

Minnesota Statewide Freight System Plan

Technical Team Meeting

December 4, 2014

Working Topic #1: Freight Performance Measures

Issue

It is a cliché but nevertheless true that “You can’t manage what you can’t measure.” A Freight Action Plan for Minnesota will need performance measures to assess the performance of the state’s freight system, set priorities for investment and other actions, and evaluate the effects of actions taken.

Background

The topic of “performance measures” was identified as a priority for the development of the Minnesota Statewide Freight System Plan for several reasons:

- **MAP-21 Transportation Legislation** – MAP-21 requires the U.S. DOT to identify national-level performance measures for various performance management areas including safety, pavements, bridges, freight, emissions, performance, and congestion. These performance measures will be implemented by State DOTs. The two measures expected as part of the MAP-21 guidance that are directly related to the freight system are: **Annual Hours of Truck Delay (AHTD)**—Travel time above the congestion threshold in units of vehicle-hours for trucks on the Interstate Highway System; and, **Truck Reliability Index (RI₈₀)**—The RI is defined as the ratio of the total truck travel time¹ needed to ensure on-time arrival to the agency-determined threshold travel time (e.g., observed travel time or preferred travel time).
- **MnDOT is active in performance measurement** – MnDOT publishes an annual performance report and has a well-developed, established set of measures. It is expected that MnDOT will be active in meeting the MAP-21 requirements when the Notice of Proposed Rulemaking is released.
- **Improved tracking of freight activity** – While MnDOT has an aggressive performance measures program, the lens through which freight is examined is not as robust as other areas.



Activity

As part of Freight Plan development, the CS team has organized a Working Group to explore freight performance measures that may aid MnDOT in assessing the condition and performance of freight system (focusing on the highway system), and identifying possible problem areas.

The CS team will work with MnDOT and the Working Group to discuss potential freight performance measures (including using and/or adapting current MnDOT performance measures for the freight system), identify available data sources and tools to quantify the measures, and recommend a short-list of measures that meets available data. This task will not establish performance measures targets.

Participants will identify what elements of freight performance are most critical to measure from their perspective, and why, e.g., to report performance to stakeholders, identify needs, or help program projects. Gaps between existing state measures, required Federal measures, and desired measures will be discussed, including adaptation of current non-freight performance measures; this will lead to an initial direction for future MnDOT freight performance measures. The output of the Working Group will be reported to the Technical Team for further discussion and direction.

Topics for Discussion

- What are the strengths and weaknesses of the measures the U.S. DOT is likely to adopt? How should these measures be integrated with Minnesota's measures?
- What measures make the most sense to the private sector? (What performance measures are used by the private sector?)
- How can performance measures be developed and applied to measure the performance of industry supply chains?
- How can statewide measures be integrated with District and local and local measures?
- How should measures for modes other than trucking on highways (rail, ports/waterways, air) be incorporated in the Freight Action Plan?

¹ 80th percentile was chosen instead of the 95th percentile because in congested urban areas, SHRP2 research project data indicates that the 95th percentile travel times usually involves non routine events that are difficult to predict and are well outside of an agency's ability to control (for example, extreme weather, law enforcement criminal investigations, and similar events). SHRP2 data shows that, in general, events that contribute to travel times around the 80th percentile are more common events such as multi-lane injury crashes and secondary crashes. These 80th percentile travel times are more likely to be affected by agency actions such as changes in infrastructure, policy actions and operational strategies. (e.g. state highway operations), in part due to historic federal requirements (or lack thereof), but also the lack of available data with which to track freight system activity.