



# I-70 Floyd Hill

## Floyd Hill CMGC Technical Team

### Meeting Summary

September 22, 2023, 9:00 to 12:00 PM

Kraemer Floyd Hill Office: 35715 US-40 Building B, Ste 220, Evergreen, CO 90439

## 1. Introductions, Meeting Purpose and Project Updates

CDR Associates opened the meeting and reviewed the agenda.

### TT Agenda 9-22-23

- *Project Updates*
- *Greenway Detour Follow Up Discussion*
- *Central Section MSE Walls Follow Up Discussion*
- *Next Steps, Action Items, & Wrap Up*

TT members confirmed the meeting agenda with no changes.

## 2. Project Updates

### Main Projects

- Work is progressing in the East Section. There will not be any blasting next week but blasting will continue the week after next.
- There is also a lot of pipe work happening and a paving meeting coming up.

### Early Projects

- *The Genesee Wildlife Crossing* - Expected to start paving the first week of October. The Team is preparing for the EB downhill section and are considering mid to late October for the detour. This paving will likely be a daytime operation as there is truck access.
- *US 40* - Work is progressing at Homestead and County Road 5. There are some closures coming up on County Road 65 the first week of October. This closure should not have a big impact on traffic. There have been recent discussions about the potential for using signals instead of flaggers during closures. CDOT is scheduling a meeting for early next week to address this.
  - **Comment** (Mike Raber, Clear Creek Bicycle Users Group): Based on prior experience in Jeffco, a lot of people tend to run these signals.



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- CDOT also has concerns about using signals and will be having further conversations.

## Environmental

- Archaeological site excavation will be taking place from early October to mid November.

## Utilities

- CDOT had a field walk with all the utilities this week. Work will start first along US 6 near the quarry. With the Greenway closure starting October 2, work should be starting along the trail soon as well.
- The PILT discussed messaging around the closure. There will be signage and broad communications. The TT will receive communications and can forward along to their constituents.

## ROW

- CDOT had a field walk yesterday with Clear Creek County and with Central City. Things are on track with ROW.

## 3. Greenway Detour Follow Up Discussion

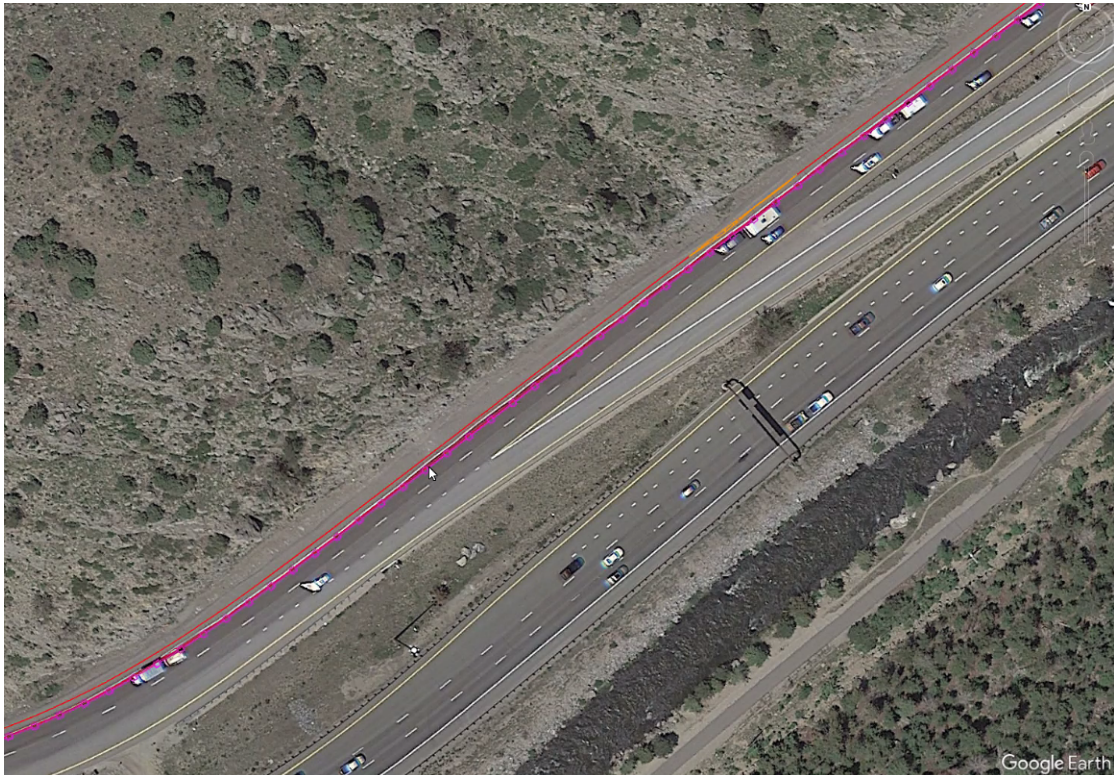
Matt Aguirre, Atkins, walked the TT through the draft Matrix to receive group input. The Matrix will be sent out for further review by the TT.

- The Matrix explored the three options that the TT had been discussed before:
  - Option A: Provide messaging that cyclists should use 103 as a detour
  - Option B: A combination of the 103 detour plus providing a shuttle service for cyclists
  - Option C: I-70 adjacent detour
- **Question** (Amy Saxton, Clear Creek County): Are all options feasible?
  - **Response:** There are concerns associated with Option C, including:
  - Reliability of keeping the trail open with rock fall. The detour is not viable for the full period that the trail is impacted; rock blasting will be happening near the maintenance facility and will close the trail.
  - Impacting emergency services due to constrained lanes and shoulders for a 1-2 mile stretch.
- The trail closure will last about 3 years.



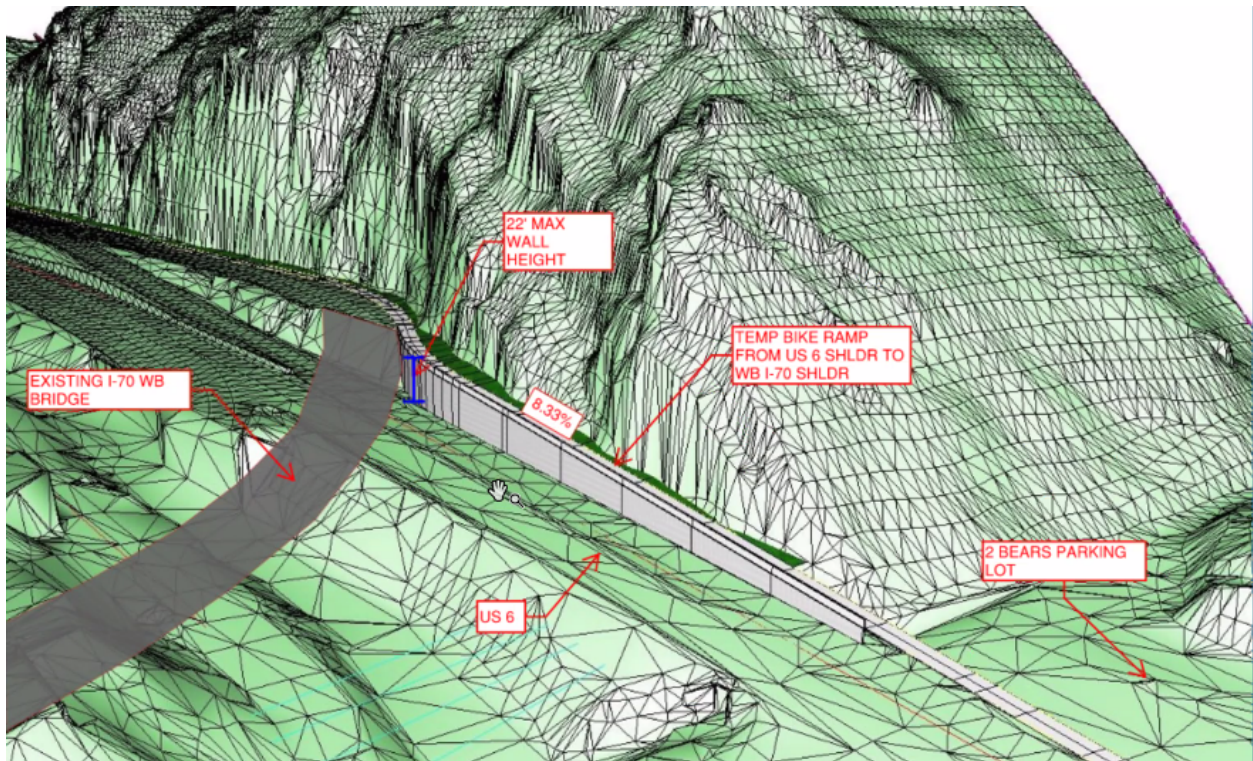
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- Mike Raber expressed concerns that it will likely be a longer closure, closer to 3-5 years, and noted that the detour could allow for some emergency access if needed.
  - Matt Aguirre: it's not a viable option for emergency services to use a 6ft wide shoulder. There would be a concrete barrier in the middle between the shoulder and bikeway which would block access for emergency services.





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- By providing a shuttle (Option B), there would not be a full closure of the trail.
- Mike Raber: this is a critical throughput for cyclists. With a shuttle, you get into issues with capacity and bike racks.
- Bill Coffin, Saddleback Community POA: I would like to hear the shuttle plan. On a shuttle you would likely need a trailer because many people will not want to put their carbon fiber bikes on the bike rack and may be traveling with a bike trailer as well.
  - **Response:** The Team is looking into the details of shuttle service and will have more information to share at subsequent meetings.
- The draft Matrix was shared to receive TT input.
  - **Comment** (Mandy Whorton, Peak Consulting): The liability of CDOT, FHWA, and Atkins needs to be considered under safety. If something happens, there is a lot of liability involved. Safety issues are significantly greater for Option C. Maintenance will be a safety/liability concern as well.
  - **Comment** (Bill Coffin): There are several groups of bikers with different abilities. There will be a peak time when there will be more cyclists.
    - **Response:** We are limited in our data of the recreational user groups. There are 53,000 vehicles driving through this section a day versus an unknown, likely small, number of cyclists.
- **Question:** What's the distance of 103 detour?
  - **Response:** 30-40 miles

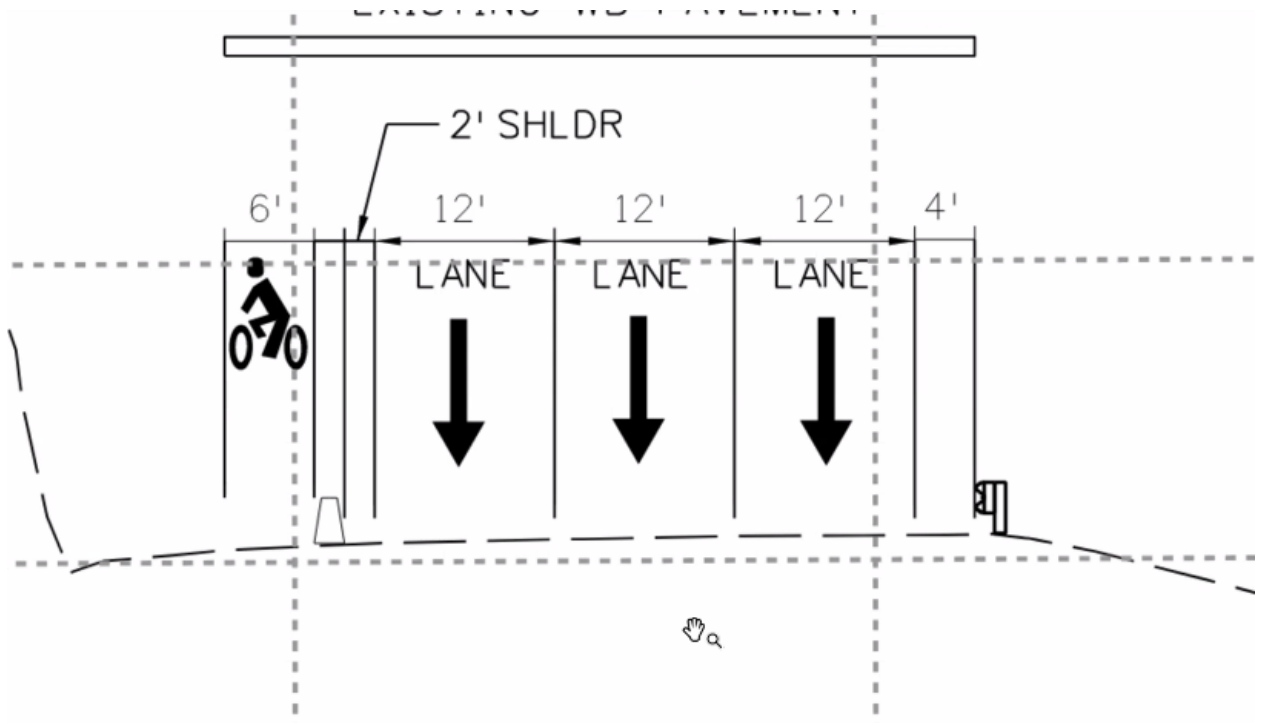


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- **Comment** (Mike Raber): I would be happy to work with the team on the shuttle option. Clear Creek county has 4 of the most iconic climbs and we don't want to decrease bicycle tourism income.
- **Amy Saxton**: We could have a marketing campaign about the 103 detour.
- **Comment** (Bill Coffin): There will need to be some ability and requirement to update/adapt the shuttle service. We really appreciate the conversation and the options versus a full closure.
- **ACTION**: Add impact to cyclists as a row at the bottom of the Matrix.
- For the “community preferences” criteria, Amy Saxton expressed that there is not agreement or aligned community preference on Option C.
  - Mike Raber agrees there wouldn't be a community consensus. Some cyclists would see the detour as low risk, others might not agree.
  - Carrie Tremblant (CDOT Bicycle and Pedestrian Program): we represent a broad cycling community including those comfortable being close to traffic and those not comfortable with it.
- **Comment** (FHWA): we support these conversations. For the 103 detour, would anything additional be needed?
  - **Response** (Tyler Brady, CDOT): If this option moves forward, there will be signs at either end including a map and a description of the detour.
  - Mike Raber suggested an update to CDOT signage that says 3 ft to pass versus just a sign with a bike on it, and to include messaging that if a cyclist is going the same speed as a car, they can use the full lane.
- For the “quality recreation access” criteria, Option C would not be quality, but it would provide access.
- It is best practice, but not required by law for an interstate project to provide an alternate route. Some language in the guides are not applicable to this project.
  - **ACTION**: Atkins to follow up on item 18.
- Item 19: Emergency pull offs are a design criteria.
- Amy Saxton: another data point to consider is how long Option C would be in place and how the bike lane would affect drivers.
  - Travel lanes will be reduced to 12ft for the project, regardless of bike lane. The bike lane would add a concrete barrier two feet from the lane versus having a shoulder.
  - **ACTION**: Atkins will create a graphic that better represents the driving experience in this section.



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- **Question** (Tracy Sakaguchi, CMCA): Is the bike path at grade with the road? It becomes stressful in a big truck to not be able to see.
  - **Response:** Yes, it is at grade.
- The graphic shows a third merging lane, but the majority of sections there are only 2 lanes. This means that in an emergency response, this section would be down to 1 lane.
- **Question** (Paul Aguilar, FHWA): Is a 6ft wide bike path enough space for bi-directional bike traffic?
  - **Response:** 8ft is supposed to be the minimum but the other 2ft are needed for a concrete barrier.
- In some locations the shoulder is 8ft, but in others, construction would need to take place to widen the shoulder in order to fit the bike path.
- The west end of the detour concludes at a CDOT maintenance yard.



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- **ACTION:** The Team will send out the updated Matrix and get additional input.
  - The TT is not making a decision today, there is time to further review options.
- **ACTION:** Carrie Tremblant will look into Strava to see what months will be the peak demand to plan for a shuttle.
  - Mike Raber: CDOT has bicycling counters which are very sophisticated, these could help as well.





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- **Question:** How often are rocks picked up in this section? Is it at least once a year?
  - **Response:** There was emergency rock stabilization in this section last year.

## 4. Central Section MSE Walls Follow Up Discussion

Julie Gamec, THK, walked the group through the MSE wall Matrix. The purpose of this discussion was to review wall types for the Central Section.

- There are 3 aesthetic looks, but 4 construction options.
  - Cast in place, full height







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- MSE 5x5 panel



- MSE 5x10 panel





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- Considerations include timing of corridor aesthetics, construction costs, and the footprint and timing of construction.
- For the cast in place walls, they would have CO Random Reveal built into the form. These walls are what is in the corridor now.
- Option A would be cast in place using formwork. The concrete would be poured in place, similar to the Twin Tunnels package. There would be a further spaced vertical joint.
- Option B would be full height panels that are precast and delivered to the site. There would be no horizontal joins but would be a vertical join, hidden by CO Random Reveal.
- Options: B, C, and D are all precast and are all 5' wide.
- Option A: 10' wide formwork. The length between vertical joins would depend on how many formers Kraemer has. The Team would need to start with the longest walls first.
- Option B: poses challenges with transportation and erection, bracing would be needed to get the walls up.
- PPSL had precast panels. The Team had a stone behind them that allowed for work in the winter, and could backfill walls in winter time. Cast in place walls are constrained by the weather for pouring concrete. This would be significantly slower.
  - **Comment:** Schedule is important and weather is a consideration. Do we compromise on aesthetics for weather and cost or do we stick with the corridor design and figure out the most efficient way to achieve it?
- **ACTION:** THK will follow up with Kraemer to add impacts to schedule due to weather to the Matrix.
- Amy Saxton: It has been a point of pride that we've been able to maintain the design aesthetic project after project in this corridor. Design matters and our county is a place worth protecting, which applies to the aesthetic values of this project too. However, we also cannot be wasteful. We need to understand the extent of additional costs/time/resources.
  - **ACTION:** THK will follow up with Kreamer to add cost to the Matrix
- Sam Hoover (Central City): if we are keeping in line with current corridor aesthetics, our only two options are Options A and B. So then it becomes a construction consideration.
- Walls in the Central Section are 25-40 ft. For a full height panel, these have to be stabilized somehow. This would lead to a longer duration of construction/longer lane closures for bracing space.



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- Bracing is similar for A & B but for A, the Team would have to excavate deeper. Option A would have the longest construction duration followed by B.
- There are 12,000ft of total walls in this section.
- If the TT comes to a decision, the Team would take the preferred alternative and would get more specifics for each section. If there are constraints on certain walls, the Team may need to adjust.
- If there is a limitation for the height either for Option A or B it would be good for the TT to know that.
- Sustainability and duration: all have similar longevity.
- Service life and maintenance: all should be the same.
- For walls that are 10 ft or less, the Team could use an MSE wall since it would be full height.
- **ACTION:** Kraemer to follow up on the timeframe of bracing.
- **ACTION:** Kraemer to follow up on service life and maintenance.
- **ACTION:** The Team will send out the updated Matrix and the three wall visuals for further input.

## 5. Wrap Up and Next Steps

- Upcoming TT Topics
  - Rock Cuts in the Saddle Cut and near the maintenance yard
  - Revegetation in the Central Section
  - Drainage structures and water quality features
  - Signing
  - Traffic control and closures
- Next TT meeting is 10/6/2023

### **ACTION ITEMS:**

- **ACTION:** Add impact to cyclists as a row at the bottom of the Greenway Detour Matrix.
- **ACTION:** Atkins to follow up on item 18 on the cycling detour Matrix.
- **ACTION:** Atkins will create a graphic that better represents the driving experience in the cycling detour section.
- **ACTION:** CDR will send out the updated cycling detour Matrix and get additional input.
- **ACTION:** Carrie Tremblatt will look into Strava to see what months will be the peak demand to plan for a shuttle.
- **ACTION:** THK will follow up with Kraemer to add impacts to schedule due to weather to the MSE walls Matrix.



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- **ACTION:** THK will follow up with Kreamer to add cost to the MSE walls Matrix
- **ACTION:** Kraemer to follow up on the timeframe of bracing.
- **ACTION:** Kraemer to follow up on service life and maintenance.
- **ACTION:** CDR will send out the updated MSE walls Matrix and the three wall visuals for further input.

## 6. Attendees

Sam Hoover (Central City); Mike Raber (Clear Creek Bicycle Users Group), Bill Coffin (Saddleback Community POA), Matt Aguirre, Anthony Pisano (Atkins); Julie Gamec (THK); Cindy Neely, Amy Saxton (Clear Creek County); Stefi Szrek (Jefferson County), Tracy Sakaguchi (CMCA); Mandy Whorton, Vanessa Halladay (Peak Consulting); Paul Aguilar, Julian Gonzalez (FHWA); Rhegan Fernandes (Kraemer); Lisa Wolff (Floyd Hill POA); Jessica North (Clear Creek School District); Jo Ann Sorensen (UCCWA); Jeff Hampton, Abbie Modafferi, Francesca Tornado, Carrie Tremblatt, Tyler Brady (CDOT); Daniel Estes, Julia Oleksiak (CDR Associates)