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Subject: Technical Team Meeting #8

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Client: CDOT Region 1

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Project: I-70 Peak Period Shoulder Lane

Project No: 215164

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Meeting Date: December 16, 2013

Meeting Location: CDOT Golden

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Notes by: Lorena Jones

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**ATTENDEES:** See attached sign-in sheet

**DISTRIBUTION:** Attendees, Technical Team Members, Project File

## Summary of Discussion

(Action items are in **bold**.)

### INTRODUCTIONS AND OVERVIEW

Steve Long opened the meeting, welcomed everybody, and reviewed the core values.

#### Project Schedule

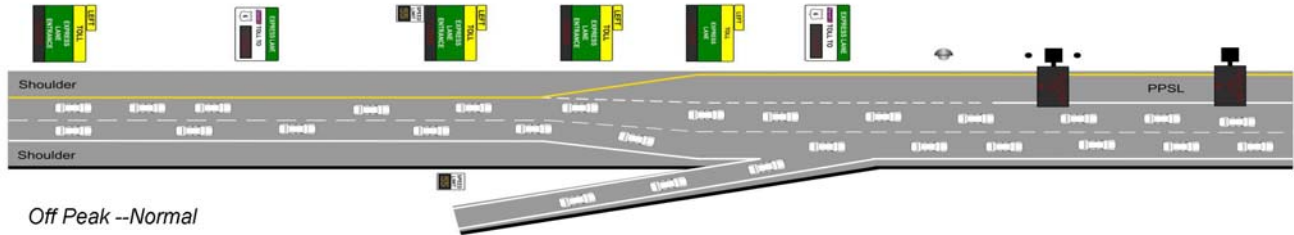
1. The Concept of Operations will be ready for a second internal draft at the end of 2013.
2. The November preliminary design meeting went well.
3. Environmental analyses are going well.
4. The preconstruction phase is still on track to open to traffic in July 2015.

#### Other Project Efforts

1. Twin Tunnels—the eastbound tunnel opened this weekend. Overall, it went well.
2. Westbound Tunnel Expansion—no construction funding yet. Should know in January if we get funding. Staff is working on the design and CatEx. Hoping to get started on construction in March. An e-mail will be sent tomorrow (12/17) to the PLT and Technical Team with an update on where the design is and ask for any concerns or issues on specific items. The team appreciated the prompt response from the consulting parties on the Section 106 information that was sent out. It was extremely helpful to move the process along.
3. CCC Transportation Visioning—holding a workshop on January 15 and 16, 2014, to take a look at how our concerns with the future should be expressed. This is transportation through the corridor.

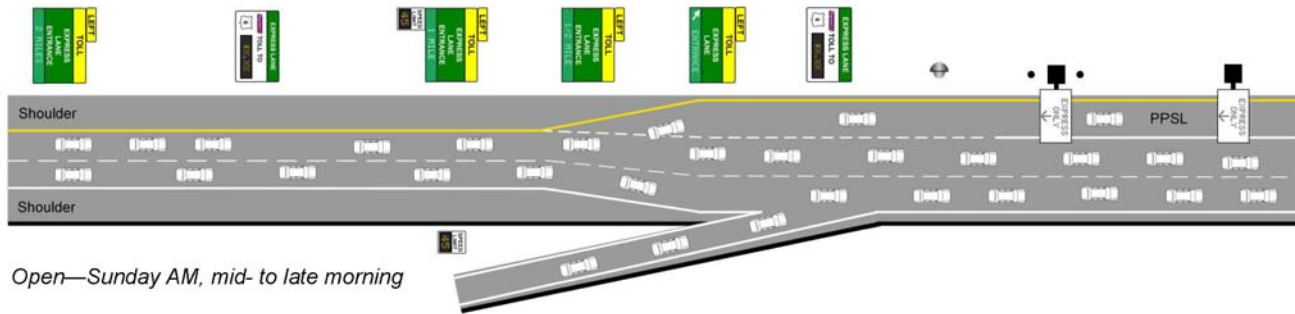
## HOW THE PEAK PERIOD SHOULDER LANE WORKS

1. *Off Peak—Normal*. There will be a series of FHWA signs required by MUTCD.

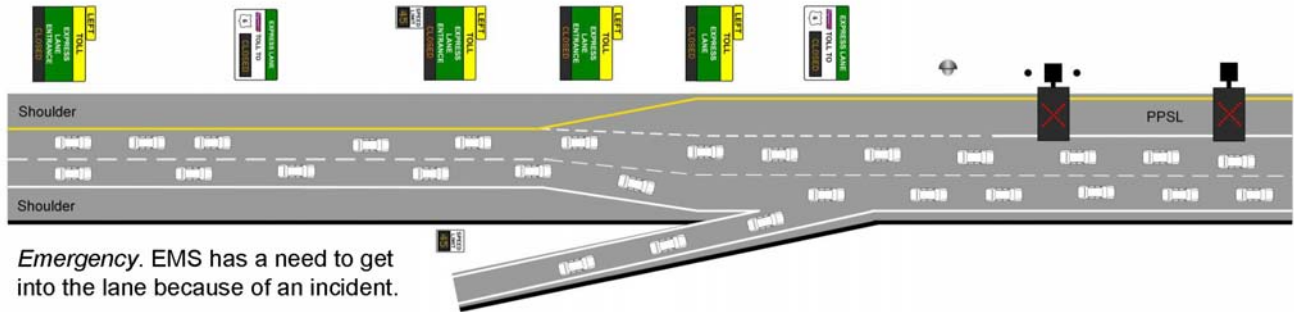


- a. *Cindy Neely*: During non-peak time when it's saying closed, what you are telling the driver is that he cannot get in that lane? If I have a flat tire, are you telling me that I cannot get in that closed lane?
- b. *Phyllis Adams*: Instead of closed, could it say emergency use only?
- c. *Cindy Neely*: What we prefer is that 95% of the time the signs are dark, that they are not flashing at us all day every day—if they are not used.
- d. We will work through the issue of letting people know that during off-peak, this lane is a shoulder. There won't be restriping needed. There will be a sign at the entrance that tells people that in 2 miles, this lane becomes an express lane. We will have that during final design.
- e. For the user's perspective—there will be an electronic message that says breakdown lane, emergency only, or it could be just dark.
- f. For EMS, it's a shoulder so they can use it as they use it today. It would be on the left side.
- g. Tolling perspective—no tolling required during off-peak.
- h. How does a driver get on the PPSL? Response: If you are coming on from the flyover of US 40, entrance sign would be visible, as well as toll information. You will have a couple thousand feet to make a change lane.
- i. Variable message signs—we can't get rid of them because they are reserved for other messaging—like chain law, road weather advisory. They need to remain in place because they have a current use. These are two distinct message signs and we don't see how we can consolidate signs.

2. *Open—Sunday AM, mid- to late morning.* Traffic starts to build.



- a. Operator's perspective—would make the go/no-go decision. Flip the switch by posting all the messages on the signs. Bottom line of signs would say express lane entrance in 2 miles, 1 mile, half mile, then the entrance and variable toll message sign. Toll will be priced in such a way that people are willing to pay, based on a traffic and revenue study.
  - b. Toller's perspective—they will know when it's scheduled to be tolled. They have a tag in their car, then they get assessed with the toll. If no tag, it would be a license plate photo.
  - c. EMS perspective—would continue to use the corridor as is, assuming there is nothing going on in the corridor for emergency response.
  - d. Are vehicles with 3 passengers allowed on the express lane? Response: Yes, but all vehicles are tolled.
  - e. *Cindy Koch:* Go/no go would be based upon the perpetual monitoring by the CDOT Traffic Operations Center? Response: There could be a scenario where traffic is so light that the lane would not be open, or if there is an accident it could be closed.
  - f. *Cindy Koch:* When you said swept, you mean visually? Response: Yes, that is correct.
  - g. What is the distance between point-of-entry and when the solid line starts to the end of the entry? Response: That will be 3,000 feet or more, depending on where we start exactly. That would be determined during design.
3. *Emergency—*EMS has a need to get into the lane because of an incident. This is where ATM really comes into play. It relies on staff monitoring, which would need to happen on the CDOT side. Dispatch would call the operations center; the operations center will implement a closure accordingly. If the incident is only 3 miles down the road, they would only close it upstream and may or may not close it downstream, depending on the incident. All dynamic signs will be changed to "closed" or similar. We could vary the message as we deem appropriate. How people respond to it will have to be determined in the field upon installation.

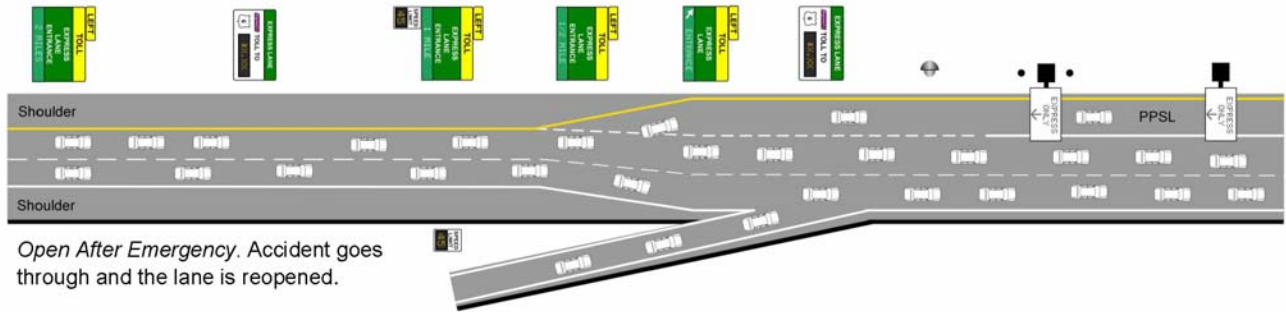


- Emergency.* EMS has a need to get into the lane because of an incident.
- If they are in the lane and need to get out for emergency vehicles, do they need to cross the white line? Response: Yes, they need to. It's going to be a learning process to see what people respond to in the corridor, and sign messaging can be modified accordingly.
  - Cindy Koch:* When you have an accident, right now you are telling people to pull off the road. While they are in the lane, you're telling them to get out. I have done the same many times—they would take more than just that left lane. There would be confusion. Response: Yes, it would be challenging. There would be different scenarios as well.
  - Jim Bemelen:* I would suggest not to put red X's all the way through simultaneously. Response: Yes, it might be most efficient to let people flush down. That would be a process that needs to be refined.
  - The ATM signs are the electronic dynamic message signs beyond the PPSL access zone. These ATM signs are in addition to the series of signs that are required by FHWA for the PPSL tolling.
  - How does communication work? Response: An accident happens, a 911 call makes it over to Dispatch, Dispatch then sends over an EMT. It's going to have to come from Dispatch. The person on the road is not going to make the call while he is en route.

If there is an incident you will watch it anyway, and you will see when it clears. Dispatch will have to call in and say they are en route. The lane may work similar to a rolling closure, you close it as they go by, and you reopen the lane behind the emergency responders.

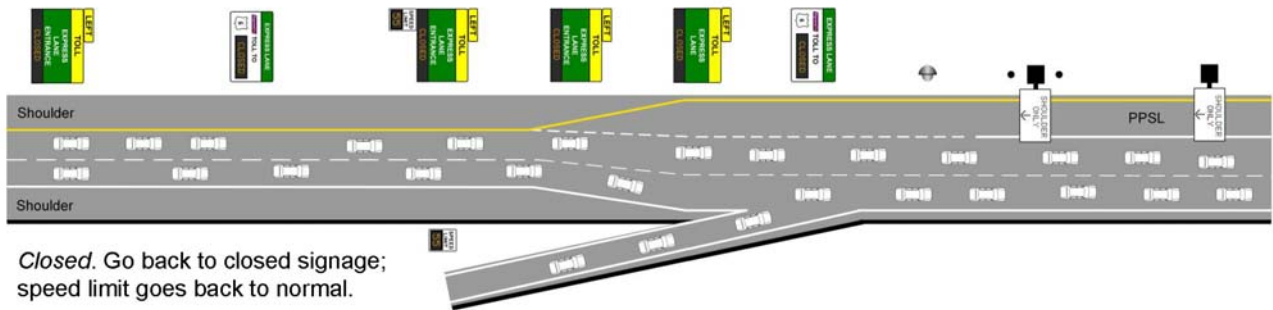
- Cindy Neely:* Are we putting up 12 cameras? Response: We are putting in CCTV cameras where there are gaps right now. We will have full coverage if the cameras are in operational. Twelve was just an estimate.
- Is it CDOT's function to maintain those cameras? Response: Yes, CDOT is doing maintenance right now on all their cameras; they are going to add these new cameras.

4. *Open After Emergency*—Accident goes through and the lane is reopened.

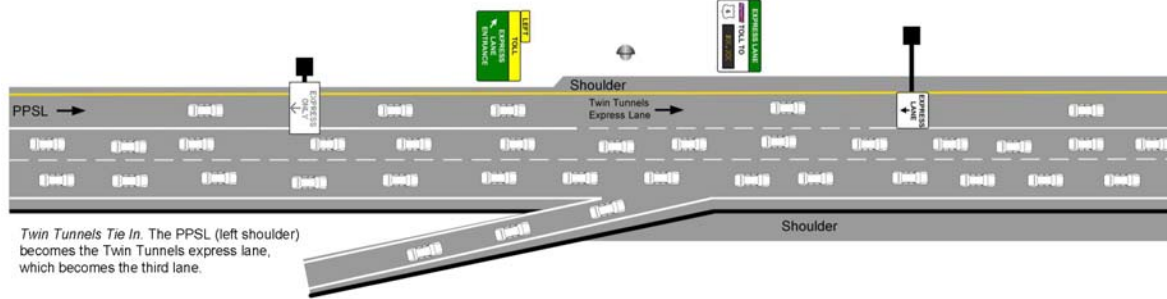


- a. *Cindy Neely*: What does that do to the individual toll charge? Response: Once an incident happens, it gets logged here; then the operations would need to notify E-470 that at 1:15 PM to 1:45 PM, for example, we had to close the lane and to void the toll. This procedure is already in place with E-470 for the I-25 reversible lanes right now.
- b. *Phyllis Adams*: If I was already on the lane when the incident happened, does that mean I would not be tolled? Response: Potentially, yes.

5. *Closed*—Go back to closed signage; speed limit goes back to normal.



6. *Twin Tunnels Tie-In*—The PPSL (left shoulder) becomes the Twin Tunnels express lane, which becomes the third lane. The last ATM sign might say “express only,” and when not in operation, it could say shoulder only. The third lane that just opened up will be tolled during the peak period, probably only through Floyd Hill, but will be open to traffic all the time. There will be at least 3 FHWA-required signs at the transition from the PPSL to the Twin Tunnels express lane, two of which could be static signs.



- a. Does it make sense to only toll it for 2 miles? Response: That's more driven by the fact that it is third lane year-round, rather than an express lane. The lane through the tunnel will be open 365 days a year.
- b. *Adams Phyllis*: This section would also be tolled during peak period? Response: That is correct.
- c. *Cindy Neely*: At this point, we are being approached by CDOT operations—that they want to run buses on the shoulder this winter. We have work to do to make a shoulder that's operational. Does CDOT have a complete set of signs for having this bus operation on the shoulder? What are we doing here? How do these things integrate? Response: CDOT is talking about eastbound bus on shoulder operations, just to see if there is any hope of it working, because 10 feet is pretty narrow. They did some tests with a Greyhound bus that was able to run on a 10-foot lane.
- d. *Carol Kruse*: Not familiar with the corridor as people who drive it all the time. It's going to be confusing. Eastbound shoulder lane coming into a third lane? How much time do I have as a driver, when I am trying to pay attention to driving?
- e. Define ATM versus variable message sign? ATM gives us the ability to manage the lane through electronic signs. The electronic sign is how we manage the lane.

#### OUTCOME FROM ISSUES TASK FORCE MEETINGS

1. *Section 106 meeting* held on December 2, 2013. We received a lot of good input during the meeting. We went over the properties that we are recommending as eligible to include on the National Register. We identified 22 properties and increasing that number by at least one. The Monroe Mine sites and various historic buildings in Lawson and Lawson Historic District are eligible, as well as the water wheel itself. We will likely be recommending the Blue Ribbon Tunnel as eligible. We are in the process of revising the report. We are working closely with Lisa Schoch to make sure we responded to all her comments.

We acknowledged the historical importance of the SH 103 area. The contribution of the railroad, the mines, and mill site are divided up in different categories. We plan to have one that is geographically focused on the SH 103 area.

2. *ALIVE meeting* held on December 3, 2013. We are recommending median jump breaks, which are lowered areas in the median barrier. There are existing breaks in the Dowd Canyon area. There is evidence that there are some big game that cross the median. Working with CPW to determine where to put those. Working with the City to look at the chain link fencing at Soda Creek. We will hope to replace that with wildlife friendly fencing.

Setting up a meeting with CPW to look in more detail at Empire Junction area to see what we can do in that area. That is the one most heavily used by wildlife.

There would also be section for little critters that cannot jump high. There will be little holes through the barrier they can fit through to cross the highway. We are trying to take some positive steps to improve the impermeability of the corridor for wildlife.

3. *SWEEP meeting* held on December 5, 2013. We talked about the retaining wall at SH 103 and what the impacts of the improvements might be. We committed to getting information back to the group. We are still working on ideas on what we can do to armor that wall. We also talked about water quality.

Comment: For the permanent water quality features we are contemplating in the Downieville area—there is an issue that we should probably add, which is the jersey barriers at the Port of Entry. Right now, it looks like it's a dumping ground for jersey barrier. This is our opportunity to revisit it, because they just won't tackle it. Response (Jim Bemelen): I am not sure why. I will have a chat with the Department of Revenue.

#### ONLINE MEETING UPDATE

1. I70PPSL.COM. Migrate the site once final to I70PPSL-CDOT.COM.
2. There are 7 pages within the site: *What is all the fuss about? What is a peak period shoulder lane? What are the benefits? How will we protect the environment? What is the environmental impact? Who is Involved? What do you think?*
3. Meant to replace the normal public involvement process, but hope to be far more reaching.
4. *Belinda Arbogast*: Can you skip with each frame? Response: Yes, you can skip and you can go back and forth. You can get straight to the thing that you care about. We would need help from everyone to distribute this widely to your distribution network, around a one-mile buffer, from Empire Junction to Idaho Springs.
5. *Jo Ann Sorensen*: We want Clear Creek residents to be aware, if you are talking just 1 mile, you might not reach everyone in Clear Creek. Response: We will look at what we have captured already and we will get back with you on that. See how far into the county we have covered.
6. There will be postcard to send out also telling people who to contact if they need more information.

7. *Belinda Arbogast*: How long does it take to do each poll? Response: We have not tested it yet, but there is also a comment form at the end.
8. *Jo Ann Sorensen*: I thought we talked about the managed lane to be 45 mph? We will have to work through the discrepancies.
9. *Jo Ann Sorensen*: If you are doing this in a linear manner, in the previous topic, the user is asked to identify the most important core value, but the core values are not explained prior to that. Response: We can move it so that we have the core values first.
10. Comment Form—this would enable us to track comments submitted.
11. Everything that's been interactive has been in the lower part, it's hard to see that comment button, didn't even notice that it was there. Response: Yes, we can move it so that it is more visible.
12. To make the site ADA-compliant, one of the requirements is you publish everything that you see in the videos, so the text is really small on the "Who is involved" page.
13. Are we calling this Town Hall or Web site? Response: We want to make this the site for the project, so all of the archives, meeting minutes, and materials will be stored in this site. We are not really calling this town hall officially. It is an online public meeting.
14. *Carol Kruse*: Overall it is great.
15. Is there going to be a way for people to view comments that have been entered? Response: We have not integrated that into the site. Once we have all the comments entered, we can publish those and share back out to people. We can definitely do that. We will revise this site to incorporate comments received today and we will publish the final site as soon as possible.
16. *Cindy Neely*: You want the traveling public to know that this is out there, so we suggest that CDOT place a computer in the visitor center so people visiting can access the site if they need to. Response: We can look into what we can do.
17. Could the Web site address be placed on the signs? Response: FHWA does not allow URLs on signs. The CDOT Public Involvement staff has several public information tools they can use to get this out to the public.

## CSS TRACKING SCHEDULE

There have been changes. Revised schedule was handed out by Kevin Shanks to the attendees. The local roadway network piece has been identified. As we are getting through the items, we shade them in blue, as shown on the hard copy.



## GLOSSARY OF TERMS

No new terms added.

## CSS PROCESS

No new evaluation criteria.

## SH 103 INTERCHANGE

1. We heard that it would be best if we shifted the I-70 alignment a little bit to the south. We will talk today about our reevaluation of that.
2. Didn't really have a huge impact on the Water Wheel Park. 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 feet to 8 feet) to allow for the possibility of a future westbound PPSL.
3. *Conceptual Site Plan—Potential Trail and Park Enhancements.* To optimize the existing infrastructure and minimize impact to the water wheel, we had varied impact from, from zero impact to 14 feet impact. Maximum of 8 feet total additional. Total additional impact is about 12 feet to 14 feet.
4. We can do this by not impacting the existing trees and vegetation right on the edge of the creek. We did not lose anything in trail width or plaza width.
5. It preserves all of what is shown on the conceptual plan. The widest piece of the sliver is the 12 feet on the arc, then it tapers on both ends.
6. Spoke with someone who has been involved with this park previously. Is there no water in that park? Response: There is water in the park. Comment: Make sure you take into consideration the sewer in that park also.

## SIGNAGE

New signage consideration

WHAT	ACCESS	TOLLING	ATM
HOW	FHWA Compliance	Static vs. Dynamic	Lane Use

1. Last time we met, we went over a variety of ideas about how to manage on the corridor and how we would manage that. It came down at the end to the biggest concern of signage. We present three different types of access for a managed lane: continuous, intermediate, and single point. We decided as a group that we would never do continuous; we took that off the table.
2. The access at 241 should be maintained, but no intermediate access between Empire Junction and 241 would be needed.
3. If we sign it to enter the facility, people will enter it, and if they need to get off the lane, we have methods we could use to make it possible. We run this kind of a single-access facility and let the user use it as they need.
4. Not truly a single access because there is an access at Empire Junction and there is also an access at 241. We will design it as a single access, then we are letting tolling encourage compliance. The issue of people entering and leaving that lane will not likely be a large one.
5. Tolling does require some extra poles out there for some cameras; however those locations will be combined with sign locations when possible.
6. Would like to know the size of those initial FHWA signs. Is there any need for a second pole to tell you what the toll fee is? Why can't it be incorporated in some manner on the initial sign? Response: We tried to consolidate in the past and we went through a series of discussion with FHWA on other corridors, and they won't allow it. They issued a directive to CDOT on how the signs must work. That is an MUTCD requirement.
7. There are a couple of proposed signs that are very close to bridges over I-70. Is there anything that prevents them from being put on the bridges to reduce clutter? One of those, if we could mount on the bridge, would be good. Response: Normally, you do not attach signs to a structure. When you put a sign, normally, they attach to the overhead or steel girder. Bridge designs do not include that kind of loading. The panels are pretty big; the larger the structure, the more wind it catches.
8. CDOT ITS staff does not like to place electronic signs on bridges because of the products and chemicals used to remove ice and snow on bridges. They would mess up the electronics in the sign. CDOT Staff Bridge staff does not normally allow signs to be put up on bridges for various reasons, such as the additional wind loading that signs induce.
9. Required Signs—with single-point access, there are at least 11 total FHWA-required signs. There may be some additional tolling points for enforcement, but they can be combined with ATM signing. We will look at the context and size of the ATM signs.
10. The ATM signs allow the PPSL to be actively managed. CCTV cameras alone do not allow for active management in the form of lane control.
11. What size are VMS on monopoles that currently exist out there? Response: 9 feet tall by 26-foot-wide.

12. *Express Lane Entrance/2-Mile Warning Sign* = Static panel is approximately 13 feet by 15 feet. Sign sizes are dictated by FHWA based on the text height we have to have. Current striping shown on the slide will be corrected. We have not designed the size of the monopoles yet, but the size of monopole on US 36 is somewhere between a 24-inch diameter pipe and a 36-inch carrying two panels. We will design them for wind loading.



13. *Express Lane Entrance/1-Mile Warning sign*. Will the cameras be on standard light poles? Response: Camera pole with a lowering device. Will likely be on a different pole from existing lighting. We'll have full coverage and we'll be able to pan around 360 degrees.



14. Not clear why we need one between the 2-mile and 1-mile marks. If you can have one less camera than you truly need, then we should do that. Response: Yes, we will look into that.

15. *Express Lane Entrance/1/2-Mile Warning Sign*. It is standard to double-post the VSL signs, where there is a change in speed.



16. *Express Lane Toll Sign*

a. *Cindy Neely*: According to the FIR plans, the first sign that comes after the toll is after the one-mile sign. But it is now different. Response: The FIR plans have been revised since. This will continue to change. Maybe we could create a table that would track the changes we make and provide to the group so people can see the changes that are made throughout. Yes, that would be helpful.



b. Why do the signs say "Express Only"? Having both "Express" and "Toll" on the sign is confusing. Can it just say Toll Lane? Response: First one has to say "Express Only" per FHWA directive. The proceeding ATM signs are variable and we have the ability to change

the messages. The message on the first ATM sign cannot be changed when the lane is in operation, subsequent signs can be modified.

- c. It's the same signing laid out for US 36 exactly. It would be black on white for the variable sign. FHWA does not have the authority to vary from MUTCD.

Intermediate signs are for when there is an incident. The places that you are referring to, like I-25 and US 36, have lanes that are in operation most of the time. It is different here on this corridor; we don't need all these signs blaring at us all the time. Response: These signs can be blacked out when the lane is not in operation. We are using ATM so that we can manage incidents that happen in the corridor.

In areas where there is a good line of sight, we don't need that many signs, but in areas where there is horizontal/vertical curvature, then maybe you need more signs.

- d. Want to make sure that the group is still on board for ATM, independent of the number of signs.
- e. ATM is still on the table, but need to look at line of sights in the corridor itself. Should not decide based on what you come up with on the drawing table. Suggest black face on the sign with Forest Service brown for the rest of it; and that we follow the same guidelines for poles for the cameras.
- f. They can also be used when it's snowing and drivers cannot see where the striping is.
- g. When there is snow covering and you can't see the striping, we should not run it as a shoulder lane.

- 17. Comments on the sign inventory (Jo Ann Sorensen): There are some extraneous signs as you go through the corridor. We ask that this be cleaned up. For example, the sign for Joe's Diner—if that place is gone, that sign would be removed.

## ATM

The ATM criteria were discussed as presented on page 38 of the presentation. Everyone agreed that we want ATM.

## Managed Lane Access

The managed lane access criteria were discussed as presented on page 41 of the presentation. All were in agreement with the recommendation of single point access.



ATM SIGN

STA 400+00



ATM Sign

STA 440+00



ATM Sign

STA. 510+00



ATM SIGN

STA. 686+00



EXPRESS LANE ENTRANCE SIGN  
FOR RE-ENTRY AFTER IDAHO SPRINGS

STA. 775+00



EXPRESS LANE TOLL SIGN  
FOR RE-ENTRY AFTER IDAHO SPRINGS

STA. 789+00



EXPRESS ONLY SIGN

STA. 810+50

#### EAST IDAHO SPRINGS INTERCHANGE

1. Not having the vertical clearance to squeeze in another lane, and the fact that sufficiency rating of the existing bridge is very low. Basically the structure is at the end of its design life.
2. Looked at the interchange as a whole knowing that we need to replace this bridge. Initially, we looked at replacing the bridge in place which presents some construction phasing challenges. Another idea was to change the alignment of the bridge. Came up with different options on how we can work with this interchange, maintaining that skew.
3. *Interchange Concept One*: Changing the skew, closing the ramp and pulling all the westbound decel off just west of the bridge. How to build this bridge keeping the bridge at its current location. Additionally, you eliminate high-speed vehicles coming off the ramp to Idaho Springs. In this existing interchange concept, we are tied to this very low-functioning interchange. Not really comfortable with this. We are making it worse with this design.
4. *Interchange Concept Two*:
  - a. To improve the condition, same decel for eastbound, put some traffic calming curves, remove asphalt and eliminate that hard turn back there. We tie in to the T intersection. Gets messy for people getting into the interchange.
  - b. These are all becoming safer for pedestrians because of free-flow. Kids will be safer crossing to the creek. Following the frontage road going into town.
  - c. With eastbound traffic (a lot of traffic going to Idaho Springs) hits, maybe could use a little traffic calming—maybe blinking yellow or red lights at night.

5. *Interchange Concept Three:*

- a. With a roundabout, possible concept is to add a bike/pedestrian lane, same 2 intersections.
- b. Purpose of a roundabout is to process traffic without traffic signal. It is safer and better for air quality. Safer even for pedestrians.
- c. Trucking industry has a problem with roundabouts in general because roundabouts are typically under-designed in terms of foot print. Real problem is when it gets saturated and traffic comes to a complete stop. The problem is not eastbound I-70 getting into East Idaho Springs. The problem is commercial traffic coming out of Idaho Springs, coming out of I-70 going back to Denver.
- d. *Carol Kruse:* Based on my experience as a driver, people stop at roundabouts, and I think you are going to have some back up. Roundabouts here are too narrow/small. In Europe, roundabouts are wider/larger.
- e. This is very focused on the bridge replacement, all these other things we still have to get approval from Bridge Enterprise. So what you're seeing here is, we are still stretching our imagination on conceptual design and how this will get funded. If we do this concept, we probably would not be able to sell this, because I don't think any engineer would buy this. This is awkward. It's probably better than the buttonhook we have today. It is a fairly good size roundabout. Still, roundabouts have these problems—just like any intersections. What we do know is that accident severity is much lower than your typical intersection. We are not going to replace that bridge and keep that buttonhook here. If people have other ideas, we would love to hear it. It is a tough bridge to replace because of the skew. We are walking a fine line with the budget and how this fits with the PPSL. Does everyone agree that we should try to enhance this interchange as well? Yes!
- f. *Mary Jane Loevlie:* We need to consider what we can do with that and maybe have a feature in there because that is another access to town.
- g. There is still the issue of lowering I-70, which we agree would be a bad choice.

EMERGENCY PULL-OUTS

- 1. Identified 7 possible pull out locations. Remember that people can pull off of the highway at the interchanges.

No	MP	Location	Length	Width	Miles Between
1	232.1	East of Empire	510	16	-
2	233.2	Lawson	510	16	1.1
3	235.0	Dumont	510	16	1.8
4	236.6	East of Spring Gulch	510	16	1.6
5	236.8	West of Fall River Rd	510	16	0.2
6	239.0	West Idaho Springs	510	12	2.2
7	240.2	East Idaho Springs	510	16	1.2

2. Pull outs should be paved. Maintenance can't plow them if they are not paved. If you don't have plowed pull out, then you don't have a pull out at all.
3. Pull outs should be large enough to accommodate a tractor trailer unit and at least one piece of emergency equipment. Required Length is 510 feet to 710 feet (including tapers). Required width is 12 feet to 16 feet.
4. Emergency pull outs Summary:

*a. East of Empire*

- i. Some concerns in this area because of wildlife, and that whole area is a wetland. Also, this is the start of the peak period, so maybe there is a compelling reason not to put one here.

There is a concern that this is going to be overnight stopping points for truckers. There was a truck stopped on the off-ramp, one on the interchange, and one on the bridge.

- ii. This emphasizes the reason why we think this is not a good location because of wildlife.
- iii. Minimizing the width of this helps a little. 12 feet is the width of the shoulder that is there now.
- iv. Speaking of who utilizes this—trucks, with chain laws. Those trucks don't pull into the chain station. They utilize the shoulders. One driver was in the lane of traffic putting in chain and was struck.
- v. Another issue is trash maintenance. There is no one responsible in cleaning up trash. Chain stations have become a trash dump. Bottles, human waste...

*b. Lawson*

*c. Dumont*—potential conflict with the on-ramp.

*d. East of Spring Gulch*—location is pretty tight. Has not done some detailed modeling. There is not a lot of room.

*e. West of Fall River*—pretty wide. That section of Fall River is extremely dangerous. When something happens in the right-hand turn, you are already in trouble when you get to the left-hand turn. So whatever we do here, we have to be careful, so we don't make it worse.

*f. West of Idaho Springs*—several concerns: close to the off-ramp, close to the bike path, there may be some impacts to the bike path. Would need to shift the bike path farther south.

g. *East Idaho Springs*

- i. Some drainage concerns, potential rock cut
- ii. Isn't this the area in the preliminary plan that there needs to be some rock cut to put in the PPSL? Response: Not really cut but stabilize it.

5. Emergency pull out summary with ramps:

No	MP	Location	Length	Width	Miles Between
1	232.1	East of Empire	510	16	-
2	233.2	Lawson	510	16	1.1
3	235.0	Dumont	510	16	1.8
4	236.6	East of Spring Gulch	510	16	1.6
5	236.8	West of Fall River Rd	510	16	0.2
6	239.0	West Idaho Springs	510	12	2.2
7	240.2	East Idaho Springs	510	16	1.2

- a. ***Initially eliminated 3 pull outs*** and will *discuss the possibility of the remaining 4*. The group went through the maps hung on the walls showing the different possible pull outs.
  - b. One can pull out at the port-of-entry if alone.
  - c. ***Recommend eliminating #2 Lawson***. Illegal for trucks to go through Lawson.
  - d. ***Suggest keeping #3 Dumont***—initially put in 16 feet but we can model it.
  - e. ***Suggest keeping #5 West of Fall River***. There is a long stretch between Dumont and Fall River. By placing those two there, we are providing two locations that don't have anything in between.
  - f. There is power in where you put the pull out. Because of the straight away, people feel it is safer.
  - g. ***Recommend eliminating #7 East Idaho Springs***.
  - h. ***Summary***—Keep only #3 at Dumont and #5 at West of Fall River Road.
6. We have ramps and we are only creating two additional pull-outs: *Dumont and West of Fall River Road*.
7. Spacing has changed 1.8 miles. In England they have gone to 1.5. We don't have the full recommendation of the 1.5 miles because we are not exceeding it. Given the terrain, this is as good as we can get.
8. *Art Ballah*: Everybody understands we have shortage in the corridor for emergency truck parking. Every company I know has policy in force for non-emergency use of pull outs for



parking. If they have some overheating situation, they would go into the port-of-entry or they go in the ramps. The problem with pull outs is, it's hard to get into there if traffic is heavy. So trucks would more likely go into the ramp.

9. Need to make sure there is enough accel/decel. For off-peak, we have a lot of shoulder that drivers can use.

#### OUTSTANDING ISSUES:

We will proceed in the next couple of months on these.

1. Drainage
2. Greenway—We will continue to refine the greenway.
3. Snow Removal/Maintenance
4. Noise
5. Barrier/Guardrail—We will come back and talk about the guardrail design.
6. Initial Environmental Findings
7. Class of Action
8. Aesthetics—Keep it at East Idaho Springs and SH 103. Back check on aesthetics—consistency with the barriers, consistency with the guidelines for all of the features along the road. Make sure we are keeping with the guidelines.
9. Local Roadway Network—waiting for CCC on this one.

#### NEXT STEPS:

1. Ready to meet with the Local roadway Network.

#### FUTURE TECHNICAL TEAM MEETINGS

1. Monday, 1/27, at Clear Creek School Commons Area
2. Monday 2/24, at Trail Ridge Conference Room in Golden
3. Monday 3/24, at Clear Creek School Commons Area

All meetings are scheduled from 8:30 a.m. to 12:00 p.m.

**TECHNICAL TEAM ATTENDANCE ROSTER**  
 Technical Team Meeting #8  
 Monday, December 16, 2013 (8:30 AM to 12:00 PM)  
 CDOT Golden - Trail Ridge Conference Room

<b>INITIAL Attendance</b>	<b>NAME</b>	<b>AGENCY</b>	<b>E-MAIL ADDRESS</b>	<b>MAILING ADDRESS</b>
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