

Work Zone Safety and Mobility



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WHAT

- ▶ **Work Zone Safety & Mobility Rule, 23 CFR 630 Subpart J**
- ▶ **Temporary Traffic Control Devices Rule, 23 CFR 630 Subpart K**
- ▶ **ADOT Policy ENG 07-03**
- ▶ **ADOT Implementation Guidelines for Work Zone Safety and Mobility** pursuant to 23 CFR 630 Subparts J & K.

WHO

- ▶ ADOT and all Local Public Agencies (LPA)
- ▶ All highway construction projects financed in whole or in part with Federal-aid highway funds.

WHY

- ▶ To provide an overview of the Work Zone Safety and Mobility Rule 23 CFR 630 Subpart J (**the Rule**) and
- ▶ 23 CFR 630 Temporary Traffic Control Devices Subpart K
- ▶ ADOT Policy and Implementation Guidelines

WHEN

- ▶ It's not new
- ▶ Effective date October 12, 2007.
- ▶ **The Rule** is an update to "Traffic Safety in Highway and Street Work Zones"

Required Processes and Procedures

To institutionalize, streamline, and standardize work zone safety and mobility practices.

- ▶ Use of work zone data
- ▶ Work zone training
- ▶ Process Reviews

ADOT ENG 07-03

Work Zone Safety and Mobility Policy

- ▶ Gives direction for all stages of project development, design and construction for work zones.
- ▶ It does not provide specifics on content or format of work zone impacts.

ADOT Implementation Guidelines

- ▶ Gives detail to processes, procedures, and guidance for individual projects.
- ▶ Specifics on content and format
- ▶ The Rule uses the term "State", while FHWA implementation guidance documents and materials use the term "agencies."
- ▶ **State and Agency mean ADOT in Arizona.**

Work Zone Safety and Mobility Steering Committee

- ▶ **Julie Kliewer**, Sponsor, Construction
- ▶ **Lisa Sinclair**, Chair, State Engineer's Office
- ▶ **Robert (Bob) Wade**, Construction Ops
- ▶ **Scott Orrahood**, Traffic
- ▶ **Mohammed A. Zaid**, Project Management
- ▶ **Paki Rico**, Communications
- ▶ **Timothy Sturm**, Maintenance
- ▶ **Ammon Heier**, FHWA

We welcome your suggestions and ideas!



What is a Transportation Management Area (TMA)?

- ▶ An urbanized area with a population of over 200,000. In addition, at the request of the Governor and metropolitan planning organization (MPO) or affected local officials, other areas may be officially designated as TMAs by the FHWA. The TMA designation applies to the entire metropolitan planning area.
- ▶ **There are two in Arizona: MAG and PAG.**

What is a “Significant” Project?

Significant in terms of potential Work Zone Impacts:

Significant if:

1. Interstate
2. In a Transportation Management Area (**TMA**)
 - a) **MAG** and **PAG**
3. Lane closures for 3 or more days (can be intermittent)

Or if:

- Based on engineering judgment (e.g. I-15 gorge)

Why identify Significant projects?

- ▶ **Helps allocate resources** to projects that are likely to have greater impacts on work zone safety and mobility.
- ▶ Determines depth of Work Zone mitigation measures

When are Significant Projects identified?

- ▶ **As early as possible** in the project development and delivery process in cooperation with FHWA. It may be quantitative or qualitative.
- ▶ The agency's work zone policy provisions, the project's characteristics, and the magnitude and extent of the anticipated work zone impacts are considered when determining if a project is Significant or not.
- ▶ Can be identified **at any stage**, including Construction.

Are there exceptions to the Significant project provision?

- ▶ **Yes. ADOT can request an exception from FHWA.**
- ▶ ADOT must show that the specific Interstate system project, or category of Interstate projects does not have a sustained work zone impact.
- ▶ Blanket exceptions for categories of Interstate system projects may be approved if ADOT demonstrates that such projects do not have sustained work zone impacts.

What is a Transportation Management Plan (TMP)?

- ▶ A TMP contains the management strategies necessary to minimize impacts of a road project's work zone.
- ▶ All projects have a TMP, even though it may not be labeled as such.

What are the components of a TMP?

For Significant Projects:

1. Temporary Traffic Control Plan (**TTC**)
2. Emergency Vehicle Access Plan (**EVAP**) ARS 28-652
3. Transportation Operations (**TO**) Component
4. Public Information (**PI**) Component

What are the components of a TMP?

For Non-Significant Projects:

1. Temporary Traffic Control Plan (**TTC**)
2. Emergency Vehicle Access Plan (**EVAP**) ARS 28-652
- ~~3. Transportation Operations (TO) Component~~
- ~~4. Public Information (PI) Component~~

Who develops and implements the TMP?

The Project Manager coordinates development:

- ▶ TTC and EVAP - primarily Design / Construction with input from Communications.
- ▶ The TO and PI - Communications during the Planning / Design phases.
- ▶ Implementation –Construction and Communications

What is the RE's role?

Pre-Construction

- ▶ Help the team decide if the project is significant
- ▶ Give your comments on the TMP early on

Construction

- ▶ Implement the TMP
- ▶ Discuss TMP during Pre-Con
- ▶ Update the TMP as needed
- ▶ Coordination Meetings as needed

Can a contractor make TMP changes?

- ▶ Only with the Resident Engineer's approval
- ▶ The agency's contract provisions also retain review and approval of TMP (TTC plan) elements, including changes.
- ▶ TMP is to be a living document

Current Status of TMPs in AZ

- ▶ Most projects contain the TMP components
- ▶ Few projects have developed stand-alone TMPs
- ▶ The WZS&M Steering Committee is working to develop, evaluate, and standardize ADOT's TMP process

The Goal is the Same

- ▶ To efficiently allocate our limited resources
- ▶ To minimize WZ impacts to the public (delays, confusion, hazards)
- ▶ To make the interface between construction and the public as safe as possible

The Rule and Roadside Safety Hardware

Section 630.1012 of **the Rule** states that the Temporary Traffic Control (TTC) Plan must

- ▶ Be consistent with the provisions under Part 6 of the MUTCD
- ▶ Be consistent with the work zone hardware recommendations in Chapter 9 of the AASHTO Roadside Design Guide.

Subpart K

“Shall” requirements:

- ▶ Positive Protection devices to protect workers – based on Engineering study.
- ▶ Uniformed Law Enforcement Policy
- ▶ Quality Guidelines for temp traffic control devices (Quantlists)
- ▶ Safe entry / exit onto / from travel lanes – a “should,” but ties into Arizona’s Emergency Vehicle Access Plan (**EVAP**) – an ARS “Shall”

Work Zone Data

- ▶ ADOT is required to use work zone data at both the project and process-levels to manage and improve work zone safety and mobility.
- ▶ **No changes to how an ADOT RE manages a project.**

What does ADOT measure?

- ▶ In addition to crash analysis, ADOT uses public satisfaction as a key measurement of the effectiveness of its Work Zones.
- ▶ ADOT's approach: The Transportation Operations (**TO**) and a Public Information (**PI**) components are usually measured by ADOT Communications.

Does the Rule mean that full road closures are no longer allowed?

- ▶ No.

Who requires training?

- ▶ All personnel involved in the development, design, implementation, operation, inspection (construction), and enforcement of work zones must be trained.
- ▶ The Rule requires that training be appropriate to the job decisions that an individual is required to make.
- ▶ The Rule requires the agency and the contractor to each designate a trained person at the project level

Is there formal training for implementing the Rule?

- ▶ This is part of it; familiarizing ADOT employees.
- ▶ ADOT, including its Local Technical Assistance Program (LTAP), provides American Traffic Safety Services (ATSSA) Traffic Control Technician (TCH1168) and ATSSA Traffic Control Supervisor (TCH1167) for Construction and Maintenance personnel.

Does the Rule requires periodic retraining?

- ▶ Yes.
- ▶ ADOT implemented a four year training cycle for Traffic Control training in both the Construction Training Matrix, and the Maintenance HOT series for technicians and supervisors.

What is a Process Review?

- ▶ The process review is a "bird's-eye view" of the agency's overall work zone management efforts to see what is working well, what is not working well and may need adjustments, and to determine how to address any new work zone management challenges that have developed.

Continued 

What is a Process Review?

- ▶ It is to guide improvements in the agency's work zone policy; processes and procedures; data and information resources; and training programs to determine whether they are adequate -- enhancing safety and mobility on current and future projects.
- ▶ Process reviews are required at least every two years to assess the effectiveness of work zone safety and mobility procedures.

ADOT's 2014 Process Review

- ▶ ADOT's Work Zone Safety and Mobility is currently wrapping up the 2013 Process Review
- ▶ Review focused on TMPs
- ▶ Team has made multiple recommendations based on findings
- ▶ Look for the Final Report in the coming month

Road Safety Audits (RSA)

Focus on all aspects of work zones

- ▶ RSAs focus their efforts on safety issues. The current definition of Road Safety Audits includes both existing and future roadways .
- ▶ Road Safety Audits (RSA) can be thought of as analogous to a Value Engineering study. Each seeks to add value / improve process.

How a Process Review or RSA May Involve You

- ▶ You may be asked to be a part of a team or a subcommittee
- ▶ The team may visit your project
- ▶ The team may review construction records
- ▶ You may be asked for an interview

Please keep track of WZ items that you think can be improved and be willing to share!

FHWA and Compliance

- ▶ FHWA Division staff are responsible for reviewing and reassessing ADOT's conformance with the Rule. The review and assessment of conformance is incorporated into existing processes, including ADOT's Stewardship Agreement with FHWA.

RECAP and Definitions

- ▶ Do these procedures change what ADOT does? **No.**
- ▶ **Transportation Management Plans (TMP)** have components:
 - All projects have a Temporary Traffic Control plan (**TTC**)
 - Emergency Vehicle Access Plan (**EVAP**).
- ▶ **Significant projects** also have Transportation Operations (**TO**) and Public Information (**PI**) components.

RECAP and Definitions

- ▶ **Significant projects** include all Interstate system projects within Transportation Management Area (**TMA**) that occupy a location for more than three days with either intermittent or continuous lane closures.
- ▶ **Transportation Management Areas (TMA)** are urbanized areas of over 200,000. **There are two in Arizona: MAG and PAG.**

Technical Resources

- ▶ FHWA has also developed a suite of companion guidance documents that provide more detail on the following aspects of the Rule:
 - ❑ Work Zone Public Information and Outreach Strategies
 - ❑ Work Zone Transportation Management Plans (TMPs)
 - ❑ Work Zone Impacts Assessment
 - ❑ Implementing the Rule on Work Zone Safety and Mobility
- ▶ All of these documents are available for download from:
http://www.ops.fhwa.dot.gov/wz/resources/final_rule.htm

Technical Resources

- ▶ The FHWA Work Zone Mobility and Safety web site provides a vast amount of information about the FHWA Work Zone Program and work zone specific topics. This site is available at <http://www.fhwa.dot.gov/workzones>.
- ▶ The Rule is available at <http://www.ops.fhwa.dot.gov/wz/resources/policy.htm>
- ▶ The FHWA, Arizona Division maintains the FHWA / ADOT Stewardship agreement <http://www.fhwa.dot.gov/azdiv/stewtoc.cfm>

Technical Resources

- ▶ ADOT Traffic Group's web site contains ADOT's Implementation Guidelines for Work Zone Safety and Mobility pursuant to 23 CFR 630 Subparts J & K
<http://www.azdot.gov/business/engineering-and-construction/traffic/traffic-engineering-references>

Questions?

E-mail

