



Appendix A.  
Context Sensitive Solutions Process

## Appendix B: Context Sensitive Solutions Process

The Peak Period Shoulder Lane stakeholder process was dictated by the I-70 Mountain Corridor Context Sensitive Solutions process. As defined by the Federal Highway Administration (FHWA), the Context Sensitive Solution (CSS) is an interdisciplinary approach to developing a transportation facility that involves all stakeholders and is responsive to the physical and social context of the area through which the transportation facility passes. For the I-70 Mountain Corridor, a CSS process was specifically developed. It is required for use on all studies, designs and construction projects undertaken in the I-70 Mountain Corridor. The process as defined on the Web site [www.i70mtncorridorcss.com](http://www.i70mtncorridorcss.com) consists of a 6-Step Process as described in Table 1.

Table 1. Six-Step CSS Process

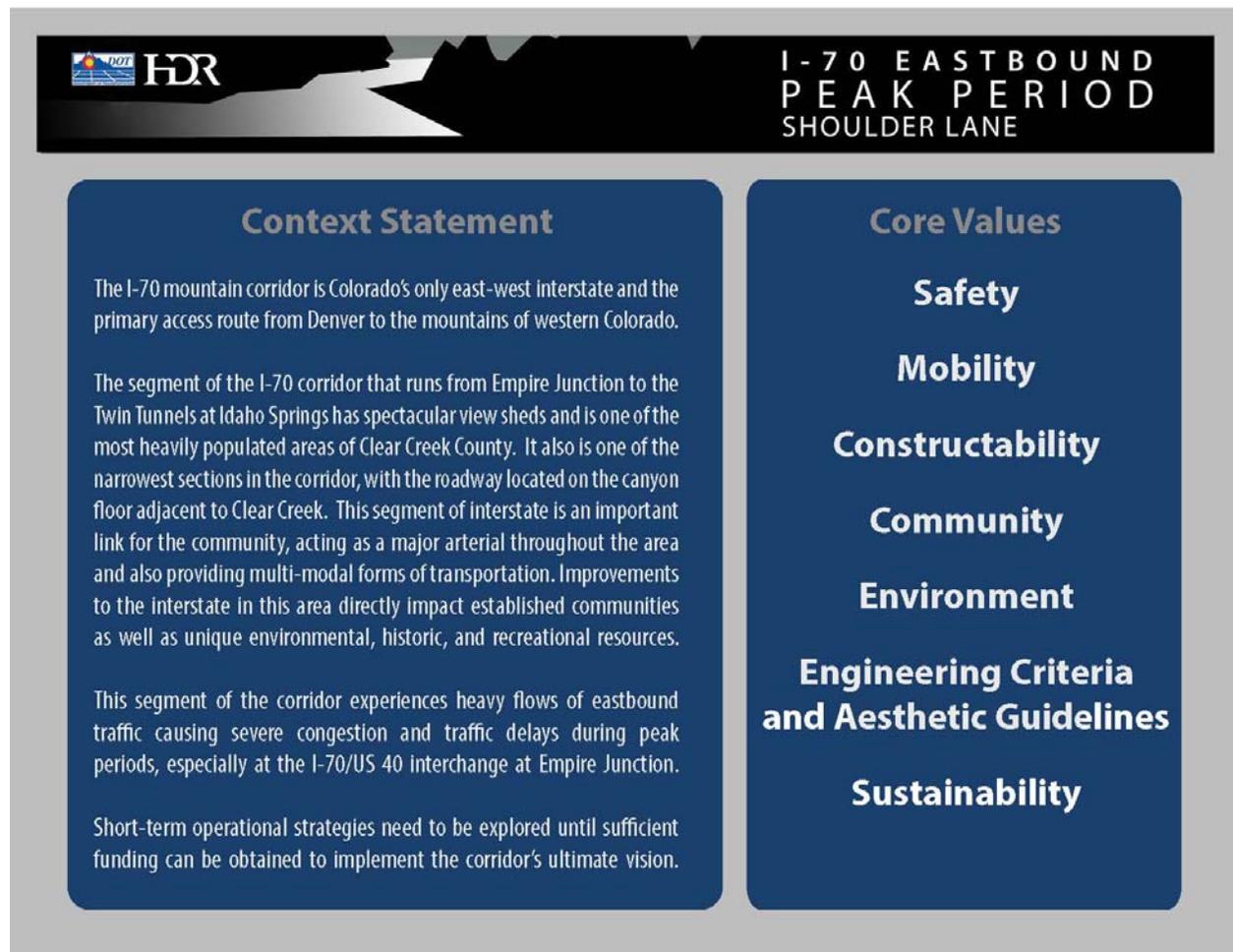
Steps	Purpose
Step 1: Define Desired Outcomes and Actions	Using the CSS Guidance and other relevant materials, this step establishes the project goals and actions. It also defines the terms to be used and decisions to be made.
Step 2: Endorse the Process	This step establishes participants, roles, and responsibilities for each team. The process is endorsed by discussing, possibly modifying, and then finalizing with all teams the desired outcomes and actions to be taken.
Step 3: Establish Criteria	This step establishes criteria, which provides the basis for making decisions consistent with the desired outcomes and project goals. The criteria measure support for the Core Values for the I-70 Mountain Corridor.
Step 4: Develop Alternatives or Options	The Project Staff works with the Project Leadership Team, stakeholders, and the public to identify alternatives or options relevant to the desired outcomes, project-specific vision, and goals.
Step 5: Evaluate, Select, and Refine Alternative or Option	The process of analyzing and evaluating alternatives applies the criteria to the alternatives or options in a way that facilitates decision making. This may be a one-step or multi-step process depending on the complexity of the alternatives and the decision.
Step 6: Finalize Documentation and Evaluate Process	Documentation should be continuous throughout the process. Final documentation will include each of the previous steps, final recommendations, and the process evaluation.

Source: CDOT, 2013

### Context Statement and Core Values

Development of the Proposed Action strictly followed the I-70 Mountain Corridor CSS Guidance. A Project Leadership Team (PLT) and a Technical Team were formed. The PLT developed a Context Statement and Core Values for the project (see Figure 1), which were then reviewed and endorsed by the Technical Team. These two teams followed the CSS 6-Step Process, ensuring consistency between the Proposed Action, the Context Statement, and Core Values.

Figure 1. Context Statement and Core Values



The PLT and Technical Team worked together to evaluate all design solutions against the Core Values and evaluation criteria. Attachment 1 of this appendix includes meeting minutes of all PLT and TT meetings as well as the evaluation criteria developed for each of the design alternatives evaluated. Table 2 shows the Core Values and their influence in the design process.

Table 2. Summary of Core Values and Design Elements

PPSL Stakeholders’ Core Values	Realizing the Core Values in the Design
<p>Safe travel for people and goods.</p> <p><b>Safety</b> for emergency responders and maintenance workers.</p> <p>A safe crossing for wildlife.</p>	<ul style="list-style-type: none"> <li>▪ The Proposed Action has been designed to provide for safe travel and safety of emergency responders.</li> <li>▪ The Proposed Action will provide safer travel for motorists by reducing congestion and travel time.</li> <li>▪ The Proposed Action includes emergency pull-outs, signage, camera coverage that is actively monitored by CDOT staff, and variable speed limits to enhance safety.</li> </ul>

Table 2. Summary of Core Values and Design Elements

PPSL Stakeholders' Core Values	Realizing the Core Values in the Design
<p><b>Mobility</b> through safe and reliable travel, operations, maintenance and management</p>	<ul style="list-style-type: none"> <li>▪ Fencing has been added or removed as necessary and three median jumps were included to improve safety of wildlife crossings.</li> </ul> <hr/> <ul style="list-style-type: none"> <li>▪ The improvements will address congestion by adding a managed lane from Empire Junction to east Idaho Springs.</li> <li>▪ The improvements will significantly improve travel times during peak periods (Sunday afternoon) and reduce the duration of the congested peak period by removing the bottleneck from Empire Junction to east Idaho Springs.</li> <li>▪ The Proposed Action will improve mobility on the local road network by removing traffic during peak periods.</li> <li>▪ The managed lane would provide a more consistently reliable trip time.</li> </ul>
<p>Efficient <b>constructability</b> by considering life cycle costs, eliminating throw away work, minimizing adverse impacts to community/environment, adding infrastructure improvements, and keeping to an operations project</p>	<ul style="list-style-type: none"> <li>▪ Future roadway improvement projects will be considered throughout the design and construction of the Proposed Action.</li> <li>▪ NEPA processes will be closely followed.</li> <li>▪ The eastbound improvements do not affect the gateway to Idaho Springs in the westbound direction.</li> <li>▪ The Proposed Action minimizes improvements needed to minimize community and environmental impacts. The new pavement width is the absolute minimum allowable by FHWA.</li> </ul>
<p><b>Community</b> through recreation, historical and cultural resources, tourism/economy, access</p>	<ul style="list-style-type: none"> <li>▪ Stakeholders will be included throughout project to ensure that community values and requests are communicated and incorporated into the plan.</li> <li>▪ Important resources will be protected and maintained during construction.</li> </ul>
<p><b>Environment</b> through maintaining the integrity of Clear Creek, Wildlife Habitat and movement, Mining, water quality, sediment</p>	<ul style="list-style-type: none"> <li>▪ Any loss of riparian habitat or vegetation during construction will be replaced.</li> <li>▪ Water quality impacts, fisheries, and aquatic habitat impacts have been analyzed</li> <li>▪ Coordination has occurred with CPW, USFS, and USFWS representatives</li> <li>▪ Mitigation efforts are incorporated to address impacts</li> <li>▪ The improvements address issues identified through the SWEEP Issues Task Force and incorporate elements from the draft Clear Creek Sediment Control Action Plan, including:                         <ul style="list-style-type: none"> <li>– New sediment control facilities to treat stormwater runoff from the highway</li> <li>– New spill containment facilities at emergency pull outs</li> </ul> </li> </ul>
<p>Engineering Criteria &amp; Aesthetic Guidelines</p>	<ul style="list-style-type: none"> <li>▪ The design and construction of the project will actively follow the I-70 Mountain Corridor Context Sensitive Solutions (CSS) process</li> <li>▪ The following design exceptions have been or are being discussed with FHWA:                         <ul style="list-style-type: none"> <li>– Roadway width</li> </ul> </li> </ul>

Table 2. Summary of Core Values and Design Elements

PSSL Stakeholders' Core Values	Realizing the Core Values in the Design
<b>Sustainability</b> by creating a project for today that blends with future possibilities including AGS, transit, and greenway	<ul style="list-style-type: none"> <li>– Structure width</li> <li>– On-ramp and off-ramp lengths</li> </ul> <ul style="list-style-type: none"> <li>▪ Future projects will be considered throughout the development and construction of the Proposed Action to ensure there are no wasted efforts</li> </ul>

## Design Criteria

Table 3 details the elements of the I-70 Mountain Corridor CSS that were incorporated during development of the Proposed Action.

Table 3. Application of I-70 Mountain Corridor Design Criteria

Criteria	Results
Corridor Design Character	Pavement widening was minimized to reduce overall impact of the Proposed Action. Sign placement was considered to minimize impacts to historic resources.
Integrated and Complete Design	The Proposed Action includes the redevelopment of Water Wheel Park, median jumps for enhanced highway permeability, and long-term maintenance considerations, as shown through the implementation of sediment basins and the paving of emergency pull outs.
Partnerships to Create the Corridor	City of Idaho Springs support for the redevelopment of Water Wheel Park. Emergency response support of the ATM network. The Technical Team includes local elected officials, local, state, and federal agencies, and other interested parties.
Use of the Programmatic Environmental Impact Statement (PEIS)	The I-70 Mountain Corridor ROD identifies a category of improvements included in the Preferred Alternative Minimum Program. This category is called " <i>Expanded use of existing transportation infrastructure in and adjacent to the Corridor.</i> " The PSSL project fits within this category of projects.
Corridor Wide Projects—Integrated with Corridor Wide efforts	ATM network, collaboration with ALIVE and SWEEP committees, and construction of certain elements of the Clear Creek SCAP.
Design Speed	There is no impact on design speed. The managed lane will maintain a 45-mph target speed through dynamic pricing.
Alignment	Minimal widening required. This widening was shifted towards the median or towards Clear Creek in response to stakeholder input.
Slope, Cut, and Fill	All slopes will be 2.5:1 or flatter. All walls are located below the roadway height, with the exception of the wall at Lawson, which was raised to provide an enhancement to the existing noise environment.
Disturbance	All work will occur in areas of previous disturbance.
Rock Cut	Rock cuts will be naturalized to blend into the existing landscape, and colored to minimize impacts between the natural rock face and new cuts.
Bridge Structures	Two new bridges with similar aesthetic design, creating visual consistency in the corridor adjacent to Idaho Springs. This includes a unique rail design that was selected via

Table 3. Application of I-70 Mountain Corridor Design Criteria

Criteria	Results
	coordination between CDOT and local officials.
Sound Attenuations	There is no sound attenuation associated with the Proposed Action.

### Agency and Stakeholder Coordination Meetings

Table 4 outlines the meetings held between agencies and public stakeholders involved in the PPSL process. These meetings were used to develop and refine the Proposed Actions, assess environmental effects, and receive stakeholder input.

Table 4. Agency and Stakeholder Coordination Meetings

Date	Meeting
April 18, 2013	Project Leadership Team Meeting #1
June 5, 2013	Project Leadership Team Meeting #2
July 3, 2013	Technical Team Meeting #1
July 11, 2013	Public Information Coordination Meeting
July 22, 2013	Technical Team Meeting #2
July 24, 2013	Colorado Motor Carriers Association Meeting
August 12, 2013	Technical Team Meeting #3
August 23, 2013	Local Agency Issues Task Force Meeting #1
August 26, 2013	Local Agency Issues Task Force Meeting #2
August 29, 2013	Section 106 Issues Task Force Meeting #1
September 9, 2013	Local Agency Issues Task Force Meeting #3
September 12, 2013	Emergency Responders Meeting
September 20, 2013	SWEEP Issues Task Force Meeting #1
September 23, 2013	Technical Team Meeting #4
September 24, 2013	ALIVE Issues Task Force Meeting #1
October 7, 2013	Project Leadership Team Meeting #1#3
October 7, 2013	Technical Team Meeting #5
October 8, 2013	Section 106 Issues Task Force Meeting #2
October 10, 2013	Floodplain Coordination Meeting
October 11, 2013	SH 103 Issues Task Force Meeting #1
October 24, 2013	SH 103 Issues Task Force Meeting #2
October 24, 2013	USFWS Federally Listed Species Meeting
October 25, 2013	USACE Section 404 Permitting Meeting
October 28, 2013	Technical Team Meeting #6

Table 4. Agency and Stakeholder Coordination Meetings

Date	Meeting
November 18, 2013	Technical Team Meeting #7
November 20, 2013	CDOT Field Inspection Review Meeting
November 26, 2013	Clear Creek County Signage Meeting
December 2, 2013	Section 106 Issues Task Force #3 Meeting
December 3, 2013	ALIVE Issues Task Force #2 Meeting
December 5, 2013	SWEEP Issues Task Force #2 Meeting
December 16, 2013	Technical Team #8 Meeting
January 8, 2013	Exit 241 Coordination Meeting
January 9, 2013	Clear Creek Rafting Interests Meeting
January 21, 2013	Idaho Springs Public Workshop #1 for Improvements at Exit 241
January 27, 2013	Technical Team Meeting #9
February 4, 2013	Exit 241 Issues Task Force Meeting #2
February 7, 2014	ALIVE Committee Update (via email)
February 11, 2014	SWEEP Committee Update (via email)
February 24, 2014	Technical Team Meeting #10
April 14, 2014	Public Open House

The Technical Team provided input that helped develop and refine the Proposed Action. Specific critical issues used a matrix for decision making, which compared design options against one another. These matrices were developed by the project team and refined based on Technical Team input, resulting in concurrence on a specific design option. The design issues discussed included the following:

- Left side or right side PPSL
- Roadway width
- Acceleration and deceleration lane length
- Highway widening towards the Clear Creek or the median
- SH 103 bridge
- North versus south I-70 alignment shift
- Advanced Traffic Management
- Rock cuts
- Managed Lane Access

For additional information see Attachment 1, Design Matrices and Attachment 2, Meeting Summaries.

## Issues Task Force Involvement

The CSS process used for the Peak Period Shoulder Lane Project included formation of numerous Issues Task Forces to delve into specific technical issues in more detail. Issues Task Forces were formed to:

- Determine road width
- Determine the best configuration for the SH 103 bridge and interchange
- Determine the best configuration for the Exit 241 bridge and interchange
- Discuss local roadway network changes
- Discuss water quality (SWEEP)
- Discuss wildlife issues (ALIVE)
- Discuss historical properties (Section 106)

Meeting minutes for all of these meetings are in Attachment 2, Meeting Summaries.

## Carrying CSS into the Design Phase

The CSS process led to modifications of the Proposed Action through a collaborative approach to project development. Modifications will continue to occur during final design, which will include participation by the PLT, Technical Team, and other stakeholders.

## Planning objectives and commitments in the SWEEP and ALIVE

- Components were advanced through Issues Task Forces and by the PLT and TT. The proposed configuration of new retaining walls and the removal of harmful wildlife fencing throughout the corridor will accommodate improved wildlife access and preserve future options for the Clear Creek Greenway. The improvements are sensitive to the social, environmental, and aesthetic character of the project area

### **ALIVE Issues Task Force Recommendations**

Table 5 includes the concerns identified by the ALIVE committee in response to the core value of “environment”, which includes wildlife, how the concerns were evaluated and the associated mitigation.

Table 5. ALIVE ITF Recommendation

Issue	Evaluation	Data Source	Resolution
Barriers to wildlife movement	Identify areas of wildlife movement. This was done through the analysis of animal vehicle collision data and meetings with USFS, USFWS, CPW, and County officials.	<ul style="list-style-type: none"> <li>▪ Analysis of animal vehicle collision data from CDOT and State Patrol.</li> <li>▪ Kintsch, et al, 2011. A Regional Ecosystem Framework for Terrestrial and Aquatic Wildlife Along the I-70 Mountain Corridor.</li> <li>▪ Analysis of existing infrastructure inventory in the corridor (box culvers, bridges,</li> </ul>	<ul style="list-style-type: none"> <li>▪ Include median jumps at three locations in the corridor; approximate mileposts are 238.95, 204.05, and 241.00. These areas are those with the highest concentration of animal-vehicle collisions with a median type that can be retrofitted.</li> <li>▪ Replace a 5-foot chain link fence area where Soda Creek Road passes below I-70 in Idaho Springs. A wildlife friendly fence will be installed in three areas, the southwest, northwest, and northeast quadrants, and a 2-meter exclusion fence</li> </ul>

Table 5. ALIVE ITF Recommendation

Issue	Evaluation	Data Source	Resolution
		box culverts). <ul style="list-style-type: none"> <li>I-70 Mountain Corridor PEIS, 2011.</li> </ul>	in the southeast quadrant. <ul style="list-style-type: none"> <li>Build two separate retaining walls near Fall River, as opposed to a single longer wall.</li> </ul>
Limit lighting to the greatest extent practical	Meetings with ALIVE committee and the Eastbound I-70 PPSL Biological Assessment.	<ul style="list-style-type: none"> <li>Apex Design (project team) provided signage location, which were subsequently revised based upon Technical Team input.</li> </ul>	<ul style="list-style-type: none"> <li>No additional lighting associated is anticipated with the Proposed Action beyond the electrified signs.</li> </ul>

### **SWEEP Issues Task Force Recommendations**

Table 6 includes the concerns identified by the SWEEP committee in response to the core value of “environment”, which includes streams and wetlands, how the concerns were evaluated and the associated mitigation.

Table 6. SWEEP ITF Recommendation

Issue	Evaluation	Data Source	Resolution
Sediment control	The Clear Creek SCAP was used to determine what features could be installed as part of the Proposed Action.	Clear Creek SCAP	<ul style="list-style-type: none"> <li>Implementation of water quality BMPs. This includes 7 sediment basins and 9 inlet sediment traps, which increase will water quality capture volume by 12.7 acres over existing conditions.</li> <li>CDOT will obtain a CDPES permit from CDPHE</li> </ul>
Rain events	The Clear Creek SCAP was used to determine what features could be installed as part of the Proposed Action.	Historic water quality data from ongoing Clear Creek monitoring.	<ul style="list-style-type: none"> <li>Implementation of water quality BMPs per a project specific Stormwater Management Plan.</li> <li>CDOT will obtain a CDPES permit from CDPHE.</li> </ul>
Dewatering	Analysis of groundwater samples from boring locations.	Boring samples Data collected as part of the <i>Twin Tunnels Environmental Assessment</i> (CDOT, 2012).	<ul style="list-style-type: none"> <li>No impacts anticipated. If dewatering is required CDOT will obtain a dewatering permit from CDPHE.</li> </ul>
Spill control	Input from CDOT staff regarding the need for spill control at emergency pull outs.	n/a	<ul style="list-style-type: none"> <li>Install hazardous spill containment at emergency pullouts.</li> </ul>
Retaining wall west of SH 103	Meeting with floodplain administrator and field reconnaissance.	Clear Creek County floodplain administrator FEMA	<ul style="list-style-type: none"> <li>CDOT will implement appropriate BMPs for erosion and sediment control according to the CDOT Erosion Control and Storm Water Quality Guide (CDOT 2002), and develop a stormwater management plan, which includes mitigation identified in the Upper Clear Creek Sediment Control Action Plan.</li> <li>CDOT will ensure that refacing the wall and</li> </ul>

Table 6. SWEEP ITF Recommendation

Issue	Evaluation	Data Source	Resolution
			placement of riprap along the base of the wall, within the ordinary highway water mark, does not result in a net increase in fill within the channel.
Wetlands	Wetlands were delineated throughout the study area.	Overlay of existing wetlands and the Proposed Action.	<ul style="list-style-type: none"> <li>▪ No permanent or temporary impacts anticipated. Mitigation to include: fencing of wetlands adjacent to active construction, staging and material stockpile restrictions, fueling restrictions, construction equipment activity restrictions, and revegetation.</li> </ul>
Aquatic species	Meetings and coordination with CPW regarding aquatic species.	CPW surveys Correspondence with CPW biologists. Field reconnaissance No known spawning habitat occurs in the area of SH 103, the only area with direct impacts to Clear Creek.	<ul style="list-style-type: none"> <li>▪ No redds were identified in the area of SH 103, therefore CPW did not anticipate impacts to spawning grounds.</li> </ul>

## **Attachment 1. Design Matrices**

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**Left Side Versus Right Side**

ID	Criteria	Options Ranking	
		Left-Side	Right-Side
<b>Evaluation Criteria</b>			
1	Addresses safety during PPSL operations	<ul style="list-style-type: none"> <li>•Standard ML striping with solid white line</li> <li>•GP lanes are consistent on peak and off peak</li> <li>•Allows for traditional rumble strips</li> </ul>	<ul style="list-style-type: none"> <li>•Unconventional ML striping with dashed line.</li> <li>•GP lanes shift between on peak and off peak operations</li> </ul>
2	Maintains safety during non-peak times	•Left-side breakdown lane (non-standard)	• Right-side breakdown lane (standard)
3	Improves mobility during peak times	<ul style="list-style-type: none"> <li>•Increases weaving to/from the express lane</li> <li>•Enhances travel time</li> <li>•Commercial vehicles may operate in right lane</li> </ul>	<ul style="list-style-type: none"> <li>•Decreases weaving to/from the express lane</li> <li>•Commercial vehicles must operate in middle lane</li> </ul>
4	Minimizes the effort required to maintain the option	<ul style="list-style-type: none"> <li>•Reduces signing and structures</li> <li>•Creates snow removal/ sediment control challenges</li> <li>•Conventional striping patterns</li> </ul>	<ul style="list-style-type: none"> <li>•Increases signing and structures</li> <li>•Unconventional striping patterns</li> </ul>
5	Enables the project team to achieve the goal of opening PPSL by July 2015	•Not a differentiator	
6	Creates infrastructure investments that are reasonable to construct and provide the best value for their life cycle, function, and purpose.	•Configuration consistent with CDOT similar projects on North I-25, US-36	<ul style="list-style-type: none"> <li>•Increases signing infrastructure more than left-side option</li> <li>•Configuration not consistent with CDOT similar projects</li> </ul>
7	Allows for a process to engage and communicate with all the local, regional and national users of the I-70 Mountain Corridor	•Not a differentiator	
8	Creates opportunities to "correct past damage"	•Not a differentiator	
9	Provides access and protects opportunities for enhancements to tourist destinations, community facilities, and interstate commerce.	• Not a differentiator	
10	Incorporates sustainability by using locally available materials and environmentally-friendly processes	• Not a differentiator	
11	Protects or creates unique features for the area as a gateway	•Creates an opportunity to replace the 103 bridge	•Opportunity to maintain the 103 bridge
12	Protects wildlife needs	• Not a differentiator	
13	Protects Clear Creek	• Not a differentiator	
14	Protects the defining historical elements of Clear Creek County	•Less signs impacting historic viewshed	•More signs impacting historic viewshed
15	Meets CDOT's and industry standards	• Not a differentiator	
16	Achieves the mountain mineral belt aesthetic guidelines	•Not a differentiator	
17	Meets the I-70 Mountain Corridor design criteria	•Not a differentiator	
18	Preserves opportunities for the AGS and the ultimate preferred alternative	•Not a differentiator	
19	Adaptable for future changes/projects	• Less infrastructure removal (signage)	• Additional infrastructure removal (signage)
<b>Issue Specific Criteria</b>			
1	Meets driver expectations/roadway environment/precedence set for express lanes in the state	<ul style="list-style-type: none"> <li>•Standard ML striping with solid white line</li> <li>• Breakdown lane on non-traditional left side</li> <li>•GP lanes are in the same configuration (on peak versus off peak)</li> </ul>	<ul style="list-style-type: none"> <li>•Unconventional ML striping with dashed line.</li> <li>• Breakdown lane on traditional right side</li> <li>• Possible fewer emergency pullouts required</li> <li>•Not consistent with North I-25 and US 36 managed lane</li> </ul>

**Left Side Versus Right Side**

ID	Criteria	Options Ranking	
		Left-Side	Right-Side
		<ul style="list-style-type: none"> <li>•Consistent with US 36 and North I-25 managed lane corridors</li> </ul>	<ul style="list-style-type: none"> <li>corridors</li> <li>•GP lanes are in different configurations (on peak versus off peak)</li> </ul>
2	Minimizing signing types and locations throughout the corridor	<ul style="list-style-type: none"> <li>•Requires less signing</li> </ul>	<ul style="list-style-type: none"> <li>•Requires more signing</li> </ul>
3	Maintains fluid ramp access and standard ramp geometry on and off-ramps accesses and ramp geometry.	<ul style="list-style-type: none"> <li>• Not a differentiator</li> </ul>	

Roadway Width		Options Ranking	
		Hybrid Width	40' or greater width
<b>Evaluation Criteria</b>			
1	Addresses safety during PPSL operations	•Narrower, less width for driver error	•Wider shoulder widths consistently
2	Maintains safety during non-peak times	•Narrower, less width for driver error	•Wider shoulder widths consistently
3	Improves mobility during peak times	•Narrower section causes generally slower speeds	•Wider section allows for generally faster speeds
4	Minimizes the effort required to maintain the option	•Less infrastructure, less maintenance	•Additional infrastructure, additional maintenance
5	Enables the project team to achieve the goal of opening PPSL by 1-Jul-15	•Narrower cross section could require less effort for NEPA, design, and construction.	•Wider cross section could require additional effort for NEPA, design, and construction.
6	Creates infrastructure investments that are reasonable to construct and provide the best value for their life cycle, function, and purpose.	•Less infrastructure is more consistent with an interim definition for the project.	•More infrastructure would be required (widening of all I-70 bridges, increase in wall areas)
7	Allows for a process to engage and communicate with all the local, regions and national users of the I-70 Mountain Corridor	•Not a differentiator	
8	Creates opportunities to "correct past damage"	• Fewer Opportunitites	• More Opportunitites
9	Provides access and protects opportunities for enhancements to tourist destinations, community facilities, interstate commerce and also limits disproportionate effects to the community.	•Not a differentiator	
10	Incorporates sustainability by using locally available materials and environmentally-friendly processes	•Not a differentiator	
11	Protects or creates unique features for the area as a gateway	• Fewer Opportunitites	• More Opportunitites
12	Protects wildlife needs	•Less barrier effect impeding highway permeability	•More barrier effect impeding highway permeability
13	Protects Clear Creek	•Less potential for encroachment into creek	•More potential for creek

Roadway Width		Options Ranking	
		Hybrid Width	40' or greater width
		<ul style="list-style-type: none"> <li>•Less visual impact for walls</li> <li>•More space for WQ features to be added</li> </ul>	<ul style="list-style-type: none"> <li>encroachment</li> <li>•More visual impact from walls</li> <li>•Less space for WQ features to be added</li> </ul>
14	Protects the defining historical elements of Clear Creek County	<ul style="list-style-type: none"> <li>•Less infrastructure, less visual impact</li> </ul>	<ul style="list-style-type: none"> <li>•More infrastructure, more visual impact, more potential encroachment into historic properties</li> </ul>
15	Meets CDOT's and industry standards	<ul style="list-style-type: none"> <li>•Rarely meets minimum standards</li> </ul>	<ul style="list-style-type: none"> <li>• More frequently meets minimum standards</li> </ul>
16	Achieves the mountain mineral belt aesthetic guidelines	<ul style="list-style-type: none"> <li>• Less opportunities</li> </ul>	<ul style="list-style-type: none"> <li>• More opportunities</li> </ul>
17	Meets the I-70 Mountain Corridor design criteria	•Not a differentiator	
18	Preserves opportunities for the AGS and the ultimate preferred alternative	•Not a differentiator	
19	Adaptable for future changes/projects	•Not a differentiator	
<b>Issue Specific Criteria</b>			
1	Clear Creek County Preference	<ul style="list-style-type: none"> <li>• Meets preference</li> </ul>	<ul style="list-style-type: none"> <li>• Less preferred</li> </ul>
2	Impacts to compounding safety risk factors	<ul style="list-style-type: none"> <li>• More safety risk factors</li> </ul>	<ul style="list-style-type: none"> <li>• Fewer safety risk factors</li> </ul>
3	Meets definition of a PPSL project	<ul style="list-style-type: none"> <li>• Optimizes existing infrastructure</li> </ul>	<ul style="list-style-type: none"> <li>• Increased infrastructure improvements</li> </ul>
4			
<b>Identification of Preferred Option: Summary</b>		<p>The Hybrid Width provides less infrastructure which is less costly, easier to meet the schedule and maintain, and is more consistent with an interim project. Although the 40 ft model was identified as better for meeting design standards, it was determined that the hybrid model will not negatively impact safety or mobility. The hybrid model also better protects environmental resources due to less infrastructure, encroachment, walls, and visual impacts. The hybrid model also better adheres to the CSS process with clear preference by CCC stakeholders. The analysis accounted for, but was not limited to, safety, widening requirements for mainline, and infrastructure needs.</p>	

Fair Better Best

Acceleration and Deceleration Lanes			
ID	Criteria	Options Ranking	
		AASHTO Standard Acceleration and Deceleration Length for Interchange Ramps	Match Existing Acceleration and Deceleration Lengths for Interchange Ramps
<b>Evaluation Criteria</b>			
1	Addresses safety during PPSL operations	•Provides maximum safety benefit and meets current design standards	•Does not meet current standards and may decrease safety at acceleration and deceleration lanes
2	Maintains safety during non-peak times	•Provides maximum safety benefit and meets design standards	•Does not meet current standards and may decrease safety at acceleration and deceleration lanes
3	Improves mobility during peak times	•Longer ramps provide increased opportunities for merging and diverging increasing mobility	•Shorter ramps decrease opportunities for merging and diverging
4	Minimizes the effort required to maintain the option	•Not a differentiator	
5	Enables the project team to achieve the goal of opening PPSL by 1-Jul-15	•Increased Infrastructure increasing construction efforts and Project schedule.	•Less Infrastructure decreasing construction efforts and Project schedule.
6	Creates infrastructure investments that are reasonable to construct and provide the best value for their life cycle, function, and purpose.	•Additional Infrastructure investments provide less value for Project life cycle, function, and purpose.	•Maximizes use of existing infrastructure and provides best value for Project life cycle, function, and purpose
7	Allows for a process to engage and communicate with all the local, regional and national users of the I-70 Mountain Corridor	•Not a differentiator	
8	Creates opportunities to "correct past damage"	•Not a differentiator	
9	Provides access and protects opportunities for enhancements to tourist destinations, community facilities, interstate commerce and also limits disproportionate effects to the community.	•Not a differentiator	
10	Incorporates sustainability by using locally available materials and environmentally-friendly processes	•Not a differentiator	
11	Protects or creates unique features for the area as a gateway	• Not a differentiator	
12	Protects wildlife needs	•Increased barrier effect impeding highway permeability	•Less barrier effect impeding highway permeability
13	Protects Clear Creek	•More potential for encroachment into creek	•Less potential for encroachment into creek •Less visual impact for walls

Fair Better Best

Acceleration and Deceleration Lanes		
ID	Criteria	Options Ranking
		AASHTO Standard Acceleration and Deceleration Length for Interchange Ramps Match Existing Acceleration and Deceleration Lengths for Interchange Ramps
		<ul style="list-style-type: none"> <li>•More visual impact for walls</li> <li>•Less space for WQ features to be added</li> </ul>
14	Protects the defining historical elements of Clear Creek County	<ul style="list-style-type: none"> <li>•More infrastructure, more visual impact, more potential encroachment into historic properties</li> </ul>
15	Meets CDOT's and industry standards	<ul style="list-style-type: none"> <li>•Meets design Standards</li> </ul>
16	Achieves the mountain mineral belt aesthetic guidelines	<ul style="list-style-type: none"> <li>•Not a differentiator</li> </ul>
17	Meets the I-70 Mountain Corridor design criteria	<ul style="list-style-type: none"> <li>•Not a differentiator</li> </ul>
18	Preserves opportunities for the AGS and the ultimate preferred alternative	<ul style="list-style-type: none"> <li>•Not a differentiator</li> </ul>
19	Adaptable for future changes/projects	<ul style="list-style-type: none"> <li>•Not a differentiator</li> </ul>
<b>Issue Specific Criteria</b>		
1	Clear Creek County Preference	<ul style="list-style-type: none"> <li>• Less Preferred</li> </ul>
2	Impacts to compounding safety risk factors	<ul style="list-style-type: none"> <li>• Less safety risk factors</li> </ul>
3	Meets definition of a PPSL project	<ul style="list-style-type: none"> <li>• Increased infrastructure Improvements</li> </ul>
4		
<b>Identification of Preferred Option: Summary</b>		The "Match Existing" option was identified as the preferred option. It provides less infrastructure which is less costly, easier to meet the schedule and to maintain, and is more consistent with an interim project. Although the AASHTO standard option was identified as providing the maximum safety benefit, the "Match Existing" option was determined to not compromise safety when compared to existing. This option protects environmental resources better due to less infrastructure, encroachment, walls, and visual impacts. It also adheres better to the CSS process with clear preference by CCC stakeholders. The analysis accounted for, but was not limited to, safety, widening requirements, and design standards.

Fair	Better	Best
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Widening Median vs. Creek			
ID	Criteria	Options Ranking	
		Widen to Creek	Widen to Median
<b>Evaluation Criteria</b>			
1	Addresses safety during PPSL operations	•Not a differentiator	
2	Maintains safety during non-peak times	•Not a differentiator	
3	Improves mobility during peak times	•Not a differentiator	
4	Minimizes the effort required to maintain the option	•More difficult to maintain taller walls along creek	•Easier to maintain shorter walls and access from roadway.
5	Enables the project team to achieve the goal of opening PPSL by 1-Jul-15	•More wall area to design & build increases schedule	•Less wall area to design & build reduces schedule
6	Creates infrastructure investments that are reasonable to construct and provide the best value for their life cycle, function, and purpose.	•More wall area has more impacts, is more expensive, and requires more maintenance	•Less wall area has less impacts, is less expensive, and requires less maintenance
7	Allows for a process to engage and communicate with all the local, regional and national users of the I-70 Mountain Corridor	•Not a differentiator	
8	Creates opportunities to "correct past damage"	•Not a differentiator	
9	Provides access and protects opportunities for enhancements to tourist destinations, community facilities, interstate commerce and also limits disproportionate effects to the community.	• More impacts to riparian vegetation affects river recreational experience	• More impacts to the median vegetation
10	Incorporates sustainability by using locally available materials and environmentally-friendly processes	•Not a differentiator	
11	Protects or creates unique features for the area as a gateway	•Not a differentiator	
12	Protects wildlife needs	•More barrier effect impeding highway permeability	•Less barrier effect impeding highway permeability
13	Protects Clear Creek	•More potential for creek encroachment •More visual impact from walls and tree removal •Less space for WQ features to be added • Degrades recreational experience	•Less potential for encroachment into creek •Less visual impact for walls and tree removal •More space for WQ features to be added
14	Protects the defining historical elements of Clear Creek County	•More infrastructure, more visual impact	•Less infrastructure, less visual impact
15	Meets CDOT's and industry standards	•Not a differentiator	
16	Achieves the mountain mineral belt aesthetic guidelines	• More impacts to riparian vegetation	• Minimizes the area of walls
17	Meets the I-70 Mountain Corridor design criteria	• Meets the corridor design criteria by not decreasing median	• Narrows the median

Fair	Better	Best
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<b>Widening Median vs. Creek</b>			
ID	Criteria	Options Ranking	
		Widen to Creek	Widen to Median
		width	
18	Preserves opportunities for the AGS and the ultimate preferred alternative	•Not a differentiator	
19	Adaptable for future changes/projects	• More infrastructure to remove in future	• Less infrastructure to remove in future
<i>Issue Specific Criteria</i>			
1	Impacts to creek users	• More visual impacts to creek users	• No visual impacts to creek users
2	Allows access to the north side of the creek from I-70.	Requires a retaining wall with guard rail that impedes access.	Requires a guard rail but no wall, providing easier access.
<b>Identification of Preferred Option: Summary</b>		<p><b>Lawson &amp; East of Lawson:</b> Widen to Creek due to no available median.</p> <p><b>Dumont On-Ramp, East of Dumont:</b>Widen to Creek to reduce rdwy runoff on slope and encourage vegetation growth &amp; maintain median width.</p> <p><b>Fall River On-Ramp:</b> Widen to Creek to reduce rdwy runoff on slope and encourage vegetation growth &amp; maintain median width, widening to median still requires creek-side retaining wall.</p>	<p><b>At &amp; East of Downieville:</b> Walls eliminated by shifting into median providing less riparian impacts.</p>

**I-70 Widening North or South**

Fair	Better	Best
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ID	Criteria	Options Ranking	
		Shift to North	Shift to South
<b>Evaluation Criteria</b>			
1	Addresses safety during PPSL operations	•Not a differentiator	
2	Maintains safety during non-peak times	•Not a differentiator	
3	Improves mobility during peak times	•Not a differentiator	
4	Minimizes the effort required to maintain the option		• Requires maintenance of park improvements.
5	Enables the project team to achieve the goal of opening PPSL by 1-Jul-15	•Not a differentiator	
6	Creates infrastructure investments that are reasonable to construct and provide the best value for their life cycle, function, and purpose.	• Requires significant and costly impacts to drainage, utilities, and City parking.	• Minor impacts to the park. • Creates opportunities for park improvements.
7	Allows for a process to engage and communicate with all the local, regional and national users of the I-70 Mountain Corridor	• By impacting drainage, utilities, and City parking, users along the I-70 corridor will be less likely to visit due to increased construction and reduced parking.	• Park improvements will engage I-70 travelers with community amenities and history
8	Creates opportunities to "correct past damage"	• Increases impacts to the City	• Provides opportunity for park improvements which may increase usage of the facility.
9	Provides access and protects opportunities for enhancements to tourist destinations, community facilities, interstate commerce and also limits disproportionate effects to the community.	• Increases impacts to the City	• Provides opportunity for park improvements which may increase usage of the facility.
10	Incorporates sustainability by using locally available materials and environmentally-friendly processes	•Not a differentiator	
11	Protects or creates unique features for the area as a gateway	• Increases impacts to the City parking	• Provides opportunity for park improvements which may increase usage of the facility.
12	Protects wildlife needs	•Not a differentiator	
13	Protects Clear Creek	•Less potential for encroachment into creek •Less visual impact for walls	•More potential for creek encroachment •More visual impact from walls •Positively impacts recreational

**I-70 Widening North or South**

Fair	Better	Best
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ID	Criteria	Options Ranking	
		Shift to North	Shift to South
			experience
14	Protects the defining historical elements of Clear Creek County	• No impacts to historical elements	• Park enhancements may lead to a greater awareness and more frequent visits to the water wheel
15	Meets CDOT's and industry standards		• Not a differentiator
16	Achieves the mountain mineral belt aesthetic guidelines	• No opportunity for park improvements	• Provides opportunity for park improvements
17	Meets the I-70 Mountain Corridor design criteria		• Not a differentiator
18	Preserves opportunities for the AGS and the ultimate preferred alternative		• Not a differentiator
19	Adaptable for future changes/projects		• Not a differentiator
<b>Issue Specific Criteria</b>			
1	Appropriate Cost/Benefit	• More costs associated with utility and drainage impacts	• Less costs and more benefits associated with Park improvements.
2	How well does the solution support pedestrian movement?	• Does not impact pedestrian movements	• Improves pedestrian movements
3	How does the solution affect the Bikeway and Water Wheel Park?	• Does not impact Bikeway or Park	• Greatly improves Bikeway and Park (connectivity, aesthetically)
4	How does the solution affect emergency services?		• Not a differentiator
5	How does the CDOT parking lot (currently in use by Kramer) integrate with the activities of the interchange?		• Not a differentiator
6	How is access to Idaho Springs and Mt. Evans affected during construction and in the long term?		• Not a differentiator
<b>Identification of Preferred Option: Summary</b>		Shifting the I-70 alignment to the south eliminates impact to the City's parking, drainage and utilities along the north side of I-70. While shifting to the south does have some minor impacts to Water Wheel Park, it provides opportunities for improvements not only to the park but to the multi-use trail along the creek. Additionally, the stakeholders requested that this shift accommodate additional maximum width (~6' to 8') to allow for the possibility of a future WB PPSL.	

Fair	Better	Best
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**SH 103 Bridge**

ID	Criteria	Reuse Existing	Options Ranking Clear Span	Two Span
<b>Evaluation Criteria</b>				
1	Addresses safety during PPSL operations		<ul style="list-style-type: none"> <li>Not a differentiator</li> </ul>	
2	Maintains safety during non-peak times		<ul style="list-style-type: none"> <li>Not a differentiator</li> </ul>	
3	Improves mobility during peak times	<ul style="list-style-type: none"> <li>This option is limited to the existing conditions.</li> </ul>	<ul style="list-style-type: none"> <li>Improves mobility on SH 103</li> </ul>	<ul style="list-style-type: none"> <li>Improves mobility on SH 103</li> </ul>
4	Minimizes the effort required to maintain the option	<ul style="list-style-type: none"> <li>This type of major retrofit would require additional effort to maintain in comparison to a new structure.</li> </ul>	<ul style="list-style-type: none"> <li>These type of structures can be designed and detailed to provide durability and low maintenance.</li> </ul>	<ul style="list-style-type: none"> <li>This more traditional type of bridge would provide a very durable structure with minimal maintenance.</li> </ul>
5	Enables the project team to achieve the goal of opening PPSL by 1-Jul-15		<ul style="list-style-type: none"> <li>Not a differentiator</li> </ul>	
6	Creates infrastructure investments that are reasonable to construct and provide the best value for their life cycle, function, and purpose.	<ul style="list-style-type: none"> <li>A retrofit of even this magnitude may still provide some initial investment savings. However, life cycle cost analysis will illustrate that it is not a best value. This option also limits the pedestrian and vehicle functions to the existing conditions.</li> </ul>	<ul style="list-style-type: none"> <li>This option is very expensive and typically warranted when traditional alternatives are not feasible.</li> </ul>	<ul style="list-style-type: none"> <li>This option is cost effective and provides the best value when considering the life cycle cost. This option provides the most flexibility for the future.</li> </ul>
7	Allows for a process to engage and communicate with all the local, regional and national users of the I-70 Mountain Corridor		<ul style="list-style-type: none"> <li>Not a differentiator</li> </ul>	
8	Creates opportunities to "correct past damage"		<ul style="list-style-type: none"> <li>Not a differentiator</li> </ul>	
9	Provides access and protects opportunities for enhancements to tourist destinations, community facilities, and interstate commerce.	<ul style="list-style-type: none"> <li>Limited to existing conditions</li> </ul>	<ul style="list-style-type: none"> <li>Provides opportunities for aesthetic and mobility enhancements</li> </ul>	<ul style="list-style-type: none"> <li>Provides opportunities for aesthetic and mobility enhancements</li> </ul>
10	Incorporates sustainability by using locally available materials and environmentally-friendly processes		<ul style="list-style-type: none"> <li>Not a differentiator</li> </ul>	
11	Protects or creates unique features for the area as a gateway	<ul style="list-style-type: none"> <li>This option will appear as a temporary retrofit bridge.</li> </ul>	<ul style="list-style-type: none"> <li>This option could be a signature structure.</li> </ul>	<ul style="list-style-type: none"> <li>This option would meet the corridor guidelines and match well with the rest of this corridor.</li> </ul>
12	Protects wildlife needs		<ul style="list-style-type: none"> <li>Not a differentiator</li> </ul>	

Fair	Better	Best
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**SH 103 Bridge**

ID	Criteria	Reuse Existing	Options Ranking Clear Span	Two Span
<b>Evaluation Criteria</b>				
13	Protects Clear Creek		• Not a differentiator	
14	Protects the defining historical elements of Clear Creek County		• Not a differentiator	
15	Meets CDOT's and industry standards	• This option would require some variances, since it is a retrofit with an older structure.	• This option would meet CDOT and industry standards.	• This option would meet CDOT and industry standards.
16	Achieves the mountain mineral belt aesthetic guidelines	• This option is limited to the existing conditions.	• This option would meet the aesthetic guidelines.	• This option would meet the aesthetic guidelines.
17	Meets the I-70 Mountain Corridor design criteria	• This option is limited to the existing conditions.	• This option would meet the design criteria.	• This option would meet the design criteria.
18	Preserves opportunities for the AGS and the ultimate preferred alternative	• This option is limited to the existing conditions.	• This option provides flexibility for AGS and the ultimate preferred alternative.	• This option provides flexibility for AGS and the ultimate preferred alternative.
19	Adaptable for future changes/projects	• This option is limited to the existing conditions.	• This option provides flexibility for future changes.	• This option provides flexibility for future changes.
<b>Issue Specific Criteria</b>				
1	How well does the solution support pedestrian movement?	• This option maintains the existing pedestrian conditions and does not provide enhancement opportunity.	• This option provides the opportunity to have a wider sidewalk for pedestrian movements and also a wider roadway shoulder for safety.	• This option provides the opportunity to have a wider sidewalk for pedestrian movements and also a wider roadway shoulder for safety.
2	Provide flexibility for the construction/traffic phasing	• This option is limited to the existing two lane bridge width, which would restrict the bridge to one lane during construction. • Significant impacts to SH 103 and I-70 traffic	• This option would require a full closure of SH103. The closure period would depend on if the structure was built on-site or if it was built off-line and moved into place.	• This option provides the flexibility of two lane phasing during construction. Accelerated bridge technology provides opportunity to reduce traffic impacts.
3	Minimizes the construction schedule	• The construction time frame for this option with a full closure would be approximately 2 months and with a phased approach the construction time frame would be in the 6 to 9 month range. A retrofit structure has a higher risk of impacts to schedule, construction and traffic phasing.	• The construction time frame for this option is on the order of two times more than traditional bridge construction.	• The construction time frame for this option with a full closure would be approximately 2 months and with a phased approach the construction time frame would be in the 6 to 9 month range.
<b>Identification of Preferred Option: Summary</b>				The two span bridge allows for flexibility in the cross section of I-70 in the future, minimizes changes to SH103 profile, enables wider shoulders and sidewalk to improve safety and pedestrian movement and allows for an auxiliary lane to improve traffic movement. It is designed to current standards provides better aesthetics and shorter construction phasing.

Fair Better Best

Advanced Traffic Management			
ID	Criteria	Options Ranking	
		ATM - YES	ATM -NO
<b>Evaluation Criteria</b>			
1	Addresses safety during PPSL operations	Provides additional driver information, provides for emergency response vehicles	Provides less driver information
2	Maintains safety during non-peak times	Could provide information about lane use during non peak.	Provides less driver information
3	Improves mobility during peak times	Not a differentiator	
4	Minimizes the effort required to maintain the option	More infrastructure to maintain	Less infrastructure to maintain
5	Enables the project team to achieve the goal of opening PPSL by 1-July-15	Software development and implementation impacts	No software development and implementation impacts
6	Creates infrastructure investments that are reasonable to construct and provide the best value for their life cycle, function, and purpose.	Anticipated to provide a positive return on investment.	No additional return on investment.
7	Allows for a process to engage and communicate with all the local, regional and national users of the I-70 Mountain Corridor	Increased driver information	Decreased driver information
8	Creates opportunities to "correct past damage"	Increased infrastructure	Less infrastructure
9	Provides access and protects opportunities for enhancements to tourist destinations, community facilities, and interstate commerce.	Increased infrastructure	Less infrastructure
10	Incorporates sustainability by using locally available materials and environmentally-friendly processes	Not a differentiator	
11	Protects or creates unique features for the area as a gateway	May impact viewshed	No impact
12	Protects wildlife needs	Increased infrastructure	Less infrastructure
13	Protects Clear Creek	Not a differentiator	
14	Protects the defining historical elements of Clear Creek County	More infrastructure (signs)	Less infrastructure (signs)
15	Meets CDOT's and industry standards	Industry trends toward dynamic managed shoulders	Not the trend

<b>Advanced Traffic Management</b>		
<b>ID</b>	<b>Criteria</b>	<b>Options Ranking</b>
		<b>ATM - YES</b>
<b><i>Evaluation Criteria</i></b>		
16	Achieves the mountain mineral belt aesthetic guidelines	Not a differentiator
17	Meets the I-70 Mountain Corridor design criteria	Not a differentiator
18	Preserves opportunities for the AGS and the ultimate preferred alternative	Not a differentiator
19	Adaptable for future changes/projects	Increased adaptability   Less adaptable
<b><i>Issue Specific Criteria</i></b>		
1	Efficiency and consolidation (including old signs)	Not a differentiator
2	Preserves emergency response capabilities	Provides ability to control managed lane   Provides no ability to control managed lane
<b>Identification of Preferred Option: Summary</b>		The recommendation is to incorporate ATM because it preserves the ability for emergency response.

Fair	Better	Best
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**MANAGED LANE ACCESS**

ID	Criteria	Options Ranking	
		SINGLE	INTERMEDIATE
<b>Evaluation Criteria</b>			
1	Addresses safety during PPSL operations	Per David Hatton safer	
2	Maintains safety during non-peak times	Not a differentiator	
3	Improves mobility during peak times	Not a differentiator	
4	Minimizes the effort required to maintain the option	Less infrastructure to maintain	More infrastructure to maintain
5	Enables the project team to achieve the goal of opening PPSL by 1-Jul-15	Not a differentiator	
6	Creates infrastructure investments that are reasonable to construct and provide the best value for their life cycle, function, and purpose.	Not a differentiator	
7	Allows for a process to engage and communicate with all the local, regional and national users of the I-70 Mountain Corridor	Not a differentiator	
8	Creates opportunities to "correct past damage"	Not a differentiator	
9	Provides access and protects opportunities for enhancements to tourist destinations, community facilities, and interstate commerce.	Less access points	More access points
10	Incorporates sustainability by using locally available materials and environmentally-friendly processes	Not a differentiator	
11	Protects or creates unique features for the area as a gateway	Not a differentiator	
12	Protects wildlife needs	Less infrastructure (signs)	More infrastructure (signs)
13	Protects Clear Creek	Not a differentiator	
14	Protects the defining historical elements of Clear Creek County	Less infrastructure (signs)	More infrastructure (signs)
15	Meets CDOT's and industry standards	Not a differentiator	
16	Achieves the mountain mineral belt aesthetic guidelines	Not a differentiator	
17	Meets the I-70 Mountain Corridor design criteria	Not a differentiator	

Fair	Better	Best
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**MANAGED LANE ACCESS**

ID	Criteria	Options Ranking	
		SINGLE	INTERMEDIATE
<b>Evaluation Criteria</b>			
18	Preserves opportunities for the AGS and the ultimate preferred alternative	Not a differentiator	
19	Adaptable for future changes/projects	Less infrastructure (signs)	More infrastructure (signs)
<b>Issue Specific Criteria</b>			
1	How does it affect signage?	Less infrastructure (signs)	More infrastructure (signs)
<b>Identification of Preferred Option: Summary</b>		The single point of entry is the preferred alternative, it has less infrastructure impacts and a reduction of conflict points, enhancing safety. The intermediate option does not appear to be an enhancement to mobility or safety.	

## **Attachment 2. Meeting Summaries**

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**I-70 Peak Period Shoulder Lane  
SUMMARY OF ISSUES RAISED AT PROJECT LEADERSHIP TEAM AND TECHNICAL TEAM MEETINGS**

Abbreviations:

CCC—Clear Creek County  
 CSS—Context sensitive solutions  
 AGS—Advanced Guideway System  
 PLT—Project Leadership Team  
 ROD—record of decision

FHA—Federal Highway Administration  
 PPSL—Peak Period Shoulder Lane  
 EJMT—Eisenhower-Johnson Memorial Tunnels  
 PEIS—Programmatic Environmental Impact Statement  
 HOT—High Occupancy Toll  
 Auxiliary lane—extends from ramp to ramp

PEIS—Programmatic Environmental Impact Statement  
 HOT—High Occupancy Toll  
 Auxiliary lane—extends from ramp to ramp

Meeting	Date	Primary Agenda Items	Summary of Issues	Agreement Reached
PLT #1 (Kickoff)	18-Apr-13	Discuss goals of project, feasibility study results, and potential issues; define values; assign roles and responsibilities.	<ul style="list-style-type: none"> <li>FHWA will evaluate whether or not the project is consistent with the ROD</li> <li>PPSL does not solve the congestion problem upstream near EJMT</li> <li>Structure F-14-W (and possibly more bridges) will need to be replaced—not wide enough</li> <li>Potential issues/core values: environment, aesthetics, maintenance, management, driver and emergency vehicle safety, community, transtations</li> </ul>	<ul style="list-style-type: none"> <li>Initial context statement and core values</li> </ul>
PLT #2	5-Jun-13	Revise Context Statement from first PLT meeting; discuss and expand on core values, critical issues and desired outcomes; update on safety assessment.	<ul style="list-style-type: none"> <li>Need for a thorough investigation of community and environmental impacts</li> <li>Is an EA more appropriate than a Cat Ex? Assurances were given that proper investigations will be conducted</li> <li>Most accidents currently occur heading EB and indicate congestion</li> <li>NEPA process will begin immediately</li> </ul>	<ul style="list-style-type: none"> <li>Revision to context statement and core values</li> </ul>
PLT #3	7-Oct-13	Discussion of ATM (Active Traffic Management)	<ul style="list-style-type: none"> <li>ATM: Managed lane can be used for incident response; emergency response will have wider shoulder during off-peak hours; need to hash out specifics, i.e. how many walls present, how many signs, sign placement, visual context of what driver can see; discussion about concerns over safety and emergency providers' opinion</li> <li>Issue Task Force for SH 103: need representatives from Clear Creek, Upper Clear Creek Foundation, Idaho Springs, manager of greenway in CCC, Commissioner Mauk, and representative of business area</li> </ul>	
TT #1	3-Jul-13	Discuss minimizing physical impact, using existing pavement and environmental issues; hear input from people regarding purpose, need and concerns about project.	<ul style="list-style-type: none"> <li>PLT established Core values: Safety, mobility, constructability, community, environment, engineering criteria and aesthetic guidelines, and sustainability</li> <li>How to balance safety with the core values</li> <li>How to protect Clear Creek—tourism and environment</li> <li>NEPA schedule: Summer 2013—begin impact assessment and field data collection</li> <li>Signage—tradeoff between safety and aesthetics/effect on views</li> <li>During peak season most accidents occur during slow speeds (but high congestion); opposite during off-peak periods</li> </ul>	<ul style="list-style-type: none"> <li>Context statement was approved</li> <li>Core values reviewed</li> <li>Issues reviewed</li> </ul>
TT #2	22-Jul-13	Review of Feasibility Study; Express Lane left vs. right option; Clear Creek County Concerns; debate over Cat Ex vs. EA; signage	<ul style="list-style-type: none"> <li>Clear Creek County Representative fears concerns have not been nor will be addressed, county has hired legal counsel; agree to review letter to ensure all issues are on tracking list</li> </ul>	<ul style="list-style-type: none"> <li>Revisions to core values and issues</li> </ul>

**I-70 Peak Period Should Lane  
SUMMARY OF ISSUES RAISED AT PROJECT LEADERSHIP TEAM AND TECHNICAL TEAM MEETINGS**

Abbreviations:

CCC—Clear Creek County  
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 PEIS—Programmatic Environmental Impact Statement  
 HOT—High Occupancy Toll  
 Auxiliary lane—extends from ramp to ramp

PEIS—Programmatic Environmental Impact Statement  
 HOT—High Occupancy Toll  
 Auxiliary lane—extends from ramp to ramp

Meeting	Date	Primary Agenda Items	Summary of Issues	Agreement Reached
			<ul style="list-style-type: none"> <li>▪ Safety concerns, i.e. access for emergency vehicles/room for broken down vehicles</li> <li>▪ Economic viability of project questioned</li> <li>▪ Clear Creek County not comfortable with Cat Ex designation; FHWA comfortable with Cat Ex</li> <li>▪ Feasibility Study is a document to layout information and help with decision making, not a document to make decisions</li> <li>▪ Several sign concepts discussed including speed changes</li> <li>▪ Right side: Requires more widening than the left; off/on ramps need paving and widening; signage increases</li> <li>▪ Left side: left express lane requires traffic to merge right; signing for left allows consolidation of PPSL and express land signing; lane configurations remain consistent during off/on peak hours; breakdown lane on left during peak hours, breakdown pullouts on right</li> </ul>	
TT #3	12-Aug-13	Discussion of criteria based on ROD vs. EA; baseline needs of both parties (CDOT/CCC); road width vs. safety; left side vs. right side; toll vs. free road; 103 bridge	<ul style="list-style-type: none"> <li>▪ Road/bridge width: 38 ft. vs. 40 ft.—FHWA not comfortable with 38 feet</li> <li>▪ CCC's main objective is protecting the creek</li> <li>▪ Left: hard shoulder, no need to reduce speed; minimum 11 signs; left side breakdown lane potentially more dangerous, trouble getting back onto main road</li> <li>▪ Right: acceleration lane difficult to see</li> <li>▪ Free lanes now will not be tolled in future</li> <li>▪ SH 103 bridge not good for left side option—biggest difference between left and right</li> </ul>	<ul style="list-style-type: none"> <li>▪ Agreed on issues-specific criteria for roadway width.</li> </ul>
TT #4	23-Sep-13	Left vs. right; roadway width; median vs. creek; acceleration and deceleration lanes	<ul style="list-style-type: none"> <li>▪ Left: doesn't affect environment as much; more consistent design; greater enhancement of safety and operational benefits; greater reduction of impacts to stakeholders due to less signage and structures</li> <li>▪ Managed lane: always on left; don't want it near accel and decel ramps; don't want trucks in it</li> <li>▪ Road width: 50% to 55% of corridor does not need to widen (FHWA wants wider, now called 39+ hybrid)</li> <li>▪ Median vs. Creek—Downieville:</li> </ul>	<ul style="list-style-type: none"> <li>▪ Agreed on the left side running option for the PPSL.</li> <li>▪ Agreed on issues-specific criteria for widening to the creek vs. the median and on acceleration and deceleration lanes.</li> </ul>

**I-70 Peak Period Should Lane  
SUMMARY OF ISSUES RAISED AT PROJECT LEADERSHIP TEAM AND TECHNICAL TEAM MEETINGS**

Abbreviations:

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 Auxiliary lane—extends from ramp to ramp

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 Auxiliary lane—extends from ramp to ramp

Meeting	Date	Primary Agenda Items	Summary of Issues	Agreement Reached
			<ol style="list-style-type: none"> <li>1. Six ft. into median -right shoulder, guard rail, vegetation stay same</li> <li>2. Took 6 ft. and move right— short retaining wall w/ guard rail, will lose vegetation—visual impacts; sliver median dictates shift towards median meaning no retaining wall</li> </ol> <ul style="list-style-type: none"> <li>▪ Median vs. Creek—Dumont EB: Widen 3 ft., no retaining wall; right of creek—lose vegetation (w/ retaining wall ~2.5 ft.); prefer to keep median and move towards creek (no riparian veg creek side), which includes retaining wall</li> <li>▪ Median vs. Creek—Fall River Rd: some veg, but not riparian; need to shift 2 ft.; widen to creek requires 3 ft. wall</li> <li>▪ Accel and Decel lanes:                         <ol style="list-style-type: none"> <li>1. Downieville—no anticipated widening on accel lane; reduced accel lane from 12 ft. to 6.5 ft. of widening w/ 450 ft. long wall 7 ft. to 4 ft. high; shift to median 6 ft. eliminates the wall</li> <li>2. Dumont—reduced widening from 13 ft. to 6 ft., reducing 7 ft. tall, 700 ft. long wall to 250 ft. long and 2.5 ft. tall; shift to median eliminates wall</li> <li>3. Fall River—no anticipated widening at decel lane; accel lane reduced from 11 ft. to 7 ft.; 2 ft. into median means one wall &lt;2 ft. tall and &lt;100 ft. of widening</li> </ol> </li> </ul>	
TT #5	7-Oct-13	Road width; vegetation/ drainage; median vs. creek; wall height/length; emergency response	<ul style="list-style-type: none"> <li>▪ West end Lawson: no median; no-option wall (3.8 ft. high existing wall); bad erosion—possibly add gutter to collect run-off.</li> <li>▪ East of Lawson: no-option wall; wall can be built that avoids riparian vegetation.</li> <li>▪ Downieville: shift to median—hold the right; shift to creek—hit riparian veg.; wall almost 4 ft.</li> <li>▪ Downieville to Dumont: animal-collision hotspot; median exists, but no vegetated median; cable barrier—does it affect animal crossing?</li> <li>▪ Dumont acceleration lane: 2.5 ft. wall, 250 ft. long; steepen south side of ditch (not much veg., except deciduous trees); clear of floodplain</li> <li>▪ Dumont-Mainline widening: wall towards creek 2.5 ft.; towards median tighten up ditch; some veg. impact on right side; steep slope would remain same; wall length 850 ft.; minimal veg. north, lots of sand—wall would help</li> </ul>	<ul style="list-style-type: none"> <li>▪ Agreed on the hybrid option for roadway width.</li> <li>▪ Agreed on two locations to widen to the median.</li> <li>▪ Agreed on the concept for acceleration and deceleration lane widening.</li> <li>▪ Agreed on issues-specific criteria for SH 103 bridge and other I-70 bridges.</li> </ul>

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			<ul style="list-style-type: none"> <li>▪ Fall River: 2 walls, 300 ft. long, 2-3 ft. high; towards median no impact to right; road is tipped, minimal ditch means run-off into roadway issue; trending towards creek side because of alignment if good drainage is established and area is revegetated</li> <li>▪ Idaho Springs (west of SH 103): walls in bad shape; put fascia on wall that looks like other walls; replace wall and make a bit longer due to decel lane</li> <li>▪ Emergency response: I-70 is primary response route; access to scene, ability to secure scene, traffic management, safety = most important; require clear lane for emergency access; access to north side of creek; port of entry considerations</li> </ul>	
TT #6	28-Oct-13	Definition of interim; median vs. creek; emergency response; Water Wheel Park enhancements; bridge options; pullout locations; signage; managed lane access	<ul style="list-style-type: none"> <li>▪ Interim: Time frame—CDOT reassess PPSL in 2020, CDOT will collect data annually and reassess prior to 2020 if needed; Agreement relative to days/hours of operation—as needed between 11 am and p.m.; Sat. &amp; Sun. December to March and July to September; holidays all year; emergency closures; weather dependent open/closure</li> <li>▪ Dumont and Fall River: Walls go towards creek because of drainage issues; drainage better controlled by adding retaining wall; no veg. in area due to mag chloride</li> <li>▪ Emergency Response: Staged assets, managed traffic management operations, active traffic management</li> <li>▪ SH 103: north toward town is tightly constrained, 3 options—widen north, widen south or split; north widening—need 5-6 ft., move highway centerline north, which impacts Water Street and ability of town to park on W St.; widening south impacts Water Wheel Park; a lot less impact south; widening is slightly less to south—opens up opportunity to enhance park area</li> <li>▪ Potential Park Enhancements: lessen road noise by lowering Greenway path by 4 ft.; SH 103 to EB I-70 lower to 10 yr. flood level plus 4 ft. wall helps noise issue; make access to creek safer</li> <li>▪ Bridge Ideas: 1. Reuse existing bridge; 2. clear span—raise elevation of SH 103 by 1 ft. (costs 5x more); 3. two span—allows for future flexibility, improved pedestrian safety, improved shoulders, trail connectivity</li> <li>▪ Pullout locations: probably not formalized but known to emergency responders; not adding infrastructure for pullouts; off-peak hours have 13</li> </ul>	<ul style="list-style-type: none"> <li>▪ Agreed on the location and height of retaining walls.</li> <li>▪ Agreed on emergency response issues.</li> <li>▪ Agreed on issues specific criteria for pull out locations, signage and managed lane access.</li> </ul>

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			feet of shoulders; on-peak hours vehicles move to refuge areas <ul style="list-style-type: none"> <li>▪ Signs: Efficient and consolidated</li> <li>▪ Managed lane access: frequency and location; how it affects signage</li> </ul>	
TT #7	18-Nov-13	Accident data; ROD; SH 103; I-70 bridges; signage considerations	<ul style="list-style-type: none"> <li>▪ <b>Accident data</b> <ol style="list-style-type: none"> <li>1. Looked at MP 230 to 242, which encompasses entire PPSL corridor; 54% of accidents EB, 46% WB</li> <li>2. Fixed objects = 38% of total, 58% WB; rear-end = 35% of total, 69% EB; sideswipe = 10% of total, 78% WB</li> <li>3. EB accidents: 72% fixed object accidents occur in winter, 73% on weekdays; 68% rear end accidents occur in winter, 49% occur on Sunday</li> <li>4. 780 accidents out of 50 million vehicles over 5 years</li> </ol> </li> <li>▪ <b>ROD:</b> project should be classified as a separate action or compatible with the ROD; FHWA is comfortable classifying projects as Tier 2; project is subject to all requirements outlined in ROD</li> <li>▪ <b>SH 103:</b> best to shift to the south, which impacts water wheel park, but mitigation measure have been determined; adding about 6 to 12 ft. of measures; nothing changed on overall analysis, but not positive about the impact on CLOMR or LOMR and will be another month before that determination can be made                             <ol style="list-style-type: none"> <li>1. Existing bridge modifications: SH 103 currently has sufficiency rating of about 60; any modification would look like band-aids, and not aesthetically pleasing; increased risks during construction in working with existing structure</li> <li>2. Clear span: option investigated, but structure depth would have to be increased; therefore, SH 103 would need to be raised or I-70 lowered to meet required vertical clearance; due to location of SH 103 can't raise it much without impacting adjacent ramps and bridge over creek to north; lowering elevation of I-70 creates sump condition which may allow water to pond on I-70; cost of this option 5x as much as two-span option</li> <li>3. Two-span: New, two-span structure designed to current design and safety standards; would provide adequate shoulders and wider</li> </ol> </li> </ul>	<ul style="list-style-type: none"> <li>▪ Agreed on the shift in alignment to the south just east of SH 103.</li> <li>▪ Agreed on the bridge replacement option for the SH 103 bridge.</li> <li>▪ Agreed on issues specific criteria for drainage, greenway, snow removal/maintenance and noise.</li> </ul>

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			sidewalk in addition to third lane for auxiliary movements; allow for flexibility for future development in area and aesthetically more attractive  <ul style="list-style-type: none"> <li>▪ <b>I-70 bridges:</b> no widening needed                             <ol style="list-style-type: none"> <li>1. East Idaho Springs Bridge: does not have vertical clearance to push another through lane; 2 options: lower I-70 or replace bridge; lowering I-70 would create significant problems; sufficiency rating is 50.2, which is borderline—50 is eligible for federal funding for rehabilitation; CDOT is resurveying and reevaluating bridge; CDOT is aware that there is another waterline under the interstate in that area</li> </ol> </li> <li>▪ <b>Signage considerations:</b> <ol style="list-style-type: none"> <li>1. Access: How to get in and out of new lane? When will traveling public be tolled?</li> <li>2. Tolling: Speed and volume—as volume builds, PPSL would open in order to allow for better speeds and higher traffic volume</li> <li>3. Static vs. Dynamic tolling: static prices and signs would not change; dynamic prices would be able to change depending on traffic conditions; 4 signs per access point, CDOT will do maintenance, dynamic tolling requires less signs</li> <li>4. Active Traffic Management (ATM): Can corridor be enhanced through different automations?</li> <li>5. Interchange exits:                                     <ul style="list-style-type: none"> <li>▪ Single-point access—get in to PPSL at US 40 and out at end</li> <li>▪ Intermediate access—start at US 40 with possible intermediate points after Dumont and west end of Idaho Springs; more merge points means more conflicts;</li> <li>▪ Continuous access—PPSL lane that you can get in and out of periodically with no definitive place; would require additional facilities to enforce and would affect tolling; team felt continuous access does not make sense and suggested eliminating it due to enforcement challenges</li> </ul> </li> </ol> </li> </ul>	
TT #8	16-Dec-13	WB Twin Tunnels; Off peak/peak details; emergency details, Twin Tunnels Tie-In; ALIVE updates, SWEEP updates; SH 103 interchange; signage; East Idaho Springs Interchange;	<ul style="list-style-type: none"> <li>▪ Twin Tunnels: No construction funding yet should know in January; staff working on design and CatEx; hoping construction starts in March</li> </ul>	▪

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		emergency pullouts	<ul style="list-style-type: none"> <li>▪ Off peak: signs preferably dark when not in use; no restriping needed; no tolling during off-peak; couple thousand feet to make change into PPSL</li> <li>▪ Peak: toll price based on traffic and revenue study; all vehicles are tolled no matter the occupancy</li> <li>▪ Emergency: ATM requires staff monitoring to ensure access for EMS; tolls will be voided if lane is closed due to emergency</li> <li>▪ Twin Tunnels: PPSL becomes Twin Tunnels express lane, which becomes the third lane</li> <li>▪ ALIVE: recommending median jump breaks; looking to replace chain link fence at Soda Creek with wildlife friendly fencing; including holes in the barriers for little critters</li> <li>▪ SWEEP: discussion about the impacts of improvement at SH 103</li> <li>▪ SH 103: no big impact on Water Wheel park; shifting alignment to the south eliminates impact to the city's parking, drainage and utilities along north side of I-70; total additional impact to the park is 12 to 14 feet—no loss in trail or plaza width</li> <li>▪ Signage: cannot attach signs to bridges to reduce clutter; at least 11 total FHWA-required signs</li> <li>▪ E Idaho Springs: structure is at end of its design life                         <ol style="list-style-type: none"> <li>1. Interchange Concept One: change skew, close ramp and pull all westbound decal off just west of bridge; how to build bridge keeping it at its current location? → this design makes project worse</li> <li>2. Interchange Concept Two: same decal for EB, put in traffic calming curves, remove asphalt, eliminate hard turn; tying into T intersection gets messy for people getting into interchange; safer for peds and kids crossing to creek</li> <li>3. Interchange Concept Three: roundabout with possible bike/ped lane, same 2 intersections; problem with roundabout for trucking industry and congestion with commercial traffic coming out of Idaho Springs and out of I-70 going to Denver</li> </ol> </li> <li>▪ Pullouts: 7 possible pullout locations identified; should be paved; required length = 510 to 710 feet, required width = 12 to 16 feet                         <ol style="list-style-type: none"> <li>1. East of Empire: concerns about wildlife and area is a wetland; concerns</li> </ol> </li> </ul>	

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			about truckers using it as rest area and chain station; concerns about trash maintenance 2. Lawson: recommended eliminating 3. Dumont: potential conflict with on-ramp (suggest keeping) 4. East of Spring Gulch: not a lot of room (recommend eliminating) 5. West of Fall River: wide, but area is extremely dangerous (suggest keeping) 6. West of Idaho Springs: close to off-ramp, close to bike path so may be some impacts to bike path—would need to shift bike path further south 7. East Idaho Springs: drainage concerns, potential rock cut (recommended eliminating) 8. Summary → keep only Dumont and West of Fall River Road	
TT #9	27-Jan-14	ITF recap; Clear Creek Rafting recap; constructability review; online public meeting; pullouts; environmental findings; signage; proposed signage; SH 103 Interchange; Exit 241 Interchange; noise; Greenway impacts	<ul style="list-style-type: none"> <li>▪ East Idaho Springs Interchange name changed to Exit 241 Interchange; lots of input from community; FHWA in support of interchange project</li> <li>▪ Bridge work will occur outside of rafting season</li> <li>▪ Constructability review: helps engineers and designers fine-tune the project and get their input on building time frame; contractors think window is too short to open PPSL in July—soonest it can open is probably mid-September to mid-November; peak summer months are July and August</li> <li>▪ Online: peak date was December 16; 37 total comments; 24 commenters; 53 comment issues (14 positive, 7 toll, 7 alternatives); 40+ poll participants</li> <li>▪ Pullouts: 2 emergency pullouts (Dumont and West Fall River Road) required length 510 ft to 710 ft and width 12 ft to 16 ft; should be paved; should be large enough to accommodate tractor trailer and one piece of emergency equipment</li> <li>▪ Environmental: impacts are toward low end of severity                         <ol style="list-style-type: none"> <li>1. Impacts to lynx not likely to adversely affect</li> <li>2. Adding median jumps with opening on bottom in 3 locations</li> <li>3. Minimal impacts to wetlands</li> <li>4. Increase in PM10 will be well below the standard</li> </ol> </li> </ul>	

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			<ul style="list-style-type: none"> <li>5. Decrease in noise and it will be perceptible</li> <li>6. Minimal impacts to riparian/vegetation</li> <li>7. No section 4(f) uses; however there will be temporary occupancy</li> <li>8. Environmental Justice—retaining wall at Lawson to reduce noise by 2 to 4 dBA</li> <li>9. Visual impact likely to be minimal</li> <li>▪ Signage: electronic signs will be used to help emergency vehicles; have to balance visual impacts to corridor with safety of drivers; team decided ATM signs should be seen 75% of the time, but should not be lit all day</li> <li>▪ Proposed Signage: overview of possible signage wording and location</li> <li>▪ SH 103: Intent is to protect motorists below from snow and objects, protect peds and bicyclists on SH 103 bridge, and provide aesthetic element (will also apply to Exit 241 bridge)                         <ul style="list-style-type: none"> <li>1. Standard Pedestrian Rail: vinyl coated chain link with Type 7 barrier, no columns—does not meet aesthetic guidelines</li> <li>2. Picket Pedestrian Rail: iron pickets with Type 7 barrier, no columns—meets guidelines with some alterations to meet aesthetics</li> </ul> </li> <li>▪ Exit 241: Existing conditions: Concern with ramp moving at high speed; potentially dangerous                         <ul style="list-style-type: none"> <li>1. Option 1: roundabout</li> <li>2. Option 2: interchange</li> </ul> </li> <li>▪ Noise                         <ul style="list-style-type: none"> <li>1. Type I: characteristics mean no noise analysis needed; key element is that project is temporary—if project becomes permanent Type 1 will apply</li> <li>2. Highway traffic noise regulations: Noise Abatement Criteria (NAC) are categories of land use that define allowable noise levels and threshold for noise mitigation</li> <li>3. Abatement Criteria: how to reduce noise when an impact is identified; all areas exceeding NAC must be considered for noise abatement; all noise abatement must meet <i>feasibility</i> (constructability) and <i>reasonableness</i> (reduction design goal must reduce noise 7dBA; cost</li> </ul> </li> </ul>	

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			<p>benefit; benefited receptors = 5 dBA of benefit from wall) criteria to be constructed using federal funds</p> <p>4. Mountain Corridor Noise Research: modeled noise reduction effectiveness/distribution; conducted modeling of noise wall scenario; modeling results show as you move away from wall there can be complications where more noise is brought by wall vs. no wall; retaining wall has slight benefit, but doesn't protect against truck traffic</p> <ul style="list-style-type: none"> <li>▪ Greenway: temporary closure of some on-ramps resulting in short detour for drivers accessing greenway                             <ol style="list-style-type: none"> <li>1. SH 103 interchange closure will cause detour around and under bridge</li> <li>2. Water Wheel Park detour over bridge</li> <li>3. Exit 241 vicinity: working on determining impacts</li> <li>4. Scott Lancaster Trail bridge: some access issues during construction; will ensure safe access underneath I-70</li> </ol> </li> </ul>	

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Local Agency ITF #1	23-Aug-13	Managed Lane; ROD compatibility; definition of interim; CatEx; ramp closures; Active Traffic Management	<ul style="list-style-type: none"> <li>▪ Managed Lane: level of infrastructure required is an issue</li> <li>▪ ROD: Compatibility dependent on scope of project; 2 approaches by CDOT and FHWA:                             <ol style="list-style-type: none"> <li>1. Project is operational and fits within operational, non-infrastructure improvements</li> <li>2. Pursue project as separate action (does not preclude Preferred Alternatives in PEIS and is not permanent solution), has independent utility as interim solution; once project is further defined FHWA and CDOT will decide on approach to ROD compatibility and submit to FHWA legal if needed</li> </ol> </li> <li>▪ Interim: setting a time horizon of 2020 to assess project; CDOT and FHWA want flexible approach by employing triggers and performance measures; concern from CCC that over time PPSL becomes permanent solution</li> <li>▪ CatEx: CDOT and FHWA comfortable with level of NEPA clearance</li> <li>▪ Ramp closures: could provide benefit to local road network and access; makes addressing accel lanes at ramps a non-issue</li> <li>▪ ATM: methods used to manage traffic to the right speed and access for emergency response</li> </ul>	Agreement on hybrid highway widening
Local agency ITF #2	26-Aug-13	Acceleration lane designs; median widening options	<ul style="list-style-type: none"> <li>▪ Acceleration lanes: length requirement, taper considerations, main line considerations, recoverable area, sight distance; physical infrastructure requirements—required widening, length and max height of wall, required accel/decel length</li> <li>▪ Empire Junction: possibly widen toward median (could impact emergency turnaround); vegetation at gore limits sight; consider pushing start of PPSL east to avoid widening impacts</li> <li>▪ Downieville: future bike path may not be accommodated by design; no location for future path identified—difficult to ID potential impacts</li> <li>▪ Dumont and Lawson: consider closing accel ramp during peak times; cut through traffic to frontage road could benefit communities</li> <li>▪ Fall River: Potential ramp closure, possibly full time—mitigated with bridge over Clear Creek to connect frontage road and access interstate at West Idaho Springs; removing ramp could help with cut-through traffic</li> <li>▪ West Idaho Springs: ramp closure would help with peak hour Colorado Boulevard gridlock; Idaho Springs believes local businesses would resist and not pursue</li> </ul>	Agreement on acceleration and deceleration lane widening
Section 106 ITF #1	29-Aug-13	106 process; define and discuss Area of Potential Effects (APE); effects of PPSL; project elements that could affect the APE	<ul style="list-style-type: none"> <li>▪ Group agreed upon an initial APE to be used for survey purposes</li> <li>▪ Direct effects of PPSL: no effect on construction of historic properties; no new ROW required</li> <li>▪ Indirect effects of PPSL: visual impacts of noise barriers, additional pavement, signage, bridge modifications and retaining walls</li> <li>▪ Noise: minimal increase; abatement is challenging due to canyon walls; concern over hours of operation</li> <li>▪ Project elements: minor widening of mainline, retaining walls, additional signage, pull outs, interchange improvements, and possibly noise abatement</li> <li>▪ APE Empire Segment: focuses on signage impacts</li> <li>▪ APE Lawson Segment: includes first line of homes due to possibility for retaining and/or noise walls</li> <li>▪ APE CDOT: includes properties adjacent to CR 308; conducting an intensive level survey of Dumont, Downieville and Lawson as part of I-70 West Section 106 PA commitments</li> <li>▪ Downieville/Dumont Segment: sign changes; accel lane changes may affect creek; expand in Dumont to capture eligible properties on south side and Dumont school; find mining activity</li> <li>▪ Fall River Segment: maintain important visual context—mining country</li> </ul>	Agreement on initial boundaries of APE

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			<ul style="list-style-type: none"> <li>▪ West Idaho Springs Segment: Stanley Mine; extend to include Maude Monroe mine</li> <li>▪ SH 103 Segment: segments eligible for NRHP; include water wheel; area includes hydropower plant; Blue Ribbon Tunnel possibly included; awareness of hot springs site—NRHP, also area of native importance; George Jackson historical marker</li> <li>▪ East Idaho Springs Segment: awareness of Spruce Mill; awareness of view of Argo Mill from highway</li> <li>▪ Twin Tunnel Segment: signs</li> <li>▪ Additional info required: mine sites and tunnels beneath road, railroad grade, Spruce Mill Site, Lawson School, George Jackson site, Blue Ribbon Mine and hot springs site</li> </ul>	
Local Agency ITF #3	9-Sep-13	Time frame of PPSL; peak period definition; left vs. right; accel/decel lanes	<ul style="list-style-type: none"> <li>▪ Time frame: CDOT commits to re-assess PPSL in 2020 for overall purpose, need and effectiveness of implementation of components of Preferred Alternative; also commits to collect data regarding volume, travel time reliability, traffic counts and traffic type, revenue, safety/crash data</li> <li>▪ Peak period definition: period of 3 hours or more where volume exceeds 2,900 vph; PPSL expected to run 58 days of year</li> <li>▪ Left: 12-foot widening when substandard, same as right if made standard; trucks in right lane for left option; left signage required</li> <li>▪ Right: 8 ft. widening when substandard, same as left if standard; trucks in center lane for right option; right lane needs to be as small as possible for right option, precludes traditional truck right-lane use; 50% more signage required; consensus reached—left side PPSL</li> <li>▪ Accel/decel: Local Agency ITF design team refined design of accel and decel lanes; FHWA will not accept anything less than existing parameters; only 2 decel lanes would be modified—US 40 and east of Idaho Springs</li> </ul>	<ul style="list-style-type: none"> <li>▪ Agreement on process for defining interim</li> <li>▪ Agreement on left vs. right</li> </ul>
SWEEP ITF #1	20-Sep-13	Project overview, info and updates; Clear Creek SCAP; wetland delineations; twin tunnels; historical mines; implementation process; plans for BMPs	<ul style="list-style-type: none"> <li>▪ Overview: add minimal pavement in eastbound direction used during peak periods; retaining wall possible for areas with additional pavement; accel and decel lane widening (more on accel lanes); possible bridge replacement at SH 103 and interchange area; visual impact of signs; potentially noise walls; installation of water quality features; possible revegetation of riprap; minimal riparian impacts</li> <li>▪ HOV: not effective as in metro area; enforcement is a constraint</li> <li>▪ Toll: variable price based on traffic volume and travel speed; will encourage use of transit; can close when needed during emergency</li> <li>▪ SCAP: will implement sedimentation control, retrofit any inlets, add sediment basis adjacent walls and pull out areas</li> <li>▪ Twin Tunnels: opening in December; frontage rd. restored to original condition; very little contaminated materials in the SH 103 area</li> <li>▪ Mines: Cadmium runoff project; potential for mine water run-on (rather than run-off) onto highway—sediment pond is full</li> <li>▪ Implementation: standing water and wetland at US 40; wetland at Water Wheel Park and near decel lane at Lawson—no impact as features are at base of fill slopes that will not be affected</li> </ul>	Agreement that the Proposed Action has the potential to improve water quality compared to the existing condition.
ALIVE ITF #1	24-Sep-13	Project overview; LIZs; barriers	<ul style="list-style-type: none"> <li>▪ Overview: about 1/2 of corridor will require widening 0—3.5 ft. of additional pavement; preliminary design late November, final design spring 2014, construction summer 2014, open summer 2015; culvert extensions possible—for wildlife usage;</li> <li>▪ LIZ Clear Creek Junction: Signage improvements (Twin Tunnel improvements: fencing, culvert, increasing bench beneath bridge for wildlife movement)</li> <li>▪ Empire Junction: infrastructure converging; ultimate goal to consolidate barriers when interchange reconstructed</li> <li>▪ Critical sites: Fall River Rd., Spring Gulch Rd., Mill Creek, Clear Creek</li> <li>▪ Barrier Effects: retaining walls with barriers adds 3 ft. height—deer reticent to jump, may cause animals to stand in travel lane if they can't jump; loss of median reduces potential refuge area for animal crossing highway, but also means fewer walls—which will inhibit wildlife more, encroaching into median or more walls?</li> </ul>	Agreement that permeability of highway will not be greatly affected by the project and that opportunity to improve the existing conditions will be analyzed.

**I-70 Peak Period Should Lane  
SUMMARY OF ISSUES RAISED AT ISSUES TASK FORCE MEETINGS**

Meeting	Date	Primary Agenda Items	Summary of Issues	Agreement Reached
Section 106 ITF #2	8-Oct-13	Drainage, APE, historical sites/noise	<ul style="list-style-type: none"> <li>▪ Revegetation: provides cover for wildlife, but may also act as attractant</li> <li>▪ Lynx: affected by lights—fewer lit signs the better;</li> <li>▪ Drainage: short wall at Lawson means drainage off highway is improved, erosion issues won't be as bad</li> <li>▪ Updated APE: expanded in recognition of possible noise wall, retaining wall and potential noise concerns at Lawson</li> <li>▪ Historical property determinations: No historic properties affected; no adverse effect (adverse effect—noise gets evaluated if it affects the qualities that make historic property eligible, or if it affects the function of historic property). Reached agreement that the APE is fine as is.</li> </ul>	Agreement on the revised APE.
SH 103 ITF #1	11-Oct-13	Aesthetics; recreation; SH 103 bridge discussion; shift I-70 north or south	<ul style="list-style-type: none"> <li>▪ Aesthetics: CDOT fence, buildings adjacent to interstate and school bus yard make highway ugly</li> <li>▪ Recreation: put-in for boaters, cycling (most-attended competition in country), fishing (fence obstructs access); lots of pedestrian traffic, including kids</li> <li>▪ <b>SH 103</b> <ol style="list-style-type: none"> <li>1. Sufficiency rating: used by CDOT and FHWA to understand what shape bridge is in—shoulders are too narrow making functionality obsolete. PPSL southern tier needs to go, which creates penalty space to get width for additional lane</li> <li>2. Bridge nearing end of life—use existing or build new? new = \$2 to \$3 million</li> </ol> </li> <li>▪ <b>I-70 Shift</b> <ol style="list-style-type: none"> <li>1. North: move median over—no move at all means no PPSL; constrained—need 5 to 6 ft.; can leave accel lane as is, does not impact bike path or Water Wheel Park, but does begin encroaching into parking lot; don't have to take any property that CDOT doesn't own; drainage, fiber optic, anything below ground would need to be moved—costly --&gt; South shift preferred over north shift.</li> <li>2. Noise: lowering elevation of trail by a few ft. greatly reduces road noise, however, need to be cognizant of 100-year flood level (under 100-year level can get insurance, over level you can't)—need to design to avoid being flooded; near Water Wheel Park—don't do open guard rail to help with noise</li> </ol> </li> </ul>	Agreement to shift highway to south just east of SH 103 at the Water Wheel Park area
SH 103 ITF #2	24-Oct-13	Future improvements; key issues and areas of Idaho Springs; park and trail improvements; SH 103 bridge	<ul style="list-style-type: none"> <li>▪ Improvements: can improvements be built so as not to preclude future improvements; new bridge at SH 103 could accommodate future improvements; roadway improvements could prove more challenging; Idaho Springs does not want improvements to go north.</li> <li>▪ Idaho Springs issues/areas: pedestrian movements; destinations; historic sites; schools, recreation centers and other community facilities; importance of accommodating all models of transportation across SH 103 bridge; traffic movement, including trucks resulting from I-70 closures</li> <li>▪ Park &amp; trail improvements: trail could be lowered four feet to six feet but above 10-year flood level; wall with aesthetic treatment, addition of plaza, creek access, movement of existing statue, walls as seating, revegetation, and paving</li> <li>▪ <b>SH 103</b> <ol style="list-style-type: none"> <li>1. Phasing: 2 month road closure—2 miles out of direction travel; or keep one lane open during construction; or keep 2 lanes open—longest construction time</li> <li>2. <i>Reuse of existing</i>: mix of existing and new bridge (least opportunity for aesthetic treatments); only 1 lane open during construction; sidewalks would not be improved; north half weaker, south half stronger; does not meet future needs and requires future improvements; necessary to lower I-70—potential water pooling on interstate; 2 months full closure, 6-9 months total construction</li> <li>3. <i>Clear span bridge</i>: requires deeper structure for load, which raises elevation and results in thicker bridge; may require changes at ramps and potentially SH 103 over creek; requires full closure of SH 103; costs 5 times more; 9-12 months construction; costly to</li> </ol> </li> </ul>	Agreement to close SH 103 bridge for period of construction.

**I-70 Peak Period Should Lane  
SUMMARY OF ISSUES RAISED AT ISSUES TASK FORCE MEETINGS**

Meeting	Date	Primary Agenda Items	Summary of Issues	Agreement Reached
			build offsite and move into place  4. <i>Two span bridge</i> : SH 103 stays open during first phase; includes auxiliary/turning lane; minimize ramp impacts; pier in center of highway would allow for future improvements; can improve bike/pedestrian facilities w/ 10 ft. sidewalk; 2 months full closure (done in shoulder season), 6-9 months total construction	
Section 106 ITF #3	2-Dec-13	COMPASS surveyed properties; signage; lighting; SH 103	<ul style="list-style-type: none"> <li>▪ COMPASS: Georgetown-Silver Plume Historic District (HD), Lawson HD (HDR recommending an NRHP eligible historic district in Lawson), Anderson Store (recommended as individually eligible), Central Colorado Railroad Grade (non-contributing to the eligibility of the overall segment, plan to treat property as eligible), Dumont Train Station (recommended eligible under Criterion C), Maude Monroe Mine (recommended eligible under Criterion C), Big 5 Mine (still under consideration), SH 103 (HDR will prepare an update for the APE segment), Idaho Springs Commercial District (City would like district extended south to Water Wheel), Water Wheel (CDOT recommends eligible under Criterion A and under Criterion Consideration F -- does not include park, just wheel), US 6/US 40 (will be assessed for effects)</li> <li>▪ Signs: Concerns about the effect of signage along I-70; being able to see the Maude Monroe Mine and the Water Wheel site will need to be evaluated; CDOT has completed some analysis of existing interstate signage but needs to look at areas where private signs could be consolidated; local and private signs need to be quantified and evaluated as part of overall visual landscape</li> <li>▪ Lighting: Can flashing lights be dimmed at night? Where will lights be added? Will lights be on all the time? Can lights not be placed in residential areas? Can lights be directed down? How many signs will be lighted?</li> <li>▪ SH 103: Consulting parties see it as a tourism gateway for Idaho Springs and the state, and would like to see more information about this in historic context in the report</li> </ul>	Agreement with initial eligibility determinations; request to review select properties again.
ALIVE ITF #2	3-Dec-13	Overview; AVC Hotspots; lynx; Empire Junction Wetland	<ul style="list-style-type: none"> <li>▪ Overview: SH 103 Bridge will be replaced at Idaho Springs, East Idaho Springs Bridge will probably be replaced; there will be 10 retaining walls and more signs; signage is being discussed with stakeholders; almost all on-ramps and some decel ramps will be widened to 4 to 8 feet; there will be improvements to Water Wheel park</li> <li>▪ Hotspots                         <ol style="list-style-type: none"> <li>1. Empire Junction: possibly use box culvert below interstate with benches on either side for dry travel year round; use fencing to divert animals to safer area</li> <li>2. MP 233 to 234: No solutions identified in this location; median jumps are not an option as existing median is W beam and/or cable, which ungulates can't jump over</li> <li>3. Fall River Road: No solutions identified in this location; median jumps are not an option as existing median is W beam and/or cable, which ungulates can't jump over; possibly use fencing to divert animals, but no over or under crossings present; agreement reached that animals should not be moved via fencing unless viable safe crossing available</li> <li>4. West end of Idaho Springs: Possibility retrofit wall on west end of town and median for easier animal crossing</li> <li>5. Soda Creek Road: Opportunity to remove existing fencing and replace with wildlife friendly fence where road passes beneath highway -- agreed this is a good low-cost solution</li> <li>6. Lynx: will not be greatly impacted by retaining walls as most occur at elevations lower than those inhabited by lynx; proposed action may affect but not adversely affect lynx</li> <li>7. Empire Junction Wetland Area: Not many solutions for this area as trimming vegetation is cost-prohibitive and maintenance intensive; don't want to draw animals to wetland by making it more attractive; animal crossing signs could be installed, but are ultimately ineffective in the long term</li> </ol> </li> </ul>	<ul style="list-style-type: none"> <li>▪ Agreement to analyze median jumps.</li> <li>▪ Agreement to replace chain link fencing with wildlife friendly fencing at Soda Creek.</li> <li>▪ Agreement to review key areas with CPW in the field.</li> </ul>
SWEEP ITF #2	5-Dec-13	Wetland impacts; Floodplain impacts; riparian vegetation impacts; CPW fish	<ul style="list-style-type: none"> <li>▪ Five wetlands delineated, potential impacts limited to wetlands #1 and #3; impacts at wetland #1 will likely be avoided entirely; wetland</li> </ul>	Agreement with the proposed water quality improvements,

**I-70 Peak Period Should Lane  
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		data; Water quality treatment	<p>impacts to #3 would result from improvements to Water Wheel Park (mitigated by creating wetlands)</p> <ul style="list-style-type: none"> <li>▪ Floodplain impacts: only adverse impact is adjacent to retaining wall on upstream side of SH 103, the crib wall is being scoured and adding sediment to the Creek; wall is being refaced -- expanding the width into the creek, which will stabilize the creek edge leaving large boulder in place; to create net zero effect to floodplains material will be removed and bed lowered; only LOMR necessary</li> <li>▪ Riparian impacts: currently calculated to be 0.5 acre, which is conservative and based on a 10-foot buffer including one area where improvements are signage only</li> <li>▪ Fish data: brown trout present throughout Clear Creek, but no redds upstream or downstream of SH 103; no impacts to spawning habitat</li> <li>▪ Water quality: about 50 acres of existing pavement in EB; project will add about 1.5 acres in EB throughout corridor (3% increase); goal is to ensure that water quality is not made worse (with proposed BMPS 20% to 25% of runoff will be captured); 8 basins and 9 inlets proposed; curb and gutter will be implemented</li> </ul>	including sediment ponds and sediment trap inlets.
Local Road Network Issue - ITF	13-Jan-14	Update on proposed and possible actions; concept for Frontage Road metering; concerns of Twin Tunnels widening; "Bus on Shoulder"; concerns of PPSL; problem areas; management strategies for Local Mobility	<ul style="list-style-type: none"> <li>▪ Limited widening associated where ramps exist; 5 strategic areas will be provided to alleviate breakdowns and accidents; new signs will be mounted over the shoulder lanes—not on a gantry system that spans entire highway; tolls collected electronically; possible 50% toll share with Idaho Springs</li> <li>▪ Metering could be used to manage traffic flow to the benefit of locals; concern expressed due to local road system traveling through residential areas → traffic counters should be deployed on entrance and exit ramps to understand local road and interstate interactions</li> <li>▪ Twin tunnel lanes are not clearly marked—drivers don't realize there are three lanes; suggestions made to consider better striping and addition of reflectors or delineators</li> <li>▪ "Bus on Shoulder"—allowing busses to use shoulder during periods of congestion; before commencement there should be coordination with PPSL project</li> <li>▪ Concerns—congestion caused by interstate traffic on local roads; safety for bikers, peds and runners; lack of reliable travel times for residents; lack of connectivity because local road network is not complete</li> <li>▪ Problem areas—Connectivity:               <ol style="list-style-type: none"> <li>1. Loveland to Bakerville</li> <li>2. Silver Plume to Georgetown</li> <li>3. Hidden Valley to Kermits</li> </ol> </li> <li>▪ Problem areas—Congestion:               <ol style="list-style-type: none"> <li>1. US 40 through Empire to Empire Junction.</li> <li>2. CR 306/Alvarado Rd (GT to Empire Junction, Lawson)</li> <li>3. US 40/CR 308 (Empire Junction to Lawson, north side of I-70)</li> <li>4. CR 308 (Lawson to Dumont)</li> <li>5. CR 312/Stanley Road (Dumont to IS)</li> <li>6. Colorado Blvd</li> <li>7. CR 314 (IS to Hidden Valley)</li> </ol> </li> </ul>	PLT will be established for frontage road metering. Continued coordination with the PPSL team.

**I-70 Peak Period Should Lane  
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			<p>8. Possibly Bakerville to Silver Plume</p> <ul style="list-style-type: none"> <li>▪ Problem areas—Confusion                             <ol style="list-style-type: none"> <li>1. Dumont</li> <li>2. Silver Lakes</li> <li>3. Possibly Bakerville to Silver Plume</li> </ol> </li> <li>▪ Improvements to local access/mobility: Fall River Bridge—could connect to an alternative route to Idaho Springs for locals during peak congestion, also popular for cyclists, and a bridge connecting Stanley Road to Fall River Road would eliminate the dangerous situation                             <ol style="list-style-type: none"> <li>1. Local mobility—Riverside drive be paved and used as alternative route; recognize that local road system is subject to mixed authority; complete improvements to CR 314 from exit 241 is important for traffic flow, safety and property owners</li> </ol> </li> </ul>	
Exit 241—ITF	21-Jan-14	Review of existing conditions; review of options; decisions	<ul style="list-style-type: none"> <li>▪ Public input received included:                             <ol style="list-style-type: none"> <li>1. Keep the exit open to the greatest extent possible during construction</li> <li>2. Work to improve the pedestrian and cycling connections. It is unsafe to access the ball fields.</li> <li>3. The existing interchange is not intuitive.</li> <li>4. Concerns regarding roundabouts causing confusion for motorists.</li> </ol> </li> </ul>	The bridge and interchange need to be replaced, a second meeting will be held to determine what type of interchanges/intersections will be used north and south of the highway.
Exit 241—ITF	04-Feb-14	SH 103 bridge; interchange concepts	<ul style="list-style-type: none"> <li>▪ No easy way to detour traffic and shut I-70 down at bridge; Bridge enterprise will pay for detours and tie-ins but not roundabouts/interchange work; EB off ramp would get tighter with required widening of I-70 to south</li> <li>▪ Roundabouts w/ direct WB ramp: new bridge must be higher for vertical clearance requirements; required wall of about 17' max height; merge point at end of ramp with bridge may be more dangerous than existing movement; new bridge cannot be built on west side of existing bridge due to ROW and utility constraints</li> <li>▪ Roundabout w/ hook WB ramp: high volume of traffic and stopped traffic in roundabout are main challenges; bigger roundabouts have higher speeds; smaller roundabouts are challenging for trucks to navigate → most support for this option</li> <li>▪ Pedestrian circulation: ball fields are a destination; greenway trail comes in from east; pedestrian underpass available for access to south of highway; PPSL does not have funding for separate pedestrian structure over I-70</li> </ul>	Two roundabouts will be used, once north and one south of the highway.



## Public Meeting

April 14, 2014

Elks Lodge, Idaho Springs

A general public meeting was held on April 14, 2014, for the I-70 Eastbound Peak Period Shoulder Lane project. The purpose was to provide information about the PPSL project and answer questions about the design and construction plans.

The meeting was attended by 43 people. An open house was set up with stations providing overall design information, information about walls, bridges, Water Wheel Park, signage, Exit 241 (including interchange alternatives considered, why the roundabouts were recommended and the safety statistics for roundabouts), construction details including detours while the SH 103 bridge was going to be closed and project benefits. Approximately 12 staff members from CDOT and HDR were present to answer questions. Steve Long from HDR gave a presentation followed by a question-and-answer session. The following questions were asked:

1. *During peak periods, what will happen if someone has a flat tire? What will happen is that we will have additional Courtesy Patrol who will clear the disabled vehicles out of traffic quickly. We also have pull-offs or off-ramps at every mile.*
2. *On bridges, you will raise the elevation of the bridges? Today the clearance is substandard. Can we lower the road instead of raising the bridge? The bridge replacement will add pedestrians and bicycle facilities. We also looked at just widening the bridge but because the bridge condition itself is so bad, this would not work. In addition, lowering the road creates drainage problems.*
3. *What is the time line? Construction is starting in June—mostly wall construction. Interchanges will occur early next winter. We will build some elements in a precast, accelerated bridge construction manner. In April and May 2015 is when we are anticipating closing and building the SH 103. The lane will be open to traffic in fall of 2015.*
4. *Where will the peak period shoulder lane end? It will end at the existing new third lane that goes through the new EB tunnel.*
5. *Could you describe the handling of pedestrian movement during construction? Steve described the new pedestrian facilities and where the detours would be.*
6. *What kind of contract is this? There are three difference types of contract: CM/GC, Design-Build-Build, and Design-Build. This project is planning to use the CM/GC contract.*
7. *Where is the money coming from to fund it? This will be both state and federal.*
8. *Where will toll money go? The amount of revenue generated with cover operating and maintenance costs. If any is left over, it will stay in the corridor*
9. *What about the rest of the bridges? None of the rest of the bridges needed to be widened or replaced. They are wide enough now to handle this extra traffic*

10. *For transportation impacts, if this is only a moderate impact what would be a major impact?* If we were adding a full lane with full shoulders and it would be open all the time, that might be classified as a major impact.
11. *Is there a NEPA document?* Yes, we have written a NEPA document that FHWA is currently reviewing. If there are any comments from tonight that need to be included in that document, we will do so
12. *What about creek impacts?* We really only have temporary creek impacts. We are not narrowing the creek in any place.
13. *What about the rafting put in at SH 103?* We are fully aware of the put-in and have met with the rafting community to discuss it. As long as we are not constructing in the area during the heavy rafting season, they said the work we are doing in the area should not be a problem.
14. *Why is this better than adding a third lane?* Tony DeVito added that the PEIS constrained the improvements that could be made in this part of the corridor. This is an operational improvement. It is an interim project—10 years to 15 years.
15. *How long will this really be usable?* We are currently looking at 10 years to 15 years, but it may last longer than that. Structures for sure have a longer life than 10 to 15 years.
16. *How can we find out better information related to WB Tunnel construction delays? That it will be closed some time during 8:00 AM to 5:00 PM is not good enough.* Tony assured the group we are doing the best we can to predict construction timing but with rock scaling it is harder to do.
17. *If you close I-70 there is too much traffic on Virginia Avenue and other local roads. We need better information. A certain time period will be really helpful.* Crystal: There is a meeting tomorrow with the Contractor. Rock scaling is taking place Monday through Thursday from 8:30 AM to 5:00 PM. There will be two complete closures for 30 minutes at a time. Then it will be open for 45 minutes. Crystal said she really wants to work with the community.  
  
When we are in the tunnel, it is hard to get a predictable schedule. It will be more predictable after the tunnel work is done.
18. *Who is doing the construction? Will it be an Australian company like US 36?* Tony said this will not be a P3 project like US 36 is. The CM/GC approach will look for the best value.
19. *Between 1900 Miner and 2200 Minor, will there be any property taken?* No. No right-of-way is needed.
20. *What does it take to limit the number of cars on the road? Does that need to go to the legislature? We cannot even get out of our properties on Colorado Boulevard.* The interstate highway system cannot be regulated that way. Tony said that people are choosing not to drive now. These improvements will keep more traffic on I-70 and off the frontage roads.

21. *We have had people racing up alleys. Can we include signs to keep people from doing that? Can we add a stop light? Tony responded that enforcement from the local police is key to this problem.*
22. *Can we shut down interchanges? That can be done at a local level.*
23. *Why are we building a third lane through the tunnel if cars are going to be talking to each other in the future? Clear Creek County is paying the price for Vail and Summit County who are receiving most of the benefit. Tony noted that this investment is also benefitting Clear Creek County residents by reducing traffic on local roads, improving the interchanges, adding pedestrian and bicycle facilities, improving Water Wheel Park*
24. *Going westbound, what is the point of the larger tunnel? There could be other operational benefits that are needed—like the bridge at the bottom of Floyd Hill. It is a stepping stone to possible other improvements—like a westbound PPSL.*
25. *Was there any deterioration in the WB tunnel after the EB tunnel widening? No.*
26. *Is there anything that we can do to keep traffic away from Colorado Boulevard/Virginia Street? We will work with local communities to see if there is anything else we can do. This is an issue during construction. We need to know when this will be happening during construction.*
27. *When will Colorado Boulevard improvements start? The City Council is discussing this tonight.*
28. *Is it possible that those of us east of downtown will have any kind of noise mitigation? One concern is affecting the views. If there is a westbound project that could be considered...*
29. *What about Jake brakes? These should be muffled, but this is not enforced.*
30. *Could there be a pavement treatment that muffles sounds? We tried that out but it did not work well with snow removal. The freezing we have can create problems with accidents.*
31. *How much will toll cost? We are not sure. It is being studied right now. It will be as low as possible to get people to use it.*
32. *One of the VMS messages on I-70 in the metro area said I-70 was closed at Twin Tunnels. Tony said we will check into that.*
33. *What is the maximum speed limit in the PPSL? 45 mph.*
34. *There are a lot of CDOT projects coming up—repairing, construction at EJMT—could we have a timeline and matrix of what is happening when and how does it affect pedestrians, bicyclists, and cars, so we can plan our trips? Crystal is putting this together.*
35. *Will there be a new face on the eastbound Twin Tunnels? Yes.*
36. *Thank you, Steve and Tony, for pulling this together. We are receiving funding for the Greenway also. We appreciate your hard work.*

## EB I-70 Peak Period Shoulder Lane

Public Meeting, April 14, 2014, Elks Lodge, Idaho Springs

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37. *We do not want to discourage the public from stopping in Idaho Springs. We want to make sure people do not get tolled twice.* It is unlikely people will want to get back in after Idaho Springs because there is likely to be very little congestion past that point because of the new lanes
38. *Tim Mauk noted that in Minneapolis, the toll rate was \$6 to \$7 for most trips with a maximum of \$12.*
39. *Can the city police patrol Colorado Boulevard? Yes.*

### Comments During Open House

40. *Could rafters put in at the Water Wheel Park?* This could be considered.
41. *Will snow plows throw snow on any houses close to the interstate?*

### Comments from Comment Sheets

42. Sounds great. Wish we had started 20 years ago. Build it and keep going west with more of it.
43. Add stop lights on Colorado Boulevard and 1st. Add stoplight instead of stop sign at Downieville?
44. Could we have a complete plan on one timeline for all construction in 2014–2015?
- Twin Tunnels—tunnel widening
  - Twin Tunnels—rock face blasting
  - PPSL widening, retaining walls
  - PPSL—interchange work
  - PPSL—Hwy 103 bridge
  - PPSL—Exit 241 bridge
  - PPS—rockfall mitigation
  - Restoration of CR 314
  - Restoration of Game Check Station
  - I-70—repaving EJMT (through CCC)
  - Hwy 103 repaving
  - Any work on Colorado Boulevard, GT rockfall (what other projects?)

On the timeline please include impacts to I-70 and the local road network and expected detours for autos, bikes, pedestrians, rafters.

45. Need more detail regarding Water Wheel Park.