I-70 Frontage Road Improvements
Old US 40 / CR 314

Project Leadership Team / Technical Team Meeting #3
December 15, 2011

Jim Bemelen, I-70 Corridor Manager
David Singer, I-70 Corridor Env. Manager
Benjamin Acimovic, Project Manager
Janet Gerak, Project Env. Manager

Agenda

1:05 **Meeting Goal and Agenda Review**
- **-CSS Step 5: confirm alignment and sections**
- **-Process overview and website reminder**

1:15 **New Introductions**

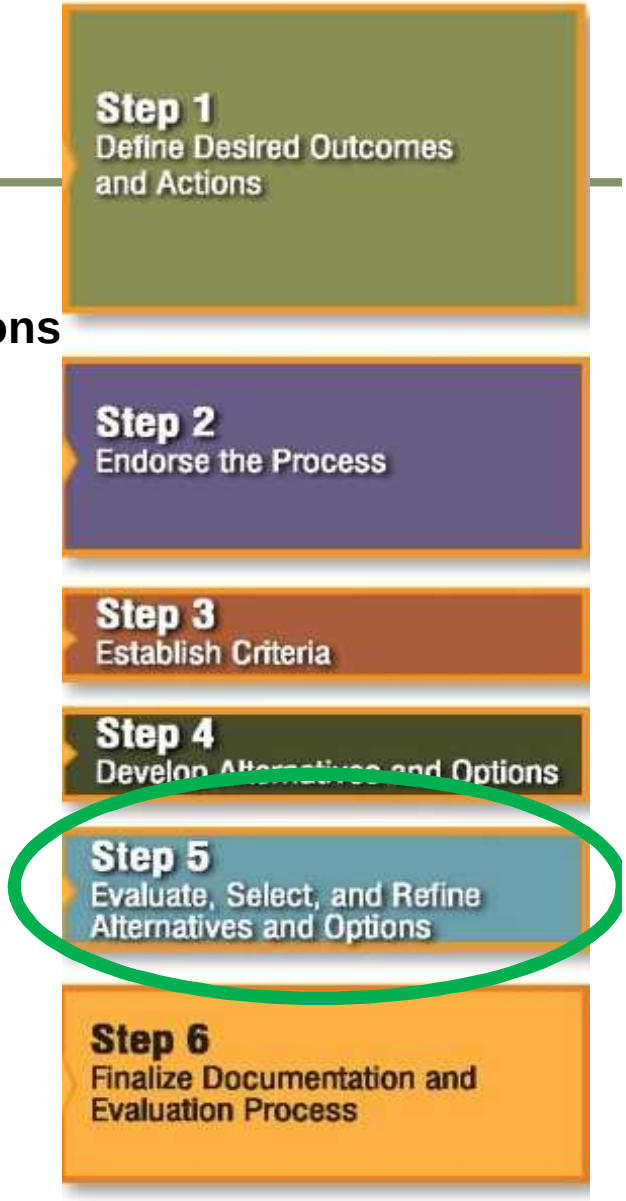
1:30 **Input from recent meetings**

1:45 **Summarize values, screening criteria and variances**

2:00 **Review alignment and cross sections**

2:45 **Endorse refined option**

3:00 **Next Steps**



Process Overview

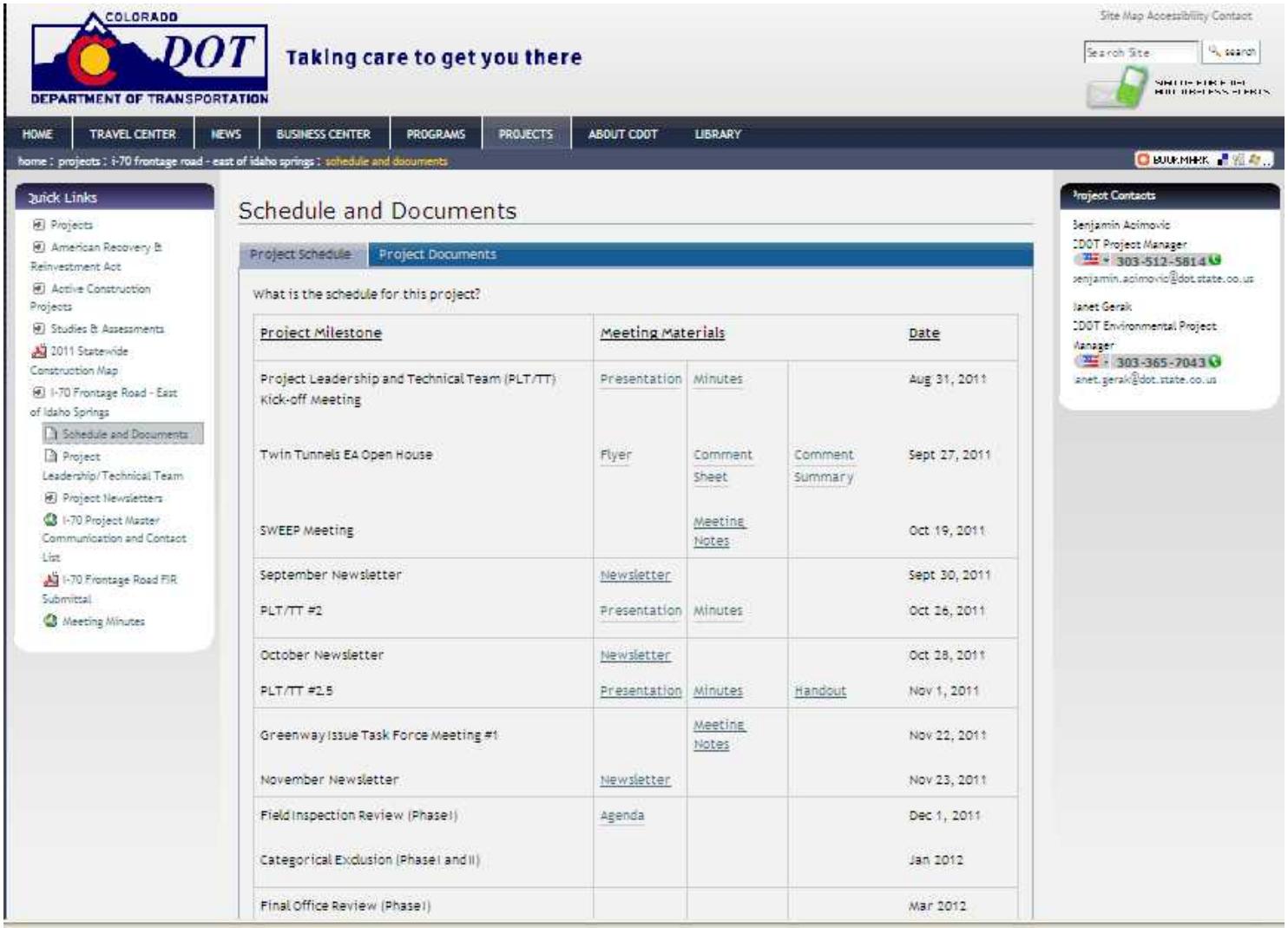
- Categorical Exclusion for frontage road improvements east of Idaho Springs to Hidden Valley

- Project Schedule

– PLT/TT Meeting	August 31, 2011
– Scoping	September 7, 2011
– PLT/TT Meeting #2	October 26, 2011
– PLT/TT Meeting #2.5	November 1, 2011
– Greenway ITF	November 22, 2011
– Field Inspection Review	December 1, 2011
– Clear Creek Board meeting review	December 12, 2011
– PLT/TT Meeting #3	December 15, 2011
– Engineering Coordination meeting	December 21, 2011
– Idaho Springs Planning Commission	TBD
– Greenway ITF#2	TBD
– Final Office Review	April 2012
– Ad date for Phase I	April 2012
– Construction of Phase I	Summer /Fall 2012

- Anticipating $6.25M project budget - for design and construction

Meeting materials on website



New Introductions

- New Project Leadership / Technical Team members: *Larry and Gail Lancaster*

Input from recent meetings

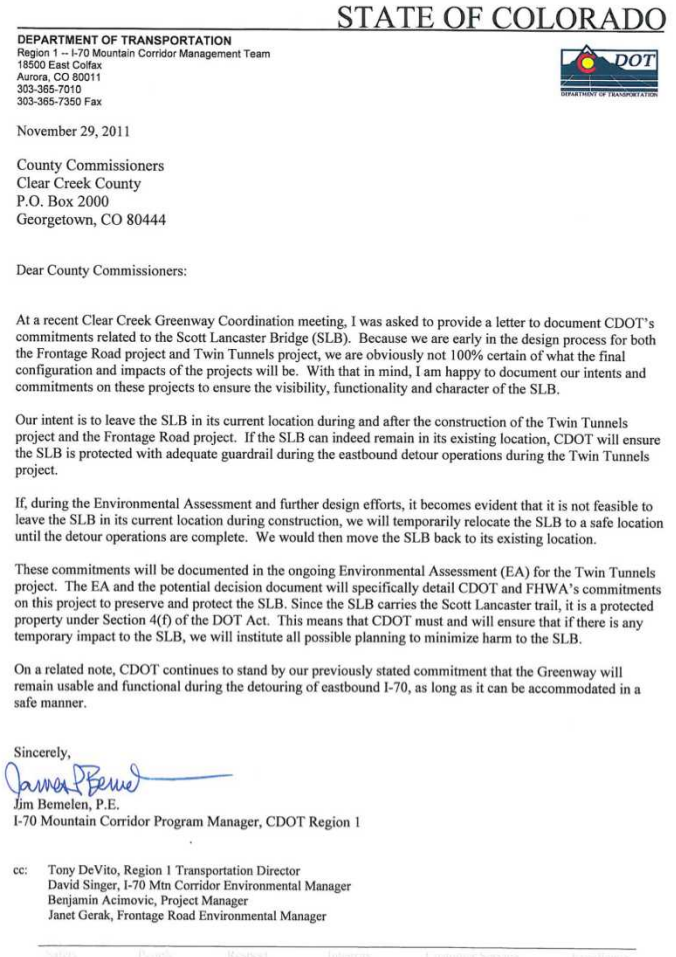
Greenway ITF, FIR, Clear Creek Board, etc

- Avoidance of Gem Power Plant remnants
- Rock wall life span and maintenance requirements
- Utility Coordination Process

Input from recent meetings

Greenway ITF, FIR, Clear Creek Board, etc

- CDOT letter to document Lancaster Bridge protections
- Clear Creek County Board Meeting endorsement
- Cleary Creek County, Comments on FIR Documents



STATE OF COLORADO

DEPARTMENT OF TRANSPORTATION
Region 1 -- I-70 Mountain Corridor Management Team
18500 East Colfax
Aurora, CO 80011
303-365-7010
303-365-7350 Fax

November 29, 2011

County Commissioners
Clear Creek County
P.O. Box 2000
Georgetown, CO 80444

Dear County Commissioners:

At a recent Clear Creek Greenway Coordination meeting, I was asked to provide a letter to document CDOT's commitments related to the Scott Lancaster Bridge (SLB). Because we are early in the design process for both the Frontage Road project and Twin Tunnels project, we are obviously not 100% certain of what the final configuration and impacts of the projects will be. With that in mind, I am happy to document our intents and commitments on these projects to ensure the visibility, functionality and character of the SLB.

Our intent is to leave the SLB in its current location during and after the construction of the Twin Tunnels project and the Frontage Road project. If the SLB can indeed remain in its existing location, CDOT will ensure the SLB is protected with adequate guardrail during the eastbound detour operations during the Twin Tunnels project.

If, during the Environmental Assessment and further design efforts, it becomes evident that it is not feasible to leave the SLB in its current location during construction, we will temporarily relocate the SLB to a safe location until the detour operations are complete. We would then move the SLB back to its existing location.

These commitments will be documented in the ongoing Environmental Assessment (EA) for the Twin Tunnels project. The EA and the potential decision document will specifically detail CDOT and FHWA's commitments on this project to preserve and protect the SLB. Since the SLB carries the Scott Lancaster trail, it is a protected property under Section 4(f) of the DOT Act. This means that CDOT must and will ensure that if there is any temporary impact to the SLB, we will institute all possible planning to minimize harm to the SLB.

On a related note, CDOT continues to stand by our previously stated commitment that the Greenway will remain usable and functional during the detouring of eastbound I-70, as long as it can be accommodated in a safe manner.

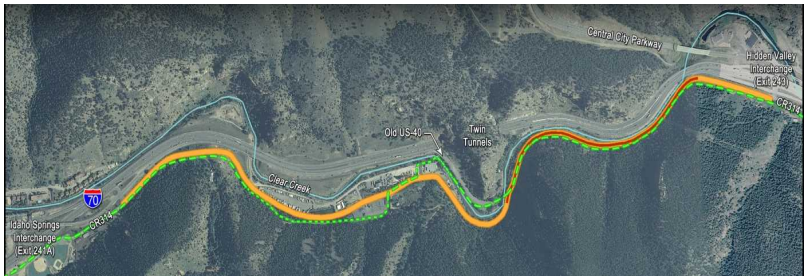
Sincerely,

Jim Bemelen, P.E.
I-70 Mountain Corridor Program Manager, CDOT Region 1

cc: Tony DeVito, Region 1 Transportation Director
David Singer, I-70 Mtn Corridor Environmental Manager
Benjamin Acimovic, Project Manager
Janet Gerak, Frontage Road Environmental Manager

Corridor Core Values

- Sustainability
- Collaborative decision making
- Safety
- Healthy environment
- Historic context
- Community respect
- Mobility and accessibility
- Aesthetics



Screening Criteria

Table 7: Summary of Preferred Alternative

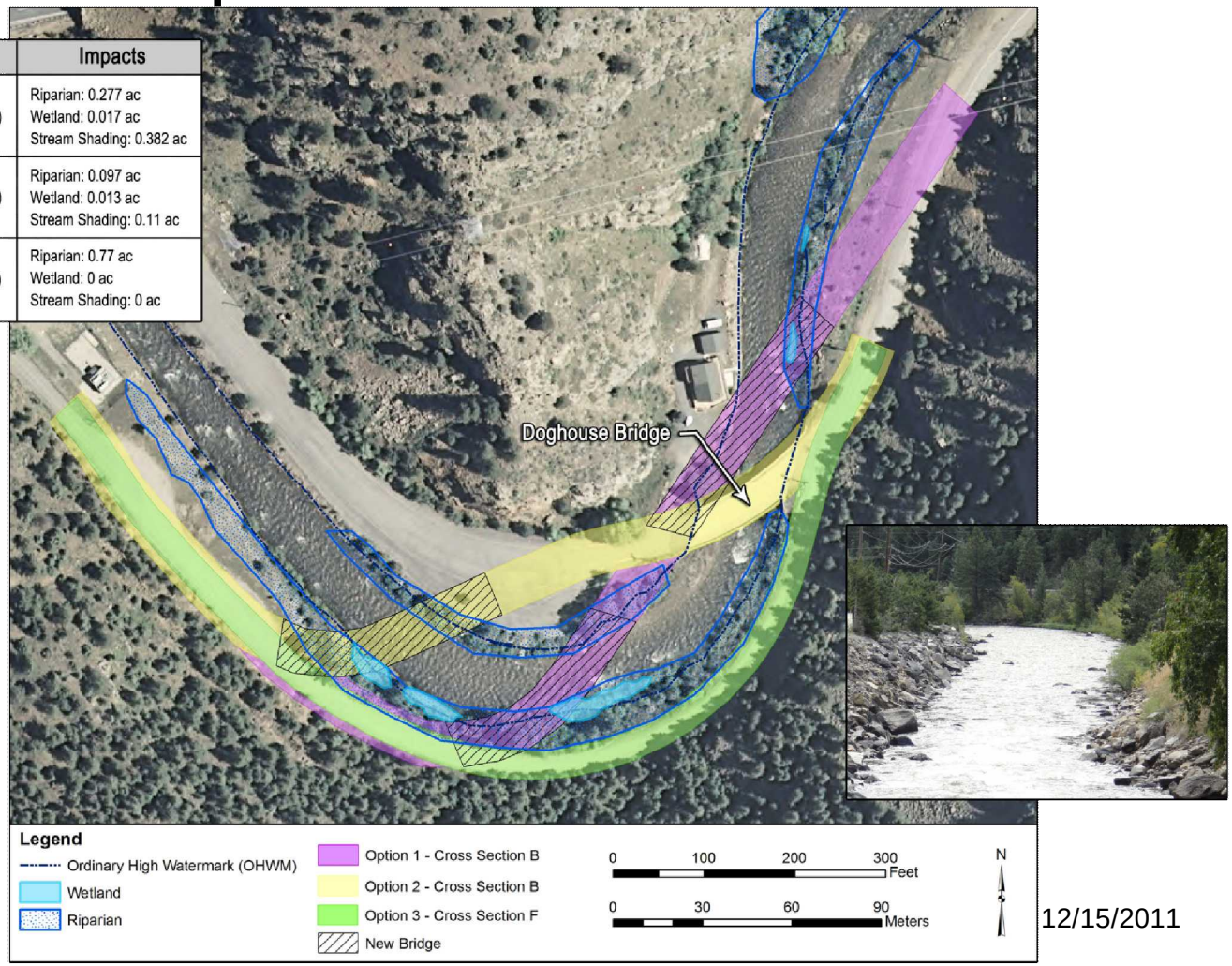
Decision Area	Option	Summary of Benefit/Drawback	Estimated Total Cost* ($ millions)
Western	**Combination of CS A and B**	**Impact to accesses and private property** **Consistent separated trail (new and existing)** **Potential wetland impacts – 0.004 acres**	**$5.83**
Gravel/Doghouse Bridge	Option 1 or 2 (New bridge(s))	New trail attached to bridge(s) Lower economic/redevelopment Lower utility coordination/extension Medium stream/wetland impacts: • Option 1 - riparian: 0.277 ac, wetland: 0.017 ac, and stream shading: 0.382 ac • Option 2 - riparian: 0.097 ac, wetland: 0.013 ac, and stream shading: 0.11 ac	$4.66
Gravel/Doghouse Bridge	**Option 3 (CS F)**	**Narrowest cross section** **Trail remains in current location along Doghouse Bridge** **Lower utility coordination/extension** **Low stream/wetland impacts**	**$3.43**

Cost being revised based on new survey

Screening Criteria

- wetlands example

Option	Impacts
Option 1 (Cross Section B)	Riparian: 0.277 ac Wetland: 0.017 ac Stream Shading: 0.382 ac
Option 2 (Cross Section B)	Riparian: 0.097 ac Wetland: 0.013 ac Stream Shading: 0.11 ac
Option 3 (Cross Section F)	Riparian: 0.77 ac Wetland: 0 ac Stream Shading: 0 ac



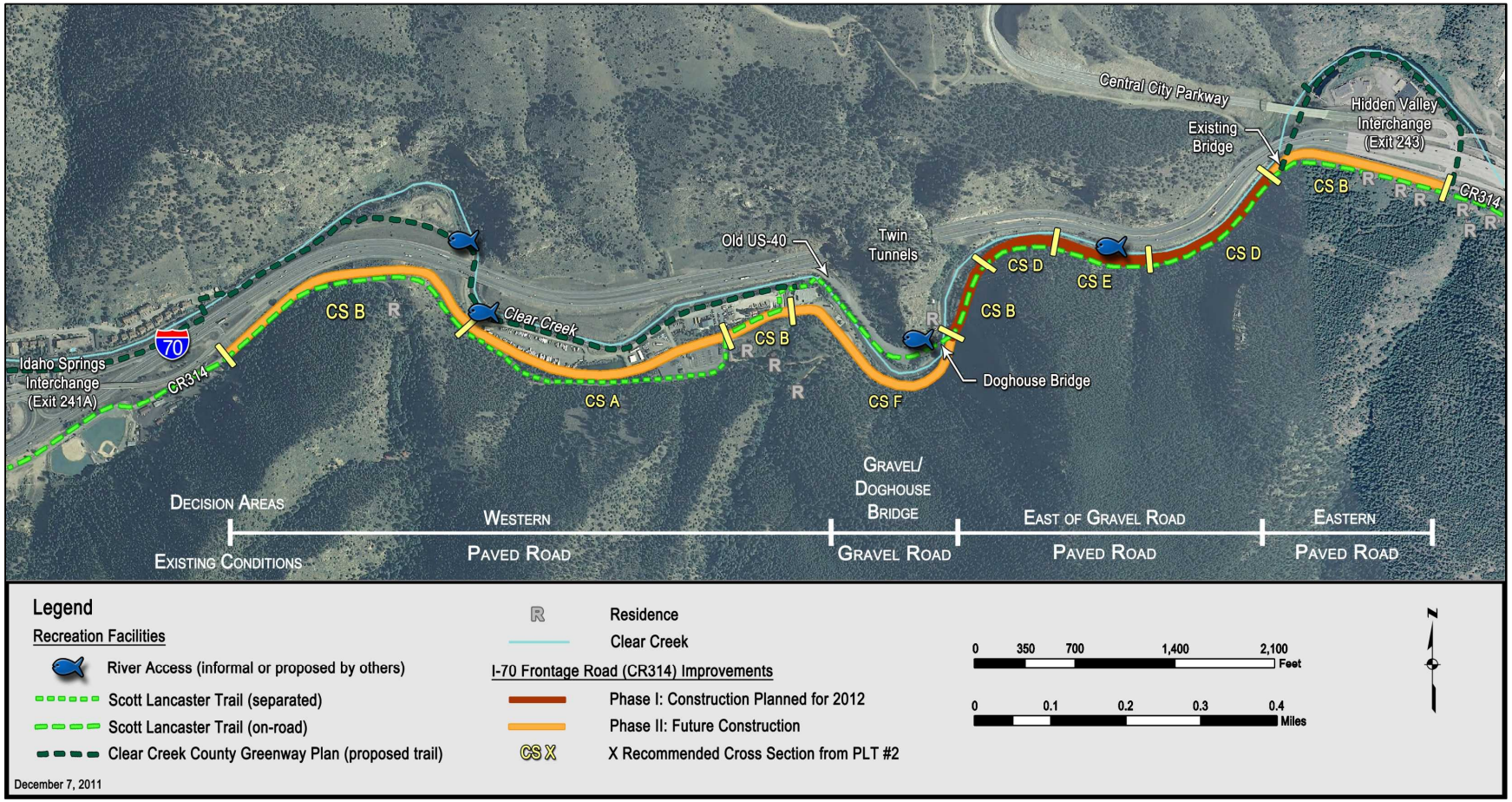
Screening Criteria

Table 7: Summary of Preferred Alternative

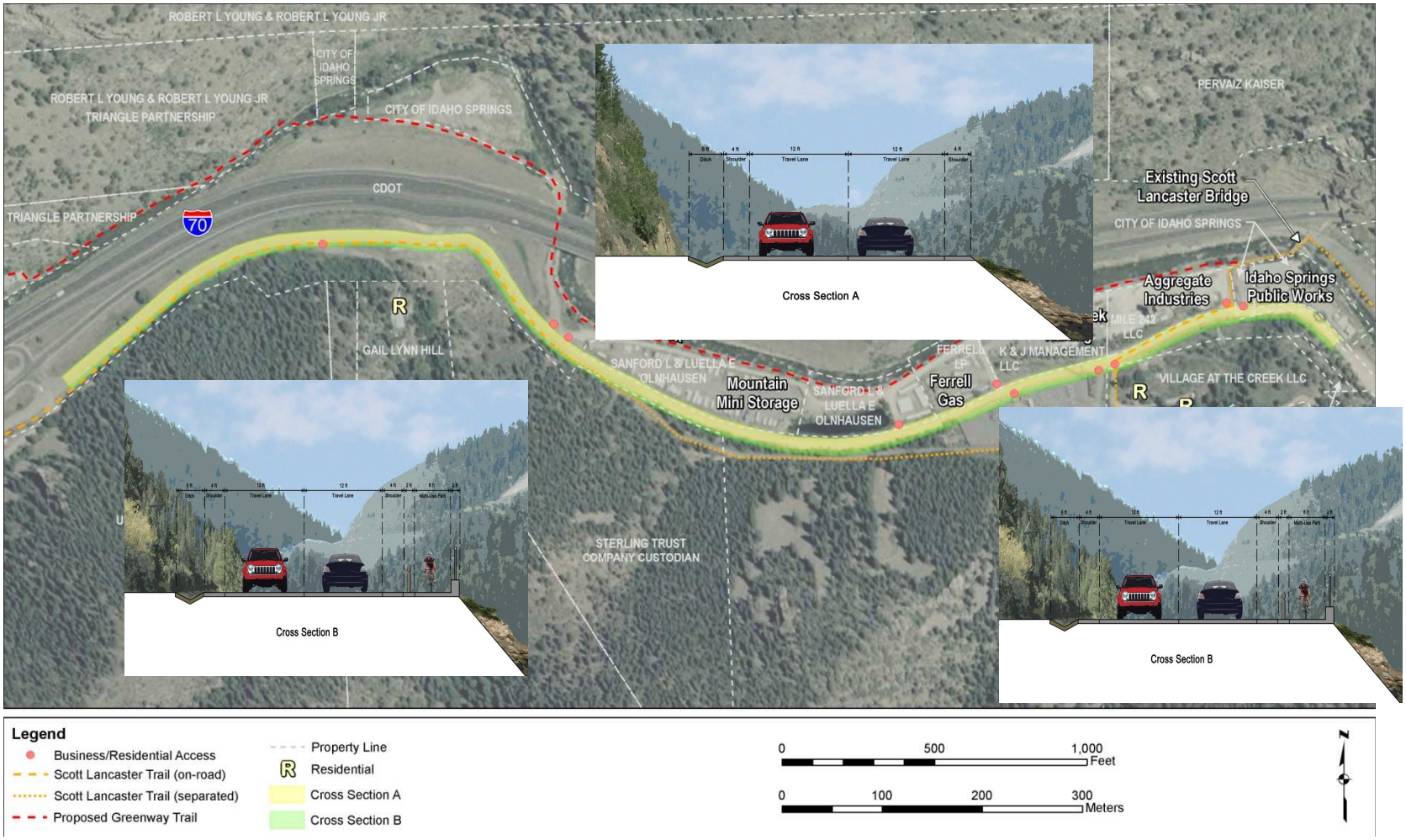
Decision Area	Option	Summary of Benefit/Drawback	Estimated Total Cost* ($ millions)
Phase I	Combination of CS B, D, E	**High flexibility to accommodate trail during detour/construction (vehicle loads on cantilever)** **High accommodation of other greenway facilities** **No stream/wetland impacts**	**$6.67**
	CS C	Low flexibility to accommodate trail during detour/construction (vehicle loads on cantilever) Low accommodation of other greenway facilities Low potential stream/wetland impacts	$4.85
Eastern	**CS B**	**Impact to accesses and private property** **Consistent separated trail** **No stream/wetland impacts**	**$3.52**

Cost being revised based on new survey

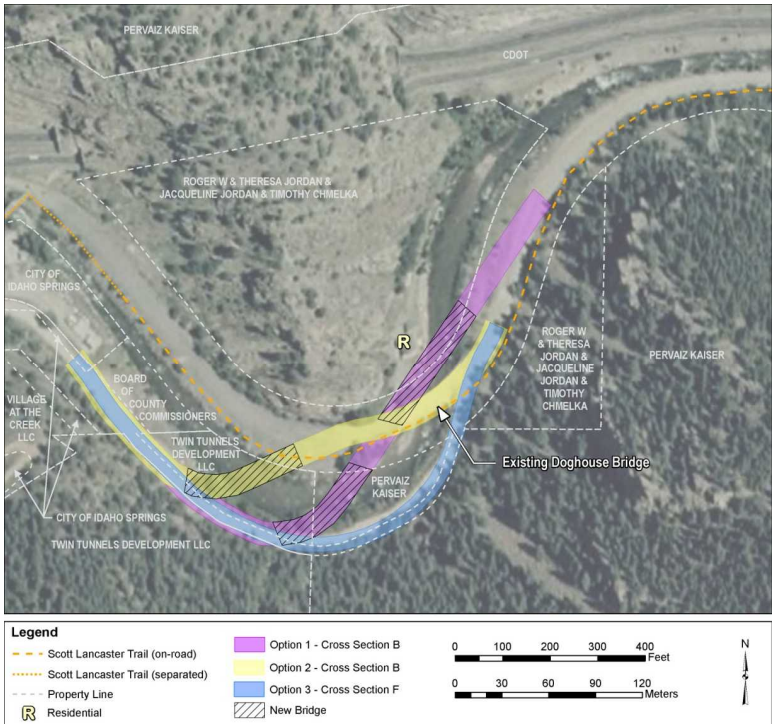
Preferred Option

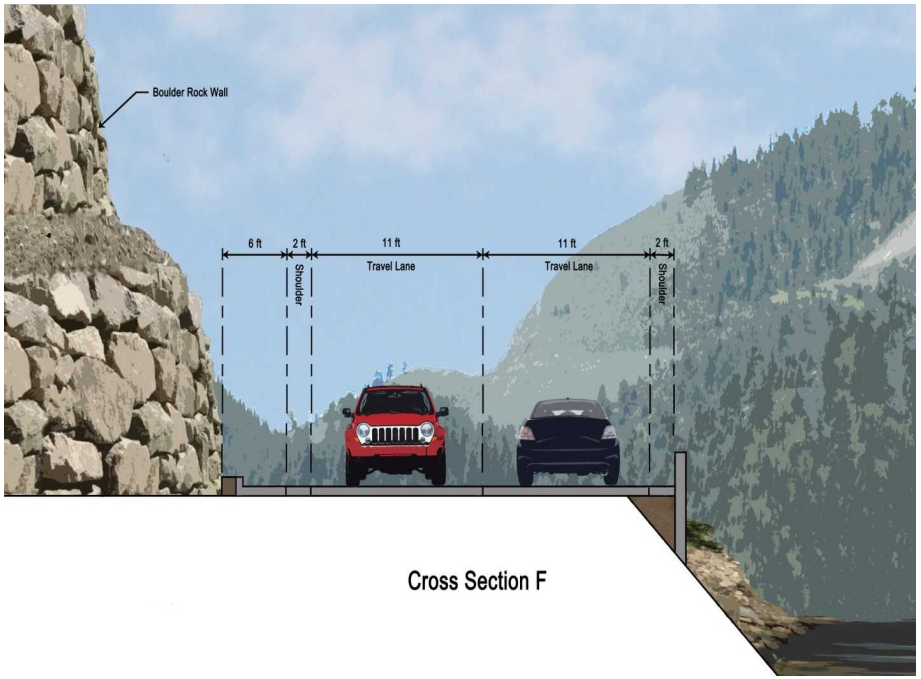


Western Decision Area



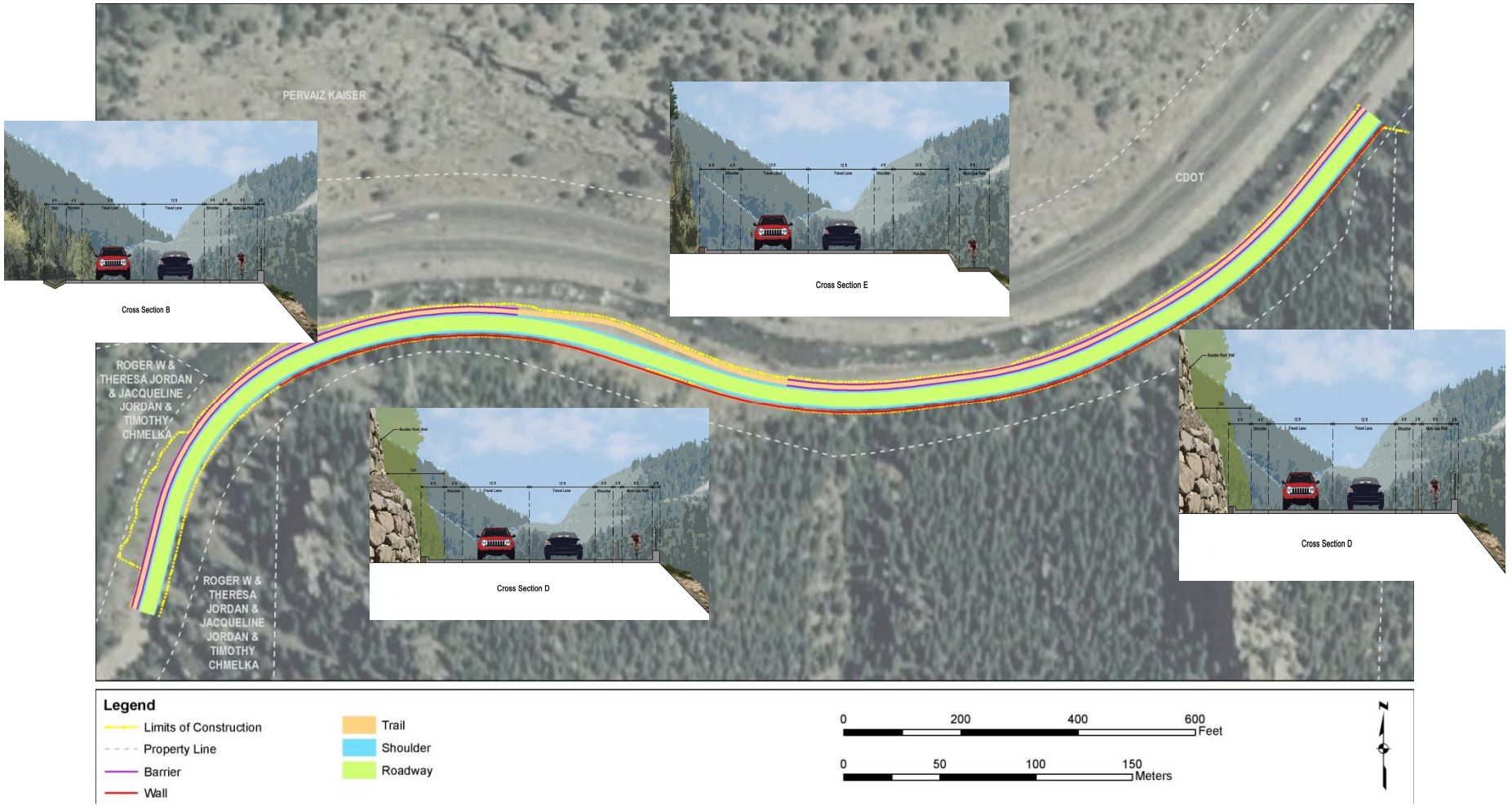
Gravel / Doghouse Rail Bridge Decision Area





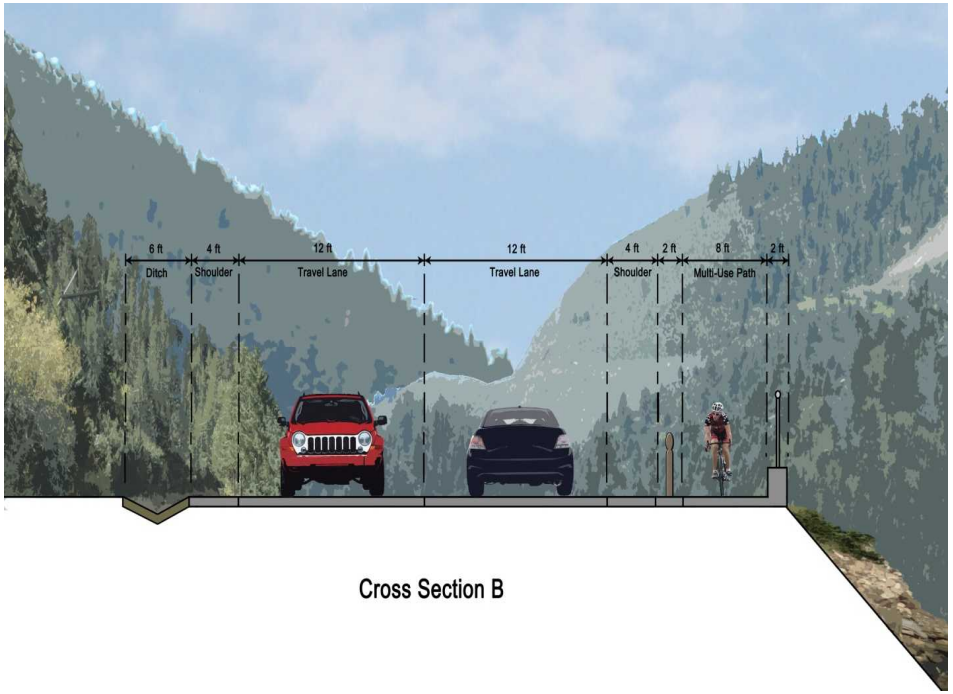
I-70 Frontage Road Improvements

East of Gravel Road Decision Area



I-70 Frontage Road Improvements

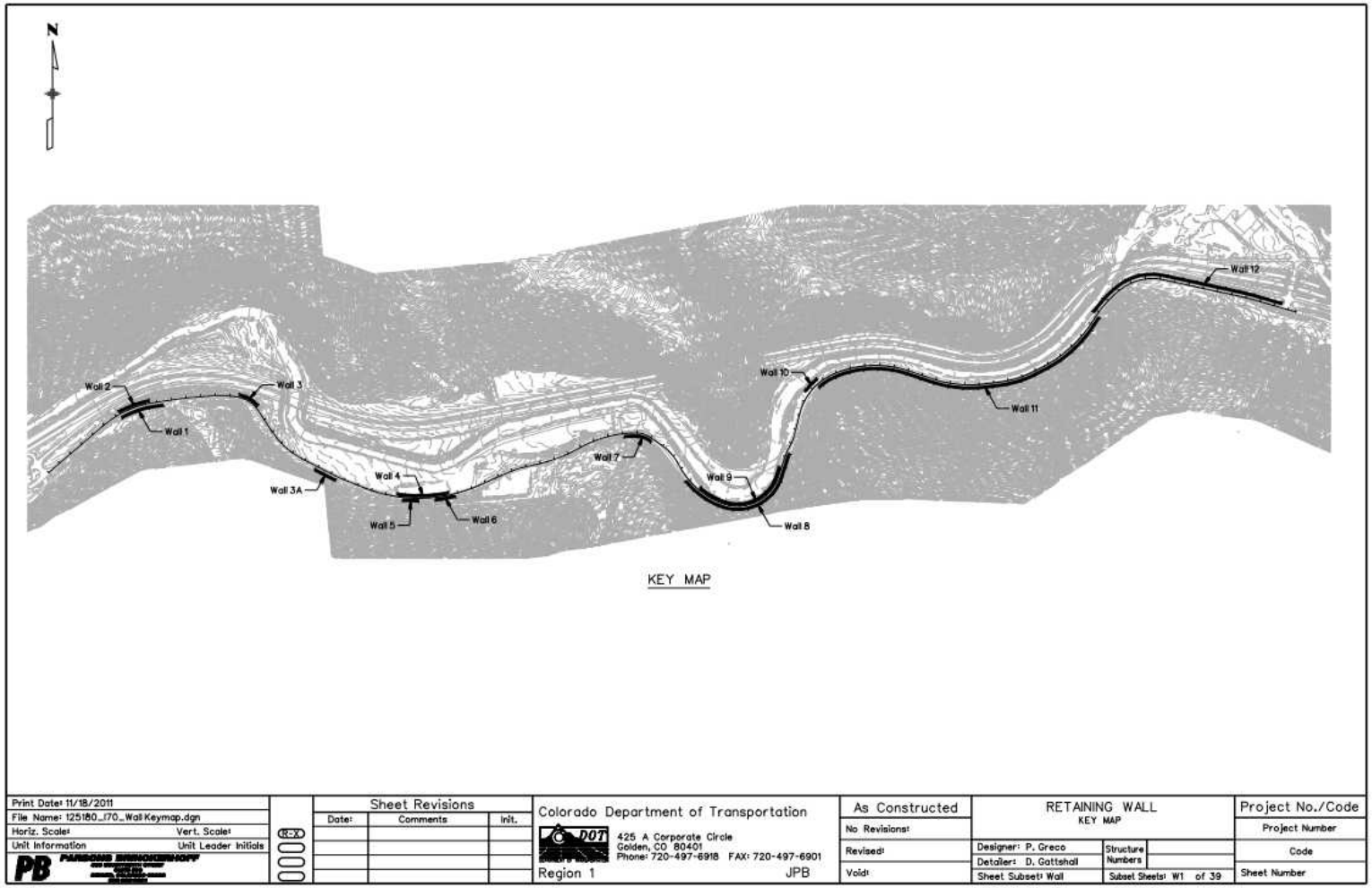
Eastern Decision Area



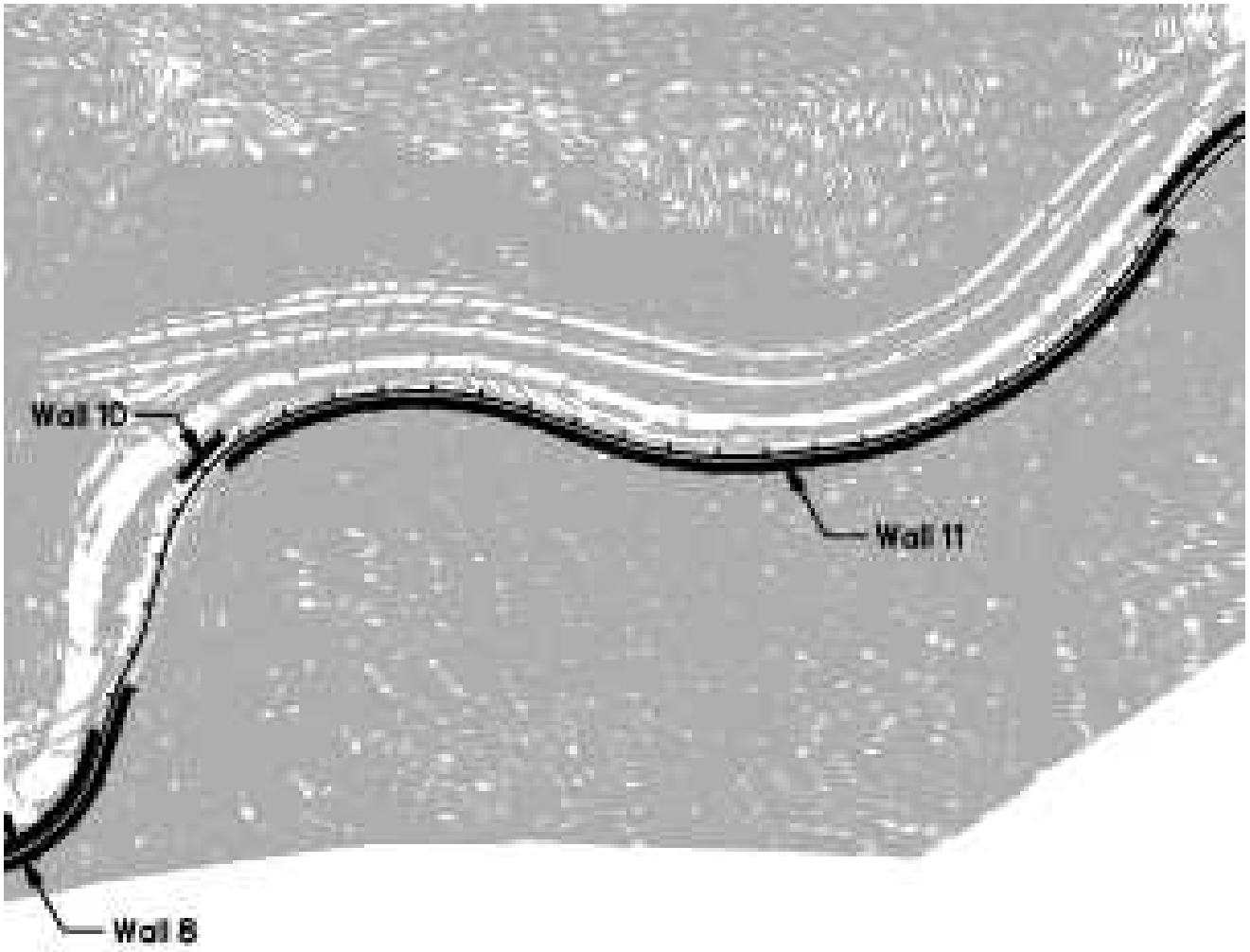
Cross Section B

I-70 Frontage Road Improvements

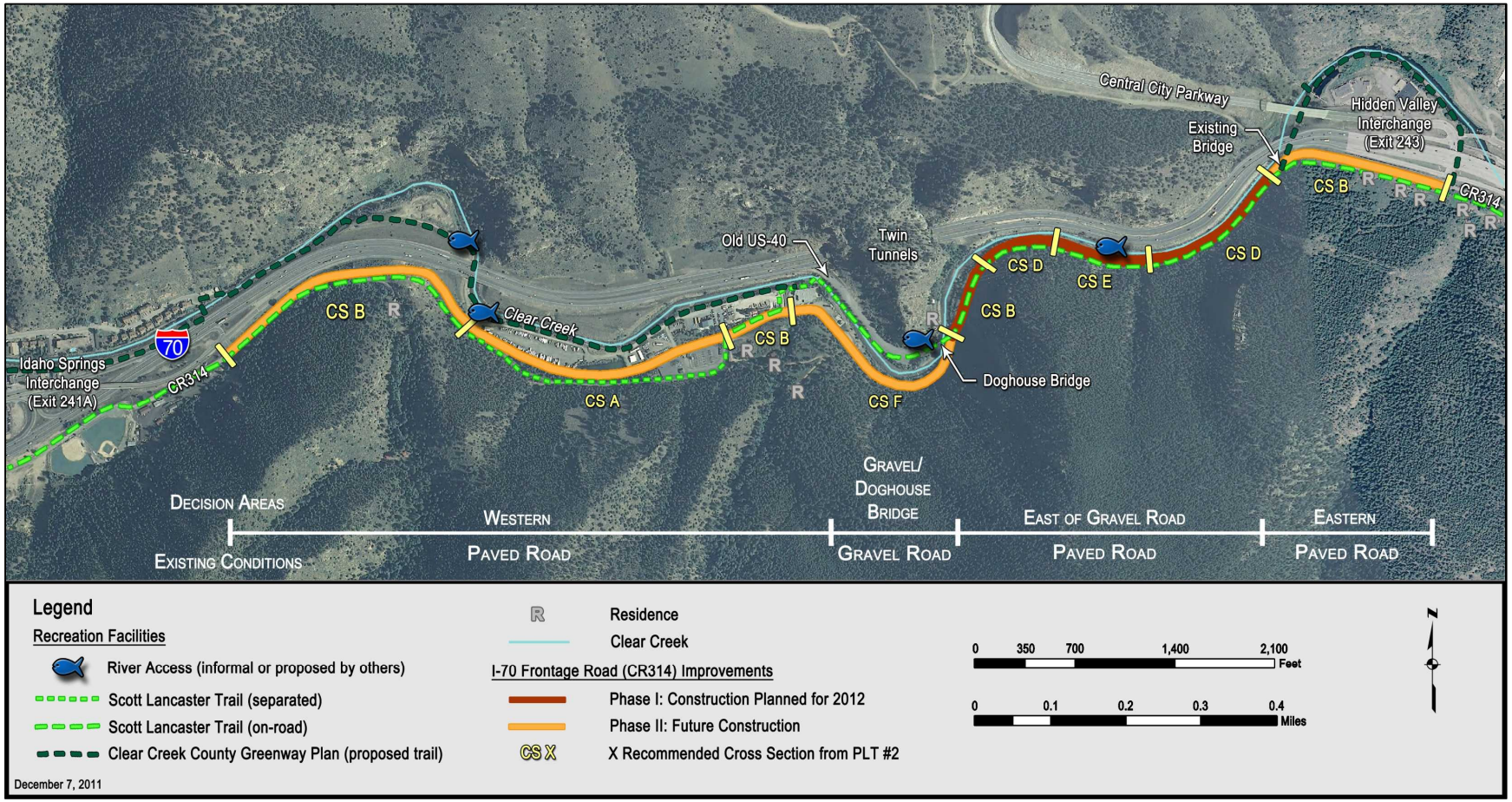
FIR Plan Wall Locations



FIR Plan Phase I Wall Locations



Preferred Option

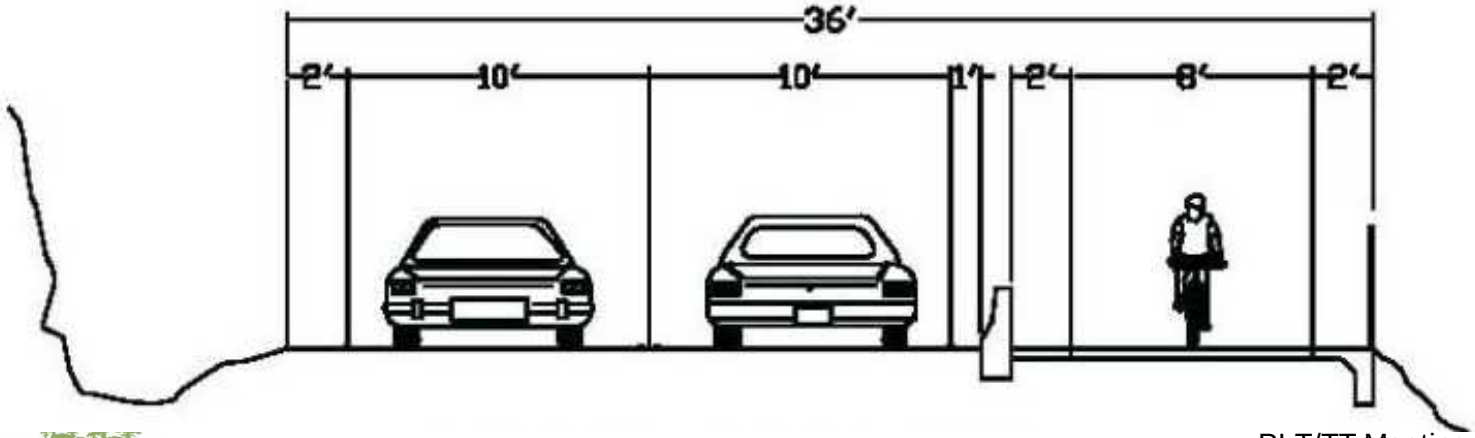


I-70 Mountain Corridor Design Criteria

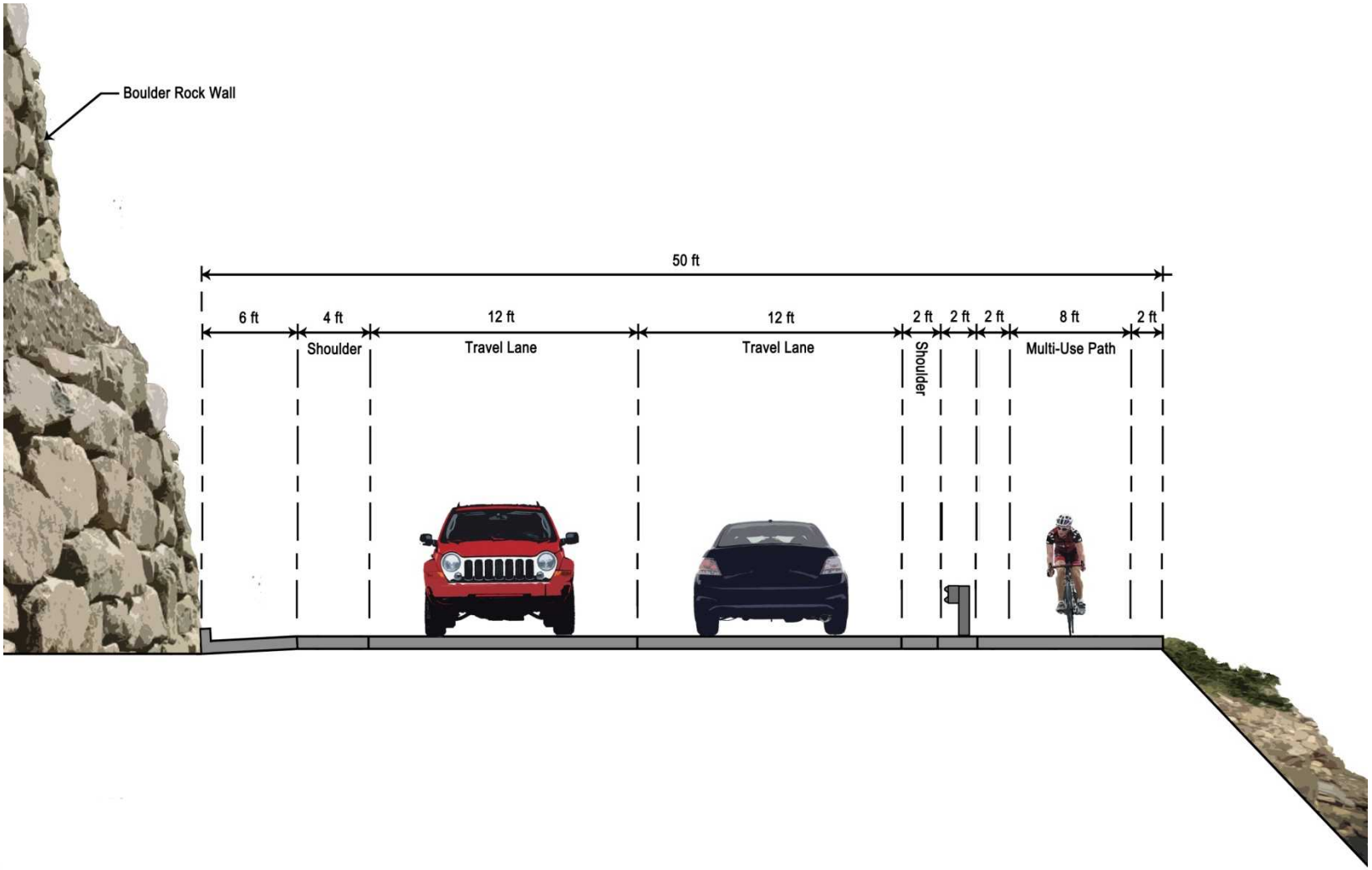
Design Criteria	Design Criteria Description	Frontage Road Conceptual Design	Frontage Road Consistency with Design Criteria
Design Speed	Not specified for Frontage Road, maintain existing speeds (posted for 30 – 35 MPH) per PLT and Clear Creek County	Existing design speeds maintained	Consistent
Alignment	Eastbound and westbound I-70 and AGS - design as independent alignments (not applicable to Frontage Road). Applicable elements: Recovery zone, snow removal, alignments will adapt to topographical conditions.	Existing alignment is maintained	Existing alignment follows topographical conditions. Limited righ reduce glare or provide separation (i.e. no room for media separation between lanes).
Slope Cut and Fill	Physical disturbance less than 40' from pavement to farthest edge of cut and fill Slopes shall not exceed 2.5:1 (H:V) Roadway retaining walls over 12' in height will be installed below the elevation of the roadway	Disturbance and walls being revised based on new topographical data in survey. Total of 12 walls anticipated in conceptual design Walls above road greater than 12': 7, 8, 11	Wall 7–across from IS public works - no option to place below ro at grade) Wall 8 – upslope of gravel section already splitting height with (wall 9) Wall 11–upslope of Phase I–consolidate wall on upslope to limi Clear Creek, floodplain, and wildlife crossing.
Disturbance	Construction maintained within historic or current disturbance	Construction is not maintained within historic or current disturbance	Existing road condition (pavement width and available bench meet current roadway standards–especially in gravel section.
Rock Cut	Geotechnical report will be completed Naturalized custom cut methods are required (scatter blasting)	Geotechnical report to be developed, will evaluate natural cut methods	TBD
Bridge Structures	Bridge structures will not utilize slope paving and will utilize closed-end abutment Bridge embankments shall be 2.5:1 maximum	NA–no bridge structures	NA
Sound Attenuation	Sound buffering and attenuation Mitigation, if required will use landforms	NA – low traffic volumes from Frontage Road, no change in capacity or alignment profile	NA

Clear Creek Greenway Recommendation

Where the creek comes into close proximity with a roadway such as Stanley Road, little room is available for the greenway trail. Whenever this scenario occurs, either the roadway width must be reduced to accommodate the trail, or a bench for the trail must be created on the creekband using a structural retaining wall system. Safety for the motorist and greenway user is of primary concern. Therefore, an approved traffic barrier between the trail and roadway should be installed whenever the trail is within ten feet (10') of the roadway shoulder edge. Many existing scenarios can occur; therefore, a traffic engineer should be consulted prior to the placement of any barrier along a roadway.



Greenway width/rail concepts



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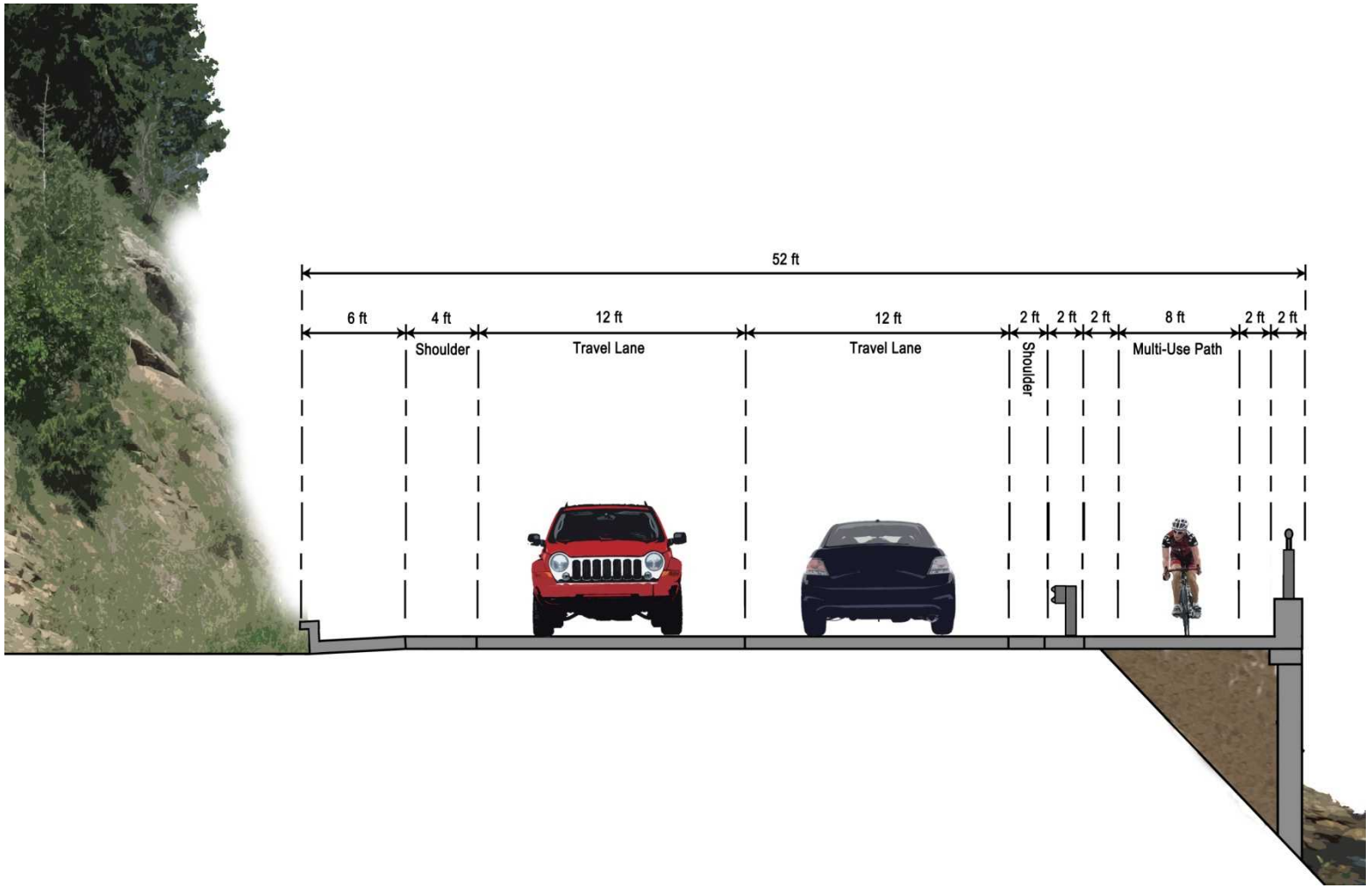
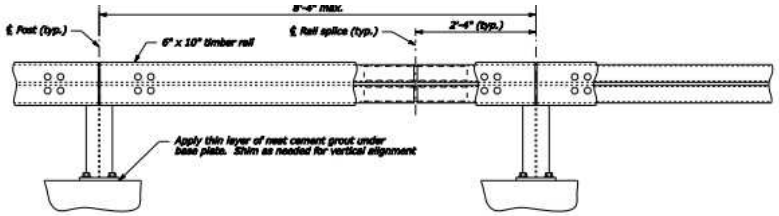
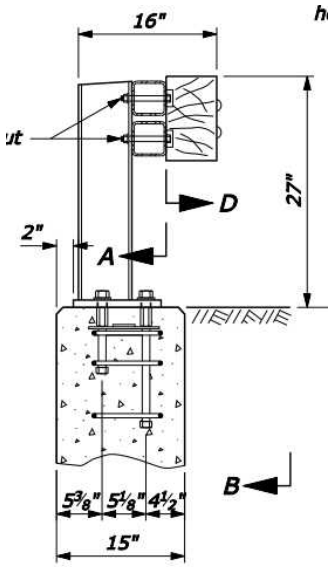


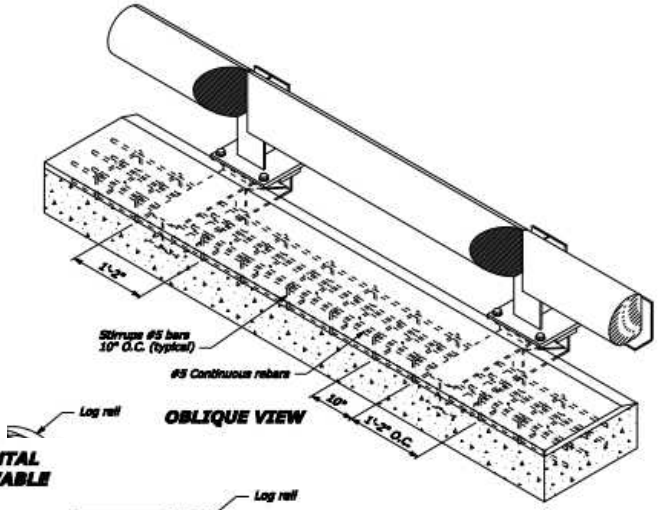
Greenway design concerns

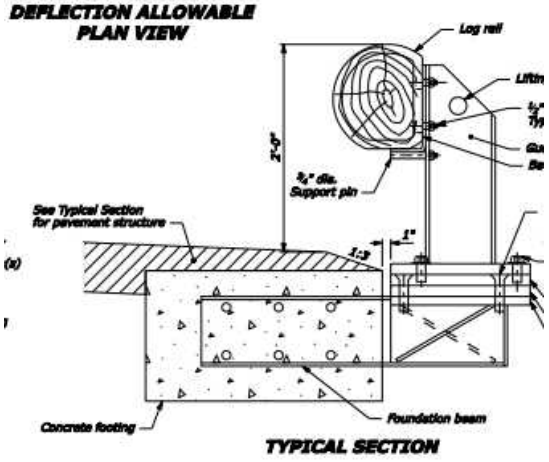
- AASHTO guidance requires at least 3 feet clearance from obstructions
- Need for 42” topple bar on guardrail
- Transition of shared use path into eastern section

Greenway rails – roadside options



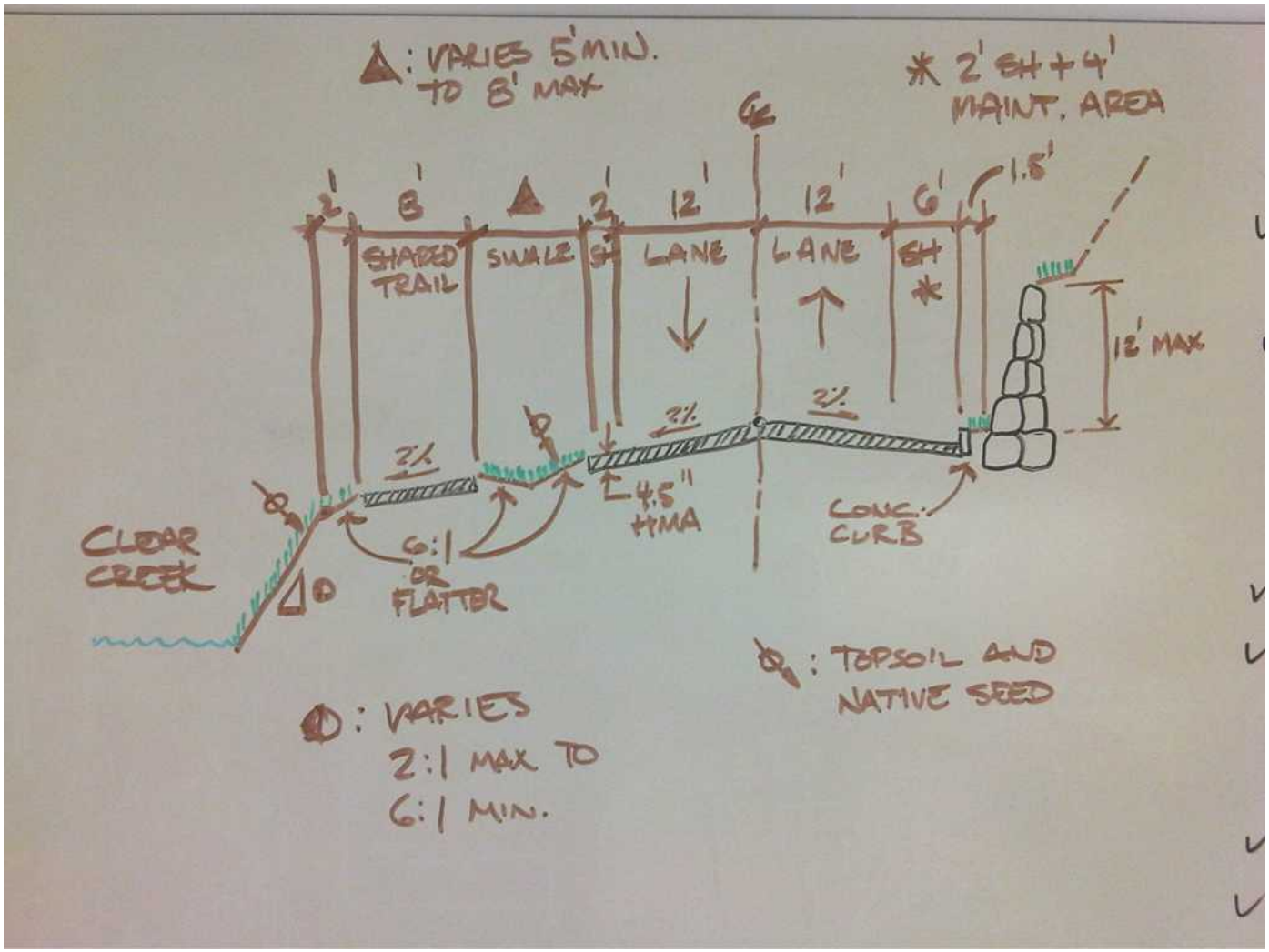




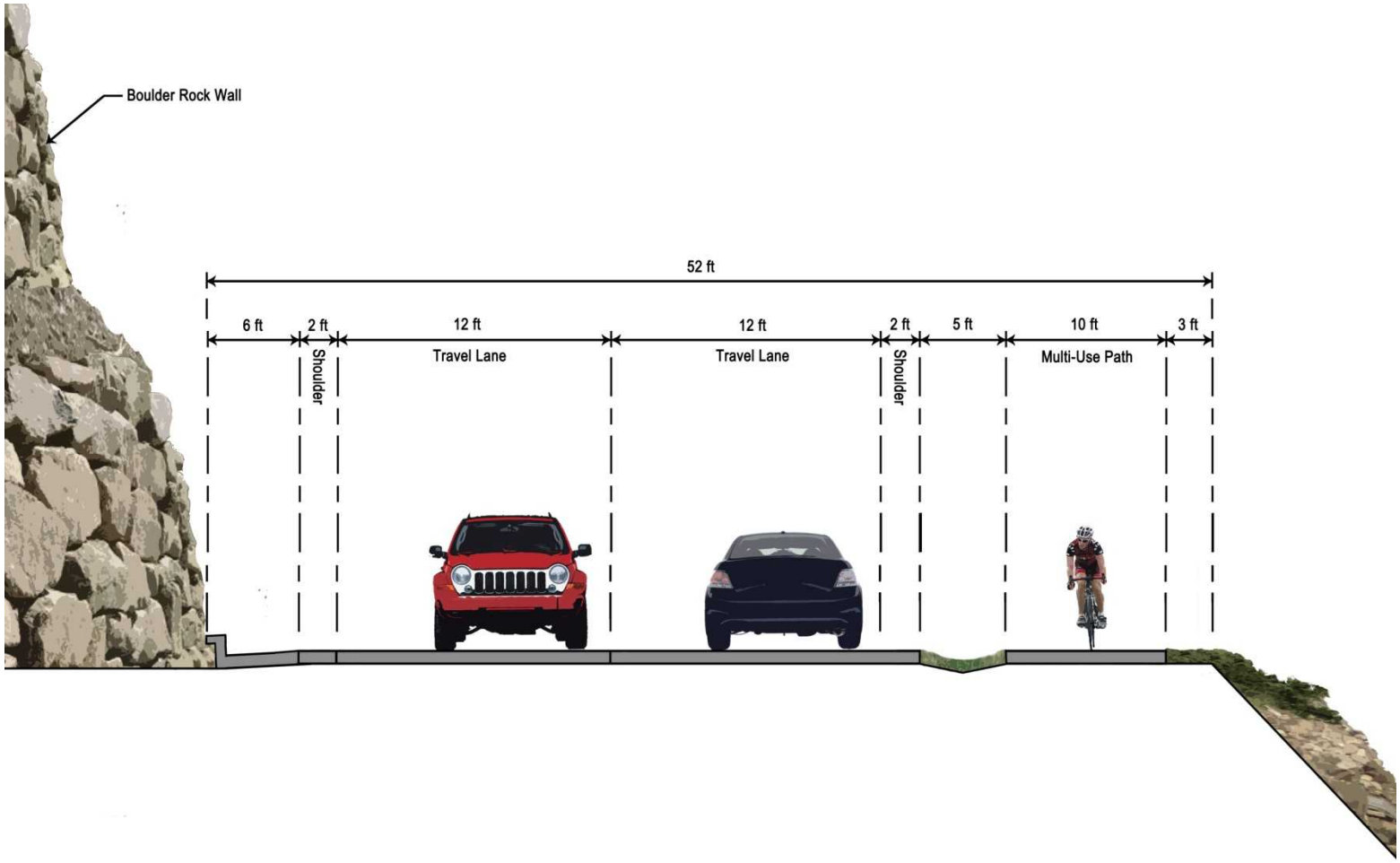


I-70 Frontage Road Improvements

Greenway rails – creekside options



Greenway width/rail concepts



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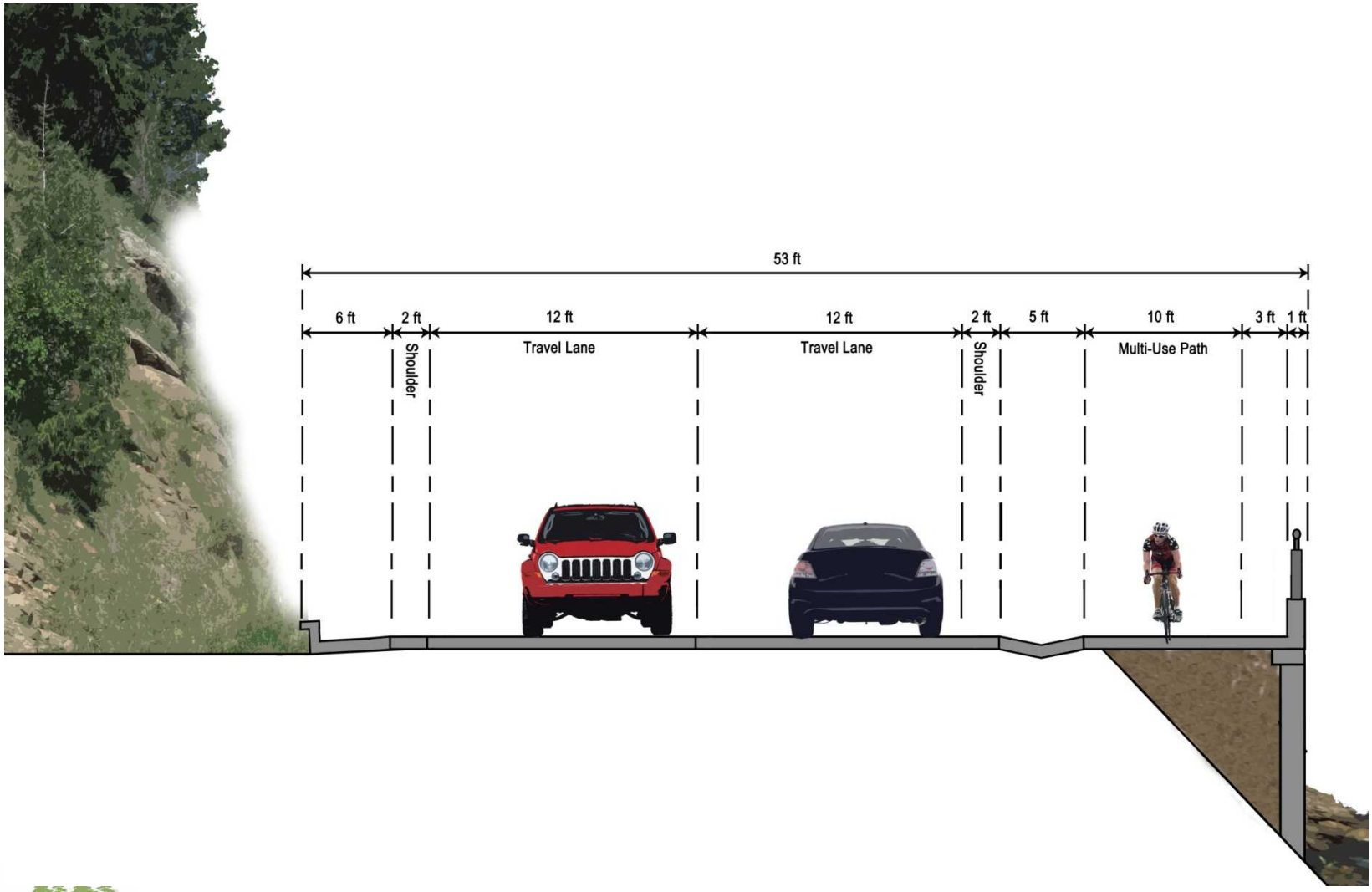
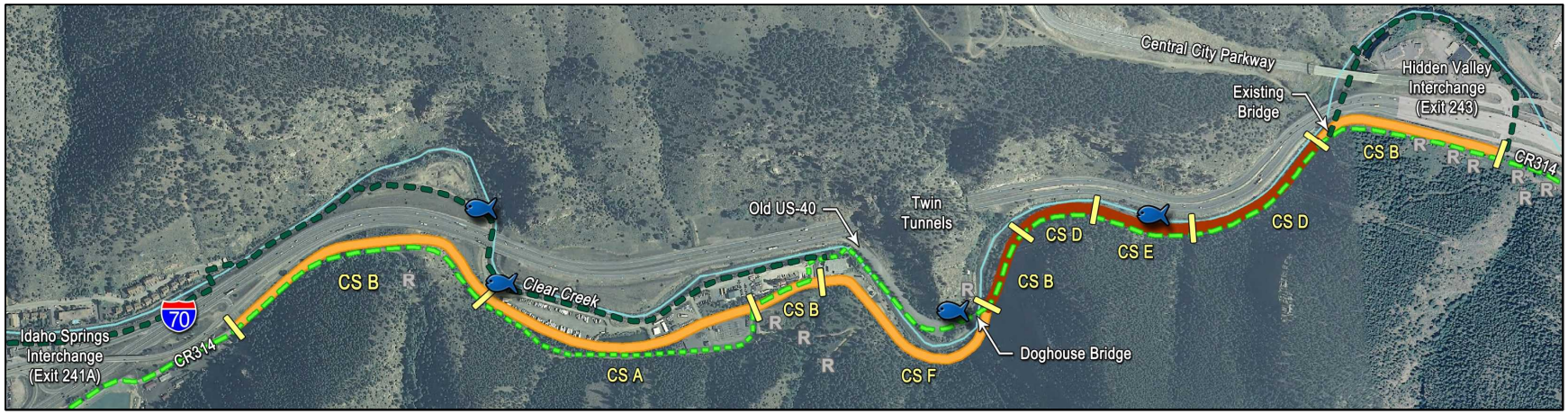


PLT Endorsement

- Endorse cross-section and alignment
- Any conditions or follow-up items?



Next Steps

- Engineering Coordination meeting
  - December 21, 2011
- Idaho Springs Planning Commission
  - Follow-up Needed
- PLT/TT Future Meetings
  - TBD
- Greenway ITF#2
  - TBD – Feedback from PLT
- Final Office Review
  - March 2012