

CITY OF MERCED
Planning Department

TO: Bicycle Advisory Commission
FROM: Bill King, Principal Planner
DATE: August 23, 2016
SUBJECT: "M" Street Bikeway between 16th Street and 18th Street

BACKGROUND

City Staff is requesting input from the Bicycle Advisory Commission (BAC) concerning the placement of a bikeway on M Street between 16th Street and 18th Street. Three options are presented for consideration and include: 1) a road diet converting the street from four travel lanes to three travel lanes with bike lanes; 2) extensive modification of the sidewalk and planter areas resulting in the creation of a bike lane; or 3) addition of sharrows. At this stage, the options are very conceptual; no drawings have been prepared. Staff is leaning toward use of sharrows.

DISCUSSION

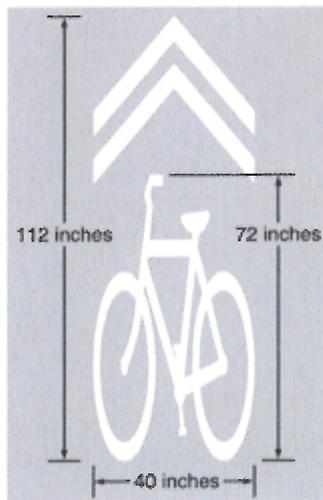
Between 16th Street and 18th Street, there is no bikeway on M Street. In this area, it is illegal to ride bikes on sidewalks. Bike lanes exist on M Street both north of 18th Street and south of 16th Street. Sharrows are signed and marked on Main Street, both east and west of M Street. The absence of a bikeway in the central core of Merced hinders adequate bike travel, especially north-south movements.

ACTION

City Staff seeks a formal recommendation from the BAC.

Attachment:

1. MUTCD Standards and 2013 Merced Bike Transportation Plan Standards

Figure 9C-9. Shared Lane Marking

- A. Assist bicyclists with lateral positioning in a shared lane with on-street parallel parking in order to reduce the chance of a bicyclist's impacting the open door of a parked vehicle,
- B. Assist bicyclists with lateral positioning in lanes that are too narrow for a motor vehicle and a bicycle to travel side by side within the same traffic lane,
- C. Alert road users of the lateral location bicyclists are likely to occupy within the traveled way,
- D. Encourage safe passing of bicyclists by motorists, and
- E. Reduce the incidence of wrong-way bicycling.

Guidance:

02 *The Shared Lane Marking should not be placed on roadways that have a speed limit above 35 mph.*

Standard:

03 **Shared Lane Markings shall not be used on shoulders or in designated bicycle lanes.**

Guidance:

04 *If used in a shared lane with on-street parallel parking, Shared Lane Markings should be placed so that the centers of the markings are at least 11 feet from the face of the curb, or from the edge of the pavement where there is no curb.*

05 *If used on a street without on-street parking that has an outside travel lane that is less than 14 feet wide, the centers of the Shared Lane Markings should be at least 4 feet from the face of the curb, or from the edge of the pavement where there is no curb.*

06 *If used, the Shared Lane Marking should be placed immediately after an intersection and spaced at intervals not greater than 250 feet thereafter.*

Option:

07 [Section 9B.06](#) describes a Bicycles May Use Full Lane sign that may be used in addition to or instead of the Shared Lane Marking to inform road users that bicyclists might occupy the travel lane.

[Back to Top](#)

Figure 9B-2. Regulatory Signs and Plaques for Bicycle Facilities

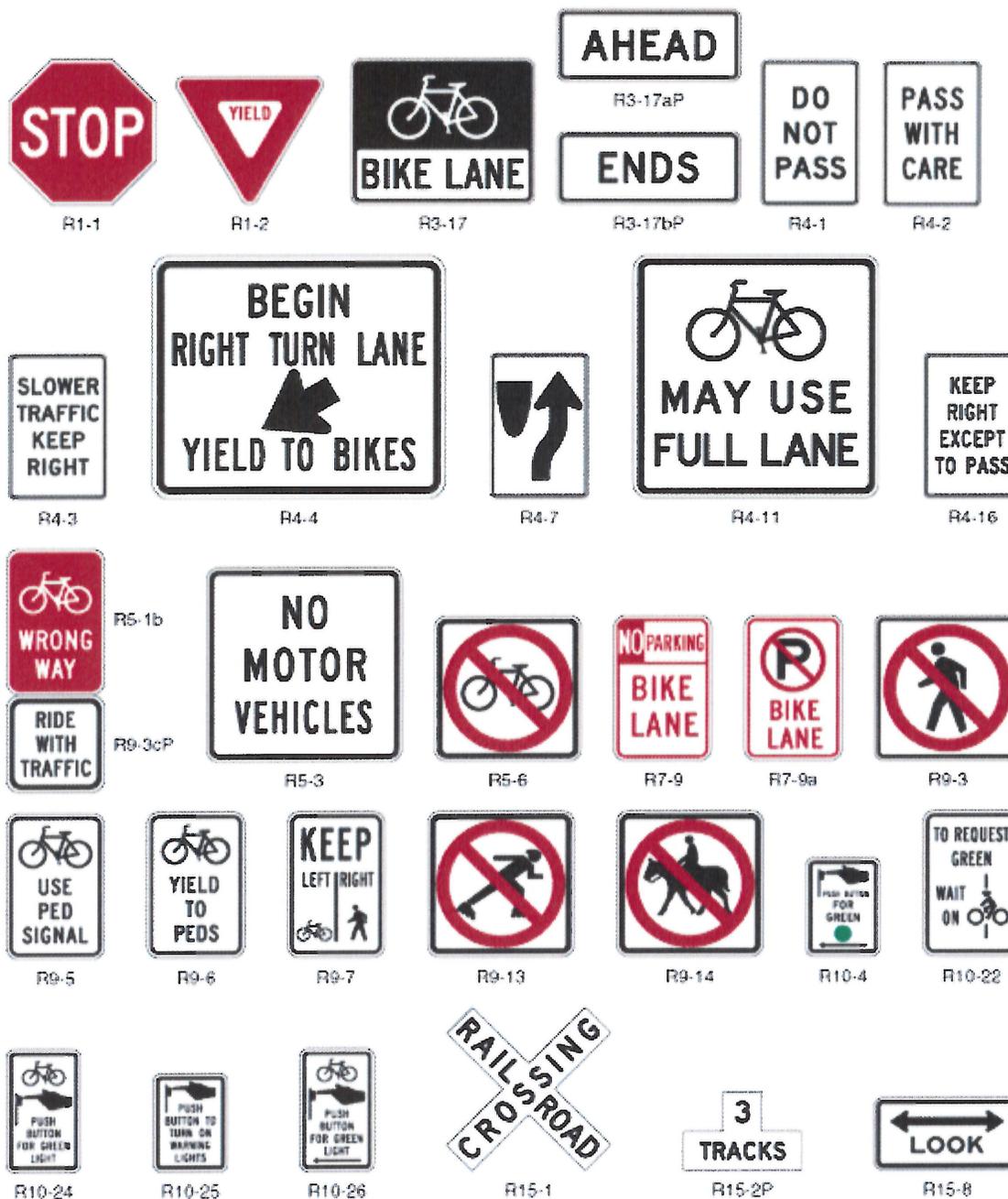


Figure 9B-2. Regulatory Signs and Plaques for Bicycle Facilities

This figure illustrates 32 regulatory signs and plaques for bicycle facilities.

R1-1 is shown as an octagonal sign with a white border and the legend "STOP" in white on a red background.

R1-2 is shown as a downward-pointing equilateral triangle with a wide red border and the legend "YIELD" in red on a white background.

R3-17 is shown as a horizontal rectangular black sign with a white border. A white symbol of a bicycle is shown on the top two-thirds of the sign. A white panel is shown on the bottom third of the sign with the words "BIKE LANE" in black.

R3-17aP is shown as a horizontal rectangular white plaque with a black border and the word "AHEAD" in black.

R3-17bP is shown as a horizontal rectangular white plaque with a black border and the word "ENDS" in black.

R4-1 is shown as a vertical rectangular white sign with a black border and the words "DO NOT PASS" in black on three lines.

R4-2 is shown as a vertical rectangular white sign with a black border and the words "PASS WITH CARE" in black on three lines.

R4-3 is shown as a vertical rectangular white sign with a black border and the words "SLOWER TRAFFIC KEEP RIGHT" in black on four lines.

R4-4 is shown as a horizontal rectangular white sign with a black border and legend. It shows the words "BEGIN RIGHT TURN LANE" on two lines above a diagonal arrow pointing down and to the left above the words "YIELD TO BIKES."

R4-7 is shown as a vertical rectangular white sign with a black border and legend. At the top left corner of the sign, a depiction of the plan view of the nose of a traffic island is shown. An upward-pointing arrow is shown on the sign, curving to depict movement to the right of the nose of the island.

R4-11 is shown as a square white sign with a black border and legend. A black symbol of a bicycle is shown on the top half of the sign above the words "MAY USE FULL LANE" in black on two lines.

R4-16 is shown as a vertical rectangular white sign with a black border and the words "KEEP RIGHT EXCEPT TO PASS" in black on four lines.

R5-1b is shown as a vertical rectangular red sign with a white border and legend. It shows a white symbol of a bicycle above the words "WRONG WAY" on two lines.

R9-3cP is shown as a square white plaque with a black border and the words "RIDE WITH TRAFFIC" in black on three lines. It is shown directly below the R5-1b sign.

R5-3 is shown as a square white sign with a black border and the words "NO MOTOR VEHICLES" in black on three lines.

R5-6 is shown as a square white sign with a black border. A black symbol of a left-facing bicycle is shown with a red circle and diagonal red slash running from the upper left to the lower right superimposed on it.

R7-9 is shown as a vertical rectangular white sign with a red border and the words "NO PARKING" in a panel in the top fourth of the sign. The word "NO" is shown in large white letters on a red panel in the upper left quadrant of the sign to the left of the word "PARKING" in red. Below this panel, the words "BIKE LANE" in red are shown on two lines.

R7-9a is shown as a vertical rectangular white sign with a red border and legend. It shows a black letter "P" inside a red circle with a red diagonal slash superimposed on it above the words "BIKE LANE" in red on two lines.

R9-3 is shown as a square white sign with a black border and a black symbol of a walking person inside a red circle with a diagonal red slash superimposed on the symbol.

R9-5 is shown as a vertical rectangular white sign with a black border and legend. It shows a symbol of a bicycle above the words "USE PED SIGNAL" on three lines.

R9-6 is shown as a vertical rectangular white sign with a black border and legend. It shows a symbol of a bicycle above the words "YIELD TO PEDS" on three lines.

R9-7 is shown as a vertical rectangular white sign with a black border and legend. It shows the word "KEEP" in large letters on the top line, the words "LEFT" and "RIGHT" on the second line, with a symbol of a bicycle under the word "LEFT" and a symbol of a person walking under the word "RIGHT." A vertical black line separates the word "LEFT" and bicycle symbol from the word "RIGHT" and person walking symbol.

R9-13 is shown as a square white sign with a black border and a black symbol of a right-facing helmeted person roller-skating inside a red circle with a diagonal red slash superimposed on the symbol.

R9-14 is shown as a square white sign with a black border and a black symbol of a left-facing horse and rider inside a red circle with a diagonal red slash superimposed on the symbol.

R10-4 is shown as a vertical rectangular white sign with a black border and legend. It shows a black symbol of a left-facing hand with an extended index finger pushing a button. This symbol is above the words "PUSH BUTTON FOR GREEN" in black on three lines above a green disc above a left-facing black arrow.

R10-22 is shown as a vertical rectangular white sign with a black border and legend. It shows the words "TO REQUEST GREEN" on the top two lines above the words "WAIT ON" to the left of a symbol of a person on a bicycle superimposed on a vertical black line.

R10-24 is shown as a vertical rectangular white sign with a black border and legend. It shows a black symbol of a bicycle above a symbol of a left-facing hand with an extended index finger pushing a button. These symbols are above the words "PUSH BUTTON FOR GREEN LIGHT" in black on four lines.

R10-25 is shown as a vertical rectangular white sign with a black border and legend. It shows a black symbol of a left-facing hand with an extended index finger pushing a button. This symbol is above the words "PUSH BUTTON TO TURN ON WARNING LIGHTS " in black on five lines.

R10-26 is shown as a vertical rectangular white sign with a black border and legend. It shows a black symbol of a bicycle above a symbol of a left-facing hand with an extended index finger pushing a button. These symbols are above the words "PUSH BUTTON FOR GREEN LIGHT" in black on four lines above a left-facing black arrow.

R15-1 is shown as composed of two horizontal rectangular white signs placed one on top of the other to form an "x," denoting a crossbuck. In black letters, the word "RAILROAD" is shown on the piece running from northwest to southeast, and the word "CROSSING" is shown on the piece running from southwest to northeast.

R15-2P is shown as an inverted T-shaped white plaque with the numeral "3" in black on the vertical part of the plaque above the word "TRACKS" in black on the horizontal part of the plaque.

R15-8 is shown as a horizontal rectangular white sign with a black border and legend. It shows a two-direction horizontal black arrow above the word "LOOK" in black.

[Back to Chapter 9B](#)

SHARROWS



DEFINITION:

A shared lane marking, or Sharrow, is a bikeway with markings on the ground to: 1) show bicyclists the correct direction of travel; 2) remind bicyclists to ride further from parked cars to prevent “dooring” collisions; and, 3) alert road users of the lateral location bicyclists are likely to occupy within the traveled

way.

The bike sharrows were introduced into the MUTCD 2009 edition and are still being studied. Based on guidance from the Bicycle Friendly Community, as well as many bike transportation professionals from local jurisdictions who have deployed this type of bikeway, it is strongly recommended that significant public outreach occur to inform the community of its meaning and use to bicyclists and operators of motor vehicles alike. Due to the lack of knowledge to motorists and bicyclists around the community about sharrows, education should be key in preventing potential accidents.

The Bicycle Friendly Community and the Oregon Department of Transportation provided much of the guidance and standards below:

SHARROW CHARACTERISTICS:

- Encourages safe passing of bicyclists by motorists
- Reduces the incidence of wrong-way bicycling

SHARROW GUIDANCE:

- Provide a lot of education
- Do not place on major arterials; if used, place on streets with low traffic amounts
- Use on streets with low speeds (20-35 mph)
- Place in rural or residential neighborhoods
- Place on narrow streets so motorists are encouraged to pass cyclist
- Place on roads with high bicycle demand
- On streets with posted 35 mph speeds or faster and motor vehicle volumes higher than roughly 3,000 vehicles per day (vpd), shared lane markings are generally not a preferred treatment. On these streets other bikeway types are preferred.

SHARROW STANDARDS

- Shared Lane Marking should be placed immediately after an intersection and spaced at intervals of 50 to 100 feet along busier streets and up to 250 feet in low traffic streets.⁴
- The Shared Lane marking in use within the United States is the Bike-and-chevron “sharrow,” illustrated in MUTCD figure 9C-9.⁵
- Shared lane markings shall not be used on shoulders or in designated bicycle lanes.
- On streets with posted 25 mph speeds or slower, preferred placement is in the center of the travel lane to minimize wear and encourage bicyclists to occupy the full travel lane.