COLORADO
Department of Transportation

Final Alternatives Screening Results

Criteria	Metrics	Description	Alt 1 Mixed Flow	Alt 2 Side Running	Alt 3 Center + Side Running	No Build (2045)
Travel Time From 40th Ave to Yale Ave	**Transit (Northbound)**	*Comparison to No Build for 2045 Peak Traffic*	Up to 25% Faster	Up to 30% Faster	Up to 35% Faster	45 mins
	Transit (Southbound)		Up to 20% Faster	Up to 25% Faster	Up to 30% Faster	44 mins
	Personal Vehicle (Northbound)	*Comparison to No Build for 2045 Peak Traffic*	Similar to No Build			29 mins (Existing = 25.5 mins)
	Personal Vehicle (Southbound)		Similar to No Build	Up to 1.4x Longer	Up to 2x Longer	30 mins (Existing = 25.4 mins)
Traffic Operations Between 40th Ave and Yale Ave	**Intersection Impacts**	*% of Signalized Intersections with Increased Traffic Delay*	Up to 5%	Up to 15%	Up to 20%	Up to 5%
	Transit Reliability	*Consistent on-time arrival of buses*	Good	Very Good	Very Good	Poor
Cost Between 40th Ave and Yale Ave	**Capital Cost**	*Comparison between Build Alternatives*	Moderate Cost	Moderate Cost	High Cost	No Cost Impacts
Construction Impacts Between 40th Ave and Yale Ave	**Level of Impact**	*Construction Area and Duration*	Moderate Impact	Moderate Impact	High Impact	No Construction Impacts
Corridor Safety Between 40th Ave and Yale Ave	**Potential Severe and Fatal Crash Reduction**	*Comparison to No Build* **All Build Alternatives reduce crashes compared to existing conditions.*	*Up to 15% Reduction	*Up to 30% Reduction	*Up to 30% Reduction	Increased Crash Potential
Ridership From 40th Ave to Southmoor Station	**Potential Transit Ridership**	*Comparison between All Alternatives* *(# of Daily Transit Trips)*	More than 5,000	More than 6,000	More than 6,000	Less than 3,500 (Existing = 2,837)
Multimodal Connectivity Between 40th Ave and Yale Ave	**Pedestrian Comfort**	*Ease of access to transit and improved pedestrian facilities*	Good	Very Good	Very Good	Very Poor
	Bicycle Connections	*Opportunities for connections to bicycle infrastructure and incorporation of shared-use paths*	Good	Good	Good	Very Poor
Lead Agency Support	*Support for the alternative from the lead agency*		Good	Good	Very Poor	Very Poor

Levels of Performance: Very Good · Good · Moderate · Poor · Very Poor

Right-of-Way (ROW) and Environmental considerations were evaluated but resulted in similar potential impacts across Alternatives 1-3 and were not differentiators.

ROW considerations included number of potential property impacts, and on-street and private off-street parking impacts.

Environmental considerations included number of potential property impacts to minority and low-income populations, possible historic properties (over 45 years old), and publicly owned parks and recreation areas.

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Colorado Blvd. Bus Rapid Transit (BRT)

Final Alternatives Screening Results

This document provides a comprehensive text-based version of CDOT's Colorado Boulevard Bus Rapid Transit (BRT) Project – Final Alternatives Screening Results project board.

The project board uses a Level of Performance scale:

- **Very Good**
- **Good**
- **Moderate**
- **Poor**
- **Very Poor**

Project Overview

The screening evaluates four options for the corridor between 40th Ave and Yale Ave:

1. **Alternative 1 (Mixed Flow):** Transit shares lanes with regular traffic.
2. **Alternative 2 (Side Running):** Dedicated transit lanes on the sides of the road which can also be used by right turning vehicles.
3. **Alternative 3 (Center + Side Running):** Dedicated transit lanes in the center of the road for approximately half of the corridor and then on the side of the road for approximately half of the corridor.
4. **No Build (2045):** Baseline comparison of doing nothing by the year 2045.

Travel Time

This criterion compares alternatives against the No Build for 2045 peak traffic travel times between 40th Avenue and Yale Avenue.

- **Transit (Northbound):** The No Build (2045) baseline is 45 mins (Moderate). Alternative 3 is the fastest at Up to 35% Faster (Very Good), followed by Alternative 2 at Up to 30% Faster (Very Good), and Alternative 1 at Up to 25% Faster (Good).
- **Transit (Southbound):** The No Build (2045) baseline is 44 mins (Moderate). Alternative 3 is Up to 30% Faster (Very Good), Alternative 2 is Up to 25% Faster (Good), and Alternative 1 is Up to 20% Faster (Good).
- **Personal Vehicle (Northbound):** All three build alternatives (Alternatives 1, 2, and 3) perform similar to No Build (Moderate), which has a baseline of 29 mins in 2045. The existing personal vehicle travel time for Northbound travel is 25.5 minutes.
- **Personal Vehicle (Southbound):** The No Build (2045) baseline is 30 mins (Moderate). While Alternative 1 is Similar to No Build (Moderate), travel times increase significantly for the others: Alternative 2 is up to 1.4x Longer (Poor) and Alternative 3 is up to 2x longer (Very Poor).

Traffic Operations

This criterion measures the alternatives' impact to traffic operations between 40th Avenue and Yale Avenue. This criterion has two metrics: intersection impacts, which is the percentage of

signalized intersections with increased traffic delay, and transit reliability, which is the consistent on-time arrival of buses.

- **Intersection Impacts:** Alternative 1 and No Build (2045) show the least impacts with up to 5% increased delay (Good). Alternative 2 has a Moderate impact of up to 15% (Moderate), and Alternative 3 has the highest impact at up to 20% (Poor).
- **Transit Reliability:** Alternative 2 and Alternative 3 offer Very Good reliability (Very Good). Alternative 1 is rated Good, while the No Build (2045) option is Poor.

Cost

This criterion measures the capital cost comparison between alternatives and includes all costs from 40th Avenue to Yale Avenue.

- **Capital Cost:** No Build (2045) has No Cost Impacts (Very Good). Both Alternative 1 and Alternative 2 represent a Moderate Cost (Moderate), while Alternative 3 is categorized as a High Cost (Very Poor).

Construction Impacts

This criterion measures the level of impact of construction area and duration, between 40th Avenue and Yale Avenue.

- **Construction Impacts:** No Build (2045) has No Construction Impacts (Very Good). Alternative 1 and Alternative 2 result in Moderate Impact (Moderate). Alternative 3 results in a High Impact (Very Poor).

Corridor Safety

This criterion measures the alternatives' potential for severe and fatal crash reductions, in comparison to the No Build in 2045.

- **Corridor Safety:** Alternative 2 and Alternative 3 provide the best safety outcomes with up to 30% reduction in severe and fatal crashes (Very Good). Alternative 1 provides up to 15% reduction in severe and fatal crashes (Good). The No Build option results in Increased Crash Potential (Very Poor). It is noteworthy that all three of the Build Alternatives reduce crashes compared to existing conditions.

Ridership

This criterion measures the potential increase in transit ridership per alternative from 40th Avenue to Southmoore Station. Today, existing transit ridership along the corridor is 2,837 daily trips.

- **Potential Transit Ridership:** Alternative 2 and Alternative 3 project the highest increase in the number of daily transit trips with more than 6,000 daily trips (Very Good). Alternative 1 projects More than 5,000 daily transit trips (Good). No Build (2045) is much lower at Less than 3,500 (Moderate).

Multimodal Connectivity

This criterion measures the potential increase in bicycle and pedestrian connectivity associated with each alternative from 40th Avenue to Yale Avenue. This criterion has two metrics: pedestrian comfort, which considers the ease of access to transit and improved pedestrian facilities, and bicycle connections, which considers the opportunity for connections to bicycle infrastructure and incorporation of shared-use paths.

- **Pedestrian Comfort:** Alternative 2 and Alternative 3 are rated Very Good (Very Good). Alternative 1 is rated Good (Good). No Build (2045) is rated Very Poor (Very Poor).
- **Bicycle Connections:** All build alternatives (Alternatives 1, 2, and 3) are rated Good (Good). The No Build option is rated Very Poor (Very Poor).

Lead Agency Support

This criterion measures support for each alternative from CDOT.

- Alternative 1 and Alternative 2 both receive Good support (Good) from the lead agency.
- Alternative 3 and the No Build (2045) option both have Very Poor support (Very Poor).

Additional Evaluation Factors

Right-of-Way (ROW) and Environmental considerations were evaluated but were not "differentiators" as they resulted in similar impacts across all three build alternatives. These included property impacts, parking impacts and potential effects on minority populations, historic and possible historic properties, public parks, and public recreation areas.