

ALTERNATIVES EVALUATION



This section describes the tiered evaluation process, alternatives, and the results of the evaluation.

Tiered Evaluation Process

A three-tiered process was developed to evaluate the model scenarios and perform the alternatives evaluation (Technical Memorandum #5). Figure 17 illustrates the methodology of this tiered approach.

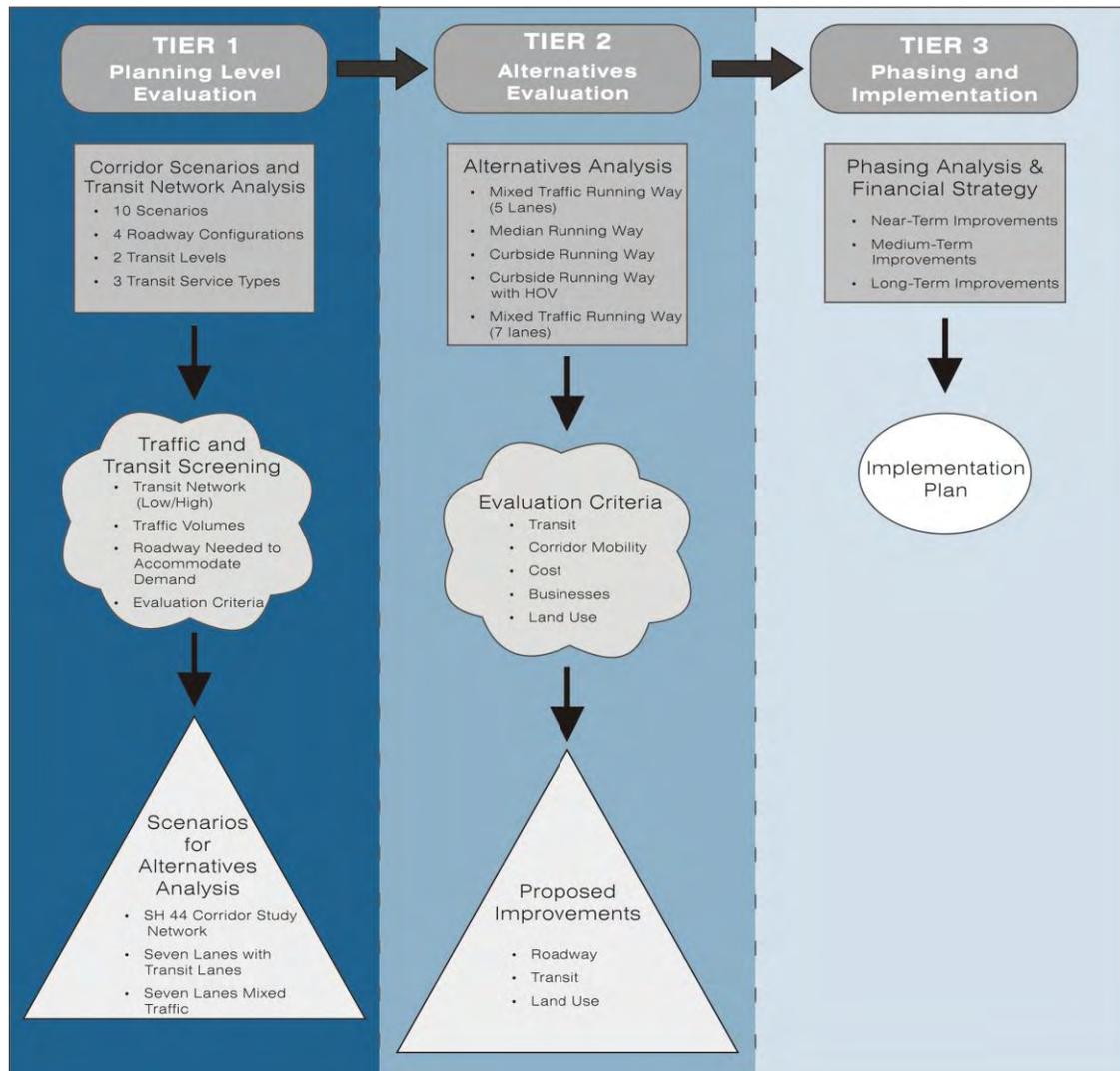
In Tier One, a high-level traffic and transit screening evaluation was performed on the ten travel demand model scenarios to narrow the scenarios for the alternatives analysis. The scenarios identified in Tier One were evaluated further in Tier Two.

Tier Two included the development of five alternatives and a detailed evaluation of these alternatives based on criteria developed as part of the project goals and objectives (Technical Memorandum #1). The Tier Two evaluation integrated the roadway, transit, and land use components

of the corridor analysis. Tier Three incorporated the findings from the alternatives evaluation and developed a phasing plan to implement the long-term

improvements. Tiers Two and Three are addressed in this section of the plan.

Figure 17 Evaluation Methodology



Overview of Alternatives

The following five alternatives, as shown in Figure 18, were developed for the corridor:

- Mixed-Traffic Running Way (5-lanes)
- Median Running Way (7-lanes)
- Curbside Running Way (7-lanes)
- Curbside Running Way with HOV (7-lanes)
- Mixed-Traffic Running Way (7-lanes)

The alternatives vary primarily by roadway cross-section and transit running way. The number of lanes listed above indicates the roadway width between SH 16 and 23rd Street. Given the built environment, no roadway modifications were assumed for the segment between 23rd Street and the future Downtown Boise Multimodal Center (Technical Memorandum #5).

The corridor was divided into four segments for the alternatives analysis due to differences in traffic volumes, land uses, and jurisdictions along the corridor. The segments are listed below:

- SH 16 to Eagle Road
- Eagle Road to Glenwood Street
- Glenwood Street to 23rd Street
- 23rd Street to Downtown Boise Multimodal Center

Evaluation Criteria

The five alternatives for each segment were scored using evaluation criteria grouped into five categories (transit, corridor mobility, cost, businesses, and land use). The criteria were developed through discussions and input from the PMT, CAC, and TAC, and are listed below.

TRANSIT

- Provision of dedicated transit lane
- Transit travel time
- Potential ridership
- Image
- Expansion of the transit system

CORRIDOR MOBILITY

- Accommodation of traffic demand

- Automobile travel time
- Conflicts between automobile and transit
- Person trips
- Pedestrian and bicycle conflicts

COST

- Ability for joint agency project
- Capital costs
- Operating costs
- Phasing adaptability

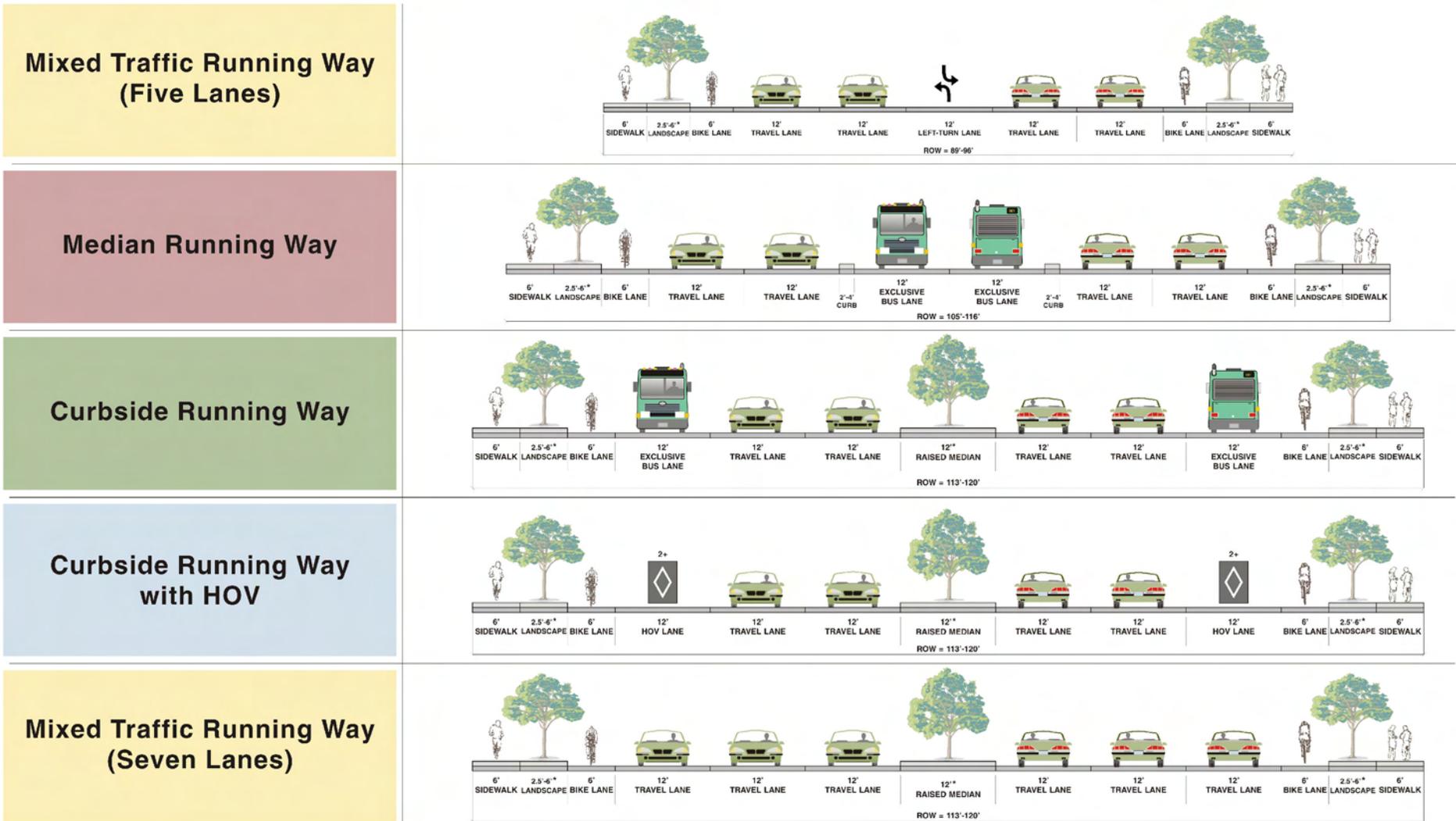
BUSINESSES

- Right-of-way impacts
- Impacts to existing businesses

LAND USE

- Consistency with corridor plans
- Consistency with land use plans
- Supportive of TOD

Each alternative was evaluated and scored based on these criteria.



Note: The widths and landscape features shown above may change during the design phase of this capital project.

* Landscaping for buffer and median could be provided on a case-by-case basis if funded and maintained by a developer or local jurisdiction.



ALTERNATIVES CONSIDERED FOR YEAR 2035
ADA COUNTY, IDAHO

FIGURE 18

Technical Evaluation of Alternatives

The technical evaluation of the alternatives was performed by roadway segment due to the varying environment along the corridor.

SEGMENT 1 - SH 16 TO EAGLE ROAD

On the segment between SH 16 and Eagle Road, the Curbside Running Way with HOV alternative scored the highest with above average scores in all of the categories. This alternative balances the tradeoff between transit and corridor mobility, resulting in a higher score than the other alternatives.

SEGMENT 2 - EAGLE ROAD TO GLENWOOD STREET

The segment between Eagle Road and Glenwood Street has a great opportunity to provide a higher level of transit

preferential treatment. The alternatives with the Median, Curbside, or Curbside with HOV Running Ways scored the highest over the two mixed traffic running way alternatives. All of these transit lane alternatives maintained a higher performance in transit, corridor mobility, and land use while balancing cost and impacts to businesses.

SEGMENT 3 - GLENWOOD STREET TO 23RD STREET

The segment from Glenwood Street to 23rd Street presents many challenges including congested traffic conditions and the generally built environment. The Curbside Running Way with HOV alternative scored the highest out of the five alternatives with above average performance in all of the categories. The HOV alternative scored higher in corridor mobility and cost (i.e., ability for joint agency project) than the other exclusive lane alternatives.

SEGMENT 4 - 23RD STREET TO DOWNTOWN BOISE MULTIMODAL CENTER

The segment between 23rd Street and the future Downtown Boise Multimodal Center was assumed to be a Mixed Traffic Running Way for year 2035 given the built environment. Future consideration of using routes parallel to State Street and/or contraflow lanes on State Street could be explored in future planning efforts. Improvements on this segment should be determined in coordination with CCDC's State Street streetscape standards.

ADDITIONAL TECHNICAL REVIEW

After the technical ranking of alternatives using the evaluation criteria, additional technical review was completed for the three transit lane alternatives and their application to State Street. The additional review compared the recommended alternatives to the general transit-usage criteria for transit lanes to determine if the

recommended configuration matched the expected transit usage by 2035.

Thresholds of use for certain types of transit lanes are important because they ensure adequate transit service is available. These thresholds can be used to identify when a transit lane may not be adequately utilized. Implementing an underutilized transit lane can cause public perception problems.

The planning thresholds for transit lanes (per hour per direction) are 20 to 30 buses for a curbside transit lane or HOV lane and 30 to 60 buses for a median running way. The planned year 2035 transit service for State Street is 18 buses per hour per direction between Eagle and Downtown Boise, which is comparable to the curbside transit lane or HOV lane criteria but significantly lower than the threshold for a median running way.

West of Eagle Road, the planned transit service is 6 to 10 buses per hour per direction, so a dedicated transit lane would appear unused. For this segment, a mixed

traffic running way would be more applicable based on the 2035 horizon year.

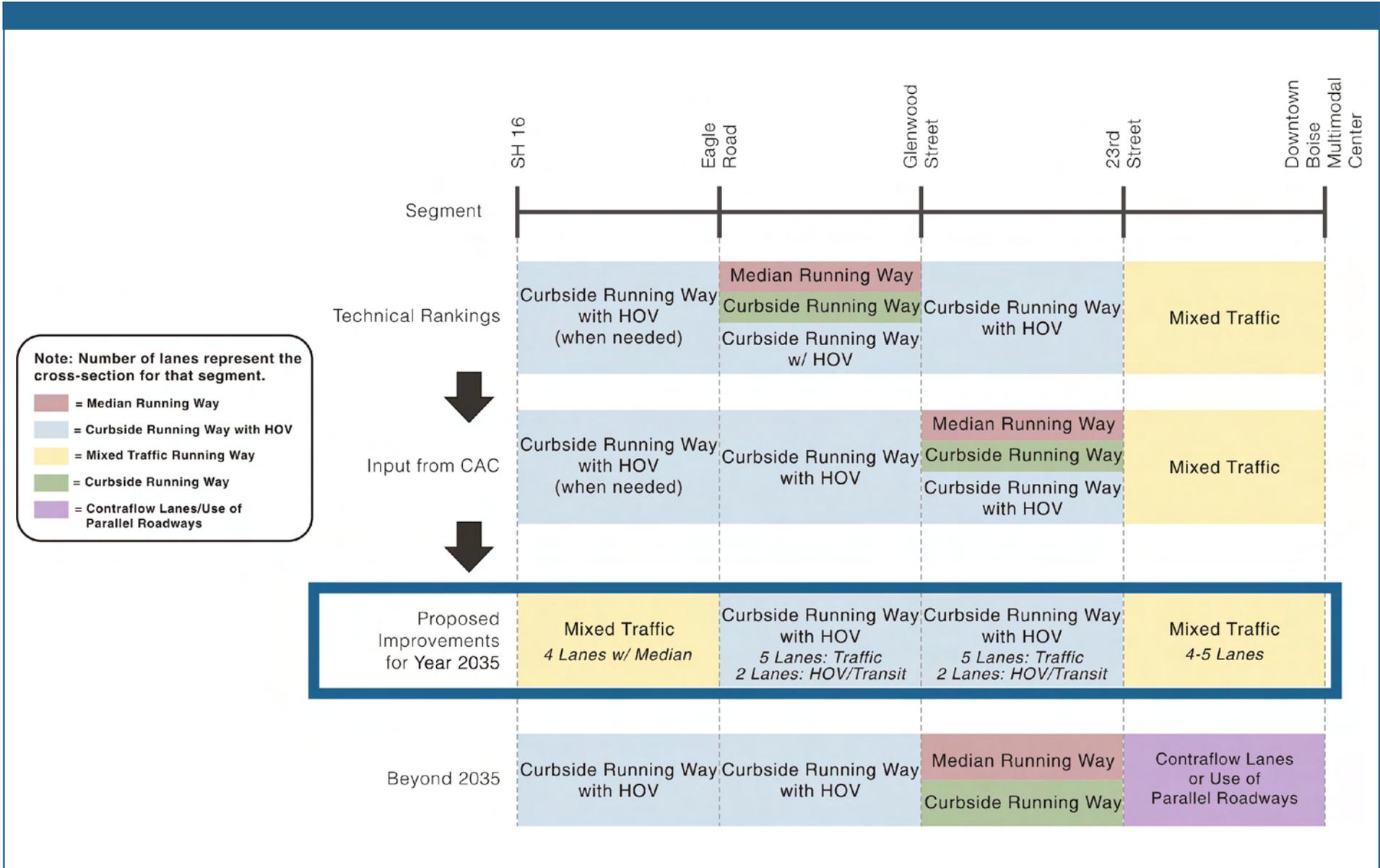
Development of Recommended Alternative

The technical rankings and additional technical review were presented to the TAC and CAC in October and November 2010 and to the public in December 2010. Figure 19 shows the development of the recommended alternative by segment based on input from the advisory committees.

Overall, the Curbside Running Way with HOV was supported for the corridor by the advisory committees and the public. Discussion occurred regarding a median running way (transit only) for the segment between 23rd Street and Glenwood Street. The technical analysis for this segment does not warrant a median running way given the projected transit levels for year 2035.

As shown in Figure 19, the recommended improvements include a Curbside Running Way with HOV between 23rd Street and Eagle Road and, when needed, a Curbside Running Way with HOV between Eagle Road and SH 16. These improvements include seven travel lanes with the HOV lane located in the outer (curbside) lanes, bike lanes, sidewalks, and a raised median.

Beyond 2035, several improvements were identified for consideration as the transit investment increases on the corridor, such as a Median Running Way or Curbside Running Way (refer to Figure 19 for improvements beyond 2035).



EVALUATION OF LONG-TERM IMPROVEMENTS
ADA COUNTY, IDAHO

FIGURE 19