DRISI

CALTRANS DIVISION OF RESEARCH, INNOVATION AND SYSTEM INFORMATION

Research Results

A Safe System Approach to Speed Limit Setting-Case Studies Report and Recommendations

Develop and implement a new roadway-based context-sensitive approach to establish speed limits that prioritize the safety of all road users.

Transportation Safety and Mobility

OCTOBER 2023

Project Title:
Developing A Safe System Approach to Setting Speed Limits

Task Number: 4007

Start Date: March 3, 2022

Completion Date: May 31, 2023

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WHAT WAS THE NEED?

With a statewide commitment to achieving Vision Zero, Caltrans has embraced the Safe System approach and will be making a holistic and comprehensive effort to prioritize multi-modal safety. To support Caltrans' pivot to the Safe System approach and based on recommendations from the Zero Fatalities Task Force, the agency is exploring Safe System strategies for potential adoption. One such strategy is setting speed limits based on multi-modal and land use context rather than the 85th percentile of current motorist speeds. This report explores examples of agencies that have taken a Safe System Approach to speed limit setting through strategies that paired speed limit changes with complementary countermeasures. This report includes a discussion of the outcomes of case studies in which evaluation data was published.

WHAT WAS OUR GOAL?

The goal of this research was to explore examples of agencies that have taken a Safe System Approach to speed limit setting through strategies that paired speed limit changes with complementary countermeasures, such as signage, design, enforcement, or educational efforts to successfully achieve a safety benefit. These case studies and discussions are intended to inform SafeTREC's Safe System Approach to Speed Limit Setting Policy Brief. The recommendations from this effort consider the legislative and other unique contextual considerations of applying these strategies in California.

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WHAT DID WE DO?

- Fehr & Peers and SafeTREC identified agencies that have taken a Safe System Approach to speed limit setting
- This report includes both Beyond California and California Case Studies.
  - The Beyond California Case Studies explore possibilities beyond the California Vehicle Code (CVC), including outcome evaluation and local implementations.
  - The California Case Studies showcase Safe System Approach interventions within the state's legislative framework, pre, and post Assembly Bill 43.
- For case studies in which evaluation data was published, this report includes a discussion of the outcomes, such as speed reduction and other metrics reported by the agency.

WHAT WAS THE OUTCOME?

This report includes the following findings:

- Instead of relying on the 85th percentile alone to set speeds, some agencies prioritize a context-based methodology, weighting factors such as roadway type, land use context, crash history, and pedestrian and bicycle activity.
- To achieve broader vehicle speed reduction, posted speed limit reduction should be accompanied by additional interventions beyond informational media.
- Speed limit changes effectively reduce top-end speeders, even when only accompanied by additional speed limit signage and an informational media campaign.
- Intervention packages, like speed limit reductions and additional speed limit signs, have been shown to reduce the number and severity of collisions and observed vehicle speeds, particularly in urban and high pedestrian activity contexts.
- The most effective, systemic approach to speed reduction evaluated in this report is pairing speed limit reductions with speed safety cameras.
- State-level policy that allows local agencies flexibility in speed limit setting can enable agencies to tailor context-based speed management solutions using the Safe System Approach.
- The California Case Studies demonstrate how cities can use existing California laws to implement potentially under-utilized speed limit adjustments and safety measures.
- The most notable limitations to adopting the proven approaches in these case studies in California include the following:
  - Speed safety cameras are not currently legal within California
  - The complexity of California's speed limit setting options could create administrative barriers for local agencies or stakeholders
  - A relative lack of precedent examples of Safe System Approaches to speed limit setting within the state

WHAT IS THE BENEFIT?

This report provides cross-cutting observations, considerations, and evaluated outcomes from agencies adopting a Safe System Approach to speed limit setting, including "framework for California" discussions for each case study. The report also includes recommendations, informed by the case studies, for SafeTREC's Policy Brief memo, which will directly influence speed limit setting in California, consistent with the Safe System approach.

LEARN MORE

The final report will be posted on the DRISI website.