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December 4, 2008

Mr. Andrew Hughes  
Division Administrator  
Federal Highway Administration  
666 North Street, Suite 105  
Jackson, MS 39202

Dear Mr. Hughes:

Re: Work Zone Safety and Mobility

Enclosed is a copy of MDOT's proposed revised procedure for managing traffic through highway and street work zones. This procedure has been revised as part of MDOT's efforts to comply with 23 CFR Part 630, Subpart K, Work Zone Safety and Mobility.

Sincerely,

Melinda L. McGrath, PE  
Deputy Executive Director/Chief Engineer

MLM/JMR

Enclosure

cc: Assistant Chief Engineers (Foster, McConnell & Sheffield)  
District Engineers  
Traffic Engineering Division  
Construction Division  
Roadway Design Division  
Planning Division  
Maintenance Division  
Central Records



**Mississippi Department of Transportation  
Procedure for Managing Traffic through Work Zones**

**Revised December 3, 2008**

# **Mississippi Department of Transportation Procedure for Managing Traffic through Work Zones**

## **INTRODUCTION**

The FHWA rule on Work Zone Safety and Mobility was updated in 2004. Requirements of the new rule promote the development of an agency work zone safety and mobility procedure to support systematic consideration and management of work zone related impacts including safety (of both the traveling public and road workers), mobility and operations. Additionally, the new rule includes requirements for training all individuals involved in the design and implementation of work zone related transportation management and traffic control. The compliance date for the new rule is October 12, 2007.

## **WORK ZONE SAFETY & MOBILITY VISION STATEMENT**

*The Mississippi Department of Transportation (MDOT) intends to provide a safe environment for the traveling public as well as road workers, while facilitating the efficient movement of traffic through highway work zones. MDOT will apply comprehensive transportation management strategies throughout project development and construction to achieve the desired results.*

## **State Level Processes and Procedures**

### **TRAINING**

The new rule requires training for all personnel involved in developing and implementing work zone transportation management and traffic control. MDOT's Outreach Division will begin scheduling training for MDOT roadway design, planning, traffic, construction, and maintenance personnel involved with work zones. Periodic training updates will be as needed to keep pace with changing industry and State practices and procedures. Roadway Design Division has sent a memorandum to all active design consultants advising of the training requirement of the new rule.

### **WORK ZONE DATA**

MDOT will use available work zone data and field observations to continue to improve safety and mobility in work zones. MDOT's Safety Engineer should make recommendations if work zone data analyses result in a need for improvements to current procedures. A review of the available work zone data should be included in the semi-annual Work Zone Reviews.

### **PROCESS REVIEW**

MDOT will perform a process review once every two years to assess the effectiveness of the Work Zone safety and mobility procedures. The MDOT Safety Engineer will schedule

the review. The review will consist of reviews of randomly selected projects throughout the state. Work zone crash data, temporary traffic control plans, condition of temporary traffic control devices, and traffic operations will be evaluated at the reviews.

### **HIGH-VISIBILITY SAFETY APPAREL**

All workers within the rights-of-way of all state and federal-aid highways who are exposed to either traffic or construction equipment within the work area shall wear high-visibility safety apparel.

High-visibility safety apparel means personal protective safety clothing that meets the class 2 or class 3 requirements of the ANSI/ISEA 107-2004 publication entitled "American National Standard for High-Visibility Safety Apparel and Headwear".

### **Project Level Processes and Procedures**

#### **SIGNIFICANT PROJECTS**

According to the new rule, the work zone management procedures for "significant" projects will be more involved than those for projects considered "not significant". A significant project is defined 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. All Interstate system projects within the boundaries of a designated Transportation Management Area (TMA) that occupy a location for more than three days with either intermittent or continuous lane closures shall be considered significant."

As of the 2000 census, Mississippi has three designated TMA's. They are the Jackson, Gulfport-Biloxi, and DeSoto County (part of the Memphis, TN TMA) urbanized areas.

All projects that are not Interstate projects within a TMA lasting more than three days with intermittent or continuous lane closures will be evaluated using engineering judgment early in project development to determine if they are "significant". At the field inspection, the review team should make the determination.

For individual projects or categories of projects that are on the interstate system that occupy a location more than three days with intermittent or continuous lane closures, but in the judgment of the State they do not cause sustained work zone impacts, the State may request from the FHWA, an exception to the definition.

## **TRANSPORTATION MANAGEMENT PLANS**

All projects are required to include a Transportation Management Plan (TMP). The TMP shall consist of the following:

- Temporary Traffic Control Plans
- Transportation Operations Component (Significant Projects only)
- Public Information Component (Significant Projects only)

### **Temporary Traffic Control Plans**

Temporary Traffic Control (TTC) plans are required for all projects. The complexity of the TTC plans will depend on the scope of the project. For simple maintenance overlay projects for example, the TTC plans may consist of only a few standard drawings. For more complicated projects, detailed phasing plans may be required. All TTC plans should include a Detail of Construction Signing for signs that will remain in place though out the life of the project. All TTC plans shall conform to Part 6 of the Manual on Uniform Traffic Control Devices (MUTCD). The responsible party for the development of TTC plans will be the division or district that develops the construction plans for the project.

### **Transportation Operations Component**

For significant projects, a Transportation Operations (TO) component is required to be included in the TMP. The TO component will consist of strategies to alleviate congestion and reduce delays associated with the road work. Examples of strategies that could be used are incentive/disincentives for contract completion, lane rentals, restricted hours for lane closures, night work, or alternative routes. The TO component should be considered at all stages of project development. It should be drafted at the field review phase, and finalized before the office review. MDOT Planning, Roadway Design, Construction and District Personnel should work together to develop the plan. MDOT Construction Division will be responsible for producing the final document(s). The TO component of the TMP will be in the form of special provisions, notice to bidders, or as separate section of the contract document.

Consultants working on significant projects will develop strategies for the TO component of the TMP. MDOT will make the final decision on which strategies will be included in the TMP.

### **Public Information Component**

For significant projects, a Public Information (PI) component is required to be included in the TMP. The PI component will consist of strategies to inform affected road users, the general public, area residents and businesses, and appropriate public entities about the project. Example of strategies that could be used are paid advertisements, telephone hotlines, public meetings, coordination with schools, law enforcement, fire protection, and

EMS, changeable message signs, web based advisories, newspaper articles, and local TV news coverage. MDOT's Outreach Division will be advised prior to construction if a PI component of the TMP will be required.

In addition to project level involvement, MDOT Outreach Division participates in National Work Zone Safety Week activities to raise public awareness of work zones.

### **POSITIVE PROTECTION DEVICES**

Definition – Devices that contain and/or redirect vehicles and meet the crashworthiness evaluation criteria contained in NCHRP Report 350. Pre-cast concrete median barrier is an example of a positive protection device.

**Positive protection devices shall be used on projects with long duration work zones (2 weeks or more) where workers have no means of escape, such as on bridges, and on projects with pavement drop-offs greater than 3 inches that will remain in place overnight.**

**Positive protection devices should be considered on projects with high anticipated operating speeds (45 mph or greater) combined with high operating volumes, and on projects that place workers close to travel lanes open to traffic.**

### **EXPOSURE CONTROL MEASURES**

Definition – Traffic management strategies to avoid work zone crashes involving workers and the motorized traveling public by eliminating or reducing traffic through the work zone, or diverting traffic away from the work space.

Exposure Control Measures, including but not limited to full road closures, ramp closures, median crossovers, detours, night work, and accelerated construction techniques, should be considered where appropriate to avoid or minimize worker exposure to traffic and exposure of road users to work activities. The impacts on work zone mobility should be taken into account when determining what exposure control measures are appropriate for use on individual projects.

### **OTHER TRAFFIC CONTROL MEASURES**

Definition – All strategies and temporary traffic controls other than Positive Protection Devices and Exposure Control Measures used to reduce the risk of work zone crashes involving motorized traffic.

Traffic control measures other than Positive Protection Devices and Exposure Control Measures shall be considered for use in work zones to reduce crashes and improve worker safety. Some other traffic control measures include, but are not limited to the following: temporary traffic control signs; temporary pavement markings; changeable message signs; arrow panels; warning flags and lights on signs; flaggers and spotters; intrusion alarms; rumble strips; reduced spacing of channelizing devices; uniformed law enforcement; worker training; traveler information; and temporary traffic signals. These measures are not mutually exclusive and should be considered in combination as appropriate.

All traffic control devices installed in work zones shall be in conformance with the latest version of the MUTCD.