

Congestion Performance Measurement

Overview

The Moving Ahead for Progress in 21st Century Act (MAP-21) focuses on data-driven performance measures that target outcomes. The Notice of Proposed Rulemaking (NPRM) for congestion performance has not yet been published, and as of July 2015, the NPRM is expected to be published in late-October 2015 with a comment period ending in late-January 2016.

Performance Measures

MAP-21 sets significant reduction in congestion on the National Highway System as a national performance goal. A NPRM for congestion reduction has not yet been issued, but a NPRM issued June 2, 2014, on “Statewide and Nonmetropolitan Transportation Planning; Metropolitan Transportation Planning”¹ (“Planning NPRM”) may provide clues about its content. The planning NPRM asked planning agencies to include a congestion management process, based on measurements, and goals based on those measurements.

The planning NPRM proposed that congestion would be measured, acceptable levels of performance would be established, causes of recurring and non-recurring congestion would be identified, and management measures would feed into a decision-making process. The development of a congestion management process should result in multimodal performance measures and strategies.

A State highway program might take a similar approach as the planning NPRM. The planning NPRM does not focus heavily on system reliability, but it’s likely that a State highway performance measurement system would favor both congestion and system reliability.

Current data collection

The California Department of Transportation (Caltrans) currently has an extensive network of highway detection in most metropolitan areas, and in all of the most congested areas of the State, in nine of the twelve districts. These detectors feed into a software tool called Caltrans Performance Measurement System (PeMS), which gathers information from these detection stations and enables analysis of highway performance.

PeMS is able to report on several areas of highway performance, such as speeds, congestion, corridor reliability, bottlenecks, and historical information is available for most types of reporting, enabling staff to analyze system performance over time, to determine whether issues are recurrent or non-recurrent. It is anticipated that Caltrans will be able to collect the information relevant to carry forward a congestion relief program.

Current congestion relief strategies

Caltrans currently addresses congestion relief through active traffic management, supported by the Traffic Management Centers, as well as issuing projects designed to reduce delay. State Highway Operation and Protection dollars are obligated to two major categories, through projects that are conceived at the district level, based on local priorities. The two categories are 1) operational improvements, which seek to reduce delay in spot locations, and 2) traffic

¹ Statewide and Nonmetropolitan Transportation Planning; Metropolitan Transportation Planning, 79 Fed. Reg. 31,784 (Jun. 2, 2014). <http://www.gpo.gov/fdsys/pkg/FR-2014-06-02/pdf/2014-12155.pdf>

management systems, which install and repair tools which help to manage traffic, such as highway detection stations, changeable message signs, and ramp meters.