STATE OF CALIFORNIA• DEPARTMENT OF TRANSPORTATION

POLICY DIRECTIVE

TR-0011 (REV 9/2006)

TRAFFIC OPERATIONS POLICY DIRECTIVE	NUMBER: 11-01	PAGE: 1 of 5
ROBERT COPP, DIVISION CHIEF (Signature)	DATE ISSUED: January 13, 2011	EFFECTIVE DATE: February 01, 2011

SUBJECT:

Amend existing policy and typical applications and adopt new typical applications in the California Manual on Uniform Traffic Control Devices (California MUTCD) for accommodating bicyclists in Temporary Traffic Control (TTC) zones.

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DOES THIS DIRECTIVE AFFECT OR SUPERSEDE ANOTHER DOCUMENT?	☒YES ☐NO	IF YES, DESCRIBE Amends Chapters 6D, 6G & 6H of the California MUTCD.
WILL THIS DIRECTIVE BE INCORPORATED IN THE CALIFORNIA MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES	☒YES ☐NO	IF YES, DESCRIBE Sections 6D.101(CA) & 6G.05, Table 6H-1(CA), Notes and Figures 6H-15, 6H-30, 6H-32(CA), 6H-36, 6H-101(CA), 6H-102(CA), 6H-103(CA) and 6H-104(CA)

DIRECTIVE

Pursuant to the authority granted to the California Department of Transportation (Department) in Section 21400 and 21401 of the California Vehicle Code (CVC), the changes included in this directive for accommodating bicyclists in Temporary Traffic Control (TTC) zones will be included in Part 6 of the California MUTCD, dated January 21, 2010.

IMPLEMENTATION

Although encouraged, it is not required that this policy be applied retroactively to projects that are in design or construction phases.

IMPLEMENTATION (Cont'd)

In this section, for purposes of clarity, strikethrough text is used to denote text in the California MUTCD that is being deleted and italic text is used to denote text that is being added to the California MUTCD. All other formatting as defined under the Definitions section of this Policy Directive is still applicable.

The following policies shall be included in the California MUTCD:

Section 6D.101(CA) Bicycle Considerations

Support:

There are several considerations in planning for bicyclists in TTC zones on highways and streets:

- A travel route that replicates the most desirable characteristics of a wide paved shoulder or bikeway through or around the ~~traffic control~~ *TTC* zone is desirable for bicyclists.
- If the ~~traffic control~~ *TTC* zone interrupts the continuity of an existing bikeway system, signs directing bicyclists through or around the *TTC* zone and back to the bikeway ~~is~~ *are* desirable.
- Unless a separate bike path through or around the ~~traffic control~~ *TTC* zone is provided, adequate roadway lane width to allow bicyclists and motor vehicles to travel side by side through or around the *TTC* zone is desirable.

Standard:

- **Bicyclists ~~must~~ *shall* not be led into direct conflicts with mainline traffic, work site vehicles, or equipment moving through or around the ~~traffic control~~ *TTC* zone.**

Support:

Figures 6H-15(CA), 6H-30(CA), 6H-32(CA), 6H-36(CA), 6H-101(CA), 6H-102(CA), 6H-103(CA), and 6H-104(CA) show typical TTC device usage and techniques for bicycle movement through TTC zones.

The following policies shall be added at the end of California MUTCD Section 6G.05 Work Affecting Pedestrian and Bicycle Facilities:

Guidance:

When existing accommodations for bicycle travel are disrupted or closed in a long-term duration project (see Section 6G.02), information and devices contained in Figures 6H-101(CA) through 6H-104(CA), as appropriate per situation encountered, should be used in order to replicate existing conditions for the needs and control of bicyclists through a TTC zone.

Except for short durations and mobile operations (see Section 6G.02), when a highway shoulder is occupied and bicyclists would be sharing a lane with vehicular traffic, as a result of the TTC zone, a combination of Bicycle crossing (W11-1) and SHARE THE ROAD (W16-1) plaque should be placed in advance of the activity area. When work is performed on a paved shoulder 2.4 m (8 ft) or more in width, channelizing devices should be placed on a taper having a length that conforms to the requirements of a shoulder taper. Signs should be placed such that they do not block the bicyclist's path of travel and they do not narrow any existing pedestrian passages to less than 1200 mm (48 in).

This directive does not recommend any other changes for the remainder of this section at this time.

In all applications of this policy, engineering judgment must be exercised. The objective is to provide the uniform application of traffic control devices in TTC zones statewide. If there are any questions regarding implementation, districts should consult with the Headquarters Traffic Operations Liaison.

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DELEGATION

No new delegations of authority are created under this policy.

BACKGROUND

The revision of existing signs and inclusion of new signs in the California MUTCD is a common practice based upon need. The Department, pursuant to CVC Section 21400; must conduct public hearings before it can revise existing policies for traffic control devices and approve new signs for use on public roadways. The California Traffic Control Devices Committee (CTCDC) is the forum used to satisfy this requirement.

California's Strategic Highway Safety Plan, or SHSP, is a statewide, comprehensive, data-driven plan that provides a coordinated framework for reducing fatalities and serious injuries on California's public roads. The SHSP establishes statewide goals, objectives, strategies and specific Actions to address California's safety needs. The SHSP identifies 152 key Actions in 16 Challenge Areas to meet these needs.

This proposal is a result of two of these 152 specific key Actions. Representatives on the statewide SHSP Challenge Areas 13 (Improve Bicycling Safety) and 14 (Enhance Work Zone Safety) teams have extensively discussed the topic and developed this proposal over several meetings throughout this year. Following are the specific SHSP identified Actions pursuant to which this recommendation is being made:

- 13.6 - Provide improved guidance and standards in the CAMUTCD for safely accommodating bicyclists in work zones.
- 14.12 - Encourage present efforts to improve access and detours for bicyclists and pedestrians near work zones.

Following are some excerpts of the recommendations that were specifically identified in the Safety Needs Action Plan (SNAP) for Challenge Area 13 & 14 and key Actions 13.6 & 14.12:

"Develop more detailed plans to accommodate bicyclists in work zones."

"Additional designs needed to better address bicyclists in work zones."

"By improving the designs of traffic control in work areas to accommodate pedestrians and bicycles, non-compliance for these two groups will be reduced and correspondingly so will their risk of injury."

"The CA MUTCD currently has standards and guidance to accommodate pedestrians. It can be anticipated that any typical applications developed to accommodate bicycles should not be as expensive to implement as those for pedestrians."

"Standards and guidance for pedestrians exists but needs to be applied in the field. More work is needed to provide the same level of detail for bicycles."

"Work with FHWA, Caltrans, Challenge Area 14 and the National Committee on Uniform Traffic Control Devices, Bicycle Technical Committee to improve the Manual of Uniform Traffic Control Devices (MUTCD), Part 6, Temporary Traffic Control, to provide improved guidance and standards by incorporating bicycle travel considerations in all situations where bicycle travel is permitted."

"The California MUTCD emphasizes the importance of accommodating bicyclists and pedestrian in work zones but does not provide sufficient guidance on bicycles. Implementation of this strategy will provide better tools."

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BACKGROUND (Cont'd)

This proposal has been reviewed by the California Bicycle Advisory Committee (CBAC) at their October and December meetings and reflects their comments and suggestions. At the December 3, 2009 meeting of the CBAC, the committee reviewed the finalized proposal and recommended approval and support for placing it on the CTCDC agenda.

The CTCDC reviewed this item at their January 21, 2010 meeting in San Diego and made a recommendation for adopting this proposal while incorporating the comments into the California MUTCD. The modified proposal was discussed at the April 15, 2010 CTCDC meeting in Sacramento to ensure that CTCDC's previous comments and concerns had been addressed. The CTCDC was supportive of the proposal.

This proposal was initiated by and discussed on a monthly basis with the SHSP task force members to ensure that it complied with the Action.

This proposal was circulated for review and comment to all Deputy District Directors in Traffic Operations and Headquarters Division Chiefs in Construction, Maintenance, Design, Legal and Engineering Services on May 13, 2010. The final proposal incorporates many of the comments that were submitted as part of this review process.

The Federal Highway Administration has reviewed the proposed modifications to the California MUTCD and has determined that they are in substantial compliance with the National MUTCD.

This policy will be retired when it is incorporated in the next revision of the California MUTCD.

DEFINITIONS

When used in this Traffic Operations Policy Directive, the text shall be defined as follows:

1) **Standard** – a statement of required, mandatory or specifically prohibited practice. All standards text appears in **bold** type. The verb **shall** is typically used. Standards are sometimes modified by Options.

2) Guidance – a statement of recommended, but not mandatory, practice in typical situations, with deviations allowed if engineering judgment or engineering study indicates the deviation to be appropriate. All Guidance statements text appears in underline type. The verb should is typically used. Guidance statements are sometime modified by Options.

3) Option – a statement of practice that is a permissive condition and carries no requirement or recommendation. Options may contain allowable modifications to a Standard or Guidance. All Option statements text appears in normal type. The verb may is typically used.

4) Support – an informational statement that does not convey any degree pf mandate, recommendation, authorization, prohibition, or enforceable condition. Support statements text appears in normal type. The verbs shall, should and may are not used in Support statements.

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ATTACHMENTS

1. Table 6H-1(CA)
2. Notes for Figure 6H-15 – Typical Application 15
3. Figure 6H-15
4. Notes for Figure 6H-30 – Typical Application 30
5. Figure 6H-30
6. Notes for Figure 6H-32(CA) – Typical Application 32(CA)
7. Figure 6H-32(CA)
8. Notes for Figure 6H-36 – Typical Application 36
9. Figure 6H-36
10. Notes for Figure 6H-101(CA) – Typical Application 101(CA)
11. Figure 6H-101(CA)
12. Notes for Figure 6H-102(CA) – Typical Application 102(CA)
13. Figure 6H-102(CA)
14. Notes for Figure 6H-103(CA) – Typical Application 103(CA)
15. Figure 6H-103(CA)
16. Notes for Figure 6H-104(CA) – Typical Application 104(CA)
17. Figure 6H-104(CA)

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Table 6H-1(CA). Index to Typical Applications

Typical Application Description	Typical Application Number
Work affecting Pedestrian and Bicycle Facilities (see Section 6G.05)	
Shoulder Closure on Urban (Low Speed) Locations to Accommodate Bicyclists	TA-101(CA)
Lane Closure on Freeway, Expressway, Rural and Urban (High Speed) Locations to Accommodate Bicyclists	TA-102(CA)
Detour for Bike Lane on Roads with Closure of One Travel Direction	TA-103(CA)
Right Lane and Bike Lane Closure on Far Side of Intersection	TA-104(CA)

Notes for Figure 6H-15 – Typical Application 15

Work in Center of Road with Low Traffic Volumes

Guidance:

1. The lanes on either side of the center work space should have a minimum width of 3 m (10 ft) as measured from the near edge of the channelizing devices to the edge of pavement or the outside edge of paved shoulder.
2. Workers in the roadway should wear high-visibility safety apparel as described in Section 6D.03.

Option:

3. Flashing warning lights and/or flags may be used to call attention to the advance warning signs.
4. If the closure continues overnight, warning lights may be used on the channelizing devices.
5. A lane width of 2.7 m (9 ft) may be used for short-term stationary work on low-volume, low-speed roadways when motor vehicle traffic does not include longer and wider heavy commercial vehicles.

Standard:

Note 5 is not applicable for State highways. Note #1 shall be used instead for State highways.

Option:

6. A work vehicle displaying high-intensity rotating, flashing, oscillating, or strobe lights may be used instead of the channelizing devices forming the tapers or the high-level warning devices.
7. Vehicle hazard warning signals may be used to supplement high-intensity rotating, flashing, oscillating, or strobe lights.

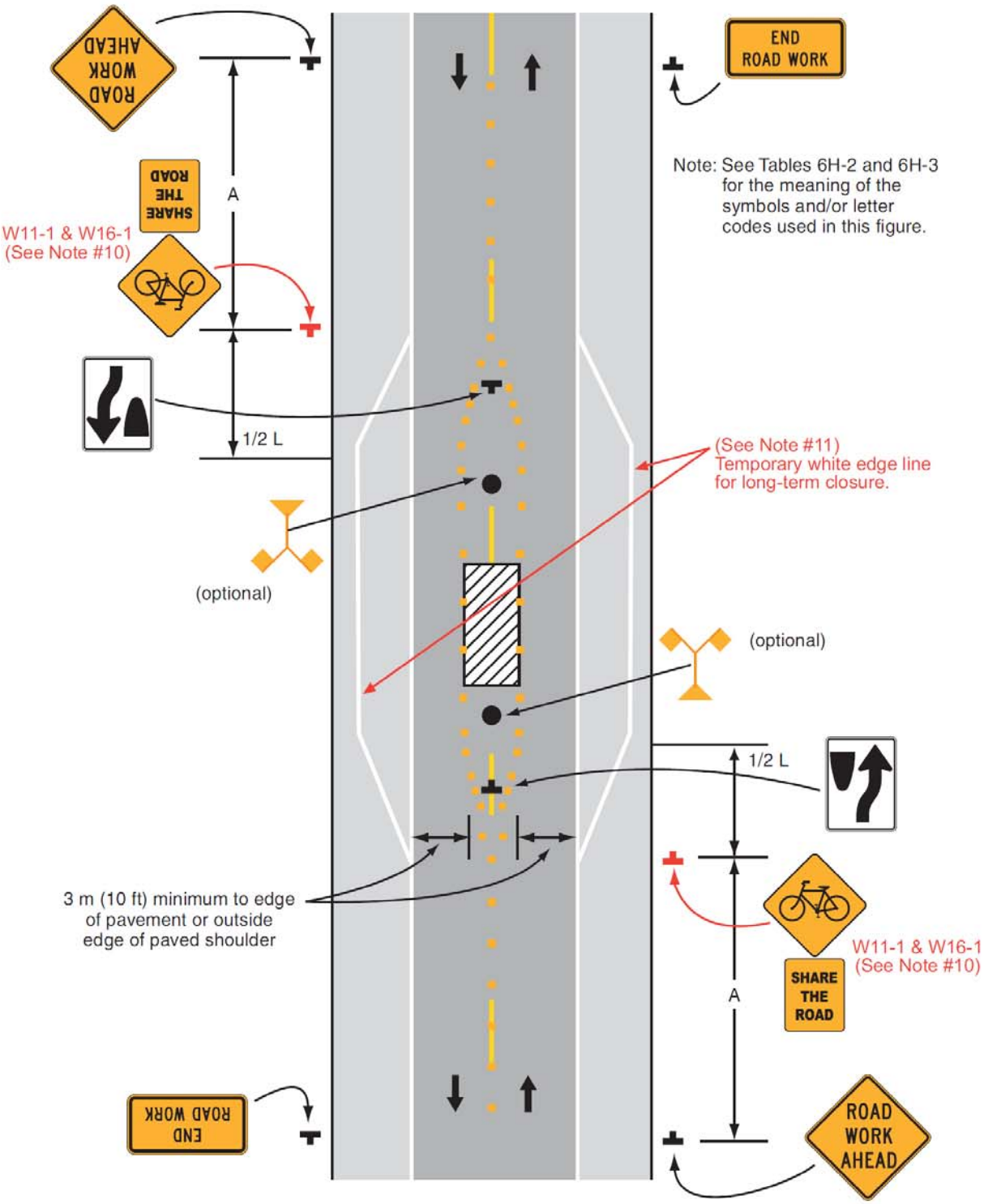
Standard:

8. Vehicle hazard warning signals shall not be used instead of the vehicle's high-intensity rotating, flashing, oscillating, or strobe lights.

Guidance:

9. All advance warning signs should be placed so that the path of travel for bicycles is not blocked while maintaining visibility for road users.
10. When existing accommodations for bicycle travel are disrupted or closed in a long-term duration project (see Section 6G.02) and the roadway width is inadequate for allowing bicyclists and motor vehicles to travel side by side, the Bicycle Crossing (W11-1) sign and the SHARE THE ROAD (W16-1) plaque should be used to advise motorists of the presence of bicyclists in the travel way lanes.
11. When existing accommodations for bicycle travel are disrupted or closed in a long-term duration project (see Section 6G.02), the temporary white edge line should be used on the shoulder to indicate the use of a portion of the shoulder as a traveled way lane.

Figure 6H-15. Work in Center of Road with Low Traffic Volumes (TA-15)



Typical Application 15

Notes for Figure 6H-30 – Typical Application 30

Interior Lane Closure on Multi-lane Street

Guidance:

1. This information applies to low-speed, low-volume urban streets. Where speed or volume is higher, additional signing such as LEFT LANE CLOSED XX ~~m~~ (FT) should be used between the signs shown.

Option:

2. The closure of the adjacent interior lane in the opposing direction may not be necessary, depending upon the activity being performed and the work space needed for the operation.
3. Shadow vehicles with a truck-mounted attenuator may be used.

Guidance:

4. When a highway-rail grade crossing exists within or upstream of the transition area and it is anticipated that backups resulting from the lane closure might extend through the highway-rail grade crossing, the TTC zone should be extended so that the transition area precedes the highway-rail grade crossing.
5. Early coordination with the railroad company should occur before work starts.

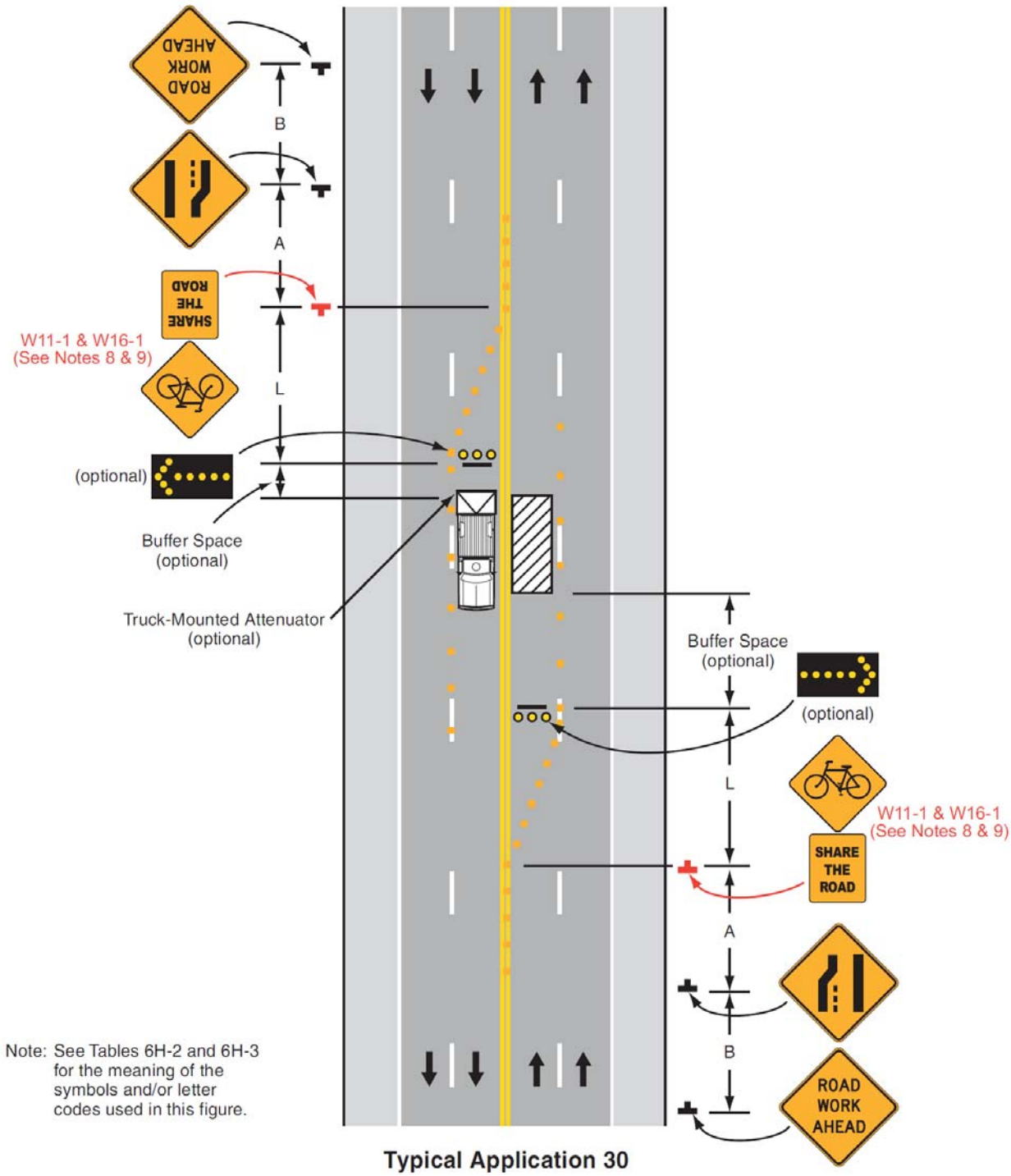
Option:

6. The RIGHT (LEFT) LANE(S) CLOSED (W20-5) sign may be used instead of the Lane Reduction (W4-2) sign.

Guidance:

7. All advance warning signs should be placed so that the path of travel for bicycles is not blocked, while maintaining visibility for road users.
8. When existing accommodations for bicycle travel are disrupted or closed in a long-term duration project (see Section 6G.02) and the roadway width is inadequate for allowing bicyclists and motor vehicles to travel side by side, the Bicycle Crossing (W11-1) sign and the SHARE THE ROAD (W16-1) plaque should be used to advise motorists of the presence of bicyclists in the travel way lanes.
9. If bicyclists are able to use the shoulder throughout the TTC zone, the Bicycle Crossing (W11-1) sign and the SHARE THE ROAD (W16-1) plaque should be omitted.

Figure 6H-30. Interior Lane Closure on Multi-lane Street (TA-30)



Note: See Tables 6H-2 and 6H-3 for the meaning of the symbols and/or letter codes used in this figure.

Typical Application 30

Notes for Figure 6H-32 6H-32(CA)—Typical Application 32

Half Road Closure on Multi-lane, High-Speed Highway

Standard:

1. **Pavement markings no longer applicable shall be removed or obliterated as soon as practical. Except for intermediate-term and short-term situations, temporary markings shall be provided to clearly delineate the temporary travel path. For short-term and intermediate-term situations where it is not feasible to remove and restore pavement markings, channelization shall be made dominant by using a very close device spacing.**

Guidance:

2. When paved shoulders having a width of 2.4 m (8 ft) or more are closed, channelizing devices should be used to close the shoulder in advance of the merging taper to direct vehicular traffic to remain within the traveled way.
3. Where channelizing devices are used instead of pavement markings, the maximum spacing should be 0.1 S meters where S is the speed in km/h (0.5 S feet where S is the speed in mph). The spacing of channelizing devices should not exceed the maximum distances shown in Table 6F-102(CA). Refer to Section 6F.58 for spacing of channelizing devices.
4. If the tangent distance along the temporary diversion is more than 180 m (600 ft), a Reverse Curve sign, left first, should be used instead of the Double Reverse Curve sign, and a second Reverse Curve sign, right first, should be placed in advance of the second reverse curve back to the original alignment.

Option:

5. Warning lights may be used to supplement channelizing devices at night.

Guidance:

6. When a highway-rail grade crossing exists within or upstream of the merging taper and it is anticipated that backups resulting from the lane closure might extend through the highway-rail grade crossing, the TTC zone should be extended so that the merging taper precedes the highway-rail grade crossing.
7. When a highway-rail grade crossing exists within the activity area, provisions should be made to provide road users operating on the left side of the normal centerline with comparable warning devices as supplied for road users operating on the right side of the normal centerline.
8. When a highway-rail grade crossing exists within the activity area, early coordination with the railroad company should occur before work starts.

Option:

9. When a highway-rail grade crossing exists within the activity area, a flagger may be used at the highway-rail grade crossing to minimize the probability that vehicles are stopped within 4.6 m (15 ft) of the highway-rail grade crossing, measured from both sides of the outside rails.
10. A truck-mounted attenuator may be used on the work vehicle and/or the shadow vehicle.

Guidance:

11. On State highways a spacing of 3 m (10 ft) should be used for taper and tangent sections.

Support:

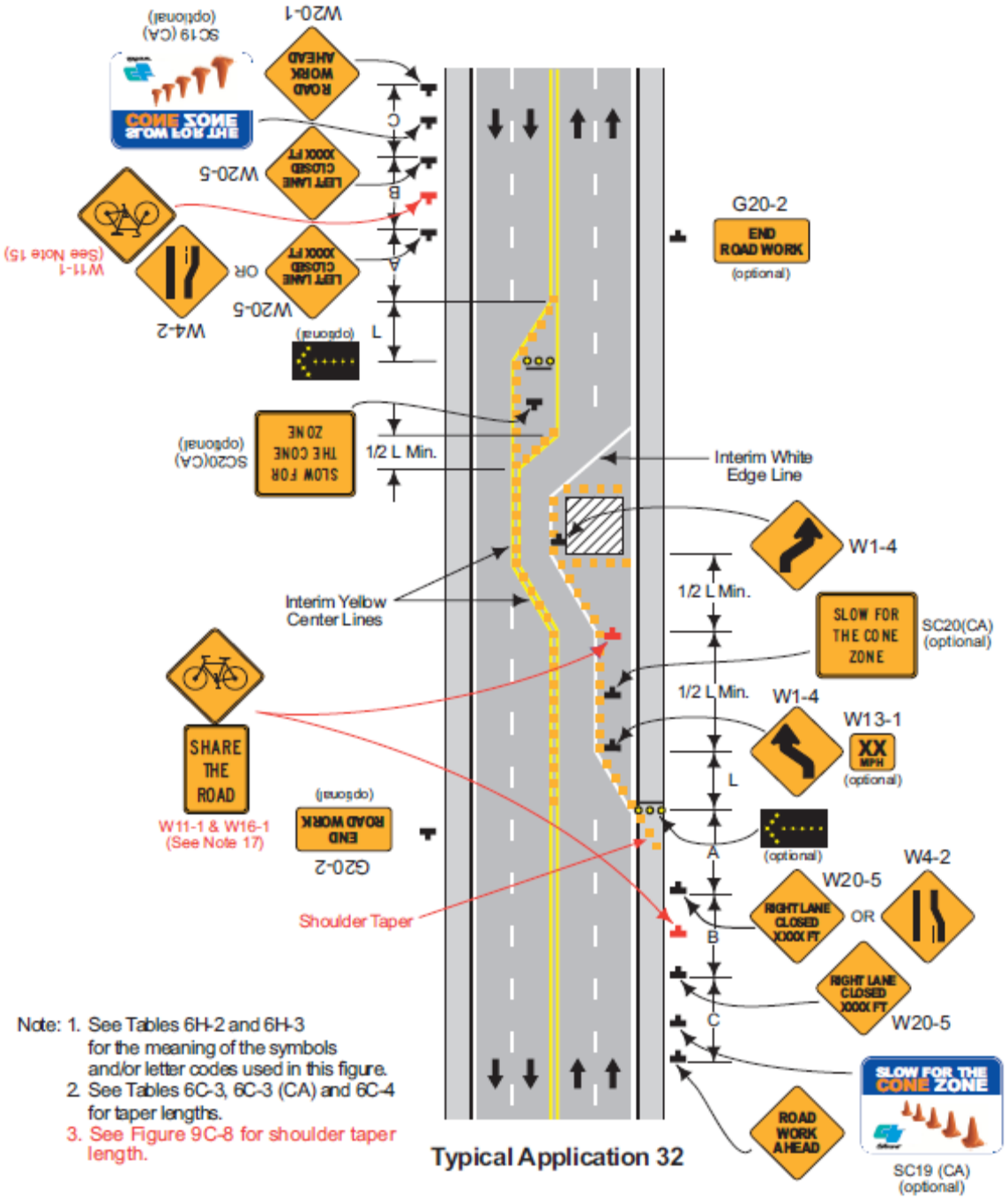
12. See Section 6F.109(CA) for use of the Slow For The Cone Zone (SC19(CA) and SC20(CA)) Signs.

Guidance:

13. All advance warning signs should be placed so that the path of travel for bicycles is not blocked, while maintaining visibility for road users.
14. If bicyclists are able to use the shoulder throughout the TTC zone, the Bicycle Crossing (W11-1) sign and the SHARE THE ROAD (W16-1) plaque should be omitted.
15. The speeds used for the shoulder taper calculations should be of bicyclists in the project vicinity or if a special event such as a bike race, the expected speed of bicyclists approaching the TTC zone.

16. If bicyclists are sharing the traveled way lanes with motorists, speed reduction countermeasures should be used to reduce traffic speeds in the TTC zone. Refer to Sections 6C.01 and 6D.03.
17. When existing accommodations for bicycle travel are disrupted or closed in a long-term duration project (see Section 6G.02) and the roadway width is inadequate for allowing bicyclists and motor vehicles to travel side by side, the Bicycle Crossing (W11-1) sign and the SHARE THE ROAD (W16-1) plaque should be used to advise motorists of the presence of bicyclists in the travel way lanes.

Figure 6H-32 (CA). Half Road Closure on a Multilane, High-Speed Highway (TA-32)



Note: 1. See Tables 6H-2 and 6H-3 for the meaning of the symbols and/or letter codes used in this figure.
2. See Tables 6C-3, 6C-3 (CA) and 6C-4 for taper lengths.
3. See Figure 9C-8 for shoulder taper length.

Notes for Figure 6H-36—Typical Application 36

Lane Shift on Freeway

Guidance:

1. The lane shift should be used when the work space extends into either the right or left lane of a divided highway and it is not practical, for capacity reasons, to reduce the number of available lanes.
2. When a lane shift is accomplished by using (1) geometry that meets the design speed at which the permanent highway was designed, (2) full normal cross-section (full lane width and full shoulders), and (3) complete pavement markings, then only the initial general work-zone warning sign is required.
3. When the conditions in Note 2 are not met, the information shown in the typical application should be employed and all the following notes apply.

Standard:

4. Where temporary traffic barriers are installed, the ends of the barrier shall be treated in accordance with the provisions of Section 6F.81.

5. A warning sign shall be used to show the changed alignment.

Guidance:

6. Where the shifted section is longer than 180 m (600 ft), one set of Reverse Curve signs should be used to show the initial shift and a second set should be used to show the return to the normal alignment. If the tangent distance along the temporary diversion is less than 180 m (600 ft), the Double Reverse Curve sign should be used instead of the first Reverse Curve sign. The second Reverse Curve sign should be omitted. Use the Reverse Curve (W1-4) signs for both locations instead of the Double Reverse Curve (W24-1) sign.
7. If a STAY IN LANE sign is used, then solid white lane lines should be used.

Standard:

8. The minimum width of the shoulder lane shall be 3 m (10 ft).

9. For long-term stationary work, existing conflicting pavement markings shall be removed and temporary markings shall be installed before traffic patterns are changed.

Option:

10. For short-term stationary work, lanes may be delineated by channelizing devices or removable pavement markings instead of temporary pavement markings.
11. ~~Three Lane Reverse Curve signs may be used in place of the Reverse Curve signs.~~ ALL LANES THRU supplemental plaques may be used to emphasize the point that all lanes shift and no lanes are closed. Use the Reverse Curve (W1-4) signs instead of the Reverse Curve (W1-4a & W1-4b) signs which show the number of lanes or ALL LANES THRU Plaque.
12. If the shoulder cannot adequately accommodate trucks, trucks may be directed to use the travel lanes.
13. The barrier shown in this typical application is one method that may be used to close a lane for a long term project.

Guidance:

14. The use of a barrier should be based on engineering judgment.

Option:

15. Type C Steady-Burn warning lights may be placed on channelizing devices and the barrier parallel to the edge of pavement for nighttime lane closures.
16. Detail 11 (see Figure 3A-102(CA)) may be used instead of the temporary solid white lane line, which is shown in Figure 6H-36.

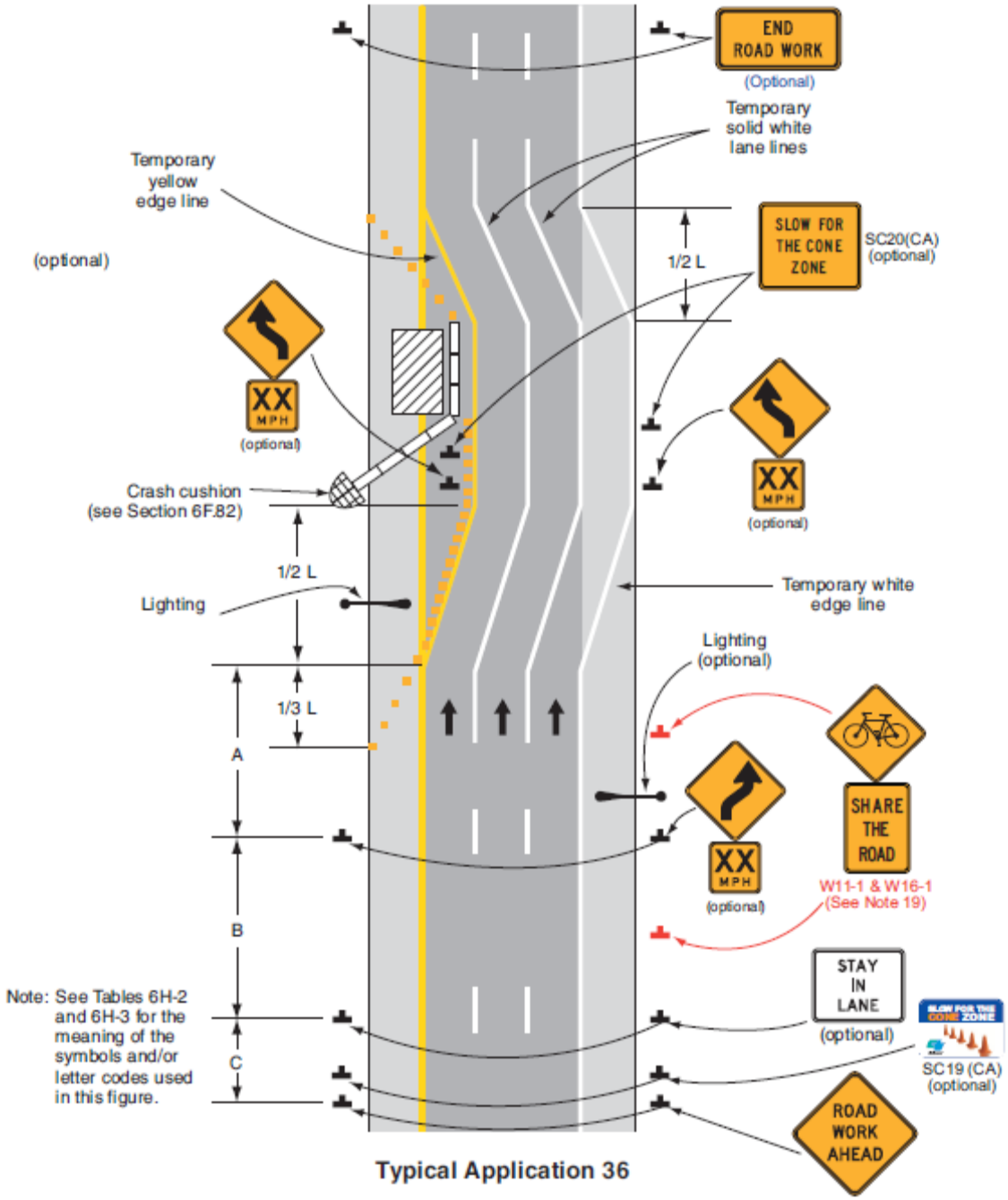
Support:

17. See Section 6F.109(CA) for use of the Slow For The Cone Zone (SC19(CA) and SC20(CA)) Signs.

Guidance:

18. All advance warning signs should be placed so that the path of travel for bicycles is not blocked, while maintaining visibility for road users.
19. When existing accommodations for bicycle travel are disrupted or closed in a long-term duration project (see Section 6G.02) and the roadway width is inadequate for allowing bicyclists and motor vehicles to travel side by side, the Bicycle Crossing (W11-1) sign and the SHARE THE ROAD (W16-1) plaque should be used to advise motorists of the presence of bicyclists in the travel way lanes.
20. Except for short durations and mobile operations, when a highway shoulder is occupied and bicyclists would be sharing a lane with vehicular traffic, as a result of the TTC zone, speed reduction countermeasures should be used to reduce traffic speeds in the TTC zone. Refer to Sections 6C.01 and 6D.03.
21. Except for short durations and mobile operations, when a highway shoulder is occupied and bicyclists would be sharing a lane with vehicular traffic, as a result of the TTC zone, before narrowing the outside lane other measures such as widening the outside shoulder to allow bicyclists and motor vehicles to travel side by side through the TTC zone should be considered.
22. If traffic volumes make it feasible, the two left lanes should be merged into one lane to avoid using the shoulder as a traveled way lane and allowing continued use for emergency purposes and bicycle travel.
23. When existing accommodations for bicycle travel are disrupted or closed in a long-term duration project (see Section 6G.02) and the roadway width is inadequate for allowing bicyclists and motor vehicles to travel side by side, a separate path should be considered for bicyclists.

Figure 6H-36 (CA). Lane Shift on Freeway (TA-36)



Typical Application 36

Notes for Figure 6H-101CA) – Typical Application 101(CA)

Shoulder Closure on Urban (Low Speed) locations to accommodate bicyclists

Guidance:

1. When existing accommodations for bicycle travel are disrupted or closed, information and devices contained in Figures 6H-101(CA) through 6H-104(CA), as appropriate per situation encountered, should be used to consider the needs and control of bicyclists through a TTC zone.
2. SHOULDER CLOSED signs should be used on limited-access roadways where there is no opportunity for disabled vehicles to pull off the roadway.
3. If drivers cannot see a pull-off area beyond the closed shoulder, information regarding the length of the shoulder closure should be provided in feet or miles, as appropriate.
4. The use of a temporary traffic barrier should be based on engineering judgment.

Standard:

5. Where temporary traffic barriers are installed, the ends of the barrier shall be treated in accordance with the provisions of Section 6F.81.

Option:

6. The barrier shown in this typical application is an example of one method that may be used to close a shoulder of a long-term project.
7. The warning lights shown on the barrier may be used.

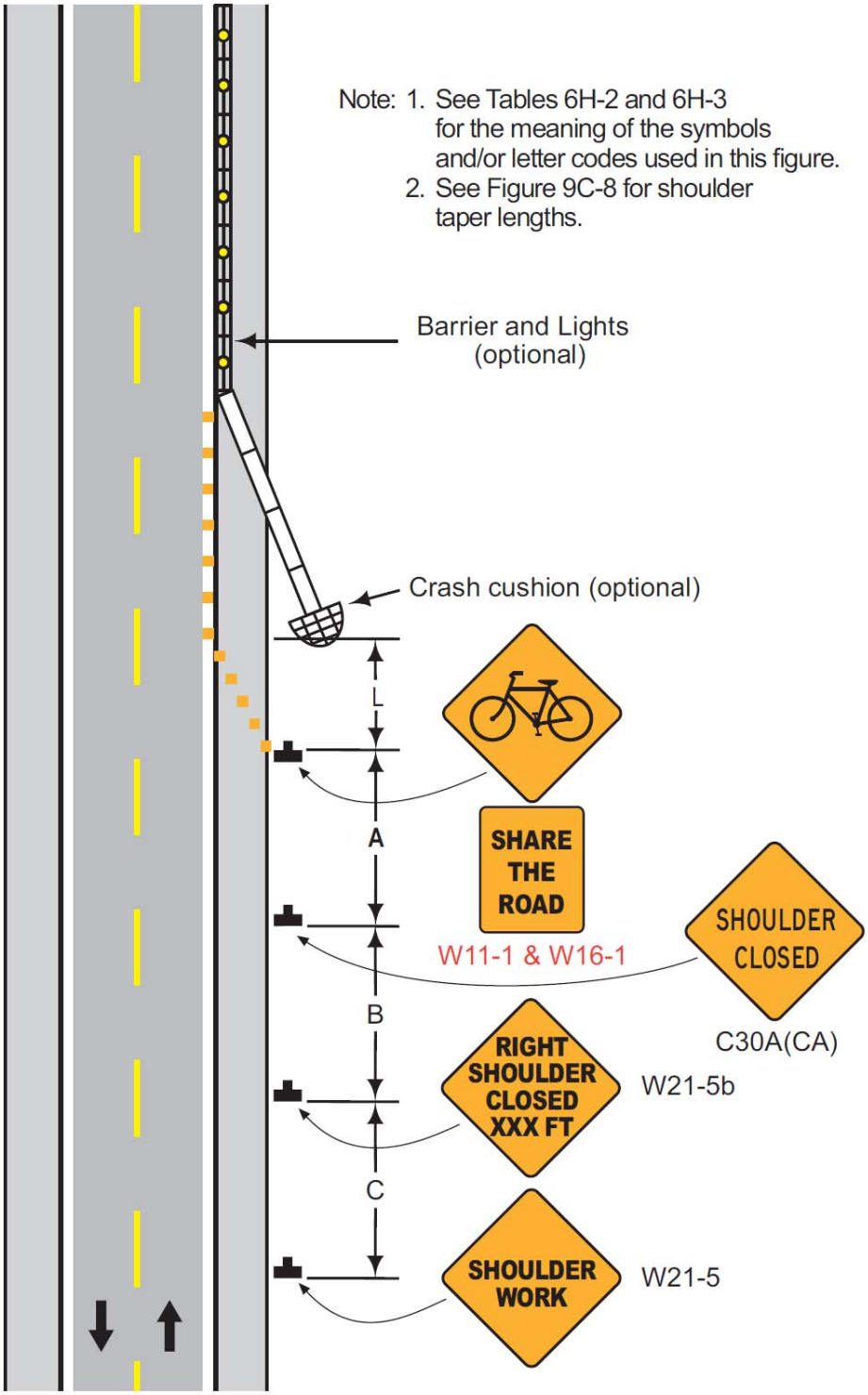
Standard:

8. The minimum offset from the upstream end of the barrier to the edge of the traveled way shall be at least 4.6 m (15 ft) unless shielded by a crash cushion.

Guidance:

9. This typical application should only be used in urban areas where posted speed is 25 mph or less. For applications on roadway with a posted speed of 30 mph or more use typical application TA-102(CA).
10. All advance warning signs should be placed so that the path of travel for bicycles is not blocked, while maintaining visibility for road users.
11. Where feasible, an adequate lane width should be provided to allow bicyclists and motor vehicles to travel side by side throughout the TTC zone.
12. The speeds used for the shoulder taper calculations should be of bicyclists in the project vicinity or if a special event such as a bike race, the expected speed of bicyclists approaching the TTC zone.

Figure 6H-101 (CA). Shoulder Closure on Urban (Low Speed) locations to accommodate bicyclists (TA-101 (CA))



Notes for Figure 6H-102(CA) – Typical Application 102(CA)

Lane Closure on Freeway, Expressway, Rural and Urban (High Speed) locations to accommodate bicyclists

Guidance:

1. When existing accommodations for bicycle travel are disrupted or closed, information and devices contained in Figures 6H-101(CA) through 6H-104(CA), as appropriate per situation encountered, should be used to consider the needs and control of bicyclists through a TTC zone.
2. SHOULDER CLOSED signs should be used on limited-access highways where there is no opportunity for disabled vehicles to pull off the roadway.
3. If drivers cannot see a pull-off area beyond the closed shoulder, information regarding the length of the shoulder closure should be provided in feet or miles, as appropriate.
4. The use of a temporary traffic barrier should be based on engineering judgment.

Standard:

5. Where temporary traffic barriers are installed, the ends of the barrier shall be treated in accordance with the provisions of Section 6F.81.

Option:

6. The barrier shown in this typical application is an example of one method that may be used to close a shoulder of a long-term project.
7. The warning lights shown on the barrier may be used.

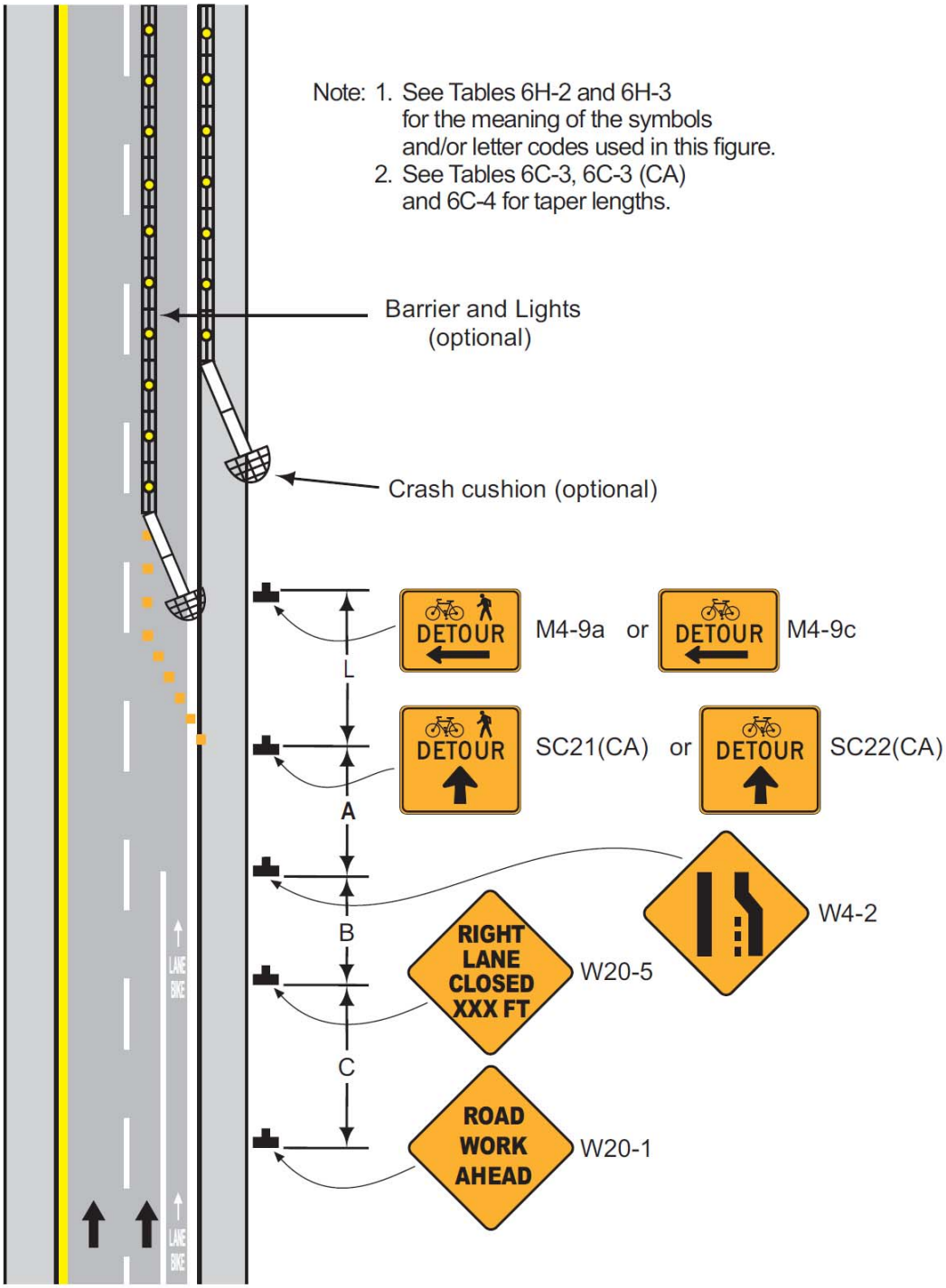
Standard:

8. The minimum offset from the upstream end of the barrier to the edge of the traveled way shall be at least 4.6 m (15 ft) unless shielded by a crash cushion.

Guidance:

9. All advance warning signs should be placed so that the path of travel for bicycles is not blocked, while maintaining visibility for road users.
10. The width of the existing pedestrian facility should be provided for the temporary facility, if practical. When it is not possible to maintain a minimum width of 60 in. throughout the entire length of the pedestrian pathway, a 60 x 60 in. passing space should be provided at least every 200 ft. to allow individuals in wheelchairs to pass.

Figure 6H-102 (CA). Lane Closure on Freeway, Expressway, Rural and Urban (High Speed) locations to accommodate bicyclists (TA-102 (CA))



Typical Application 102 (CA)

Notes for Figure 6H-103(CA)—Typical Application 103(CA)

Detour for Bike Lane on Roads with Closure of One Travel Direction

Guidance:

1. When existing accommodations for bicycle travel are disrupted or closed, information and devices contained in Figures 6H-101(CA) through 6H-104(CA), as appropriate per situation encountered, should be used to consider the needs and control of bicyclists through a TTC zone.
2. This plan should be used for streets without posted route numbers.
3. On multi-lane streets, Detour signs with an Advance Turn Arrow should be used in advance of a turn.

Option:

4. The STREET CLOSED legend may be used in place of ROAD CLOSED.
5. Additional DO NOT ENTER signs may be used at intersections with intervening streets.
6. Warning lights may be used on Type III Barricades.
7. Detour signs may be located on the far side of intersections.
8. A Street Name sign may be mounted with the Detour sign. The Street Name sign may be either white on green or black on orange.

Standard:

9. When used, the Street Name sign shall be placed above the Detour sign.

Guidance:

10. The DETOUR (M4-8) sign should be placed on tangent sections at intervals not to exceed 1300 ft and at major intersections.

Option:

11. In urban areas, the M4-8 signs may be placed at every intersection.

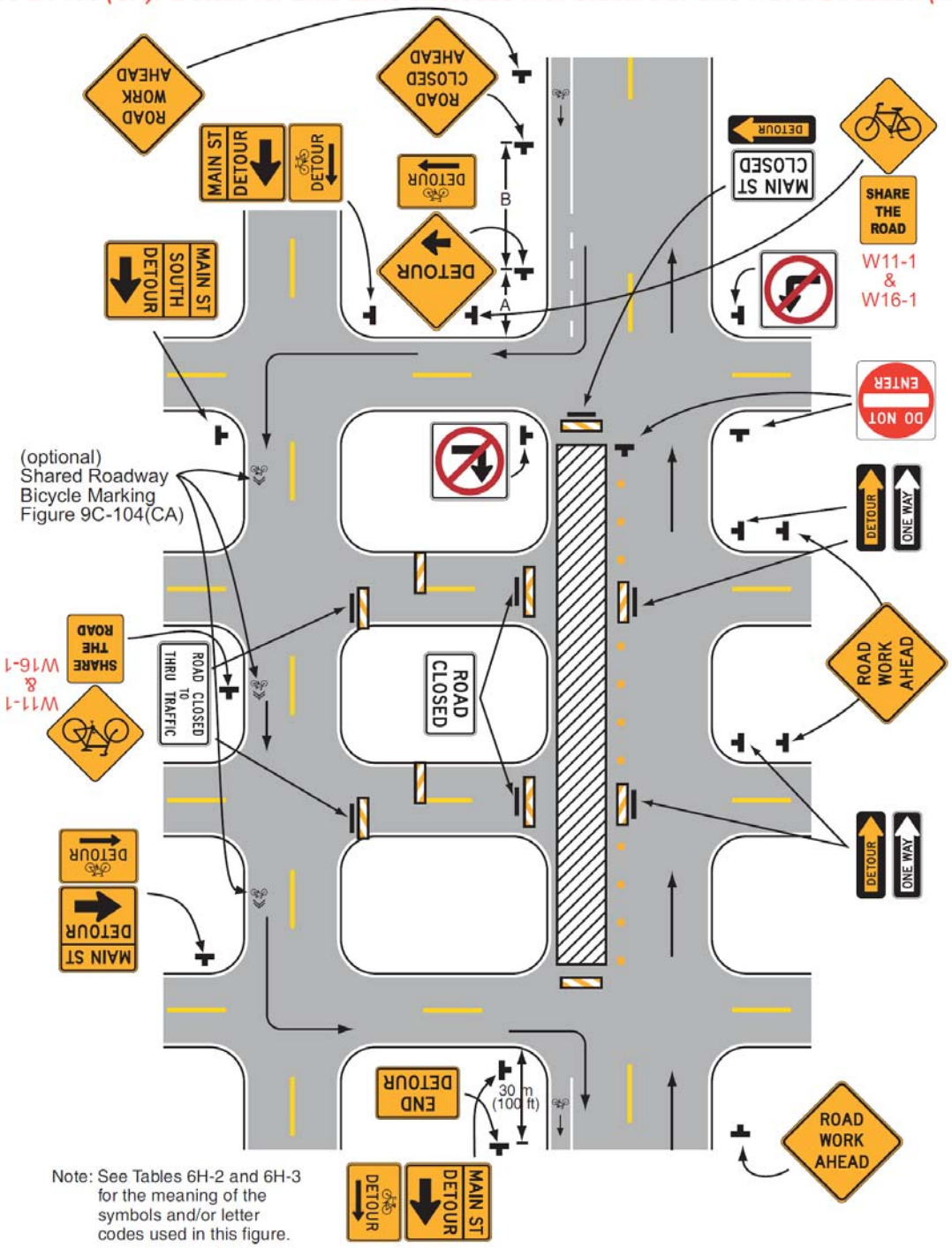
Guidance:

12. When the detour is applicable to bicyclists and not pedestrians, the Bicycle Detour (M4-9c) sign should be used instead of the Pedestrian/Bicycle Detour (M4-9a) sign.
13. All advance warning signs should be placed so that the path of travel for bicycles is not blocked, while maintaining visibility for road users.

Option:

14. For long-term duration projects (see Section 6G.02), the shared roadway bicycle marking may be used along detours with on-street parking and inadequate lane width.

Figure 6H-103 (CA). Detour for Bike Lane on Roads with Closure of One Travel Direction (TA-103 (CA))



Note: See Tables 6H-2 and 6H-3 for the meaning of the symbols and/or letter codes used in this figure.

Typical Application 103 (CA)

Notes for Figure 6H-104(CA)—Typical Application 104(CA)

Right Lane and Bike Lane Closure on Far Side of Intersection

Guidance:

1. When existing accommodations for bicycle travel are disrupted or closed, information and devices contained in Figures 6H-101(CA) through 6H-104(CA), as appropriate per situation encountered, should be used to consider the needs and control of bicyclists through a TTC zone.
2. If the work space extends across a crosswalk, the crosswalk should be closed using the information and devices shown in Figure 6H-29.

Option:

3. The normal procedure is to close on the near side of the intersection any lane that is not carried through the intersection. However, when this results in the closure of a right lane having significant right turning movements, then the right lane may be restricted to right turns only, as shown. This procedure increases the through capacity by eliminating right turns from the open through lane.
4. For intersection approaches reduced to a single lane, left-turning movements may be prohibited to maintain capacity for through vehicular traffic.
5. Flashing warning lights and/or flags may be used to call attention to the advance warning signs.
6. Where the turning radius is large, it may be possible to create a right-turn island using channelizing devices or pavement markings.

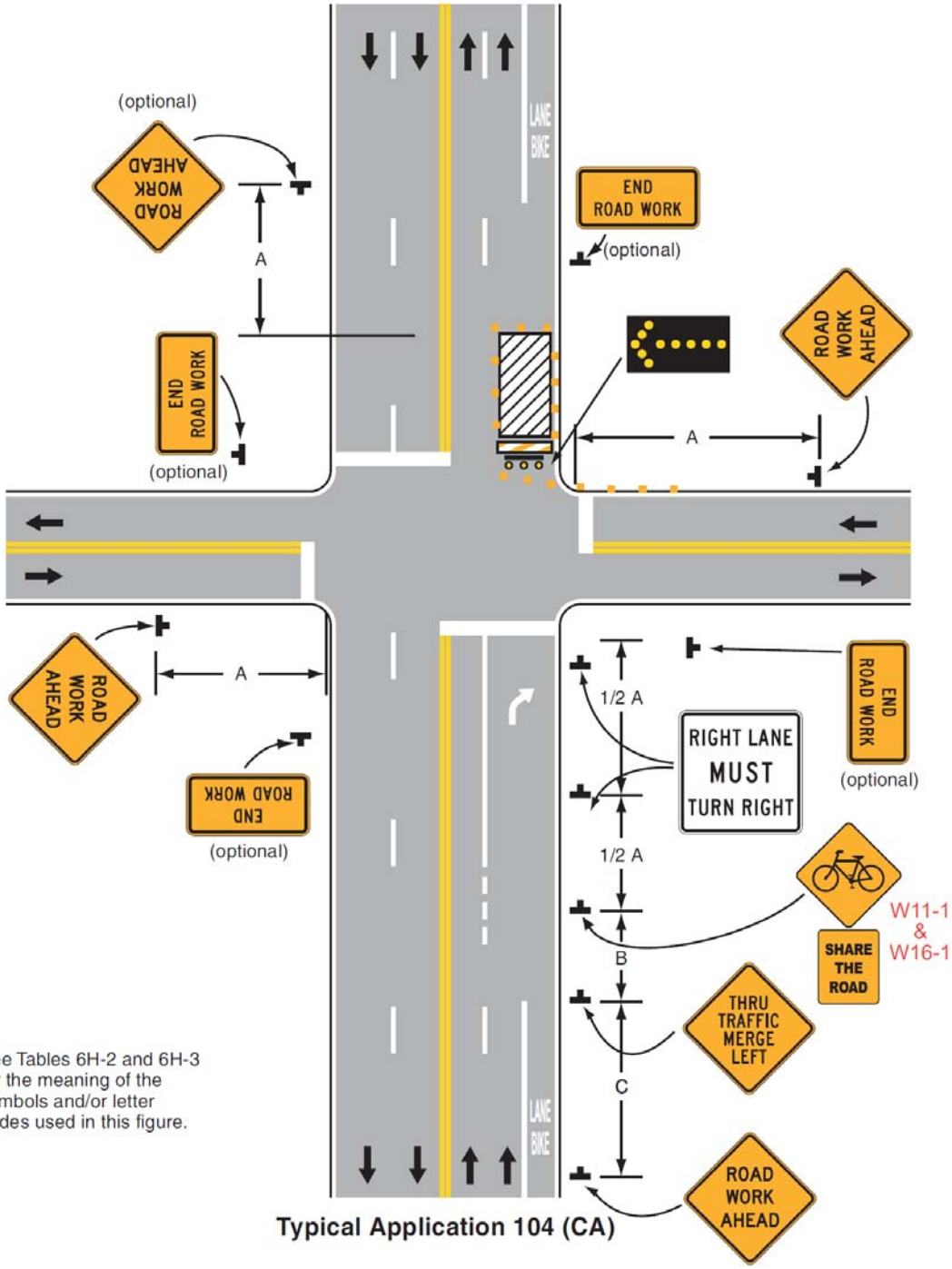
Guidance:

7. All advance warning signs should be placed so that the path of travel for bicycles is not blocked, while maintaining visibility for road users.
8. For long-term duration projects (see Section 6G.02), consideration should be given to installing signs in an overhead location.

Option:

9. A high-level warning device (flag tree) may supplement the advance warning signs. Refer to Section 6F.57.

Figure 6H-104 (CA). Right Lane and Bike Lane Closure on Far Side of Intersection (TA-104 (CA))



Note: See Tables 6H-2 and 6H-3 for the meaning of the symbols and/or letter codes used in this figure.

Typical Application 104 (CA)