

Transportation Management Plans (TMPs) for Work Zones

The *Final Rule on Work Zone Safety and Mobility* was published on September 9, 2004, in the *Federal Register*. All state and local governments that receive federal-aid funding are required to comply with the provisions of this rule no later than October 12, 2007.

The rule updates and broadens the former regulation at 23 CFR 630 Subpart J to address more of the current issues affecting work zone safety and mobility. Within the rule are three primary components:

- Implementation of an overall, state-level work zone safety and mobility **policy**.
- Development and implementation of standard **processes and procedures** to support policy implementation, including procedures for work zone impacts assessment, analyzing work zone data, training, and process reviews.
- Development and implementation of procedures to assess and manage work zone impacts on individual **projects**. This includes requirements for identifying *significant projects* and developing and implementing transportation management plans (TMPs). A *significant project* is defined in the rule as one that, alone or in combination with other concurrent projects nearby, is anticipated to cause sustained work zone impacts that are greater than what is considered tolerable based on state policy and/or engineering judgment.

The full text of the rule can be found at http://www.ops.fhwa.dot.gov/wz/docs/wz_final_rule.pdf.

The Federal Highway Administration (FHWA) is developing a guidance document to help state and local agencies developing TMPs. This fact sheet provides an introduction to the forthcoming guidance document.

What Is a TMP?

A TMP lays out a set of strategies for managing the work zone impacts of a project. The TMP requirement in the rule helps to expand mitigation of work zone impacts beyond traffic safety and control. The scope and content of the TMP required for a project are based on the agency's work zone policies, its understanding of the expected work zone impacts of the project, and whether a project is determined to be *significant*.

For all projects, the TMP called for in the rule will contain a Temporary Traffic Control (TTC) plan that addresses

traffic safety and control through the work zone. Some states refer to TTC plans as Traffic Control Plans (TCPs) or Maintenance of Traffic (MOT) plans.

If a project is expected to be significant, the TMP for that project must also contain both transportation operations and public information components. The transportation operations (TO) component addresses operations and management of the transportation system in the work zone impact area. Examples of TO strategies include travel demand management, signal retiming, use of intelligent transportation systems (ITS), speed enforcement, and traffic incident management. The public information (PI) component addresses communication with the public and concerned stakeholders, both before and during the project, about the project, what to expect in and around the work zone, and available travel alternatives. Examples of PI strategies include using brochures, web sites, radio, and/or variable message signs to disseminate this information both pre-trip and in-route.

What Are the Benefits of a TMP?

Some of the key benefits of a TMP are to help:

- Address the broader safety and mobility impacts of work zones at the corridor and network levels.
- Promote more efficient and effective construction staging, duration, and costs.
- Improve work zone safety for construction workers and the traveling public.
- Minimize traffic and mobility impacts.
- Improve public awareness.
- Minimize impacts to local communities and businesses.
- Improve intra and interagency coordination.

"TMPs would streamline the process through which road user impacts due to work zones can be properly analyzed and addressed."

– **Jawad Paracha**,
Maryland State
Highway Administration

"[TMPs] bring all stakeholders into the discussions in advance, so we can work out the best detour routes, signal retiming, and other geometric improvements."

– **Tom Notbohm**, Wisconsin DOT

TMP Development and Implementation

The guidance document suggests an approach in which TMP development begins during the design phase (or earlier) of a project. In this approach, TMP development starts with **gathering relevant information** about the project, including materials created during earlier project planning and preliminary engineering. Relevant information includes the project's characteristics, its potential impacts, and potential mitigation strategies to address the impacts. This information, along with the agency's work zone policies and its determination of whether a project is significant, will help the agency **determine what the TMP needs to address**.

Once the TMP requirements are identified, the project team can **develop the TMP**. The TMP will need to consider project constraints and include proposed mitigation strategies and estimated implementation costs. After review and approval of the TMP, it will then be **implemented and monitored** during the construction phase. In this phase, the contractor and/or design team may need to adjust the TMP based on the performance of the work zone.

Following completion of construction, a post-project **evaluation** is done to assess how well the TMP worked. The findings from this performance assessment can be used by an agency to improve the effectiveness of future TMPs.

"Effective TMPs are ones that are developed early, and address both the traffic control design and traffic operational components of the work zone."

– Steve Kite, North Carolina DOT

Tips for an Effective TMP

- Look to involve relevant stakeholders early in the process.
- Consider potential management strategies and implementation costs early in planning and programming.
- Consider and develop management strategies for impacts beyond the physical location of the work zone itself (e.g., on adjacent roadways, on local businesses).
- Consider a range of alternative transportation management strategies. Avoid constraining the number and/or type considered.
- Constructability needs and work zone management strategies need to be balanced.

- Recognize that cost is often a constraint for the development of a TMP, particularly for major TMPs.
- The TMP is a 'dynamic document' that needs to be maintained and revised by the project team as project development progresses.
- During construction, monitoring the implementation of the TMP and field conditions enables an agency to identify potential safety and mobility concerns, and to adjust the TMP as necessary.
- Evaluating the effectiveness of your TMPs can provide valuable lessons learned for future projects.

"Based on our experience, public information is the TMP mitigation strategy that gives us the 'biggest bang for the buck'—its effectiveness is greater in urban areas, but still holds true in rural areas."

– Robert Copp, Caltrans

Implementation Guidance

The Federal Highway Administration (FHWA) is currently developing an Implementation Guidance document to help state and local transportation agencies implement the provisions of the work zone final rule and attain compliance. To supplement the overall Implementation Guidance document, FHWA is also developing a suite of companion guidance documents that will provide more detail on the following aspects of the final rule:

- Work Zone Impacts Assessment
- Work Zone Transportation Management Plans (TMPs)
- Work Zone Public Information and Outreach Strategies

The guidance documents will be available in late 2005 and will provide guidelines and sample approaches for implementing the rule, examples from states using practices that relate to the rule, and sources for more information.

This fact sheet is one in a series of final rule fact sheets meant to increase awareness and understanding of the rule and the products being developed to assist agencies with implementation of the rule. Fact sheets are available for the three specific guidance document topics as well as for the final rule itself.

All final rule resources will be posted to http://www.ops.fhwa.dot.gov/wz/resources/final_rule.htm as they become available.

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