

Federal Highway Administration
U.S. Department of Transportation
400 Seventh St. SW
Washington, DC 20590

July 17, 2003

Refer to: HOTO-1

Mr. Mark W. Bott
Traffic Operations Engineer
Michigan Department of Transportation
P.O. Box 30050
Lansing, MI 48909

Dear Mr. Bott:

Thank you for your June 19 letter requesting approval to experiment with a double solid line marking pattern for edgelines on some portions of approximately 83 miles of freeways in the areas to the north and east of Grand Rapids, in conjunction with a project to install shoulder rumble strips that are offset only 4 inches from the travel lane and to provide edgeline striping within the rumble strips for enhanced wet night visibility ("rumble striping"). Your project will include some freeway sections where, in addition to the normal 4-inch wide right and left edgelines placed just within the travel lanes, you will add a second 4-inch wide solid edgeline on the shoulder, within the rumble strip, separated from the normal edgeline by 8 inches, on both the left and right shoulders. The left edgeline(s) will be yellow and the right edgeline(s) will be white.

From the information provided, we understand that Michigan department of transportation's preferred marking pattern for edgelines with the 4-inch offset rumble strips would be to remove the existing edgeline stripe (on both left and right) from the travel lane and instead place a new 6-inch wide solid edge line 2 inches outside the travel lane, on the shoulder. Such an edgeline marking will have 2 inches of markings on the shoulder (within 2 inches of the travel lane) and 4 inches of markings within the rumble strip. A single 6-inch wide edgeline placed in this manner would not be in non-compliance with the Manual on Uniform Traffic Control Devices (MUTCD) and thus does not require experimentation approval.

You also indicate that, in the event your preferred edgeline-marking pattern produces unacceptable negative results (in terms of longitudinal joint maintenance or other considerations), a "fallback" edgeline pattern would be implemented. This pattern, labeled as Type B in your "Attachment C," is the one that features two 4-inch wide lines, one on the travel lane within 3 inches of the lane/shoulder joint, and one on the shoulder within the rumble strip. These two solid lines would be separated by 8 inches. This "fallback" marking pattern does not

comply with the MUTCD, which calls for edgelines to be single lines and which defines a double solid line as a line which is prohibited to cross. Therefore, your Type B pattern does require experimentation approval.

We have reviewed your proposed experimentation and your evaluation plan and we approve of it, with some reservations as described below. Your experimentation request is approved for a 4-year time period. For future reference purposes, we have assigned the following official experimentation number and title to your request: "3-159(Ex)—Double Line Edgelines MIDOT." Please refer to this number in future correspondence.

Our reservations about your experimentation are centered on the issue stated in the first paragraph of your letter, particularly as it applies to the double white edgeline for the right shoulder. That is, the established meaning of a double white line is to prohibit crossing the line, yet that is not the intended meaning of the double white line that drivers will see as the right edgeline in your experimentation. Although double white lines may not have been used very much in Michigan, they are widely used in other States in applications including but not limited to:

- approaches to an obstruction in the middle of a one-way roadway
- lane lines in one-way tunnels where lane changing is prohibited
- lines separating a preferential use (HOV, etc.) lane from regular mixed-flow lanes in segments where it is legally prohibited to change lanes

We are willing to approve your experimentation as a "fallback" to your preferred marking pattern, because it is for only a limited portion of the Michigan freeway network and only for a limited time. However, we are very concerned about future implications, should Michigan and/or other States decide to adopt the 4-inch rumble strip offset for universal use and then use the double line edgeline "rumble striping" pattern with it. Universal striping of all of Michigan's freeways with double edgelines would condition drivers to a less restrictive meaning of double lines, and in our opinion this would likely lead to reduced respect for and effectiveness of the double line marking where it is really needed to convey a prohibition on lane changing for safety reasons. Therefore, the Federal Highway Administration is unlikely to approve a future revision to the MUTCD that would allow a double line edgeline marking where crossing the line is not prohibited. As "rumble striping" is gaining wider use for enhanced wet night visibility, we are encouraging States using this technique to consider use of either the wide edgeline (such as your Type A, or even wider) or else two 4-inch lines that are separated by a considerably larger dimension such that it appears different to the driver than the traditional double line marking.

We hope your overall project and this specific experimentation are both successful and we look forward to receiving your reports as the experimentation progresses. However, we would urge you to look ahead to the larger implications of possible future wide-scale marking of "rumble stripes" throughout Michigan and other States, and to develop a reasonable future marking pattern for this technique that does not look like a traditional double line.

If we can be of further assistance, please contact Mr. Scott Wainwright of our staff on 202-366-0857.

Sincerely yours,

/s/ Vincent P. Pearce

Vincent P. Pearce
Acting Director
Office of Transportation Operations