

How We Got Here

Concept Packages

Tunnel Visioning

- CDOT, stakeholders and technical experts met to discuss the mobility issues at the Twin Tunnels
- Five-day workshop followed the CSS 6-Step Process
- Desired outcome of the workshop:
 - Develop improvements that address near-term and current mobility needs
- Outcome of the workshop was the recommendation of Concept Package 2

Critical Success Factor	Considerations
Improve Mobility	Speed, Volume, # of People
Compatibility with Existing Plans	Number of plans
Timing of Implementation	Date of opening to full operations
Cost	Cost to build will be in \$\$ Changes in operations and maintenance costs will be discussed
Level of Environmental Change	Based on the relative impacts to the environmental resources (water, air, wildlife, visual, historic)
Level of Economic Benefit	Recreational opportunities, impact to local businesses, access to resorts, local access
Flexibility of Design and Long Term Usability	Provides for operational options and compatibility with the PEIS Preferred Alternative
Community Stakeholder Acceptance	Local, Regional and State
Attractive solution to gain funding and political support	Discuss with stakeholders
Safety	Address existing deficiencies, reduce congestion, reduce demand, meets driver expectation
Construction Disruption	Duration, Repetition, Interruption, Frequency

Ideas

Construction Ideas

Ideas that could improve mobility w/out building

Enhancement ideas that could improve on several or all build concepts

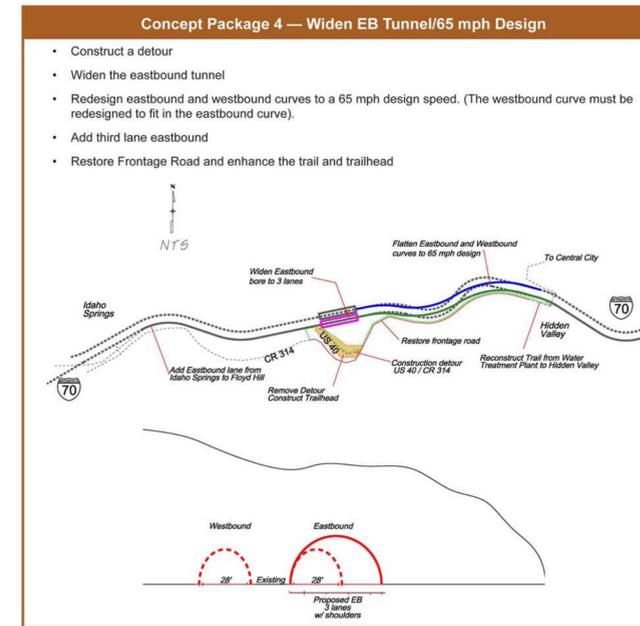
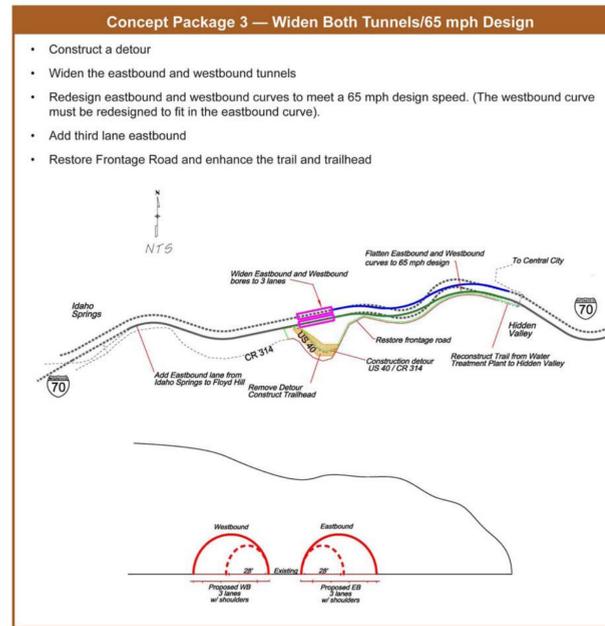
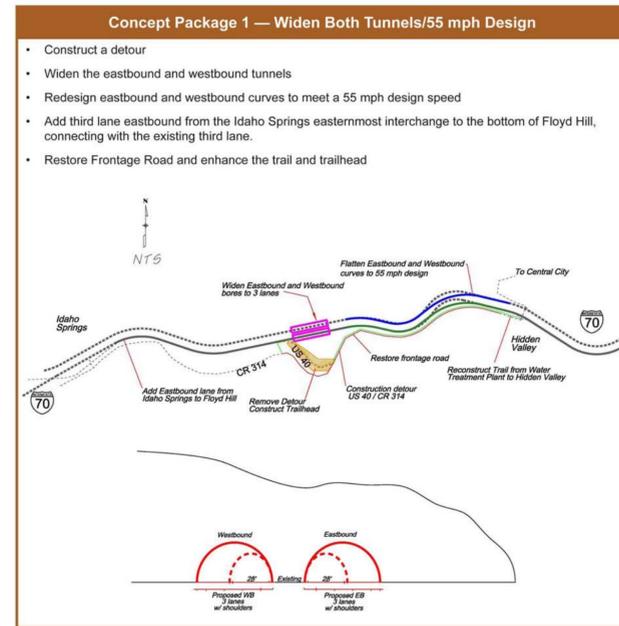
Funding ideas to gain funding to build the improvements

Concept Elements

- A — Widen Existing EB and WB Tunnels
- B — Widen Existing EB Tunnel
- C — Construct new 3rd Tunnel
- D — Realign 3 EB lanes with 65 mph design
- E — Realign 3 EB lanes with 55 mph design
- F — Flatten EB and WB curves to 65 mph
- G — Flatten EB and WB curves to 55 mph
- H — Flatten EB 45 mph curve to 55 mph
- J — Hidden Valley to Floyd Hill widen to 3 EB lanes
- L — Add 3rd EB lane from Idaho Springs to Twin Tunnels
- M — Improve shoulder to provide 3 EB lanes for peak period
- O — Old US 40/CR 314 used for detour EB during construction
- P — Restore/enhance frontage road, trail and trailhead

Concept Packages

- Concept Package 1 — Widen Both Tunnels/55 mph Design
- Concept Package 2 — Widen EB Tunnel/Fix 45 mph Curve EB
- Concept Package 3 — Widen Both Tunnels/65 mph Design
- Concept Package 4 — Widen EB Tunnel/65 mph Design
- Concept Package 5 — 55 mph EB Tunnel Bypass
- Concept Package 6 — 65 mph EB Tunnel Bypass
- Concept Package 7 — New EB Tunnel/Fix 45 mph Curve EB

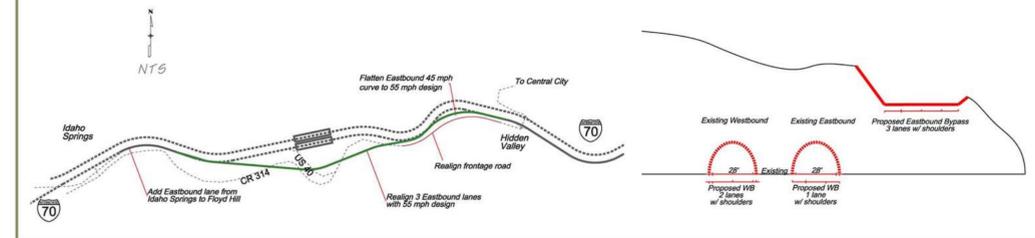


Major issues for Concept Packages 1, 3, and 4

- The WB bridge at the interchange with US 6 will require replacement within the next few years. Any WB work now would result in disrupting WB traffic twice.
- Without rebuilding the US 6 bridge, adding a WB lane at this time would not provide continuous three-lane WB section and would not meet the ultimate 55/65 mph solution.
- Any 65 mph EB design impacts the WB lanes and results in disrupting the WB traffic twice.

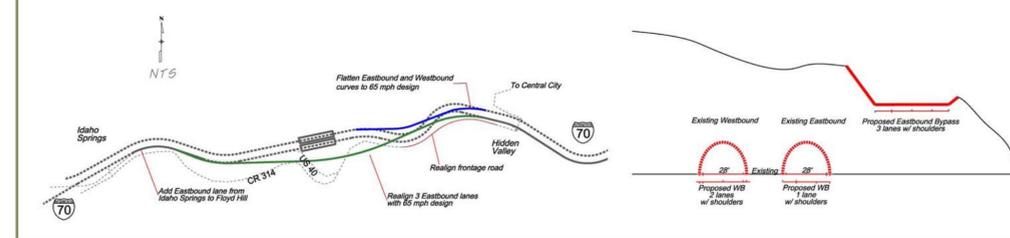
Concept Package 5 — 55 mph EB Tunnel Bypass

- Construct eastbound lanes on a viaduct positioned south of the existing I-70 thus bypassing the eastbound tunnel.
- Redesign for 55 mph and three eastbound lanes.
- Westbound lanes would remain in their current location.
- Add third eastbound lane from Idaho Springs easternmost interchange to Floyd Hill connecting with the existing 3-lane section.



Concept Package 6 — 65 mph EB Tunnel Bypass

- Construct eastbound lanes on a viaduct positioned south of the existing I-70 thus bypassing the eastbound tunnel.
- Redesign for 65 mph, includes flatten of both the EB and WB curves, and would accommodate 3 eastbound lanes.
- Westbound lanes would be improved to 65 mph as well.
- Add a third eastbound lane from Idaho Springs easternmost interchange to Floyd Hill connecting with the existing 3-lane section.

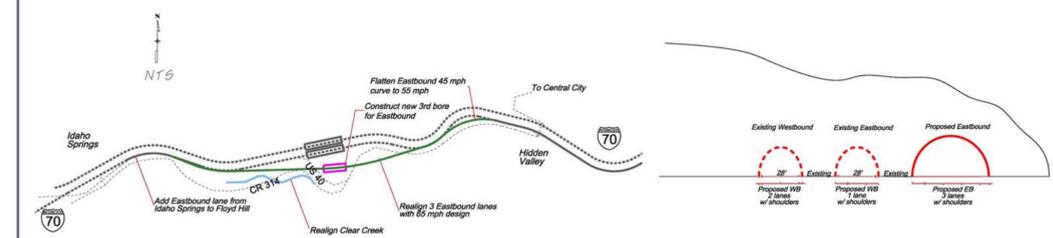


Major issues for Concept Package 5 and 6 (viaducts)

- Results in steep (7%) grades
- Cuts into the mountain and disrupts the natural wildlife crossing
- Viaducts would be over the creek or require realignment of the creek
- Safety concerns with icing of the bridge
- Increased maintenance of long structures

Concept Package 7 — New EB Tunnel/Fix 45 mph Curve EB

- Construct eastbound lanes on a viaduct positioned south of the existing I-70 through a new tunnel.
- Redesign for 65 mph, includes flatten of both the EB and WB curves, and would accommodate 3 eastbound lanes.
- Westbound lanes would be improved to 65 mph as well.
- Add a third eastbound lane from Idaho Springs easternmost interchange to Floyd Hill connecting with the existing 3-lane section.



Major issues for Concept Package 7

- Realignment of the road requires realignment of the creek
- Increases the maintenance costs by increasing the linear feet of tunnels

