Attempt to Simplify the Entrance to Aspen Alternatives Evaluation

By Gary Lauder gary@lauderpartners.com

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I have taken the liberty to try to summarize the information provided by Jacobs and overlay the main variations that are (or should be) under consideration. On the next page there is a table that compares the alternatives and fits onto a single page.

"Improved Split-Shot" (ISS) refers to the version with a turn-around between Cemetery Lane and the roundabout. The "Splitshot" that Jacobs analyzed did not have that turn-around, which is what caused it to be rated worse for traffic. This fixes that. The Record of Decision (RoD) did not bless the split-shot due to no existing roundabout at that time, and they did not think to add a turnaround. It does not assume any dedicated bus lanes (i.e. assumes 2 lanes of general traffic (GT) in each direction), but there would be room to add those (i.e. 3 lanes in each direction)(second-to-last column). Part of why there would not be dedicated bus lanes is that this design would eliminate congestion, so the 2 lanes should flow quickly enough such that bus lanes become unnecessary. For apples-to-apples comparison, I included a version of the Preferred Alternative (PA) that would have 2 general traffic lanes in each direction. It would not be feasible for the PA to have that + a bus lane in each direction since that would be 6 lanes across Marolt and the bridge. There has been reference to a "Modified split shot," but the mod(s) were undefined until recently. The last (right column) evaluates it. It keeps a light at Cemetery.

3-Lane shifted assumes that there would be a lane added all the way from the existing bridge to the roundabout, which would require an (S)EIS. That scenario does not ameliorate the inbound traffic jam, which is much worse than the outbound, so it has meaningful risk of non-approval by CDOT/FHWA. It also does little to improve Aspen's emergency evacuation time nor the single point of failure reliance on the Castle Creek Bridge (CCB).

The base case ISS has 2 only minor variations from the PA. Those changes are: keeping the connection between Cemetery Lane and the roundabout and adding a turn-around. Recently I added an underpass of WB 82 at Cemetery Lane as an alternative to the turnaround, but both could be implemented. It does not change the analysis of the ISS. It could have 1 or 2 lanes in each direction for general traffic(GT) (whether or not there is an additional lane dedicated for busses). If there were 2 GT lanes, the traffic would probably flow well enough so that there would be no need for a dedicated bus lane. Were the ISS to be the desired strategy, then the fastest way to get there is as follows. Aspen could commence building the PA while applying for the SEIS to make those modifications to it. That way more of the processes could run concurrently in parallel rather than serially.

Please see the next page for the comparison table.

<u>Criteria</u>	Just Repair	<u>3 Lane</u>	Preferred Alter-	PA with 4	Improved Split-	Improved Split-	ISS w/2	"Modified
	<u>CCB</u>	Shifted (3LS)	native (PA) (1GT	general traffic	Shot (ISS) (1 GT	Shot (2 General	General Traffic	Split-Shot"
			+ 1 Bus Lane)	lanes	+ 1 Bus Lane)	Traffic (GT) lanes)	+1 Bus Lane	w/2 lanes ¹
Emergency Egress	No	+1 lane	+4 lanes	+4 lanes	+2-3 Lanes ² (&	+2-3 Lanes (and	+3 Lanes (and	+2 Lanes
	improvement				3LS can add 1)	3LS can add 1)	3LS=+1)	
Improve EB Traffic	No	No	No	Somewhat ³	Yes ⁴	Yes (a lot) ⁴	Yes (a lot!)	Yes (a lot!)
Improve WB Traffic	No	Yes	No	Somewhat	Yes ⁴ , but ⁵	Yes (a lot) ⁵	Yes (a lot)	Yes
Improve bus speed	No	Could	Yes	Yes on EB,	Yes	Yes on EB, but WB	Yes (a lot)	Yes
				maybe on WB ⁵		depends on ⁵		
Inconveniences	No	No	Yes	Yes	No	No	No	No
Cemetery Ln.								
Expandability ⁶	No	No	No	No	Yes (+1 lane)	Yes (+1 lane)	N/A	Probably
Requires Eminent	No	Some?	Yes	Yes	No	No	No	No
Domain/Takings								
Risk EIS non-appr.	No	Yes ⁷	Low	Low	Low	Low	Low	Low
Safety (collisions)	Not good due to traffic light @ Cemetery Lane. 3LS is worse.		Bad due to traffic light (7 th & Main). Worse than 3LS. ⁸		Good (no traffic lights) ⁹	Good (no traffic lights)	Good (no traffic lights)	Not as good as ISS ¹⁰
Completion Speed ¹¹	Slow	Really slow	Fastest	Pretty fast	Pretty fast ¹²	Pretty fast	Pretty fast	Pretty fast
Traffic Delays Due To Construction	High	Really high	Low	Low	Low	Low	Low	Low
Cost	Low	Medium	High ¹³	High	Medium ¹⁴	Medium	Medium	Medium
Value/Cost	Low	Low	Low ¹⁵	Medium	High ¹⁶	High	High	High

¹ MSS was drafted by Jacobs and shows a traffic light at CL for EB traffic, which will slow WB traffic and poses standard safety problems.

⁸ Worse due to: additional lane (4), and 4 different left turning movements.

² In this scenario, even though the end state would be 1 general traffic lane & 1 bus lane (= 2 lanes), bridge should probably be 3 lanes in order to temporarily accommodate ALL traffic while CCB is being rebuilt, and to accommodate future expansion. A 4-lane 1-way bridge would be indefensible.

³ Under PA, Cemetery Lane traffic heading EB, and EB traffic headed to Cemetery Lane all have to funnel through light and wait for their respective green left-turn arrows, so green phase for through traffic may only be 60%.

⁴ Improves it a lot due to absence of traffic light at 7th & Main (would be required in PA) and elimination of existing Cemetery Lane light (continuous flow).

⁵ WB traffic from roundabout to AABC is limited by traffic lights. Unless these are improved, traffic may still back up. They CAN be improved.

⁶ Ability to add a lane, whether for busses or general traffic. Aspen is likely to continue to grow. 2-lane ISS can add a 3rd, and a 4th w/eminent domain.

⁷ Risk of non-approval is due mainly to how it reduces the outbound traffic jam (not nearly as bad as inbound), while doing nothing for inbound traffic.

⁹ In Jacobs's version of the Split-Shot, there is a light planned for 7th & Main, which is due to their keeping 7th St. 2-way between Main & Hallam. There's no need for that.

A light could be installed for pedestrians and left turns from Main onto 7th St. NB. If so, the light would be 95% green in main directions. Traffic lights are a major source of T-bone and head-on collisions, which are much more deadly than the turning movements of the ISS.

¹⁰ Safety is worse than ISS due to keeping light at CL. It would still be way better than the PA and 3LS.

¹¹ Completion speed is important due to how soon we would have improved egress, and how long traffic would be disrupted.

¹² If ISS were to be pursued, the fastest way to get there would be to commence construction of the PA while filing an SEIS for the minor modifications to that to change it to the ISS. Those changes are: keeping the connection between Cemetery Lane and the roundabout, adding turn-around, and having 2 lanes in each direction for general traffic (whether or not there is an additional lane dedicated for busses).

¹³ PA means that Aspen has to own & rebuild CCB. With ISS, it's a divided highway, so CDOT would own both bridges.

¹⁴ Cost savings from: new bridge only 2-3 lanes; no property takings; CCB can be rebuilt w/o traffic on it; fewer new lanes across Marolt.

¹⁵ Benefit is mainly for emergency egress & slightly faster busses. Traffic is not improved & worsened for Cemetery Lane.

¹⁶ The value is rated high due to: best alternative for alleviating traffic (which is the highest cost to the public), safest, and adds lanes for egress quickly. Value/Cost is highest since the value is highest and the cost is medium.

In case there is concern on the part of the residents of the rectangle bounded by 7th, 8th, Hallam and Main, there would be no difficulty exiting or entering in the ISS scenario.

Exiting:

WB: Exit on Bleeker and make left into 1-way traffic on 7th.

EB: Exit on 8th and make left into 1-way traffic on Main.

Entering:

WB: Make left off of 7th onto Bleeker.

EB: Make left off of Main into 8th.

For pedestrians and bikes, a light could be installed at 7th and Bleeker to stop the 2 lanes of traffic to cross. If there's a zebra crosswalk, I don't think that that's necessary, but it's an option. Crossing 2 lanes of traffic that are both heading in the same direction is MUCH safer than crossing the 5 lanes on Main St., and even that seems to work today.

Those coming from Cemetery Lane/McLain Flats Rd. would be majorly inconvenienced by the PA, but should find the ISS to be a dramatic improvement from today's conditions...as would everyone else. For this and other reasons, CDOT and the FHWA would not resurrect the PA and would instead adopt the ISS or a similar plan.

Regarding the underpass that I added to my proposed diagram in 2025: that could be an alternative to the turn-around, but there is a case for including both. Specifically, the underpass would not be accessible for people who live in the West end who would likely find it easier to loop through than to try to cross Main St. Those people would benefit from the turn-around even if there were also an underpass. If an underpass is built, it should be wide enough to accommodate the later addition of another WB lane to 82.

When the alternatives are weighed, quantification of safety differences should be performed.