



## Floyd Hill Design Technical Team Meeting Summary

April 21, 2023, 9:00 AM to 12:00 PM

CDOT Golden Office – Lookout Mountain Conference Room and Virtual (Zoom)

### 1. Introductions, Meeting Purpose and Project Updates

Jonathan Bartsch, CDR Associates, opened the meeting, prompted introductions, and reviewed the agenda.

The purpose of the meeting was to discuss:

- *Project Updates & Early Projects*
- *Follow Up Discussion: Structure Barrier Types*
- *Introduce West Section 60% Design Overview*
- *Introduce West Section Signing and Walls*
- *Introduce WB Off Ramp to Hidden Valley Intersection Improvements*
- *Review Upcoming TT Topics*
- *Wrap Up & Next Steps*

TT members confirmed the meeting agenda with no changes.

### 2. Project Updates

- **Early Projects:** Jeff Hampton, CDOT, provided updates on the early projects. The Genesee Wildlife Crossing is progressing, with a deck pour scheduled to begin in the next week. The Roundabout projects have been delayed due to utilities relocation. Drainage work has begun, however a stop work order was issued to address the issue of flagging/signage.
- **TT Comment:** It seems that the utilities relocation and delays should be taken into consideration for the planning of the next sections. We should incorporate regular updates on utilities for the early projects into our TT meetings.
  - **Response:** We can certainly plan to incorporate the utilities updates into our TT meetings regularly. The status of utilities in this case is that we have identified relocation areas and are working on the design and construction plans.



- **TT Comment:** Thank you. We have also been having issues with local wifi/connectivity over the past few weeks that are very concerning to local citizens.
  - **Response:** Yes, we have been investigating the cause of the connectivity outages on the 11th and 19th. On the 11th, a local company working in a yard struck an overhead line. On the 19th, Lumen/Centurylink had a section of their fiber optic cables fail. Although neither of these events were related to this construction project, we are aware and concerned that one strike to a line can take out connectivity for the community for hours. Lessons learned from these outages are that we will do everything we can to not disrupt the lines and also, Clear Creek County can increase the resiliency in their system. We also need a more direct line of communication to providers so that it does not take as long to determine the cause of outages.
- **TT Comment:** I can reach out to the Colorado Utility Alliance. They have a more direct channel of communication to the providers and can help us stay in the loop.
- **TT Comment:** The PILT can plan to correspond with them. We had a recent meeting to discuss a TDM program to reduce traffic during construction. We have started by working with the school district, encouraging parents to use busing systems and encouraging older high school students to carpool.
- **Environmental Updates:** No new updates.
- Kurt Kionka, CDOT, shared with the group that Maintenance will be attending the upcoming TT meeting on May 19th. They plan to share information on the deicing material, technology, and snow removal strategies along the corridor. They will also discuss the MSDS safety sheet.

**ACTION:** Jonathan Cain to reach out to the Colorado Utility Alliance and put them in contact with the PILT.



### 3. Follow Up Discussion: Bridge Barrier Types

Tammy Heffron (HDR) reviewed the high level details of Structure Barrier Types (Type 9 and Type 10) introduced during the last TT meeting. Since the last TT meeting, Tammy met with a few concerned TT members and she addressed concerns raised in reference to the barrier in Glenwood Canyon. She explained that the current CDOT crash-tested barriers (both Type 9 and Type 10) are 9 inches taller and 6 inches wider than the Glenwood Canyon railing.

She then presented a table synthesizing the differentiators between Type 9 and Type 10 barrier types (below).

**Table 1: Bridge Barrier Comparison**

<b>Type 10 MASH (Steel &amp; Concrete)</b>	<b>Type 9 (Solid Concrete)</b>
Open barrier allows visibility of landscape	Solid barrier limits visibility of landscape
Open barrier allows for more snow/debris to pass	Solid barrier provides for more snow/debris containment
Higher barrier maintenance costs	Lower barrier maintenance costs
More “cluttered look” with snow fence?	Less “cluttered look” with snow fence?
Less stainless steel reinf. Steel rails costly	More stainless steel reinf. - no steel railing

Tammy Heffron fielded the TT for additional considerations or potentially differentiating factors. The group discussed several potential ideas. The project team clarified that several of these are, in fact, differentiating factors including:

- **Sound:** Type 9 solid concrete would block more of the sound than the open Type 10 barrier.
- **Visibility:** Type 10 is more open visually, which some drivers may prefer. There is no difference between the two types in terms of site lines along the roadway.
- **Fear factor:** the point was raised that, for some drivers, it may feel safer to have Type 9 solid barriers on such high bridges, seeing over the edge may be distracting.
- **Maintenance:** Type 9 barriers are simpler to repair. The group asked about integrity of the barrier when repaired. The project team indicated that the barriers



are repaired to have the same level of safety and integrity as when they are originally constructed.

- **Aesthetics:** Type 9 is easier to tie into walls, however there was concern expressed by the TT regarding the quality of the concrete work. The TT was in favor of having a responsible party review the quality of concrete work.

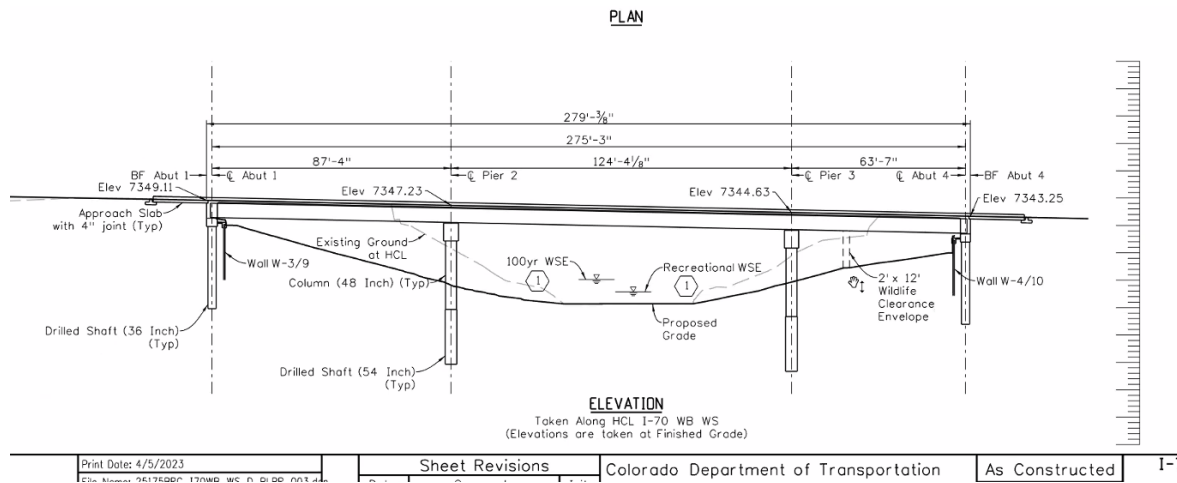
The project team thanked the TT for these insights. The team does not need to make an absolute decision today, however, moving forward, the team has a good sense for what the TT prefers and why, which will help guide decision making as the designs progress.

#### 4. Introduce West Section 60% Design Overview

Alan Carter (Atkins) walked the TT through an overview of the West Section 60% design, spanning from just East of Veterans Memorial Tunnel (Exit 243) to around the Idaho Springs area (Exit 241).

He began with a detailed look at the transition lanes into the Westbound Peak Period Shoulder Lane (WBPPSL, a new, tolled lane for high traffic times), beginning at Veterans Memorial Tunnel and ending just West of the US 40/Empire Interchange. He indicated that typically, (around 65% of the time) this lane will remain a shoulder. In order to avoid confusion for drivers coming from the Express Lane before the tunnel, the WBPPSL will require drivers to merge left into the lane. When this WBPPSL lane is closed, drivers will merge right into standard lanes. Signage will be incorporated along this corridor to indicate whether or not the lane is open (signs to be discussed further in the next agenda item).

Moving along the West Section, Alan identified that a wildlife underpass will be incorporated under bridges D and E in the West Section and displayed preliminary plans for this 4-6 ft. trail. (Pictured below)



- **TT Question:** How will snow removal and deicing material be handled over these wildlife areas to prevent salts from harming wildlife?
  - **Response:** The snowmelt will be piped off the bridges, not falling over the edges.

Alan continued along the West Section to highlight another area of interest, the floodplain bench. This is an area of habitat improvement along the creek that will be a terraced bank incorporating native species. The higher terraces will host more woody species such as cottonwood trees and willows and the lower terraces, closer to the creek will host reeds and grasses that are suited to the variable water levels.

- **TT Question:** Are you concerned at all about the Cottonwoods being close to the road, being affected by deicing materials or dropping branches?
  - **Response:** We have found that deciduous trees do not have as much of an issue with deicing material because trees take in the salts through their leaves. During the wintertime, when deicing materials are used, the Cottonwoods have dropped all their leaves.



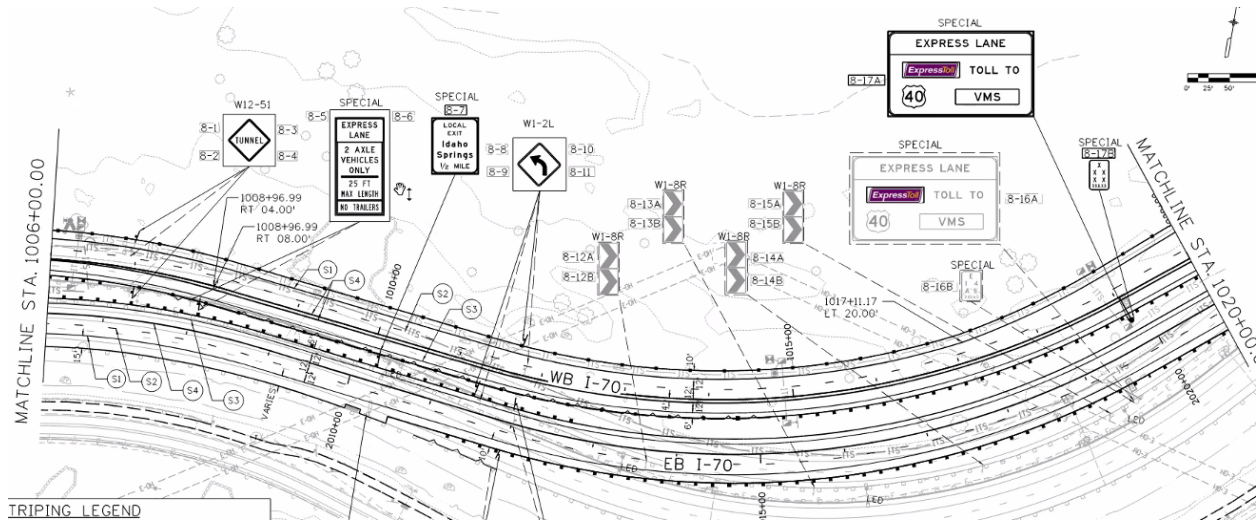
- **TT Question:** What kinds of improvements to the Greenway trail will be made in this section?
  - **Response:** This section will be resurfaced with concrete. No new railings will be added.

Having provided a snapshot of the main highlights in the West Section, the project team indicated that the coming meetings will dive deeper into the key topics for discussion. In addition to the broad overview, the team wanted to also introduce Signing and Walls in the West Section as well as the anticipated intersection improvements at the Hidden Valley Intersection.

## 5. Introduce West Section Signing and Walls

Alan Carter walked the TT through the Signing and Walls anticipated for the West Section. The signing role plot (pictured below) shows many of the signs in this section will be replacing old signage and providing indications for the WBPPSL.

### West Section Signing Role Plot



### Example of WBPPSL Signing



- **TT Question:** Was CTIO involved in the discussion of signing?
  - **Response:** Yes. They have been providing direction on when the signing changes can be made, ensuring these times are during the off season.
- **TT Question:** Will all signs follow the corridor aesthetic guidelines?
  - **Response:** Yes, see the example below.



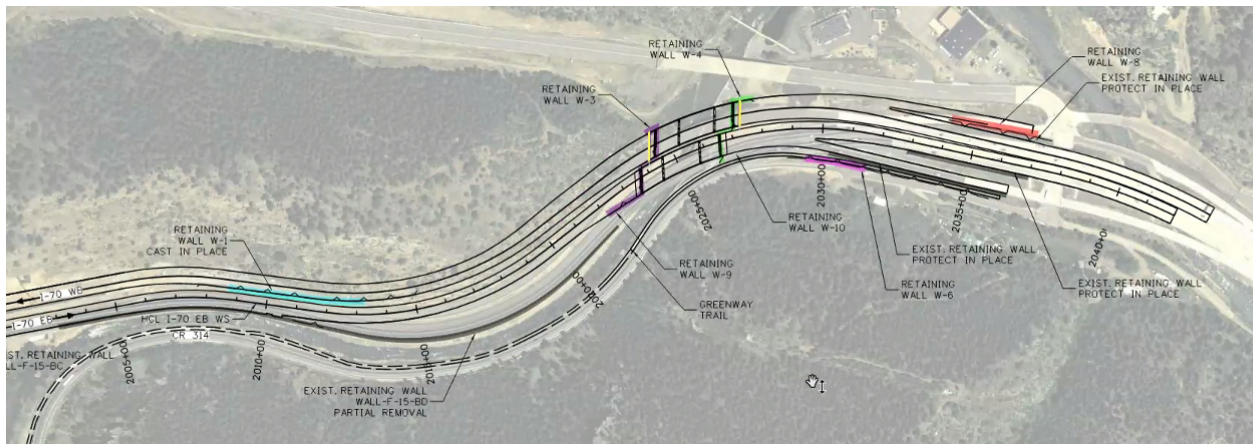
**ACTION:** A request from the TT to the project team is to provide a more synthesized overview of the major differences between existing West Section signage vs. proposed West Section signage (i.e. what is the total number of additional signs in this section?).

**TT Agreement:** It will be important to have consistent naming for the WBPPSL signage (also referred to as MEXL "Mountain Express Lane") to ensure clarity for drivers.

**ACTION:** Margaret Bowes & Project Team to check if WBPPSL will incur an additional cost, or if it is one toll charge for the whole Express Lane system along the corridor.

In addition to signage, the project team introduced the locations of walls in the West Section:

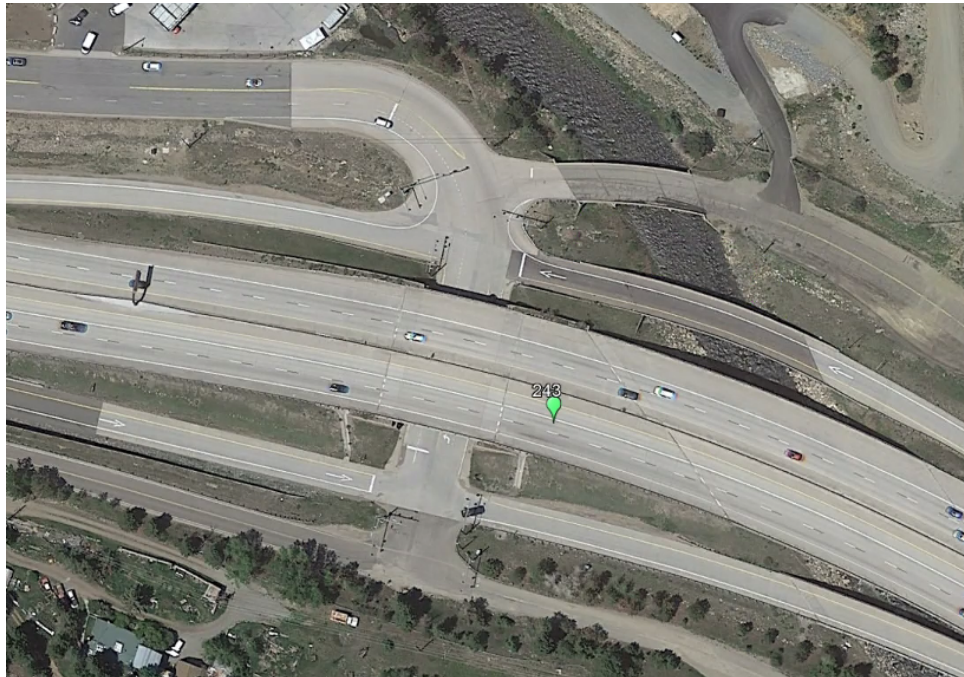




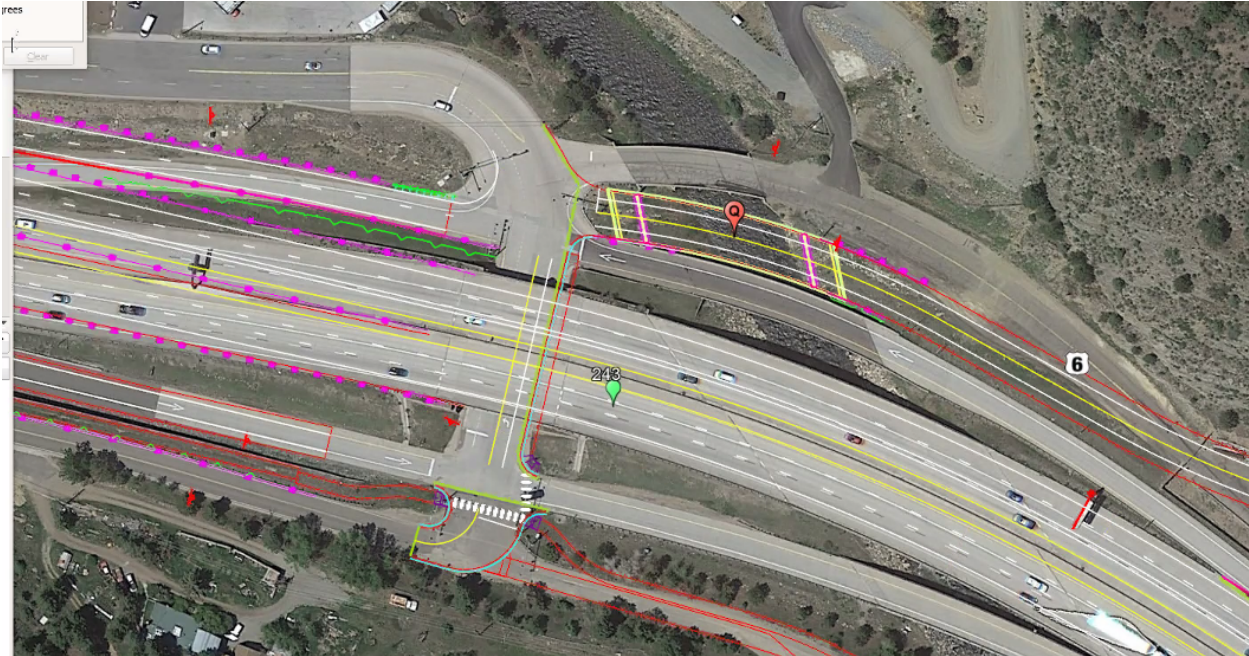
The project team provided a high level overview of the anticipated walls and rudimentary design details. The project team will be having an internal Wall Design Workshop in the coming week and can provide more detail after that meeting.

### **5. Introduce WB Off Ramp to Hidden Valley Intersection Improvements**

Lastly, the project team wanted to introduce the updated plans for intersection improvements at Hidden Valley. Currently, the WB off ramp and US 40 are separated and creates confusion at the 5 “legged” intersection.



The plan is to join these two parallel roads to reduce this intersection confusion. This will also streamline the necessary bridge repair (current bridges are hydraulically compromised), replacing two old bridges with one improved bridge (Bridge Q).



The project team fielded the TT for any questions or concerns with this overview of the plan. The TT indicated that the project team would need to follow up with Central City (representative not in attendance) to confirm approval of direction.

**ACTION:** TT to confirm direction for Hidden Valley Intersection improvements with Central City.

## 6. Upcoming TT Topics

Jonathan Bartsch provided a summary of action items identified during the meeting and reviewed the list of upcoming topics:

- Clarification on Express Lane Messaging
- Follow up on Signing and Wall discussion as the project team has more detail
- Maintenance discussion on May 19th
- Continued discussion of Utility Relocation
- Greenway Typical Sections
- Central Section Greenway Construction Impacts- will be central to Greenway ITF coming up



TT members from Clear Creek County added that the required materials for the 1041 Permit Application will be needed very shortly for the West and Central Sections. These permits will likely include ROW considerations through Clear Creek County and Idaho Springs.

**ACTION:** Project Team to coordinate with Clear Creek County and Idaho Springs on 1041 Permit materials for the West and Central Sections.

**ACTION:** TT to provide edits or contributions to the list of upcoming TT topics.

## 7. Next Steps & Wrap Up

The project team thanked all participants for joining the meeting and is looking forward to diving into more detail in the West Section during the next TT meeting on May 5th.

### Summary of Action Items, Agreements, & Decisions:

**ACTION:** Jonathan Cain to reach out to the Colorado Utility Alliance and put them in contact with the PILT.

**ACTION:** A request from the TT to the project team is to provide a more synthesized overview of the major differences between existing West Section signage vs. proposed West Section signage (i.e. what is the total number of additional signs in this section?).

**TT Agreement:** It will be important to have consistent naming for the WBPPSL signage (also referred to as MEXL “Mountain Express Lane”) to ensure clarity for drivers.

**ACTION:** Margaret Bowes & Project Team to check if WBPPSL will incur an additional cost, or if it is one toll charge for the whole Express Lane system along the corridor.

**ACTION:** TT to confirm direction for Hidden Valley Intersection improvements with Central City.

**ACTION:** Project Team to coordinate with Clear Creek County and Idaho Springs on 1041 Permit materials for the West and Central Sections.

**ACTION:** TT to provide edits or contributions to the list of upcoming TT topics.



## **8. Attendees**

Cindy Neely, Amy Saxton (Clear Creek County); Stefi Szrek (Jefferson County); Jessica North (Clear Creek County School District); Jonathan Cain (Idaho Springs); Mike Raber (Clear Creek Bicycle User Group); Sam Hoover (Central City); Bill Coffin, Lisa Wolff (Floyd Hill POA); Margaret Bowes (I-70 Coalition); Brian Dabling (FHWA); JoAnn Sorenson (Upper Clear Creek Watershed Association (SWEEP)); Gary Frey (Trout Unlimited); James Proctor (Bridge Enterprise/AECOM); Tyler Brady, John Gregory, Jeff Hampton, Badr Husini, Kurt Kionka, Ryan Sullivan, Francesca Tordonato (CDOT); Alan Carter, Anthony Pisano (Atkins); Matt Hogan, Koichiro Shimomura, Tim Maloney, Brandon Simao (Kraemer); Larry Quirk (Rocksol); Mandy Whorton, Vanessa Halladay (PEAK Consulting); Tammy Heffron (HDR); Kevin Shanks (THK Associates); Jonathan, Cara Potter, Julia Oleksiak (CDR Associates)