

**BUILDING BRIDGES: AN INNOVATIVE PUBLIC-PRIVATE PARTNERSHIP TO  
RECONNECT THE ROCKIES**

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## ABSTRACT

Colorado's Interstate 70 (I-70) Mountain Corridor (the Corridor), spans approximately 144 miles from Denver to Glenwood Springs and currently presents a significant obstacle to wildlife movement in the heart of the Rocky Mountains. Average annual daily traffic counts along the Corridor range from 14,000 to 73,000, well above the threshold at which the highway becomes a near complete barrier for a multitude of wildlife species. Travel demand in the corridor is projected to rise in the coming years, and unless appropriate mitigation measures are instituted to provide wildlife passage along the Corridor, the barrier effect of this roadway will be compounded.

The Colorado Department of Transportation (CDOT) has long been investigating opportunities to restore connectivity for wildlife as part of a larger planning process to relieve congestion along the Corridor. In 2006, CDOT received congressional funding directing them to look into the feasibility of building a vegetated wildlife overpass on West Vail Pass, located about midway through the Corridor. Based on the initial data gathered by CDOT, the proposed site was used for the ARC International Wildlife Crossing Infrastructure Design Competition in 2010. This competition challenged landscape architects, engineers, and ecologists from around the world to devise a more ecologically sensitive, cost-effective, and beautiful wildlife bridge. Using the momentum from the ARC competition, Rocky Mountain Wild, CDOT and others, in an innovative partnership, are collaborating to locate, design, engineer, fund and build the I-70 Wild Byway, Colorado's first wildlife overpass over I-70. This project is the first step in advancing a vision of a fully reconnected I-70 Mountain Corridor.

Some form of wildlife mitigation will be required as a part of the I-70 Mountain Corridor improvement projects. However, without a collaborative partnership intent on building a more costly, but more effective wildlife bridge, it is likely that less expensive, smaller scale mitigation projects will result. These smaller scale projects may not sufficiently serve the full spectrum of wildlife species that are known to cross I-70 in the Vail Pass area. Therefore, we have formed a public-private partnership supported by interested agencies, organizations and individuals across our region to promote the construction of the I-70 Wild Byway. Building this first overpass with a combination of public and private funding may provide the needed incentive to build, monitor and evaluate additional wildlife crossing structures on I-70 and across the state. Private funding aids innovative project delivery and can streamline project development, design and construction. With sufficient private funding, the I-70 Wild Byway could be considered an early action mitigation measure for future improvements along the Corridor. It is the intention of all partners working on this project that this overpass will eventually be just one of many crossing structures built *both* over and under I-70 to begin reestablishing a system of connectivity for wildlife on the move across the state and along the I-70 Mountain Corridor.

## INTRODUCTION

Colorado's Interstate 70 (I-70) Mountain Corridor (the Corridor), spans approximately 144 miles from Denver to Glenwood Springs, traversing five bioregions covering an elevation range from 5,700' west of Golden, to a high point of over 11,000' at the Eisenhower/Johnson Tunnels, where the road crosses under the Continental Divide, and back down to 6,100' at Dotsero. I-70 currently presents a significant obstacle to wildlife moving through the heart of the Rocky Mountains to meet their daily, seasonal and/or life needs and causes safety issues due to animal-vehicle collisions (AVCs). Wildlife species affected by the highway include mule deer, elk, moose, mountain lion, bighorn sheep, black bear and the federally threatened Canada lynx.

Studies show that an average annual daily traffic (AADT) of 10,000 creates habitat avoidance or acts as a near complete barrier for all types of species (Charry and Jones 2009) although a number of species are susceptible to road mortality or barrier effects at lower traffic volumes. AADT counts along the Corridor range from 14,000 to 73,000 (CDOT 2012), well above the threshold at which the highway becomes a near complete barrier for a multitude of wildlife species (Charry and Jones 2009). Travel demand in the corridor is projected to rise in the coming years (CDOT and FHWA 2011, ES-4), and unless appropriate mitigation measures are instituted to provide wildlife passage along the Corridor, the barrier effect of this roadway will be compounded.

The Colorado Department of Transportation (CDOT) has been involved with wildlife mitigation planning efforts along the Corridor for more than a decade as part of the I-70 Programmatic Environmental Impact Statement (PEIS), a Tier 1 National Environmental Policy Act (NEPA) planning document. The importance of enhancing habitat connectivity in the Corridor was highlighted in the purpose and need for the project, and one of the criterion used in developing the Preferred Alternative for the PEIS included preserving, restoring, or enhancing ecosystem functions.

Early in the planning process, CDOT and the Federal Highway Administration (FHWA) convened an interagency group of wildlife specialists called A Landscape Level Inventory of Valued Ecosystem Components (ALIVE) to consider the negative impacts of existing and proposed transportation systems on wildlife habitat and movement patterns, and to guide mitigation development strategies as a part of the I-70 PEIS. The objective of this cooperative effort was to agree up-front to conservation strategies and mitigation measures to ensure timely environmental clearances for projects prioritized under the PEIS. General and site-specific recommendations from the ALIVE committee were incorporated into the I-70 PEIS planning documents. One recommendation included a vegetated overpass on West Vail Pass.

Building further on the work from the I-70 PEIS and the ALIVE committee, another major wildlife mitigation planning effort in the Corridor includes the *Regional Ecosystem Framework for Terrestrial and Aquatic Wildlife along the I-70 Mountain Corridor in Colorado: An Eco-Logical Field Test* project (I-70 Eco-Logical Project), which was completed in 2011. The I-70 Regional Ecosystem Framework is designed to achieve on the ground results using a two-pronged approach based on comprehensive data synthesis and analysis, and clearly defined stakeholder processes for increasing transparency and accountability in the planning, design and implementation of wildlife permeability measures.

Meanwhile, in 2006, CDOT received congressional funding directing them to look into the feasibility of building a vegetated wildlife overpass on West Vail Pass, located about midway through the Corridor. Based on the initial data gathered by CDOT, the proposed site was used for the ARC International Wildlife Crossing Infrastructure Design Competition in 2010. This competition challenged landscape architects, engineers, and ecologists from around the world to devise a more ecologically sensitive, cost-effective, and beautiful wildlife bridge (ARC 2010).

Building on the momentum from all these works, CDOT is currently collaborating with the Rocky Mountain Wildlife Bridge Corporation, in an innovative public-private partnership, to locate, design, engineer, fund and build the I-70 Wild Byway, Colorado's first wildlife bridge over I-70. Building this first overpass with a combination of public and private funding may provide the needed incentive to build, monitor and evaluate additional wildlife crossing structures on I-70 and across the state, advancing a vision of a fully reconnected I-70 Mountain Corridor. The I-70 Wild Byway is the missing link in our intermountain highway system that reconnects wildlife to its habitat, improves public safety and showcases world-class infrastructure – right here in Colorado.

## **BACKGROUND**

As the state's population continues to grow, transportation infrastructure struggles to reduce congestion and accommodate expanding communities. I-70 in Colorado is a prime example: it is the only east-west interstate across Colorado and serves as a lifeblood of travel for Colorado and the nation, providing for the movement of people, goods, and services; it is a major corridor providing access to many of Colorado's recreation and tourism destinations; and it is an essential link in the national interstate highway system, the principal purposes of which are to connect major metropolitan areas and industrial centers by direct routes, and to provide a dependable, interconnected highway network to serve in national emergencies.

Existing congestion along I-70 is degrading the accessibility of mountain travel for Colorado residents, tourists, and businesses. Travel demand in the Corridor is projected to continue increasing over the next 25 years and beyond. The need to relieve this congestion is especially acute for weekend travelers seeking access between the Denver metropolitan area to the central mountains and Western Slope.

To relieve congestion along the I-70 Mountain Corridor, CDOT initiated a planning process for I-70 and released a Draft PEIS in 2005; however, the process was highly contentious, with disagreements on the preferred alternative, environmental and social impacts, and multimodal choices. A change in leadership at both the Governor and CDOT Director level in 2007 brought new attention to the debate. CDOT recommitted the agency to better integration of stakeholder concerns into the discussion about the future of the interstate corridor and revisited the PEIS, releasing a Revised Draft PEIS in 2010. In June of 2011, FHWA signed the Record of Decision (ROD) for the Interstate 70 PEIS.

CDOT has been involved with wildlife mitigation planning efforts along the Corridor for more than a decade as part of the I-70 PEIS planning process. The importance of enhancing habitat connectivity in the Corridor was highlighted in the purpose and need for the project, and one of the criterion used in developing the Preferred Alternative for the PEIS included preserving, restoring, or enhancing ecosystem functions.

### **A Landscape Level Inventory of Valued Ecosystem Components (ALIVE)**

The I-70 PEIS analyzed and documented the current and future impacts that I-70 would have on wildlife species. In 2001, CDOT and FHWA convened an interagency group of wildlife specialists called A Landscape Level Inventory of Valued Ecosystem Components (ALIVE) to consider the negative impacts of existing and proposed transportation systems on wildlife habitat and movement patterns, and to guide mitigation development strategies as a part of the I-70 PEIS (CDOT and FHWA 2004). Other agencies engaged in the ALIVE committee include those responsible for the protection and management of wildlife habitats and threatened and endangered species – the Colorado Parks and Wildlife (CPW), the Bureau of Land Management (BLM), the US Forest Service (USFS), and the US Fish and Wildlife Service (USFWS). The objective of this cooperative effort was to agree up-front to conservation strategies and mitigation measures to ensure timely environmental clearances for projects prioritized under the PEIS (Solomon 2007, 3).

The main goals of the ALIVE committee were fourfold:

- Designation of key wildlife habitat including Canada lynx habitat.
- Identification and characterization of linkage interference zones [or important wildlife movement areas].
- Analysis of specific conflict areas for wildlife roadway crossing within the linkage interference zones.
- Recommendations for mitigating conflicts through wildlife crossings and other techniques including fencing and land conservation strategies (CDOT and FHWA 2004, 3.2-6).

As part of the process, the ALIVE committee identified wildlife habitat of high ecological integrity, wildlife habitat linkages, and barriers to wildlife crossings along the Corridor. The wildlife habitat linkages, designated as Linkage Interference Zones (LIZs-2004), were determined by integrating local expert knowledge concerning wildlife within the Corridor, habitat characteristics, and a geographic information system (GIS) analysis of potential roadway barriers (such as retaining walls or jersey barriers) that exist within the Corridor. The ALIVE committee also proposed specific recommendations, including wildlife crossings and land protection, for each zone (CDOT and FHWA 2004). An ALIVE Memorandum of Understanding (MOU) documented the lead agencies' commitment to identify mitigation and conservation measures during future Tier 2 NEPA processes as a way to reduce AVCs and increase habitat connectivity within the Mountain Corridor. CDOT, FHWA, USFWS, USFS, BLM, and CPW signed the MOU in April 2008.

### **A Regional Ecosystem Framework for Terrestrial and Aquatic Wildlife along the I-70 Mountain Corridor in Colorado: An Eco-Logical Field Test (I-70 Eco-Logical Project)**

Building on the work from the I-70 PEIS and the ALIVE committee, the *Regional Ecosystem Framework for Terrestrial and Aquatic Wildlife along the I-70 Mountain Corridor in Colorado: An Eco-Logical Field Test* project (I-70 Eco-Logical Project) was completed in 2011 (Kintsch et al 2011). The I-70 Eco-logical Project was developed to field test the ecosystem approach developed by FHWA (Brown 2006). The Regional Ecosystem Framework applies an ecosystem-based approach to developing transportation infrastructure by protecting and restoring aquatic and terrestrial connectivity while also improving predictability in environmental review. The progress that CDOT had made to date in the long-term planning for potential improvements along the Corridor offered a unique opportunity to apply the Eco-Logical framework and find ways to preserve and restore key wildlife linkages across Colorado's high country.

The ultimate objective of the project was to develop solutions for mitigating transportation impacts on wildlife habitat connectivity along the I-70 Mountain Corridor from Golden (MP 258, west of Denver) to west of Dotsero (MP 130). To accomplish this, Rocky Mountain Wild and ECO-resolutions, LLC collaborated with CDOT, Colorado Watershed Assembly (CWA) and Western Transportation Institute (WTI) to: 1) compile baseline information on the presence of, and use of existing crossing structures by, wildlife along I-70; 2) develop recommendations for mitigating the impacts of roads and traffic on wildlife, specifically road mortality and habitat fragmentation; and 3) facilitate the environmental review process and provide an enhanced forum for stakeholder involvement.

All information compiled as part of this project was analyzed and summarized to provide CDOT with recommendations for avoiding and minimizing impacts to terrestrial and aquatic wildlife during planning, design, construction, and operations and maintenance. A systematic and transparent process for updating and validating the 13 LIZs identified in 2004 by the ALIVE committee was developed as part of this project. The updated LIZs (LIZs-2011) and their associated site-specific recommendations were reviewed and agreed on by the ALIVE committee before they were finalized. In addition to site-specific

recommendations, best management practices were formulated to provide general guidance for project-level planning throughout the corridor.

### **West Vail Pass Habitat Linkage Project and the ARC International Wildlife Crossing Infrastructure Design Competition**

One recommendation that came out of the ALIVE committee in 2004 and remained in the I-70 Ecological Project recommendations was a wildlife overpass in the West Vail Pass LIZ-2004 and LIZ-2011. In 2006, CDOT received a federal grant from the Public Lands Discretionary Funds to analyze the feasibility of constructing a vegetated wildlife overpass over I-70 on the west side of Vail Pass (West Vail Pass Habitat Linkage Project). The overall purpose of the project was to understand wildlife movement and associated wildlife/vehicle conflicts on West Vail Pass to identify a suitable location for a wildlife overpass in the area. Thus, the federal grant monies were to be used to identify an appropriate location for a wildlife overpass on the west side of Vail Pass, develop design criteria, and proceed through a preliminary design process.

Based on the initial data gathered by CDOT through the West Vail Pass Habitat Linkage Project, the proposed site was used for the ARC International Wildlife Crossing Infrastructure Design Competition in 2010. This competition, initiated by a multidisciplinary team of non-governmental organizations, transportation agencies, and US and Canadian universities, challenged landscape architects, engineers, and ecologists from around the world to devise a more ecologically sensitive, cost-effective, and beautiful wildlife bridge.

Of the 36 teams from nine countries that entered, a group of engineers and landscape architects from HNTB and Michael Van Valkenburgh and Associates in New York took the prize. The conceptual overpass bridge design used pairs of precast concrete elements with v-shaped cross sections buttressed against each other longitudinally, creating a long-span arch over I-70. Several pairs of the elements would be set side by side as needed to develop the required structure width. This concept eliminated the need for a center bridge pier and conventional bridge abutments (ARC 2010).

## **METHODS AND RESULTS**

Building on all the work previously done in the Corridor and using the momentum from the ARC competition, Rocky Mountain Wild, CDOT and others, in an innovative partnership, are collaborating to locate, design, engineer, fund and build Colorado's first wildlife bridge over I-70 in the Corridor. This project, called the I-70 Wild Byway project, is the first step in advancing a vision of a fully reconnected I-70 Mountain Corridor.

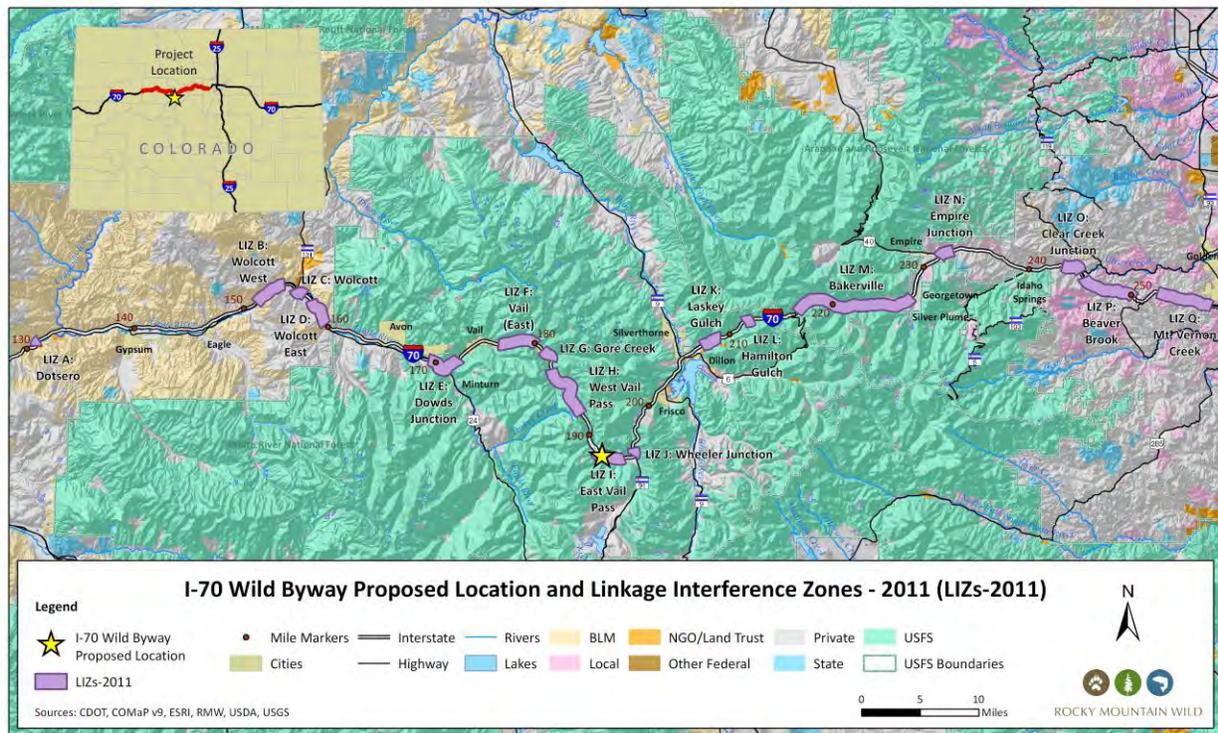
### **Site Selection**

To choose the best location for the I-70 Wild Byway, the study efforts on West Vail Pass were expanded on to include the additional research outlined above looking at the entire I-70 Mountain Corridor.

In fall 2011, CDOT assembled a Technical Working Group to guide the development of site selection criteria for wildlife overpass structures in Colorado. This group consisted of individuals experienced with wildlife mitigation for transportation projects, CDOT engineering and environmental staff, FHWA, and representatives from Rocky Mountain Wild and other members of the non-profit conservation community. While the criteria were developed to be applicable statewide, the criteria were initially developed for the I-70 Mountain Corridor. CDOT and the Technical Working Group developed a two-step site selection screening process that included biological, safety, and engineering factors to be considered when identifying potential locations for wildlife overpass structures. As part of the process,

the resource agencies and stakeholders that participated in the ALIVE committee for the I-70 PEIS provided input on the screening criteria, which was incorporated into the site selection criteria, as appropriate.

The LIZs-2011 identified in the I-70 Eco-Logical Project served as the starting point for the screening process because these areas have been identified as connectivity areas within the project study area based on existing habitat, movement areas, and roadway features. Due to the heavily studied nature of the project study area, the I-70 Wild Byway project did not attempt to identify any locations for a wildlife overpass outside the LIZs-2011 (Fig. 1). All references to LIZs in this paper from this point on refer to the refined LIZs-2011 identified in the I-70 Eco-Logical Project.



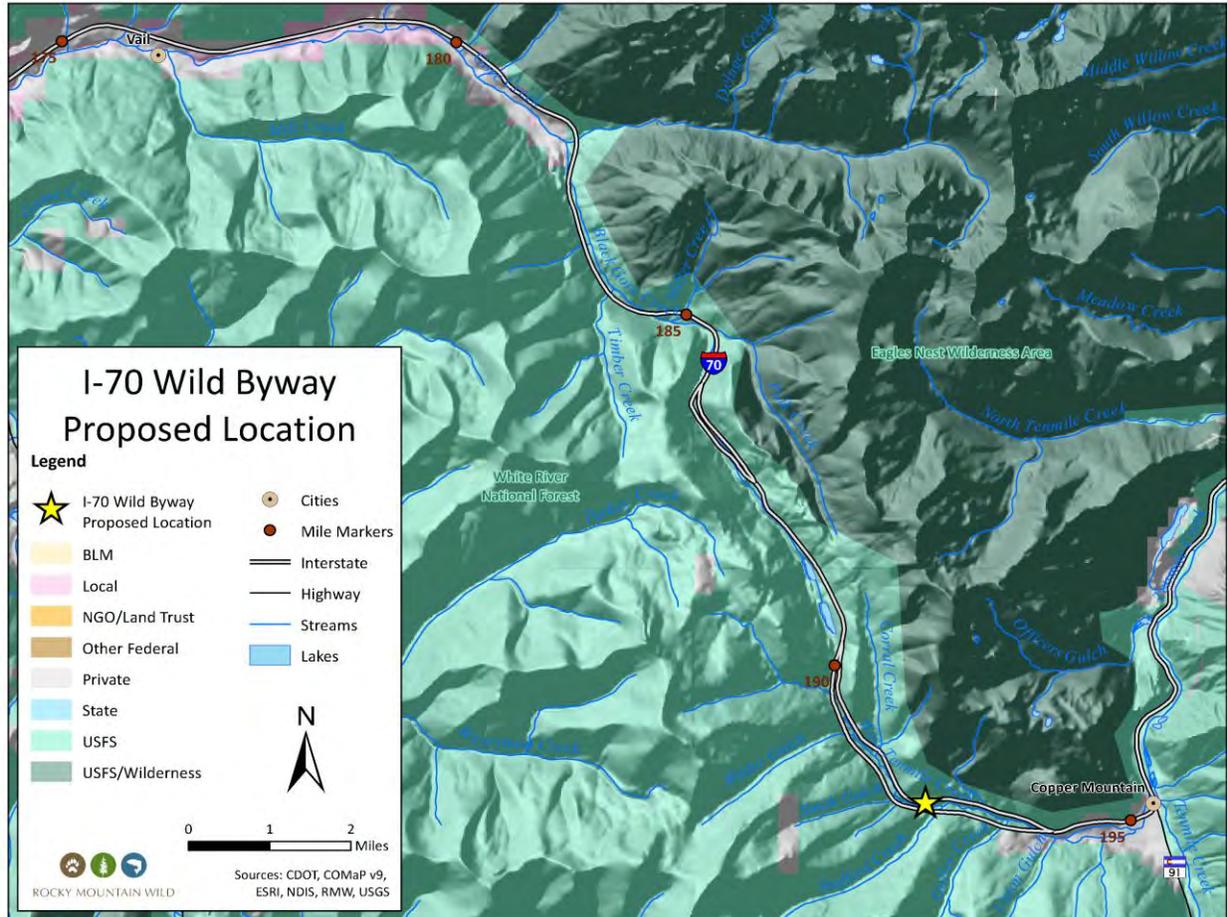
**FIGURE 1 I-70 Wild Byway proposed location and Linkage Interference Zones – 2011.**

The objective of the Level 1 Screening process was to identify three to five sites within the project study area that would be suitable for a wildlife overpass based on the statewide criteria developed in 2012. The Level 1 Screening process consisted of analyzing several criteria for each LIZ including frequency and severity of AVCs, habitat and movement area for a diversity of species likely to use a wildlife overpass, daily traffic counts, land ownership on both sides of the highway and existing and proposed wildlife crossing structures in the area. LIZs were evaluated for each criterion and given a high ranking based on individual factors for each criterion. Priority LIZs for further consideration in Level 2 Screening were then selected from the high-ranked LIZs based on a combined evaluation of all the Level 1 site selection criteria.

The objective of the Level 2 Screening process was to analyze the LIZs that were identified during the Level 1 Screening process in more detail and identify a specific location within one of the selected LIZs where the construction of a wildlife overpass would be feasible. Similar to the Level 1 Screening process, the Level 2 Screening process criteria were based on the statewide criteria developed in 2012. Level 2 Screening criteria looked at factors such as topography, engineering constraints, cost, environmental

clearances, Public-Private-Partnership opportunities, species-specific biological needs, potential for endangered species mitigation and stakeholder support for the project.

The site that achieved the best balance between all the criteria and factors is at I-70 mile post 192.3 in the westbound direction on East Vail Pass about midway through the Corridor (Fig. 2). This site consistently ranked high during the site-specific considerations of the Level 2 screening. It lies within known lynx migration area, has Forest Service (including some wilderness) lands on both sides of the highway, and overall has the most favorable engineering considerations.



**FIGURE 2 I-70 Wild Byway proposed location.**

The segment between mile posts 192.3 and 192.4 serves as a prime location to construct a vegetated wildlife overpass because it will only have to cross the westbound lanes of I-70, is in alignment with a large span bridge on eastbound I-70 over Stafford Creek, and has an expansive median with high quality wetlands that serves as a habitat draw. Additionally, this section of I-70 is not currently designated for future widening in the I-70 PEIS and a proposed Advanced Guideway System (“AGS”, i.e. a rail system of undesignated type) intended to serve the I-70 corridor in lieu of lane widening should not be impacted by the construction of a wildlife crossing at this site. By spanning just the westbound lanes, the overall cost associated with the structure is reduced dramatically, while leveraging the existing eastbound span bridge infrastructure to create a fully functional bi-directional crossing of I-70.

## **Private-Public-Partnership**

There are currently no funds allocated by CDOT or FHWA within the first phase of the I-70 expansion project to build the I-70 Wild Byway. While some form of wildlife mitigation will be required as a part of the I-70 expansion projects, without an independent effort to build the more costly, but more effective wildlife crossing bridge, it is likely that less expensive, smaller scale mitigation projects will result. Meanwhile, animal-vehicle collisions occur daily on I-70, and the wild landscape of Colorado remains divided by I-70. Therefore, a public-private-partnership (PPP) – supported by interested agencies, organizations and individuals across our region and nationwide – is being formed to locate, design, engineer, fund and build Colorado’s first wildlife bridge over I-70 at Vail Pass. PPP’s have been proven to be a reliable vehicle to help the state deliver projects efficiently and effectively. Ultimately, we want to ensure that CDOT has a positive experience in developing this crossing so it will be the first of many.

### *Rocky Mountain Wildlife Bridge Company*

The project is not a PPP in the traditional sense. A Colorado non-profit organization called Rocky Mountain Wildlife Bridge Company (BridgeCo) has been formed for which federal 501(c)3 status is currently being sought. It is the initial intent that BridgeCo would be a special purpose entity with a limited scope confined to funding, designing, and building the I-70 Wild Byway. BridgeCo is structured to facilitate raising the required private funds for the project with a specific objective to allow any donations from individuals or corporations to be fully tax deductible. As a corporation, BridgeCo has a Board of Directors and an executive officer which will serve as the strategic leadership team for BridgeCo. An advisory board will also be established to provide guidance and expertise.

This model for building the I-70 Wild Byway essentially mimics that of a private developer building a vehicle bridge over an interstate highway to serve a private use. As a private developer, BridgeCo will have the flexibility to procure design and construction services without the more restrictive federal and state procurement policies and at a lower cost to the project by avoiding overhead cost burdens imposed by state procurement processes. Creating BridgeCo as a special purpose entity with limited scope also isolates the construction risk to BridgeCo and its general contractors, rather than exposing a non-profit unfamiliar with capital project construction risk to the normal risks associated with large construction projects.

### *I-70 Wild Byway Team*

BridgeCo has been created to facilitate raising the private funds necessary to build the first wildlife bridge over I-70 in Colorado. BridgeCo is not intended to have any permanent employees; instead several interested organizations and businesses have committed staff time and resources to the I-70 Wild Byway project. Below is the current I-70 Wild Byway team.

**Rocky Mountain Wild** Rocky Mountain Wild’s (RMW) role in the I-70 Wild Byway project is to provide administrative support, fundraising, public relations, and project leadership services. RMW is also overseeing certain technical aspects of the project and will provide all of the pre- and post-construction wildlife monitoring work.

**Real Estate Generation, LLC** Rick Wells of Real Estate Generation, LLC (REGen) is a licensed engineer by training with project management, financial consulting, and infrastructure construction experience. Mr. Wells will act as a project manager for the I-70 Wild Byway project and owner’s representative for BridgeCo. Mr. Wells also has many years of experience as a corporate officer and will assist BridgeCo’s executive leadership with managing the private development model for BridgeCo.

**Bethany Gravell** Bethany is the Development Director at Colorado Conservation Trust, and a former Executive Director of Rocky Mountain Wild. As a professional fundraiser Bethany brings extensive experience and a deep base of Colorado foundation connections to this project. Bethany Gravell will act as the capital campaign manager and public relations consultant.

**The WILD Foundation** The WILD Foundation (WILD) is an international conservation organization that focuses on building positive interactions between people and nature. They are a leader in developing innovative resource conservation and education programs, and award winning collaborations. WILD's role in the I-70 Wild Byway project is to provide communications and environmental education expertise.

**Environmental Communications Associates** Environmental Communications Associates (ECA) is a pioneer in strategic planning and communications on environmental and sensitive issues. ECA joined the I-70 Wild Byway team to provide consulting, marketing, media and branding expertise. The ECA team are also key members in the fundraising team.

**Kaplan Kirsch & Rockwell LLP** Kaplan Kirsch & Rockwell LLP is a national law firm with practice focused on solving problems that involve environmental, land use, public lands and transportation law. Their team lends legal and project development services to this project.

**Colorado Department of Transportation** The Colorado Department of Transportation (CDOT) has long been investigating opportunities to restore connectivity for wildlife as part of a larger planning process to relieve congestion along the Corridor. CDOT is currently finalizing a MOU with BridgeCo, confirming their commitment to the PPP. CDOT has been a key partner in the I-70 Wild Byway project since its conception, offering key funding and technical support.

**Project Advisors** The I-70 Wild Byway team will continue to consult with ALIVE committee members and others who are responsible for the protection and management of wildlife habitats and threatened and endangered species in Colorado. Other key project advisors include the Woodcock Foundation providing support on funding and donor outreach, and the ARC partnership helping to bring the I-70 Wild Byway project to an international audience.

**Advisory Board** BridgeCo will establish an advisory board to assist in fund raising, to provide guidance from technical and industry experts, and to promote the goals of the project as enumerated by the Board of Directors. The Advisory Board members will not have any decision making authority, but rather will be asked to provide BridgeCo with advice on critical decisions and assistance in fund raising and public outreach on issues relating to the project.

### *Design and Construction*

The I-70 Wild Byway project is currently divided into two phases - pre-development and construction. In order to move the project forward expeditiously, BridgeCo will pursue the pre-development work using a "private developer" design, engineering, and permitting process with CDOT as the review and permitting entity, but not as the project sponsor. BridgeCo will initiate work on pre-development as soon as the combined funding will allow for completion of the scope of work including: engineering and design, permitting, cost estimating, public outreach, and running a capital campaign to secure private and public funding for construction.

It is the intent of the I-70 Wild Byway project to promote innovative and cost effective design for this first wildlife overpass project over an interstate in Colorado. The ARC competition resulted in a set of new wildlife bridge designs for I-70, with the winning team being a collaboration of HNTB and Michael Van Valkenburgh Associates. Subject to the approval of CDOT, the I-70 Wild Byway project intends to use the ARC winning bridge design as the basis for designing our bridge on East Vail Pass.

BridgeCo will be responsible for building the bridge, but once built the bridge is to be owned and maintained by CDOT.

### *Fundraising*

**Pre-development Phase** CDOT has committed \$350,000, roughly 50% of the initial cost for the design, engineer and environmental permitting phase of the project. The I-70 Wild Byway team will raise private donations to fund the remaining costs plus funding for management of the project and for conducting a private fund raising effort for the construction phase of the project. Fundraising will be done with Colorado-centric foundations and individuals as the primary target for the pre-development phase of the project. Funds would be committed by these organizations but not called and spent until sufficient commitments have been made to complete the pre-development phase of the project.

**Construction Phase** Fundraising targets for the construction phase of the project will include: national, regional, and local organizations with an interest in wildlife connectivity and mitigation of climate change impacts; national, regional, and local organizations with an interest in highway safety; high net worth private foundations or individuals with strong Colorado ties and a history of giving to critical Colorado projects; high net worth private foundations or individuals with a strong interest and record of giving to wildlife and climate change issues; and companies wishing to associate their brand, product, or corporate identity with a highly visible environmentally and safety friendly project which will be viewed by millions of I-70 drivers over its lifetime. Funds would be committed by these organizations, but not called or spent until sufficient commitments have been made from both private and public funding sources to complete the construction of the project.

## **DISCUSSION AND CONCLUSION**

Some form of wildlife mitigation will be required as a part of the I-70 Mountain Corridor improvement projects. However, without a collaborative partnership intent on building a more costly, but more effective wildlife overpass, it is likely that less expensive, smaller scale mitigation projects will result. These smaller scale projects may not sufficiently serve the full spectrum of wildlife species that are known to cross I-70 in the Vail Pass area. Building the first overpass over I-70 in the state of Colorado with a combination of public and private funding may provide the needed incentive to build, monitor and evaluate additional wildlife crossing structures on I-70 and across the state. Private funding aids innovative project delivery, making the project more time efficient by streamlining clearance, design and construction processes. With sufficient private funding, the I-70 Wild Byway could be the most cost-effective alternative for mitigation of I-70 expansion projects and be considered an early action mitigation measure for future improvements along the Corridor. It is the intention of all partners working on this project that this overpass will eventually be just one of many crossing structures built *both* over and under I-70 to begin reestablishing a system of connectivity for wildlife on the move across the state and along the I-70 Mountain Corridor.

## **ACKNOWLEDGEMENTS**

This project would not be possible without the numerous organizations, agencies and individuals that have devoted countless hours to the vision of a more connected landscape in the Southern Rocky Mountains, and along I-70 Mountain Corridor. These organizations, agencies and individuals, include but certainly are not limited to: the Southern Rockies Ecosystem Project (SREP), now a part of Rocky Mountain Wild (RMW), for their work to identify and prioritize wildlife linkages across the state of Colorado in collaboration with the Colorado Department of Transportation (CDOT), the Federal Highway Administration (FHWA), The Nature Conservancy, and Colorado State University; the ALIVE committee – including CDOT, FHWA, US Forest Service (USFS), the US Fish and Wildlife Service (USFWS), Colorado Parks and Wildlife (CPW), the Bureau of Land Management (BLM) and others – for their work

to investigate opportunities to restore connectivity for wildlife along the I-70 Mountain Corridor; SREP, Wilderness Workshop and others who worked to make the Public Lands Discretionary Funds a reality; Felsburg Holt and Ullevig (FHU) for assisting CDOT to analyze the feasibility of constructing a vegetated wildlife overpass on West Vail Pass; SREP, Denver Zoo, and the Gore Range Natural Science School (now Walking Mountains Science Center) and their numerous volunteers who contributed to the knowledge base on Vail Pass through the Vail Pass Citizen Science Wildlife Monitoring Program; the ARC partnership for dreaming up the International Wildlife Crossing Infrastructure Design Competition and pushing landscape architects, engineers, and ecologists from around the world to devise a more ecologically sensitive, cost-effective, and beautiful wildlife bridge (<http://arc-solutions.org/>); the I-70 Eco-Logical project team, in particular Julia Kintsch at ECO-resolutions, LLC as well as the Colorado Watershed Assembly and Western Transportation Institute; Amy Masching and Denver Zoo for their continued contribution of time, expertise and equipment to the Colorado Corridors and I-70 Wild Byway projects; Alexandra Christy and Jeremy Guth with the Woodcock Foundation, Roger Surdahl with FWHA, and Harvey Locke with Yellowstone to Yukon Conservation Initiative for their much needed support and advice in these early stages of the I-70 Wild Byway project; and members of the Technical Working Group – guided by FHU and including Julia Kintsch with ECO-resolutions, Monique DiGiorgio, CDOT and the ALIVE committee – for their work to find the best location for the first overpass over I-70 in Colorado. Of course this project would be nowhere without the longtime support from numerous individuals at CDOT, but in particular Peter Kozinski who, though he has transferred outside of the CDOT region in which the location for the I-70 Wild Byway is proposed, he has stayed committed to the project.

Finally, this project would not be where it is today without the current I-70 Wild Byway team members who have dedicated incalculable time and energy to this project with very little compensation: Bethany Gravell formerly with RMW, currently with Colorado Conservation Trust; Rick Wells with Real Estate Generation, LLC; Alyson Duffey and Vance Martin with the WILD Foundation; AJ Grant, Danice Crawford, Averill Doering and Christie Lambert with Environmental Communications Associates; the team at Kaplan Kirsch and Rockwell; and Tehri Parker and Josh Pollock at RMW.

## BIOGRAPHICAL SKETCHES

**Paige Singer** is the technical coordinator and GIS specialist for the I-70 Wild Byway Project. She has been a conservation biologist/GIS specialist for Rocky Mountain Wild since 2008. She has a B.A. in Psychology from Stanford University, and an M.S. in Environmental Studies from the University of Montana. Paige has studied human-wildlife interaction issues in areas as diverse as Montana and Africa. Before coming to RMW, Paige coordinated the Citizen Science Wildlife Monitoring Program with the Southern Rockies Ecosystem Project.

**David Singer** is the Colorado Department of Transportation's I-70 Mountain Corridor Environmental Program Manager. It is his responsibility to ensure compliance with the I-70 Programmatic Environmental Impact Statement and Record of Decision for the 144 mile corridor. This includes the program's commitment to an unparalleled approach to developing Context Sensitive Solutions. Most recently, he contributed on the Twin Tunnels Widening Project, which earned the 2013 FHWA Environmental Excellence Award for Environmental Streamlining. David received his bachelor of arts at Michigan State University and his juris doctorate at the University Of Detroit School Of Law. David is a licensed attorney with the State Bar of Colorado.

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