



**APPENDIX A6**  
**SOCIAL RESOURCES TECHNICAL MEMORANDUM**



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### INTRODUCTION AND BACKGROUND

The Interstate 70 (I-70) West Vail Pass Auxiliary Lanes project (Project) is located in Eagle and Summit Counties, with the eastern terminus just east of the Vail Pass Rest Area and the western terminus in the Town of Vail. The project study limits include eastbound (EB) and westbound (WB) I-70 from mile post (MP) 179.5 to MP 191.5. The project location and approximate study area are shown in **Figure 1**.

As part of the initial National Environmental Policy Act (NEPA) analysis, a Tier 1 Environmental Impact Statement (EIS) for the I-70 Mountain Corridor (C-470 to Glenwood Springs) was completed in 2011. This EIS, the *I-70 Mountain Corridor Programmatic Final Environmental Impact Statement* (PEIS), recommended the addition of auxiliary lanes EB and WB on the west side of Vail Pass from MP 180 to MP 190 as part of the Preferred Alternative's Minimum Program of Improvements. The PEIS also identified the potential for an elevated Advanced Guideway System (AGS) for transit along the I-70 corridor, including the West Vail Pass project corridor. A follow-up AGS Feasibility Study in 2014 analyzed potential alignments and costs for an AGS system and determined there were three feasible alignments for future AGS. While AGS is not part of the West Vail Pass Auxiliary Lanes project, the AGS Feasibility Study was used to ensure the project did not preclude the favored alignment of the three, which would be partially within CDOT right-of-way (ROW).

A Tier 2 NEPA analysis is the next step required to move highway improvements forward. The project is following the Colorado Department of Transportation (CDOT) and Federal Highway Administration (FHWA) NEPA process to confirm the needs for improvements to West Vail Pass, identify a Proposed Action, investigate the anticipated benefits and impacts of the proposed improvements (through an Environmental Assessment), produce conceptual design plans, and make funding, scheduling, and phasing recommendations.

This memorandum summarizes the social resources present in the study area and potential impacts and mitigation for each resource. The social resources included in this memorandum are: land use, economic profile, environmental justice (low-income and minority) communities, and recreational resources.

### I-70 FINAL PEIS AND RECORD OF DECISION ANALYSIS

The following describes potential impacts identified in the PEIS and Record of Decision (ROD) for land use, economics, environmental justice, and recreational resources. The summaries below are for the Preferred Alternative as identified in the PEIS and ROD. The impacts in the PEIS are primarily the result of congestion and transit-related elements of the Preferred Alternative and not the addition of auxiliary lanes.



## **LAND USE**

The PEIS and ROD determined that the Preferred Alternative increased the footprint of I-70 and would impact properties adjacent to I-70, including National Forest lands due to widening of I-70. It also stated that construction workers would need temporary housing in the I-70 Mountain Corridor throughout the construction period as affordable housing is not available and Mountain Corridor communities are concerned about the reuse of housing once construction is complete.

## **ECONOMICS**

The PEIS and ROD determined that the Preferred Alternative would not cause induced growth from the addition of auxiliary lanes. The Preferred Alternative was expected to affect economic growth by slightly exceeding modeled employment and gross regional product predictions.

## **ENVIRONMENTAL JUSTICE/SOCIOECONOMICS**

The PEIS and ROD concluded that none of the alternatives had direct effects on low-income and minority populations that are highly disproportionate and adverse in comparison to the population on a corridor-wide basis. The Preferred Alternative was found to provide the greatest commuting benefits to low-income residents by offering a range of transportation choices, but also had the greatest negative effect on affordable housing by dispersing demand for housing and increasing the cost of housing in outlying areas.

## **RECREATIONAL RESOURCES**

The Preferred Alternative was determined to directly impact between 63 and 84 recreation sites corridor-wide.

## **LEGISLATION**

The following identifies existing local, state, and federal guidelines or regulations with which this project must comply.

## **LAND USE AND RIGHT-OF-WAY**

There are no specific FHWA or CDOT land use regulations. The CDOT NEPA Manual (CDOT 2017) does state that the land use discussion should assess the consistency of the alternatives with the comprehensive development plans adopted for the area and (if applicable) other plans used in the development of the transportation plan required by 23 USC 134.

CDOT must comply with federal relocation regulations when implementing transportation projects in Colorado. The regulations and certifications applicable to residential business right-of-way and relocation are summarized below:

- FHWA Technical Advisory T6640.8a Guidance for Preparing and Processing Environmental and Section 4(f) Documents – In any NEPA document, the relocation information should be summarized in sufficient detail to adequately explain the relocation situation including anticipated problems and proposed solutions for all alternatives.
- Uniform Relocation Assistance and Real Property Acquisition Policies Act of 1970 (Public Law 100-17) “establishes a uniform policy for the fair and equitable treatment of persons displaced as a direct result of programs or projects undertaken by a Federal agency or with Federal financial assistance.”



- FHWA’s Environmental Impact and Related Procedures (23 CFR 771) – Provides direction for FHWA on implementing NEPA.

## **ECONOMICS**

CDOT must comply with federal economic regulations when implementing transportation projects in Colorado. The regulations and guidance applicable to economic resources are summarized below.

- Section 1508.14 of CEQ Regulations (2005) – When a PEIS is prepared and economic or social and natural or physical environmental effects are interrelated, then the EIS will discuss all these effects on the human environment.
- Intermodal Surface Transportation Efficiency Act of 1991 – Instructs federal agencies to consider the overall social, economic, energy, and environmental effects of transportation decisions. 4 Sections 109(h) and 128, Title 23 of the United States Code on Highways (2012) – Assures that community cohesion, availability of public facilities and services, and economic and social effects are assessed during highway developments.
- FHWA Technical Advisory T6640.8a Guidance for Preparing and Processing Environmental and Section 4(f) Documents – In any NEPA document, where there are foreseeable economic impacts, the draft EIS should discuss them for each alternative.
- Section 5309 New Starts, 49 USC 5309(e) – Prompts a comprehensive review of the economic development effects associated with the project.
- Major Transit Capital Investment Projects Final Rule, 49 CFR Part 611 (2001) – Places promotion of economic development as a priority in federally funding projects.

## **ENVIRONMENTAL JUSTICE/SOCIOECONOMICS**

Environmental justice (EJ) considerations were created out of concerns that transportation facilities were constructed in minority and low-income population area without regard to the consequences of these actions. EJ refers to the social equity in sharing the benefits and the burdens of specific projects and/or programs and is regulated by Executive Order (EO) 12898, Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations (Clinton, 1994; FHWA, 2015). The EO is in response to Title VI of the Civil Rights Act of 1964 which states “No person in the United States (US) shall, in the grounds of race, color, or national origin be excluded from participation in, be denied the benefits of, or be subjected to discrimination under any program or activity receiving federal financial assistance.”

Guidance on how to implement EO 12898 and conduct EJ analyses was issued by the Council on Environmental Quality (CEQ) (CEQ, 1997; FHWA, 2015). The CEQ guidance states that minority and low-income populations occur where either:

- The low-income or minority population of the affected area exceeds 50%.
- The population percentage of the affected area is meaningfully greater than the minority population percentage in the general population or other appropriate unit of geographical analysis.

Minorities fall within the following race and ethnic groups as identified by the US Census Bureau: Black/African Americans, American Indian/Alaskan Natives, Asians, Native Hawaiian/Pacific Islanders, and Hispanics. The US Department of Health and Human Services (HHS) defines low-income as persons/families within incomes at or below the poverty level. The EO requires analyzing



projects that involve federal agencies or federal funds to evaluate a potential for disproportionately high or adverse impacts on minority or low-income populations in the study area. Disproportionately high and adverse effects negatively affect minority and/or low-income populations more than non-minority and/or non-low-income populations.

The FHWA Order 6640.23 published in 1998 was updated in June 2012; it is titled 6640.23A FHWA Actions to Address Environmental Justice in Minority Populations and Low-Income Populations and it serves as the agency's policy regarding EJ. CDOT's NEPA Manual includes direction for implementation of FHWA and CEQ guidance. The CDOT NEPA Manual reflects the EO and FHWA's 6640.23A Order as well as provides direction for identifying EJ populations, potential impacts, appropriate mitigation measures, and outreach methods that may be useful for the determination (CDOT, 2017).

In April 2015, FHWA issued the Environmental Justice Reference Guide to provide FHWA staff with a resource to help ensure compliance with EJ requirements. The reference guide contains information about the history of EJ, its relationship to Title VI of the Civil Rights Act of 1964, FHWA's commitment to EJ and nondiscrimination, data collection and analysis and a discussion of the applicability of EJ throughout the stages of project development (FHWA, 2015).

## **RECREATIONAL RESOURCES**

### ***THE REGULATIONS PERTAINING TO PROTECTION OF RECREATIONAL RESOURCES INCLUDE THE FOLLOWING:***

- Federal Land Policy and Management Act of 1976- The purposes of the Federal Land Policy and Management Act include:
  - » Section 102 (a)(8) requires that "...the public lands be managed in a manner... that will provide for outdoor recreation and human occupancy and use."
  - » Section 103 (c) identifies "recreation" as one of the resources for which public land should be managed.
  - » Section 201 (a) states that "the Secretary shall prepare and maintain on a continuing basis an inventory of all public lands and their resources and other values (include...recreation)."
- National Forest Management Act of 1976 - The National Forest Management Act requires the Forest Service to perform a comprehensive assessment of present and anticipated uses for their lands and develop a management program based on "multiple-use and sustained yields" and implement a resource management plan for each unit of the National Forest System.
- Land and Water Conservation Act, Section 6(f) - Some recreational properties have been purchased or improved with funds from the Land and Water Conservation Fund Act (LWCFA) and are therefore subject to regulation as defined in Section 6(f) of the LWCFA. Section 6(f) protects these properties as public recreation facilities in perpetuity and prohibits a "conversion" of a property from recreational use unless a suitable (size, usefulness, monetary value) property can be found. The LWCFA is run by the National Park Service and administered locally in Colorado by Colorado Parks and Wildlife. Colorado's Statewide Comprehensive Outdoor Recreation Plan is a five-year planning document that each state must produce to remain eligible for LWCF appropriations.



- US Department of Transportation (DOT) Act, Section 4(f) - Parks and recreation resources were evaluated within the Project because they are important community facilities that warrant consideration during federally funded transportation projects. Impacts to public parks and recreational resources are generally under the jurisdiction of Section 4(f) (23 CFR 774) of the US Department of Transportation (DOT) Act. Section 4(f) affords special protection to parks, recreation areas, and wildlife/waterfowl refuges that are open to the public. Section 4(f) stipulates that the FHWA and other agencies under the purview of the USDOT may not approve a “use” of a Section 4(f) property unless there is no feasible and prudent alternative and all efforts to minimize harm to the resource have been implemented (FHWA, 2016). Section 4(f) is addressed in a separate Section 4(f) evaluation report.

## STUDY AREA

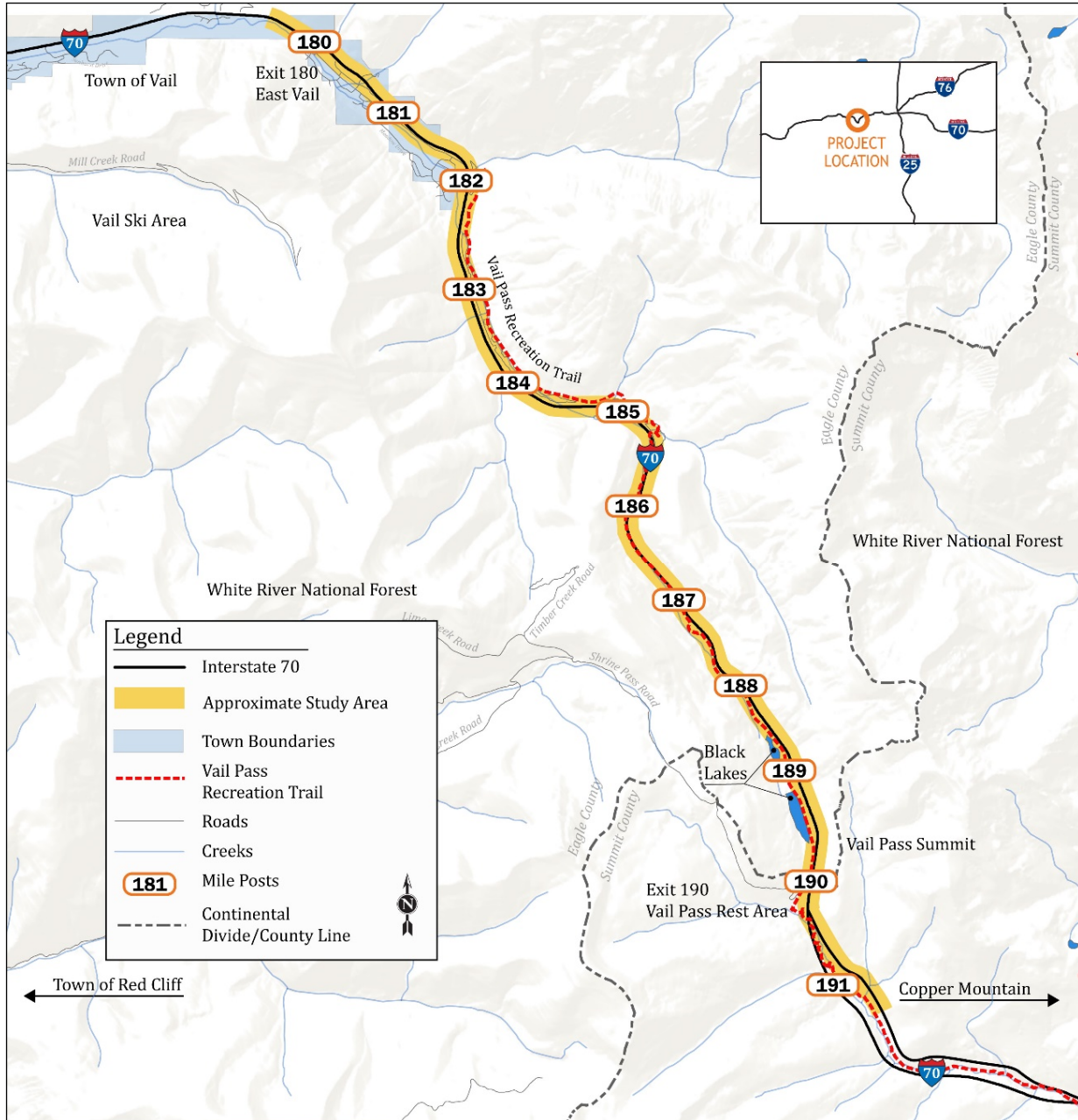
### LAND USE, ECONOMICS, AND RECREATIONAL RESOURCES

The study area (**Figure 1**) extends from the Town of Vail (MP 179.5) east to the top of Vail Pass (MP 191.5) in Eagle and Summit Counties, Colorado. The study area was established early in the planning process and extends approximately 200 feet on both sides of I-70. The project extent was later established to include the potential limits of disturbance resulting from the Proposed Action and was utilized for impact analyses.

### ENVIRONMENTAL JUSTICE/SOCIOECONOMICS

For the purpose of this analysis, data used to evaluate EJ populations comprises Eagle and Summit Counties, and the census block groups that are intersected by the project study area limits. Within Eagle County this includes Block Group 1 in Census Tract 6, Block Groups 1 and 2 in Census Tract 7.02, and Block Group 2 in Census Tract 7.03. Within Summit County, the assessment includes Block Group 1 in Census Tract 3. Since data within census designated geographies cannot be broken down into different geographies, the project team selected census tracts and block groups that fell within the study area. As a result, more geography than the study area is included in the analysis. The EJ figures in this memorandum show the project extent as well as census tract and block group boundaries.

**Figure 1. Project Location and Study Area**



Source: DEA Project Team



## PURPOSE AND NEED

The purpose of the project is to improve safety and operations on EB and WB I-70 on West Vail Pass.

This project is needed to address safety concerns and operational issues due to geometric conditions (steep grades and tight curves) and slow-moving vehicle and passenger vehicle interactions that result in inconsistent and slow travel times along the corridor. The I-70 Mountain Corridor PEIS identified safety and mobility issues on West Vail Pass related to speed differentials due to slow-moving vehicles. (*Mobility is defined as the ability to travel along the I-70 Mountain Corridor safely and efficiently in a reasonable amount of time.*)

- **Safety Concerns:** A high number of crashes occur along the corridor related to speed, tight curves, narrow roadway area, and inclement weather/poor road conditions. Speed differentials between passenger vehicles and slow-moving vehicles cause erratic lane changes and braking maneuvers resulting in crashes and spin outs. Emergency response is hampered by vehicular speeds and lack of roadway width to provide room for emergency vehicles to pass.
- **Operational Issues:** The steep grades and resulting speed differentials causes slow and unreliable travel times through the corridor. Tight curves also cause drivers to slow down. The corridor is frequently closed by vehicle incidents, due to lack of width to maintain a single lane of traffic adjacent to emergency responders, resulting in substantial traffic backups and delays. During winter months, the travel lanes and shoulders are severely impacted by snow accumulation, impacting the overall capacity of the corridor. (*Operations is intended to describe the flow of traffic at desirable speeds given the geometric and prevailing weather conditions.*)

## NO ACTION ALTERNATIVE

The No Action Alternative is included as a baseline for comparison to the action alternative. Under the No Action Alternative, only programmed projects that are planned and funded by CDOT or other entities would be completed. Currently, there are no large-scale transportation projects to add safety improvements, operational improvements, vehicular capacity, and multimodal facilities along I-70 within the project area. The No Action Alternative would leave West Vail Pass as it currently is configured and would not provide substantial improvements beyond typical current maintenance (e.g. resurfacing and plowing) activities. The roadway would remain the same, with 2 EB and 2 WB lanes (each 12 feet in width), an inside shoulder typically 4 feet in width, and an outside shoulder typically 10 feet in width.

## PROPOSED ACTION ALTERNATIVE

The Proposed Action (**Figure 2**) will add a 12-foot auxiliary lane, both EB and WB, for 10 miles from approximately the East Vail exit (MP 180) to the Vail Pass Rest Area exit (MP 190). Existing lanes will be maintained at 12 feet and the shoulders would be widened to a minimum of 6 feet for inside shoulders and maintained at 10 feet for outside shoulders. All existing curves will be modified as needed to meet current federal design standards.



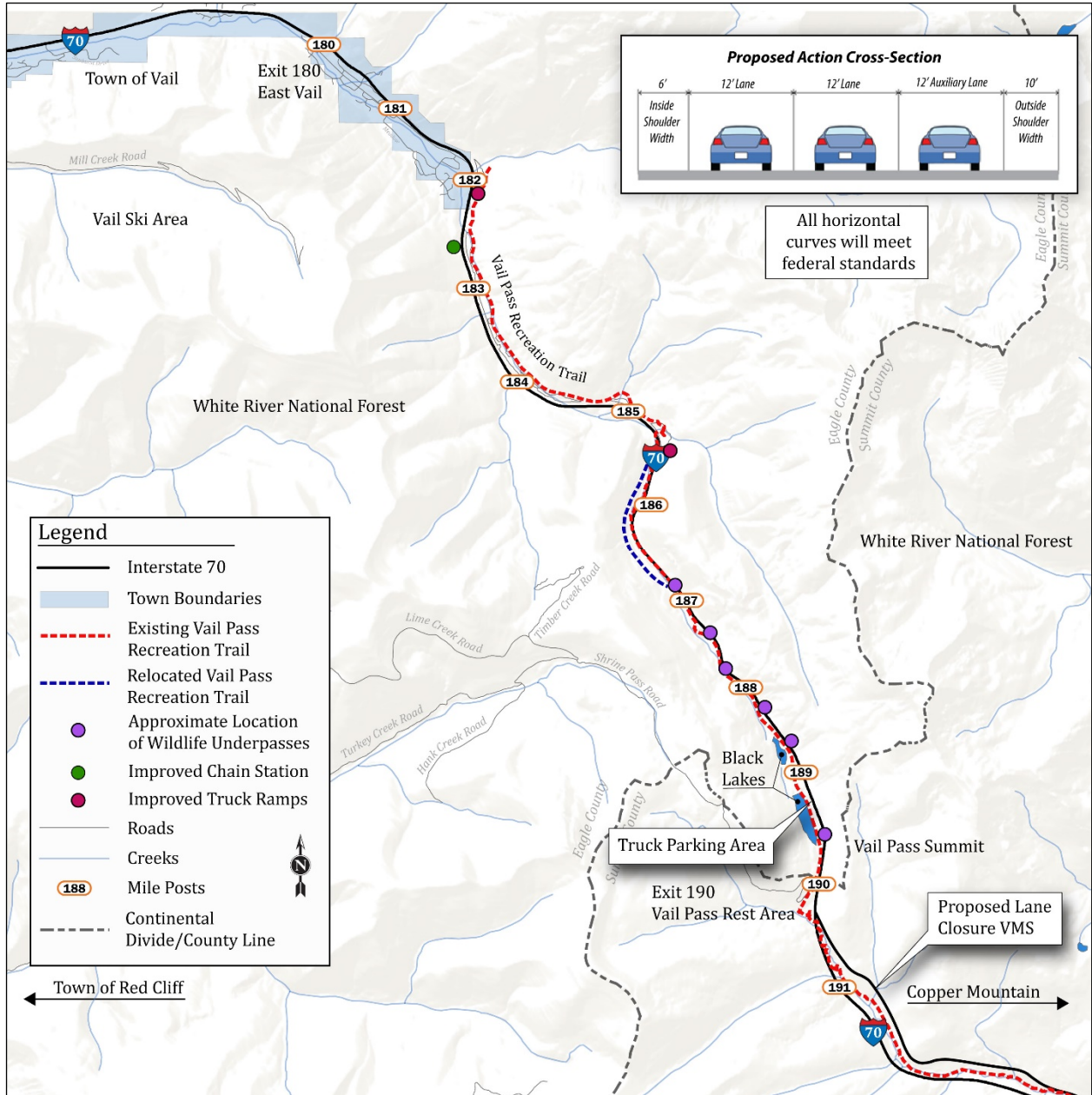


Intelligent Transportation System (ITS) equipment will also be installed along the I-70 project corridor, consistent with recent study recommendations. Additional variable message signs (VMSs) will be installed at key locations to warn drivers of upcoming curves, grades, and incidents. Additional variable speed limit signs will be installed to manage driver speeds to conditions. Automated lane closure signage will be installed approaching the East Vail exit on EB I-70 and approaching the WB I-70 Vail Pass Rest Area exit to quickly and efficiently close lanes when needed.

Additional elements of the Proposed Action include:

- The Vail Pass Recreation Trail will be directly impacted by the addition of the I-70 auxiliary lane and therefore relocated for approximately two miles from MP 185 to MP 187.
- Existing emergency truck ramps, located at approximately MP 182.2 and 185.5, will be upgraded to current design standards.
- Six wildlife underpasses and wildlife fencing will be constructed throughout the corridor.
- Additional capacity will be added to the existing commercial truck parking area at the top of Vail Pass.
- Widened shoulders (minimum of eight feet of additional width beyond the 10' shoulder) at multiple locations to accommodate emergency pull-offs, emergency truck parking, and staging for tow trucks.
- Improved median emergency turnaround locations to accommodate emergency and maintenance vehicle turnaround maneuvers.
- Improved chain station located at approximately MP 182.5 with additional parking, signage, lighting, and separation from the I-70 mainline.
- Avalanche protection located at approximately MP 186.

**Figure 2. I-70 West Vail Pass Auxiliary Lanes Proposed Action Alternative**



Source: DEA Project Team



## METHODOLOGY

### LAND USE AND ECONOMICS

To map existing land uses, data was obtained for US Forest Service (USFS)-managed areas and Town of Vail zoning and land use. Parcel data from Summit and Eagle Counties was also utilized. Future land uses were determined from plans and mapping prepared by the USFS and local jurisdictions and information obtained from the Town of Vail Community Development Department.

Population, housing, and economic characteristics and trends were evaluated as part of the existing conditions assessment to better understand the community profile within the project area. The community profile is based on figures and forecasts from the US Census Bureau and the Colorado Department of Labor and Employment. The USFS provided information pertaining to special use permits acquired to perform commercial recreation services.

This tech memo is prepared in accordance with the CDOT NEPA Manual and evaluates:

- Consistency with existing and future land uses and zoning;
- Consistency with adopted land use plans;
- Potential for induced development and growth; and
- Land use impacts during construction, including access and detours.

### ENVIRONMENTAL JUSTICE

The majority of the study area lies within Eagle County with a portion located in Summit County; data for both counties were evaluated. For the purpose of this analysis, minority and/or low-income populations within the study area were identified in accordance with CDOT's EJ guidelines, as defined in CDOT's NEPA Manual. Data from the American Community Survey (ACS) 5-Year Estimates (2013-2017) was downloaded at the block group level, county, and state for this analysis. The following categories are included:

- Low-income: B19001 Household Income in the Past 12 Months (In 2017 Inflation-adjusted dollars) (US Census, ACS, 2017a)
- Minority: B03002 Hispanic or Latino Origin by Race (US Census, ACS, 2017b)
- English Proficiency: B16004 Age By Language Spoken at Home By Ability to Speak English for the Population 5 Years and Over<sup>1</sup> (US Census, ACS, 2017c)

Minority populations and English proficiency were evaluated directly from the ACS data.

For low-income populations, both ACS and US Department of Housing and Urban Development (HUD) data were used. Following the guidance described in the CDOT NEPA Manual, the following steps were used to calculate the low-income population areas in each county: 1) utilized HUD data to determine income limits by persons in family, 2) calculated the extremely low-income income limit for the average household size, and 3) summed households within the low-income limit. The percentage of extremely low-income households was then calculated.

Through the guidance described in the CDOT NEPA Manual, low-income population areas were defined using HUD and ACS data to evaluate income limits by persons in households in Eagle and

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<sup>1</sup> Per CDOT's NEPA Manual guidance, only populations 18 and older were included in this analysis.



Summit Counties (US Census, 2019b and US HUD, 2018). Details regarding this evaluation are available in the following section.

For the purpose of this study, the project team collected from a variety of sources to identify social and community resources including the following:

- Google Earth (2019 and 2020 imagery)
- Google Maps (2019 and 2020 maps)
- Community websites

A qualitative EJ evaluation was performed to evaluate to what extent any minority or low-income population areas would be affected by the Proposed Action. An understanding of the demographic character of the area is important to provide a basis for assessing impacts to the local community and evaluating the project with respect to EJ requirements. The study area as a whole was analyzed opposed to targeting the analysis to specific properties affected by the improvements identified in the Proposed Action.

## **RECREATIONAL RESOURCES**

Several sources of data and information were referenced to identify parks and recreational facilities within the study area. These include:

- Draft EA existing conditions from 2007 (EA was not completed)
- Town of Vail- GIS data including land use, parcel boundaries, zoning, and designated open spaces (Vail, 2019)
- USFS management areas (USFS, 2019a)
- Eagle County- GIS Viewer (2019a) and Open Space Finder (2019b)
- Summit County- Interactive Trails Map (2019a) and Parcel Viewer (2019b)
- Available aerial photography and maps (Google2019, Google 2020)

## **EXISTING CONDITIONS**

### **LAND USE AND ECONOMICS**

#### **LAND USE**

Land use and zoning are established by policy, law, and plans that are developed and administered by the local jurisdictions. Jurisdictions in the project area that are active in land use planning and zoning include the Town of Vail, Eagle County, and Summit County. The project area is not located in a highly urbanized area; therefore, there is no metropolitan planning organization responsible for coordinating regional land use. Land use in and around the project area is largely uninhabited due to I-70's location within the White River National Forest and adjacency to Eagles Nest Wilderness Area. The northwestern portion of the project area overlaps with the Town of Vail.

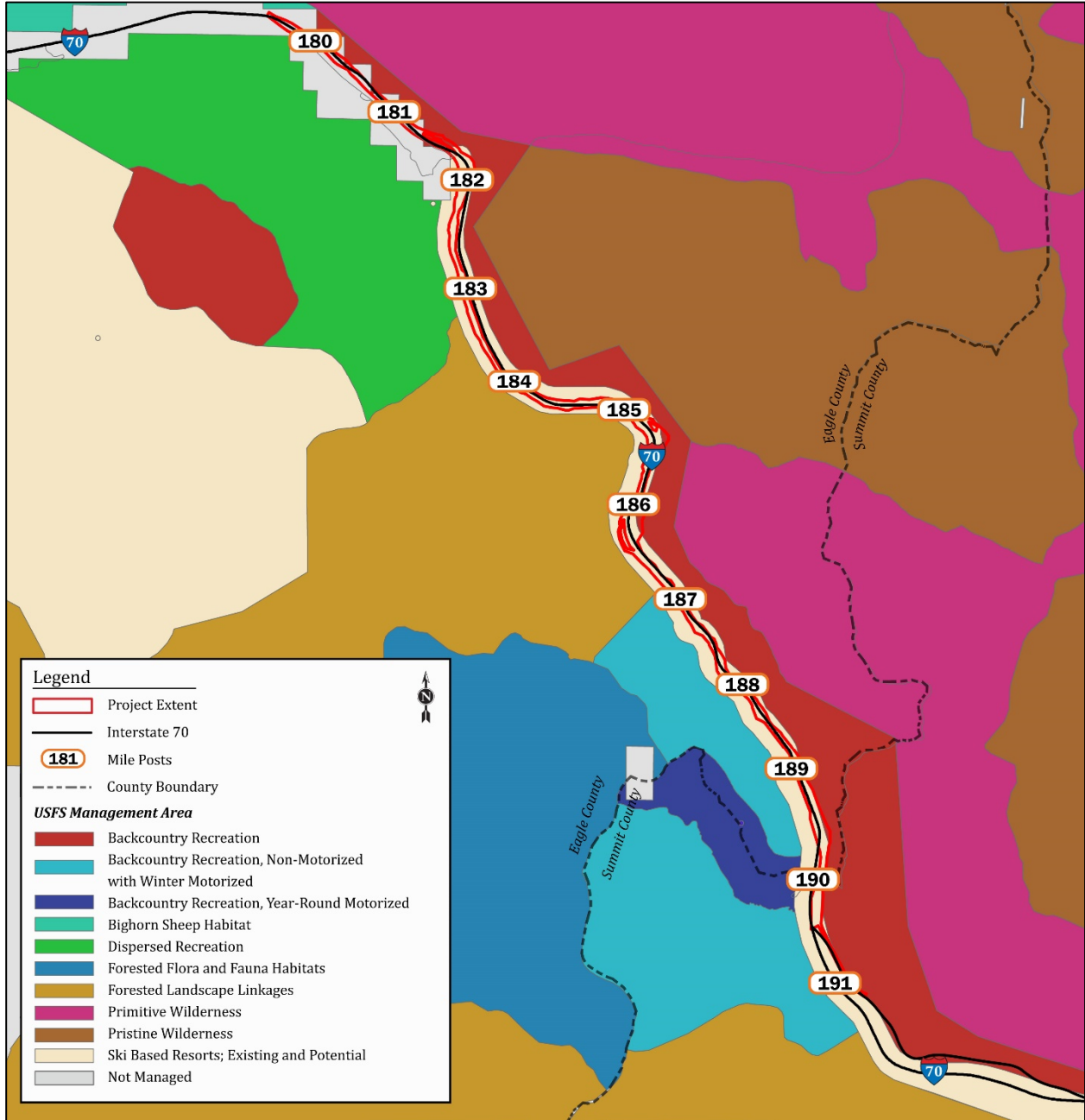
USFS land accounts for the majority of the project area. This land use is uninhabited and is generally protected from development. USFS management areas determine the level of human activity and use allowed in various in forest areas. The majority of the project area is located within the management area designated as "ski bases resorts - existing and potential." This management area includes existing resorts that have already been permitted and developed, as well as additional suitable



terrain with potential for future development. The majority of the land immediately to the north and including several small portions of the project area (MP 180.5-182, MP 185, MP 189.5, and MP 191.5) is managed for backcountry recreation. The far western end of the study area is managed for bighorn sheep habitat while the land south of the study area is designated as dispersed recreation, forested landscape linkages, and backcountry recreation, non-motorized with winter motorized uses. **Figure 3** illustrates the location of these USFS management areas.

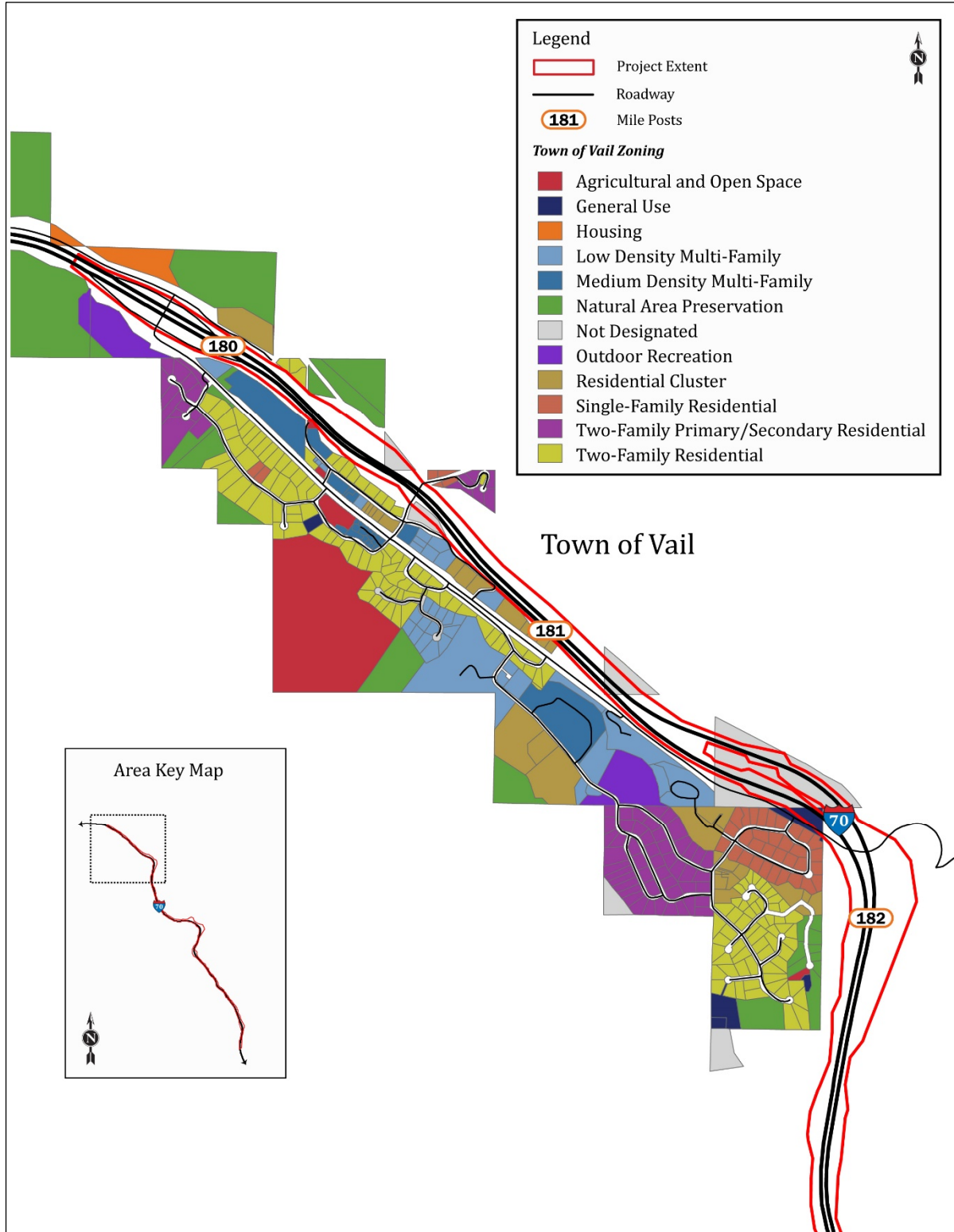
The Town of Vail is the only populated location within the project area and encompasses the western end of the project area. In this easternmost portion of the Town of Vail, commonly referred to as East Vail, the land use is primarily residential (single-family, two-family, low and medium density multiple-family), and interspersed with park and open space. The area encompassing I-70 is primarily unzoned land for transportation right-of-way (ROW), but includes three Town of Vail parcels within the study area that are zoned without designation and one parcel zoned as general use. These parcels were provided to the Town by the USFS through a patent and are subject to the highway easement deed described above. **Figure 4** illustrates the distribution of these land uses within the Town of Vail.

**Figure 3. USFS Management Areas**



Source: White River National Forest Management Areas (USFS 2019a)

**Figure 4. Town of Vail Zoning**



Source: Town of Vail (Vail 2019a)



**ECONOMICS**

Between 2000 and 2017, both the population and number of households increased for the project area, as presented in **Table 1**. Compared to Colorado as a whole, Eagle County experienced more growth in population at 1.51% while the Town of Vail experienced the least amount of change with just over 1% growth. The number of households added in the Town of Vail and Eagle and Summit Counties between 2000 and 2017 were less than that of Colorado.

**Table 1. Community Population and Households: 2000-2017**

GEOGRAPHIC UNIT	2000	2017*	GROWTH 2000-2017	CAGR
<b>POPULATION</b>				
Colorado	4,301,261	5,436,519	1,135,258	1.39%
Eagle County	41,659	53,726	12,067	1.51%
Summit County	23,548	29,722	6,174	1.38%
Town of Vail	4,531	5,425	894	1.06%
<b>HOUSEHOLDS</b>				
Colorado	1,658,238	2,082,531	424,293	1.35%
Eagle County	15,148	17,765	2,617	0.94%
Summit County	9,120	9,455	335	0.21%
Town of Vail	2,165	2,206	41	0.11%

Source: US Census Bureau, ACS 2001a, 2017a, 2017c

CAGR- Compound Annual Growth Rate

\* Data based on ACS 5-Year Estimates (2013-2017)

Median household income also increased for the area as presented in **Table 2**. Across all of Colorado, median income increased 1.95% compared to 1.69% for Eagle County and 1.55% in Summit County. The Town of Vail experienced an increase of 1.58%. Despite lower growth rates compared to Colorado, the median household income for Eagle County, Summit County, and the Town of Vail were all higher than that of Colorado in years 2000 and 2017.

**Table 2. Median Household Income: 2000-2017**

GEOGRAPHIC UNIT	2000	2017*	GROWTH 2000-2017	CAGR
Colorado	\$47,203	\$65,548	\$18,345	1.95%
Eagle County	\$62,682	\$83,303	\$20,621	1.69%
Summit County	\$56,587	\$73,538	\$16,951	1.55%
Town of Vail	\$56,680	\$73,981	\$17,301	1.58%

Source: US Census Bureau, ACS 2000b, 2017d

CAGR- Compound Annual Growth Rate

\* Data based on ACS 5-Year Estimates (2013-2017)

As median household income increased from 2000 to 2017, the number of employed individuals also increased as presented in **Table 3** below. Employment growth in Colorado was 1.55%, which was exceeded only by Eagle County at 1.58%. Both Summit County and the Town of Vail experienced slightly lower employment rates at 1.49% and 1.13%, respectively.





**Table 3. Employment Status: 2000-2017**

GEOGRAPHIC UNIT	2000	2017*	GROWTH 2000-2017	CAGR
Colorado	3,325,197	4,320,213	995,016	1.55%
Eagle County	32,878	42,899	10,021	1.58%
Summit County	19,840	25,507	5,667	1.49%
Town of Vail	4,106	4,971	865	1.13%

Source: US Census Bureau, ACS 2000b, 2017b

CAGR- Compound Annual Growth Rate

\* Data based on ACS 5-Year Estimates (2013-2017)

A review of employment by industry type indicates that arts, entertainment, recreation, accommodation and food services (collectively servicing tourism) currently employs the most individuals in Eagle County, Summit County, and the Town of Vail compared to other industries (**Table 4**). In the Town of Vail, this industry represents nearly half of the workforce with 46% employed.

**Table 4. Industry Types: 2017**

INDUSTRY TYPE	COLORADO (NUMBER/%)	EAGLE COUNTY (NUMBER/%)	SUMMIT COUNTY (NUMBER/%)	TOWN OF VAIL (NUMBER/%)
Agriculture, forestry, fishing and hunting, and mining	66,523 / 2%	460 / 1%	380 / 2%	14 / 1%
Construction	218,515 / 8%	3,570 / 11%	2,000 / 10%	114 / 3%
Manufacturing	189,456 / 7%	832 / 2%	879 / 5%	112 / 3%
Wholesale trade	70,033 / 2%	824 / 2%	223 / 1%	55 / 1%
Retail trade	299,623 / 11%	3,442 / 10%	2,981 / 15%	331 / 9%
Transportation and warehousing, and utilities	126,136 / 4%	1,051 / 3%	686 / 4%	95 / 2%
Information	126,136 / 4%	672 / 2%	144 / 1%	105 / 3%
Finance, insurance, real estate, and rental and leasing	192,773 / 7%	2,794 / 8%	1,184 / 6%	375 / 10%
Professional, scientific, management, administrative, and waste management services	381,241 / 14%	4,341 / 13%	1,783 / 9%	240 / 6%
Educational, health and social services	568,141 / 20%	3,888 / 12%	2,005 / 10%	462 / 12%
Arts, entertainment, recreation, accommodation and food services	297,616 / 11%	8,861 / 26%	5,226 / 27%	1,778 / 46%
Other services (except public administration)	138,852 / 5%	1,750 / 5%	952 / 5%	87 / 2%
Public administration	130,540 / 5%	981 / 3%	915 / 5%	100 / 3%

Source: US Census Bureau, ACS 2017e

\* Data based on ACS 5-Year Estimates (2013-2017)



The region offers a range of outdoor activities that support the arts, entertainment, recreation, accommodation, and food services industry, with recreation within the White River National Forest at the forefront. There are numerous companies who hold a special use permit from the USFS to perform commercial recreation services. The following **Table 5** presents the types and number of special use permits issued by the Eagle-Holy Cross Ranger District, which includes the Study Area. The special use permits have a 10-year term, but there are also temporary permits (one year or less) available that are issued at the ranger’s discretion and may change from year to year.

**Table 5. Recreation Permits issued by the Eagle-Holy Cross Ranger District**

PERMIT TYPE	NUMBER OF PERMIT HOLDERS
Bicycle rental and tours	6
Snow cat skiing	1
Skiing / avalanche education	3
Snowshoe tours	1
Fishing	4
Outdoor education	2
Backcountry huts	1
Recreation Events	6

Source: USFS, Eagle-Holy Cross Ranger District personal communications (2019)

The six permits for bicycle rentals and tours operate primarily along the Vail Pass Recreation Trail. Clients are shuttled to the top of Vail Pass where they can ride the recreation trail, guided or unguided, back toward the Town of Vail. The outfitting and guiding companies operate on Vail Pass from May to November, dependent on weather conditions.

**ENVIRONMENTAL JUSTICE/SOCIOECONOMICS**

CDOT evaluates environmental effects on all communities, including human health, economic, and social effects (negative and positive) on minority and low-income populations within the study area. CDOT’s environmental stewardship policy makes sure that the statewide transportation system is constructed and maintained in an environmentally responsible, sustainable, and compliant manner as well as following several legal mandates that pertain to communities and federally funded projects. Before impacts can be determined, an evaluation of the racial and economic character of the affected community, specifically including the identification of minority and low-income populations and resources serving these populations within the study area was performed as described in the following sections.

**LOW INCOME POPULATION AREAS**

Low-income populations are defined as any readily identifiable group of low-income persons, who live in geographic proximity, in which household income is at or below the HHS poverty guidelines. If circumstances warrant, geographically dispersed/transient persons (such as migrant workers or Native Americans) who will be affected by a proposed department of transportation program, policy, or activity are also included in low-income populations.

To evaluate extremely low-income populations, two metrics were established: 1) the extremely low-income threshold dollar amount, number, and percentages for a particular county; and 2) the number and percentage of extremely low-income populations in the study area that will be compared to the county percentage. The extremely low-income threshold is defined as a household income at or



below the HHS poverty guidelines. However, CDOT uses the US HUD threshold of extremely low-income level, which is tailored by county and more inclusive than HHS (CDOT, 2017). To identify low-income populations, a combination of the US Census and the US HUD data are used to evaluate the average household size in Eagle and Summit Counties as depicted in **Tables 6 and 7**.

**Table 6. Income Limit Category for Eagle County**

INCOME LIMIT CATEGORY	PERSONS IN FAMILY							
	1	2	3	4	5	6	7	8
Extremely Low Income	\$18,800	\$21,500	\$24,200	\$26,850	\$29,000	\$32,960	\$37,140	\$41,320

Notes:

FY: Fiscal Year

Source: US HUD, FY 2017

**Table 7. Income Limit Category for Summit County**

INCOME LIMIT CATEGORY	PERSONS IN FAMILY							
	1	2	3	4	5	6	7	8
Extremely Low Income	\$18,500	\$21,150	\$23,800	\$26,400	\$28,780	\$32,960	\$37,140	\$41,320

Notes:

FY: Fiscal Year

Source: US HUD, FY 2017

For Eagle County, the average household size is 3.02 persons (US Census, 2019a); the income limit was evaluated for this average by the following steps:

1. Subtracting the two household categories from which the average household size falls within (3-person household income from the 4-person household income)
2. Multiplying the result by the decimal remainder (in this case, 0.02)
3. Adding the remainder amount to the lower household category (3-person household income)

**Table 8. Identifying the Extremely Low-Income Threshold in Eagle County**

INCOME THRESHOLD	STEP 1	STEP 2	STEP 3
	3-PERSON HH INCOME SUBTRACTED FROM THE 4-PERSON HH INCOME	RESULT MULTIPLIED BY DECIMAL REMAINDER	REVISED INCOME THRESHOLD
Extremely Low Income	\$2,650	\$53.00	\$24,253

Notes:

HH: Household

FY: Fiscal Year

Source: US HUD, FY 2017



For Summit County, the average household size is 3.10 persons (US Census, 2019b); the income limit was evaluated for this average by the following steps:

1. Subtracting the two household categories from which the average household size falls within (3-person household income from the 4-person household income)
2. Multiplying the result by the decimal remainder (in this case, 0.10)
3. Adding the remainder amount to the lower household category (3-person household income)

**Table 9. Identifying the Extremely Low-Income Threshold in Summit County**

INCOME THRESHOLD	STEP 1	STEP 2	STEP 3
	3-PERSON HH INCOME SUBTRACTED FROM THE 4 PERSON HH INCOME	RESULT MULTIPLIED BY DECIMAL REMAINDER	REVISED INCOME THRESHOLD
Extremely Low Income	\$2,600	\$260.00	\$24,060

Notes:

HH: Household

FY: Fiscal Year

Source: US HUD, FY 2017

As shown in **Table 10**, the Eagle County extremely low-income threshold was assessed to be \$24,253 with nine percent of households qualifying as extremely low-income. Among the Eagle County census block groups in the study area, Block Group 2 of Census Tract 7.02 is the same as the county average of nine percent, while the other three block groups were higher than the county average at 14% (Block Group 1 of Census Tract 6, Block Group 1 of Census Tract 7.02, and Block Group 2 of Census Tract 7.03).

**Table 10. Percent Extremely Low-Income Households within the Study Area Block Groups**

GEOGRAPHIC UNIT	EXTREMELY LOW-INCOME THRESHOLD	TOTAL HOUSEHOLDS	EXTREMELY LOW-INCOME HOUSEHOLDS	PERCENT
Eagle County	\$24,253	17,765	1,547	9%
Summit County	\$24,060	9,455	1,076	11%
<b>CENSUS BLOCK GROUPS WITHIN THE STUDY AREA</b>				
<b>Eagle County</b>				
Census Tract 6	Block Group 1	540	74	<b>14%</b>
Census Tract 7.02	Block Group 1	346	48	<b>14%</b>
	Block Group 2	378	34	9%
Census Tract 7.03	Block Group 2	376	52	<b>14%</b>
<b>Summit County</b>				
Census Tract 3	Block Group 1	206	32	<b>16%</b>

Notes:

Source: US Census Bureau, ACS, 2017a

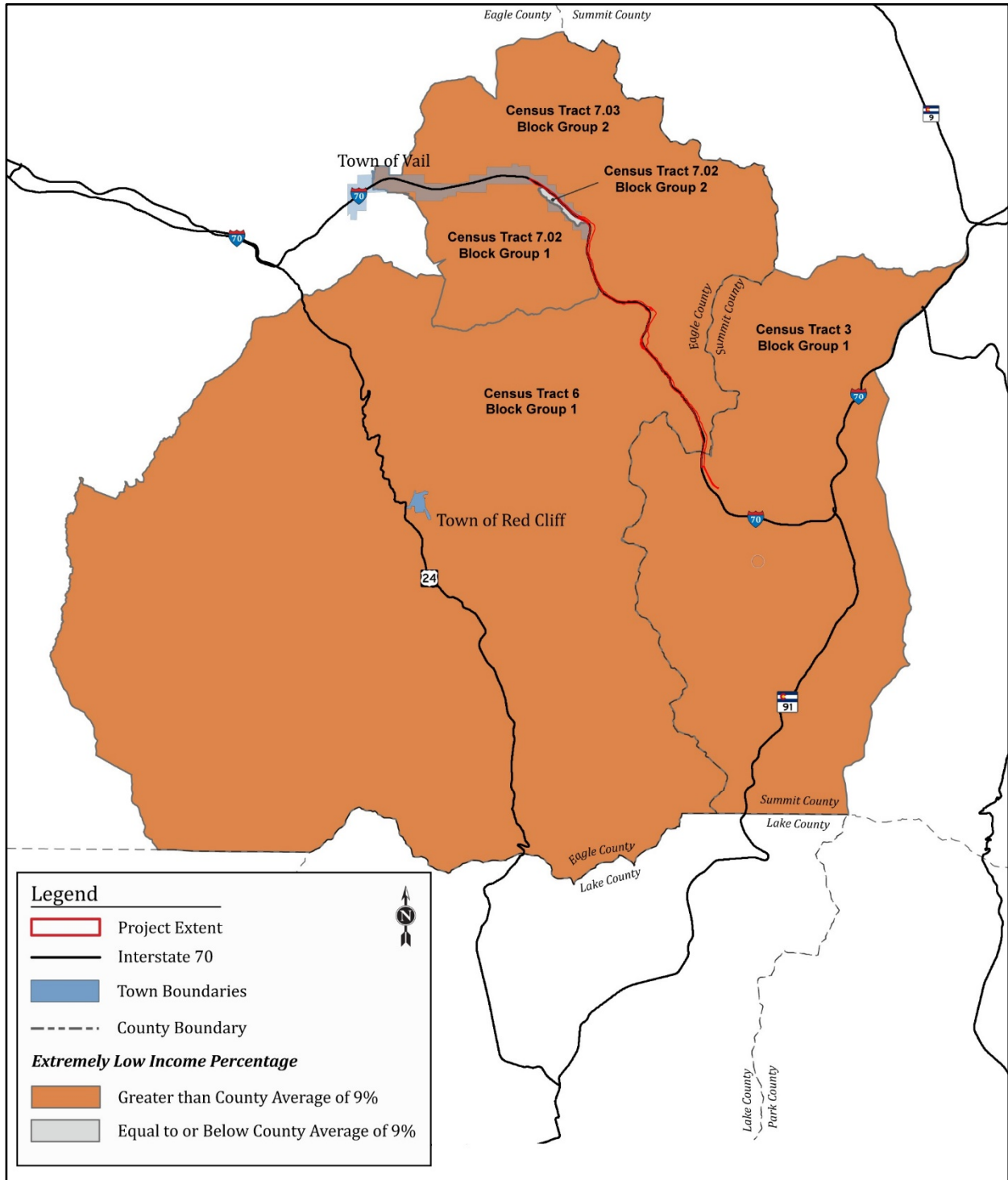
Percentages shown in **BOLD** exceed the respective county percentages.



The Summit County extremely low-income threshold was assessed to be \$24,060 with 11 percent of households qualifying as extremely low-income. Block Group 1 of Census Tract 1 was above the Summit County percentage with 16 percent qualifying as extremely low-income. The extremely low-income population block groups are shown in **Figure 5**.

Block Group 1 of Census Tract 6 is located to the south of I-70, between MP 184 and MP 190. Block Group 1 of Census Tract 3 extends east from the Eagle-Summit county line. Although the percentage of extremely low income populations in both block groups exceed their respective county percentages, it's important to note that no households counted within either block group occur within the project area. The project area within both block groups is bordered entirely by USFS lands. The primary population centers for Block Group 1 of Census Tract 6 are the towns of Red Cliff and Minturn along US Highway 24. The primary population center for Block Group 1 of Census Tract 3 is Copper Mountain.

**Figure 5. Extremely Low-income Percentage within the Study Area**





**MINORITY POPULATIONS**

Based on a review of the data, the total minority populations within Block Group 1 of Census Tract 6 exceed the Eagle County, Summit County, and Colorado total minority percentages (**Table 11**). The total minority populations of the other project area census tracts are lower than Colorado and their respective county percentages. The comparison of minority population block groups is shown in **Figure 6**.

**Table 11. Percent Minority within the Study Area Block Groups**

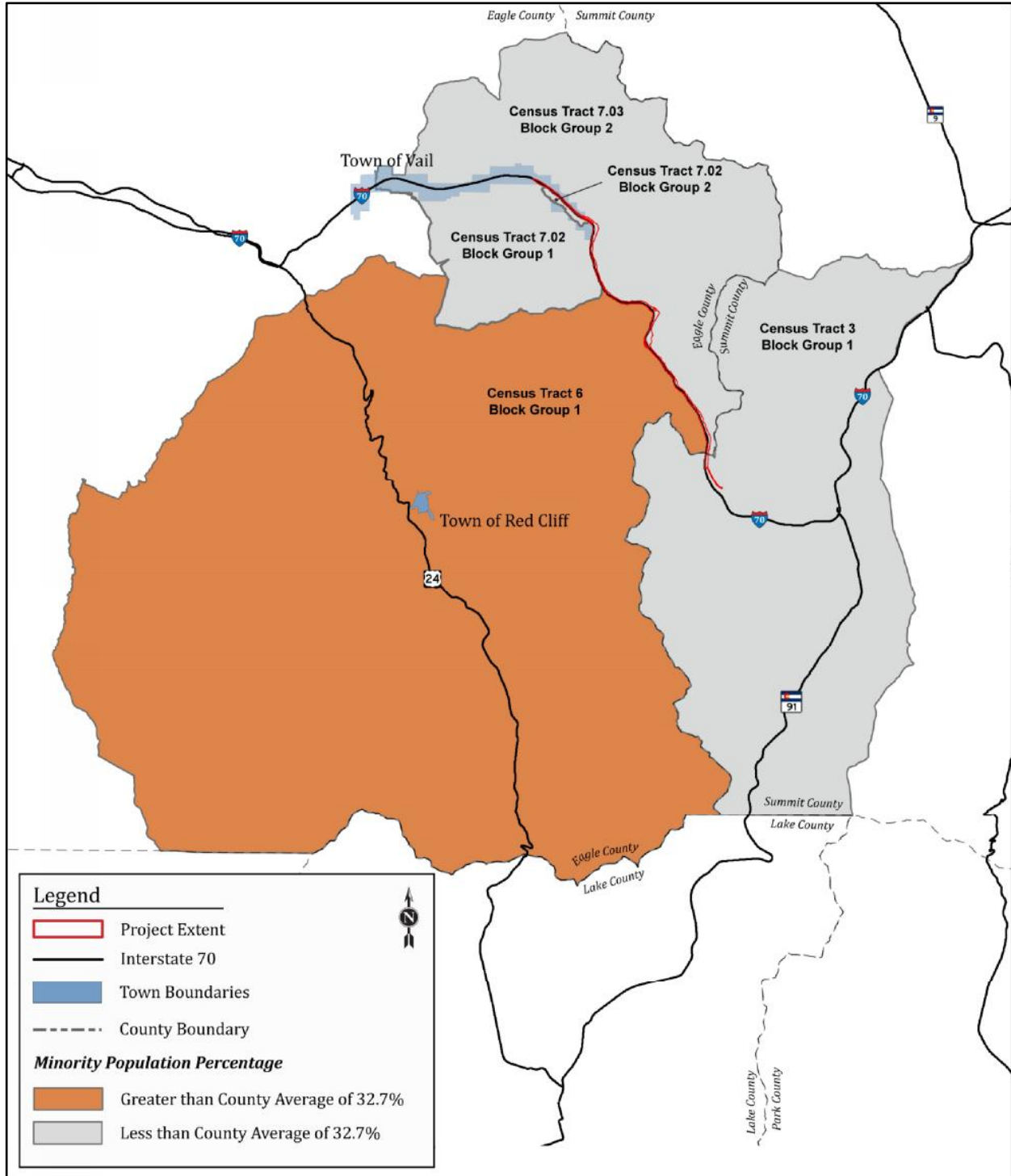
GEOGRAPHIC UNIT		TOTAL POPULATIONS	PERCENT MINORITY					TOTAL MINORITY
			BLACK/ AFRICAN AMERICAN	NATIVE AMERICAN	ASIAN	HISPANIC OR LATINO	OTHER <sup>1</sup>	
Colorado		5,436,519	3.9%	0.5%	3.0%	21.3%	2.6%	31.4%
Eagle County		53,726	0.8%	0.4%	0.9%	29.6%	1.0%	32.7%
Summit County		29,722	0.9%	0.3%	0.4%	14.0%	2.4%	18.1%
<b>BLOCK GROUPS IN THE STUDY AREA</b>								
<b>Eagle County</b>								
Census Tract 6	Block Group 1	1,535	<b>2.5%</b>	0.0%	0.0%	<b>31.1%</b>	<b>5.2%</b>	<b>38.8%</b>
Census Tract 7.02	Block Group 1	891	<b>6.4%</b>	0.0%	<b>5.4%</b>	8.6%	0.4%	20.9%
	Block Group 2	736	0.0%	0.0%	0.0%	2.6%	<b>2.6%</b>	5.2%
Census Tract 7.03	Block Group 2	849	<b>3.9%</b>	0.0%	0.0%	4.6%	0.0%	8.5%
<b>Summit County</b>								
Census Tract 3	Block Group 1	646	0.0%	0.0%	0.0%	3.1%	0.0%	3.1%

Source: US Census Bureau, ACS, 2017b

1 Total of the following census categories for B03002: “Other race alone” and “Two or more races”. Percentages shown in BOLD exceed the respective county and/or Colorado percentages.

Block Group 1 of Census Tract 6 is located to the south of I-70, between MP 184 and MP 190. Although the percentage of minority populations in the block group exceeds the Eagle County, Summit County, and Colorado total minority percentages, it’s important to note that no households counted within the block group occur within the project area. The project area within Block Group 1 of Census Tract 6 is bordered entirely by USFS lands. The primary population centers for Block Group 1 of Census Tract 6 are the towns of Red Cliff and Minturn along US Highway 24. The Proposed Action does not include minority EJ populations.

**Figure 6. Minority Population Percentages within the Study Area**







**LIMITED-ENGLISH PROFICIENT POPULATIONS**

For purposes of this assessment, individuals who do not speak English as their primary language and have a limited ability to read, write, speak, and understand English are considered to be Limited-English proficient (LEP). LEP populations are identified to make sure that they can effectively participate in and benefit from federally assisted projects and that project actions do not violate the Title VI prohibition against national origin discrimination.

For this LEP assessment, data was collected from the US Census Bureau American ACS 5-year Estimates (2013-2017) at the tract, county, and state level. Datasets were refined based upon populations 18 years old and older that speak English not at all, not well, and well, and compared to Eagle and Summit Counties, as well as Colorado.

The FHWA guidelines state that if greater than 50 people fall into this category, language assistance is required, and if 5% (must be at least 50 people) or 1,000 people fall into this category, written translation is required for vital documents.

Based on the data presented in **Table 12**, language assistance and written translation is required for two of the Eagle County census tracts (Tracts 6 and 7.02). The percentage of LEP individuals within Eagle County and Summit County is 11.1 and 6.2 percent, respectively. Block Groups 1 of Census Tract 6 and Census Tract 7.02 have the greater percentage of LEP population at 6.0 and 12.5 percent and both exceeded the Colorado percentage of 5.4. Block Group 1 of Census Tract 1 in Summit County is below the county and Colorado percentages at 5.3.

**Table 12. Percent Limited English Proficient Households within the Study Area Block Groups**

GEOGRAPHIC UNIT		NUMBER AND PERCENTAGE OF INDIVIDUALS WITH LIMITED-ENGLISH PROFICIENCY
Colorado		274,780 Individuals (5.4%)
Eagle County		5,590 Individuals (11.1%)
Summit County		1,762 Individuals (6.2%)
<b>CENSUS TRACTS WITHIN THE STUDY AREA</b>		
<b>Eagle County</b>		
Census Tract 6	Block Group 1	<b>89 Individuals (6.0%)</b>
Census Tract 7.02	Block Group 1	<b>111 Individuals (12.5%)</b>
	Block Group 2	14 Individuals (1.9%)
Census Tract 7.03	Block Group 2	0 Individuals (0.0%)
<b>Summit County</b>		
Census Tract 1	Block Group 1	50 Individuals (5.3%)

Source: US Census Bureau, ACS, 2017c

Percentages shown in **BOLD** exceed either their respective county and/or the Colorado percentage, and meet the FHWA guidelines requiring language assistance and written translation.

**RECREATIONAL RESOURCES**

Due to the proximity to the White River National Forest, the study area provides access to a wide range of recreation opportunities including multiple trails that access the Eagles Nest Wilderness. Eagles Nest Wilderness is a federally designated wilderness area in Summit and Eagle Counties that encompasses approximately 133,496 acres of the White River National Forest. The area is managed



for a variety of recreation uses by the Dillon and Holy Cross Ranger Districts of the USFS. There are campgrounds, the Black Lakes, and the Vail Pass Winter Recreation Area, which is located at the top of the pass and is a major recreation destination. Additionally, the Town of Vail oversees numerous recreation resources within the study area.

**Table 13** summarizes each parks and recreation resource identified in the study area, the jurisdiction, the type of resource, and approximate mile point along I-70. **Figures 7-1 and 7-2** illustrate these resources geographically within the study area.

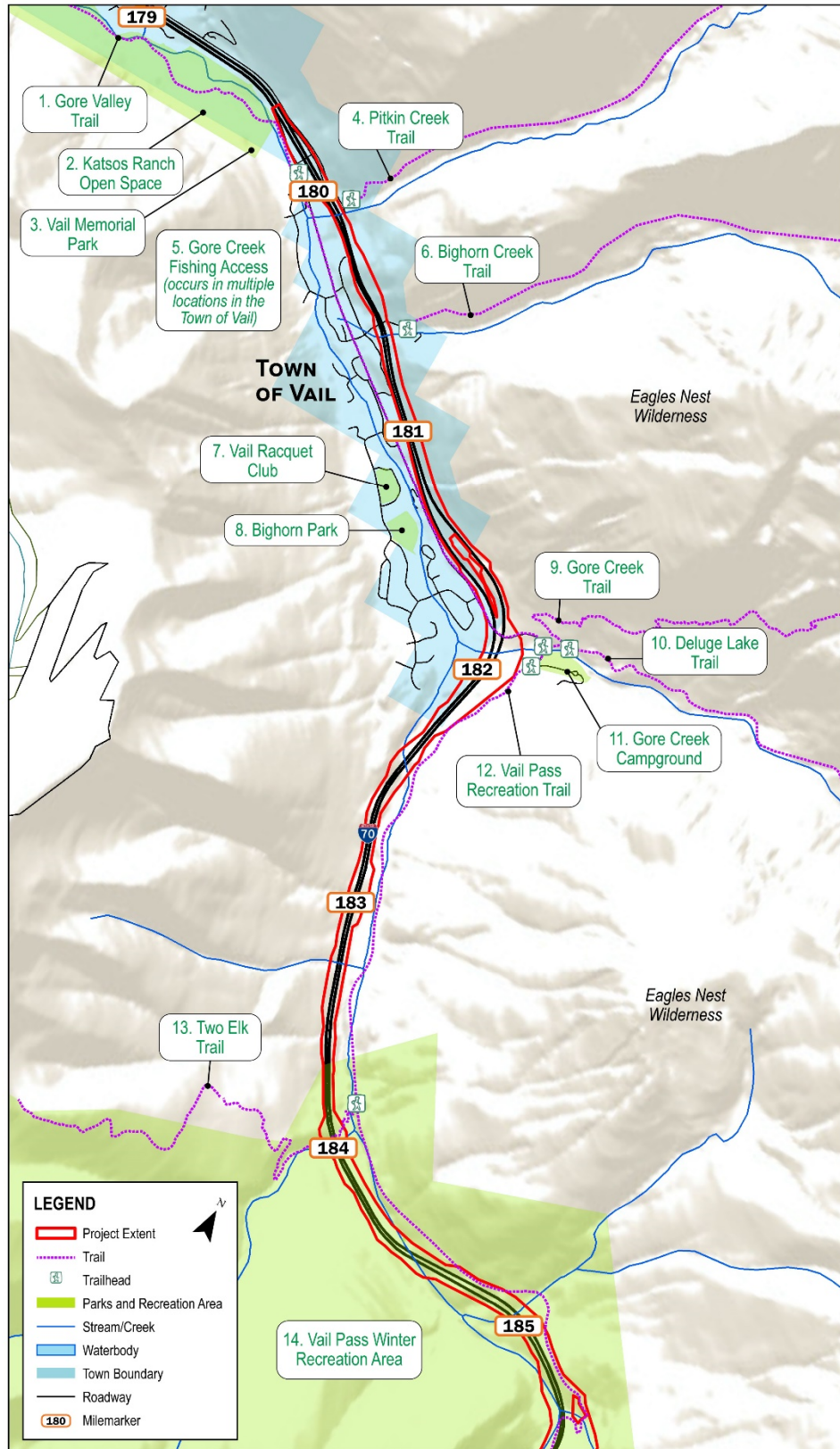
**Table 13. Parks and Recreation Resources**

NAME	SECTION 4(F)?*	OFFICIAL WITH JURISDICTION	RESOURCE TYPE	PROJECT MILE POST	MAP ID
Bighorn Creek Trail	Yes	USFS	Trail	180.3	6
Bighorn Park	Yes	Town of Vail	Park	181.5	8
Black Lake Number 1	Yes	Colorado Parks and Wildlife	Recreation Area	188.7	15
Black Lake Number 2	Yes	Colorado Parks and Wildlife	Recreation Area	189.5	16
Corral Creek Trail	Yes	USFS	Trail	190	20
Deluge Lake Trail	Yes	USFS	Trail	181.6	10
Gore Creek Campground	Yes	USFS	Recreation Area	181.7	11
Gore Creek Fishing Access	No	NA	Recreation Area	180.2, 190.2	5
Gore Creek Trail	Yes	USFS	Trail	181.7	9
Gore Valley Trail	Yes	Town of Vail	Trail	179.5-181.8	1
Katsos Ranch Open Space	No*	Town of Vail	Recreation Area	177.7-179.4	2
Pitkin Creek Trail	Yes	USFS	Trail	179.9	4
Shrine Pass Road	Yes	USFS	Trail	190	17
Two Elk Trail	Yes	USFS	Trail	184	13
Vail Memorial Park	No	Town of Vail	Park	180	3
Vail Pass Recreation Trail	Yes	USFS	Trail	181.8-191.5	12
Vail Pass Winter Recreation Area	Yes	USFS	Recreation Area	190	14
Vail Pass Rest Area	No	CDOT	Recreation Area	190	18
Vail Racquet Club (4695 Vail Racquet Club Drive)	No	Privately Owned	Recreation Area	181.3	7
Wilder Gulch Trail	Yes	USFS	Trail	190.2	19

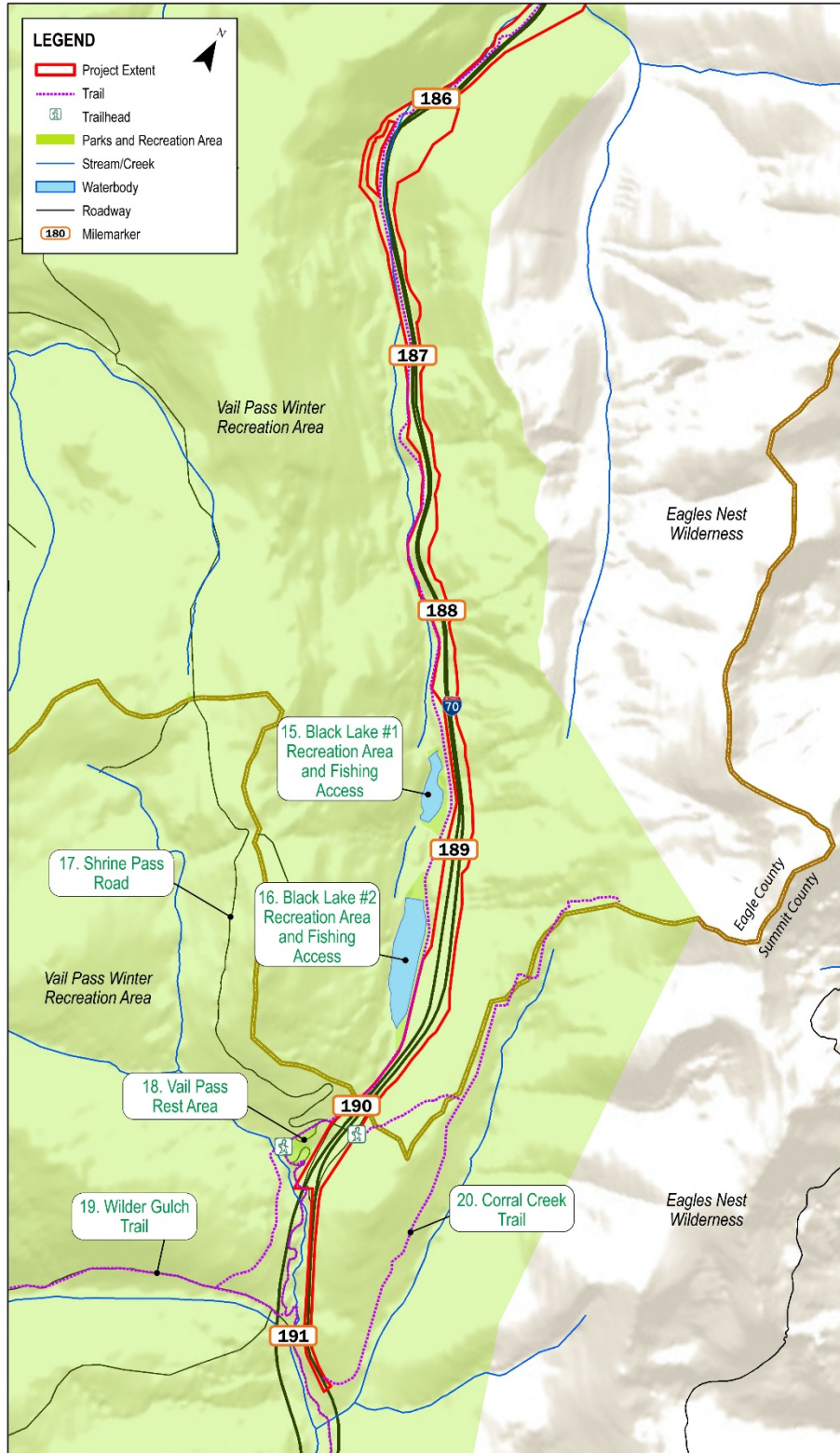
\*Impacts and mitigation for Section 4(f) resources are discussed in further detail in the Section 4(f) Evaluation Report

\*\*Trails within Katsos Ranch Open Space are considered Section 4(f) resources.

**Figure 7-1. Parks and Recreation Resources**



**Figure 7-2. Parks and Recreation Resources**





The recreation resources in the study area are described in more detail in the following sections.

### **BIGHORN CREEK TRAIL**

The Bighorn Creek trailhead is located within the Town of Vail, approximately 450 feet north of I-70 at MP 180.3. The parking lot at the trailhead is accessed from Columbine Drive. The Bighorn Creek trail is approximately 3.25 miles and offers views of Bighorn Falls and the Vail Valley. The trail falls under the jurisdiction of the White River National Forest and provides access to the Eagles Nest Wilderness Area.

### **BIGHORN PARK**

Bighorn Park is located within the Town of Vail, south of I-70 near mile marker 181.5. This park offers a number of amenities, including a playground, off-leash park, open turf area, picnic tables/shelter/grills, restrooms, access to path, and parking. The park is owned by the Town of Vail and is a tax-funded, publicly accessible recreation facility.

### **BLACK LAKES NUMBER 1 AND 2**

The Black Lakes are cold water reservoirs located at the top of Vail Pass just north of the Vail Pass Rest Area, within the White River National Forest. The primary function of the lakes is to deliver water during low flow periods to the Black Gore and Gore Creeks, Eagle River and eventually to the Colorado River, but also offer fishing opportunities in close proximity to I-70. Colorado Parks and Wildlife stocks the Black Lakes with rainbow trout annually. The area includes a parking lot, vault toilets, fishing pier, and access to the Vail Pass Recreation Trail.

### **CORRAL CREEK TRAIL**

The Corral Creek Trail extends approximately 5 miles into the Eagles Nest Wilderness and can be accessed adjacent to WB I-70 near MP 191 or from the top of Vail Pass at Exit 190. The trail has moderate use, but becomes more popular among cross-country skiers and snowshoers during the winter months.

### **DELUGE LAKE TRAIL**

The Deluge Lake Trail begins at the Gore Creek Campground and extends approximately 3.8 miles to Deluge Lake. The trail traverses a steep, sunny, south-facing hillside for about 3 miles before turning north into the Deluge Creek valley with views of the Sawatch Range. The Deluge Lake Trail is under the jurisdiction of the White River National Forest.

### **GORE CREEK CAMPGROUND**

The Gore Creek Campground is located on the north side of I-70 approximately 760 feet to the east of I-70 at MP 181.7 and is located along Gore Creek close to the Eagles Nest Wilderness. The campground offers 25 campsites with picnic tables and fire grates. It is handicap accessible and accommodates tent camping and trailers, although no hook-ups or dump stations are available. The Gore Creek campground is under the jurisdiction of the White River National Forest and is accessed from Bighorn Road.

### **GORE CREEK FISHING ACCESS**

Gore Creek is a perennial tributary to the Eagle River that flows west through the Vail Valley and along the I-70 frontage road through the study area. There are several locations that offer informal river access for fishing within the Town of Vail.



### **GORE CREEK TRAIL**

The Gore Creek Trail is located approximately 850 feet north of I-70 at MP 181.7. Parking for the trailhead is accessed from Bighorn Road (Old US 6). The trail accesses Gore Lake at approximately 5.5 miles and ends at Buffalo Pass at approximately 6.8 miles. The Gore Creek Trail is open to hiking and horseback, and offers camping and fishing opportunities. The trail is one of the most popular of the Eagles Nest Wilderness.

### **GORE VALLEY TRAIL**

The Gore Valley Trail is part of the ECO Trails system and consists of a 12-mile bike route that's a combination of attached bike lanes, detached trails and residential streets. The ECO Trails system is an Eagle County program that is responsible for funding, constructing, and promoting a multi-use, non-motorized trail system through the Eagle and Vail valleys. The paved trail winds through open space, parks and recreation facilities, as well as Vail's village areas. The trail extends from the Eagle Valley Trail at the west end of Vail (at Sunburst Road) to the Vail Pass Trail in East Vail.

### **KATSOS RANCH OPEN SPACE**

Katsos Ranch is owned by the Town of Vail and designated as open space. The property is within Vail municipal limits and lies to the south of I-70 between MP 177.7 and 179.4. Its northern boundary varies between over 1000 and less than 100 feet away from I-70. The majority of Katsos Ranch Open Space is not within the study area, with the exception of a small portion along the northern edge of the extreme eastern part of the property. This small portion is south of I-70 at approximately MP 179.6. Katsos Ranch Open Space has trails throughout that are open to pedestrians, bicyclists, and other recreational users.

### **VAIL MEMORIAL PARK**

An approximately 11-acre portion of Katsos Ranch is occupied by Vail Memorial Park. The Vail Memorial Park Foundation, a non-profit, non-sectarian organization, leases this portion of Katsos Ranch from the Town of Vail. This park offers a place to purchase memorials in the form of benches, trees and inscriptions on boulders, flagstones, and dry-stacked rock walls. Cremation remains can be buried in containers in the memorial park as well.

### **PITKIN CREEK TRAIL**

The Pitkin Creek Trail is located within the Town of Vail municipal limits, with its trailhead approximately 140 feet north of I-70. From Exit 180 it is reached by following Fall Line Drive to the parking lot. The first mile of the trail climbs steeply out of Vail Valley and after 2.5 miles hikers climb steep switchbacks with views of two waterfalls on Pitkin Creek. Further on the trail provides access to Pitkin Lake, and to many Gore Range peaks. The Pitkin Creek trail is roughly 4.5 miles in length, of which approximately 500 feet is within the study area. The trail is under the jurisdiction of the White River National and is designated for hiking use.

### **SHRINE PASS ROAD**

Shrine Pass Road is a USFS-designated biking and recreation trail and 4 wheel-drive dirt road that starts at Vail Pass and ends at the town of Redcliff.

### **TWO ELK TRAIL**

The Two Elk Trail is a National Recreation Trail spanning 11 miles from a junction with Vail Pass Recreation Trail to Forest Road 762 near Minturn. From the Vail Pass Recreation Trail, the Two Elk



Trail extends southwest through the study area and passes under the two I-70 bridges spanning Timber Creek near MP 184. The trail is open to hiking and biking, and falls under the jurisdiction of the White River National Forest. Current access to the east trailhead is provided by Bighorn Road to the Vail Pass Recreation Trail and then hike 1.8 miles east to the Two Elk Trailhead.

### **VAIL PASS RECREATION TRAIL**

The Vail Pass Recreation Trail begins at Gore Creek Campground and extends approximately 15 miles southeast to Copper Mountain where it connects to the Ten Mile Canyon Trail. It is paved and supports a variety of uses including cycling, hiking/running, cross-country skiing, and snowshoeing. The Vail Pass Recreation Trail is maintained by CDOT and connects to the Gore Valley Trail to the west. Within the study area, the majority of the trail runs adjacent to I-70. The trail was the result of collaboration between CDOT and the USFS, and holds a National Recreation Trail designation.

### **VAIL PASS REST AREA**

The Vail Pass Rest Area is located on the south side of I-70 at exit 190 (at MP 190). It is accessible by automobile from the interstate and from the various trails that tie in at this location. The Vail Pass rest area is maintained by CDOT and offers restrooms, a picnic area, and handicap access. It was constructed to serve as a safety rest area for the traveling public using I-70 and, although it provides parking for some recreational uses, any recreational use of the rest area is incidental.

### **VAIL PASS RACQUET CLUB**

The Vail Racquet Club (Club) is located at 4695 Vail Racquet Club Drive in East Vail. It is a privately owned facility located within the Vail Racquet Club Mountain Resort. The Club offers fitness classes, a lap pool, tennis facilities, and a fitness center.

### **VAIL PASS WINTER RECREATION AREA**

The Vail Pass Winter Recreation Area encompasses approximately 15,000 acres and is located predominantly on the south side of I-70 from MP 186.8 to Copper Mountain. The Vail Pass Winter Recreation Area is under the jurisdiction of the White River National Forest and is accessible from the Vail Pass Rest Area. It offers approximately 119 miles of motorized and non-motorized trails for snowshoeing, backcountry skiing, snowmobiling, and accessing huts and is one of the most heavily used recreation facilities in the White River National Forest. CDOT and FHWA have an existing highway easement deed with the USFS for I-70 through the USFS land in the Project area.

### **WILDER GULCH TRAIL**

Wilder Gulch Trail starts at the top of Vail Pass and extends approximately 3.5 miles southwest to the top of Ptarmigan Pass. It can be accessed from the Vail Pass Rest Area at I-70 Exit 190. The trail is open to hiking, horseback, and biking in the summer and cross-country skiing and snowshoeing in the winter.

### **SECTION 4(f) RECREATION RESOURCES**

Section 4(f) affords special protection to parks, recreation areas, and wildlife/waterfowl refuges that are open to the public. The discussion of impacts and potential use of Section 4(f) parks and recreation resources is addressed in a separate Section 4(f) Evaluation Report.



## **SECTION 6(f) RECREATION RESOURCES**

Based on a review of CDOT's Online Transportation Information System (CDOT, 2019), there are no Section 6(f) properties located within the study area.

## **FUTURE CONDITIONS**

### **LAND USE**

Since the majority of the project area lies within USFS land, future land use is not expected to change significantly. The USFS will continue to manage the land according to the Land and Resource Management Plan (described in the next section), with a focus on management for a variety of uses on a sustainable basis. Based on the current USFS Schedule of Proposed Actions (USFS 2019b), which includes projects that will begin or are currently undergoing environmental analysis and documentation, there are no known future projects that would change existing land uses within the project area.

For the portion of the project area located within the Town of Vail, land use planning is performed by the Planning Department which includes development of plans and policies, land use, zoning, and environmental review. Long range master plans are developed and utilized during the planning process as described in the following section. Based on a review of the projects currently under evaluation by the Town of Vail Planning Department, there is one new planned development proposed within the study area. The proposed development is located at the western end of the project area at 3700 N. Frontage Road East, near the East Vail I-70 Interchange (Exit 180). The Development Plan proposes the construction of 73 residential units, including 42 units of deed-restricted employee housing, 19 deed-restricted townhomes, and 12 unrestricted townhomes. In 2017 Vail Resorts received approval to change the zoning on this 23.3 acres parcel of land to Housing (5.4 acres on the western portion of the site) and Natural Area Preservation (17.9 acres on the eastern portion of the site).

### **LOCAL PLANNING DOCUMENTS**

Local counties and municipalities apply their adopted land use plans and zoning ordinances to their respective jurisdictions. Several local land use plans provide guidance on land use activities for jurisdictions within the project area. The following section summarizes the relevant provisions of those local plans by jurisdiction, and any land use changes or planned development specified within the project area.

#### **EAGLE COUNTY STRATEGIC PLAN, 2017**

The *Eagle County Strategic Plan* outlines long term goals to meet the mission and vision for Eagle County. The Vision states the importance of balancing the community within the environmental context: "*Eagle County is made up of thriving communities for families and is home to a vibrant workforce, with personal health and wellness achievable for all. Our natural beauty is preserved through purposeful environmental stewardship. We are an international year-round resort destination with a diverse, resilient economy.*" A number of goals are listed to achieve this vision, including "*Eagle County is a Great Place to Live for All*". Under this goal, relevant land-use objectives are listed, including the following: encourage more affordable housing choices and create communities with a sense of place. Another goal, "*Eagle County Promotes a Diverse and Resilient Economy*" includes an objective which





advocates to decrease congestion on I-70. The *Eagle County Strategic Plan* does not include any specific information regarding future planned development or land use changes in the project area.

***EAGLE COUNTY COMPREHENSIVE PLAN, 2005***

The *Eagle County Comprehensive Plan* establishes a vision and framework for the future of Eagle County, based on the expressed desires of Eagle County residents. The plan's future land use map, combined with county adopted community plan maps, portray the vision for future land use patterns. These maps are intended to serve as a conceptual guide for future land use decisions in unincorporated Eagle County. It is the plan's intent that outcomes regarding zone changes and site-specific land use proposals reflect the written policies of the plan, the comprehensive future land use map, and the goals and objectives set forth within community plans. The plan does not include any specific information regarding future planned development or land use changes in the project area.

The comprehensive plan discussions relevant to the West Vail Pass Environmental Assessment's purpose and need include two transportation policy statements:

- "Only those alternatives for improvements to I-70 that best serve the needs and desires of the people of Eagle County should be supported."
- "Bike paths should be safe, well designed, well maintained and appropriately connected within and between communities."

As part of the comprehensive plan, Eagle County developed a growth scenario questionnaire. The questionnaire attempted to capture and define public sentiment regarding future growth in the county. The exercise compared local community-generated predictions to those made by the State Demography Office and CDOT. Various scenarios that could influence growth and development, such as the widening of I-70, were considered. The data was used as a general tool to predict regional growth and assist in planning efforts. According to the survey, the likelihood of future development in the project area is between one and four on a scale of zero to 28.

***WHITE RIVER NATIONAL FOREST LAND AND RESOURCE MANAGEMENT PLAN, 2002 REVISION***

The Forest Management Plan provides guidance for all resource management activities on the White River National Forest. The plan includes goals and objectives, standards and guidelines, management area prescriptions, and monitoring and evaluation requirements for the forest. Relevant to matters of land use and zoning are the plan's "management areas" which determine activities and uses allowed in various locations. These classifications permit varying levels of human activity and are analogous to town zoning principals.

***THE EAGLE COUNTY ECONOMIC DEVELOPMENT PLAN UPDATE, 2016***

This document is an update to the 2013 development plan and its purpose is to create new opportunities and jobs within Eagle County. The following five core objectives are outlined in this plan: 1. Build a Business-Friendly Eagle County; 2. Market the Vail Valley Business Brand; 3. Retain, Grow and Recruit Businesses; 4. Support our Opportunity Segments (Entrepreneurship, Location-Neutral Business, Tourism & Recreation and Health & Wellness); and 5. Provide Support for a Quality Workforce. Under Objective 4, one strategy for promoting tourism and recreation includes efforts to improve I-70 corridor infrastructure. The Plan does not include any specific information regarding future planned development or land use changes in the project area.



***VAIL 20/20 FOCUS ON THE FUTURE, STRATEGIC ACTION PLAN, 2007***

This plan was developed to guide decision-making and improve the effectiveness and efficiency of capital and operational budgeting for the Town of Vail. The plan details land use and development, parks and recreation, environment, housing, transportation, economy community and public safety topics, including specific vision statements, long-term goals, and actions and strategies over a five year timeframe. Community input was an important aspect of developing the plan with several workshops/meetings to collect opinions. With regards to transportation along I-70, 20/20 participants expressed concerns about noise, pollution, and increased traffic. The plan includes goals and strategies to support the transportation vision including numerous specific to I-70 such as “*work with CDOT to ensure I-70 functions adequately for the movement of people and goods to and from Vail.*” No specific information regarding future planned development or land use changes in the project area are included.

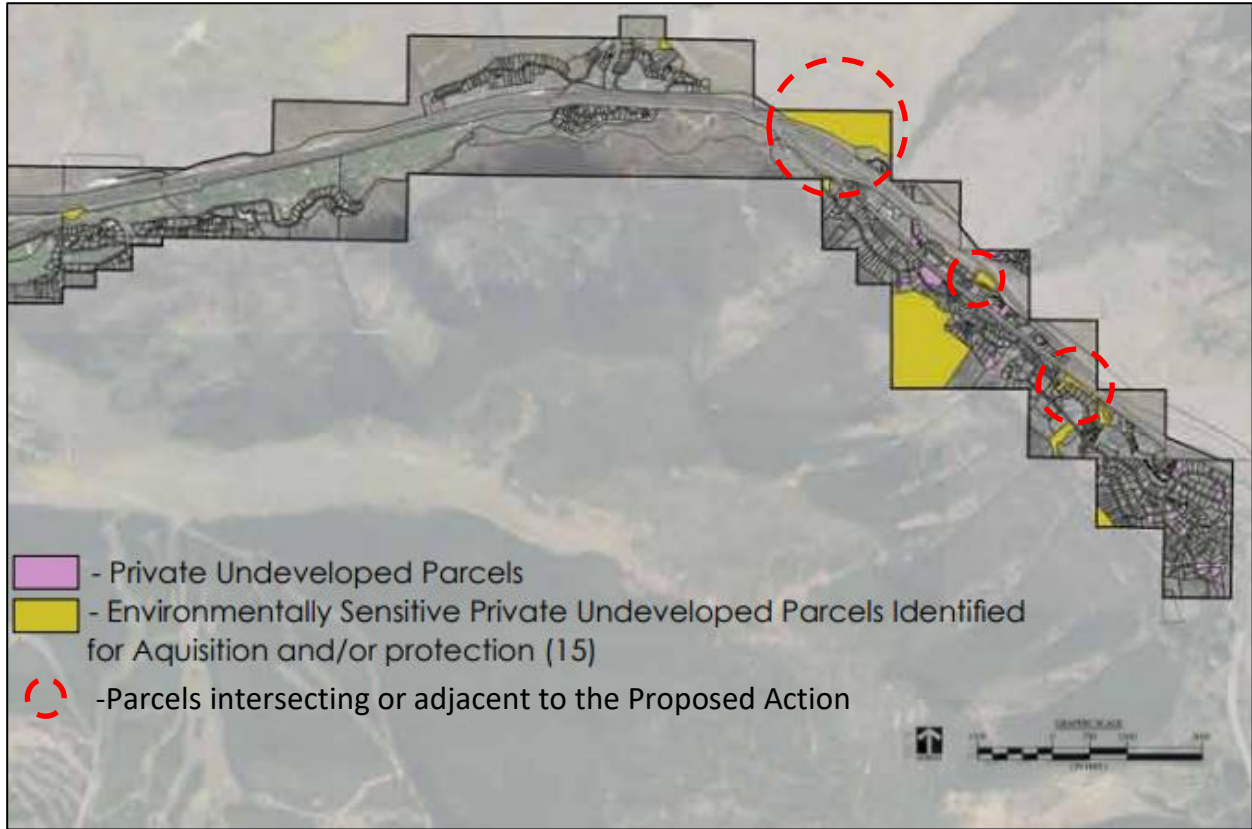
***TOWN OF VAIL: OPEN LANDS PLAN UPDATE, 2018***

This draft document updates the plan created in 1994 given the changes the Town of Vail had experienced over the past 23 years. A number of changes occurred in this timeframe: population growth, increased summer visitation, workforce housing challenges, regionally-oriented recreation facilities, redevelopment, and increase in recreational trails. The update summarizes which parts of the original plan have been completed, which parts are still relevant and to identify new needs based on current issues such as water quality, recreation, and housing. The Vail Town Council, with public input, will ultimately adopt the update to the Comprehensive Open Lands Plan.

The Open Lands Plan Update includes 15 environmentally sensitive parcels that were identified for acquisition and/or protection. Four of those environmentally sensitive parcels are in close proximity to the project area: the west side of I-70 near Bighorn Creek near Columbine Drive/Spruce Way and north of Bighorn Park near Gore Creek and the Vail Racquet Club. These parcels are shown in yellow with dashed red circles in **Figure 8**.

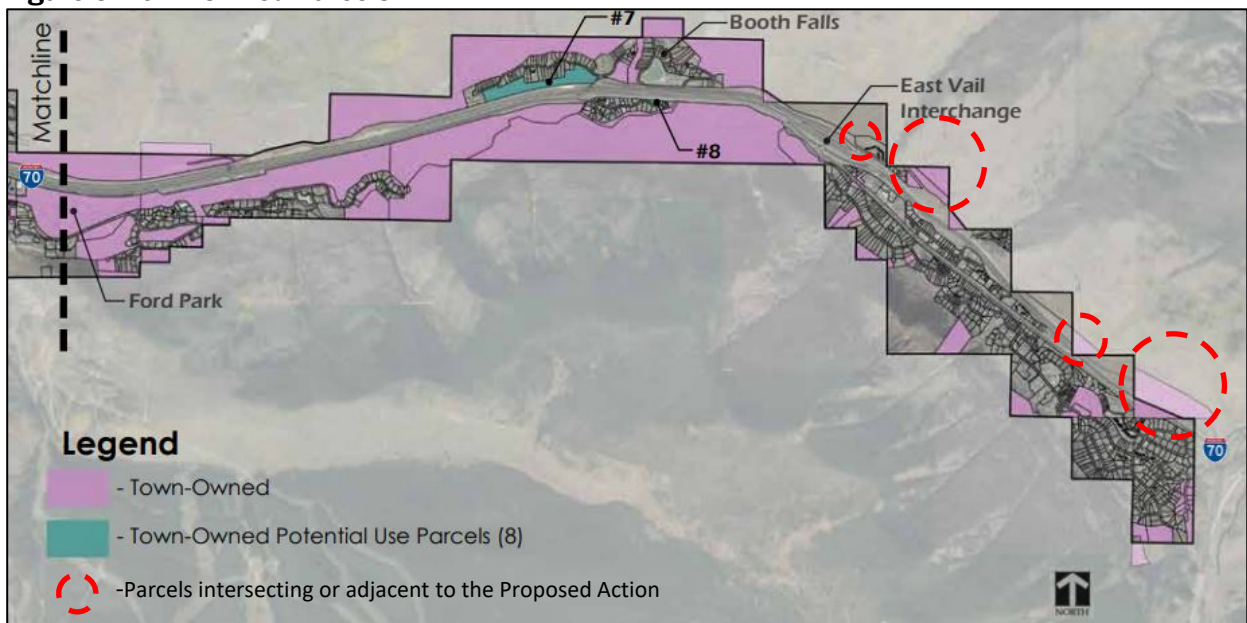
The Open Lands Plan Update provides an overview of existing Town-owned lands, which comprise approximately 1,040 acres across 161 parcels. 758 acres, or 72.8% of all Town-owned lands are zoned as either the Agriculture and Open Space District, Outdoor Recreation District, or Natural Preservation Area District. The Town-owned parcels in East Vail are depicted on **Figure 9**, with the parcels nearest to the Study Area identified by dashed red circles.

**Figure 8. Environmentally Sensitive Parcel Information**



Source: Vail, 2018

**Figure 9. Town-Owned Parcels**

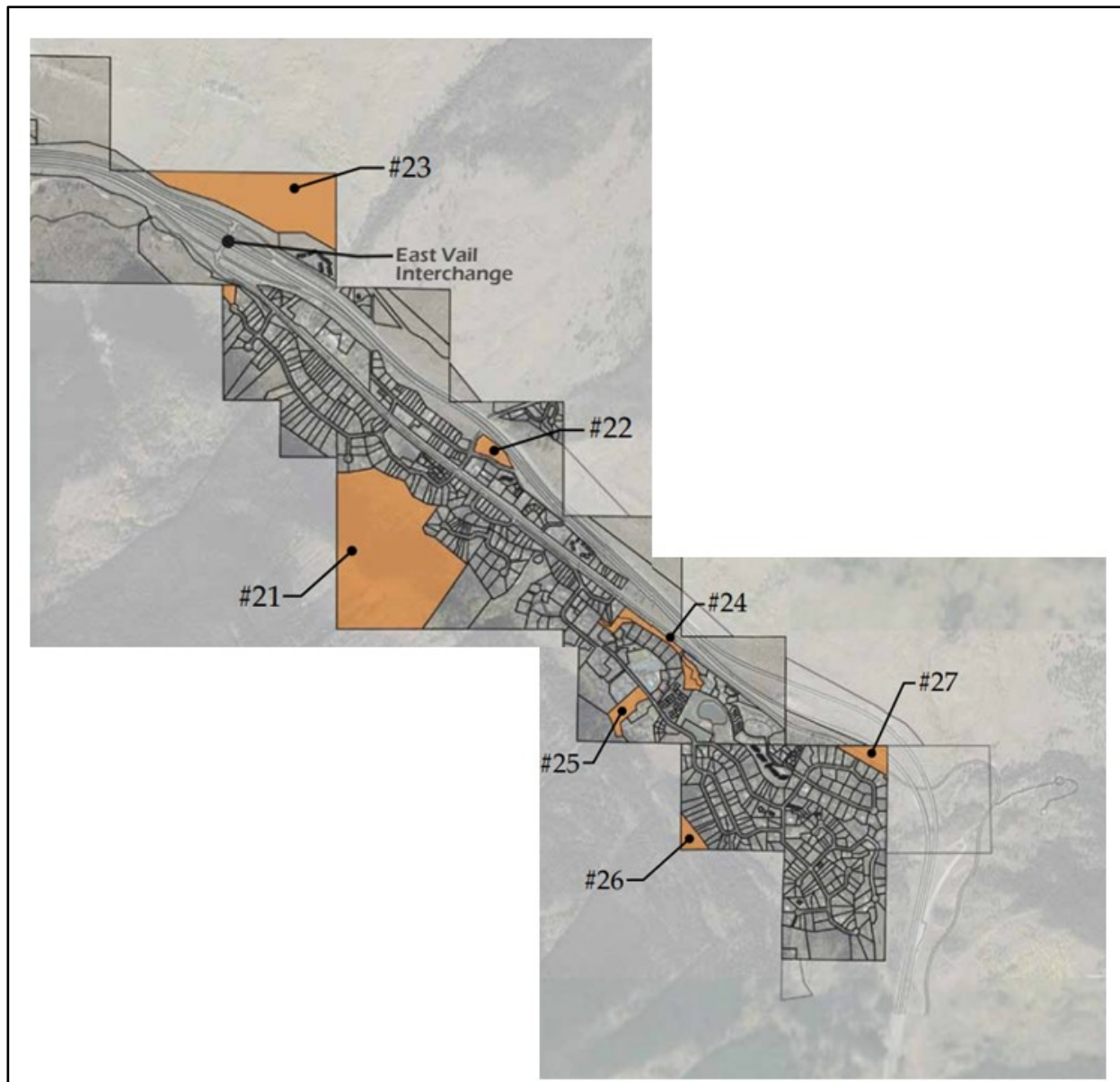


Source: Vail, 2018

The following action items have been identified for parcels that intersect or are adjacent to the project area (as shown in **Figure 10**):

- Parcel #22: Acquire the parcel, which is currently owned by CDOT.
- Parcel #23: Acquire parcel if not developed. If development application is submitted and approved, establish conservation easement.
- Parcel #24: Acquire parcels or work with land owner on conservation easement or other measures to eliminate development potential.
- Parcel #27: Acquire the parcel, which is currently owned by CDOT.

**Figure 10. Town of Vail Parcel Action Items**



Source: Vail, 2018



## RECREATIONAL RESOURCES

Based on a review of documents and mapping from the Town of Vail, Eagle County, and the White River National Forest, there are no planned parks and recreation resources in the study area. One conceptual trail improvement presented in the Open Lands Plan Update for the Town of Vail (2018) includes a new soft-surface trail to connect the lower reach of Two Elk Trail with East Vail, eliminating the need to access the Vail Pass Recreation Trail. No detailed design or implementation schedule has been established.

## IMPACTS

### NO ACTION ALTERNATIVE

The No Action Alternative does not meet the purpose and need of the Project. Traveler safety and operational efficiency would not be improved along West Vail Pass. Other than routine maintenance (e.g. resurfacing and plowing) to keep I-70 in good operating condition, the interstate would not be improved beyond those activities. The No Action Alternative would not result in any changes to land use, would not require relocation of any existing businesses or residences, and would not affect access or use of recreational areas.

### PROPOSED ACTION ALTERNATIVE

#### LAND USE

##### *DIRECT IMPACTS*

The Proposed Action will require approximately 24 acres of additional USFS land to be included in the highway easement deed for I-70. Land from the White River National Forest would be included in the highway easement deed, within areas managed for ski-based resorts and backcountry recreation. Direct impacts to resources within USFS property, including recreation facilities and wetlands, are addressed in the respective resource technical memorandums.

On non-federal lands within the study area, the Proposed Action impacts three parcels owned by the Town of Vail. Portions of all three parcels are already impacted by the existing I-70 corridor and no land use designation have been assigned by the Town of Vail. Based on the project extents, it is anticipated that partial acquisitions of the Town of Vail parcels would occur. In addition, temporary easements may be required from adjacent properties and will be identified during final design.

##### *COMPATIBILITY WITH LAND USE PLANS*

Overall, the Proposed Action is compatible with the land use plans reviewed as part of this evaluation which demonstrate regional support for improvements to I-70. The only instance of incongruence was found in the Town of Vail's Open Lands Plan Update, which identifies two parcels for acquisition (parcels 22 and 27 on **Figure 11**) which are directly impacted by the Proposed Action. Parcel 22 is also considered environmentally sensitive in the Open Lands Plan Update.

#### ECONOMICS

The Proposed Action will add a 12-foot auxiliary lane, both EB and WB, for 10 miles in order to address safety concerns and operational issues related to speed differentials due to slow-moving vehicles. No additional highway capacity will be added and the Proposed Action is not expected to induce population growth within the corridor. With regards to the local economy, Eagle and Summit Counties rely heavily on tourism with arts, entertainment, recreation, accommodation and food



services comprising the largest local industry. As a result, the counties also have great vulnerability to suppressed visitor trips arising from traffic congestion, and large numbers of inter-county commuting workers, which further exacerbates congestion. Economic benefits would result from the Proposed Action from improved mobility and access to recreational and tourist amenities by both workers and visitors, particularly during periods of snow accumulation in winter months. On a broader scale, the Proposed Action would also have wide-ranging benefits for commerce and industry costs by reducing freight trucking delays on Vail Pass associated with congestion and highway closures.

Detours, lane closures, and an increase in I-70 congestion during construction could temporarily affect mobility to local businesses and tourist destinations. Impaired mobility during construction of the Proposed Action could also result in increased traffic on secondary roads. The Vail Pass Recreation Trail will be directly impacted by the Proposed Action, and business for commercial recreation outfitters/guides that utilize the trail may also be affected due to possible closures and access issues during construction. Construction activities would also create dust, noise, and vibration which could negatively affect businesses which rely on outdoor recreation.

#### **ENVIRONMENTAL JUSTICE/SOCIOECONOMICS**

Four block groups that intersect the Study Area exceed the county percentage of extremely low-income households and therefore constitute EJ populations. The Proposed Action will impact these populations. As described in the following paragraphs, an evaluation as to whether these populations would bear disproportionately high and adverse human-health or environmental effects due to the implementation of the Proposed Action has been made.

#### **RELOCATION AND ROW ACQUISITIONS**

The general location of Vail Pass will remain the same and most of the work will take place within existing ROW, but minor shifts in the location of the road and associated widening will occur. Temporary easements may be required from adjacent properties and will be identified during final design. No direct impacts to existing buildings or other improvements would occur and no existing businesses or residences would be relocated.

#### **NOISE ASSESSMENT**

A noise assessment was performed consisting of seventeen (17) short-term and three (3) long-term locations where existing noise levels were measured. Then, using a computer modeling program, noise levels were predicted for the No Action Alternative (year 2040) and Proposed Action (year 2045). The data are compared to determine if a traffic noise impact occurs based on: 1) the predicted noise levels meet or exceed CDOT's noise abatement criteria; or 2) predicted noise substantially exceeds the existing highway traffic noise level.

The Proposed Action would result in noise impacts based on exceeding CDOT's noise abatement criteria. Noise impacted areas include residential areas located northeast of I-70 between MP 180 and MP 182 and forest/trail recreation areas located on both sides of I-70, east of MP 182. The noise impacted residential area includes EJ populations in Census Tract 7.02, Block Group 2.

#### **BENEFITS**

Impacts under the Proposed Action are anticipated; however, there are also benefits that would improve safety and traffic operations on Vail Pass. The addition of an auxiliary lane will improve mobility for emergency responders and the general population, including minority and low-income



residents. Access to recreational and tourist amenities, particularly during periods of snow accumulation in winter months, would also improve.

#### **CONSTRUCTION**

Construction-related noise, dust, vibration, and equipment emissions would temporarily increase. Detours, lane closures, and an increase in I-70 congestion during construction could also affect mobility to local businesses, tourist destinations, and recreation areas. These impacts would affect the local community including EJ populations, area visitors, and those traveling I-70 to other destinations.

#### **DETERMINATION OF DISPROPORTIONATELY HIGH AND ADVERSE EFFECTS ON EJ POPULATIONS**

Based on the analysis of relocation and ROW acquisitions, noise impacts, project benefits, and temporary construction impacts, the Proposed Action would not result in disproportionately high and adverse effects to the surrounding EJ populations. Specific to noise, the impacts are not disproportionate because the noise impacts are distributed across all populations and not just the EJ populations. Furthermore, EJ populations are not more sensitive to noise than other residences in the area.

#### **RECREATION RESOURCES**

Impacts to recreation resources are described in the following sections. Those resources not included below are not anticipated to have any temporary or permanent impacts from the Proposed Action.

##### ***BIGHORN CREEK TRAIL***

The Columbine Drive concrete box culvert under I-70 may need to be lengthened to accommodate the auxiliary lanes on I-70. The construction would result in partial closures at a minimum; with anticipated full closures of Columbine Drive expected for up to a few days at a time.

##### ***DELUGE LAKE TRAIL***

Short-term closures of access to the trail will be required during construction due to safety-critical work on the I-70 bridges over Bighorn Road. It is anticipated that no detour is available for the trail.

##### ***GORE CREEK CAMPGROUND***

Short-term closures of access to the campground will be required during construction due to safety-critical work on the I-70 bridges over Bighorn Road. It is anticipated that no detour is available for access to the campground.

##### ***GORE CREEK TRAIL***

Short-term closures of access to the trail will be required during construction due to safety-critical work on the I-70 bridges over Bighorn Road. It is anticipated that no detour is available for access to the trail.

##### ***GORE VALLEY TRAIL***

Short-term closures of access to the trail will be required during construction due to safety-critical work on the I-70 bridges over Bighorn Road. It is anticipated that no detour is available for access to the trail.

##### ***TWO ELK TRAIL***

Short-term closures of Bighorn Road and access to the east trailhead via Vail Pass Recreation Trail will be required during construction due to safety-critical work on the I-70 bridges over Bighorn



Road. The trail will also be impacted where it crosses under I-70 near MP 184 due to safety-critical bridge work. It is anticipated that no detours are available at either location for the trail.

#### ***VAIL PASS RECREATION TRAIL***

As part of the Proposed Action, approximately two miles of the Vail Pass Recreation Trail (MP 185 to 187) will be relocated due to direct impacts from construction. In addition, short-term closures of access to the trail from Bighorn Road will be required during construction due to safety-critical work on the I-70 bridges over Bighorn Road and closures of the trail will be required at Polk Creek near MP 185.5 due to safety-critical work on the bridges over Polk Creek. Other sections of the recreation trail will remain unchanged, with the exception of minor realignments due to proximity to the proposed auxiliary lane at MP 184.5 and 184.9.

#### ***VAIL PASS WINTER RECREATION AREA***

Due to the widening and minor realignments of I-70 from the Proposed Action, the highway easement deed will need to be expanded to include an additional approximately 24 acres of the Winter Recreation Area. None of the trails or access to the trails within the Vail Pass Winter Recreation Area will be affected.

### **MITIGATION MEASURES AND BEST MANAGEMENT STRATEGIES**

The mitigation measures in **Table 14** will be implemented should the Proposed Action be constructed.





**Table 14. Resource Mitigation Measures**

CONTEXT			
<p><b>Land Use:</b> Land use in and around the study area is largely uninhabited due to I-70’s location within the White River National Forest and adjacency to Eagles Nest Wilderness Area. The Town of Vail owns three parcels of land, which I-70 currently crosses in East Vail. These parcels are subject to the USFS highway easement deed with CDOT. The USFS owns the majority of the land surrounding I-70 in the study area and CDOT has an existing highway easement deed with the USFS. There are also numerous privately owned parcels in East Vail that are adjacent to I-70.</p> <p><b>Economics:</b> Between 2000 and 2017, both the population, number of households, median household income, and number of employed individuals all increased in the project area. The arts, entertainment, recreation, accommodation and food services (collectively servicing tourism) currently employs the most individuals compared to other industries.</p> <p><b>Environmental Justice:</b> Four block groups that intersect the study area exceed the county percentage of extremely low-income households and therefore constitute EJ populations. Within two of those block groups, no households occur within the project area. One block group exceeds the County and State percentage of minority populations, but no households counted within the block group occur within the project area.</p> <p><b>Recreation:</b> There are 20 parks and recreation resources within or adjacent to the project area.</p>			
IMPACT TYPE	NO ACTION ALTERNATIVE	PROPOSED ACTION ALTERNATIVE	MITIGATION
Land Use	<p><b>Permanent Impacts:</b> None</p>	<p><b>Permanent Impacts:</b> Approximately 24 acres of additional USFS land to be included in the highway easement deed with the USFS for I-70. A portion of the Vail Pass Recreation Trail would be realigned, impacting land adjacent to I-70 in the White River National Forest No impacts outside the highway easement deed to the Town of Vail properties are anticipated.</p> <p><b>Temporary Impacts:</b> Temporary Easements during construction may be required and will be identified during final design.</p>	<p><b>Permanent:</b></p> <ul style="list-style-type: none"> <li>FHWA and the USFS will modify the Highway Easement Deed with agreed upon terms and conditions.</li> <li>The acquisition of any property interests will comply fully with the Uniform Relocation Assistance and Real Property Acquisition Policies Act of 1970, as amended (Uniform Act), applicable Colorado statutes, and CDOT’s right-of-way manual.</li> </ul> <p><b>Temporary:</b> The acquisition of any property interests will comply fully with the Uniform Relocation Assistance and Real Property Acquisition Policies Act of 1970, as amended (Uniform Act), applicable Colorado statutes, and CDOT’s right-of-way manual.</p>



IMPACT TYPE	NO ACTION ALTERNATIVE	PROPOSED ACTION ALTERNATIVE	MITIGATION
<p><b>Economics</b></p>	<p><b><u>Permanent Impacts:</u></b> Continued safety and operational issues resulting in substantial traffic backups and delays, which impacts patronage at local and regional businesses by travelers who may avoid the interstate. Tourism is similarly affected by visitors who may choose to vacation in other areas with easier access. Vehicle-based costs (fuel and maintenance) and driver-based costs (wages and per diem) of freight commerce would also continue to be affected by operational issues on I-70</p>	<p><b><u>Permanent Impacts:</u></b></p> <ul style="list-style-type: none"> <li>• Improved mobility and access to recreational and tourist amenities by both workers and visitors, particularly during periods of snow accumulation in winter months.</li> <li>• Reduced freight trucking delays on Vail Pass associated with congestion and highway closures.</li> </ul> <p><b><u>Temporary Impacts:</u></b></p> <ul style="list-style-type: none"> <li>• Detours, lane closures, and an increase in I-70 congestion during construction could affect mobility to local businesses and tourist destinations.</li> <li>• Dust, noise, and vibration which could negatively affect businesses which rely on outdoor recreation</li> <li>• Commercial recreation outfitters/guides that utilize the trail may also be affected due to possible closures and access issues.</li> </ul>	<p><b><u>Permanent:</u></b> None</p> <p><b><u>Temporary:</u></b></p> <ul style="list-style-type: none"> <li>• See Socioeconomic mitigation for noise and dust.</li> <li>• Coordination will occur with local jurisdictions, the traveling public, businesses, and residents in advance of any access changes</li> <li>• Coordinate with the local jurisdictions and traveling public to prepare for construction including public safety and security measures, signed detours, lane closures, and alternate access information.</li> <li>• Community, business, and recreation access will be maintained to the highest degree possible.</li> <li>• When lane restrictions and closures are required, CDOT will follow the most current lane closure strategy to minimize traffic disruptions.</li> <li>• Closures to Vail Pass Recreation Trail will be minimized to the highest degree possible. Closures and other impacts to trail use will be coordinated with the USFS in advance of when they would occur.</li> </ul>
<p><b>Environmental Justice/ Socioeconomics</b></p>	<p><b><u>Permanent Impacts:</u></b> None</p>	<p><b><u>Permanent Impacts:</u></b> The Proposed Action would not result in disproportionately high and adverse effects to the surrounding EJ populations. Noise impacts occur northeast of I-70 between MP 180 and MP 182; however, the impacts are not disproportionate because the noise</p>	<p><b><u>Permanent:</u></b> A noise barrier was found to be feasible and reasonable along the north side of I-70 at MP 180.5, between the interstate and Fall Line Drive. A Benefited Receptor Preference Survey will be conducted prior to construction.</p>



IMPACT TYPE	NO ACTION ALTERNATIVE	PROPOSED ACTION ALTERNATIVE	MITIGATION
		<p>impacts are distributed across all populations and not just the EJ populations. Furthermore, EJ populations are not more sensitive to noise than other populations in the area.</p> <p><b>Temporary Impacts:</b></p> <ul style="list-style-type: none"> <li>• The local community adjoining the project area, may be exposed to increased noise, dust, vibration, and impaired mobility during construction.</li> <li>• Temporary construction easements may be required</li> </ul>	<p><b>Temporary:</b></p> <ul style="list-style-type: none"> <li>• Notify neighbors in advance when construction noise may occur. Provide language assistance and written translation for two of the Eagle County census tracts (Tracts 6 and 7.02)</li> <li>• Keep noisy activities as far from sensitive receptors as possible.</li> <li>• Keep exhaust systems on equipment in good working order.</li> <li>• Maintain equipment on a regular basis; it should be subject to inspection by the construction project manager to ensure maintenance is being conducted.</li> <li>• Use properly designed engine enclosures and intake silencers if appropriate.</li> <li>• Place stationary equipment as far from sensitive receptors as possible.</li> <li>• Perform construction activities in noise sensitive areas during hours that are least disturbing to nearby residents, as feasible. Follow CO Noise Statute 25-12-103 and local noise ordinances, or coordinate with local towns if the construction is unable to meet local noise ordinances.</li> <li>• Prohibit unnecessary idling of construction equipment.</li> <li>• Locate construction diesel engines as far away as possible from residential areas.</li> <li>• Locate staging areas as far away as possible from residential areas.</li> </ul>



IMPACT TYPE	NO ACTION ALTERNATIVE	PROPOSED ACTION ALTERNATIVE	MITIGATION
			<ul style="list-style-type: none"> <li>• Limit unnecessary idling to less than five minutes by posting signage.</li> <li>• Prohibit tampering with equipment to increase horsepower or defeat and emissions control device's effectiveness.</li> <li>• Coordinate with the local jurisdictions and traveling public to prepare for construction including public safety and security measures, signed detours, lane closures, and alternate access information.</li> <li>• The acquisition of any property interests will comply fully with the Uniform Act, applicable Colorado statutes, and CDOT's right-of-way manual.</li> <li>• An Air Pollutant Emissions Notice (APEN) for projects over 25 acres and that last more than 6 months in length may be needed. A permit may be needed if emissions exceed permit thresholds. If needed, the APEN and permit will cover Air Pollution Control Division (APCD) required mitigation measures for active construction.</li> <li>• Apply water or wetting agents to manage dust when appropriate.</li> <li>• Usage of wind barriers and wind screens to minimize the spread of dust in areas where large amounts of materials are stored.</li> <li>• Usage of a wheel wash station and/or large-diameter cobble apron at egress/ingress areas to minimize dirt being tracked onto public streets.</li> </ul>



IMPACT TYPE	NO ACTION ALTERNATIVE	PROPOSED ACTION ALTERNATIVE	MITIGATION
			<ul style="list-style-type: none"> <li>• Usage of pick-up broom to control dirt tracked onto public streets.</li> <li>• Coverage of or wetting temporary excavated materials.</li> <li>• Usage of a binding agent for long-term excavated materials.</li> <li>• Construction vehicle engines may be required to be properly tuned and maintained.</li> <li>• Water active grading and parking areas as required</li> <li>• Apply best management practices to stockpiles.</li> <li>• Cover loads on all trucks hauling dirt, sand, or other loose material.</li> </ul>
<p><b>Recreation</b></p>	<p><b><u>Permanent Impacts:</u></b> None</p>	<p><b><u>Permanent Impacts:</u></b> Two miles (MP 185-187) of the Vail Pass Recreation Trail will be relocated due to direct impacts to the existing trail from the construction of the EB auxiliary lane. The trail will also have minor realignments at MP 184.5 and 184.9 due to proximity to the proposed auxiliary lane.</p> <p><b><u>Temporary Impacts:</u></b></p> <ul style="list-style-type: none"> <li>• Short-term closures of access to Deluge Lake Trail, Gore Creek Trail, Gore Valley Trail, the east trailhead for Two Elk Trail, and Gore Creek Campground due to safety-critical work on the I-70 bridges over Bighorn Road.</li> <li>• Access to Bighorn Creek Trail may require closures for construction work on the Columbine Drive</li> </ul>	<p><b><u>Permanent:</u></b> None</p> <p><b><u>Temporary:</u></b> Coordinate with the USFS, local jurisdictions, and traveling public to prepare for construction including public safety and security measures, signed detours, lane closures, and alternate access information.</p>



IMPACT TYPE	NO ACTION ALTERNATIVE	PROPOSED ACTION ALTERNATIVE	MITIGATION
		concrete box culvert crossing under I-70. The trail will also be impacted where it crosses under I-70 near MP 184 due to safety-critical bridge work.	



## PERMITS

The construction phase of this Project could have several localized diesel-emitting sources as well as land disturbance during construction, which will temporarily affect air quality conditions during construction. Therefore, the Project will need to follow the requirements of filing APENs with the the Colorado Department of Public Health and Environment—Air Pollution Control Division to fulfill U.S. Environmental Protection Agency’s concerns regarding air quality impacts. Preparation of a Fugitive Dust Control Plan will also be required. This plan will specify mitigation methods to reduce dust emissions during construction. Adherence to this plan will reduce temporary air pollution resulting from construction.



## REFERENCES

CEQ, 1997. "Environmental Justice: Guidance under the National Environmental Policy Act." Council on Environmental Quality (CEQ). December 10, 1997. Accessed January 2017.

([https://www.epa.gov/sites/production/files/2015-02/documents/ej\\_guidance\\_nepa\\_ceq1297.pdf](https://www.epa.gov/sites/production/files/2015-02/documents/ej_guidance_nepa_ceq1297.pdf))

CDOT, 2017. "CDOT NEPA Manual," Colorado Department of Transportation (CDOT), August 2017. Accessed January 2017 and April 2018. (<https://www.codot.gov/programs/environmental/nepa-program/nepa-manual>)

Eagle County, 2007. Eagle County Strategic Plan Draft. Eagle County, Colorado.

Eagle County, 2017. Eagle County Strategic Plan. Eagle County, Colorado. Updated May 2017.

Eagle County, 2019a. Eagle County GIS Viewer. Accessed June 2019. Eagle County, Colorado. <http://www.eaglecounty.us>

Eagle County, 2019b. Eagle County Open Space Finder. Accessed June 2019. Eagle County, Colorado. <http://gismap.eaglecounty.us/OpenSpace/>

Eagle County Community Development (2005). Eagle County Comprehensive Plan. Eagle County, Colorado.

Vail, 1994. Town of Vail Comprehensive Open Lands Plan. Town of Vail, Colorado.

Vail, 2018. Town of Vail Comprehensive Open Lands Plan Update. Adopted October 16, 2018. Town of Vail, Colorado.

Vail, 2019. GIS Data: Land use, parcel boundaries, zoning, designated open space. Town of Vail, Colorado.

Summit County, 2019a. Summit County Interactive Trails Map. Accessed June 2019. <https://summitcountyco.maps.arcgis.com/apps/webappviewer/index.html?id=3bef9132da234447b7081661157adc8a>

Summit County, 2019b. Summit County Parcel Viewer. Accessed June 2019. <http://summitcounty.maps.arcgis.com/apps/webappviewer/index.html?id=85c6c55514ae4d4f9218202e364fec73>

US Census Bureau, 2001a. "DP-1: Profile of Demographics Characteristics: 2000. Census 2000 Summary File. Accessed June 2019. (<https://factfinder.census.gov/faces/nav/jsf/pages/searchresults.xhtml?refresh=t>)

US Census Bureau, 2001b. "DP-3: Profile of Economic Characteristics: 2000. Census 2000 Summary File. Accessed June 2019. (<https://factfinder.census.gov/faces/nav/jsf/pages/searchresults.xhtml?refresh=t>)





US Census Bureau, 2017a. "B01003: Total Population. 2013-2017 American Community Survey 5-Year Estimates. Accessed June 2019.

(<https://factfinder.census.gov/faces/nav/jsf/pages/searchresults.xhtml?refresh=t>)

US Census Bureau, 2017b. "CP03: Comparative Economic Characteristics. 2013-2017 American Community Survey 5-Year Estimates. Accessed June 2019.

(<https://factfinder.census.gov/faces/nav/jsf/pages/searchresults.xhtml?refresh=t>)

US Census Bureau, 2017c. "S1101: Households and Families. 2013-2017 American Community Survey 5-Year Estimates. Accessed June 2019.

(<https://factfinder.census.gov/faces/nav/jsf/pages/searchresults.xhtml?refresh=t>)

US Census Bureau, 2017d. "S1903: Median Income in the Past 12 Months (In 2017 Inflation-Adjusted Dollars). 2013-2017 American Community Survey 5-Year Estimates. Accessed June 2019.

(<https://factfinder.census.gov/faces/nav/jsf/pages/searchresults.xhtml?refresh=t>)

US Census Bureau, 2017e. "S2405: Industries by Occupation for the Civilian Employed Population 16 Years and Over. 2013-2017 American Community Survey 5-Year Estimates. Accessed June 2019.

(<https://factfinder.census.gov/faces/nav/jsf/pages/searchresults.xhtml?refresh=t>)

US Forest Service, 2019a. White River National Forest Management Areas GIS Data. Accessed June 2019. ([https://www.fs.usda.gov/detail/whiteriver/maps-pubs/?cid=fsbdev3\\_001232](https://www.fs.usda.gov/detail/whiteriver/maps-pubs/?cid=fsbdev3_001232))

US Forest Service, 2019b. Forest Service Schedule of Proposed Actions for the White River National Forest. Accessed December 2019. <https://www.fs.fed.us/sopa/forest-level.php?110215>