



MEETING NOTES

PROJECT:	21685 I-70 West Vail Pass Auxiliary Lanes
PURPOSE:	Project Leadership Team (PLT) Meeting #4
DATE HELD:	December 3, 2019
LOCATION:	Avon Branch Library, 200 Benchmark Rd, Avon, CO
ATTENDING:	John Kronholm, Project Manager, CDOT Region 3 Karen Berdoulay, Resident Engineer, CDOT Region 3 Vanessa Henderson, I-70 Environmental Manager, CDOT Jeff Bellen, FHWA Matt Klein, US Forest Service Ben Gerdes, Eagle County Dick Cleveland, Representing Vail Town Council Tracy Sakaguchi, Colorado Motor Carriers Association Greg Hall, Town of Vail Tom Gosiorowski, Summit County JJ Wierema, Wood Leah Langerman, David Evans and Associates Kara Swanson, David Evans and Associates
COPIES:	PLT Members

SUMMARY OF DISCUSSION:

1. Introductions & Agenda

- a. After a round of self-introductions, Kara reviewed the agenda.

2. Actions Since Last PLT Meeting

- a. Kara described actions taken since the last PLT meeting:
 - i. Conducted alternatives screening
 - ii. Developed screening criteria
 - iii. Defined “alternatives” vs. “design options”
 - iv. Met with Technical Team (TT) three times (PLT received invites, materials, and notes)
 - v. Met with Issue Task Forces (ITFs)
 1. ALIVE – December 2018
 2. SWEEP – February 2019
 3. Section 106 – November 2019
 4. Emergency Services – February 2019
 5. Recreation – November 2018
 - vi. Held second public meeting – December 2018

3. Alternatives Evaluation

- a. Kara reviewed the alternatives evaluation process and results.
- b. The screening criteria and the alternatives evaluation process were reviewed by the TT. Two levels of screening were initially planned.
- c. Level 1 criteria addressed the Purpose and Need (safety and operations) and some Core Values.



- d. Level 2 criteria brought in consideration of additional Core Values and was meant to be comparative between alternatives.
- e. Level 1 Alternatives
 - i. No Action
 - ii. Alternative 1 – Existing Two Lanes with Curve Modifications and Intelligent Transportation Systems (ITS) Improvements
 - iii. Alternative 2 – Auxiliary Lanes with Full Shoulders, Curve Modifications, and ITS Improvements (Recommended by the I-70 Mountain Corridor Programmatic Environmental Impact Statement)
 - iv. Alternative 3 – Existing Two Lanes and Operational Lanes with Curve Modifications and ITS Improvements (operational lane would function as a shoulder most of the time, but could be an operational lane when needed)
 - v. Alternative 4 – Auxiliary Lanes with Westbound I-70 Realignment, Curve Modifications, and ITS Improvements
- f. Level 1 Screening Results
 - i. If an alternative didn't meet the Purpose and Need (answer was No for safety or operations questions) then it was eliminated. Core Values weren't considered fatal flaws, but provided additional consideration.
 - ii. The result for the collaborative decision-making question for Alternative 4 changed from No to Yes since the last time the PLT saw this (in TT #8 materials), but this didn't change the screening results. The 2011 ROD identified the I-70 corridor as the general location for improvements. The slight realignment that would be part of the alternative still falls within the existing general I-70 corridor, so it is compliant with the ROD.
 - iii. Level 1 resulted in a Preferred Alternative: Alternative 2 - Auxiliary Lanes with Full Shoulders, Curve Modifications and ITS Improvements. This includes the following improvements:
 - 1. Add a third lane both eastbound and westbound (MP 180-190)
 - 2. Curve geometry improvements
 - 3. ITS improvements: variable message signs, variable speed limit signs, automated closures
 - 4. Improve truck ramps, truck parking, and chain stations
 - 5. Trail improvements where impacted
 - 6. Wildlife crossing improvements
 - 7. Sediment collection improvements
 - iv. The study area was extended a bit in the westbound direction (from MP 190 to MP 191.5) to accommodate placement of a VMS near the top of the pass.

4. Design Options

- a. Some design options are also included in the Preferred Alternative but not shown on the Preferred Alternative graphic.
 - i. Chain Station: Chain station at approximately MP 183 will be improved with additional parking, signage, lighting, and separation from the I-70 mainline.
 - ii. Emergency Truck Ramps: Two existing truck ramps, located at approximately MP 182.2 and 185.5, will be upgraded to current design standards.
 - iii. Emergency Turnarounds: Improved median emergency turnaround locations included to accommodate emergency and maintenance turnaround maneuvers.



- iv. Truck Parking: Additional capacity added to the existing commercial truck parking area at the top of Vail Pass.
- v. Pull-Off Areas: Widened shoulders (minimum of eight feet of additional width beyond the 10' shoulder) included at multiple locations to accommodate emergency pull-offs, emergency truck parking, and staging for tow trucks.
- vi. Water Quality: Conveyance and treatment water quality BMPs will be implemented and determined during final design.
 - 1. Will provide a menu of options that was chosen from BMPs specifically for the pass. The SWEEP ITF, TT and PLT will have a chance to give more input during design.
- vii. Wildlife Crossings: Six wildlife underpasses and wildlife fencing will be constructed throughout the corridor.
 - 1. At the last TT meeting CDOT stated that the Environmental Assessment (EA) will commit to the number and approximate location of wildlife underpasses, and will note the target species for each location. Based on additional conversations with CDOT's wildlife specialist the EA will now identify the target species and a small to medium, or large underpass, based on FHWA's report on wildlife crossing design. The EA won't specify exact dimensions for each underpass, but will reference the minimum dimensions in the FHWA report. This level of detail in the EA is needed in order for agency representatives to be able to review the recommendations.
 - 2. Tom asked if all of the underpasses are new. Kara confirmed the six are all new.
 - 3. Greg asked about the wildlife crossing on other side of Vail Pass. Karen noted on the east side there will still be an overpass (at MP 192), as a separate project. It only crosses WB I-70, so it is a shorter structure. An overpass didn't work well within our project area because of safety concerns related to shading, snow drifts, and driver expectancy. It didn't fit the Purpose and Need to negatively impact safety and operations for a wildlife overpass, so underpasses were chosen instead.
 - 4. Greg noted that it seems the underpasses should be "the bigger the better" to accommodate all animals. Karen explained that we are referencing the FHWA handbook for small to medium, and large species. Some smaller animals actually prefer and feel more comfortable with a smaller underpass.
 - 5. Greg would like the underpasses to be context sensitive and fit the landscape.
 - 6. Tom asked how many underpasses are planned of each size. Karen noted that the team did a survey of where species travel in the area. The locations were chosen and based on where the animals migrate. There are two large underpasses.
 - 7. Tom asked if wildlife fencing is included the length of the project. Kara confirmed that this is included.
- viii. Trail Relocation: Vail Pass Recreation Trail will be relocated for approximately two miles from MP 185 to MP 187 due to direct impacts from the addition of the I-70 auxiliary lane.



- ix. Avalanche Protection: Avalanche protection will be installed on the inside of the curve located near MP 186.
 1. Tom asked what the protection will be. John noted that passive avalanche fences in this area will be recommended. Tom noted that it takes a long time to clean up the avalanches in this area, so he agreed passive fencing and not something triggering avalanches would be best here.

5. Trail Realignment

- a. JJ presented the trail realignment decision-making process and recommendations. This was a collaborative process, where feedback was solicited and received from the general public, trail users, TT and ITFs to determine what is most important to them. Competing criteria were balanced to develop and evaluate alignments for the trail.
- b. Three different alignments were developed: one stays close to I-70, one crosses the creek and stays on the far side of the creek, and another has four creek crossings.
- c. The recommended alignment is a hybrid of the three, which avoids as many tree stands as possible and only crosses the creek twice.
 - i. At the last TT meeting there was a lot of discussion about a 0.3 mile section of the trail. After the meeting, CDOT and FHWA decided on an alignment for this section that will be included in the EA.
 - ii. Greg mentioned it seems the trail is a lot closer to the creek than 100 feet. JJ verified that is true. Given the topography and balancing all of the criteria that was the best.
 - iii. Greg thought the blue line was the creek, not an alignment. JJ confirmed the blue line is one of the alignments and the creek isn't drawn.
 - iv. **ACTION:** Add creek on trail alignment graphics.
- d. Tom asked if there are any segments with cut and fill. JJ replied yes, but we attempted to have only one or the other in a given location.
- e. Trail construction
 - i. Matt asked if the EA is going to address timing of phasing of trail construction to minimize impact to trail businesses. Kara noted that there is a social resources report that looks at the economic impacts that includes documentation of these things. The goal is to minimize any closure or impacts to those businesses as much as possible.
 - ii. JJ noted most of the trail construction could be done offline and could be done before the roadway reconstruction. There have been discussions of trying to reconstruct the impacted portion of the trail before the auxiliary lane construction, but phasing has not yet been determined.
 - iii. Matt asked if there has been any consideration of using a portion of the trail right-of-way for construction staging. Karen noted that it wouldn't be used for staging; the trail would only be closed for constructability or safety if needed. Kara noted that it can be written into future contract documents that contractors can't use trail for staging.
 - iv. Greg requested that the EA state the trail should be designed in a way to minimize repeated closures. Karen isn't sure CDOT can commit fully to this, due to some portion of the trail still being close to I-70.
 - v. Greg asked if there are any seasonal restrictions for construction. It is important to recognize that detours can be very impactful to those commuting through this trail; it is not all recreational use. Karen noted that



we can restrict days of work, have some places designated as “walk your bike” for a short area, and other accommodations can also be considered.

- f. Greg mentioned that e-bikes could possibly be allowed on the trail in the future. He asked if the team considered that e-bikes may need to be accommodated with this design.
 - i. Karen noted that the trail is proposed to be 11 – 14-foot wide. The flexibility in that width is important for reasons like this (to consider conditions and information known at the time of construction). No other aspects of the design would need to change to accommodate e-bikes.
 - ii. Dick noted that it seems they will eventually be allowed and it will result in a greater number of users.
- g. Tom noted that we may need to consider passing conditions on the bike path. He suggested we consider making some sections even wider than planned to better accommodate passing. The longer, straight sections could be candidates for this.
 - i. Greg suggested considering two lanes going uphill, one going down.
 - ii. Tom thought maybe passing lanes would be more useful in the downhill direction than uphill. Dick agreed with this.
 - iii. Karen committed to investigate passing lanes on the trail during final design.

6. Design Criteria

- a. Kara introduced the design criteria topic. A memo and CSS Criteria Exceptions plan set were provided in the handout that will be used for this discussion. There are certain design criteria required on the I-70 Mountain Corridor. This area falls within an Area of Special Attention, which is why CDOT is bringing this before the PLT during NEPA. There are some spot locations where some of these criteria may not be able to be met; these will be reviewed today. According to the CSS process, the PLT’s general consensus regarding these design exceptions is needed (during this meeting) to move forward.
- b. Vanessa noted that every I-70 Mountain Corridor project has had some approved design exceptions. For example, the Twin Tunnels project had to build walls on the creek side and the WB Peak Period Should Lanes project had to move into the median.
- c. JJ noted that is impossible to meet all criteria, because there are always situations where they conflict with each other.
- d. Alignment
 - i. Advanced Guideway System (AGS)
 - 1. Greg asked that the AGS alignment be discussed and shown to the TT and PLT.
 - 2. Karen noted that the team prepared a graphic showing how the AGS alignment works with this Preferred Alternative. It was sent to Greg since he is the one who requested the info.
 - 3. **ACTION:** Karen offered to share the AGS graphic.
 - 4. John explained the background of the AGS alignment. An AGS feasibility study was done in 2014 that looked at 3 or 4 AGS alignments. They eliminated one that matched the I-70 alignment because the train would be too slow. The favorite alignment (not Preferred Alternative) would travel quickly to Copper, then travel on a slower alignment through Vail Pass. For the most part, the AGS tried to stay in I-70 ROW, but there are several tunnels that are 50-60 feet above the creek. In general, the favorite alignment is so far

from I-70 through the West Vail Pass project area that it would be very challenging for the auxiliary lanes project to preclude the AGS. Vanessa noted that precluding the AGS alignment is much more of a concern in other mountain corridor locations, but not on Vail Pass.

5. **ACTION:** Vanessa recommended changing the AGS column to say “Not precluded” instead of N/A.
- ii. Median Width
1. Greg noted that the alignment should not seem urban. To ask to reduce the median width for everywhere shown in red seems excessive.
 2. JJ explained that the red shading is more focused on the length. Even though it is shown all filled in red, it doesn’t mean that we plan to widen into the entire median. In some cases it may only be a few feet.
 3. **ACTION:** Vanessa suggested the PLT needs a graphic that shows the median width that would be impacted (more detail than is currently shown).
 4. Tom recommended showing a toe of slope or daylight line to better see where the impact area is. Tom believes that where the median is already narrow, the median doesn’t have much value. If there is only a 25-foot-wide existing median, then it wouldn’t matter to narrow to no median in that area, and then maybe we’d get more glare screening. There are already many segments where glare is a problem that aren’t being addressed.
 5. **ACTION:** Tom asked to see cross sections to be able to see the vertical. Karen noted that we aren’t at that level of design yet, but some high-level information about the layout can be shown. Could note the difference in vertical between westbound lanes, median and eastbound lanes.
- iii. PLT Design Exception Approval
1. Greg stated he feels uncomfortable blessing the design exceptions at this point. He is surprised that the CSS process calls for the PLT to bless this. Vanessa stated that this is intended for the PLT to understand the concepts and the balance of the Core Values. Karen noted that as we go into final design the PLT will continue to be involved and give input.
 2. Tom is personally comfortable with median narrowing where it is best to do. If pushing to outside ruins a well done cut-slope, then it makes sense to widen to median. The devil is in the details, so it is hard to say for sure without knowing more. He is not sure how the PLT is supposed to bless the concept plan.
 3. Vanessa acknowledged that more information needs to be sent to this group before a decision can be made.
 4. Greg noted that it is strange to ask this PLT (majority non-technical/engineer/environmental group members) for this kind of input. There are many others that could give input on this, especially the TT.
 5. Vanessa noted that in other Region 1 projects design criteria exceptions are reviewed by TT first.
 6. Kara noted that the TT hasn’t had this exact presentation, but they have been involved in discussions related to impacts and mitigation.



John noted we have reviewed the alignment, proposed limits of disturbance, walls locations, and mentioned design exceptions will be needed to the TT.

7. Tom expects that the design team and TT has looked at this in more detail than the PLT. He wants to hear that the TT believes these design exceptions are the best we can do.
 8. John mentioned that a report documenting the variables will be done next as part of this project.
 9. Kara noted that all we are asking for is consensus on these design exceptions, based on 5% design, in order to continue moving forward. The intent of the CSS process is that the TT and PLTs will continue to be involved in decision making as more detail becomes available.
 10. Tom reviewed an example near the top of the pass maintenance facility where it is hard to concur until further information is available. What is the impact on that median (changing landscape, trees lost, etc.) if walls aren't being used to minimize impacts of grading? It seems there is a more advanced level of design on the walls, so how do we not understand the limits of disturbance? JJ noted that toes can be shown. Tom asked that all walls are shown.
 11. **ACTION:** On the CSS Criteria Exceptions design plans, show all walls and highlight those higher than 12-feet tall, add toes and limits of disturbance.
 12. Kara noted that this Preferred Alternative has undergone a lot of tweaks to take criteria, Core Values, phasing, and impacts to the public in consideration, based on TT feedback.
 13. Tom noted that the struggle for transportation funding leads us to chase cheap. Let's try to get the best project and make sure we aren't choosing improvements based on cost versus the best solution. Decisions will be somewhat based on cost, because if this becomes a \$1B project, then cost will need to be considered. There must be some internal understanding of cost of meeting criteria or not, which should be shown for the TT and PLT. We can't afford to build this anyway under current funding realities.
 14. Dick suggested that we build the equivalent of a Glenwood Canyon project. This isn't a typical project in a typical area.
 15. Karen emphasized that the team has not approached this from a cost perspective from day one. This is a \$700M project. Cost has not been the driving factor for these variance decisions. Perhaps the "story" of how we came to request these exceptions hasn't been explained in enough detail to make everyone comfortable.
 16. **ACTION:** A TT meeting will be added and held in the next couple months to go over the design exception requests in much more detail, with more detail provided for the conversation.
 17. Karen asked if holding a TT and PLT on the same day would work. Tom agreed.
 18. JJ noted that generally if impacts are reduced it will be less costly as well.
- e. Slope Cut and Fill



- i. Greg asked how to name walls between two different roadway alignments. What is considered cut or fill? When there is a terraced wall, is that considered one wall or a series of walls?
- ii. Tom asked what the max height of walls is that exceed 12 feet. JJ noted it could be more on the order of 40 feet, especially in the narrows.
- f. Sound Attenuation
 - i. Dick asked if there is a project noise report that can be shared. There are a lot of members of the public waiting to know if a noise wall will be built as part of this project.
 - ii. Kara explained that information will be included in the EA for public review. At that time, a small group meeting for residents interested in this could be held.
 - iii. Dick noted that this issue will stall the entire project if it is not handled well. People see this as the project that will finally be their salvation (provide a noise wall).
 - iv. Karen explained that all TT members will get the EA and all associated tech memos during the public review period. This can't be shared until CDOT and FHWA complete their reviews, which would then be the time of public review.
 - v. Greg noted that Town of Vail has done their own noise study (completed by Hankard Environmental) which showed that the noise for some East Vail residents is over the threshold. If this project's noise study results are different then there will be a challenge by the Town.
 - vi. ACTION: Kara offered to share the noise study methodology memo done by Illingworth and Rodkin with the PLT.
 - vii. ACTION: Kara requested that Greg share the Town's noise study report with the project team.
 - viii. Ben suggested we note similarities and differences from the Town's noise study. It is good to explain assumptions and explaining why there may be differences.

7. CSS Process

- a. Kara explained that we are now in Step 6 of the CSS process - finalize documentation and evaluation process.
 - i. Greg mentioned that this is a big project. This and Floyd Hill are the two largest Mountain Corridor projects. It seems like there have been long stretches without people hearing anything about the decisions being made.
 - ii. Kara noted that we have always planned a TT meeting to review what is in the EA before it is released so there is a heads up on the impacts and mitigation.
 - iii. Ben asked if it would be beneficial to have elected officials invited to the last TT meeting. Karen explained that she just presented to the TPR, which included elected officials.
 - iv. Leah suggested that elected official presentations could be made for each agency during the 30-day public review period, since the information shared during those presentations would be the results of the EA, which shouldn't be made public until CDOT and FHWA review is complete.
 - v. Greg requested public review be longer than 30 days. Vanessa noted that an agency can request the comment period to be extended to 45 days, but that has to be for a specific reason and can't be submitted until day 1 of the



comment period. That request would need to be reviewed and approved by CDOT and FHWA.

- vi. ACTION: Kara noted we can send an update newsletter to the public in the gap of time without a public meeting.

8. Schedule

- a. Kara reviewed the schedule for EA review and release:
 - i. Draft EA to CDOT Region 3: March 2020
 - ii. Revised EA to CDOT HQ: April 2020
 - iii. Revised EA to FHWA and USFS: May 2020
 - iv. Public Review of EA: July 2020
 - v. Public Meeting: July 2020
 - vi. Decision Document: Fall 2020
- b. Karen added that a TT meeting to review design criteria will be held soon, per the earlier discussion during this meeting.
- c. Kara explained that the TT meeting prior to the EA release can be held during the CDOT and FHWA review time. It can be done before FHWA gets the EA for review, even though the information will still be considered “draft”.
- d. Tom noted that people are very worried about multiple impacts, especially in East Vail. Some people believe that I-70 will be cantilevered over their homes. He cautioned that we don’t underestimate the comments and concern that we will hear from the public. He asked if there is benefit of a small group meeting with East Vail in addition to the public meeting.
 - i. Karen agreed we will talk to East Vail about draft recommendations related to noise in spring 2020. Can use this to alleviate some concerns.
 - ii. Leah suggested that the residents meeting not be restricted to a small group, but instead be a focused meeting open to everyone. It would be clearly advertised as focused on noise impacts in East Vail. She suggested the meeting be advertised by the Town and through an email blast to the entire project mailing list, and that attendance not be restricted. It would be helpful to have a specific meeting for this topic, so it doesn’t take away from a Town Council meeting or from the project’s general public meeting that will be held during the EA’s 30-day public review period. Leah has used meetings like this successfully on other projects to clear up misconceptions, share information, and give people a forum to provide their noise-specific input.
 - iii. Greg and Dick agreed with this approach and estimated 20 – 50 people interested in East Vail noise would attend.
 - iv. ACTION: Plan East Vail noise impacts public meeting.
- e. Greg asked if the Eagle River Watershed Council’s issues have been worked out. Karen said we’ve met with them multiple times, but there are things that CDOT doesn’t mitigate for and can’t be addressed within this project. They have asked for CDOT to do adaptive management, where modifications are made to the road as needed to make sure that water quality stays at a certain level. CDOT can’t commit to quality of water that is impacted by many other things besides the roadway. Vanessa noted that we only mitigate for CDOT impacts, not impacts by others.

9. Phasing of Improvements

- a. Karen explained the phasing and funding of improvements.
- b. Phasing



- i. The team is looking at phases that could be built as funding becomes available. The hope is that these phases would involve stand-alone improvements that each have their own benefit for the cost and would not be throw-away.
 - ii. The auxiliary lanes could be built in phases (for example, they could be built from MP 184 uphill in the eastbound direction). The auxiliary lanes can't be built in short/two-mile segments.
 - iii. A menu of options for phased improvements has been created and the team is developing crash reduction factors for each of them.
 - c. Funding
 - i. Have a \$4.5 M freight grant with \$2.5 M match.
 - ii. This project is on the SB 267 list in years 3 - 4 for \$13.5M. Have to build by 2023 or 2024.
 - iii. Trying to use that as seed money for an INFRA Grant which could be \$25M.
 - iv. Also looking for FASTER Safety money.
 - d. John stated that two early action items will move forward before any projects are delivered: 1) Updating the Sediment Control Action Plan (SCAP) (trying to get that going now), and 2) Developing Vail Pass aesthetic guidelines. The SCAP effort will be significant and may take approximately nine months.
 - i. Greg noted that the SCAP may need to go beyond sediment, to cover other pollutants.
 - ii. Karen noted it would be for the top two miles of Gore Creek as well as Black Gore Creek. There is a menu of SWEEP items that will be looked and can be shared.
 - iii. Kara explained that as we get into additional design more than just sediment can be considered.