

Which Freeway Corridors in Los Angeles Can Support Regional Bus Service?

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Issue

Southern California’s freeway network sustains regional mobility, connecting major employment centers, residential communities, airports, port facilities and inter-regional destinations. Yet many freeway corridors in Caltrans District 7, which includes Los Angeles and Ventura counties, lack consistent, frequent regional bus service integrated directly into those freeway environments.

Existing facilities such as the Harbor Transitway and El Monte Busway demonstrate that freeway-based bus service is physically possible. Operational experience also shows that successful service depends on more than placing buses on freeways; passenger access, station design, right-of-way conditions, service coordination and agency governance all play major roles.

This study highlights a screening-level method for identifying potential sites for new regional bus services. The framework is intended to help Caltrans District 7 compare freeway segments and identify sites for further technical analysis.

Study Approach

Using a comparative case method, the researcher reviewed freeway-based bus and busway systems in the United States (Los Angeles, San Diego, Seattle, Minneapolis–St. Paul and Pittsburgh) and abroad (Ottawa, Canada, Brisbane and Adelaide, Australia, Bogotá, Colombia, and Guangzhou, China).

The analysis focused on frequent, all-day regional bus routes that function as “trunk services,” rather than commuter-only or other local-freeway routes. Where data were available, the study compared ridership, reliability, cost, station design, service structure and agency documentation.

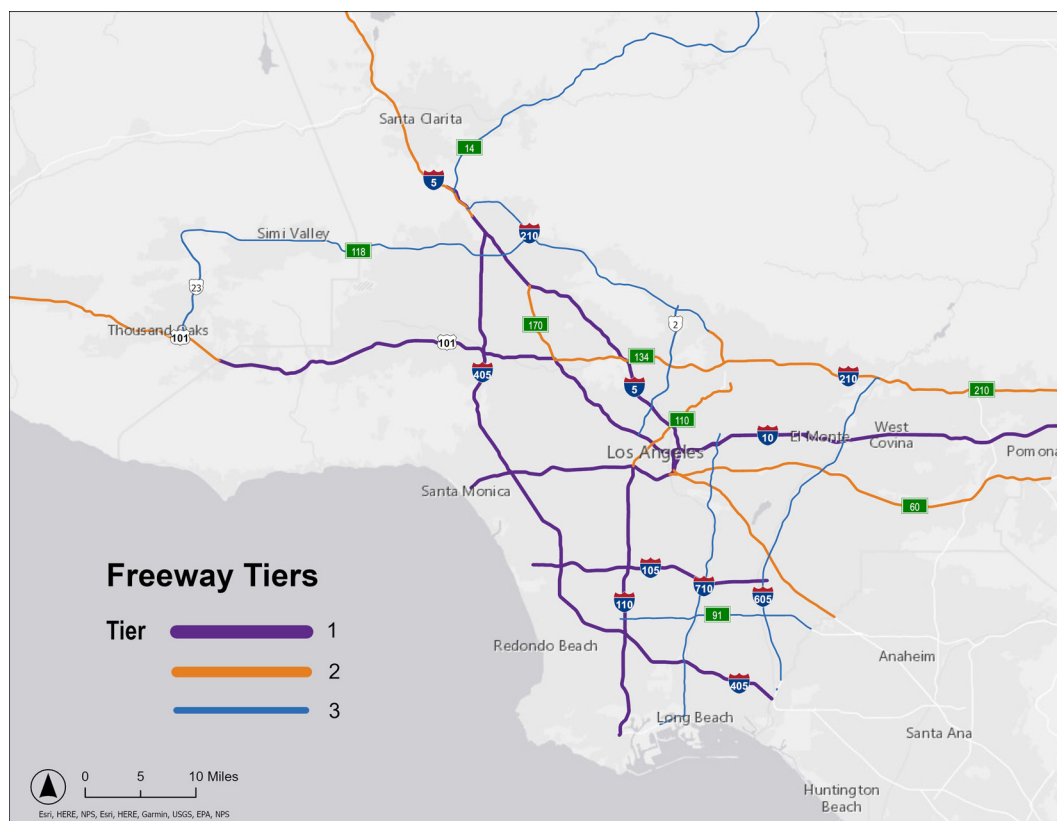
Findings were translated into a screening framework for District 7. Because freeway conditions vary along a corridor, the framework evaluates individual freeway segments rather than entire routes. Each segment was assessed for market potential and implementation feasibility, producing tiers that indicate where deeper study may be useful (**Figure 1**).

Key Findings

- » Freeway bus performance depends on core operational factors, not just regional context. The case studies repeatedly showed the same factors shaping whether freeway-based bus service performed as a reliable regional transit option.
- » Continuous right-of-way is the strongest operating factor. Buses perform better when they can stay in managed or dedicated lanes without repeated delays from ramps, intersections, merging or inconsistent lane enforcement.
- » Station design can significantly limit performance. Even when buses move quickly on the freeway, poor station access, limited platform space, slow vertical circulation or weak transfer connections can impact service performance.
- » High-performing corridors usually have a main all-day regional service that operates frequently and is supported by feeder routes or commuter routes. When too many routes use the same facility without clear roles, the corridor becomes harder to understand and operate.
- » Multi-agency corridors require coordinated governance structures before they can function as one system. Establishing clear service roles, schedule coordination, fare integration, operating standards and consistent public-facing information are critical for efficient use of shared transportation corridors.

Figure 1.

Screening-level tier map of Caltrans District 7 freeway segments evaluated for potential freeway-based bus service opportunities.



Recommendations

Based on the findings and screening framework, the following researcher recommends that Caltrans District 7:

- » Develop detailed profiles for high-priority segments, including traffic conditions, surrounding land use, existing managed lanes, transit connections and possible station or access opportunities.
- » Treat station access as a core performance issue. Pedestrian bridges, elevators, safe crossings, bike access and transfer connections should be considered required infrastructure, not optional amenities.
- » Coordinate early with transit operators and relevant Caltrans units to test assumptions about service roles, transfers, right-of-way constraints and implementation feasibility.
- » Prioritize corridors where frequent, all-day regional bus service could use existing freeway infrastructure while preserving future flexibility for higher-capacity transit investments.

For More Information

Sanchez III, I. E. (2026). Beyond the Harbor Transitway: Evaluating Freeway-Based Bus Service Opportunities (Master's capstone, UCLA). Retrieved from: <https://escholarship.org/uc/item/6j0987zj>

A digital companion StoryMap, *Bus Transit Priority Freeways in District 7*, displays segment-level maps, project renderings and detailed evaluation results. It can be found here: <https://arcg.is/eOzbCO>.