



U.S. Department
of Transportation
Federal Highway
Administration

Memorandum

Subject: **INFORMATION:** MUTCD – Interim
Approval for Optional Use of Red-Colored
Pavement for Transit Lanes (IA-22)

Date: DEC 4 2019

From: Martin C. Knopp 
Associate Administrator for Operations

In Reply Refer To:
HOTO-1

To: Federal Lands Highway Division Directors
Division Administrators

Purpose: The purpose of this memorandum is to issue an Interim Approval for the optional use of red-colored pavement to enhance the conspicuity of station stops, travel lanes, or other locations in the roadway that are reserved for (1) the exclusive use by public transit vehicles or (2) multi-modal facilities where public transit is the primary mode (collectively referred to hereinafter as “transit lanes”). Interim Approval allows interim use, pending official rulemaking, of a new traffic control device, a revision to the application or manner of use of an existing traffic control device, or a provision not specifically described in the *Manual on Uniform Traffic Control Devices for Streets and Highways* (MUTCD).

Background: Chapter 3G of the 2009 MUTCD contains provisions regarding the use of colored pavements. Paragraph 1 of Section 3G.01 describes colored pavement as consisting of differently colored road paving materials, such as colored asphalt or concrete, or paint or other marking materials applied to the surface of a road or island to simulate a colored pavement.

If colored pavement is used to regulate, warn, or guide traffic, the colored pavement is considered to be a traffic control device. Paragraph 3 of Section 3G.01 limits the use of colored pavement used as a traffic control device to the colors yellow and white. Interim Approval 14 allows for the optional use of green-colored pavement in bicycle lanes. Paragraph 2 of Section 3G.01 discusses the use of colored pavement as a purely aesthetic treatment that is not intended to regulate, warn, or guide traffic and is therefore not considered to be a traffic control device.

There have been several experiments conducted in the United States that were approved under the MUTCD with the use of red-colored pavement to provide additional conspicuity to pavement markings that communicate to road users that a portion of the roadway has been set aside for exclusive or preferential use by public transit vehicles. In some cases, taxis and bicycles have also been permitted to use these lanes. Depending on the roadway geometry, it is sometimes permissible for vehicles to enter these transit lanes as necessary to turn right or to access on-street parking. Because this colored pavement has been used to regulate,

warn, or guide traffic, it is serving as more than an aesthetic treatment and is, by definition, a traffic control device.

For more than 10 years, red has been the only color that has received official Federal Highway Administration (FHWA) approval for colored pavement experimentation with transit facilities. Experimentation with this treatment began at the request of agencies wishing to improve the performance of and compliance with their transit lanes and to improve on the existing MUTCD-compliant pavement markings. Red was selected with the early experimental cities because of its existing use for this purpose in other jurisdictions internationally.

Research on Red-Colored Pavement for Transit Lanes: Agencies across the United States are showing an increased interest in using colored pavement specifically for transit lanes, and many of them have submitted requests to the FHWA to experiment with colored pavement. The FHWA has approved experiments with red-colored pavement for a variety of State and local governmental agencies, including the following: the City of Chicago, Ill.; the City of New York, N.Y.; the District of Columbia; the City of Santa Rosa, Cal.; and San Diego County, Cal. In these experiments, red-colored pavement is being used as a traffic control device to enhance the conspicuity of locations designated for exclusive or preferential use by public transit vehicles. The experimental locations were a mix of full-time and part-time dedicated transit lanes.

FHWA Evaluation of Results: The Office of Transportation Operations has reviewed the available data and considers the experimental red-colored pavement to be satisfactorily successful for the applications that were tested. Positive operational effects have been noted in the experiments including the reduction of illegal occupancy of transit lanes by non-transit vehicles, travel time of transit vehicles, and illegal parking in transit lanes. While not all of these effects were observed at all experimental sites, the majority of sites observed showed at least one of these positive operational effects from the installation of red-colored pavement. Experimental results also showed that the red-colored pavement did not induce drivers of private vehicles to make turns from the incorrect lane.

In one experimental location, the experimenting agency heard concerns from business owners that the red-colored pavement might confuse drivers into believing they could not access the businesses on the right side of the roadway. It is recommended that agencies consider public information when red-colored pavement is installed and, if warranted, install appropriate signing where potential concerns with business access are identified.

The design of red-colored pavement for transit lanes is not proprietary and can be used by any jurisdiction that obtains approval from the FHWA to use red-colored pavement. Experimentation has shown that red-colored pavement has a low risk of safety or operational concerns when used in transit lanes in compliance with the terms of this Interim Approval.

This Interim Approval does not create a new mandate compelling the use of red-colored pavement, but will allow agencies to install red-colored pavement in transit lanes, pending official MUTCD rulemaking, to enhance the conspicuity of the transit lane where such a need has been determined.

Conditions of Interim Approval: The FHWA will grant Interim Approval for the optional use of red-colored pavement in designated locations, station stops, or travel lanes in the roadway reserved exclusively for public transit vehicles or multi-modal facilities where public transit is the primary mode, to any jurisdiction that submits a written request to the FHWA Office of Transportation Operations. A State may request Interim Approval for all jurisdictions in that State. Jurisdictions using red-colored pavement under this Interim Approval must agree to comply with the technical conditions detailed herein, to maintain an inventory list of all locations where red-colored pavement is installed, and to comply with Item D in Paragraph 18 of Section 1A.10 of the 2009 MUTCD, which requires:

An agreement to restore the site(s) of the Interim Approval to a condition that complies with the provisions in this Manual within 3 months following the issuance of a Final Rule on this traffic control device; and terminate use of the device or application installed under the interim approval at any time that it determines significant safety concerns are directly or indirectly attributable to the device or application. The FHWA's Office of Transportation Operations has the right to terminate the interim approval at any time if there is an indication of safety concerns.

1. General Conditions:

The use of red-colored pavement is optional. However, if an agency opts to use red-colored pavement under this Interim Approval, the following design and installation requirements shall apply.

2. Allowable Uses:

Red-colored pavement may be used to enhance the conspicuity of locations, station stops, or travel lanes in the roadway reserved for (1) the exclusive use by public transit vehicles or (2) multi-modal facilities where public transit is the primary mode (collectively referred to herein as transit lanes). This includes travel lanes that are dedicated for such use on a part-time basis.

The use of red-colored pavement under this Interim Approval is limited to the following applications:

- a. Red-colored pavement may be installed within transit lanes only as a supplement to the standard pavement markings that are required for the designation of a preferential lane as provided in Chapter 3D of the 2009 MUTCD. Red-colored pavement shall not be used in lieu of those pavement markings that are required to designate a preferential lane.
- b. Where used, red-colored pavement shall be installed for the entire width of the transit lane and for the entire length of the transit lane, except where non-transit vehicles are permitted to enter the transit lane in advance of a turning movement or for other authorized purposes. Red-colored pavement should be used in a broken pattern where non-transit vehicles are permitted to enter the transit lane under these conditions.

- c. If lane extension markings are used to extend a transit lane across an intersection (see Section 3B.08 of the 2009 MUTCD), red-colored pavement may be installed between these lines as a supplement to the lines. Red-colored pavement shall not be used instead of dotted lane extension markings to extend a transit lane across an intersection. Red-colored pavement may be installed for the entire length of the transit lane extension or for only a portion (or portions) of the transit lane extension. If used between dotted lane extension lines through an intersection, the pattern of the red-colored pavement shall be dotted in a manner that matches the pattern of the dotted lines, thus filling in only the areas that are directly between a pair of dotted line segments that are on opposite sides of the transit lane extension.

3. Design of Red-Colored Pavement:

- a. The daytime chromaticity coordinates for the color used for red-colored pavement shall be as follows:

1		2		3		4	
x	y	x	y	x	y	x	y
0.420	0.330	0.450	0.380	0.560	0.370	0.540	0.320

- b. There is no nighttime chromaticity requirement for red-colored pavement.
- c. Red-colored pavement may be retroreflective, but there is no requirement or recommendation that it be retroreflective.
- d. If red paint or other marking materials applied to the roadway surface are used to provide red coloring, consideration should be given to selecting pavement marking materials that will minimize loss of traction for pedestrians, bicycles, and motorcycles where such users are expected to use or cross the facility (see Paragraph 4 of Section 3A.04 of the 2009 MUTCD).
4. Other:

Except as otherwise provided herein, all other provisions of the MUTCD that are applicable to colored pavements shall apply to red-colored pavement.

Please direct any questions concerning this Interim Approval to Mr. David Kirschner at david.kirschner@dot.gov.

cc:
 Associate Administrators
 Chief Counsel
 Chief Financial Officer
 Directors of Field Services
 Director of Technical Services