

| MN MUTCD (2005) | FHWA 2009 MUTCD (with changes from 2003 MUTCD) | Proposed MN MUTCD 2011 | Comments/Recommendations |
|---|--|---|---|
| <p>2B.26 Preferential Only Lane Signs (R3-10 through R3-15)</p> <p>SUPPORT</p> <p>Preferential only lanes are lanes designated for special traffic uses such as high-occupancy vehicles (HOV), light rail, buses, taxis, or bicycles. Preferential only lane treatments might be as simple as restricting a turning lane to a certain class of vehicles during peak periods, or as sophisticated as providing a separate roadway system within a highway corridor for certain vehicles.</p> | <p>CHAPTER 2G. PREFERENTIAL AND MANAGED LANE SIGNS new Chapter with relocated text from Chapters 2B, 2C, and 2E</p> <p><u>Section 2G.01 Scope</u></p> <p>Support:</p> <p>Preferential only lanes are lanes designated for special traffic uses such as high-occupancy vehicles (HOVs), light rail, buses, taxis, or bicycles. Preferential only lane treatments might be as simple as restricting a turning lane to a certain class of vehicles during peak periods, or as sophisticated as providing a separate roadway system within a highway corridor for certain vehicles. this paragraph was relocated from Section 2B.26</p> <p>HOV Preferential lanes may take many forms depending on the level of usage and the design of the facility. They may might be barrier-separated (on a separate alignment or physically separated from the other travel lanes by a barrier or median), or they may be concurrent with other travel lanes and be buffer-separated (separated from the adjacent general-purpose lanes only by a narrow buffer area created with longitudinal pavement markings), or contiguous (separated from the adjacent general-purpose lanes only by a lane line). Preferential lanes might allow continuous access with the adjacent general-purpose lanes or restrict access only to designated locations. Physically separated HOV Preferential lanes may might be operated in a constant direction or may be operated as reversible lanes. Some reversible preferential lanes on a divided highway might be operated counter-flow to the direction of traffic on the immediately adjacent general-purpose lanes. this paragraph was relocated from Section 2B.27</p> <p>HOV Preferential lanes may might be operated on a 24-hour basis, for extended periods of the day, during peak travel periods only, during special events, or during other activities. this paragraph was relocated from Section 2B.27</p> <p><u>Open-road tolling lanes and toll plaza lanes that segregate traffic based on payment method are not considered preferential lanes. Chapter 2F contains information regarding signing of open-road tolling lanes and toll plaza lanes.</u></p> <p><u>Managed lanes typically restrict access with the adjacent general-purpose lanes to designated locations only.</u></p> <p><u>Under certain operational strategies, such as the occupancy requirement of an HOV lane changing in response to actual congestion levels, a managed lane is a special type of</u></p> | <p>OPTION</p> <p>HOV lanes may take many forms depending on the level of usage and the design of the facility. They may be physically separated from the other travel lanes by a barrier or median, or they may be concurrent with other travel lanes and be separated only by longitudinal pavement markings. Physically separated HOV lanes may be operated in a constant direction or may be operated as reversible lanes.</p> <p>HOV lanes may be operated on a 24-hour basis for extended periods of the day, during peak travel periods only, during special events, or during other activities.</p> | <p>TF review 3-16-11 Heather, Ken W. Joe G., Cathy H. Janelle</p> <p>Relocated</p> <p>Change to support</p> <p>New</p> |

Section 2B.27 contains information regarding the restriction of the use of the diamond symbol to HOV lanes only. The requirements for guide and regulatory signs in advance of all preferential only lanes on freeways are provided in Section 2E.59. Compliance Date: December 22, 2013

STANDARD
When a preferential only lane is established, the Preferential Only Lane signs and pavement markings (see Sections 3B.22 and 3B.23) for these lanes shall be used to advise road users.

At the end of a preferential only lane, a Lane Ends (R3-12a or R3-15a) sign shall be used.

Standard:

When a preferential **only** lane is established, the Preferential **Only** Lane **regulatory** signs (see Figure 2G-1) and pavement markings (see ~~Sections 3B.22 and 3B.23~~ **Chapter 3D**) for these lanes shall be used to advise road users.

Support:

Preferential Lane (R3-10 series through R3-15 series) regulatory signs consist of several different general types of regulatory signs as follows (see Figure 2G-1):

- A. Vehicle Occupancy Definition signs define the vehicle occupancy requirements applicable to an HOV lane (such as "2 OR MORE PERSONS PER VEHICLE") or types of vehicles not meeting the minimum occupancy requirement (such as motorcycles or ILEVs) that are allowed to use an HOV lane (see Section 2G.04).
- B. Periods of Operation signs notify road users of the days and hours during which the preferential restrictions are in effect (see Section 2G.05).
- C. Preferential Lane Advance signs notify road users that a preferential lane restriction begins ahead (see Section 2G.06).
- D. Preferential Lane Ends signs notify users of the termination point of the preferential lane restrictions (see Section 2G.07).

Standard:

Regulatory signs applicable only to a preferential lane shall be distinguished from regulatory signs applicable to general-purpose lanes by the inclusion of the applicable symbol(s) and/or word(s) (see Figure 2G-1).

Support:

The symbol and word message ~~that appears displayed~~ on a particular Preferential **Only** Lane **regulatory** sign will vary based on the specific type of allowed traffic and on other related operational constraints that have been established for a particular lane, such as an HOV lane, a bus lane, or a taxi lane. ~~Section 2B.27 contains information regarding the restriction of the use of the diamond symbol to HOV lanes only. The requirements for guide and regulatory signs in advance of all preferential only lanes on freeways are provided in Section 2E.59.~~

Standard:

~~At the end of a preferential only lane, a Lane Ends (R3-12a or R3-15a) sign shall be used.~~

SUPPORT

The symbol and word message that appears on a particular Preferential Only Lane sign will vary based on the specific type of allowed traffic and on other related operational constraints that have been established for a particular lane, such as an HOV lane, a bus lane, or a taxi lane.

Section 2B.27 contains information regarding the restriction of the use of the diamond symbol to HOV lanes only. The requirements for guide and regulatory signs in advance of all preferential only lanes on freeways are provided in Section 2E.59. Compliance Date: December 22, 2013

relocated

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| <p>GUIDANCE Ground-mounted Preferential Only Lane (R3-10, R3-11, and R3-12 series) signs should be installed where preferential only lanes are implemented on freeways, expressways, and conventional roads.</p> <p>SUPPORT The sizes for Preferential Only Lane signs will differ to reflect the design speeds for each type of roadway facility. Appendix C provides sizes for each type of roadway facility.</p> <p>GUIDANCE The size of the ground-mounted Preferential Only Lane Operational (R3-11 series) signs should remain consistent to accommodate any manual addition or subtraction of a single line of text for each sign.</p> <p>SUPPORT Consistent sign sizes are beneficial for agencies when ordering sign materials, as well as when making text changes to existing signs if changes occur to operating times or occupancy restrictions in the future. For example, the R3-11c sign has space for one line located below "24 HOURS" if an agency desires to add additional information (such as "Mon. - Fri."), yet the R3-11c sign has the same dimensions as the other R3-11 series signs.</p> | <p>Option:</p> <p>Changeable message signs may be used to supplement, substitute for, or be incorporated into static <u>Preferential Lane regulatory</u> signs where travel conditions change or where multiple types of operational strategies (such as variable occupancy requirements, or vehicle types, or pricing policies) are used and varied throughout the day or week, or on a real-time basis, to manage the use of, control of, or access to preferential only lanes.</p> <p><u>Support:</u></p> <p><u>Figure 2G-1 illustrates examples of changeable messages incorporated into static Preferential Lane regulatory signs.</u></p> <p>Standard:</p> <p>When changeable message signs (see Section 2A.07 Chapter 2L) are used as regulatory signs for preferential only lanes, they shall be the required sign size and shall display the required letter height and legend format that corresponds to the type of roadway facility and design speed.</p> <p><i>Guidance:</i></p> <p><i>When Preferential Only Lane <u>regulatory</u> signs are used <u>on conventional roads</u>, the decision <u>regarding whether</u> to use a specific ground- <u>post-mounted or overhead version of a particular type of sign</u> should be based on an engineering study that considers the available space, the existing signs for the <u>adjoining adjacent</u> general-purpose traffic lanes, roadway and traffic characteristics, the proximity to existing overhead <u>signing signs</u>, the ability to install overhead signs, and any other unique local factors. <u>this paragraph was relocated from Section 2B.28</u></i></p> <p><i>The decision to use a specific ground-mounted or overhead sign for a preferential only lane should be based on an engineering study that considers the available space, the existing signs for adjoining general purpose lanes, roadway and traffic characteristics, the proximity of other overhead signing, the ability to install overhead signs, and any other unique local factors.</i></p> <p><i>Ground-mounted Preferential Only Lane (R3-10, R3-11, and R3-12 series) signs should be installed where preferential only lanes are implemented on freeways, expressways, and conventional roads.</i></p> <p><u><i>If overhead regulatory signs applicable only to a preferential lane are located in approximately the same longitudinal position along the highway as overhead signs applicable only to the general-purpose lanes, the signs for the preferential lane should be separated laterally from the signs for the general-purpose lanes to the maximum extent practical to minimize conflicting information, while maintaining their visual</i></u></p> | <p>OPTION</p> <p>Changeable message signs may be used to supplement static signs where travel conditions change or where multiple types of operational strategies (such as variable occupancy requirements, vehicle types, or pricing policies) are used and varied throughout the day or week to manage the use of, control of, or access to preferential only lanes.</p> <p>STANDARD</p> <p>When changeable message signs (see Section 2A.7) are used as regulatory signs for preferential only lanes, they shall be the required sign size and shall display the required letter height and legend format that corresponds to the type of roadway facility and design speed (see Section 2A.7).</p> <p>GUIDANCE</p> <p>When Preferential Only Lane signs are used, the decision to use a specific ground-mounted or overhead sign should be based on an engineering study that considers the available space, the existing signs for the adjoining general purpose traffic lanes, roadway and traffic characteristics, the proximity to existing overhead signing, the ability to install overhead signs, and any other unique local factors.</p> <p>GUIDANCE</p> <p>Ground-mounted Preferential Only Lane (R3-10, R3-11, and R3-12 series) signs should be installed where preferential only lanes are implemented on freeways, expressways, and conventional roads</p> | <p>Relocated</p> <p>Relocated</p> <p>removed</p> <p>Re-located</p> |
| <p>GUIDANCE The decision to use a specific ground-mounted or overhead sign for a preferential only lane should be based on an engineering study that considers the available space, the existing signs for adjoining general purpose lanes, roadway and traffic characteristics, the proximity of other overhead signing, the ability to install overhead signs, and any other unique local factors.</p> <p>SUPPORT Figures 2E-46 through 2E-52 show example signing layouts using the R3-10 through R3-15 series signs for various preferential only lane applications.</p> | | | |

relationship to the lanes below necessitated by specific legend or arrows indicating lane assignment.

Standard:

If used, overhead Preferential ~~Only~~ Lane (R3-13 series, R3-14 series, and R3-15 series) regulatory signs shall only be installed along preferential only lanes on freeways and expressways. These overhead signs shall be installed on the side of the roadway where the entrance to the preferential ~~only~~ lane is located and any appropriate adjustments shall be made to the sign message. The sign sizes shall differ between freeways and expressways as provided in Table 2B-1 to reflect the different design speeds for each type of roadway. this paragraph was relocated from Section 2B.28

Option:

Where a median of sufficient width is available, the R3-13 series and R3-15 series signs may be post-mounted.

Support:

The sizes for Preferential ~~Only~~ Lane regulatory signs will differ to reflect the design speeds for each type of roadway facility. Table 2G-1 provides sizes for each type of roadway facility.

Guidance:

The edges of Preferential Lane regulatory signs that are post-mounted on a median barrier should not project beyond the outer edges of the barrier, including in areas where lateral clearance is limited.

Option:

Where lateral clearance is limited, Preferential Lane regulatory signs that are post-mounted on a median barrier and that are 72 inches or less in width may be skewed up to 45 degrees in order to fit within the barrier width or may be mounted higher, such that the vertical clearance to the bottom of the sign, light fixture, or structural support, whichever is lowest, is not less than 14 feet above any portion of the pavement and shoulders.

Standard:

Where lateral clearance is limited, Preferential Lane regulatory signs that are post-mounted on a median barrier and that are wider than 72 inches shall be mounted with a vertical clearance that complies with the provisions of Section 2A.18 for overhead mounting.

Guidance:

On conventional roadways, Preferential ~~Only~~ Lane regulatory sign spacing should be determined by engineering judgment

STANDARD

Overhead Preferential Only Lane (R3-13 series, R3-14 series, and R3-15 series) signs shall only be installed along preferential only lanes on freeways and expressways. These overhead signs shall be installed over the lane where the entrance to the preferential only lane is located and any appropriate adjustments shall be made to the sign message. The sign sizes shall differ between freeways and expressways as provided in Appendix C to reflect the different design speeds for each type of roadway

SUPPORT

The sizes for Preferential Only Lane signs will differ to reflect the design speeds for each type of roadway facility. Appendix C provides sizes for each type of roadway facility.

GUIDANCE

Preferential Only Lane sign spacing should be determined by engineering judgment based on prevailing speed, block

STANDARD

The R3-10, R3-11, R3-11a, R3-11c, R3-13, R3-13a, R3-14, and R3-14a signs shall be used exclusively with preferential only lanes for high-occupancy vehicles to indicate the particular vehicle occupancy requirement and time restrictions applying to that

Relocated

Re-located

Re-located

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| <p>lane. The R3-10, R3-11b, and R3-14b signs should be used in situations where a preferential only lane is not an HOV lane, but is designated for use by other types of vehicles (such as bus and/or taxi use).</p> <p>When used, the ground-mounted Preferential Only Lane Operational (R3-11 series) signs shall be located adjacent to the preferential only lane, and the overhead Preferential Only Lane Operational (R3-14 series) signs shall be mounted directly over the lane.</p> <p>The legend format of the ground-mounted Preferential Only Lane Operational (R3-11 series) signs should have the following sequence:</p> <p>A. Top Lines: Lanes applicable (such as "RIGHT LANE", "RIGHT 2 LANES", or "THIS LANE")</p> <p>B. Middle Lines: Eligible uses such as "HOV 2+ ONLY" (or 3+, or 4+), "BUSES ONLY", or other applicable turning movements</p> <p>C. Bottom Lines: Applicable time and day (such as "7-9 AM" or "6:30-9:30 AM, MON-FRI")</p> <p>The legend format of the overhead Preferential Only Lane Operational (R3-14 series) sign shall have the following sequence:</p> <p>A. Top Line: Eligible uses, such as "HOV 2+ ONLY (3+ or 4+), "BUSES ONLY", or other types of vehicles;</p> <p>B. Bottom Lines: Applicable time and day, with the time and day placed above the down arrow (such as "7-9 AM" or "6:30-9:30 AM, MON-FRI"). When the operating periods exceed the available line width, the hours and days of the week shall be stacked as shown for the R3-14a sign.</p> <p>OPTION</p> <p>The diamond symbol may be used instead of the word message HOV.</p> <p>STANDARD</p> <p>When the diamond symbol (or HOV abbreviation) is used without text on the ground-mounted Preferential Only Lane (R3-10 series, R3-11 series, and R3-12 series) signs, it shall be centered on the top line of the sign. When the diamond symbol (or HOV abbreviation) is used with associated text on the ground-mounted Preferential Only Lane (R3-10 series, R3-11 series, and R3-12 series) signs, it shall appear to the left of the associated text. When the diamond symbol is used on the overhead Preferential Only Lane (R3-13, R3-13a, R3-14, and R3-14a) signs, it shall appear in the top left quadrant. The diamond symbol shall not be used on the bus, taxi, or bicycle Preferential Only Lane signs. The diamond symbol for the R3-15 and R3-15a signs shall appear on the left side of the sign.</p> <p>GUIDANCE</p> <p>The Preferential Only Lane Ahead (R3-10a, R3-12, and R3-15) signs should be used for advance notification of preferential only lanes.</p> <p>STANDARD</p> <p>The R3-10, R3-10b, R3-13, and R3-13a signs shall be used in situations where agencies determine it is appropriate to provide a sign that defines the operational strategy (such as minimum occupancy or types of vehicles) that is being used to manage or regulate the vehicles that are permitted to use a preferential only</p> | <p>based on prevailing speed, block length, distances from adjacent intersections, and other <u>site-specific</u> considerations.</p> <p><u>Support:</u></p> <p><u>Sections 2G.04 and 2G.05 contain provisions regarding the placement of Preferential Lane regulatory signs on freeways and expressways.</u></p> <p>Standard:</p> <p>The R3-10, R3-11, R3-11a, R3-11c, R3-13, R3-13a, R3-14, and R3-14a signs illustrated in Figure 2G-1 that incorporate the diamond symbol shall be used exclusively with preferential only lanes for high-occupancy vehicles to indicate the particular occupancy requirement and time restrictions applying to that lane. The R3-10a, R3-11b, and R3-14b signs illustrated in Figure 2G-1 that do not have a diamond symbol shall be used in situations where a with preferential only lanes is that are not an HOV lanes, but is are designated for use by other types of vehicles (such as bus and/or taxi use).</p> <p><u>Option:</u></p> <p>Agencies may select from either the HOV abbreviation or the diamond symbol, <u>or use both</u>, to reference the HOV lane designation. <u>this paragraph was relocated from Section 2B.27</u></p> <p>The diamond symbol may be used instead of the word message HOV.</p> <p>Standard:</p> <p>When the diamond symbol (or HOV abbreviation) is used without text on the ground- post-mounted Preferential Only Lane (R3-10 series, R3-11 series, and R3-12 series) regulatory signs, it shall be centered on the top line of the sign. When the diamond symbol (or HOV abbreviation) is used with associated text on the ground- post-mounted Preferential Only Lane (R3-10 series, R3-11 series, and R3-12 series) regulatory signs, it shall appear to the left of the associated text. When the diamond symbol is used on the overhead Preferential Only Lane (R3-13, R3-13a, R3-14, and R3-14a) regulatory signs, it shall appear in the top left quadrant. The diamond symbol for the R3-15, and R3-15a, R3-15b, and R3-15c signs shall appear on the left side of the sign. The diamond symbol shall not be used on the bus, taxi, or bicycle Preferential Only Lane signs. the sequence of the last two sentences was reversed</p> <p>The Vehicle Occupancy Definition, Periods of Operation, and Preferential Lane Advance regulatory signs for HOV signs (see Section 2B.26) lanes shall display the minimum allowable vehicle occupancy requirement established for each HOV lane, The vehicle occupancy</p> | <p>length, distances from adjacent intersections, and other considerations.</p> | <p>Re-located</p> <p>Re-located</p> <p>MN uses carpool. Check law.</p> |
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lane.

The legend format of the R3-10 and R3-13 signs should have this sequence:

- A. Top Line: "HOV 2+ ONLY" (or 3+ or 4+ if appropriate)
- B. Bottom Lines: "2 OR MORE PERSONS PER VEHICLE" (or 3 or 4 if appropriate)

OPTION

Changeable message signs may be used to supplement static signs where travel conditions change or where multiple types of operational strategies (such as variable occupancy requirements, vehicle types, or pricing policies) are used and varied throughout the day or week to manage the use of, control of, or access to preferential only lanes.

STANDARD

When changeable message signs (see Section 2A.7) are used as regulatory signs for preferential only lanes, they shall be the required sign size and shall display the required letter height and legend format that corresponds to the type of roadway facility and design speed (see Section 2A.7).

OPTION

The ground-mounted Preferential Only Lane Operational (R3-11 series) signs and the overhead Preferential Only Lane Operational (R3-14 series) signs may be used to supplement changeable message signs that are used to convey preferential only lane restrictions.

Where additional movements are permitted from a preferential only lane on an approach to an intersection, the format and words used in the legend in the middle lines on the ground-mounted Preferential Only Lane Operational (R3-11 series) signs and on the overhead Preferential Only Lane Operational (R3-14 series) signs may be modified to accommodate the permitted movements (such as "RIGHT TURNS ONLY").

GUIDANCE

The Inherently Low Emission Vehicle (ILEV) (R3-10b) sign should be used to indicate that it is permissible for a properly labeled and certified ILEV, regardless of the number of occupants, to use an HOV lane. The ILEV signs should be ground-mounted in advance of and at intervals along the HOV lane based upon engineering judgment. The R3-10b sign is only applicable to HOV lanes and should not be used with other preferential only lane applications.

SUPPORT

Inherently low emission vehicles are defined by the Environmental Protection Agency (EPA) as vehicles having no fuel vapor (hydrocarbon) emissions. These vehicles must be certified by the EPA as meeting the emissions standards and requirements specified in 40 CFR 88-311-93 and 40 CFR 88.312-93 (c).

2B.27 Preferential Only Lanes for High-Occupancy Vehicles (HOVs)

STANDARD

The agencies that own and operate preferential only lanes for High-Occupancy Vehicles (HOV lanes) shall have the authority and responsibility to determine how they are operated and the occupancy requirements for vehicles operating in HOV lanes. The minimum occupancy requirement shall be two occupants per

~~requirement established for an HOV lane shall be referenced **displayed** immediately after the word message HOV or the diamond symbol. **The diamond symbol shall be restricted for use with HOV lanes only.** this paragraph is a combination of two paragraphs that were relocated from Section 2B.27~~

Support:

The agencies that own and operate ~~preferential only~~ HOV lanes ~~for high-occupancy vehicles (HOV lanes) shall~~ have the authority and responsibility to determine how they are operated and the minimum occupancy requirements ~~for vehicles operating in HOV lanes. The minimum occupancy requirement shall be two occupants per vehicle.~~ Information about federal requirements for certain types of vehicles not meeting the minimum occupancy requirement to be eligible to use HOV lanes that receive Federal-aid program funding and about requirements associated with proposed significant changes to the operation of an existing HOV lane and certain vehicles are contained in the "Federal-Aid Highway Program Guidance on High Occupancy Vehicle (HOV) Lanes" (see Section 1A.11). ~~this paragraph was relocated from Section 2B.27~~

Option:-

~~The ground-mounted Preferential Only Lane Operational (R3-11 series) signs and the overhead Preferential Only Lane Operational (R3-14 series) signs may be used to supplement changeable message signs that are used to convey preferential only lane restrictions.~~

Support:-

~~Figures 2E-46 through 2E-52 show example signing layouts using the R3-10 through R3-15 series signs for various preferential only lane applications.~~

Standard:

The provisions of Sections 2G.03 through 2G.07 regarding regulatory signs for Preferential lanes shall apply to managed lanes operated at all times or at certain times by varying vehicle occupancy requirements (HOV) or by using vehicle type restrictions as a congestion management strategy. Such managed lanes shall use changeable message signs or changeable message elements within static signs to display the appropriate regulatory sign messages only when they are in effect.

When certain types of vehicles (such as trucks) are prohibited from using a managed lane or when a managed lane is restricted to use by only certain types of vehicles during certain operational strategies, regulatory signs or regulatory panels within the appropriate guide signs that include changeable message elements shall be used to display the

vehicle.

The requirements for a minimum number of occupants in a vehicle to use an HOV lane shall be in effect for most, or all, of at least one of the usual times of the day when the demand to travel is greatest (such as morning or afternoon peak travel periods) and the traffic congestion problems on the roadway and adjoining transportation corridor are at their worst.

The HOV signs (see Section 2B.26) shall display the minimum allowable vehicle occupancy requirement established for each HOV lane.

The vehicle occupancy requirement established for an HOV lane shall be referenced immediately after the word message HOV or the diamond symbol. The diamond symbol shall be restricted for use with HOV lanes only.
Compliance Date: December 22, 2013

The Federal Highway Administration (FHWA) shall be consulted if a significant operational change is proposed that could be reasonably expected to affect a specific HOV lane or portions of the HOV system that were funded or approved by FHWA. This shall include portions of the local, region, or Federal-aid highway system, where operational changes might significantly impact the operation of one HOV lane or portions of the regional HOV system. To assure consistency with the provisions of Titles 23 and 49 of the United States Code (USC), the important issues and possible impacts of any significant operational changes shall be reviewed to determine if any Federal approval is required.

In accordance with the "Federal-Aid Highway Program Guidance on High Occupancy Vehicle (HOV) Lanes" (see Section 1A.11), a proposed project, including a proposed test or demonstration project that seeks to significantly change the operation of the HOV lanes for any length of time shall require a Federal review as outlined in Section 2 of the "Federal-Aid Highway Program Guidance on High Occupancy Vehicle (HOV) Lanes" prior to initiating such a test or demonstration project.

SUPPORT
FHWA Division Offices, with involvement from the Federal Transit Administration (FTA), are responsible for reviewing proposals to significantly change the operation of HOV lanes. Federal interests in this review include commitments made during the National Environmental Policy Act process as described in Title 23 C.F.R., Part 771, in project agreements, transportation planning requirements, and transportation conformity requirements under the Clean Air Act (40 C.F.R., Part 51).

Proposals to adjust only the HOV lane hours of operation during the day (for example, minor changes in hours during peak travel periods) or the occupancy requirements (for example, HOV 3+ to HOV 2+) are not typically considered significant operational changes and might not require an explicit Federal review or approval.

Any action that has the potential to adversely affect the area's flow of traffic, roadway and traveler safety, or the environment might be considered to be a significant operational change. Any proposal to significantly adjust the hours of operation, or to convert an HOV lane to a general purpose travel lane, would be considered a significant operational change to the original project design concept or scope. Examples of significant operational

[open/closed status of the managed lane for such vehicle types.](#)

[When the vehicle occupancy required for use of an HOV lane is varied as a part of a managed lane operational strategy, regulatory signs that include changeable message elements shall be used to display the required vehicle occupancy in effect.](#)

[Support:](#)

[See Section 2G.17 for regulatory signs for managed lanes that use tolling or pricing as a congestion management strategy, either exclusively or with other management strategies.](#)

[Figures 2G-2 and 2G-3 illustrate the use of regulatory signs for the beginning, along the length, and at the end of contiguous or buffer-separated preferential lanes that provide continuous access with the adjacent general-purpose lanes.](#)

Section ~~2B.27~~ 2G.04 Preferential ~~Only~~ Lanes for High-Occupancy Vehicles (HOVs) Vehicle Occupancy Definition Regulatory Signs (R3-10 Series and R3-13 Series)

Standard:

The R3-10, ~~R3-10b~~, R3-13, and R3-13a Vehicle Occupancy Definition signs (see Figure 2G-1) shall be used in situations where agencies determine that it is appropriate to provide a sign that defines the operational strategy (such as minimum occupancy or types of vehicles) that is being used to manage or regulate the vehicles that are permitted allowed to use a preferential only an HOV lane. this paragraph was relocated from Section 2B.26

Guidance:

The Inherently Low Emission Vehicle (ILEV) (~~R3-10b~~ R3-10a) sign (see Figure 2G-1) should be used to indicate that when it is permissible for a properly labeled and certified ILEV, regardless of the number of occupants, to use an HOV lane. When used, the ILEV signs should be ~~ground-~~ post-mounted in advance of and at intervals along the HOV lane based upon engineering judgment and the placement of other Preferential Lane regulatory signs. The ~~R3-10b~~ R3-10a sign is only applicable to HOV lanes and should not to be used with other preferential only lane applications. this paragraph was relocated from Section 2B.26

Support:

~~Inherently low emission vehicles~~ ILEVs are defined by the Environmental Protection Agency (EPA) as vehicles having no fuel vapor (hydrocarbon) emissions. ~~These vehicles must and are certified by the EPA as~~ meeting the emissions standards and requirements specified in 40 CFR 88-311-93 and 40 CFR

changes could include:

- A. Switching from 24-hour HOV lane operations to only a portion of the day or week;
- B. Implementing a pricing option to an existing HOV lane (such as HOT lane or toll lane);
- C. Significantly reducing the hours of operation of an HOV lane that is operational during only one peak travel period; or
- D. Managing or operating the HOV lane in a manner that renders it functionally inoperable or obsolete (such as not providing enforcement of the occupancy requirement).

GUIDANCE

An engineering study based on the current and estimated future travel demand for a corridor and facility should be the basis for determining when, during a typical day, there should be a minimum occupancy requirement for a vehicle to use an HOV lane.

OPTION

HOV lanes may be operated on a 24-hour basis for extended periods of the day, during peak travel periods only, during special events, or during other activities.

HOV lanes may take many forms depending on the level of usage and the design of the facility. They may be physically separated from the other travel lanes by a barrier or median, or they may be concurrent with other travel lanes and be separated only by longitudinal pavement markings. Physically separated HOV lanes may be operated in a constant direction or may be operated as reversible lanes.

Agencies may select from either the HOV abbreviation or the diamond symbol to reference the HOV lane designation.

SUPPORT

Inherently low emission vehicle (ILEV) eligibility, testing and certification requirements, labeling, and other regulatory provisions are developed and administered through the Environmental Protection Agency (EPA). EPA is the only entity with the authority to certify ILEVs. Vehicle manufacturers must request the EPA to grant an ILEV certification for any vehicle to be considered and labeled as meeting those standards. According to the EPA, 1996 was the first year that they certified any ILEVs. EPA regulations specify that ILEVs must meet the emission standards specified in 40 CFR 88.311-93 and their labeling must be in accordance with 40 CFR 88.312-93(c). EPA established the ILEV concept to recognize vehicles with no fuel vapor (hydrocarbons) emissions. Zero emission vehicles (electric powered vehicles) that have no emissions are the only other type of clean fuel vehicles that are allowed to use HOV lanes.

OPTION

Agencies may permit a vehicle with less than the required number of occupants to operate on HOV lanes if:

- A. The vehicle is properly labeled and certified as an ILEV and the lane is not a bus only HOV lane; or
- B. The HOV lanes are part of a project that is participating in the FHWA Value Pricing Pilot Program (see Section 2 of the "Federal-Aid Highway Program Guidance on High Occupancy Vehicle (HOV) Lanes").

STANARD

Motorcycles shall be permitted to use HOV lanes that receive Federal-aid program funding.

88.312-93(c). **this paragraph was relocated from Section 2B.26**

Guidance:

*The legend format of the R3-10 and R3-13 signs should have ~~this the following~~ sequence: **this paragraph was relocated from Section 2B.26***

- A. *Top Line: "HOV 2+ ONLY" (or 3+ or 4+ if appropriate)*
- B. *Bottom Lines: "2 OR MORE PERSONS PER VEHICLE" (or 3 or 4 if appropriate)*

The legend format of the R3-13a sign should have the following sequence:

- A. *Top Line: "HOV 2+ ONLY" (or 3+ or 4+ if appropriate)*
- B. *Middle Lines: "2 OR MORE PERSONS PER VEHICLE" (or 3 or 4 if appropriate)*
- C. *Bottom Lines: Times and days the occupancy restriction is in effect*

Support:

Section 2G.17 contains information regarding the legends of Vehicle Occupancy Definition signs for a priced managed lane that has an occupancy requirement for non-toll travel.

Standard:

For barrier- or buffer-separated or contiguous preferential lanes where access between the preferential and general-purpose lanes is restricted to designated locations, an **overhead Vehicle Occupancy Definition (R3-13 or R3-13a) sign, which defines the occupancy requirement,** shall be installed at least 1/2 mile in advance of the beginning of or initial entry point to an HOV lane. These signs shall only be displayed in advance of the beginning of or initial entry point to HOV lanes. **this paragraph was relocated from Section 2B.28**

Option:

For barrier-separated ~~preferential only~~ HOV lanes, the sequence of a post-mounted Periods of Operation (R3-11a) sign followed by a ~~ground-~~ post-mounted Vehicle Occupancy Definition (R3-10) signs ~~defining the occupancy requirement may be alternated in series with Preferential Only Lane Operational (R3-11, R3-11a, R3-11b, or R3-11c) signs. These signs~~ may be located at intervals of approximately ~~0.6~~ 1/2 mile along the length of the ~~preferential only~~ HOV lane, at intermediate entry points, and at designated enforcement areas as defined by the operating agency. **this paragraph was relocated from Section 2B.28**

Standard:

2B.28 Preferential Only Lane Sign Applications and Placement

STANDARD

Overhead Preferential Only Lane (R3-13 series, R3-14 series, and R3-15 series) signs shall only be installed along preferential only lanes on freeways and expressways. These overhead signs shall be installed over the lane where the entrance to the preferential only lane is located and any appropriate adjustments shall be made to the sign message. The sign sizes shall differ between freeways and expressways as provided in Appendix C to reflect the different design speeds for each type of roadway.

An R3-13 or R3-13a sign, which defines the occupancy requirement, shall be installed at least 800 m (0.5 mi) in advance of the beginning or initial entry point to an HOV lane. These signs shall only be displayed in advance of the beginning or initial entry point to HOV lanes.

A ground-mounted Preferential Only Lane Operational (R3-11, R3-11a, R3-11b, or R3-11d) sign shall be installed at the beginning, initial entry point, intermediate access points, and direct access ramps to all types of preferential only lanes. The overhead Preferential Only Lane Operational (R3-14 series) signs shall be installed only at the beginning or initial entry point to all types of preferential only lanes.

The ground-mounted Preferential Only Lane Ends 800 m (1/2 Mile) (R3-12b) sign shall be installed at least 800 m (0.5 mi) in advance of the termination of an HOV lane. The ground-mounted Preferential Only Lane Ends (R3-12a) sign shall be installed at the point where the preferential only lane restriction ends. All longitudinal pavement markings, as well as word and symbol pavement markings, associated with the preferential only lane shall end where the R3-12a sign designating the end of the preferential only lane restriction is installed.

OPTION

Additional ground-mounted Preferential Only Lane (R3-10, R3-11, R3-11a, R3-11b, or R3-11c) signs may be provided along the length of a preferential only lane.

Overhead Preferential Only Lane Ahead (R3-15) signs may be placed approximately 1.6 km (1 mi) and 3.2 km (2 mi) in advance of the beginning or initial entry points to any type of preferential only lane.

The ground-mounted Preferential Only Lane Ahead (R3-12) sign may be installed at a minimum of 1.6 km (1 mi) in advance of the beginning or initial entry point to any type of preferential only lane.

GUIDANCE

When Preferential Only Lane signs are used, the decision to use a specific ground-mounted or overhead sign should be based on an engineering study that considers the available space, the existing signs for the adjoining general purpose traffic lanes, roadway and traffic characteristics, the proximity to existing overhead signing, the ability to install overhead signs, and any other unique local factors.

STANDARD

For all barrier-separated preferential only lanes, an overhead Preferential Only Lane Operational (R3-14 series) sign shall be

For buffer-separated or contiguous HOV lanes where access is restricted to designated locations, the sequence of a post-mounted Periods of Operation (R3-11a) sign followed by a ~~Ground-~~ post-mounted Vehicle Occupancy Definition (R3-10) signs defining the occupancy requirement shall be located and alternated with Preferential Only Lane Operational (R3-11 series) signs in series at intervals not greater than 0.6 1/2 mile along the length of the preferential only access-restricted HOV lane, at designated gaps in the buffer where vehicles are allowed to legally access the preferential only HOV lane, and within designated enforcement areas as defined by the operating agency. **this sentence came from a paragraph in Section 2B.28**

For ~~concurrent-flow preferential only~~ buffer-separated or contiguous HOV lanes where continuous access with the adjacent general-purpose lanes is provided, the sequence of a post-mounted Periods of Operation (R3-11a) sign followed by a ~~ground-~~ post-mounted Vehicle Occupancy Definition (R3-10) signs defining the occupancy requirement, and ILEV (R3-10a) signs if appropriate, shall be located and alternated with ~~Preferential Only Lane Operational (R3-11 series) signs in series~~ at intervals not greater than 0.6 1/2 mile along the length of the preferential only HOV lane. **this paragraph was relocated from Section 2B.28**

Guidance:

The signs within each Preferential Lane regulatory sign sequence should be separated by a minimum distance of 800 feet and a maximum distance of 1,000 feet.

Standard:

For all types of direct access ramps that provide access to or lead to preferential only HOV lanes, a ~~ground-~~ post-mounted Vehicle Occupancy Definition (R3-10) sign defining the occupancy requirement, and an ILEV (R3-10a) sign if appropriate, and a ~~Preferential Only Lane Operational (R3-11 series) sign~~ shall be used at the beginning or initial entry point for all types of the direct access ramps that provide access or lead to preferential only lanes. **this paragraph was relocated from Section 2B.28**

Standard:

~~The requirements for a minimum number of occupants in a vehicle to use an HOV lane shall be in effect for most, or all, of at least one of the usual times of the day when the demand to travel is greatest (such as morning or afternoon peak travel periods) and the traffic congestion problems on the roadway and adjoining transportation corridor are at their worst.~~

~~The Federal Highway Administration (FHWA) shall be consulted if a significant operational change is~~

used at the beginning or initial entry point, and at any intermediate access points or gaps in the barrier where vehicles are allowed to legally access the barrier-separated preferential only lanes. Ground-mounted Preferential Only Lane Operational (R3-11 series) signs shall be used only as a supplement to the overhead signs at the beginning or initial entry point, or at any intermediate access points or gaps in the barrier.

GUIDANCE

For all barrier-separated preferential only lanes, an overhead Preferential Only Lane Ahead (R3-15) sign should be installed and located at least 1.6 km (1 mi) in advance of the beginning or initial entry point.

OPTION

For barrier-separated preferential only lanes, ground-mounted R3-10 signs defining the occupancy requirement may be alternated in series with Preferential Only Lane Operational (R3-11, R3-11a, R3-11b, or R3-11c) signs. These signs may be located at intervals of approximately 1 km (0.6 mi) along the length of the preferential only lane, at intermediate entry points, and at designated enforcement areas as defined by the operating agency.

For barrier-separated reversible-flow preferential only lanes, Preferential Only Lane signs may be either static or changeable message type.

STANDARD

For buffer-separated preferential only lanes (painted buffer of 0.6 m (2 ft) or more), an overhead Preferential Only Lane Operational (R3-14 series) sign shall be used at the beginning or initial entry point, and at intermediate access points or gaps where vehicles are allowed to legally access the buffer-separated preferential only lane. Ground-mounted R3-10 signs defining the occupancy requirement shall be located and alternated with Preferential Only Lane Operational (R3-11 series) signs in series at intervals not greater than 1 km (0.6 mi) along the length of the preferential only lane, at designated gaps in the buffer where vehicles are allowed to legally access the preferential only lane, and within designated enforcement areas as defined by the operating agency.

OPTION

For buffer-separated preferential only lanes, overhead Preferential Only Lane Operational (R3-14 series) signs may be used at specific locations and intervals along the length of the preferential only lane to supplement the ground-mounted R3-10 signs defining the occupancy requirement and the Preferential Only Lane Operational (R3-11 series) signs based on an engineering study.

STANDARD

For concurrent-flow preferential only lanes, ground-mounted R3-10 signs defining the occupancy requirement shall be located and alternated with Preferential Only Lane Operational (R3-11 series) signs in series at intervals not greater than 1 km (0.6 mi) along the length of the preferential only lane.

OPTION

For concurrent-flow preferential only lanes, overhead Preferential Only Lane Operational (R3-14 series) signs may be used at specific locations and intervals along the length of the preferential only lane to supplement the ground-mounted R3-10 signs

~~proposed that could reasonably be expected to affect a specific HOV lane or portions of the HOV system that were funded or approved by FHWA. This shall include portions of the local, regional, or Federal-aid highway system, where operational changes might significantly impact the operation of one HOV lane or portions of the regional HOV system. To assure consistency with the provisions of Titles 23 and 49 of the United States Code (U.S.C), the important issues and possible impacts of any significant operational changes shall be reviewed to determine if any Federal approval is required.~~

~~In accordance with the "Federal Aid Highway Program Guidance on High Occupancy Vehicle (HOV) Lanes" (see Section 1A.11), a proposed test or demonstration project that seeks to significantly change the operation of the HOV lanes for any length of time shall require a Federal review as outlined in Section 2 of the "Federal Aid Highway Program Guidance on High Occupancy Vehicle (HOV) Lanes" prior to initiating such a test or demonstration project. Also in accordance with the Federal Aid Highway Program Guidance on HOV lanes, any proposal to significantly change the operation of an HOV lane shall require some form of Federal review, which might require potential action.~~

~~Support:~~

~~FHWA Division Offices, with involvement from the Federal Transit Administration (FTA), are responsible for reviewing proposals to significantly change the operation of HOV lanes. Federal interests in this review include commitments made during the National Environmental Policy Act process as described in Title 23 CFR, Part 771, in project agreements, transportation planning requirements, and transportation conformity requirements under the Clean Air Act (40 CFR, Part 51).~~

~~Proposals to adjust only the HOV lane hours of operation during the day (for example, minor changes in hours during peak travel periods) or the occupancy requirements (for example, HOV 3+ to HOV 2+) are not typically considered significant operational changes and might not require an explicit Federal review or approval.~~

~~Any action that has the potential to adversely affect the area's flow of traffic, roadway and traveler safety, or the environment might be considered to be a significant operational change. Any proposal to significantly adjust the hours of operation, or to convert an HOV lane to a general purpose travel lane, would be considered a significant operational change to the original project design concept or scope. Examples of significant operational changes could include:~~

- ~~A. Switching from 24-hour HOV lane operations to only a portion of the day or week;~~
- ~~B. Implementing a pricing option to an existing HOV lane (such as HOT lane or toll lane);~~

defining the occupancy requirement and the Preferential Only Lane Operational (R3-11 series) signs based on an engineering study.

STANDARD

For direct access ramps to preferential only lanes, a ground-mounted R3-10 sign defining the occupancy requirement and a Preferential Only Lane Operational (R3-11 series) sign shall be used at the beginning or initial entry point for all types of direct access ramps that provide access or lead to preferential only lanes.

OPTION

For direct access ramps to preferential only lanes, an overhead Preferential Only Lane Operational (R3-14 series) sign may be used at the beginning or initial entry point to supplement the required ground-mounted signs.

SUPPORT

Section 2B.26 contains provisions regarding the use of changeable message signs for preferential only lanes. Section 2E.59 contains additional provisions regarding signing for preferential only lanes on freeway and expressway facilities. Figures 2E-46 through 2E-52 show application and placement examples for Preferential Only Lane signs for a variety of preferential only lane situations.

~~C.—Significantly reducing the hours of operation of an HOV lane that is operational during only one peak travel period, or~~

~~D.—Managing or operating the HOV lane in a manner that renders it functionally inoperable or obsolete (such as not providing enforcement of the occupancy requirement).~~

~~Guidance:~~

~~An engineering study based on the current and estimated future travel demand for a corridor and facility should be the basis for determining when, during a typical day, there should be a minimum occupancy requirement for a vehicle to use an HOV lane.~~

~~Support:~~

~~Inherently low emission vehicle (ILEV) eligibility, testing and certification requirements, labeling, and other regulatory provisions are developed and administered through the Environmental Protection Agency (EPA). EPA is the only entity with the authority to certify ILEVs. Vehicle manufacturers must request the EPA to grant an ILEV certification for any vehicle to be considered and labeled as meeting those standards. According to the EPA, 1996 was the first year that they certified any ILEVs. EPA regulations specify that ILEVs must meet the emission standards specified in 40 CFR 88.311-93 and their labeling must be in accordance with 40 CFR 88.312-93(c). EPA established the ILEV concept to recognize vehicles with no fuel vapor (hydrocarbons) emissions. Zero emission vehicles (electric powered vehicles) that have no emissions are the only other type of clean fuel vehicles that are allowed to use HOV lanes.~~

~~Standard:~~

~~Agencies shall permit a vehicle with less than the required number of occupants to operate on HOV lanes if:~~

~~A.—The vehicle is properly labeled and certified as an ILEV and the lane is not a bus-only HOV lane, or~~

~~B.—The HOV lanes are part of a project that is participating in the FHWA Value Pricing Pilot Program (see Section 2 of the "Federal Aid Highway Program Guidance on High Occupancy Vehicle (HOV) Lanes").~~

~~Motorcycles shall be permitted to use HOV lanes that receive Federal aid program funding.~~

~~Section **2B.28** [2G.05](#) **Preferential Only Lane** [Periods of Operation](#) [Regulatory Signs](#) [Applications and Placement](#) [\(R3-11 Series and R3-14 Series\)](#)~~

~~Guidance:~~

The sizes of the ~~ground- post-mounted Preferential Only Lane Operational Periods of Operation~~ (R3-11 series) signs should remain consistent to accommodate any manual addition or ~~subtraction removal~~ of a single line of text for each sign. ~~this paragraph was relocated from Section 2B.26~~

Support:

Consistent sign sizes are beneficial for agencies when ordering sign materials, as well as when making text changes to existing signs if changes occur to operating times or occupancy restrictions in the future. For example, the R3-11c sign has space for one line located below "24 HOURS" if an agency ~~desires to add~~ determines that it is appropriate to display additional information (such as "MON – FRI"), yet the R3-11c sign has the same dimensions as the other R3-11 series signs. ~~this paragraph was relocated from Section 2B.26~~

Standard:

When used, the ~~ground- post-mounted Preferential Only Lane Operational Periods of Operation~~ (R3-11 series) signs shall be located adjacent to the preferential ~~only~~ lane, and the overhead ~~Preferential Only Lane Operational Periods of Operation~~ (R3-14 series) signs shall be mounted directly over the lane. ~~this paragraph was relocated from Section 2B.26~~

The legend format of the ~~ground- post-mounted Preferential Only Lane Operational Periods of Operation~~ (R3-11 series) signs shall have the following sequence: ~~this paragraph was relocated from Section 2B.26~~

- A. Top Lines: Lanes applicable, such as "RIGHT LANE" or "2 RIGHT ~~2~~ LANES" or "THIS LANE"
- B. Middle Lines: Eligible uses, such as "HOV 2+ ONLY" (or 3+ or 4+ if appropriate) or "BUSES ONLY" or other applicable uses or eligible turning movements
- C. Bottom Lines: Applicable times and days, such as "7 AM – 9 AM" or "6:30 AM – 9:30 AM, MON-FRI"

The legend format of the overhead ~~Preferential Only Lane Operational Periods of Operation~~ (R3-14 series) signs shall have the following sequence: ~~this paragraph was relocated from Section 2B.26~~

- A. Top Line: Eligible uses, such as "HOV 2+ ONLY" (or 3+ or 4+ if appropriate) or "BUSES ONLY" or other ~~types-of-vehicles~~ applicable uses or eligible turning movements
- B. Bottom Lines: Applicable times and days, with the time and day placed above the down arrow, such as "7 AM – 9 AM" or "6:30 AM – 9:30 AM, MON-FRI" (When the operating periods exceed the available line width, the hours and days of the week shall be stacked as shown for the R3-14a sign in Figure 2G-1.)

For preferential lanes that are in effect on a full-time basis, either the full-time Periods of Operation (R3-11b and R3-14b) signs shall be used, or the legends of the part-time Periods of Operations (R3-11, R3-11a, R3-14, R3-14a) signs shall be modified to display the legend 24 HOURS.

The full-time Periods of Operation (R3-14b) sign shall not be used where the preferential lane is in effect only on a part-time basis.

Option:

Where additional movements are permitted from a preferential **only** lane on an approach to an intersection, the format and words used in the legend in the middle lines on the ~~ground-~~ post-mounted ~~Preferential-Only Lane Operational Periods of Operation~~ (R3-11 series) signs and on the top line of the overhead ~~Preferential-Only Lane Operational Periods of Operation~~ (R3-14 series) signs may be modified to accommodate the permitted movements (such as "HOV 2+ AND RIGHT TURNS ONLY"). this paragraph was relocated from Section 2B.26

A MOTORCYCLES ALLOWED (R3-11P) plaque may be used where motorcycles, regardless of the number of occupants, are allowed to use an HOV lane.

Standard:

If used, the MOTORCYCLES ALLOWED plaque shall be mounted below a post-mounted Preferential Lane Periods of Operation (R3-11, R3-11a, or R3-11c) sign.

For all barrier- or buffer-separated or contiguous preferential **only** lanes where access is restricted to designated locations, an overhead ~~Preferential-Only Lane Operational Periods of Operation~~ (R3-14 series) sign shall be used at the beginning or initial entry point, and at any intermediate **access entry** points or gaps in the barrier where vehicles are allowed to legally access the ~~barrier-separated access-restricted~~ preferential **only** lanes. For all barrier-separated and buffer-separated preferential lanes, Ground- ~~post-mounted Preferential-Only Lane Operational Periods of Operation~~ (R3-11 series) signs shall be used only as a supplement to the overhead signs at the beginning or initial entry point, or at any intermediate **access entry** points or gaps in the barrier or buffer.

~~For buffer-separated preferential only lanes (painted buffer of 2 feet or more), an overhead Preferential-Only Lane Operational (R3-14 series) sign shall be used at the beginning or initial entry point, and at intermediate access points or gaps where vehicles are allowed to legally access the buffer-separated preferential only lane. this paragraph was incorporated into the previous~~

paragraph

For buffer-separated or contiguous preferential lanes where continuous access with the adjacent general-purpose lanes is provided, including those where a preferential lane is added to the roadway (see Figure 2G-2 for HOV lanes) and those where a general-purpose lane transitions into a preferential lane (see Figure 2G-3 for HOV lanes), an overhead Periods of Operation (R3-14 series) sign shall be used at the beginning or initial entry point of the preferential lane.

Guidance:

Overhead (R3-14 series) or post-mounted (R3-11 series) Periods of Operation signs should be installed at periodic intervals along the length of a contiguous or buffer-separated preferential lane where continuous access with the adjacent general-purpose lanes is provided.

Option:

Additional overhead (R3-14 series) or post-mounted (R3-11 series) Periods of Operation signs may be provided along the length of any type of preferential lane.

On conventional roads, the overhead Periods of Operation (R3-14 series) signs may be installed at the beginning or entry points and/or at intermediate points along preferential lanes in any geometric configuration.

Standard:

For all types of direct access ramps that provide access to or lead to preferential lanes, a post-mounted Periods of Operation (R3-11 series) sign shall be used at the beginning or initial entry point of the direct access ramp.

Option:

For direct access ramps to preferential ~~only~~ lanes, an overhead ~~Preferential Only Lane Operational~~ Periods of Operation (R3-14 series) sign may be used at the beginning or initial entry point to supplement the required ~~ground-~~ post-mounted signs.

Lane-use control signals (see Chapter 4M) may be used at access points to preferential lanes to indicate that a ramp or access roadway leading to the preferential lane or facility, or one or more specific lanes of the facility, are open or closed (see Figure 2G-14).

Standard:

~~A ground-mounted Preferential Only Lane Operational (R3-11, R3-11a, R3-11b, or R3-11d) sign shall be installed at the beginning, initial entry point,~~

~~intermediate access points, and direct access ramps to all types of preferential only lanes. The overhead Preferential Only Lane Operational (R3-14 series) signs shall be installed only at the beginning or initial entry point to all types of preferential only lanes.~~

~~Option:~~

~~Additional ground-mounted Preferential Only Lane (R3-10, R3-11, R3-11a, R3-11b, or R3-11c) signs may be provided along the length of a preferential only lane.~~

~~For barrier-separated reversible-flow preferential only lanes, Preferential Only Lane signs may be either static or changeable message type.~~

~~For buffer-separated preferential only lanes, overhead Preferential Only Lane Operational (R3-14 series) signs may be used at specific locations and intervals along the length of the preferential only lane to supplement the ground-mounted R3-10 signs defining the occupancy requirement and the Preferential Only Lane Operational (R3-11 series) signs based on an engineering study.~~

~~For concurrent-flow preferential only lanes, overhead Preferential Only Lane Operational (R3-14 series) signs may be used at specific locations and intervals along the length of the preferential only lane to supplement the ground-mounted R3-10 signs defining the occupancy requirement and the Preferential Only Lane Operational (R3-11 series) signs based on an engineering study.~~

~~Support:~~

~~Section 2B-26 contains provisions regarding the use of changeable message signs for preferential only lanes.~~

~~Section 2E-59 contains additional provisions regarding signing for preferential only lanes on freeway and expressway facilities. Figures 2E-46 through 2E-52 show application and placement examples for Preferential Only Lane signs for a variety of preferential only lane situations.~~

[Section 2G.06 Preferential Lane Advance Regulatory Signs \(R3-12, R3-12e, R3-12f, R3-15, R3-15a, and R3-15d\)](#)

Guidance:

[The Preferential Lane Advance \(R3-12, R3-12f, R3-15, and R3-15d\) signs should be used for advance notification of a barrier-separated, buffer-separated, or contiguous preferential lane that is added to the general-purpose lanes \(see Figure 2G-12\).](#)

The Preferential ~~Only~~ Lane ~~Ahead~~ Advance (R3-10a, R3-12, R3-12e and R3-15a) signs should be used for advance notification of a general-purpose lane that becomes a

preferential ~~only~~ lanes (see Figure 2G-13). this paragraph was relocated from Section 2B.26

Option:

The legends on the R3-12f and R3-15d signs may be modified to suit the type of preferential lane.

~~Overhead Preferential Only Lane Ahead (R3-15) signs may be placed approximately 1 mile and 2 miles in advance of the beginning or initial entry points to any type of preferential only lane. this paragraph was relocated from Section 2B.28~~

~~The ground-mounted Preferential Only Lane Ahead (R3-12) sign may be installed at a minimum of 1 mile in advance of the beginning or initial entry point to any type of preferential only lane. this paragraph was relocated from Section 2B.28~~

Guidance:

~~For all barrier-separated preferential only lanes, an overhead Preferential Only Lane Ahead (R3-15) sign should be installed and located at least 1 mile in advance of the beginning or initial entry point. this paragraph was relocated from Section 2B.28~~

On conventional roads, for general-purpose lanes that become preferential lanes, a post-mounted (R3-12e) or overhead (R3-15a) Preferential Lane Advance sign should be installed in advance of the beginning of or initial entry point to the preferential lane at a distance determined by engineering judgment based on speed, traffic characteristics, and other site-specific considerations. The distance selected should provide adequate opportunity for ineligible vehicles to vacate the lane prior to the beginning of the restriction.

On freeways and expressways, for general-purpose lanes that become preferential lanes, an overhead Preferential Lane Advance (R3-15a) sign should be installed at least 1 mile in advance of the beginning of the preferential lane restriction.

Option:

Additional post-mounted or overhead Preferential Lane Advance signs may be placed farther in advance of or closer to the beginning or initial entry points to a preferential lane.

Section 2G.07 Preferential Lane Ends Regulatory Signs (R3-12a, R3-12b, R3-12c, R3-12d, R3-12g, R3-12h, R3-15b, R3-15c, and R3-15e)

Standard:

The ~~A ground-~~ post-mounted Preferential ~~Only~~ Lane Ends ~~1/2 Mile~~ (R3-12b or R3-12h) sign shall be installed at least 1/2 mile in advance of the termination of ~~an HOV~~ a preferential lane. this paragraph was

relocated from Section 2B.28

Except as provided in Paragraph 6, ~~The a~~ ground- post-mounted Preferential ~~Only~~ Lane Ends (R3-12a ~~or R3-12g~~) sign shall be installed at the point where ~~the a~~ preferential ~~only~~ lane ~~and~~ restriction ends ~~and traffic must merge into the general-purpose lanes.~~

~~All longitudinal pavement markings, as well as word and symbol pavement markings, associated with the preferential only lane shall end where the R3-12a sign designating the end of the preferential only lane restriction is installed.~~ this deleted sentence is now covered in Chapter 3B

A post-mounted Preferential Lane Ends (R3-12d) sign shall be installed at least 1/2 mile in advance of the point where a preferential lane restriction ends and the lane becomes a general-purpose lane.

Except as provided in Paragraph 7, a post-mounted Preferential Lane Ends (R3-12c) sign shall be installed at the point where a preferential lane restriction ends and the lane becomes a general-purpose lane.

Option:

The legends on the R3-12g and R3-15e signs may be modified to suit the type of preferential lane.

An overhead Preferential Lane Ends (R3-15b or R3-15e) sign may be installed instead of or in addition to a post-mounted R3-12a or R3-12g sign at the point where a preferential lane and restriction ends and traffic must merge into the general-purpose lanes.

An overhead Preferential Lane Ends (R3-15c) sign may be installed instead of or in addition to a post-mounted R3-12c sign at the point where the preferential lane restriction ends and the lane becomes a general-purpose lane.

Section 2G.08 Warning Signs on Median Barriers for Preferential Lanes

Option:

When a warning sign applicable only to a preferential lane is installed on a median barrier with limited lateral clearance to the adjacent travel lanes or shoulders, the warning sign may have a vertical rectangular shape. For a High Occupancy Vehicle lane, such signs may be used instead of using the HOV Plaque (W16-11P) (see Section 2G.09) with a standard diamond-shaped warning sign.

Standard:

When a vertical rectangular-shaped warning sign applicable only to a preferential lane is installed on a

median barrier, the top portion of the sign shall be comprised of a white symbol or legend denoting the type of preferential lane (such as the diamond symbol for HOV or the legend BUS LANE) on a black background with a white border, and the bottom portion of the sign shall be comprised of the standard word message or symbol of the standard warning sign as a black legend on a yellow background with a black border (see Figure 2G-4).

Guidance:

Where lateral clearance is limited, such as when a post-mounted warning sign applicable only to a preferential lane is installed on a median barrier, the edges of the sign should not project beyond the outer edges of the barrier.

Option

Where lateral clearance is limited, warning signs applicable only to a preferential lane that are post-mounted on a median barrier and that are 72 inches or less in width may be skewed up to 45 degrees in order to fit within the barrier width or may be mounted higher, such that the vertical clearance to bottom of the sign, light fixture, or its structural support, whichever is lowest, is not less than 14 feet above any portion of the pavement and shoulders.

Standard:

Where lateral clearance is limited, Preferential Lane warning signs that are post-mounted on a median barrier and that are wider than 72 inches shall be mounted with a vertical clearance that complies with the provisions of Section 2A.18 for overhead mounting.

Section ~~2G.52~~ 2G.09 High-Occupancy Vehicle (HOV) Plaque (W16-11P)

Option:

In situations where there is a need to warn drivers in an HOV lane of a specific condition, a HOV (W16-11P) plaque (see Figure 2G-4) may be used above a warning sign. The HOV plaque may be used to differentiate a warning sign specific for HOV lanes when the sign is also visible to traffic on the ~~adjoining~~ adjacent general-purpose roadway. Among the warning signs that may be possible applications of the HOV plaque are the ~~Advisory Speed~~, Advisory Exit Speed, Added Lane, and Merge signs.

The diamond symbol may be used instead of the word message HOV on the W16-11P plaque. When appropriate, the words LANE or ONLY may be used on this plaque.

Support:

Section 2G.08 contains information regarding warning signs

[that can be mounted on barriers for HOV or other types of preferential lanes.](#)

Section ~~2E.59~~ [2G.10 Preferential Only Lane Guide Signs – General](#) Section 2E.59 was split into four Sections and substantially edited

Support:

[Preferential lanes are used on freeways, expressways, and conventional roads. Except as otherwise provided, Sections 2G.10 through 2G.15 apply only to guide signs for preferential lanes on freeways and expressways.](#)

Guidance:

[On conventional roads, guide signs applicable only to preferential lanes are ordinarily not needed, but if used they should comply with the provisions for guide signs in Chapter 2D and any principles for Preferential Lane guide signs in Sections 2G.10 through 2G.15 that engineering judgment finds to be appropriate for the conditions.](#)

Support:

[Consistency in signs and pavement markings for preferential lanes plays a critical role in building public awareness, understanding, and acceptance, and makes enforcement more effective.](#)

Additional guidance and standards related to the designation, operational considerations, [signing signs](#), pavement markings, and other considerations for preferential ~~only~~ lanes is provided in Sections 2G.03 through 2G.07, [and](#) 2G.09, ~~3B.22~~, and ~~3B.23~~ [Chapter 3D](#).

Guidance:

~~Because consistency in signing and pavement markings for preferential only lanes within a State or metropolitan area plays a critical role in building public awareness, understanding, and acceptance, and makes enforcement more effective, an engineering study should be conducted to determine~~ [The appropriate combinations of pavement markings and standard overhead signs, and ground- post-mounted regulatory, warning, and guide signs and pavement markings for a specific preferential only lane application should be selected based on an engineering study.](#)

[If overhead signs applicable only to a preferential lane are located in approximately the same longitudinal position along the highway as overhead signs applicable only to the general-purpose lanes, the signs for the preferential lane should be separated laterally from the signs for the general-purpose lanes to the maximum extent practical to minimize conflicting information.](#)

[The Preferential Only Lane signing signs should be designed](#)

and located to avoid overloading the road user. Based on the importance of the sign, ~~the following priority regulatory signs should be given: regulatory, advance regulatory, priority over guide, then signs.~~ The order of priority of guide signs should be Advance Guide, Preferential Lane Entrance Direction, and finally ~~next~~ Preferential Lane Exit Destination supplemental guide signs.

Standard:

Signs applicable only to a preferential lane shall be distinguished from signs applicable to general-purpose lanes by the inclusion of the applicable symbol(s) and/or word(s).

Support:

The symbol and/or word message that appears on a particular guide sign applicable only to a preferential lane will vary based on the specific type of allowed traffic and on other related operational constraints that have been established for a particular lane, such as an HOV lane, a bus lane, or a taxi lane.

Standard:

For HOV lanes, the diamond symbol shall appear on each Advance Guide sign, Preferential Lane Entrance Direction sign, and Preferential Lane Entrance Gore sign, as shown in Figures 2G-5 through 2G-7 for the designated entry and exit points for barrier- and buffer-separated geometric configurations and direct access ramps to or from such lanes. The diamond symbol shall not be used with preferential lanes for other types of traffic, such as bus lanes or taxi lanes.

Signing for an HOV lane that is managed by means of varying the occupancy requirement in response to changing conditions shall also comply with these provisions.

~~Either the HOV abbreviation or~~ The diamond symbol shall ~~appear~~ be displayed in the legend of each Preferential ~~only~~ Lane guide sign at the designated entry and exit points for all types of HOV lanes (including barrier- and buffer-separated, ~~concurrent flow~~ contiguous, and direct access ramps) in order to alert motorists that there is a minimum allowable vehicle occupancy requirement for vehicles to use the HOV lanes ~~and to inform them of the times during which these vehicle occupancy requirements are in effect.~~ Guide signs shall not display the occupancy requirement for the preferential lane.

A combination of guide and regulatory signs shall be used in advance of and at the initial entry point and all intermediate entry points from general-purpose lanes or facilities to ~~at~~ contiguous, barrier-separated, and buffer-separated preferential ~~only~~ lanes where access

between the preferential and general-purpose lanes is restricted to designated locations. ~~The Advance Guide signs for preferential only lanes shall be consistent with the requirements of Section 2E.30.~~ The regulatory signs shall comply with the provisions of Sections 2G.03 through 2G.07.

Regulatory signs alone shall be used in advance of, at the beginning of, and at periodic intervals along contiguous or buffer-separated preferential lanes that provide continuous access between the adjacent general-purpose lanes and the preferential lane (see Figures 2G-12 and 2G-13). The design and placement of the regulatory signs shall comply with the provisions of Sections 2G.03 through 2G.07.

Except as otherwise provided in Sections 2G.10 through 2G.13, guide signs applicable to a preferential lane with a vehicle occupancy requirement shall be distinguished from those applicable to general-purpose lanes by displaying the white diamond symbol on a black background at the left-hand edge of these signs.

Option:

When post-mounted guide signs applicable only to a preferential lane are installed on a median barrier with limited lateral clearance to the adjacent travel lanes or shoulders, the guide signs may have a vertical rectangular shape.

Standard:

When vertical rectangular shaped guide signs applicable only to a preferential lane are installed on a median barrier, the top portion of the signs shall be comprised of the applicable white symbol or white word message that identifies the type of preferential lane (such as the diamond symbol for an HOV lane) on a black background with a white border, and the bottom portion of the sign shall be comprised of the appropriate guide sign legend on a green background with a white border (see Figures 2G-3, 2G-6, and 2G-7).

Guidance:

Where lateral clearance is limited, such as when a ~~ground-~~post-mounted Preferential ~~Only~~ Lane ~~guide~~ sign is installed on a median barrier, the edges of the sign should not project beyond the outer edges of the barrier.

Option:

Where lateral clearance is limited, Preferential ~~Only~~ Lane (~~R3-10, R3-11, and R3-12-series~~) ~~guide~~ signs that are 72 inches or less in width may be skewed up to 45 degrees in order to fit within the barrier width or may be mounted ~~at a height of 14 feet or more above the roadway~~ higher, such that the vertical clearance to the bottom of the sign, light fixture, or its

structural support, whichever is lowest, is not less than 14 feet above any portion of the pavement and shoulders.

Guidance Standard:

Where lateral clearance is limited, Preferential **Only** Lane **guide** signs that are **post-mounted on a median barrier and that are wider than 72 inches** ~~should~~ **shall be mounted at a height of at least 14 feet above the roadway with a vertical clearance that complies with the provisions of Section 2A.18 for overhead mounting.**

Option:

Lane-use control signals (see Chapter 4M) may be used at access points to preferential lanes to indicate that a ramp or access roadway leading to or from the preferential lane or facility, or one or more specific lanes of the facility, are open or closed.

Changeable message signs may ~~be used to~~ supplement, substitute for, or be incorporated into static **guide** signs where travel conditions change or where multiple types of operational strategies (such as variable occupancy requirements, vehicle types, or pricing policies) are used and varied throughout the day or week to manage the use of, control of, or access to preferential **only** lanes.

Standard:

When changeable message signs (see ~~Section 2A.07 Chapter 2L~~) are used as ~~regulatory or~~ **guide** signs for preferential **only** lanes, they shall be the required sign size and shall display the required letter height and legend format that corresponds to the type of roadway facility and design speed.

Advance Guide signs, Preferential Lane Entrance Direction signs, and Preferential Lane Entrance Gore signs for the initial entry point and intermediate entry points into a preferential lane from the general-purpose lanes on the same designated route shall not identify the entry point as an exit by using the word "EXIT" on the sign or on a plaque.

Guidance:

Advance Guide signs and Preferential Lane Entrance Direction signs for initial and intermediate entry points into a preferential lane should use the word "ENTRANCE," such as "HOV LANE ENTRANCE" (see Figures 2G-5 and 2G-6) to convey the fact that vehicles are not leaving the designated route.

Preferential Lane Entrance Gore signs (see Figure 2G-7) at the initial entry point to a preferential lane should use the word "ENTRANCE." Preferential Lane Entrance Gore signs at intermediate entry points to a barrier-separated preferential

lane where the sign would be located immediately adjacent to and directly viewed by traffic in the preferential lane should not use the word "ENTRANCE."

Standard:

When the entry point is on the left-hand side of the general-purpose lanes, a LEFT (E1-5aP) plaque (see Figure 2E-22) shall be added to the top left edge of the Advance Guide and Preferential Lane Entrance Direction signs. The LEFT plaque shall not be used on a preferential lane regulatory sign.

~~Reversible flow or express lanes that do not have any specific vehicle occupancy or designation restrictions shall be consistent with the requirements of Chapters 2B and 3B.~~

~~Overhead preferential only lane guide signs shall be used only as a supplement to ground-mounted preferential only lane guide signs unless an engineering study identifies that ground-mounted guide signs are not appropriate for a particular situation or location.~~

Guidance:

Existing sign and bridge structures should be used to the extent practical for the installation of preferential only lane signs. Where possible, advance guide and guide signs that are provided for preferential only lanes should share sign structures spanning the preferential only lanes and the adjoining freeway facility.

Standard:

~~Ground-mounted and overhead advance guide signs, guide signs, and exit signs applicable to HOV lanes and direct access ramps to HOV lanes shall contain the HOV diamond symbol in the upper left corner of the sign as shown in Figures 2E-46 through 2E-52. The diamond symbol shall not be used with lanes designated for bus or taxi traffic.~~

Option:

Agencies may select from either the HOV abbreviation or the diamond symbol to reference the HOV lane designation.

Standard:

~~For concurrent flow preferential only lanes, including those where a preferential only lane is added to the roadway (see Figure 2E-48 for HOV lanes) and those where a general purpose lane transitions into a preferential only lane on the roadway (see Figure 2E-49 for HOV lanes), an overhead regulatory (R3-14 or R3-14a) sign shall be used.~~

Section 2G.11 Guide Signs for Initial Entry Points to Preferential Lanes **relocated from Section 2E.59**

Standard:

~~Ground-mounted~~ Except where a buffer-separated or contiguous preferential lane is added or where a general-purpose lane becomes a buffer-separated or contiguous preferential lane, and provides continuous access with the adjacent general-purpose lanes as illustrated in Figures 2G-2 and 2G-3, an Advance Guide signs shall be provided at least 1/2 mile prior to the beginning or initial entry point to all types of preferential **only** lanes in any type of geometric configuration (including barrier-separated, buffer-separated, and concurrent flow). Ground-mounted guide signs shall be provided at the beginning or initial entry point and at intermediate access points to all types of preferential **only** lanes. A Preferential Lane Entrance Direction sign shall also be provided at the initial entry point. Advance Guide and Preferential Lane Entrance Direction signs for such entry points shall not include the word "EXIT" (see Section 2G.10).

Guidance:

An Advance Guide sign should also be installed and located approximately 1 mile in advance of the initial entry point to a preferential lane that restricts access with the adjacent general-purpose lanes to designated locations.

Option:

~~Overhead advance guide signs and overhead guide signs may be used in advance of, at the beginning or initial entry point, and at designated intermediate access points to any type of preferential **only** lane. An Advance Guide signs may also be installed and located approximately 1 mile and 2 miles in advance of the beginning or initial entry point to any type of a preferential **only** lane that restricts access with the adjacent general-purpose lanes to designated locations.~~

Standard:

~~For barrier-separated, buffer-separated, or contiguous preferential **only** lanes where entry is restricted to only designated points, overhead the Advance Guide and ~~overhead guide~~ Preferential Lane Entrance Direction signs shall be provided in advance of and at the beginning or initial entry point to the preferential **only** lanes (see Figure 2E-46 for HOV lanes) mounted overhead. Overhead guide signs shall also be used at all intermediate entry points to barrier-separated preferential **only** lanes (see Figure 2E-47 for HOV lanes).~~

Guidance:

~~Advance [Preferential Lane Exit](#) Destination guide signs, identifying [final destination and](#) downstream exit locations [accessible from the preferential lane](#) (see [Figures 2G-8, 2G-13, 2G-14, and 2G-16](#)), should be installed in advance of ~~designated the initial~~ entry points ~~and along the length of to~~ access-restricted preferential ~~only~~ lanes (such as barrier- and buffer-separated). ~~In addition to the routes that typically appear on advance destination guide signs, these signs should also include destinations.~~ These signs should be located based on the priority of the message, the available space, the existing signs on ~~adjoining adjacent~~ general-purpose traffic lanes, roadway and traffic characteristics, the proximity to existing overhead signs, the ability to install overhead signs, and other unique local factors.~~

Standard:

Advance destination guide signs for preferential lanes shall include an upper section displaying a black legend that includes the type of preferential lane and the word "EXITS," such as "HOV EXITS," on a white background. For preferential lanes that incorporate a vehicle occupancy requirement, the white diamond symbol on a black background shall be displayed at the left edge of this upper section (see Figure 2G-8).

Support:

Figure 2G-8 shows an example of signs for the initial entry point to a preferential lane.

~~**Guidance:**~~

~~Where conditions restrict the ability to provide more than one advance guide sign in advance of any type of preferential only lane, the advance guide sign that is installed should be placed at least 1/2 mile in advance of the beginning or entry point to the preferential only lane.~~

~~**Option:**~~

~~Advance guide signs may be provided for preferential only lanes with unrestricted access, such as concurrent flow preferential only lanes.~~

~~**Guidance:**~~

~~For barrier-separated preferential only lanes where conditions restrict the ability to provide more than one advance guide sign prior to the entrance to the preferential only lane, the sign should be placed approximately 1/2 mile in advance of the exit. In these situations, the installation of the corresponding regulatory and next exit supplemental signs should be located based on the priority of the message and the available space.~~

Section 2G.12 Guide Signs for Intermediate Entry Points to Preferential Lanes **relocated from Section**

2E.59

Standard:

For barrier-separated, buffer-separated, and contiguous preferential lanes where entry is restricted only to designated points, an overhead Preferential Lane Entrance Direction sign shall be provided at intermediate entry points to the preferential lane from the general-purpose lanes.

Guidance:

For barrier- and buffer-separated preferential lanes where intermediate entry from the general-purpose lanes is provided via a separate lane or ramp (see Figure 2G-9), at least one Advance Guide sign should be provided in addition to the Preferential Lane Entrance Direction sign.

For access-restricted preferential lanes where intermediate entrance and egress are at the same designated access location, the Preferential Lane Entrance Direction sign should be located between 1/2 and 1/4 of the length of the designated entry area, as measured from the downstream end of the entry area (see Figure 2G-10).

Standard:

The Advance Guide signs, if used for intermediate entry points to a preferential lane from the general-purpose lanes, shall be overhead.

Option:

Advance Guide signs may be provided at approximately 1/2 mile, 1 mile, and 2 miles in advance of intermediate entry points from the general-purpose lanes to a preferential lane.

Standard:

Advance Guide and Preferential Lane Entrance Direction signs for intermediate entry points shall not include the word "EXIT" (see Section 2G.10).

Guidance:

Exit Destination guide signs, identifying the final destination and downstream exit locations accessible from the preferential lane, should be installed in advance of intermediate entry points from the general-purpose lanes to access-restricted preferential lanes.

Support:

Section 2G.11 contains information on the design and placement of Preferential Lane Exit Destination guide signs.

Figures 2G-9 and 2G-10 show examples of signs for various geometric configurations of intermediate entry to a barrier- or buffer-separated preferential lane where access is restricted to designated locations.

Section 2G.13 Guide Signs for Egress from Preferential Lanes to General-Purpose Lanes
relocated from Section 2E.59

Standard:

For barrier-separated, buffer-separated, and contiguous preferential **only** lanes where egress is restricted only to designated points, ~~ground-~~ post-mounted Advance **exit Guide** and ~~ground-~~ post-mounted **Exit Intermediate Egress Direction** signs (see Figure 2G-11) shall be installed ~~prior to and at the intermediate exit points of the preferential only lanes (see Figure 2E-47 for HOV lanes). Ground-mounted guide signs shall be mounted~~ in the median or on median barriers that separate two directions of traffic prior to and at the intermediate exit points from the preferential lanes to the general-purpose lanes (see Figure 2G-9).

The legends of these signs shall refer to the next exit or exits from the general-purpose lanes by displaying the appropriate destination information, exit number(s), or both. The Intermediate Egress Direction signs for egress from the preferential lanes to the general-purpose lanes shall not refer to the egress as an exit.

Support:

Section 2G.10 contains information on the design of post-mounted guide signs applicable to a preferential lane when installed on a median barrier. Figures 2G-9 and 2G-12 show examples of signs for various geometric configurations of intermediate egress from a barrier- or buffer-separated preferential lane where access is restricted to designated locations.

Guidance:

Where two or more adjacent preferential lanes are present in a single direction, consideration should be given to the use of overhead guide signs to display the information related to egress from the preferential lanes.

For barrier-separated and buffer-separated preferential lanes where egress from a preferential lane to the general-purpose lanes is restricted only to designated points via a separate lane or ramp, the Advance Guide and Intermediate Egress Direction signs for the egress should be mounted overhead and a Pull-Through sign should be mounted with the Intermediate Egress Direction sign (see Figure 2G-12).

Standard:

For preferential lanes that incorporate a vehicle occupancy requirement, the design of the overhead Advance Guide and Egress Direction signs for intermediate egress from the preferential lanes to the general-purpose lanes shall display a white diamond symbol on a black background at the left-hand edge of the signs.

The design of Pull-Through signs when used in conjunction with an Egress Direction sign at an intermediate egress from the preferential lanes to the general-purpose lanes shall be distinguished from those applicable to general-purpose lanes by inclusion of an upper section with the applicable black legend on a white background, such as HOV LANE. For preferential lanes that incorporate a vehicle occupancy requirement, the white diamond symbol on a black background shall be displayed at the left-hand edge of this upper section.

Option:

~~For barrier-separated preferential only lanes, an advance destination guide sign may be used in the vicinity of designated intermediate entry and exit points.~~

Standard:

~~For buffer-separated preferential only lanes (painted buffer of 2 feet or more) where access is restricted to designated entry points, ground-mounted guide signs shall be mounted in the median or on median barriers separating two directions of traffic. ground-mounted advance exit and ground-mounted exit signs shall be installed prior to and at the intermediate exit points of buffer-separated preferential only lanes (see Figure 2E-47 for HOV lanes).~~

Option:

~~For buffer-separated preferential only lanes, an advance destination guide sign may be used in the vicinity of designated intermediate entry and exit points.~~

Guidance:

~~For buffer-separated HOV lanes, guide and regulatory signs should be provided to alert HOV lane users and non-users of the minimum allowable vehicle occupancy requirement and the locations of the designated entry and exit points.~~

Section 2G.14 Guide Signs for Direct Entrances to Preferential Lanes from Another Highway

Standard:

~~For direct access ramps to HOV preferential lanes, advance guide signs shall be provided along the adjoining surface streets to direct traffic into from a~~

transit facility (such as a park & - ride lot or a transit station or terminal) that ~~ultimately leads to HOV lanes~~ is accessible from surface streets, advance guide signs shall be provided along the adjoining surface streets to direct traffic into and through the transit facility to the preferential lane (see Figure 2G-13 ~~for HOV lanes~~). ~~relocated from Section 2E.59~~

Support:

Figures 2G-14 ~~through 2E-52~~ provides examples of recommended uses and layouts of signs for HOV lanes for direct access ramps, park & - ride lots, and access from surface streets, ~~and exclusive preferential only lane ramps at interchanges that directly connect two freeway facilities.~~ ~~Direct access ramps to preferential only lanes sometimes form a three or four legged intersection that is controlled by either static signs or traffic control signals.~~ ~~relocated from Section 2E.59~~

Section 2G.15 Guide Signs for Direct Exits from Preferential Lanes to Another Highway

Standard:

For ~~concurrent flow~~ contiguous HOV preferential lanes on the left-hand side of the roadway ~~with unrestricted access,~~ Advance Guide and guide signs, Exit Direction signs, and Exit Gore signs (see Figure 2G-14) specifically applicable to the preferential lanes shall ~~only~~ be used ~~on~~ for exits to direct access ramps, such as HOV lane ~~only~~ ramps (see Figure 2G-15) or ramps to park & - ride ~~lots facilities (see Figures 2E-50 and 2E-51 for HOV lanes).~~ ~~relocated from Section 2E.59~~

The design of Advance Guide, Exit Direction, and Pull-Through signs for direct exits from preferential lanes shall be distinguished from those applicable to general-purpose lanes by inclusion of an upper section with the applicable black legend on a white background, such as HOV LANE (for Pull-Through signs) or HOV EXIT (for Advance Guide and Exit Direction signs). For preferential lanes that incorporate a vehicle occupancy requirement, the white diamond symbol on a black background shall be displayed at the left-hand edge of this upper section (see Figures 2G-15 and 2G-16).

Guidance:

Advance Guide and Exit Direction signs for exits to direct access ramps from a preferential lane should be mounted overhead. A Pull-Through sign should be used with the Exit Direction sign at exits to direct access ramps.

Standard:

Post-mounted guide signs in a vertical rectangular shape installed on a median barrier shall not be used

[for the Advance Guide and Exit Direction signs for exits to direct access ramps.](#)

Because direct access ramps for preferential **only** lanes at interchanges connecting two freeways are typically left-**hand** side exits and typically have design speeds similar to the preferential **only** lane, overhead Advance Guide signs and overhead **guide Exit Direction** signs shall be provided in advance of and at the entry point to each **freeway-to-freeway** preferential **only** lane ramp (see Figure 2G-16 **for HOV lanes**). **relocated from Section 2E.59**

Guidance:

*The use of guide signs for preferential **only** lanes at freeway interchanges should ~~conform to~~ **comply with** the [provisions for regulatory and guide signs requirements](#) established in this Manual. **relocated from Section 2E.59***

Support:

~~The use of advance guide and~~ Guide signs for direct access ramps for preferential **only** lanes at interchanges connecting two freeways ~~is~~ **are** similar to [those for](#) a connecting ramp between two freeway facilities. **relocated from Section 2E.59**

[Section 2G.16 Signs for Priced Managed Lanes – General](#)

[Support:](#)

[A priced managed lane is a managed lane that employs tolling or pricing, typically through electronic toll collection, to manage congestion levels and maintain a certain level of service for users of the facility. A priced managed facility typically provides a less congested alternative to adjacent lanes along the same designated route, or to a nearby facility, that experience recurring congestion during peak periods. A priced managed lane might allow non-toll travel by certain vehicles based on occupancy or other criteria. A variety of operational management strategies might be used in conjunction with tolling or pricing.](#)

[The number and combination of operational strategies that are applied to a managed lane to manage congestion or improve efficiency might be practically limited by the amount of information that can be legibly displayed on signs or in signing sequences and still be readily comprehended by road users. Such factors to consider when evaluating alternatives for managed lanes are locations of signs for general-purpose interchanges and for other roadway conditions, the number of intermediate access points between the managed and general-purpose lanes and the need to repeat the operational information, and the distance over which a signing sequence that displays all of the eligibility requirements can be displayed.](#)

Because managed lanes have the capability to employ a variety of operational strategies on a changing basis, it is not practical to assign a naming convention to such lanes for the purpose of signing based on the specific operational management strategies, as is more readily accomplished with other types of preferential lanes, such as HOV, Bus, or Bike lanes. Instead, the various requirements, restrictions, and eligibility criteria are more appropriately conveyed through a sequence of regulatory and guide signs with a more encompassing designation for the purpose of providing directional information.

As priced managed lanes become more prevalent as an operational strategy, it will be important to establish a uniform naming convention to distinguish those lanes that are an alternative to travel on adjacent general-purpose lanes on the same designated route to effectively communicate to motorists the range of basic requirements for similar facilities in different regions.

Standard:

Priced managed lanes that are adjacent to general-purpose lanes along the same designated route shall be signed using the legend EXPRESS or EXPRESS LANE(S). This provision shall apply when any of the following operational strategies is used for a managed lane:

- A. All users of the managed lane are charged a fixed or variable toll;**
- B. General-purpose traffic using the managed lane is charged a fixed or variable toll, but HOV traffic is allowed to travel without being charged a toll on either a full- or part-time basis;**
- C. General-purpose traffic using the managed lane is charged a fixed or variable toll, but HOV traffic is offered a discounted toll on either a full- or part-time basis; or**
- D. General-purpose traffic using the managed lane is charged a fixed or variable toll, but HOV traffic registered with a local program travels at a discounted toll or without being charged a toll on either a full- or part-time basis (a transponder or other identifier is typically required of HOVs to indicate registration in conjunction with electronic or visual enforcement and verification of vehicle occupancy).**

The legends EXPRESS and EXPRESS LANE(S) shall not be used on signs for entrances to highways on which all lanes are managed and there are no adjacent general-purpose lanes on the same designated route. The legends EXPRESS and EXPRESS LANE(S) shall not be used on signs for a managed ramp connection that provides an alternative to a general-purpose ramp connection (see Figure 2F-7), except where the ramp leads directly to a managed lane as described in Section 2G.14. The legends EXPRESS and EXPRESS LANE(S) shall not be used on signs for open-road tolling lanes

Mn/PASS lanes B.

What is the definition of EXPRESS LANES?

[that bypass a conventional toll plaza \(see Chapter 2F\).](#)

[The diamond symbol shall be reserved exclusively for preferential lanes whose operational strategy is occupancy-based only \(see Sections 2G.03 through 2G.14\) and shall not be used to designate a managed lane in which other operational strategies, such as tolling and pricing, are employed to allow general-purpose traffic to use the lane.](#)

[Section 2G.17 Regulatory Signs for Priced Managed Lanes](#)

[Standard:](#)

[Except as otherwise provided in this Section, the provisions of Sections 2G.03 through 2G.07 regarding regulatory signs for Preferential lanes shall apply to priced managed lanes operated at all times or at certain times with a toll payment requirement of some or all vehicles to use the lane\(s\). Such managed lanes shall use changeable message signs or changeable message elements within static signs to display the appropriate regulatory sign messages only when they are in effect.](#)

[Regulatory signs for preferential lanes shall be appropriately modified for adaptation to a priced managed lane, where applicable, as shown in Figure 2G-17.](#)

[Regulatory signs shall be used to indicate the toll charged. If the toll varies, regulatory signs that include changeable message elements, such as the R3-48 and R3-48a signs that are shown in Figure 2G-17, shall be used to display the actual toll amount in effect at any given time.](#)

[When only vehicles with a registered ETC account are allowed to use a managed lane where some or all vehicles are charged a toll, regulatory signs to indicate such a restriction shall be provided and shall incorporate the pictograph adopted by the toll facility's ETC payment system and the word ONLY \(see Section 2G.18 for the incorporation of such regulatory legends into the guide signs for the entrances to such facilities\). The display of the ETC system pictograph shall comply with the provisions of Sections 2F.03 and 2F.04 as shown in Figures 2G-17 and 2G-18.](#)

[When HOV traffic is allowed to use a priced managed lane without paying a toll and registration in a local program is not required to receive the toll exemption, the Vehicle Occupancy Definition \(R3-10 or R3-13\) signs \(see Section 2G.04\) shall be modified to delete the diamond symbol to create priced managed lane Vehicle Occupancy Definition \(R3-40 and R3-43\) signs to indicate the minimum occupancy related to the management strategy \(see Figure 2G-17\).](#)

This will require changing the design of our signs. TF disagrees with this – How will SOV's know they can use the lane outside of priced times if no diamond?

Mn/DOT will need to review our existing signs and structures to see if we would/could comply: diamond, EXPRESS, and spacing.
Heather

A priced managed lane Periods of Operation (R3-44 or R3-44a) sign (see Figure 2G-17) shall be installed at the beginning or initial entry point, and at any intermediate entry points where vehicles are allowed to legally enter an access-restricted priced managed lane.

When the vehicle occupancy required for non-toll use of a managed lane is varied as a part of a priced managed lane operational strategy, regulatory signs that include changeable message elements shall be used to display the required vehicle occupancy in effect for non-toll travel.

Option:

Where registration in a local program or ETC account is required for HOV traffic to travel in a priced managed lane without being charged a toll or by being charged a discounted toll, such information may be displayed on a separate sign within the sequence of the required regulatory and guide signs.

Standard:

R3-42 Series and R3-45 Series signs (see Figure 2G-17) shall be installed in accordance with the provisions of Section 2G.07 to indicate the termination of a priced managed lane or restriction. The R3-42, R3-42a, and R3-45 signs shall be used only where the managed lane and restriction end and traffic must merge into the general-purpose lanes. The R3-42b, R3-42c, and R3-45a signs shall be used only where the managed lane restriction ends and the lane becomes a general-purpose lane.

Section 2G.18 Guide Signs for Priced Managed Lanes

Standard:

Except as otherwise provided in this Section, guide signs for barrier-separated, buffer-separated, and contiguous managed lanes shall follow the specific provisions for Preferential Lane guide signs contained in Sections 2G.10 through 2G.15. Except as otherwise provided in this Section, guide signs for highways on which all lanes are managed shall follow the general provisions for freeway and expressway guide signs as contained in Chapter 2E as a whole. Guide signs for highways on which all lanes are managed and tolling or pricing is used as a management strategy shall follow the applicable provisions for toll road guide signs as contained in Chapter 2F, in addition to the general provisions of Chapter 2E.

If fixed or variable tolls are used as an operational strategy for a managed lane, the guide signs shall comply with the provisions of Sections 2F.03, 2F.04, and 2F.17 regarding the use, size, and placement of

ETC-account pictographs.

Support:

Figure 2G-18 shows examples of Guide signs for entrances to priced managed lanes and other ETC account-only toll facilities that incorporate header panels with ETC account pictographs and regulatory legends.

Guidance:

Exit Destination supplemental guide signs, identifying final destination and downstream exit locations accessible from the managed lane (see Figure 2G-19), should be installed in advance of the initial entry points to priced managed lanes. These signs should be located in accordance with the provisions of Paragraph 5 of Section 2G.11.

For managed lanes that are available as an alternative to travel on adjacent general-purpose lanes on the same designated route, changeable message signs indicating the comparative travel times or congestion levels using the managed lanes versus the general-purpose lanes (see Figure 2G-20) should be installed in advance of the initial and intermediate entry points to the managed lanes.

Option:

Changeable message signs may also be used on non-managed highways to display comparative travel times or congestion levels for a nearby managed highway.

Standard:

Guide signs at the initial and intermediate entry points to a priced managed lane in which all general-purpose passenger vehicles are allowed shall include the legend EXPRESS or EXPRESS LANE(S). The guide signs shall incorporate the pictograph of the ETC account system into a header panel within the guide sign in accordance with Sections 2F.03, 2F.04, and 2F.17. For a priced managed lane that allows non-toll travel by HOV traffic without registration in a local program, the header panel shall be modified to a regulatory format to display both the pictograph of the ETC account system and the minimum occupancy requirement for non-toll travel with a black legend on a white background (see Figure 2G-19).

Guide signs at the initial and intermediate entry points to a managed lane that allows only HOV traffic with either a fixed or variable occupancy requirement shall follow the provisions of Sections 2G.10 through 2G.12 and 2G.14.

Support:

Figures 2G-21 through 2G-24 show examples of guide signs

[for various configurations of initial and intermediate entrances to a priced managed lane.](#)

Standard:

[The use and locations of guide signs for intermediate egress locations and direct exits from a priced managed lane \(see Figures 2G-24 through 2G-27\) shall comply with the provisions of Sections 2G.13 and 2G.15. The signs shall be suitably modified to display header messages of white legend on a green background that relate the guide sign legends to the managed lane\(s\) as appropriate in accordance with the following:](#)

- A. [Post-mounted or overhead-mounted Advance Guide signs for intermediate egress to the general-purpose lanes shall include the legend LOCAL EXITS in a header panel within the guide signs, destination information or the exit number\(s\) for the next exit\(s\) accessible from the general-purpose lanes, and the appropriate distance information to the location of the egress \(see Figures 2G-24 and 2G-25\).](#)
- B. [Post-mounted or overhead-mounted Intermediate Egress Direction signs shall include the legend LOCAL EXITS in a header panel within the signs, the destination information or the exit number\(s\) of the next exit\(s\) accessible from the general-purpose lanes, and a diagonally upward-pointing directional arrow \(see Figures 2G-24 and 2G-25\).](#)
- C. [For direct exits to another roadway, the legend EXPRESS EXIT shall be used on the Advance Guide and Exit Direction signs \(see Figure 2G-26\).](#)
- D. [For pull-through signs, the legend EXPRESS LANE\(S\) shall be used, either as a header panel within the pull-through sign or as the principal legend of the sign without a header panel \(see Figures 2G-25, 2G-26, and 2G-27\).](#)

Support:

[Section 2G.13 contains information on the use of overhead-mounted guide signs for intermediate egress to the general-purpose lanes.](#)

[Figures 2G-28 and 2G-29 show examples of guide signing for direct entrances to a priced managed lane from a crossroad or surface street.](#)

