



MEMORANDUM

To: Regional Transportation Operations Coalition

From: CMAP Staff

Date: December 7, 2017

Re: 2018 regional safety performance targets

Established under MAP-21 and continued in the FAST Act, state departments of transportation (DOTs) and metropolitan planning organizations (MPOs) are given separate responsibility for establishing performance targets and using a set of performance measures to track progress toward meeting those targets for a variety of transportation areas including safety, bridge and pavement condition, air quality, freight movement, and system reliability. CMAP staff developed a [memo](#) outlining these requirements. The safety performance measure (Safety PM) requirements are set out in the Federal Highway Administration's [National Performance Management Measures: Highway Safety Improvement Program](#) final rule.

CMAP staff prepared a [memo](#) that reviewed options for setting 2018 regional safety performance targets for the Transportation Committee in September and returned in November with a tentative staff recommendation to support the state's targets. Staff is also seeking feedback from RTOC before finalizing its recommendation to the MPO Policy Committee and CMAP Board in January.

This memo surveys how other states and MPOs are approaching their Safety PM requirements and proposes that CMAP support IDOT's targets. It also addresses how to document the safety targets in the Transportation Improvement Program (TIP).

How other states and MPOs are approaching safety targets

State DOTs were required to establish 2018 safety targets as part of their annual Highway Safety Improvement Program (HSIP) report to FHWA at the end of August 2017. States have adopted widely divergent targets,¹ with some aiming for improvement and others expecting significant

¹ The targets are to be established as five-year rolling averages on all public roads for: (1) the number of fatalities, (2) the rate of fatalities per 100 million vehicle miles traveled (VMT), (3) the number of serious injuries, (4) the rate of serious injuries per 100 million VMT, and (5) the number of non-motorized fatalities and non-motorized serious injuries. Thus, the form of the 2018 target is the desired value of the 2014-2018 average for each of the measures.

worsening of safety (Table 1). California DOT used a trend line to set its safety targets, which resulted in an increase in all five measures. Wisconsin DOT set its safety targets based on stipulating a percentage reduction. IDOT used two methods, a least squares trend line and a policy-based 2-percent annual reduction, to set the state’s targets.

Table 1. 2018 safety performance targets for selected states (percent change in five-year rolling averages from baseline to the 2014 – 2018 safety target)

Performance Measure	New York	California	Texas	Iowa	Indiana	Missouri	Wisconsin	Illinois
Fatalities	-5.0%	12.0%	8.2%	6.5%	5.0%	2.9%	-2.0%	-4.0%
Serious Injuries	-6.0%	11.5%	6.7%	2.2%	4.1%	-6.2%	-5.0%	-4.7%
Non-Motorized	-1.0%	1.9%	14.2%	4.5%	0.6%	6.6%	-5.0%	-4.0%

MPOs have until the end of February 2018 to establish their own targets or decide to support the state DOTs targets. A review of peer MPOs found that most are currently going through the same process as CMAP, working through their committees to determine if they should set their own safety targets or support the state DOT’s targets. For instance, the staff of the Metropolitan Transportation Commission (MTC), the MPO for the San Francisco region, recommended supporting the state targets. At the Denver Regional Council of Governments (DRCOG), the Denver MPO, staff recommended establishing different targets. MPOs in the state of Illinois are likely to take different approaches as well. Staff at two downstate MPOs suggested they probably will vote to support IDOT’s targets, while staff at another indicated that the MPO is likely to choose more aggressive targets based on its current long-range transportation plan.

Preliminary recommendation for first-year 2018 safety performance targets

Staff preliminarily recommends that the MPO support IDOT’s 2018 safety targets. The IDOT safety targets are fairly aggressive due to the year-to-year fatality and serious injury reductions that need to be realized. Staff believes this is the best alternative for the first year of setting safety targets and shows a consistent approach to improving traffic safety. By supporting IDOT’s targets the region will have a goal that supports the City of Chicago’s Vision Zero Initiative as well.² Given that the targets are to be set annually, CMAP can readily revisit target selection. Ideally IDOT and CMAP will coordinate more extensively on state target selection going forward.

Note that by agreeing to support IDOT’s safety targets, the MPO is not agreeing to any specific share of the decrease in fatalities and serious injuries. Instead it is agreeing to integrate the targets as goals in the metropolitan planning process and to plan and program projects that help meet the State’s targets. The selection of the target does not directly affect the allocation of funding at either the state or MPO level. However, the targets selected for different measures should ultimately reflect funding allocation priorities among other factors.

² The City of Chicago Vision Zero Action Plan calls for a 20 percent and 35 percent reduction in fatalities and serious injuries by 2020, respectively, which is very similar in its year-over-year reduction to the IDOT safety targets.

It is worth noting that CMAP is preparing a regional safety paper that make recommendations for reducing fatalities and serious injuries through policy, infrastructure improvements, enforcement, and technology. Because behavioral change is the most important factor in safety improvement, greater emphasis will be needed on enforcement and education programs to make significant safety improvements, as well as any supporting legislative or policy changes that are needed.

Safety integration in the TIP

CMAP is also required to indicate how the TIP makes progress toward achieving the safety performance targets. While the exact method for measuring the safety impact of the TIP is not stipulated by law, there are two primary options, as follows:

1. The first method is the most resource intensive because it involves collecting additional engineering data on TIP projects. This detailed data would be used to estimate the reduction in crashes expected as a result of the transportation project. In this technique a value called a “crash modification factor” (CMF) is applied to the current crash rate at a location to estimate the crash reduction associated with the project. For example, installing a traffic signal and left turn lane at an intersection is estimated to reduce crashes by 43 percent. The studies used to estimate the CMFs are specific with regard to road and traffic characteristics that are needed to use the CMF properly.
2. The second method would identify projects that improve high-crash locations. These locations could be identified from measures that IDOT has calculated, such as the Five Percent locations, the Safer Road Index (SRI), and the Potential for Safety Improvement (PSI), or measures created by CMAP or a local agency. The standard design process would address safety issues during the development of a project; thus, if these locations are improved, then safety should also be increased.

Based on the difficulty of obtaining relevant engineering data in a timely manner and accurately applying the crash modification factors to the projects, it is more reasonable at this time to proceed with the second method and identify TIP projects that improve areas with a high number or severity of crashes. This approach will require only limited additional data from implementers. If the typical scope for a phase 1 study in Illinois begins to include estimating crash reduction using CMFs, that information can also eventually be reported in the TIP.

Next steps

Following discussion by RTOC, staff will finalize its recommendation for setting the 2018 regional safety targets. The recommended safety targets will be brought to the MPO Policy Committee and CMAP Board in January.

Action requested: Discussion