



# Colorado Department of Transportation

## NEPA DETERMINATION / PROJECT CERTIFICATION

### A. PROJECT INFORMATION Form: 01

Environmental Scoping Date: 05/17/2021	Project #: 267 0703-497	Subaccount #: 24666	Related Subaccount #: 24440, 21912
Project Name: <b>Genesee Wildlife Crossing</b>			
Project Description (and Location): This project will build a wildlife underpass at approximately MP 254.5. Work includes structures, traffic crossovers (detours), grading/excavation, wildlife fencing and wildlife escape ramps.			
Region: 1	CDOT Program/Residency: R1 West Program	Environmental PM: Vanessa Halladay/Tamara Burke	FHWA Area Engineer: Elizabeth Cramer
FHWA NEXUS <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No		Other Federal NEXUS: <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	
Class of Action: <input type="checkbox"/> EIS/ROD <input type="checkbox"/> EA/FONSI <input checked="" type="checkbox"/> CatEx		Construction/Contracting Method: <input checked="" type="checkbox"/> Design-Bid-Build <input type="checkbox"/> Design Build	
If CatEx, the project fits the following CE number: C22		<input type="checkbox"/> GM/GC <input type="checkbox"/> Other:	
Project Lead: <input checked="" type="checkbox"/> CDOT <input type="checkbox"/> Local Agency <input type="checkbox"/> Other			

### B. THE NEPA PROCESS

Resource Clearances	Revised Clearances																																																														
<p><i>Check Box Only if Impacted</i></p> <table style="width: 100%;"> <tr> <th style="width: 70%;"></th> <th style="width: 30%; text-align: center;">Clearance Date</th> </tr> <tr> <td>Air Quality (hot spot analysis)</td> <td style="text-align: center;"><input type="checkbox"/> 05/12/2022</td> </tr> <tr> <td>Noise</td> <td style="text-align: center;"><input type="checkbox"/> 05/12/2022</td> </tr> <tr> <td>Hazmat - ISA/MESA</td> <td style="text-align: center;"><input type="checkbox"/> 06/30/2022</td> </tr> <tr> <td>T&amp;E and State Listed Species</td> <td style="text-align: center;"><input type="checkbox"/> 07/07/2022</td> </tr> <tr> <td>Wetland Delineation (Survey)</td> <td style="text-align: center;"><input type="checkbox"/> 07/07/2022</td> </tr> <tr> <td>Paleontology</td> <td style="text-align: center;"><input type="checkbox"/> 09/30/2021</td> </tr> <tr> <td>Archaeology</td> <td style="text-align: center;"><input type="checkbox"/> 09/08/2021</td> </tr> <tr> <td>History</td> <td style="text-align: center;"><input type="checkbox"/> 07/20/2022</td> </tr> <tr> <td>Section4(f) - Historic</td> <td style="text-align: center;"><input type="checkbox"/> 07/20/2022</td> </tr> <tr> <td>Section4(f) - Non-Historic</td> <td style="text-align: center;"><input type="checkbox"/> 06/22/2022</td> </tr> <tr> <td>Section6(f)</td> <td style="text-align: center;"><input type="checkbox"/> 07/06/2022</td> </tr> <tr> <td>Other: <b>Visual</b></td> <td style="text-align: center;"><input type="checkbox"/> 05/11/2022</td> </tr> </table> <p>All required clearance actions indicated have been completed for the design plans referenced below. If Project is a Categorical Exclusion, no significant environmental impacts will result from this project. Construction is not authorized until approved in Part E below. Implementation of project shall include required mitigation commitments.</p> <p><input checked="" type="checkbox"/> Action meets requirements to be a Programmatic CatEx per the FHWA/CDOT Programmatic Agreement for Categorical Exclusions (FHWA signature below not required).</p> <p><input type="checkbox"/> This is an EA/FONSI or EIS/ROD. The Decision Document has already been signed by FHWA (FHWA signature below is not required).</p> <p><b>Design Plan Set and Date:</b> FOR Plan Set / 6/21/2022</p> <p><b>RPEM Signature and Date:</b> Vanessa Halladay <small>Digitally signed by Vanessa Halladay Date: 2022.07.21 16:14:13 -0600</small> / 7/21/2022</p>		Clearance Date	Air Quality (hot spot analysis)	<input type="checkbox"/> 05/12/2022	Noise	<input type="checkbox"/> 05/12/2022	Hazmat - ISA/MESA	<input type="checkbox"/> 06/30/2022	T&E and State Listed Species	<input type="checkbox"/> 07/07/2022	Wetland Delineation (Survey)	<input type="checkbox"/> 07/07/2022	Paleontology	<input type="checkbox"/> 09/30/2021	Archaeology	<input type="checkbox"/> 09/08/2021	History	<input type="checkbox"/> 07/20/2022	Section4(f) - Historic	<input type="checkbox"/> 07/20/2022	Section4(f) - Non-Historic	<input type="checkbox"/> 06/22/2022	Section6(f)	<input type="checkbox"/> 07/06/2022	Other: <b>Visual</b>	<input type="checkbox"/> 05/11/2022	<table style="width: 100%;"> <tr> <th style="width: 33%;"></th> <th style="width: 33%; text-align: center;">Revised Clearance date</th> <th style="width: 33%; text-align: center;">Revised Clearance date</th> </tr> <tr> <td></td> <td style="text-align: center;"><input type="checkbox"/> _____</td> <td style="text-align: center;"><input type="checkbox"/> _____</td> </tr> <tr> <td></td> <td style="text-align: center;"><input type="checkbox"/> _____</td> <td style="text-align: center;"><input type="checkbox"/> _____</td> </tr> <tr> <td></td> <td style="text-align: center;"><input type="checkbox"/> _____</td> <td style="text-align: center;"><input type="checkbox"/> _____</td> </tr> <tr> <td></td> <td style="text-align: center;"><input type="checkbox"/> _____</td> <td style="text-align: center;"><input type="checkbox"/> _____</td> </tr> <tr> <td></td> <td style="text-align: center;"><input type="checkbox"/> _____</td> <td style="text-align: center;"><input type="checkbox"/> _____</td> </tr> <tr> <td></td> <td style="text-align: center;"><input type="checkbox"/> _____</td> <td style="text-align: center;"><input type="checkbox"/> _____</td> </tr> <tr> <td></td> <td style="text-align: center;"><input type="checkbox"/> _____</td> <td style="text-align: center;"><input type="checkbox"/> _____</td> </tr> <tr> <td></td> <td style="text-align: center;"><input type="checkbox"/> _____</td> <td style="text-align: center;"><input type="checkbox"/> _____</td> </tr> <tr> <td></td> <td style="text-align: center;"><input type="checkbox"/> _____</td> <td style="text-align: center;"><input type="checkbox"/> _____</td> </tr> <tr> <td></td> <td style="text-align: center;"><input type="checkbox"/> _____</td> <td style="text-align: center;"><input type="checkbox"/> _____</td> </tr> </table> <p>All required clearance actions indicated have been completed for the design plans referenced below. 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<p><b>FHWA Division Administrator Signature</b> (if required) I concur with the above category designation and the scope of environmental clearance/permits indicated above.</p> <p><b>Signature and Date:</b> STEPHANIE P GIBSON <small>Digitally signed by STEPHANIE P GIBSON Date: 2022.07.22 16:12:34 -0600</small> / 7/21/2022</p>	<p><b>FHWA Division Administrator Signature</b> (if required) I concur with the above category designation and the scope of environmental clearance/permits indicated above.</p> <p>_____/_____/_____</p>																																																														

**Comments:**

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# Colorado Department of Transportation

## NEPA DETERMINATION / PROJECT CERTIFICATION

### C. PERMITS AND ADDITIONAL REQUIREMENTS

Form: 01

Resource Clearances		Revised Clearances		
<i>Check Box Only if Impacted</i>	Date Completed	Date Updated	Date updated	
404 Permit	<input type="checkbox"/> _____	<input type="checkbox"/> _____	<input type="checkbox"/> _____	<input type="checkbox"/> _____
401 Certification	<input type="checkbox"/> _____	<input type="checkbox"/> _____	<input type="checkbox"/> _____	<input type="checkbox"/> _____
402 Certification	<input type="checkbox"/> _____	<input type="checkbox"/> _____	<input type="checkbox"/> _____	<input type="checkbox"/> _____
Const. Stormwater Permit (CDPS)	<input checked="" type="checkbox"/> 07/27/2022	<input type="checkbox"/> _____	<input type="checkbox"/> _____	<input type="checkbox"/> _____
Const. Dewatering Permit	<input type="checkbox"/> _____	<input type="checkbox"/> _____	<input type="checkbox"/> _____	<input type="checkbox"/> _____
Noxious Weed Management	<input type="checkbox"/> _____	<input type="checkbox"/> _____	<input type="checkbox"/> _____	<input type="checkbox"/> _____
SB40 Certification	<input type="checkbox"/> _____	<input type="checkbox"/> _____	<input type="checkbox"/> _____	<input type="checkbox"/> _____
Wetland Finding	<input type="checkbox"/> _____	<input type="checkbox"/> _____	<input type="checkbox"/> _____	<input type="checkbox"/> _____
Structure Demolition Permit	<input type="checkbox"/> _____	<input type="checkbox"/> _____	<input type="checkbox"/> _____	<input type="checkbox"/> _____
Hazardous Materials – Phase II	<input type="checkbox"/> _____	<input type="checkbox"/> _____	<input type="checkbox"/> _____	<input type="checkbox"/> _____
Permanent WQ	<input type="checkbox"/> _____	<input type="checkbox"/> _____	<input type="checkbox"/> _____	<input type="checkbox"/> _____
SWMP	<input checked="" type="checkbox"/> 07/27/2022	<input type="checkbox"/> _____	<input type="checkbox"/> _____	<input type="checkbox"/> _____
Other:	<input type="checkbox"/> _____	<input type="checkbox"/> _____	<input type="checkbox"/> _____	<input type="checkbox"/> _____

### D. Comments

### E. ENVIRONMENTAL PROJECT CERTIFICATION

All clearance and permit requirements for this project have been addressed and mitigation included. The appropriate documentation is on file in the Region office.

	Clearance	Revised Clearance		Revised Clearance
<b>Design Plan Set and Date:</b>	Pre- AD Plan Set / 07/26/2022	_____ / _____		_____ / _____
<b>Certification Type:</b>	<input type="checkbox"/> Advertisement <input checked="" type="checkbox"/> Advertisement & Construction <input type="checkbox"/> Other:	<input type="checkbox"/> Advertisement <input type="checkbox"/> Advertisement & Construction <input type="checkbox"/> Other:		<input type="checkbox"/> Advertisement <input type="checkbox"/> Advertisement & Construction <input type="checkbox"/> Other:
<b>RPEM Signature &amp; Date:</b>	Vanessa Halladay <small>Digitally signed by Vanessa Halladay Date: 2022.07.28 11:16:47 -0600</small> / 7/28/2022	_____ / _____		_____ / _____

**Note to Project Manager:** Any changes to the plans and specifications after the date of the RPEM signature in Part B that affect environmental impacts or mitigation must be approved by the RPEM.



## I-70 Floyd Hill to Veterans Memorial Tunnels

CATEGORICAL EXCLUSION

# I-70 Mountain Corridor Wildlife Crossing

Genesee: Mt. Vernon Linkage Interference Zone

July 2022

Lead Agencies



Project Number: 267 0703-497, Project Code 24666  
Jefferson County, Colorado

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## FOR INFORMATION CONTACT

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vanessa.halladay@state.co.us

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elizabeth.cramer@dot.gov

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Appendix B	Historic Resources Documentation and Consultation	Appendix G	Visual Resource Scoping Document
Appendix C	Archaeological Resources Clearance	Appendix H	Aquatic Resources Technical Memorandum
Appendix D	Paleontological Resources Clearance	Appendix I	Mitigation Tracking Spreadsheet
Appendix E	Initial Site Assessment		

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## List of Acronyms and Abbreviations

AADT	Average Annual Daily Traffic	PLT	Project Leadership Team
ALIVE	A Landscape Level Inventory of Valued Ecosystem Components	PM <sub>10</sub>	particulate matter less than 10 microns in diameter
ACHP	Advisory Council on Historic Preservation	PMJM	Preble's Meadow Jumping Mouse
APE	Area of Potential Effect	Project	I-70 Mountain Corridor Wildlife Crossing Project - Mt. Vernon Creek LIZ Project
BLM	U.S. Bureau of Land Management	REC	Recognized Environmental Conditions
CDOT	Colorado Department of Transportation	ROD	Record of Decision
CatEx	Categorical Exclusion	RTD	Regional Transportation District
CFR	Code of Federal Regulations	SH	State Highway
CO	carbon monoxide	SHPO	State Historic Preservation Office
Corridor	I-70 Mountain Corridor	TT	Technical Team
CPW	Colorado Parks and Wildlife	U.S.	United States
CSS	Context Sensitive Solutions	US 40	U.S. Highway 40
EA	Environmental Assessment	USFS	U.S. Forest Service
EPA	Environmental Protection Agency	USFWS	U.S. Fish and Wildlife Service
ESA	Endangered Species Act	WVC	Wildlife-Vehicle Collisions
FHWA	Federal Highway Administration		
I-70	Interstate 70		
ISA	Initial Site Assessment		
ITF	Issue Task Force		
LIZ	Linkage Interference Zone		
LWCF	Land and Water Conservation Fund		
MOU	Memorandum of Understanding		
MP	milepost		
MS4	Municipal Separate Storm Sewer System		
Mt.	Mount		
NAAQS	National Ambient Air Quality Standards		
NEPA	National Environmental Policy Act		
NRHP	National Register of Historic Places		
PA	Programmatic Agreement		
PEIS	Programmatic Environmental Impact Statement		

## 1. Introduction

Conflicts between road infrastructure and wildlife movements have become an increasing concern in Colorado. In 2019, Governor Jared Polis issued the *Conserving Colorado's Big Game Winter Range and Migration Corridors Executive Order* (2019-011), which directed state agencies to work together with federal land managers, local governments, and private landowners to reduce risks to wildlife from vehicle collisions and to preserve habitat and migration corridors/movement routes for the state's big game herds. As part of this Executive Order, the Colorado Department of Transportation (CDOT) and Colorado Parks and Wildlife (CPW) signed a Memorandum of Understanding (MOU) to collaborate in mitigating wildlife-vehicle collisions (WVCs).

The concepts of wildlife connectivity and reducing WVC are essential to CDOT's mission. Successful projects like the State Highway (SH) 9 wildlife crossings and the wildlife crossings included in the I-25 South Gap project highlight the department's continued efforts to improve and expand wildlife crossing infrastructure throughout the state. Over the past 5 years, CDOT has implemented more than a dozen wildlife crossings. Monitoring has demonstrated that these crossings have been effective in reducing WVCs and restoring wildlife movement routes.

Long before these more recent initiatives, CDOT, CPW, federal land management agencies, local communities, and environmental groups collaborated to reduce WVCs and improve wildlife connectivity along the Interstate 70 (I-70) Mountain Corridor between Glenwood Springs and the western Denver metropolitan area. In 2008, CDOT, the Federal Highway Administration (FHWA), the United States (US) Fish and Wildlife Service (USFWS), US Forest Service (USFS), Bureau of Land Management (BLM), and CPW signed the A Landscape Level Inventory of Valued Ecosystem Components (ALIVE) MOU to improve existing wildlife habitat connectivity and streamline the Section 7 Endangered Species Act consultation process for projects in the Mountain Corridor. The MOU identifies areas where the highway is a significant barrier to wildlife movement, referred to as linkage interference zones (LIZs) and the signatories agreed to collaborate to mitigate the impacts of I-70 on wildlife within the Mountain Corridor. In addition, the I-70 Mountain Corridor Biological Opinion commits CDOT to install wildlife crossings in each LIZ, 13 of which were identified in the MOU and 4 additional that were identified in subsequent research. Every Tier 2 Mountain Corridor project includes an ALIVE Issue Task Force (ITF) to guide wildlife mitigation strategies and compliance with these agreements.



Examples of Wildlife Crossings throughout the State: SH 9, US 550, and I-25 South Gap

As part of the Floyd Hill project, which proposes improvements along approximately 8 miles of I-70 from east of the Beaver Brook/Floyd Hill interchange through the Veterans Memorial Tunnels to the eastern edge of Idaho Springs, the ALIVE ITF reviewed wildlife mitigation for the two LIZs in the project area. As part of this evaluation, a large wildlife overpass estimated to cost more than \$17 million was developed and planned for the Beaver Brook LIZ. Due to the high cost of the crossing structure, characteristics of the target species (primarily a resident elk herd), and concerns about land use suitability around the crossing location, the project's ALIVE ITF determined that it would be prudent to consider alternative wildlife mitigation. The ALIVE ITF reviewed the other LIZs in the CDOT Region 1 portion of the I-70 Mountain Corridor east of the Eisenhower-Johnson Memorial Tunnels (EJMT) to determine if one or more crossings could be constructed in lieu of installing the large overpass at the top of Floyd Hill.<sup>1</sup> The analysis prioritized and ultimately recommended two locations at Genesee and Empire for alternative wildlife crossings.

In 2021, CDOT advanced the alternative wildlife crossings, in conjunction with intersection improvements along US 40 at the top of Floyd Hill, as “early projects” that could be constructed independently from the larger Floyd Hill Project. CDOT determined that these early projects would provide immediate benefits and ease construction impacts from the larger Floyd Hill project.

CDOT is preparing this Categorical Exclusion (CatEx) to document compliance with National Environmental Policy Act (NEPA) requirements for the installation of the wildlife crossing at Genesee, in the Mt. Vernon LIZ, which would be constructed within the operational right-of-way of I-70.

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<sup>1</sup> The Floyd Hill Project includes other mitigation for the Beaver Brook and Clear Creek LIZs, including more than 4 miles of wildlife

CatExs are activities that previous experience has shown do not involve significant environmental impacts. These activity types are defined in 23 Code of Federal Regulations (CFR) 771.117. This CatEx qualifies as a programmatic CatEx action (C22), which does not normally require any additional approvals. However, due to the connection with the larger Floyd Hill project, relationship to broader Mountain Corridor commitments and agreements, and agency and public interest in wildlife crossings generally and in the Mountain Corridor specifically, CDOT determined a more thorough analysis and documentation of the project was appropriate. This CatEx is organized as follows:

- **Section 1:** Provides the background and context for the Project as well as the purpose of this document.
- **Section 2:** Presents the Project location and surrounding land uses and context.
- **Section 3:** Explains the purpose and need for the Project.
- **Section 4:** Provides the Project description.
- **Section 5:** Describes the Context Sensitive Solutions (CSS) Process that guided Project development.
- **Section 6:** Defines the context for each environmental resource and evaluates the potential for impacts as well as the permits and clearances that may be needed for construction.
- **Section 7:** Summarizes how CDOT has involved agencies and the public in the development of the Project.
- **Section 8:** Lists the references cited in this report.

fencing and improved wildlife passage areas under the new bridge structures.

## 2. Where is the Project Located?

The Project is located in Jefferson County, Colorado within the Mt. Vernon Creek LIZ, which is identified from I-70 Milepost (MP) 252.8 to MP 257.6 (Kintsch et al., 2011). The proposed underpass would be located at MP 254.4 near the northern limits of the community of Genesee (Exhibit 1). At this location, I-70 is elevated on fill approximately 90 feet above the ground level. An unnamed drainage runs under the highway in a 48-inch diameter corrugated metal pipe and continues in a channel through the surrounding open space both north and south of the proposed underpass. These conditions are a natural draw for wildlife, and adjacent land uses are favorable for a crossing in this location. Land on the south side of I-70 near MP 254.4 is protected open space managed by the Village at Genesee homeowner's association (HOA). North of I-70 is a large undeveloped parcel of land that is for sale. Although not required for the installation of the wildlife crossing, CDOT is interested in purchasing this property for habitat protection and to support the long-term viability of the crossing structure for wildlife movement.

The Project limits extend east and west of the crossing for nearly three miles, from MP 253.1, west of the Genesee interchange, to the Lookout Mountain Exit at MP 256 to include wildlife fencing that will help to direct wildlife to the crossing structure and prevent animals from entering the highway.

West of the proposed wildlife underpass within these limits, Genesee Park is located on either side of I-70. Genesee Park is managed by Denver Mountain Parks for a conservation bison herd, which has been maintained on site since 1914. North of I-70 is open space associated with Katherine Craig Park. This property is also managed by Denver Mountain Parks and is currently closed to the public. Land uses east of the proposed underpass consist of open space and Genesee Village (south of and downgradient from I-70). The Project limits end at the Genesee exit and overpass, known locally as Picture Bridge.

View below I-70,  
looking east at  
MP 254.4

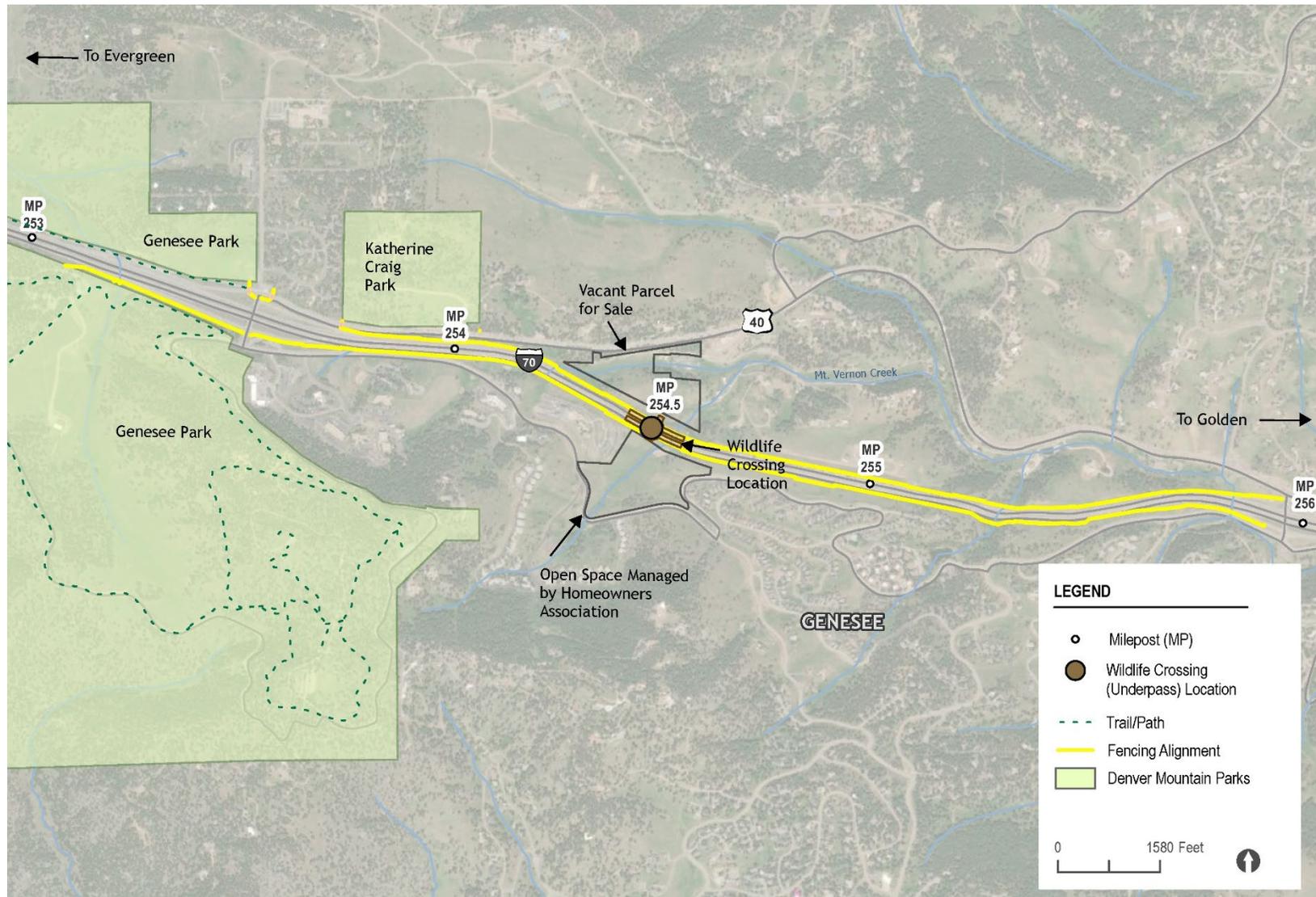


View below I-70,  
looking south from  
underpass at an  
unnamed drainage,  
east of MP 254.4

View west toward  
Genesee Park and  
the location where  
the bison herd is  
maintained



**Exhibit 1 Project Location Map**



### 3. Purpose and Need

The purpose of the Project is to mitigate the impact of I-70 on wildlife habitat connectivity along the I-70 Mountain Corridor in the Mt. Vernon Creek LIZ; honor the commitments from the I-70 Mountain Corridor Programmatic Environmental Impact Statement (PEIS) Record of Decision (ROD), ALIVE MOU, and I-70 Biological Opinion; and reduce WVCs to improve safety for drivers and wildlife.

This stretch of highway between MP 252.8 and 257.6 is home to resident elk and mule deer populations and is within the winter ranges of both species. Through the LIZ, I-70 is considered a major barrier to wildlife movement due to its large footprint and high traffic volumes and speeds, which create few gaps where wildlife can safely cross the highway. Traffic volumes range from 61,000 to 70,000 average annual daily traffic (AADT) (CDOT, 2022). At these volumes, I-70 acts as a complete barrier for wildlife movement, and the probability of an animal successfully crossing is very small (Charry and Jones, 2009). Under current conditions, there are few opportunities for wildlife, especially large mammals such as elk and mule deer, to safely cross I-70 within the Project area. The one existing bridge over I-70 at the Genesee Exit (MP 253.5) is unsuitable for wildlife due to traffic, though elk have been known to cross over the highway on this roadway bridge at night.

The presence of the highway results in direct impacts, such as wildlife mortality and vehicular crashes due to WVC, and indirect impacts, such as habitat fragmentation and reduced landscape permeability. Impediments to wildlife movement along the corridor include structural barriers (road footprint, median and shoulder barriers, retaining walls, cut and fill slopes), operational barriers (traffic volumes and speeds), and behavioral barriers (light and noise).

The Mt. Vernon Creek LIZ has a high rate of WVC within the Corridor (3.6 WVC/mile/year) and is considered a WVC hot spot where CDOT

has determined safety improvements are needed. Between 2015 and 2019, 87 WVC crashes were reported to law enforcement for the section of I-70 within the Mt. Vernon Creek LIZ (MP 252.8 to MP 257.6). The majority of reported WVCs involved mule deer (53 percent) and elk (44 percent), although collisions with black bear and other wildlife were also reported. Crashes within the Project limits (MP 253 to MP 256) are more concentrated with a higher WVC rate, at 4.4 WVC/mile/year, than the overall LIZ. Between 2015 and 2019, 66 WVC were reported within the fencing limits. Like the Mt. Vernon Creek LIZ overall, the majority of reported WVCs involved deer (58 percent) and elk (39 percent).

In both the LIZ overall and in the Project limits, WVC numbers are likely underreported. National research suggests as many as two-thirds or more of WVCs go underreported in national crash databases each year (Huijser et al., 2008), which is supported by the number of carcasses removed by CDOT maintenance crews and CPW officials not related to official crash reports. Between 2015 and 2018, CDOT reported 66 carcass pickups in the Mt. Vernon Creek LIZ, 55 of which were within the Project limits. Most carcass pickups were deer and elk; other medium- and smaller-sized fauna that are also subject to roadkill but are not well represented in reports include bobcat, coyote, red fox, and raccoon.



**Vehicle damaged by elk-vehicle collision on I-70. The Rocky Mountain Insurance Information Association estimates property damage averages \$3,103 per crash.**

## 4. Project Description

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Designing and constructing an effective wildlife crossing system requires substantial time, money, and attention to site-specific parameters and details, including target species, terrain, landscape, roadway, surrounding infrastructure and land uses, and other variables. Because the needs of wildlife and physical settings vary, there are no standardized designs for wildlife crossings. Wildlife crossing structures provide safe passage for wildlife either above a highway (as an overpass) or below a highway (as an underpass). Fencing, gates, guards, and escape ramps are typically incorporated into the design to funnel wildlife toward the crossing and increase its effectiveness.

The design of the wildlife crossing at Genesee is rooted in lessons learned from similar projects across North America and in Colorado specifically. Colorado has a long history with wildlife crossings that began more than 50 years ago with the installation of culverts near Vail and Durango. Since this time, the state has implemented programs to identify statewide needs, prioritize highway segments, cultivate stakeholder collaboration, and promote public safety. Additionally, monitoring data from installed wildlife crossings have informed the design of the Genesee wildlife crossing infrastructure.

### 4.1. Crossing Structure

The wildlife crossing at Genesee would be constructed as an underpass of I-70. The new cross-section includes two bridges (one in the westbound direction and one in the eastbound direction) that together would be approximately 118 feet wide (from abutment to abutment), 16-18 feet high, and 137 feet long (across I-70), including a 27-foot open median. The underpass opening would be approximately 44 feet wide at the base of the slopes. As shown in Exhibit 2, the opening would also include 2:1 slopes and a 4-foot bench on both sides. Concrete barriers around the median opening

would minimize the impact of light and noise from passing traffic on wildlife using the underpass and fencing would be placed between the highway bridges to keep wildlife off of the median. The structure is located to the west of the unnamed drainage (a tributary to Mt. Vernon Creek) to avoid impacts on this resource.

The underpass design is modeled after the wildlife crossings recently constructed for the I-25 South Gap project, which also targeted elk as a primary species. A visual depiction and typical section of the wildlife crossing are presented in Exhibit 2.

### KEY DEFINITIONS

#### Wildlife Fencing

Wildlife fencing keeps wild animals from accessing the travel way and/or funnels animals to a safe crossing structure. Fencing design is highly species-specific and depends on many factors - migration patterns, topography, and animal behavior. Woven wire mesh fencing is a common type of wildlife fencing used along highways.

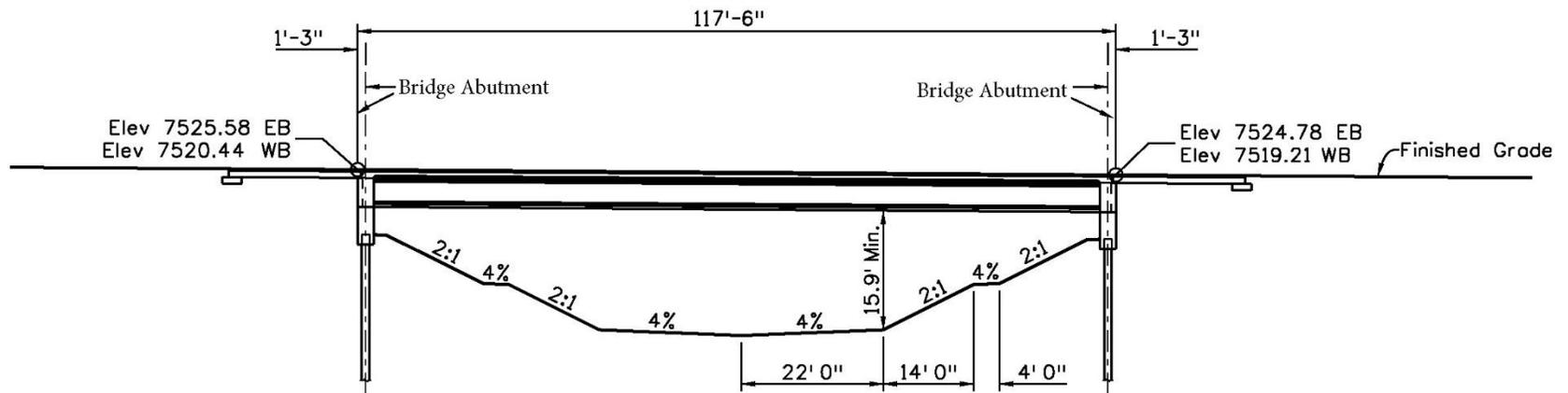
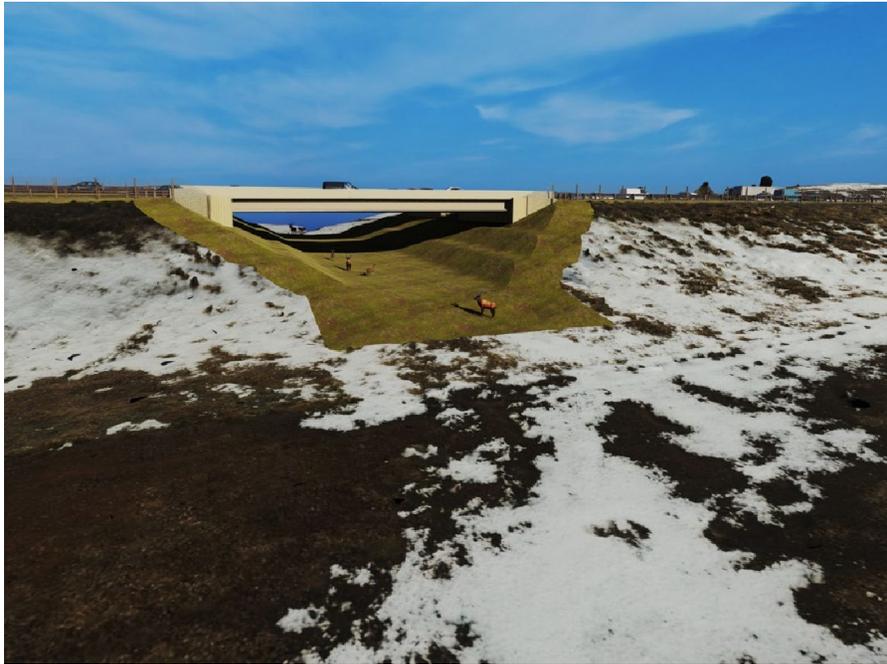
#### Wildlife Guards

Like cattle guards, wildlife guards are installed in locations where fences intersect driveways or roads. They are used to discourage animals from walking through a gap in fencing and onto roadways or highway on- or off-ramps. Different designs are available, with the most common being bar (round bar, flat bar) and grate patterns. Grate patterns are easier for pedestrians and bicyclists to navigate.

#### Escape Ramps

Wildlife can become trapped within fenced right-of-way (between the fence and the highway). Escape ramps are earthen ramp structures that provide a one-way escape or “jump-out” for wildlife to return to the safe side of the fence.

**Exhibit 2 Typical Section and Visualizations of the Wildlife Underpass at Genesee**



## 4.2. Wildlife Fencing

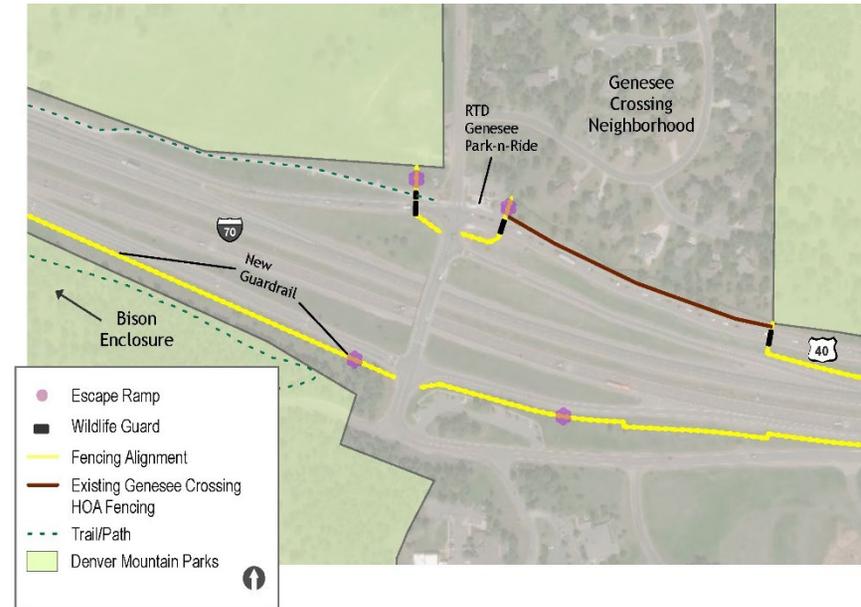
As shown in Exhibit 3, wildlife fencing associated with the underpass will extend west and east of the crossing structure on both sides of I-70 for nearly three miles from MP 253.1, west of the Genesee interchange east to the Lookout Mountain Exit at MP 256. It is anticipated that the fence will be located near the interstate, at the edge of the clear zone, rather than along CDOT right-of-way, which is set back from the highway.

Existing barbed-wire right-of-way fencing will be removed where it is not needed by adjacent landowners to avoid a double fence line. On the northeast side, the fence will end at the top of the I-70 westbound on-ramp between US 40 and the on-ramp. On the southeast side, the fence end will tie into the end of the guard rail that runs along the I-70 eastbound off-ramp.

The southwest fence end has been designed in consultation with Denver Mountain Parks and is constrained by the needs of the existing bison herd and associated enclosure, which lies west of the Genesee interchange on both the north and south sides of the highway. The preferred fence alignment in this area (Exhibit 4) involves removing existing wildlife fencing, adding new fencing, and installing gates that swing open and closed to create an elk movement corridor. The gates will open (be closed off to wildlife) only when bison are crossing beneath I-70. New fencing will be installed along the I-70 right-of-way to keep wildlife from crossing the highway. The design includes guardrail adjacent to the truck parking lanes to prevent vehicular damage to the fence in response to Denver Mountain Parks concerns. Ongoing coordination with Denver Mountain Parks will be needed to refine this fence alignment and adjustments to the park's bison enclosure during final design.

The northwest fence end is also complicated, in part by the need to tie into the bison enclosure, and because of existing fencing associated with the homes in the Genesee Crossing Neighborhood that are adjacent to US 40 (Exhibit 5). To the west side, the bison

Exhibit 3 Northwest Fence Detail



enclosure nearly abuts the Genesee interchange. A paved bike path heads west from the interchange and runs between the north side of I-70 and the bison enclosure. Elk walk down the bike path and have become trapped between the bison fence and the interstate in this area. To prevent these movements, the Project will connect wildlife fencing from the corner of the bison enclosure to the interchange bridge abutment over I-70 and install wildlife guards across the bike path and the I-70 westbound on-ramp.

On the northeast side of the interchange, the wildlife fence alignment must avoid creating a tunnel on either side of US 40, with a wildlife fence running between I-70 and US 40. To avoid creating a potentially dangerous situation, either the existing fence should be integrated into the fence alignment or new fencing will be installed in this location.

**Exhibit 4 Fencing Alignment**



Exhibit 5 Southwest Fence Detail (Bison Enclosure)

Gates Open



Gates Closed



	Existing Fencing to Remain
	Existing Fencing to be Removed
	New Fencing to be Installed
	New Gates to be Installed



Additional coordination with the Genesee Crossing Neighborhood HOA will be needed to determine whether the existing fencing can be integrated into the design and if so, how it would be maintained. From the east side of the Regional Transportation District (RTD) Genesee Park-n-Ride, fencing will be installed from the west end of the Genesee Crossing Neighborhood, break across US 40 via a wildlife guard, and then continue between US 40 and the I-70 westbound off-ramp up to the bridge interchange. At the east end of the Genesee Crossing Neighborhood, which is adjacent to existing fencing along Katherine Craig Park, a wildlife guard will be installed across US 40 and wildlife fencing will continue east along the north side of the interstate, within CDOT right-of-way. Existing barbed wire right-of-way fencing on the north side of US 40 at Katherine Craig Park would be removed to facilitate wildlife movement through the area to the new crossing structure.

#### 4.3. Wildlife Guards and Escape Ramps

Elk currently use the existing road overpass at the Genesee interchange to cross over I-70, typically during nighttime hours. CPW, Denver Mountain Parks, and the ALIVE stakeholders agreed that it would be best to continue to allow elk to cross I-70 at this location given low traffic speeds. Therefore, there will not be wildlife guards across the interchange or at each of the I-70 on- and off-ramps. Wildlife guards are needed at the following locations:

- I-70 Genesee Exit, westbound on-ramp and I-70 Genesee Bike Path
- US 40, east side of the Genesee Interchange
- US 40 at Katherine Craig Park

The Project incorporates a grid-patterned wildlife guard design (2-inch by 3-inch open cells) over a bar design because it is more suitable for bicyclists and pedestrians as well as vehicle traffic moving at higher speeds.

Escape ramps will be included approximately every quarter mile along the fenced segments, as shown in Exhibit 3. A total of thirteen escape ramps are currently recommended on alternating sides of I-70.

#### 4.4. Construction

Construction of the wildlife crossing under I-70 will involve excavation and/or drilling caissons at depths up to 50 feet below the ground surface. As currently designed all construction activities would occur within the existing CDOT right-of-way. The Project would be constructed under traffic with westbound and eastbound traffic lanes being shifted north and south into the median depending on the stage of construction. Traffic would not be detoured from I-70. Construction of the Project is expected to begin in the Fall of 2022.

## 5. How Did the I-70 Mountain Corridor CSS Process Influence Project Development?

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Context Sensitive Solutions (CSS) is an approach that considers the environmental and community context within which a transportation improvement project will exist, and includes early, continuous, and meaningful involvement of stakeholders throughout project development. The I-70 Mountain Corridor CSS process is required by the PEIS ROD for all Tier 2 projects and consists of a unique set of guidance developed specifically for the Corridor in collaboration with a broad coalition of stakeholders. It designates various groups to work with the project team throughout project development: a Project Leadership Team (PLT), Technical Team (TT), and Issue Task Forces (ITFs) for special interests such as history, wildlife, and wetlands.

The I-70 Mountain Corridor CSS process was initiated for the Floyd Hill Project NEPA process in 2017 and continued from the 2016 Concept Development Process.

The PLT, TT, and ALIVE ITF established during the Floyd Hill EA, have been actively involved in the development of the Genesee wildlife crossing Project. The ALIVE ITF, comprised of representatives from Clear Creek County, CPW, Jefferson County, USFWS, USFS, FHWA, and CDOT met six times between April 2018 and May 2020 to identify wildlife habitat connectivity issues and review potential mitigation solutions and locations. These efforts ultimately led the ALIVE ITF to recommend wildlife crossings in alternative locations outside of the Floyd Hill Project area, in both Empire and Genesee. The Floyd Hill PLT and the ALIVE ITF continued their involvement as the early projects were advanced from the larger Floyd Hill Project.

Since advancing the wildlife crossings from the Floyd Hill EA, the PLT continued to guide the early projects and met three times. The PLT endorsed the decision to advance the early projects

separately from the Floyd Hill Project, received updates on the design and construction schedules and progress, and advised on public involvement. The ALIVE ITF met three times to further the designs for the alternative wildlife crossing locations:

- ALIVE Meeting - April 11, 2022. The meeting updated the ITF on the design progress and reviewed details of the structures, fencing, and other details.
- ALIVE Meeting - September 2, 2021. This meeting was a site visit with the ALIVE ITF. The main purpose of this meeting was to review the location of the wildlife crossing in the field and to discuss fencing options and challenges. This meeting resulted in agreement on the preferred fence alignment and the extent of the crossing structure.
- ALIVE Meeting - July 12, 2021. This meeting brought the ALIVE ITF up to date on the proposed design for the crossing structure and provided a forum for discussing design considerations for the underpass. CDOT and the consultant team reviewed preliminary specifications for the crossing structure, including structure type and dimensions, and discussed associated habitat protection efforts. The ALIVE ITF then provided input for integration into the 30 percent design.

Meeting notes are included in Appendix A.

In addition to the ALIVE ITF involvement and coordination, the consultant team has conducted several site visits with CDOT, CPW, and Denver Mountain Parks to discuss the design of the wildlife crossing structure and review challenges and options related to the fencing alignment. The PLT, TT and ALIVE ITF will continue their roles as the Project continues to final design, permitting and associated agency consultations, and construction.

## 6. What are the Impacts Associated with the Project?

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This section defines the context, or affected environment, for each environmental resource and evaluates the impacts associated with the Project. Technical reports and other documentation prepared in support of the analysis are included in the Appendices.

Both permanent and temporary impacts are evaluated in this section. Permanent impacts are permanent changes to the Project area's natural and community resources, such as the acquisition of right-of-way that is converted to transportation use or changes in the visual environment. Temporary impacts generally are those that result from construction, such as dust generation, noise from construction equipment or activities, or traffic delays. Mitigation measures have been included to address identified impacts and are detailed in Appendix I.

Data reviewed for the Project determined that both farmlands and floodplains do not occur in the Project area. Therefore, these resources are not discussed further in this document.

### 6.1. Air Quality

#### Context

This Project is located in Jefferson County, which is within the Denver-Boulder carbon monoxide (CO) and Denver Metro particulate matter less than 10 microns in diameter (PM<sub>10</sub>) maintenance areas. This area formerly exceeded National Ambient Air Quality Standards (NAAQS) for CO and PM<sub>10</sub>, and the region is under maintenance plans to ensure that the NAAQS continue to be met.

The Project is exempt from air quality conformity requirements per 40 CFR 93.126 under projects that “correct, improve, or eliminate a hazardous location or feature.” The installation of

fencing is also an exempt category. Therefore, regional air quality analysis is not required. The Project would not add roadway capacity, involve intersections, or reconfigure mainline I-70.

#### Impacts

The Project would result in temporary, intermittent increases in air emissions during construction related to reduced speeds on I-70, excavation, earth moving, and general construction activities, such as the use and staging of diesel emitting construction equipment. Impacts are not expected to be adverse and would be temporary in duration.

#### Mitigation

Mitigation commitments #1-7, detailed in Appendix I, are designed to address temporary, construction-related impacts to air quality. Mitigation commitments include requirements for heavy construction equipment and considerations regarding the location of staging areas.

### 6.2. Cultural Resources

#### Context

Section 106 of the National Historic Preservation Act of 1966 requires federal agencies to identify and evaluate the effects of their undertakings on historic properties. This process involves identifying historic properties, evaluating effects, resolving adverse effects, and mitigation if warranted.

The area of potential effects (APE) for the Project is shown in Appendix B. It includes areas where the Project may directly or indirectly affect historic or potentially historic resources. The original APE was developed in December 2021 and was expanded in July 2022 to account for changes in the wildlife fencing design.

Previously recorded historic resources were identified in the APE through a search of the COMPASS database maintained by the Colorado Office of Archaeology and Historic Preservation.

A review of Jefferson and Clear Creek County Assessor records and historic and current aerial images and topographic maps was completed, and a field inventory was performed on June 23, 2021. As described in Exhibit 6 and Appendix B, four historic properties were identified within the APE: Bridge Structure F-15-CI, also known as Picture Bridge (5JF.7908); Genesee Park (5JF.950); Katherine Craig Park (5JF.979), and Ralston Residence (5JF.2788).

CDOT assessed the Project for archaeological and paleontological resources in September 2021 and provided clearances for the Project to proceed with no further evaluation or attached mitigation stipulations. Archaeological and paleontological clearances for the Project are provided in Appendix C and Appendix D, respectively.

**Impacts**

The Project results in no adverse effect to historic properties. CDOT completed Section 106 consultations with the State Historic Preservation Office (SHPO) and consulting parties, who concurred with these determinations (Appendix B).

**Exhibit 6. Historic Properties Eligibility and Effects Determinations**

Site Number	Name	Location	Eligibility	Effects
5JF.7908	Picture Bridge <sup>1</sup>	Spans I-70 at the Genesee Exit	Recommended Eligible (2021) under Criterion C <sup>2</sup> as exemplary representation of steel box girder continuous bridge construction	No Adverse Effect
5JF.950	Genesee Park	North and South of I-70 west of the Genesee Exit	Listed in NRHP (1990) under Criteria A <sup>2</sup> and C <sup>2</sup> , with several corresponding periods of significance.	No Adverse Effect
5JF.979	Katherine Craig Park	North of US 40 east of Genesee Exit	Listed in NRHP (1995) under Criteria A <sup>2</sup> for its association with community planning and development, conservation, and recreation.	No Adverse Effect
5JF.2788	Ralston Residence	Approximately 0.25 mile from crossing location	Field Eligible (2002) under Criterion A <sup>2</sup> for its association with the fur farming industry, and Criterion C <sup>2</sup> as a modest version of the Craftsman style found in rural Jefferson County.	No Adverse Effect

<sup>1</sup> Although Picture Bridge is identified as an exceptionally significant feature of the federal interstate system, it has been excluded from the Interstate Exemption and as such, remains subject to review under Section 106.

<sup>2</sup> Historic properties can be eligible for listing on the National Register under any of the following criteria: Criterion A - association with events that have made a significant contribution to the broad patterns of our history; Criterion B - association with the lives of persons significant in our past; Criterion C - embodies distinctive characteristics of a type, period, or method of construction, represent the work of a master, possess high artistic values, or represent a significant and distinguishable entity whose components may lack individual distinction; or Criterion D - may yield, information important to history or prehistory.



The Project would not directly affect the Picture Bridge (5JF.7908) or Ralston Residence (5JF.2788). Project elements such as fencing, wildlife guards, and guardrails would be located along the interstate and would be consistent with highway infrastructure. As noted in the December 2021 consultation with SHPO and verified by field review and the Google Earth viewshed tool, these Project features would present a negligible visual change in the overall setting of these resources and would not interfere with significant viewsheds. The Project would result in a determination of No Adverse Effect for 5JF.7908 and 5JF.2788.

Genesee Park (5JF.950) is located within the APE and the Project area, approximately one mile west of the crossing structure. Wildlife fencing would extend east and west of the crossing structure, as described in detail in Section 4.2. The fencing would be located within the park's historic district boundary and would have a direct effect to the property but would not affect characteristics of the park that qualify it for inclusion in the National Register. Contributing resources to the historic district include the bison "game preserves" as they are identified in the National Register of Historic Places nomination. These game preserve areas were developed in 1914 and are significant for their association with the development of wildlife conservation and preservation in the United States. The bison enclosure is a small pen area within the game preserve that is used to stage and manage the herd when it is moved from the south to north side of Genesee Park, which occurs several times annually.

Wildlife fencing would include new fencing adjacent to the truck parking lanes on I-70; installation of new fencing and gates within the bison enclosure; removal of existing fencing within Genesee Park; and installation of new guardrail. Fencing would generally replace or reconfigure existing fencing within the park, including removing existing wildlife fencing, adding new fencing, and installing gates that swing open and closed to create an elk movement corridor and preserve the management of the historic

bison herd (see Section 4.2). These changes were developed in consultation with Denver Mountain Parks and are consistent with the park's current infrastructure and management practices. While these installations constitute a visual change, they are located near I-70 and will not change the broader visual setting of the district, nor diminish the ability of the resource to communicate significance in the areas of Community Planning and Development, Landscape Architecture, Architecture, Engineering, or Conservation. The Project results in a determination of No Adverse Effect for 5JF.950.

Katherine Craig Park (5JF.979) is located north of I-70 and US 40, east of the Genesee exit and the Genesee Crossing Neighborhood. A wildlife guard would be placed across US 40, and wildlife fencing would continue from the Genesee Crossing Neighborhood to the north side of I-70 (between I-70 and US 40). Barbed wire fencing within the park boundary would be removed to facilitate wildlife movement in this area. New wildlife fencing would be installed across from the park across US 40 between I-70 and US 40 in the I-70 right-of-way. No new fencing would be installed in the park, and no other work would occur within park boundaries. The removal of fencing would have a direct effect to the property but would not interfere with any of the park's protected attributes or its functions. Although the removal of fencing would constitute a visual change, the fencing is located at the edge of the property, adjacent to US 40 and would not diminish the ability of the resource to communicate significance in the areas of Community Planning and Development, Conservation, or Entertainment/Recreation. The Project results in a determination of No Adverse Effect for 5JF.979.

CDOT consulted with the SHPO and consulting parties in December 2021. SHPO concurred with the Section 106 determinations, including the APE and eligibility and effects determinations in January 2022. In June and July 2022, CDOT updated the consultation with additional information about the Project's

wildlife fencing design and alignment. The updated information did not change the effect determinations but was provided to clarify new details that affect the Picture Bridge, Genesee Park, and Katherine Craig Park. More detailed information regarding the impact analysis, determinations of effect, and Section 106 consultations are provided in Appendix B.

**Mitigation**

The Project results in no adverse effect to historic properties, and no mitigation is required. Mitigation commitment #8, detailed in Appendix I, is included to address any unexpected discovery of archaeological or paleontological resources during construction.

**6.3. Environmental Justice**

**Context**

Data from the 2019 American Community Survey 5-year estimates at the census block group level indicate that no populations that meet the threshold (meaningfully greater than the reference population) for protections under Executive Order 12898 or Title VI of the Civil Rights Act of 1964 are present in the Project area.

Typical of rural mountain geography, the Project area falls within three large census divisions (census tract 98.45, block groups 1 and 2; and census tract 98.50, block group 1). As shown in Exhibit 7, in all three block groups analyzed, the percentage of minority residents and low-income households is less than that of Jefferson County overall (22 percent) and (14 percent), respectively.

Data from the Environmental Protection Agency (EPA) Environmental Justice Screening and Mapping Tool, also known as EJ Screen, confirms census data with both minority and low-income populations falling below that of Jefferson County. In addition, zero percent of the population identifies as linguistically isolated.

**Exhibit 7. Percent Minority and Low-Income in Comparison to Jefferson County**

Location	Percent Minority	Percent Low-Income <sup>1</sup>	Exceeds County?
Jefferson County	22%	14%	NA
Census Tract 98.45, Block Group 1	18%	5%	No
Census Tract 98.45, Block Group 2	5%	3%	No
Census Tract 98.50, Block Group 1	3%	8%	No

<sup>1</sup> Using CDOT’s Methodology, Federal year 2021 income limits from the US Department of Housing and Urban Development were adjusted to reflect Jefferson County’s average household size of 2.38 and then used to establish a low-income threshold of \$26,397. Correlating this to census household income level groupings means that for this analysis, low-income is defined as households that earn less than \$30,000 a year.

**Impacts**

Because no minority or low-income populations have been identified that would be adversely impacted by the Project, no further Environmental Justice analysis is required. The Project is expected to improve safety and reduce WVCs in the area, which would have a beneficial effect on the general population, including minority and low-income individuals.

**Mitigation**

No mitigation is required.



#### 6.4. Geologic Resources

##### Context

The Project area is located in a valley that precedes the dramatic geologic exposures, steep rock cuts, and canyon walls that characterize much of the I-70 Mountain Corridor to the west. Soils in the vicinity of the underpass are classified as Lininger-Trag Sandy Loam and characterized as well-drained and representative of the mountain slopes. Soils, where the underpass would be constructed, are largely characterized as fill materials that have been compacted to form the embankment that supports I-70 above.

##### Impacts

Construction of the underpass will require excavating beneath I-70 across the width of the highway (137 feet). The fill material is considered stable, and no geological hazards are anticipated to be encountered.

##### Mitigation

No mitigation is required.

#### 6.5. Hazardous Materials

##### Context

An Initial Site Assessment (ISA) was prepared to evaluate the potential for encountering Recognized Environmental Conditions (RECs), soil and/or groundwater contamination, and other solid and hazardous waste concerns within the Project area (Pinyon Environmental, Inc., 2021). A GeoSearch database inquiry of records for facilities that handle hazardous materials and/or petroleum products and recorded incidents of spilled or released hazardous materials within a 1-mile radius was obtained and reviewed. This was followed by a site visit to properties within 50 feet of and/or in close proximity to the proposed wildlife underpass.

The ISA identified one facility, the Genesee Mountain Scheelite Occurrence, as a potential environmental concern within the study area. This facility was a former tungsten, scheelite, garnet, and wernerite mine. No reported releases, violations, or enforcement actions were identified. The presence of this mine was not confirmed with aerial photographs or topographic maps of the area. Based on the cross-gradient location of this facility relative to the study area, and the lack of reported releases, violations, or enforcement actions, this facility has a low potential to impact the Project during construction. No other concerns were identified for the Project. The ISA is included in Appendix E.

##### Impacts

Construction of the wildlife crossing under I-70 will involve excavation and/or drilling caissons at depths up to 50 feet below the ground surface. Groundwater is likely to be encountered during construction and dewatering may be required. The potential for encountering contaminated groundwater is low.

The Project could require the removal of highway structures, like painted guardrails, signs, or metal bridge components that, if removed, would need to be properly characterized and disposed of.

##### Mitigation

Mitigation commitments #9-16, detailed in Appendix I, are designed to address temporary, construction-related impacts associated with hazardous materials. Mitigation commitments include requirements related to the unexpected discovery of contaminants, the disturbance of painted structures, and the protection of groundwater.

#### 6.6. Land Use and Right of Way

##### Context

The Project area is located in the western limits of Jefferson County, Colorado, and supports a mixture of privately owned



vacant parcels, residential communities, and recreational land uses. Existing land use and future development within the Project area is regulated by the *Jefferson County Comprehensive Master Plan (2020)*, specifically the *Central Mountains Area Plan*.

As shown in Exhibit 1, land immediately north and south of the wildlife crossing location (MP 254.5) is privately owned and undeveloped. North of I-70 is a 17-acre vacant parcel that has been passively for sale for several years (a for sale sign has been placed on the property, but it is not currently listed with a real estate service). South of I-70 is a 20-acre parcel of land owned by the Village at Genesee and managed by their homeowner's association as open space.

Recreational land uses are located north and south of I-70 in the western limits of the Project, where fencing will be installed. As shown in Exhibit 1, the boundaries of Genesee Park span the highway west of Genesee Exit (MP 253.5) with portions of the park on both the north and south sides of I-70. North of I-70 a popular bicycle path (I-70 Genesee Bike Path) runs along the boundary of Genesee Park, adjacent to the I-70 westbound on-ramp. The Katherine Craig Park, north of I-70 and east of the Genesee interchange, is currently used by a girl scout troop and is not open to the public.

Residential communities in the Project area include the Chimney Creek development, a gated townhome community south of I-70 near MP 254.5; the Village at Genesee, a large lot single-family residential community also south of I-70 near MP 254.5; and Genesee Crossing, a subdivision with single-family homes on 0.5-acre lots in the northeast quadrant of the Genesee interchange.

The crossing structure and all associated fencing would be located within CDOT's right-of-way, which varies in width between approximately 250 feet (near the eastern Project limit) and 2,000 feet (at the Genesee Exit). At MP 254.5, where the underpass would be constructed, the existing highway right-of-way width is

approximately 470 feet, and the crossing structure would require approximately 137 feet.

### Impacts

The Project is consistent with existing land use, zoning, and local land use plans for Genesee and Jefferson County. Undeveloped lands and adjacent parks and open space within the Project area are favorable for a wildlife crossing. The Project does not involve changes to roadway capacity or access and improvements would occur within the existing right-of-way.

Maintenance agreements could be needed for fencing within Denver Mountain Parks and the Genesee Crossing Neighborhood (if the existing HOA fencing is integrated into the wildlife fencing). The need for temporary easements to construct new fencing adjacent to the bison enclosure will be determined during final design. Construction staging is also expected to occur within CDOT right-of-way. For these reasons, the Project would not directly or indirectly impact land use, and changes to existing or planned land use would not occur.

### Mitigation

No mitigation is required.

## 6.7. Noise

### Context

Traffic on I-70 is the primary source of noise in the Project area. Noise-sensitive receptors are present south of I-70 in the Village at Genesee, more than 600 feet from the Project. North of I-70, receptors are dispersed and located closer to US 40. Genesee Park is bisected by I-70 west of the Project area, where fencing would be installed. Also in this area is the Genesee Crossing neighborhood with access from Mt. Vernon Country Club Road. Other noise-sensitive land uses include open space, Katherine Craig Park, and the I-70 Genesee Bike Path, which runs through Genesee Park.



This Project is not considered a Type 1 project, per 23 CFR Part 772. It does not involve capacity increases or alterations to the existing highway and detailed noise analysis, study, or abatement is not required.

### Impacts

The Project would not affect traffic or change noise conditions in the Project area. During construction, temporary, intermittent increases in noise would occur because of the use of standard construction techniques and diesel-powered equipment that generate noise. Because noise-sensitive receptors are located far from the crossing location, where construction activities would be concentrated, impacts are not expected to be adverse.

### Mitigation

Mitigation commitments #17-20, detailed in Appendix I, are designed to address temporary, construction-related noise. Mitigation commitments include requirements for heavy construction equipment and considerations for the location of staging areas and haul routes.

## 6.8. Recreational Resources

### Context

Recreational resources in the Project area include the following parks, trails, and open space:

- **Genesee Park:** Genesee Park is accessed from the Genesee Exit (MP 253.5) and is located on both sides of I-70. It is owned and managed by Denver Mountain Parks. The 2,413-acre park contains parking areas, scenic viewing areas, trails, and a pedestrian bridge. Denver Mountain Parks also manages a conservation bison herd on the property. The Genesee Mountain Trail is located within Genesee Park near the bison enclosure. The 3.9-mile dirt multiuse trail provides access to the pedestrian bridge and offers views of the bison herd as

well as connections to the Genesee Drive, Genesee Summit, and American Bison Trails.

- **Katherine Craig Park:** Katherine Craig Park is located north of I-70 and east of the Genesee Exit. Like Genesee Park, it is owned and managed by Denver Mountain Parks. However, this park is exclusively used by the Mile High Council of Girl Scouts and is not open to the public.
- **I-70 Genesee Bike Path:** The I-70 Genesee Bike Path is a 2.4-mile paved multi-use path that runs parallel to I-70 in the northwest quadrant of the Genesee Exit. Bicyclists and pedestrians use this pathway which connects bicyclists to US 40 and both bicyclists and pedestrians to Genesee Park.
- **The Village at Genesee HOA Open Space and Trail:** The Village at Genesee Open Space and walking trail are located on the south side of I-70 at MP 254.5. The land is owned and managed by the Village at Genesee HOA and used primarily by local residents.

### Impacts

Fencing associated with the bison enclosure south of I-70 within Genesee Park, would be reconfigured to facilitate wildlife movements. The fencing alignment as shown in Exhibit 4 and described in detail in Section 4.2 has been developed in consultation with Denver Mountain Parks and involves removing existing wildlife fencing, adding new fencing, and installing gates that swing open and closed to create an elk movement corridor. The gates will open (be closed off to wildlife) only when bison are crossing beneath I-70. New fencing will be installed along the I-70 right-of-way to keep wildlife from crossing the highway. The design includes guardrail adjacent to the truck parking lanes to prevent vehicular damage to the fence, something Denver Mountain Parks has expressed concern about. No other activities would occur within the park boundaries and land would remain



used for recreation and the management of the conservation bison herd.

Wildlife guards are recommended in the following locations, where breaks in fencing would be needed and to discourage wildlife from entering roadways:

- I-70 westbound on-ramp and I-70 Genesee Bike Path at the Genesee interchange
- US 40, on the east side of the Genesee interchange
- US 40, at Katherine Craig Park

The Project incorporates a grid-patterned wildlife guard design (2-inch by 3-inch open cells) over a bar design because it is more suitable for bicyclists and pedestrians as well as vehicle traffic moving at higher speeds.

The Project would be constructed within existing right-of-way and access to all recreational resources will be maintained throughout construction; no other impacts are anticipated to park and recreational resources.

### Mitigation

Mitigation commitments #21-22, detailed in Appendix I, are designed to address access to parks during construction and coordination with Denver Mountain Parks with regard to the fencing alignment adjacent to the bison enclosure at Genesee Park.

## 6.9. Section 4(f) Resources

### Context

Section 4(f) of the Department of Transportation Act of 1966 requires FHWA to consider and avoid or minimize the use of important parks and recreation areas, wildlife and waterfowl refuges, and historic properties in developing transportation projects. There are various exceptions to the requirements for

Section 4(f) approval as specified in 23 CFR 774.13, including part (d) temporary occupancies of land that are so minimal as not to constitute a use within the meaning of Section 4(f) and part (g) transportation enhancement activities, transportation alternatives projects, and mitigation activities where: (1) The use of the Section 4(f) property is solely for the purpose of preserving or enhancing an activity, feature, or attribute that qualifies the property for Section 4(f) protection; and (2) The official(s) with jurisdiction over the Section 4(f) resource agrees in writing to (1).

Historic properties in the Project area included in the Section 4(f) evaluation include one residence (the Ralston Residence - 5JF.2788), Genesee Park (5JF.950), Katherine Craig Park (5JF.979), and Bridge Structure F-15-CI, otherwise known as Picture Bridge (5JF.7908), as described in Section 6.2.

In addition to being a historic property, Genesee Park also qualifies for protection under Section 4(f) as a recreational resource. Genesee Park is the largest (2,413 acres) of the City of Denver's Mountain Parks system and provides recreational activities for the public that include picnicking, hiking, wildlife viewing, as well as unique opportunities for visitors to view the historic conservation bison herd. The Genesee Mountain Trail is a separate Section 4(f) resource located within Genesee Park near the bison enclosure. The 3.9-mile dirt multiuse trail provides access to the pedestrian bridge and offers views of the bison herd as well as connections to the Genesee Drive, Genesee Summit, and American Bison Trails.

Other recreational resources in the Project area do not qualify as Section 4(f) resources:

- The 2.4-mile I-70 Genesee Bike Path is located within CDOT right-of-way on land dedicated to transportation uses, and therefore, is not considered a Section 4(f) property.



- Katherine Craig Park, located on the northern side of I-70 near the Project, is owned by the City of Denver and managed by Denver Mountain Parks, it also is not considered a Section 4(f) property because it is not open to the public and is leased exclusively to the Mile High Council of Girl Scouts.
- The Village at Genesee HOA Open Space and walking trail (located on the South side of I-70 at MP 254.5) is also not considered a Section 4(f) property because it is privately owned and managed by the Village at Genesee HOA and used primarily by local residents.

### Impacts

The historic Section 4(f) evaluation resulted in *de minimis* determinations for the Ralston Residence (5JF.2788), Genesee Park (5JF.950), and Picture Bridge (5JF.7908) and a temporary occupancy exception for Katherine Craig Park (5JF.979). As detailed in Section 6.2, Cultural Resources, the Project would result in a No Adverse Effect determination for historic properties. Section 4(f) regulations (23 CFR 774) provide FHWA an opportunity to make a *de minimis* impact finding under Section 4(f) for properties resulting in a No Adverse Effect determination. In correspondence dated, December 23, 2021 (Appendix B), FHWA notified SHPO of their intention to make a *de minimis* finding for the following historic properties: Ralston Residence (5JF.2788), Genesee Park (5JF.950), and Picture Bridge (5JF.7908). In July 2020, CDOT provided an update for the effects to Genesee Park, Picture Bridge, and Katherine Craig Park (5JF.979), which did not change the No Adverse Effect determinations or *de minimis* determination for Genesee Park and Picture Bridge. Additionally, the update documented that the impacts to Katherine Craig Park fall under the temporary occupancy exception to Section 4(f) approval. There would be no change in land ownership, work required to remove the fence is minor and temporary in duration, would not adversely affect activities or uses of the park, and the

impacted area would be fully restored (see correspondence in Appendix F).

For the recreational Section 4(f) evaluation for Genesee Park, CDOT determined that the activities that are being undertaken within Genesee Park are for the sole for the purposes of preserving and enhancing the management of the park's bison herd, and as such, qualifies as an exception for Section 4(f) approval under CFR 774.13(g) - transportation enhancement activities.

The Project would not change public access or recreational uses of Genesee Park. The Genesee wildlife crossing has been designed as mitigation for impacts to wildlife from the I-70 Floyd Hill project. It does not involve a traditional transportation use but has some benefits related to the management of Genesee Park. Impacts to Genesee Park are related to the fencing associated with the wildlife crossing structure. The proposed fencing configuration is shown in Exhibit 4 and includes:

- **Installation of new fencing adjacent to the truck parking lanes on I-70.** Although this activity occurs within CDOT right-of-way, it would benefit Genesee Park by keeping wildlife from entering the highway travel lanes. Both Denver Mountain Parks and CPW have noted instances of wildlife getting trapped between the park's existing fencing and the highway in this area.
- **Installation of new fencing and gates within the bison enclosure.** The northern section of gates is located within CDOT right-of-way, and the southern section of gates is located on the existing property line. The purpose of this feature is to separate existing wildlife uses from management activities associated with the bison herd.

The gates would be designed to open and close depending on the movements of the bison herd. Most of the time, the gates would remain in the closed position to allow for a wildlife movement corridor that would funnel wildlife to the new



crossing along CDOT's right-of-way. The gates would temporarily open (and be closed to wildlife movements) when bison are moved from the north side of the park to their enclosure on the south side of I-70.

- **Removal of existing fencing within Genesee Park.** To address Denver Mountain Park's concerns related to wildlife movements near the bison enclosure, existing fencing along the eastern boundary would be removed. This would address existing concerns related to elk that become trapped within bison grazing areas.
- **Installation of new guardrail.** At the request of Denver Mountain Parks, new guardrail would be constructed along the truck parking lanes to protect existing and proposed fencing.

As described in Section 6.9, Recreational Resources, CDOT has worked closely with Denver Mountain Parks on the fencing alignment and associated infrastructure within Genesee Park. They have informed the modifications that are proposed to the fencing within the existing bison enclosure. As the official with jurisdiction over Genesee Park, Denver Mountain Parks concurred in correspondence dated June 22, 2022 that concurred that the use of the Section 4(f) property as described in this section is solely for the purpose of preserving or enhancing an activity, feature, or attribute that qualifies the property for Section 4(f) protection and that the Section 4(f) Enhancement Exception applies to the Project activities. Appendix D contains the Section 4(f) correspondence with Denver Mountain Parks.

#### Mitigation

No mitigation is required.

#### 6.10. Section 6(f) Resources

##### Context

Section 6(f) refers to a section of the Land and Water Conservation Fund (LWCF) Act of 1965 (Public Law 88-578, 78 Stat 897) that

prohibits the conversion of property acquired or developed with grants from this fund to a non-recreational purpose without the approval of the National Park Service. A conversion of Section 6(f) property occurs when land planned, developed, or improved with grants from the LWCF is permanently converted from outdoor recreation to some other use.

A review of CDOT GIS databases indicates that Genesee Park was developed with LWCF grant money and is subject to Section 6(f) evaluation.

#### Impacts

As shown in Exhibit 4, fencing located adjacent to and within the boundaries of Genesee Park, south of I-70, will be reconfigured to facilitate wildlife movements and support the management of the existing bison herd within the park. No change in wildlife or recreational use of the park nor conversion of park property to transportation use would occur.

The fencing design includes the removal of some existing fencing and the installation of new fencing and gates to separate wildlife movements from the management of the bison herd. While most activities would occur within CDOT right-of-way, the existing fencing south of I-70 that extends into the park would be removed from within the park. This would be done at the request of Denver Mountain Parks to reduce conflicts between wildlife and the management of the bison herd. Near the culvert where the bison cross beneath I-70, the southern section of new fencing and gates would also be installed on the property line and would likely need to be accessed for maintenance. No other activities would occur within the park boundaries.

The Project would not acquire any property from the park nor change any of the park's recreational uses or management practices regarding the bison herd. No Section 6(f) use would occur. Maintenance of the fencing would be required and may require an easement. Easements allowing a transportation agency

to enter the property for maintenance, slope easements, or other activity that does not involve converting the land to a non-outdoor recreation use are not subject to Section 6(f) requirements.

### Mitigation

No mitigation is required.

## 6.11. Socioeconomic Resources

### Context

The I-70 and Genesee interchange provide residents with essential access into and out of adjacent lands and link communities to services and economic activities throughout the I-70 Mountain Corridor.

Residential communities in the Project area include the Chimney Creek development, a gated townhome community south of I-70 near MP 254.5; the Village at Genesee, a large lot single-family residential community also south of I-70 near MP 254.5; and Genesee Crossing, a subdivision with single-family homes on 0.5-acre lots in the northeast quadrant of the Genesee interchange.

Community resources that serve these and adjacent communities include the RTD Genesee Park-n-Ride, which accommodates approximately 20 parking spots, the Flatirons Community Church (south of I-70 on Genesee Trail Road), Rockland Community Church (north of I-70 on Mt. Vernon Country Club Road), and the Ralston Elementary School (in the Genesee Crossing Neighborhood). Emergency services are provided by the Jefferson County Sheriff, the Highland Rescue Team Ambulance District, and/or the Genesee Fire Protection District.

### Impacts

Temporary construction-related nuisances such as noise, visual disturbance, traffic delays, and the presence of heavy construction vehicles, would be expected throughout construction. These effects would be concentrated around MP

254.5, where the underpass will be constructed. Residences within Chimney Creek and the Village at Genesee are elevated, and construction activities would be visible in the distance from several of the homes along Genesee Trail Road. The informal trail within the Genesee Village HOA open space is located more than 500 feet from the proposed underpass location; access would not be affected. Given the topography and distance from the construction site, impacts would be minimal.

Construction would occur under traffic with lanes being shifted north and south into the median depending on the stage of construction. Detours would not be required, lane closures would comply with CDOT procedures, and no changes would be required to the interchanges or community accesses.

### Mitigation

Mitigation commitments #23-24, detailed in Appendix I, are designed to address construction-related nuisances as well as coordination with the public and emergency service providers.

## 6.12. Threatened and Endangered Species

### Context

A review of the USFWS IPaC and Colorado Parks and Wildlife databases indicate five federal- and state-listed mammal, bird, and plant species have the potential to occur in the Project area: Preble's meadow jumping mouse (PMJM) (*Zapus hudsonius preblei*), Canada lynx (*Lynx canadensis*), Mexican Spotted Owl (*Strix occidentalis lucida*), Bald Eagle (*Haliaeetus leucocephalus*) and Ute Ladies'-tresses orchid (*Spiranthes diluvialis*).

No critical habitat for any federal-and-state-listed mammals, birds, or plant species has been designated within the Project area boundaries. The PMJM, a federal and state-listed threatened species, is found in heavily vegetated riparian habitats with adjacent, relatively undisturbed grassland communities and a nearby water source. Although the Project area is located within



the range (defined as the area where a species could potentially occur in its lifetime) for the PMJM, it does not contain suitable habitat, and this species has not been documented within the Project area (Kintsch et. al 2011).

Canada lynx, a federal-listed threatened species, prefer dense subalpine forests characterized by persistent snow and dense horizontal cover in areas with abundant snowshoe hare populations. In Colorado, these habitat areas occur at an elevation range of 10,000 feet to 12,000 feet. They also prefer areas that are relatively isolated from and unaffected by human developments and activities. The Project area has been disturbed by human activity and is below the ideal elevation range, potential habitat for Canada lynx within the Project area is considered low. However, the crossing would accommodate lynx movement should any move through the area.

The Mexican Spotted Owl, a federal and state-listed threatened species, has no suitable habitat within the I-70 Mountain Corridor nor within the Project area.

The Bald Eagle, a state species of concern, prefers continuous riparian habitat and large cottonwood trees, which are lacking in the Project area but could occur in surrounding areas.

The occupied habitat for Ute Ladies'-tresses orchid, a federal-listed threatened species, consists of seasonally moist soils and wet meadows of drainages below 7,000 feet. Potential habitat exists in the vicinity of the Project but is not present within the limits of disturbance for the Project.

The monarch butterfly (*Danaus plexippus*), a candidate for federal listing, lay their eggs on its obligate milkweed host plant. Common places milkweed occurs include short and tall grass prairies, livestock pastures, agricultural margins, roadsides, wetland, and riparian areas, sandy areas, and gardens, in addition to deserts, open forests, and woodlands. Potential habitat exists in the

vicinity of the Project but is not present within the limits of disturbance for the Project.

### Impacts

Because of the lack of suitable habitat, the Project would not affect threatened or endangered species. The Project is designed as mitigation to address impacts to wildlife. Should PMJM or Canada lynx individuals pass through the Project area, design features, such as the inclusion of woody debris cover along one side of the structure, would facilitate passage through the crossing.

Water depletions that could affect federal-listed species that inhabit the South Platte River are possible because the Project will be using concrete. In order to address the effects this depletion will have on federally listed species downstream that depend on the river for their survival, CDOT, as a state agency, is participating in the South Platte Water Related Activities Program (SPWRAP). CDOT is cooperating with the Federal Highway Administration (FHWA) which provides a federal nexus for the project. In response to the need for formal consultation for the water used from the South Platte basin, FHWA has prepared a Programmatic Biological Assessment (PBA) dated 02/22/2012 that estimated total water usage through 2019. The PBA has since been extended through 2032 and addresses the following species: Least Tern (interior population) (*Sternula antillarum*), pallid sturgeon (*Scaphirhynchus albus*), Piping Plover (*Charadrius melodus*), western prairie fringed orchid (*Platanthera praeclara*), and the Whooping Crane (*Grus americana*). On 04/04/2012, the USFWS signed a Biological Opinion which concurs with this approach and requires a yearly reporting of water usage. The extension, which has the same reporting requirements, was signed by the USFWS on March 29, 2019. The water used for this project will be reported to the USFWS at the year's end after the completion of the project as per the aforementioned consultation. Effects to species not addressed in the PBA or affected by causes



other than water depletions to the South Platte will be analyzed separately.

### Mitigation

Mitigation commitment #25, detailed in Appendix I, commits CDOT to using native grasses, forbs, and shrubs to protect pollinator habitat in support of restoring monarch butterfly breeding and feeding habitat.

### 6.13. Vegetation

#### Context

Vegetation communities in the Project area are typical of Eastern Montane vegetation, including mountain shrubland, Douglas fir forest, ponderosa pine forest, and developed/previously disturbed areas. Construction will occur within developed/previously disturbed areas along CDOT's right-of-way.

There are no riparian or wetland vegetation within the limits of disturbance for the Project. No obstructions are anticipated in any streams, banks, or tributaries that meet Colorado Senate Bill 40 (SB40) (33-5-101-107) Colorado Revised Statutes, 1973 certification application criteria for impacts to wildlife corridors.

#### Impacts

Construction of the underpass would impact approximately 0.70 acres of low-lying grasses adjacent to the roadway and within CDOT right-of-way. In addition, the installation of fencing to the east and west will temporarily disturb or remove small areas of vegetation where posts are placed into the ground. Tree removal is not anticipated. The Project has been designed to avoid impacts to the unnamed drainage and associated vegetation to the east of the underpass.

Ground disturbance and clearing during construction has the potential to expose soils to erosion and result in the spread of noxious weeds.

### Mitigation

Mitigation commitments #25-26, detailed in Appendix I, are designed to address disturbance to vegetation during construction and the control of noxious weeds.

CDOT will use only native grasses, forbs, and shrubs in compliance with Procedural Directive 503.1 to protect pollinator habitat along certain state highway corridors through its Integrated Roadside Vegetation Management Program.

### 6.14. Visual Resources

#### Context

The scenic attractiveness of the Study Area, as defined in the I-70 PEIS, is categorized as Class B, which indicates that the lands have some distinctive features but are overall typical of the landscape. The Project is located in the Mt. Vernon landscape unit, which is an enclosed canyon with panoramic views at its western end near where the wildlife underpass would be located.

Viewer sensitivity toward visual resources is moderate. As noted in Section 6.3, Picture Bridge is identified as an exceptionally significant feature of the federal interstate system. As motorists crest the hill on westbound I-70 in this location, they are afforded picturesque views of the Genesee Park valley and the Arapahoe Range of the Rocky Mountains beyond.

Residential communities south of the underpass location are elevated and views to the north from Genesee Trail Road are of I-70. The Village at Genesee HOA Open Space and walking trail (located on the south side of I-70 at MP 254.5) is situated below I-70 and views of the roadway itself are less prominent.

The I-70 Mountain Corridor Aesthetics Guidance provides a cohesive aesthetic vision for the entire corridor and guides Tier 2 project design. Aesthetic considerations also are incorporated into the I-70 Mountain Corridor Engineering Design Criteria,

making some aesthetic decisions part of the required design criteria, such as the treatment and grading of cut and fill slopes and bridge abutment and embankment design.

CDOT's Visual Resource Scoping document was completed for the Project in December of 2021. Based on the scoping form, a Visual Impact Assessment is not required (see Appendix G).

### Impacts

The underpass would not be visible from I-70, and fencing would be similar to other roadway features present in the landscape. Visual impacts are expected to be minor. The view for motorists traveling on I-70 would not change, since the crossing would be constructed beneath the highway. Wildlife fencing would be 8 feet high with wooden posts and 4-inch mesh. This is consistent with existing right-of-way fencing in the Project area.

Existing views for residences south of the crossing location would remain a combination of open space and transportation infrastructure. For users of the HOA Open Space and walking trail, the underpass would be visible, but consistent with the natural landscape since it would be designed with natural materials and utilized by wildlife.

Minimal visual disturbances are expected during construction. Residences within Chimney Creek and the Village at Genesee along Genesee Trail Road would be able to see construction activities in the distance. Views for most residences would be filtered by existing landscape and vegetation.

### Mitigation

Mitigation commitment #27, detailed in Appendix I, commits the Project to compliance with both the I-70 Mountain Corridor Aesthetics Guidance (CDOT, 2015) and I-70 Mountain Corridor Design Criteria (CDOT, n.d.) during final design and construction.

View from Picture Bridge, looking west



### 6.15. Water Quality

#### Context

The Project is not defined as a transportation project and is not located within CDOT's or Jefferson County's Municipal Separate Storm Sewer System (MS4) Permit area, where water quality treatment is typically required.

No aquatic resources were identified in the Project area. Mt. Vernon Creek is located north of the Project and crosses under I-70 more than 1,800 feet to the west of the proposed underpass. An unnamed intermittent tributary of Mt. Vernon Creek crosses under I-70 approximately 300 feet east of the proposed underpass in a 48-inch diameter corrugated metal pipe. Neither of these water bodies are included in the Clean Water Act's 303d-list of impaired waters.

**Impacts**

The Project would not increase impervious surface area and water quality treatment is not warranted.

The Project has the potential to impact groundwater during construction. Bridge caissons will require drilling to depths of up to 50 feet below the ground surface, where groundwater will likely be encountered.

**Mitigation**

Mitigation commitments #28-30, detailed in Appendix I, are designed to address potential impacts to groundwater during construction.

**6.16. Wetlands and Aquatic Resources**

**Context**

Non-wetland waters and wetlands within the Project area were delineated in September 2021. The area delineated correlated with the limits of construction at the wildlife crossing location (MP 254.5) and did not include the three miles to the east and west along the adjacent roadway, where fencing would be installed on highway fill and where no waters are present. Details regarding the methodology are included in the Aquatic Resources Technical Memorandum in Appendix B.

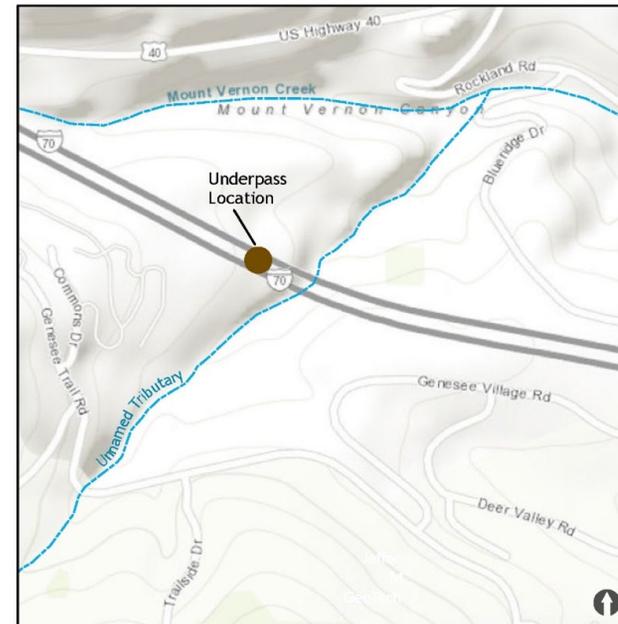
No aquatic resources were identified in the Project area within the limits of disturbance for the Project. As shown in Exhibit 6, Mt. Vernon Creek is located north of the Project and crosses I-70 more than 1,800 feet to the west of the proposed underpass.

An unnamed intermittent tributary to Mt. Vernon Creek crosses I-70 approximately 300 feet east of the proposed underpass.

**Impacts**

No impacts are anticipated. The Project has been shifted to the west, specifically to avoid impacts to the unnamed intermittent tributary to Mt. Vernon Creek.

**Exhibit 6 Mt. Vernon Creek and Unnamed Tributary**



**Mitigation**

No mitigation is required.



## 6.17. Wildlife

### Context

The Project lies within the Eastern Montane ecoregion of Colorado, which provides suitable habitat for several common wildlife species that are found in the Project area, including elk (*Cervus canadensis*), mule deer (*Odocoileus hemionus*), black bear (*Ursus americanus*), mountain lion (*Felis concolor*), and various other small terrestrial mammals, raptors, and other migratory birds.

The Project area supports a resident elk population that migrate across I-70 to the south to reach their production area in the spring. Denver Mountain Parks also manages a conservation bison (*Bison bison*) herd in Genesee Park. The bison herd is enclosed by wildlife fencing within the park and a culvert underpass provides passage between the southern and northern sections of the park when needed.

Due to its high traffic volume and large footprint, I-70 is considered a major barrier to wildlife movement throughout the I-70 Mountain Corridor. Currently, there is no safe passage for wildlife across I-70 and wildlife either cross the interstate or use the overpass at Picture Bridge. Because of the lack of crossing options and the high traffic volumes, the Project area has the highest rate of WVC within the Corridor (4.4 WVC/mile/year). Between 2015 and 2019, 66 WVC were reported in this segment. The majority of reported WVCs involved deer (58 percent) and elk (39 percent). Collisions with elk were highest in August, October, May, and June. Collisions with deer were highest in June, July, and November.

### Impacts

The Project purpose is to mitigate the interstate's adverse impacts to wildlife movements. It will improve habitat connectivity and reduce WVCs in the Project area and is consistent

with statewide initiatives to conserve big game herds and reduce WVCs.

Construction activities have the potential to cause mortality of small mammals and reptiles and disturb raptors and migratory birds during their nesting period (February 1 to August 31). Tree removal is not anticipated for the construction of the Project.

### Mitigation

Mitigation commitments #32-33 in Appendix I, documents the requirement for pre-construction nesting bird surveys.

## 6.18. Cumulative Impacts

Categorical exclusions are prepared for Projects that do not individually or cumulatively have a significant effect on the human environment. A review of the analyses contained in Sections 6.1 through 6.17 confirms the Project is not expected to result in adverse permanent impacts. The Project has been designed to mitigate WVCs and improve safety. Mitigation provided in Appendix I includes best management practices prior to or during construction as well as addresses temporary construction-related effects. For these reasons, a cumulative impact analysis is not warranted.

## 6.19. Permits or Additional Clearances

The following permits and additional activities may be required prior to construction:

- Dewatering permit, if groundwater is encountered
- Colorado Discharge Permit System/Stormwater Construction Permit if disturbance area is greater than 1 acre
- Access permit for work in Genesee Park, Denver Mountain Parks.

## 7. What Opportunities were Provided for Public and Agency Input?

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Public and agency participation related to the Project began during the NEPA process for the Floyd Hill Project. As discussed in Section 5 of this report, CDOT is implementing the CSS process for the Floyd Hill Project, which guided the development of the wildlife crossing at Genesee.

Agencies and the public have provided many comments and suggestions related to the Project throughout the Floyd Hill EA process. Issues relating to wildlife and the need for a crossing in the Mt. Vernon Creek LIZ were presented in the virtual public engagement room, which was advertised through email blasts, postcard mailings, flyers, and newspaper ads and made available on the Floyd Hill Project website in August of 2021. The public has repeatedly expressed concerns over safety related to WVCs in the Project area.

The Project team will coordinate with the Colorado Wildlife and Transportation Alliance to conduct additional public education and outreach to tell the story of the wildlife crossings and press releases will be sent out at the beginning and completion of construction activities.

The Section 106 process has included consultation with SHPO and consulting parties. Correspondence is included in Appendix B. CDOT coordinated with Denver Mountain Parks throughout the Project design regarding Project effects on their properties. CDOT also formally consulted with Denver Mountain Parks as the Official with Jurisdiction over Genesee Park as a recreational property under Section 4(f). Correspondence is included in Appendix F.

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