

IMPROVING BUS OPERATIONS AND TRAFFIC (IBOT) FACT SHEET

The Project

Building upon the successful launch of technology that helps transit vehicles stay on time while traveling on surface streets in the San Diego region, SANDAG conducted a study to determine the benefits of expanding the system. The effort, called the Improving Bus Operations and Traffic (IBOT) planning study, identified additional locations in the region where implementation of transit signal priority (TSP) technology would boost the efficiency of the transit system.



Currently, five *Rapid* routes in San Diego County use TSP. Data show that the use of TSP on these routes has improved on-time performance and reduced travel times without negatively impacting traffic flow in these corridors. Overall, these routes show reduced congestion at intersections.

Working with transit operators and local jurisdictions, the IBOT project team conducted a cost-benefit analysis to identify the top 10 additional corridors where bus routes would most benefit from TSP technology. The study found that implementing TSP on these corridors will improve transit operations, reduce transit trip times, and improve overall mobility.

The Need

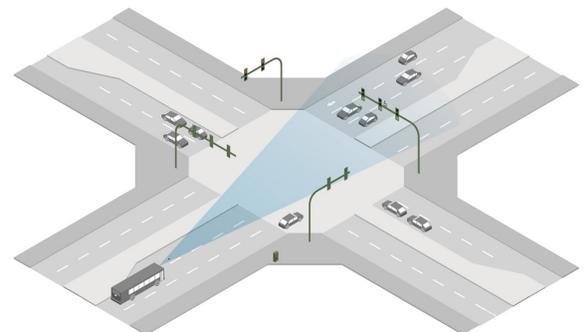
There is a need to improve bus reliability and overall transit travel time in the San Diego region. Transit travel times can be reduced by up to 10 percent during peak hours by improving efficiency at traffic signals with TSP technology. TSP allows buses that fall behind schedule to recover lost time, increasing the consistency of on-time arrival and improving connections throughout the transit system. This time savings and increased reliability improve the attractiveness of buses as a mobility choice.

What is Transit Signal Priority?

TSP is a method of adjusting traffic signal timing to provide more “green time” for buses, resulting in fewer stops at traffic signals. It can reduce delays by decreasing the probability of a bus stopping at a red signal. TSP can extend a green light by a few seconds to allow the bus to cross through an intersection or it can shorten a red light as a bus approaches an intersection. TSP is a lower priority than emergency vehicle preemption, which can switch a signal to green at any time.

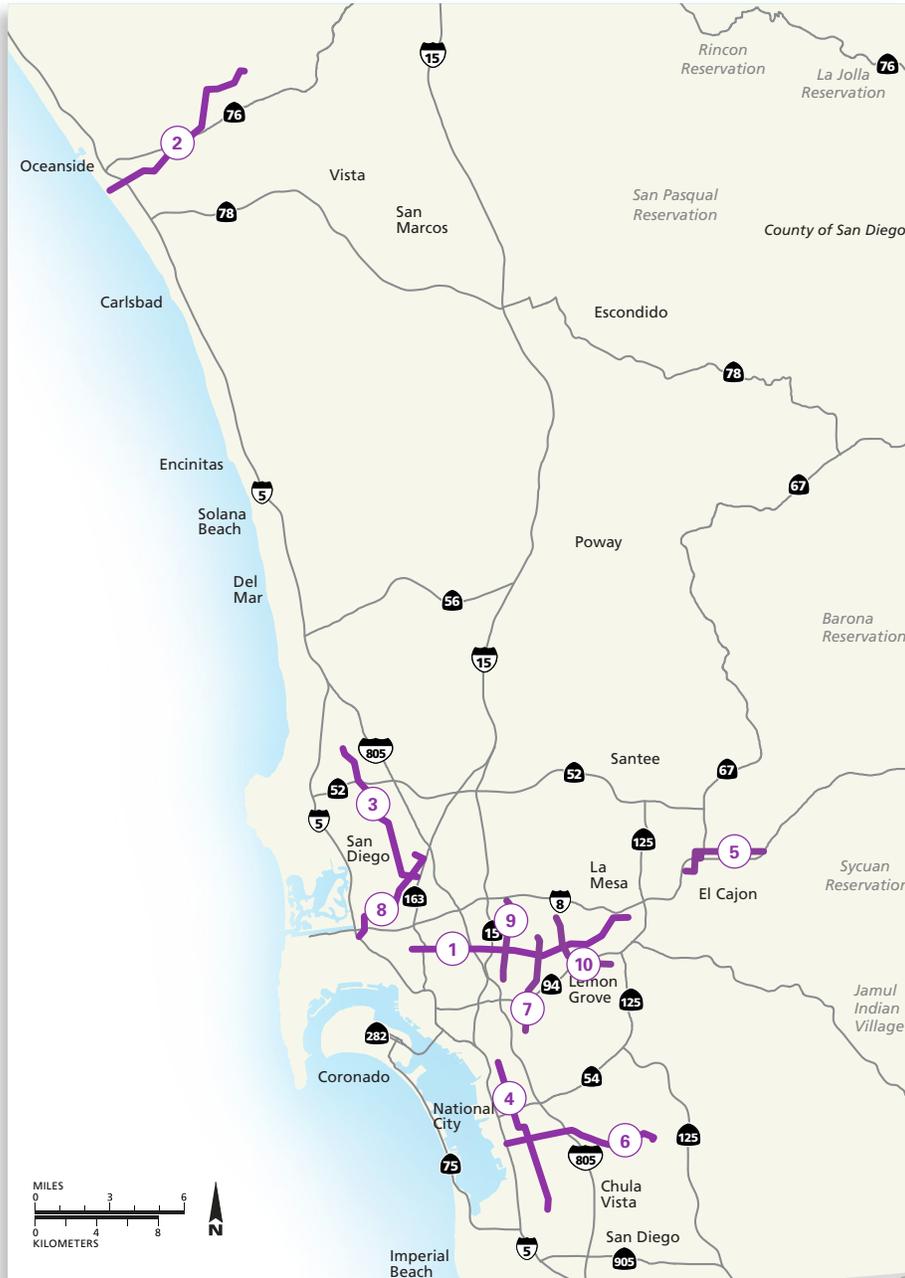
TSP is only triggered if a bus is behind schedule. Typically, a TSP activation is unnoticeable to other drivers on the road.

(Continued on reverse)



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IBOT Study Findings

After a thorough technical review of bus corridors throughout the region, as well as a review of input received from transit operators about their experiences on their routes, the study identified the top ten corridors that would realize the most benefit from TSP implementation:

1. University Avenue (San Diego)
2. Mission Avenue (Oceanside)
3. Genesee Avenue (San Diego)
4. Highland Avenue (National City/Chula Vista)
5. El Cajon Transit Center to E. Main Street (El Cajon)
6. H Street (Chula Vista)
7. 54th Street/Euclid Avenue (San Diego)
8. Linda Vista Road (San Diego)
9. Fairmount Avenue (San Diego)
10. College Avenue (San Diego/Lemon Grove)

Implementing TSP on these corridors would result in time savings that will significantly increase on-time performance, and improve connections and service reliability for all bus routes on these corridors.

Project Costs

The budget for the IBOT study was \$230,000, the majority of which was funded by a Transportation Planning Grant awarded to SANDAG by the California Department of Transportation in Fiscal Year 2014-15. SANDAG contributed the remaining funds. The study found that implementing IBOT on the recommended corridors would cost between \$900,000 and \$1.1 million per corridor.

Status

The study began in summer 2015 and concluded in fall 2016.

For More Information

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