

**DATE:** November 6, 2014

**TO:** Region Engineers  
Region Associate Construction Engineers  
Region Construction Engineers  
TSC Managers  
TSC Construction Engineers

**FROM:** Gregory C. Johnson, P.E.  
Chief Operations Officer

Randel R. Van Portfliet, P.E.  
Bureau Director of Field Services

**SUBJECT:** Bureau of Highway Instructional Memorandum 2014-10  
Freeway Work Zone Design Guidance

MDOT has established the following guidance on lane and shoulder widths when designing a 3R/4R freeway work zone. Projects should have a minimum 11 foot lane, and any shoulder next to an open ditch should be at least 2 feet paved with 1 foot aggregate to the hinge point. If the open ditch shoulder width is equal to or less than the above dimensions, delineation devices as detailed in [SOA 2013-001 Work Zone Safety Tools for Narrow Shoulders](#) must be utilized.

In addition, a 1 foot minimum, 2 foot optimal shy distance from the edge line to the temporary traffic control device should be maintained. These criteria will be added to THE Plan Review checklist to verify that the guidance is satisfied.

If the maintenance of traffic (MOT) guidance above cannot be maintained during the staging of a 3R/4R freeway project, a work zone lane or shoulder width variance request must be completed (form 5632). If a variance is required on a project it should be sought just after scoping but prior to the development of the base plans, in conjunction with PPMS Task 3390. In addition, the variance must be approved prior to the submittal of a Life Cycle Cost Analysis or a Transportation Management Plan (TMP).

Once the Open Ditch 3R/4R Freeway Work Zone Width Variance Request (form 5632) is completed, it is to be submitted to the Traffic Incident and Work Zone Mobility Unit Manager for review by the Traffic and Safety Statewide Alignment Team (TSSAT). The TSSAT is made up of representatives with a diverse background of traffic, safety, and MOT knowledge. This knowledge allows the team to look at all of the elements involved in the scope of work and make an engineering determination as to what course of action is required to move the project forward. The TSSAT will provide the office with one of the following recommendations:

- The MOT design is acceptable based on the documentation provided and the project can proceed.
- The MOT design is acceptable, but additional mitigation factors, as noted by the review team, should be incorporated into the project, and the project can proceed.
- The MOT design is unacceptable and requires the project office to adjust MOT staging.

Mitigation factors and temporary work zone traffic control devices that can be used to modify a MOT design can be found in the [Work Zone Safety and Mobility Manual](#) and in the [System Operations Advisory 2013-001 Work Zone Tools for Narrow Shoulders](#). These documents along with any other relevant material should be reviewed and incorporated in the project design.

If you have any questions, please contact Chris Brookes, Work Zone Delivery Engineer, at [BrookesC@michigan.gov](mailto:BrookesC@michigan.gov) or 517-636-0300.

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Chief Operations Officer

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Bureau Director of Field Services

FHWA approval: 10-01-14

BOFS:OFS:CB:mn

Index: Traffic Control

cc: CFS Division Staff  
M. Chaput  
M. DeLong  
B. O'Brien  
P. Collins  
B. Wieferich  
C. Rademacher  
J. Mullins  
D. Wedley  
P. Wiese  
L. Wieber  
A. Kremer  
J. Forster, FHWA  
ACM  
ACEC  
APAM  
CRAM  
MCA  
MITA  
MML