# Tiering Analysis

Overview

This document describes the process proposed to establish the project tiers for the Long Beach to East Los Angeles Corridor Mobility Investment Plan (LB-ELA CMIP). This process, called the "Tiering Analysis", establishes four tiers for the initial list of projects and programs:

- **Tier 1A:** Higher scoring / More ready for implementation

- **Tier 1B:** Higher scoring / Less ready for implementation

- **Tier 2A:** Lower scoring / More ready for implementation

- **Tier 2B:** Lower scoring / Less ready for implementation

Figure 1: Example of Tiering Analysis Outcomes
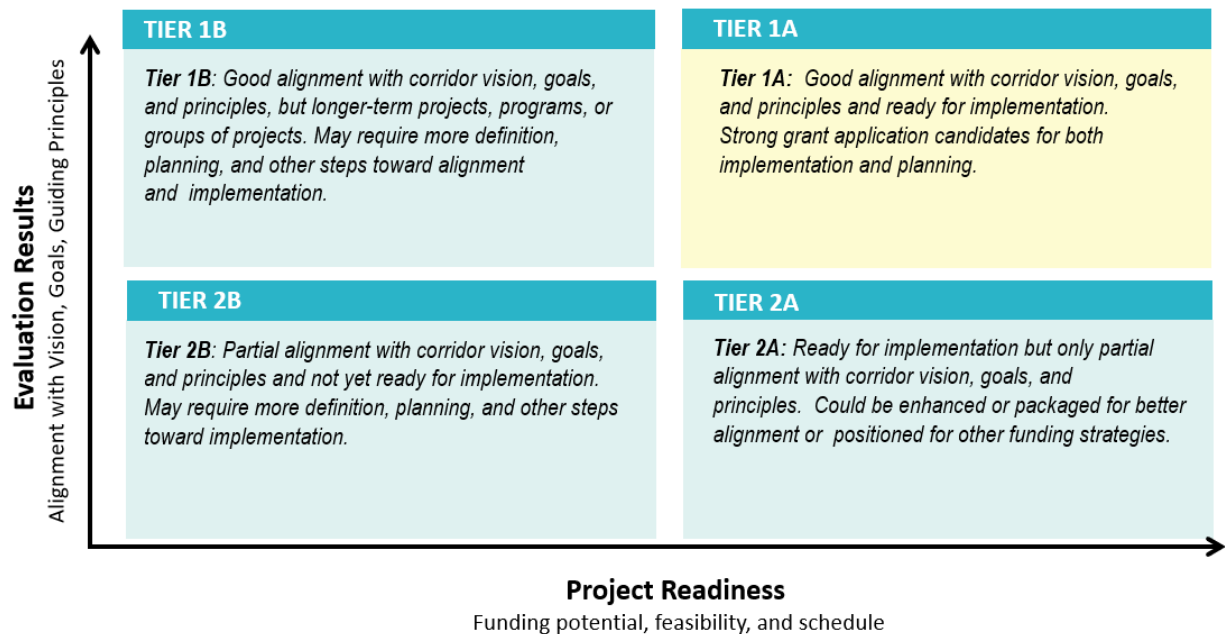
Additionally, some projects were removed from the initial list prior to evaluation, such as the mainline capacity improvements on I-710, and some projects were removed during the tiering process that are in construction or fully funded (see attachment F).

The results of the tiering analysis, included in Attachment E, will be used to inform the funding strategy and recommendations included in the Draft CMIP. Figure 2 describes the process for the tiering analysis and how it will be leveraged in the funding recommendations.

Figure 2: Overview of Prioritization Process
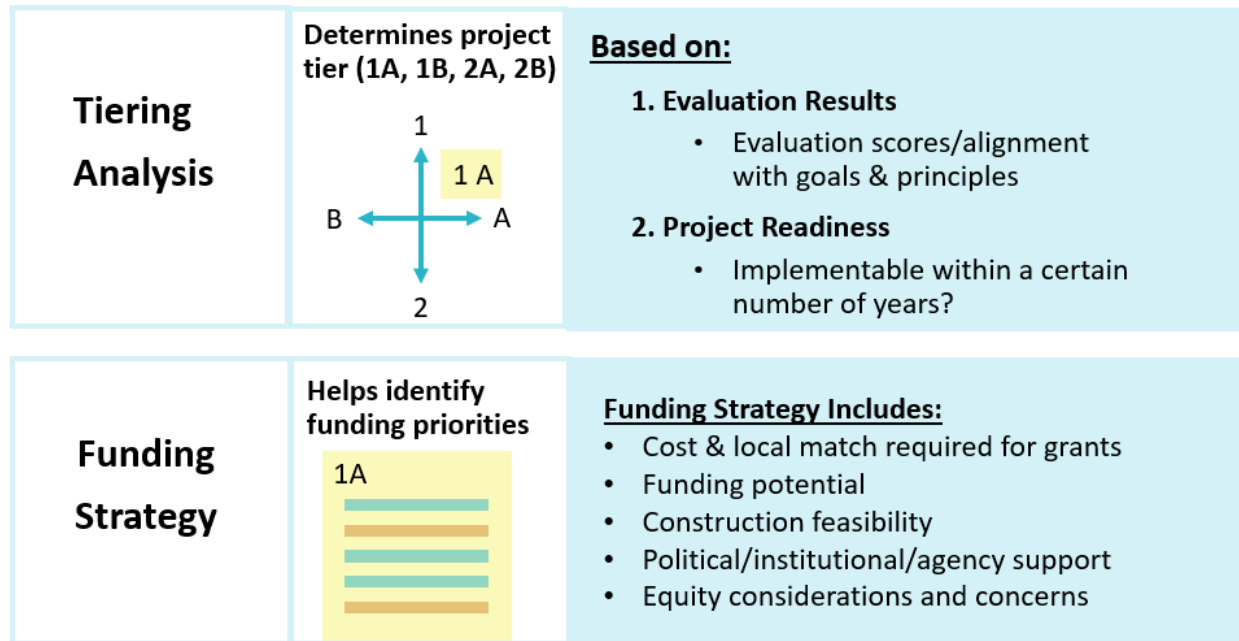
The sections below describe how the evaluation results and project readiness are combined to complete the draft tiering analysis.

1. Evaluation Results

The results of the evaluation determine if a project is Tier 1 or Tier 2. Within each mode (Active Transportation, Arterial, Community, Freeway, Goods Movement, Transit), the top scoring 40% of projects are included in Tier 1. Two factors were used to determine the top scoring projects, the Total Benefit Score and the Total Outcome Score:

- **Total Benefit Score:** The Total Benefit Score is based on the results of the quantitative and qualitative metric evaluations (see Attachment A). The total benefit score is a sum of the six goal summary scores and the two principal summary scores.[1]

- **Total Outcome Concerns**: Outcome Concerns are defined as the unintended externalities of a project that are more difficult to mitigate in the design process. Eight of the sixteen Concerns are designated as Outcome Concerns (shown below). The Total Outcome Score is a sum of the Concern scores for each of those eight metrics.

Concern Criteria
Con3: Potential for Increased Commute Times
Con4: Potential for Traffic Diversion
Con5: Potential to Increase Localized Emissions / Emissions shifting

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[1] Summary scores are based on an average of the individual metric scores, adjusted for the number of metrics within a goal that the project addresses.

Con7: Potential for concentrated congestion impacts
Con9: Potential for VMT Increases
Con10: Potential to increase user costs
Con12: Potential to increase economic displacement
Con14: Potential for reduced transit ridership

- **Final Ranking Score:** To create the final ranking score used in the tiering analysis, the Total Benefit Score for projects is reduced by a factor depending on the project's Total Outcome Concern score, as follows:

Total Outcome Score*	# Projects/ Programs	Benefit Score Reduction
0	144	0%
1-2	42	5%
3-4	20	10%
5-10	6	15%

See Attachment A for a description of how the Concerns are evaluated. Each concern has the potential for a score of 3 (high potential adverse impact). Therefore, the highest possible Outcome Concern Total would be a total score of 24.

The Final Ranking Score was used for the identification of the top 40% of projects in each mode that are classified as Tier 1 projects or programs. The other 60% of projects in each mode are classified as Tier 2 projects.

2. Project Readiness

For the purpose of tiering, project readiness is defined by how soon a project could break ground. Project sponsors provided the project readiness and phasing information to Metro. If no information was available, the project team used their professional judgment to determine the likely timeframe for a given project or program.

- **Projects.** For defined projects, the following thresholds were used to determine if a project timeline is short, medium, or long-term. The number of years in each of these categories vary by project mode as described below.

Mode	Time Frame (years to begin construction)		
	Short	Med	Long
Active Transportation / TDM	0 to 2	3 to 6	7+
Transit	0 to 3	4 to 8	9+
Goods Movement	0 to 3	4 to 8	9+
Arterial Roadway	0 to 3	4 to 8	9+

Freeway	0 to 5	6 to 10	10 +
Community Programs	NA	NA	NA

- **Programs.** Each program was classified as short, medium, or long-term based on the following characteristics:

Timeframe	Program Type
Short-term	Expansion of on-going program, a pilot program, or study
Medium-term	Collections of defined or semi-defined projects
Long-term	Collections of undefined strategies or project ideas

For the tiering analysis, Tier "A" projects or programs are those that are designated as "short-term." Medium and long-term projects and programs are classified as Tier B.