	High	Moderate to High	Moderate to High		
	5EA.728	x															
SUMMIT COUNTY	Officers Gulch/ Tenmile Canyon	Curtain Railroad Community	x	N/A	Low to Moderate	Moderate to High	Moderate to High	Low to Moderate	Low to Moderate	Low to Moderate	Low to Moderate	Low to Moderate	Moderate to High	Moderate to High	Low to Moderate	Low to Moderate	
		Mines SE of Officers Gulch	x														
SUMMIT COUNTY	Blue River Valley	5ST.258	x	N/A	Low	Low to Moderate	Moderate to High	Low to Moderate	Low to Moderate	Low	Low	Low	Low to Moderate	Moderate to High	Low to Moderate	Low to Moderate	
		5ST.326	x														
		Excelsior Mine	x														
		Buffalo Placer	x														
		Chief Mtn Water Flume	x														
CLEAR CREEK COUNTY	Loveland	Loveland Ski Area	x	N/A	Moderate to High	Low to Moderate	Moderate to High	Low to Moderate	Low to Moderate	Moderate to High	Moderate to High	Moderate to High	Low to Moderate	Moderate to High	Low to Moderate	Low to Moderate	
		5CC.791.1	x														
	Silver Plume	5CC.173.1	x	N/A	Low to Moderate	Moderate to High	High	Moderate to High	Moderate to High	Moderate to High	Moderate to High	Moderate to High	Moderate to High	Moderate to High	High	Moderate to High	Moderate to High
		5CC.3.NHLD	x														
		5CC.3.100	x														
		5CC.3.101	x														
		5CC.3.102	x														
		5CC.3.103	x														
		5CC.3.105	x														
		5CC.3.107	x														
		5CC.3.108	x														
		5CC.3.217	x														
		5CC.3.356	x														
		5CC.3.357	x														
		5CC.3.383	x														
		5CC.3.384	x														
		5CC.3.99	x														
		5CC.4	x														
		5CC.633	x														
		5CC.68	x														
5CC.7	x																
5CC.9	x																
Jonny Bull Mine	x																

**Legend:**

- Relative potential to affect historic properties:**
- Weak Contrast** = changes that can be seen but do not attract attention and are subordinate to the setting.
  - Moderate and Moderate to Strong Contrast** = changes that are noticeable but are still subordinate to the setting.
  - Strong and Very Strong Contrast** = changes that attract attention and dominate the setting.
  - Low - Moderate-High** The degree of visual impact is an indicator of level of potential effect to historic districts and sites.

**NOTES:**

- 1) It is assumed that context sensitive designs will be applied to alternatives in Tier 2 level design. The compatibility of alternatives will need to be re-evaluated in the context of these designs for compatibility with local settings.
- 2) The analysis of visual influence on historic properties and landscape settings is consistent with criteria applied in the visual resource assessment (section 3.13 and Appendix L).

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Table 3.15-7. Properties Subject to Potential Visual Intrusion per 36 CFR 800.5(a)(2)(v)

Scenery Analysis Unit	Historic Property Site Number *	0 to 0.5 mile	0.5 to 3 miles	Transit Alternatives																				
				No Action Alternative	Transit Alternatives				Highway Alternatives				Combination Highway/Transit Alternatives											
					1 Minimal Action Alternative	2 Rail with IMC	3 Advanced Guideway System (AGS)	4 Dual-Mode Bus in Guideway	5 Diesel Bus in Guideway	6 6-Lane Highway 55 mph	7 6-Lane Highway 65 mph	8 Reversible/HOV/HOT Lanes	9 6-Lane Highway with Rail and IMC	10 6-Lane Highway with AGS	11 6-Lane Highway with Dual-Mode Bus in Guideway	12 6-Lane Highway with Diesel Bus in Guideway								
CLEAR CREEK COUNTY	Georgetown	SCC.11	x	N/A	Low to Moderate	Moderate to High	High	Moderate to High	Moderate to High	Moderate to High	Moderate to High	Moderate to High	Moderate to High	Moderate to High	Moderate to High	Moderate to High	Moderate to High	Moderate to High	Moderate to High	Moderate to High	Moderate to High	Moderate to High	Moderate to High	
	SCC.12	x																						
	SCC.13	x																						
	SCC.3 NHLD	x	x																					
	SCC.3.10	x																						
	SCC.3.219	x																						
	SCC.3.220	x	x																					
	SCC.3.221	x																						
	SCC.3.358		x		Low	Low to Moderate	Moderate to High	Low to Moderate	Low to Moderate	Low to Moderate	Low to Moderate	Low to Moderate	Low to Moderate	Low to Moderate	Moderate to High	Moderate to High	Low to Moderate							
	SCC.3.359		x		Low	Low to Moderate	Moderate to High	Low to Moderate	Low to Moderate	Low to Moderate	Low to Moderate	Low to Moderate	Low to Moderate	Low to Moderate	Moderate to High	Moderate to High	Low to Moderate							
	SCC.461.1	x	x		Low to Moderate	Moderate to High	High	Moderate to High	Moderate to High	Moderate to High	Moderate to High	Moderate to High	Moderate to High	Moderate to High	High	High	Moderate to High	Moderate to High	Moderate to High	Moderate to High	Moderate to High	Moderate to High	Moderate to High	
	SCC.5	x																						
	SCC.64	x																						
	SCC.8	x																						
	SCC.991	x																						
	SCC.992	x																						
	SCC.993	x																						
	SCC.994	x																						
	Lawson, Downieville, and Dumont	SCC.181	x		N/A																			
	SCC.654	x																						
Historic Area	x																							
Idaho Springs / Chicago Creek	SCC.201 Commercial District	x		N/A	Moderate to High	High	High	High	High	High	High	High	High	High	High	High	High	High	High	High	High	High	High	
	SCC.229	x																						
	SCC.231	x																						
	SCC.241	x																						
	SCC.328	x																						
	SCC.427.1	x																						
	SCC.571		x		Low to Moderate	Moderate to High	Moderate to High	Moderate to High	Moderate to High	Moderate to High	Moderate to High	Moderate to High	Moderate to High	Moderate to High	Moderate to High	Moderate to High	Moderate to High	Moderate to High	Moderate to High	Moderate to High	Moderate to High	Moderate to High	Moderate to High	
	SCC.653	x			Moderate to High	High	High	High	High	High	High	High	High	High	High	High	High	High	High	High	High	High	High	
	SCC.76	x																						
	SCC.859	x																						
	SCC.966	x																						
	SCC.967	x																						
	SCC.985	x																						
	Chinese Mines	x																						
Hulk Mine	x																							
Alma Lincoln Mine	x																							
Stanley Mine Complex	x																							
Floyd Hill	SCC.427.1	x		N/A	High																			
Beaver Brook	5JF.590	x	x	N/A	Low to Moderate	Moderate to High	Moderate to High	Moderate to High	Moderate to High	Low to Moderate	Low to Moderate	Low to Moderate	Moderate to High	Moderate to High	Moderate to High	Moderate to High	Moderate to High	Moderate to High	Moderate to High	Moderate to High	Moderate to High	Moderate to High	Moderate to High	
	5JF.976		x		Low	Moderate to High	Moderate to High	Low to Moderate	Low to Moderate	Low	Low	Low	Moderate to High	Moderate to High	Moderate to High	Moderate to High	Moderate to High	Moderate to High	Moderate to High	Moderate to High	Moderate to High	Moderate to High	Moderate to High	
	5JF.2212	x			Low to Moderate	High	High	Moderate to High	Moderate to High	Low to Moderate	Low to Moderate	Low to Moderate	High	High	High	High	High	High	High	High	High	High	High	
Mount Vernon Canyon	5JF.185	x		N/A	Moderate to High	Moderate to High				Moderate to High	Moderate to High	Moderate to High	Moderate to High	Moderate to High	Moderate to High	Moderate to High	Moderate to High	Moderate to High	Moderate to High	Moderate to High	Moderate to High	Moderate to High	Moderate to High	
	5JF.398	x																						
	5JF.590	x																						
	5JF.979	x																						
<b>Summary</b>				The No Action alternative would include several planned or permitted projects, which are described in detail in Chapter 2. The No Action alternative would include the existing highway condition; however, no major projects are planned for construction in the next 5 to 20 years in Garfield County. Impacts on visual resources would include current roadside scars and development that is occurring along the Corridor.	The Minimal Action alternative would result in localized changes and would primarily result in changes that would not attract attention and would be subordinate to the setting (weak contrast).	Elevated portions (30%) would result in changes that would attract attention and dominate the setting (very strong contrast). On-grade portions (70%) would result in changes that would be noticeable but subordinate to the setting (moderate and moderate to strong contrast).	The AGS alternative, which would be a completely elevated system, is anticipated to result in changes that would attract attention and dominate the setting (strong contrast).	Changes associated with the Bus in Guideway alternatives would range from very strong to weak contrast. Areas of elevated structures and major retaining walls would result in changes that would attract attention and dominate the setting (strong contrast).	Same as Dual-Mode Bus in Guideway	Changes associated with the Highway alternatives would range from very strong to weak contrast. Areas of elevated structures and major retaining walls would result in changes that would attract attention and dominate the setting (strong contrast).	Similar to 6-Lane Highway 55 mph	Similar to 6-Lane Highway 55 mph	The Rail portion of this alternative would be on grade within the median east of the E.JMT and would result in changes that are noticeable but subordinate to the setting (moderate contrast). In areas where this alternative would be elevated, it would attract attention and dominate the setting (strong contrast).	The AGS portion of this Combination alternative would be elevated within the median, which would result in changes that would attract attention and dominate the setting (strong contrast).	Changes associated with the Combination Bus in Guideway and Highway alternatives would range from very strong to weak contrast. Areas of elevated structures and major retaining walls would result in changes that would attract attention and dominate the setting (strong contrast).	Same as 6-Lane Highway with Dual-Mode Bus in Guideway								

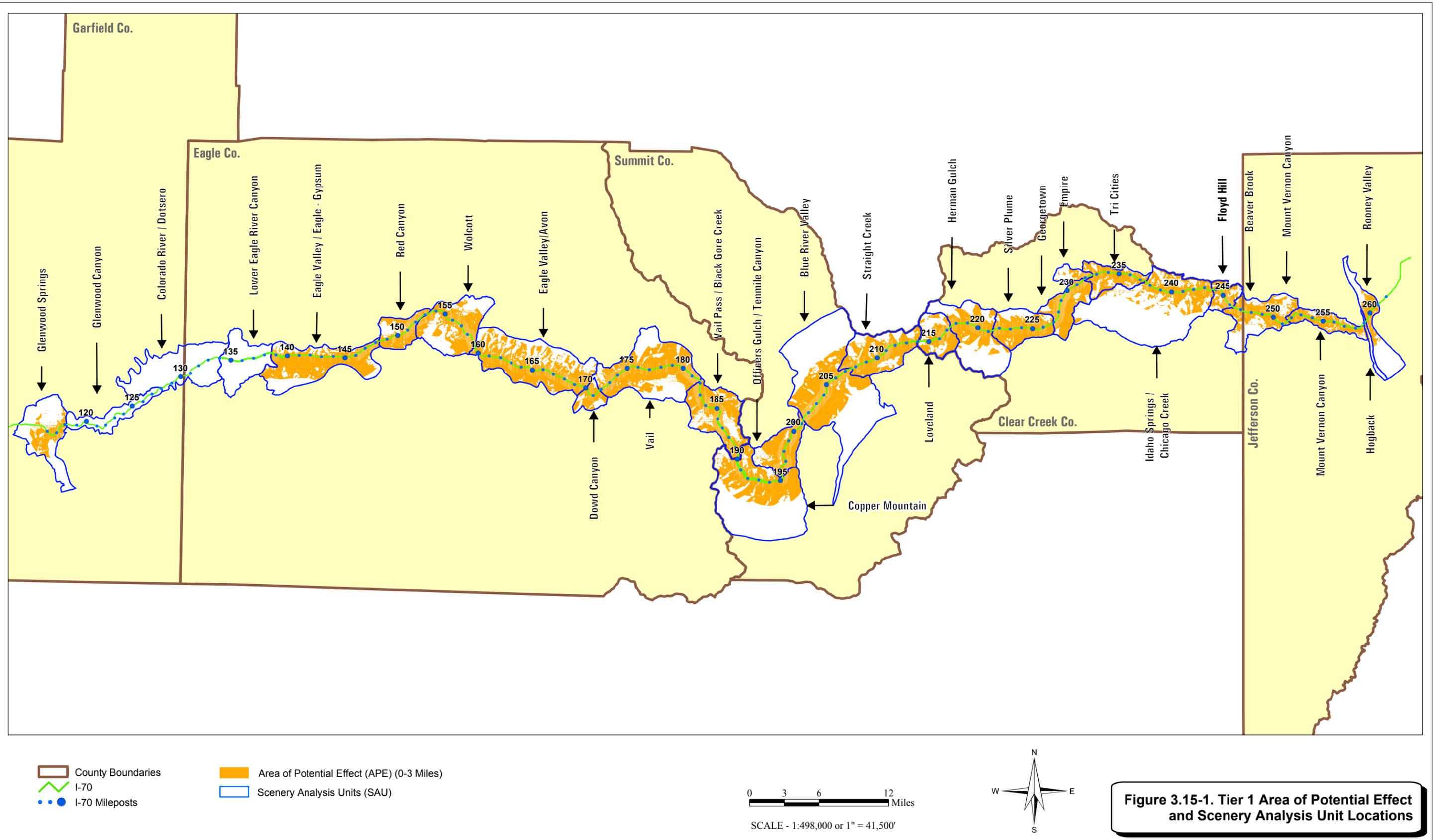
Legend:

Relative potential to affect historic properties:

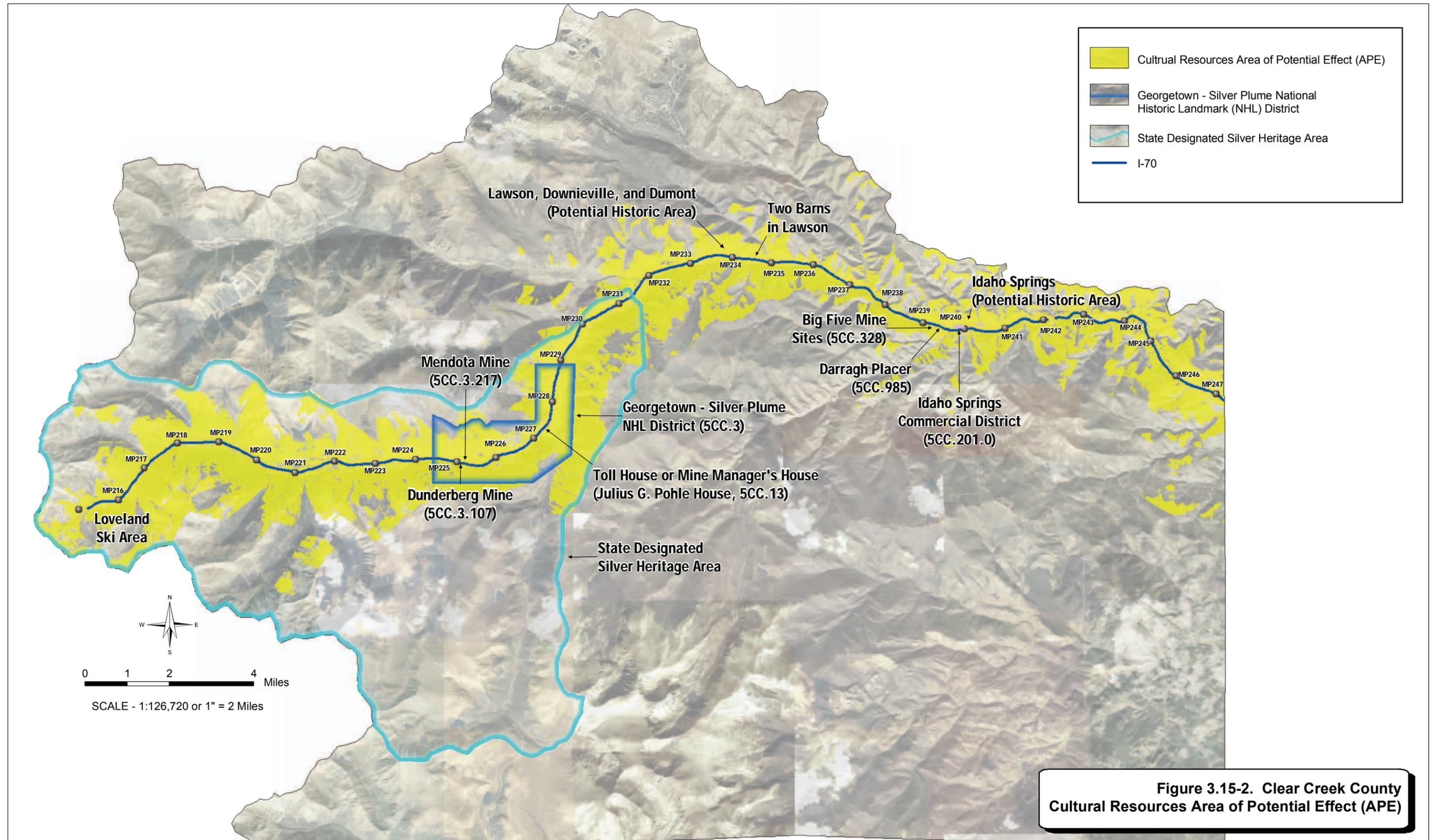
- Weak Contrast = changes that can be seen but do not attract attention, and are subordinate to the setting.
- Moderate and Moderate to Strong Contrast = changes that are noticeable but are still subordinate to the setting.
- Strong and Very Strong Contrast = changes that attract attention, and dominate the setting.
- Low - Moderate-High The degree of visual impact is an indicator of level of potential effect to historic districts and sites.

NOTES:

- 1) It is assumed that context sensitive designs will be applied to alternatives in Tier 2 level design. The compatibility of alternatives will need to be re-evaluated in the context of these designs for compatibility with local settings.
- 2) The analysis of visual influence on historic properties and landscape settings is consistent with criteria applied in the visual resource assessment (section 3.13 and Appendix L).



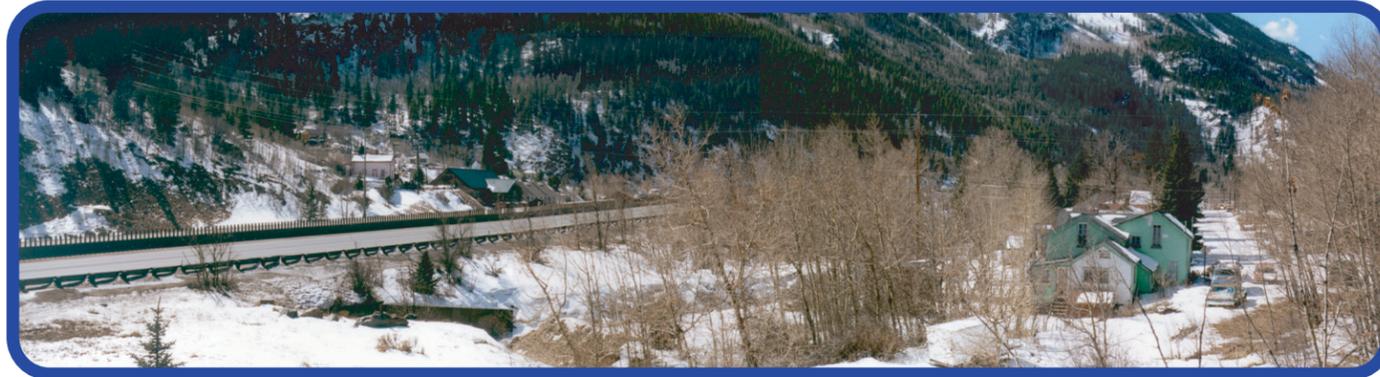
3.15 Historic Properties and Native American Consultation



**Figure 3.15-2. Clear Creek County Cultural Resources Area of Potential Effect (APE)**

### Visual Simulations

**View Looking West over Sliver Plume**



**EXISTING CONDITIONS**

**View Looking West within Sliver Plume**



**EXISTING CONDITIONS**



**RAIL ALTERNATIVE SIMULATION**



**RAIL ALTERNATIVE SIMULATION**



**SIX-LANE HIGHWAY ALTERNATIVE WITH SOUND WALL MITIGATION SIMULATION**  
*(Please note that sound walls are one possible future option)*



**SIX-LANE HIGHWAY ALTERNATIVE WITH SOUND WALL MITIGATION SIMULATION**  
*(Please note that sound walls are one possible future option)*

## Visual Simulations

View Looking East near Silver Plume Train Depot



EXISTING CONDITIONS



AGS ALTERNATIVE SIMULATION

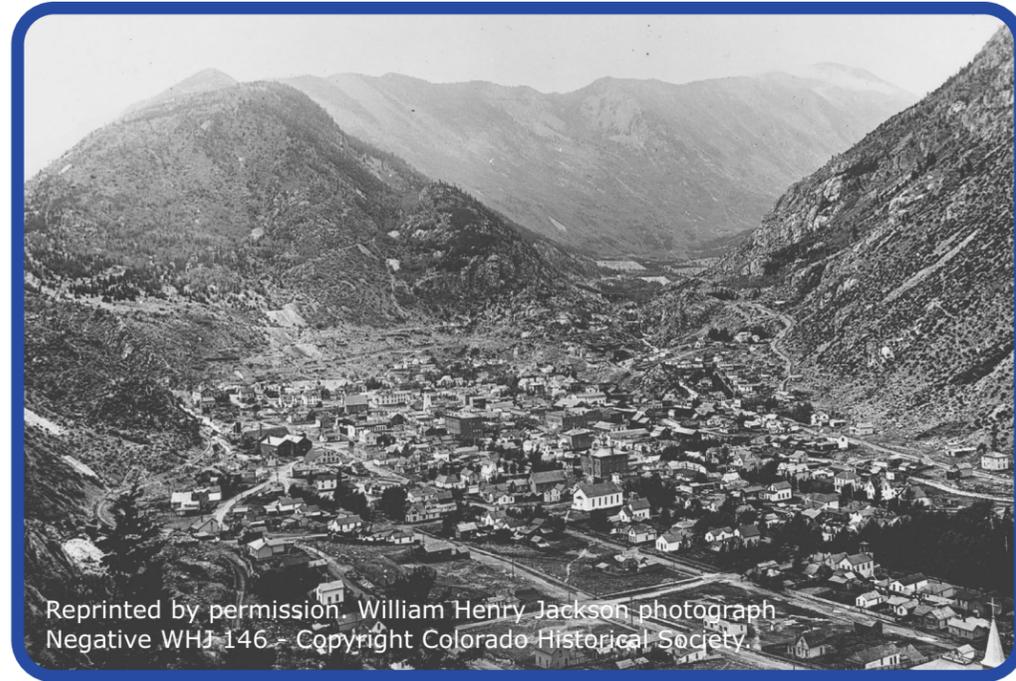


RAIL ALTERNATIVE SIMULATION

Figure 3.15-4

### Visual Simulations

View Looking Southwest over Georgetown



1901 VIEW



EXISTING CONDITIONS



RAIL ALTERNATIVE SIMULATION

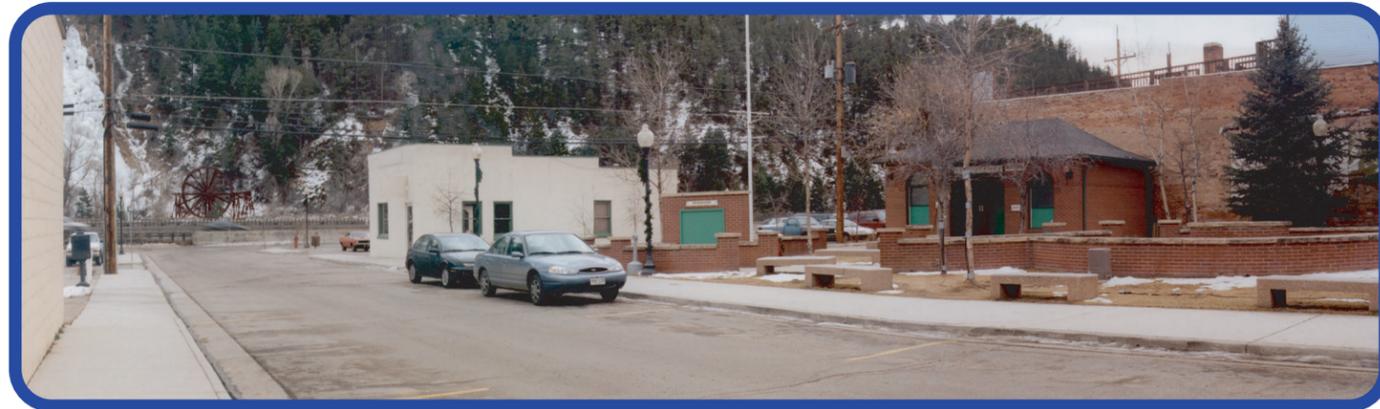


SIX-LANE HIGHWAY ALTERNATIVE SIMULATION

Figure 3.15-5

### Visual Simulations

View Looking South from 16th & Miner Street in Idaho Springs

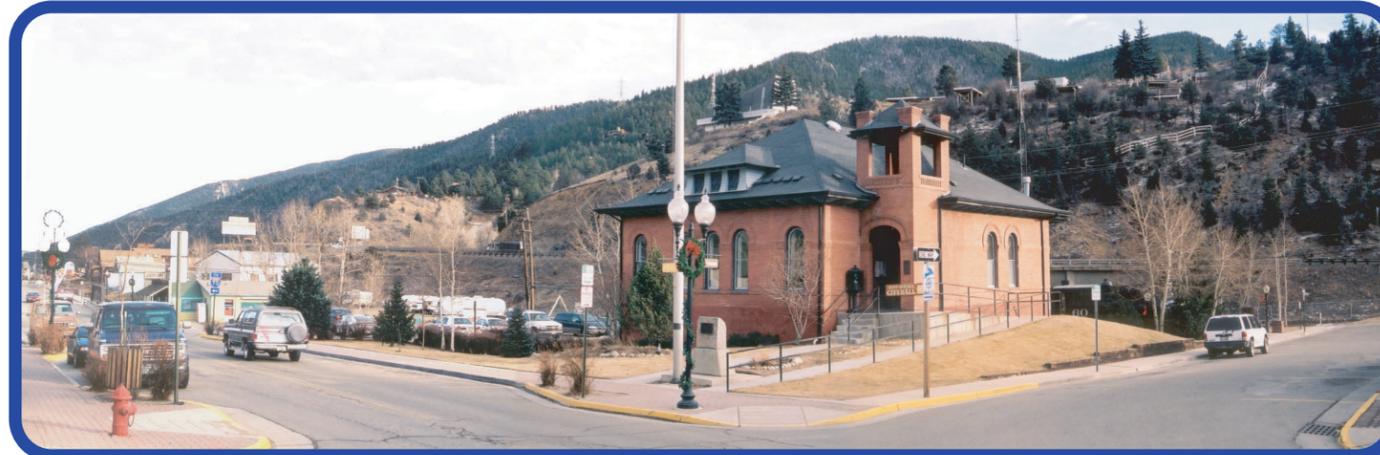


EXISTING CONDITIONS

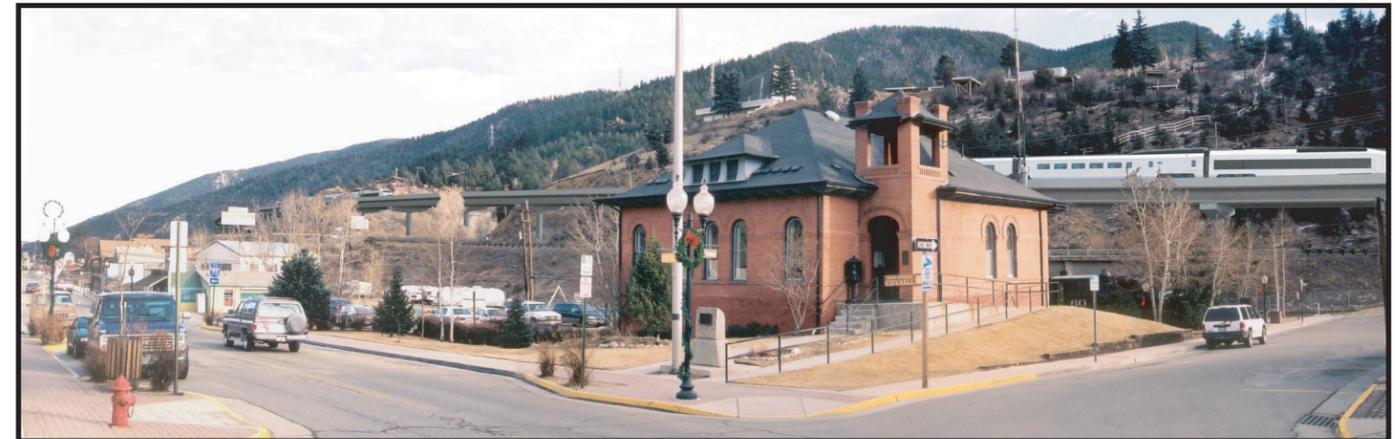


SIX-LANE HIGHWAY ALTERNATIVE SIMULATION

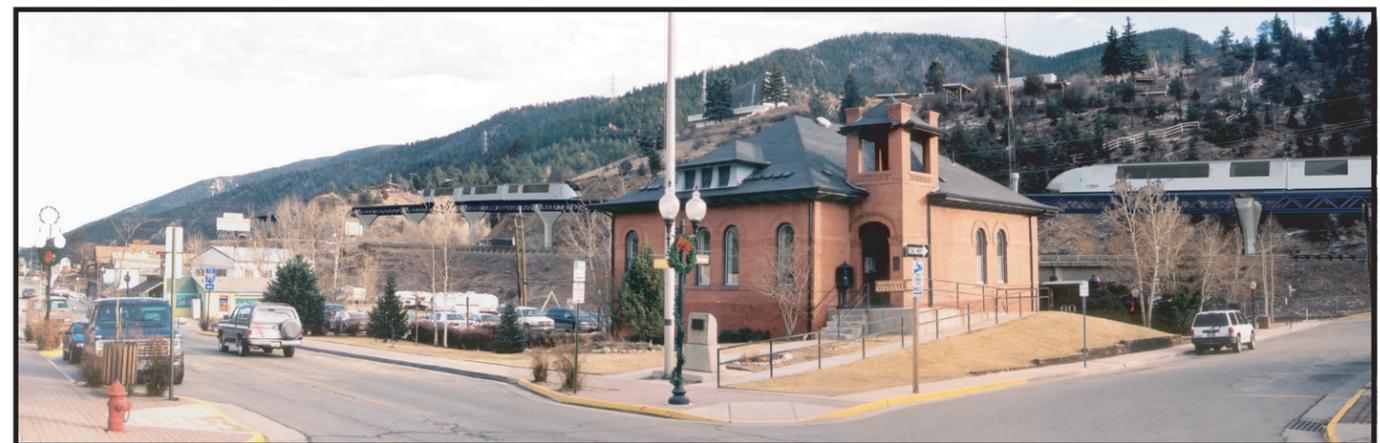
View Looking Southeast near Idaho Springs City Hall



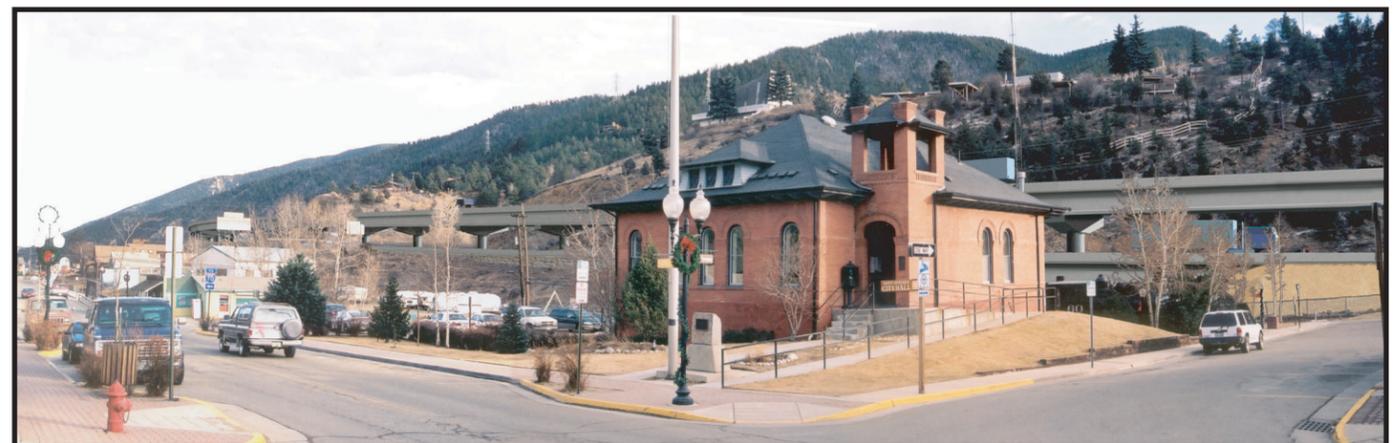
EXISTING CONDITIONS



RAIL ALTERNATIVE SIMULATION



AGS ALTERNATIVE SIMULATION



SIX-LANE HIGHWAY ALTERNATIVE SIMULATION

Figure 3.15-6