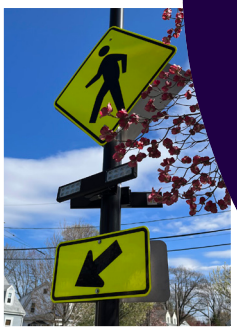
The Massachusetts Amendments to the 11th Edition of the Manual on Uniform Traffic Control Devices

for Streets and Highways

January 2026











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MassDOT
Massachusetts Department of Transportation
Highway Division

INTRODUCTION

Section I.1 Background

01 The Massachusetts Amendments to the *Manual on Uniform Traffic Control Devices for Streets and Highways* (MUTCD) has been correlated with and conforms, as closely as Massachusetts laws and conditions will allow, to the standards adopted by the Federal Highway Administrator as a National Standard for application on all Classes of Highways.

02 Modifications that were deemed necessary to cover local requirements and to incorporate in these official standards the most recent traffic engineering recommendations of MassDOT have been made and are hereby presented as Amendments and addenda in the manual as the OFFICIAL STANDARDS OF THE MASSACHUSETTS DEPARTMENT OF TRANSPORTATION, HIGHWAY DIVISION (MassDOT), as authorized by Chapter 85, Section 2 of the General Laws.

Section I.2 How to Use This Document

01 All Standards, Guidance, Options, Support, Tables, Figures, and References found in FHWA's MUTCD (2023 11th Edition) shall be considered official unless specifically amended in this document in one of the following ways:

A. An existing Section, Paragraph, Table, or Figure from the FHWA MUTCD has been *deleted*. Where this occurs the applicable Section name will be shown in this document and the portion(s) of it to be removed will be listed. The deleted portion(s) are no longer applicable to traffic control devices in Massachusetts.
B. A new Section, Paragraph, Table, or Figure has been *inserted*. Where this occurs the applicable Section name will be shown in this document and the new portion will be inserted in the appropriate place based upon its Section or Paragraph number (e.g. Section 7A.03 in this document follows Section 7A.02 in the FHWA MUTCD; Paragraph 11A of Section 2B.49 of this document follows Paragraph 11 and precedes Paragraph 12 of Section 2B.49 in the FHWA MUTCD; Paragraphs 00A and 00B of Section 2B.19 of this document precede Paragraph 01 of Section 2B.19 in the FHWA MUTCD; etc.).

PART 1
GENERAL

CHAPTER 1C. DEFINITIONS, ACRONYMS, AND ABBREVIATIONS USED IN THIS MANUAL

Section 1C.02 Definitions of Words and Phrases Used in this Manual

Insert the following definitions to the list found in Paragraph 03:

296. Department – The Highway Division of the Massachusetts Department of Transportation.
297. State Highway – Streets and highways under the care and control of the Highway Division of the Massachusetts Department of Transportation.
298. Vulnerable Road User – A user of the road who is relatively less physically protected than a motor vehicle user including, but not limited to pedestrians, cyclists, construction personnel, wheelchair or personal mobility device users, people on scooters, skateboards, and roller skates, people on horses or carriages, and farm equipment operators.

Section 1C.03 Meanings of Acronyms and Abbreviations Used in this Manual

Insert the following acronyms and abbreviations, and their respective definitions, to the list found in Paragraph 01:

63. CMR – Code of Massachusetts Regulations
64. HCVE – Heavy Commercial Vehicle Exclusion
65. MAAB – Massachusetts Architectural Access Board
66. MGL – Massachusetts General Laws

CHAPTER 1D. PROVISIONS APPLICABLE TO TRAFFIC CONTROL DEVICES IN GENERAL

Section 1D.02 Responsibility and Authority for Traffic Control Devices

Insert the following paragraphs:

Support:

07A MGL Ch. 85, Sec. 2 mandates that the Department “erect and maintain on state highways and ways leading thereto and therefrom, and on all main highways between cities and towns such direction signs, warning signs or lights, curb, street or other traffic markings, mechanical traffic signal systems, traffic devices, or parking meters as it may deem necessary for promoting the public safety and convenience… The department may, from time to time, make, alter, rescind or add to rules and regulations relative to such signs, lights, signal systems, traffic devices, parking meters and markings.”

07B Additionally, the statute provides that "any rule, regulation, order, ordinance or by-law of a city or town hereafter made or promulgated relative to or in connection with the erection or maintenance of signs, traffic control signals, traffic devices, school zones, parking meters or markings on any way within its control shall take effect without department approval provided such signs, traffic control signals, traffic devices, parking meters, school zones or markings in conformance with the Department 's current manual on uniform traffic control devices and the department's sample regulation for a standard municipal traffic code; provided, however, that such rule, regulation, order, ordinance or by-law shall not take effect until approved in writing by the department, or be effective after such approval is revoked, if made or promulgated relative to or in connection with the following:

(1) any way at its intersection or junction with a state highway;
(2) any project which is or was federally aided, in whole or in part;
(3) any traffic signal or flasher in any city of town which does not employ a registered professional engineer in the commonwealth to design, redesign or change the timing and sequence of signal or flasher;
(4) any sign excluding heavy commercial vehicles;
(5) any school zone establishment or signing in relation to which the city or town intends to seek reimbursement from the commonwealth;
(6) any one-way street sign which would prohibit the free flow of two-way traffic between adjoining cities or towns on a through way or main way, as determined by the department, or any one-way street signs which would not be placed at an intersection of public ways;
(7) any rule, regulation, order, ordinance or by-law of a city or town which when made or promulgated would exclude motor vehicle travel on any existing way which connects one city or town with another;
(8) Notwithstanding the foregoing, speed control signs may be established only in accordance with the provisions of section eighteen of chapter ninety.”

Insert the following Sections:

Section 1D.12 Traffic Control Device Permits Issued by the Department

Standard:

01 **To avoid unnecessary investigation and clerical labor, blanket permits are issued to all cities and towns having approved traffic regulations to cover the following subjects:**

- **A. Warning Signs**
- **B. Standard School Signs**
- **C. Pavement Markings**
- **D. Regulatory Signs**
- **E. Parking Meters**

02 **The following items shall require a specific permit in each instance:**

- **A. Areas involving Traffic Control Agreements**
- **B. School Zones funded by the Department or on State Highway**
- **C. Traffic Control Signals (unless community employs a MA Registered P.E.)**
- **D. Traffic Beacons (unless community employs a MA Registered P.E.)**
- **E. One-Way Streets between adjoining communities**
- **F. Any way at an intersection or junction with State Highway**
- **G. Exclusion of Heavy Commercial Vehicles**

Section 1D.13 Regulations for Parking, One-Way Streets, and Turning Movements

Support:

01 On streets that are under the care and control of a municipality, said streets or portions thereof where parking is to be prohibited, restricted, or otherwise regulated are matters generally left for the determination of the local rulemaking body. This also applies to one-way streets and turning movement restrictions. The Department does not usually investigate these proposals although traffic engineering advice is available on request.

Standard:

02 **In order for a municipality to legally enforce a parking restriction, one-way street, or turning movement, it shall:**

- **A. Adopt the regulation.**
- **B. Advertise the regulation.**
- **C. Post signs that conform to the MUTCD and Massachusetts Amendments.**

03 **If the regulation to be affected is authorized by a special legislative enabling Act, acceptance of the Act shall be the first requirement.**

Section 1D.14 Regulations for Towing on City and Town Ways

Support:

01 MGL Ch. 40, Sec. 22D authorizes cities and towns to "remove…any vehicle parked or standing on any part of any way under the control of the municipality in such a manner as to obstruct any curb ramp designed for use by handicapped persons as means of egress to a street or public way,

or to occupy or obstruct any parking space reserved for a vehicle used by a disabled veteran or handicapped person whose vehicle bears the distinguishing license plate, or displays the special parking identification plate authorized by section two of chapter ninety, or bears the official identification of a handicapped person issued by any other state, or any Canadian Province, or to impede in any way the removal or plowing of snow or ice or in violation of any rule or regulation which prohibits the parking or standing of all vehicles on such ways or portions thereof at such time."

Standard:

02 **In order for a municipality to legally tow vehicles parked or standing in violation of a regulation, it shall:**

- **A. Accept MGL Ch. 40, Sec. 22D.**
- **B. Adopt the regulation.**
- **C. Advertise the regulation.**
- **D. Post signs that conform to the MUTCD and Massachusetts Amendments.**

Section 1D.15 <u>Through Ways</u>

Support:

01 MGL Ch. 89, Sec. 9 authorizes the Department to designate any state highway or part thereof as a through way. It further authorizes any city or town to designate any way or part thereof as a through way. For such designation to be effective, the statute requires the erection of suitable signs or signals to be erected "in accordance with the requirements of the Department."

02 The application of the through way rule is intended to ensure the facility, right-of-way and safety of traffic flow upon arterial highways. This is accomplished by giving to the operator of a vehicle upon such highway a provisional right of way over vehicles entering from intersecting ways. It is also intended to protect the operator of a vehicle on the minor way upon entering a major artery, the importance and potential hazard of which they may not be aware, without first making a cautionary stop.

03 It should be noted that at no place in the statute is permission given, directly or by implication, for speed on through ways in excess of those limits provided by law or special regulation. Increased facility of flow upon protected ways is to be obtained by reduction in interruption rather than by increased operating speed.

Guidance:

04 *One or more of the following warrants should be met to establish a through way:*

A. The way proposed for protection should carry a much larger volume of traffic than do the ways intersecting it. This volume should be of such density that under normal conditions it will carry a relatively constant flow of vehicles.

B. The way proposed for protection should carry traffic movements which have relatively fast and constant free-flow speed. At intersections in congested districts where there is slow movement of all traffic the rule is not needed and if used, would cause unnecessary congestion and delay. At intersections in such districts, the respective rights of drivers, because of the slow movement, should be accommodated by the use of the right-of-way rule; or, if conditions necessitate, by use of stop and go control.

C. Except under special conditions, the proposed way should not closely parallel another way to which the rule is applied. The necessity for frequent stops by cross traffic results in irritation and disobedience, unless the protection is obviously demanded by conditions.

D. The character of the proposed way should be such as to warrant application of the stop rule upon at least 80% of the intersecting way.

PART 2
SIGNS

CHAPTER 2A. GENERAL

Section 2A.04 Design of Signs

Delete Paragraph 18.

Insert the following paragraphs:

Standard:

18A **Except as provided in Paragraphs 19 of Section 2A.04, except for the Carpool Information (D12-2) sign (see Section 2I.14), and unless otherwise provided in this in this manual internet addresses and email addresses, including domain names and uniform resource locators (URL), metadata tags ("hash tags"), and scanning graphics (see Paragraph 17 of Section 2A.04) shall not be displayed on any sign, supplemental plaque, sign panel (including logo sign panels on Special Service signs), or changeable message signs.**

Section 2A.08 Word Messages

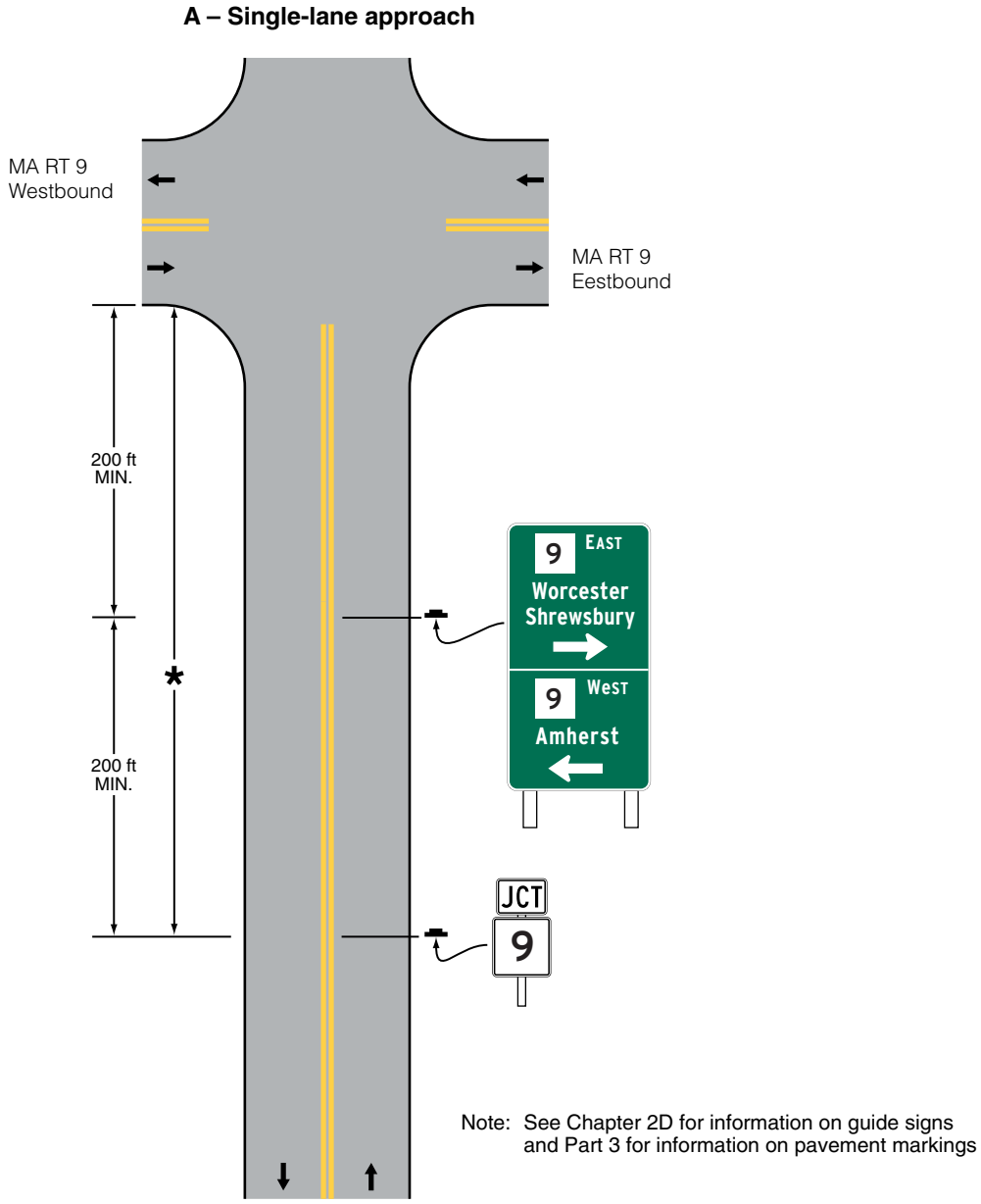
Insert the following paragraph:

Standard:

18A **All sign lettering styles shall conform to FHWA's "Standard Highway Signs and Markings" book.**

Insert Figure MA-2A-4 (Relative Locations of MA-D1 Series Signs on an Intersection Approach).

Figure MA-2A-4A. Relative Locations of MA-D1 Series of Guide Signs on an Intersection Approach



Section 2A.15 Mounting Height

Delete Paragraph 16.

Insert the following paragraph:

Standard:

15A **Overhead signs shall provide a vertical clearance of not less than 17 feet and 6 inches to the sign, light fixture, or sign bridge over the entire width of the pavement and shoulders, except where the structure on which the overhead signs are to be mounted or other structures along the roadway near the sign structure have a lesser vertical clearance.**

CHAPTER 2B. REGULATORY SIGNS, BARRICADES, AND GATES

GENERAL

Section 2B.03 Size of Regulatory Signs

Insert Table MA-2B-1 (Regulatory Sign and Plaque Sizes, MA Standard).

Table MA-2B-1. Regulatory Sign and Plaque Sizes, MA Standard

Sign or Plaque	Sign Designation	Section	Conventional Road		Expressway	Freeway	Minimum	Oversized
			Single Lane	Multi-Lane				
End Speed Zone	MA-R2-7	2B.21	24 x 30	30 x 36	–	–	18 x 24	–
Left Lane Only	MA-R3-5cP	2B.18	24 x 18					
Right Lane Only	MA-R3-5dP	2B.18	24 x 18					
Speed Limit Regulation Plaque (SEC 17)	MA-R2-1P	2B.21	24 x 9	30 x 9				
Speed Limit Regulation Plaque (SEC 17C)	MA-R2-1aP	2B.21	24 x 9	30 x 9				
Authorized Travel In Breakdown Lane	MA-R4-30	2G.20	–	–	126 x 120	126 x 120	–	–
Travel Prohibited In This Lane	MA-R4-31	2G.20	–	–	48 x 48	48 x 48	–	–
Except [days] [times] (plaque)	MA-R4-31aP	2G.20	–	–	30 x 48	30 x 48	–	–
End Breakdown Lane Travel	MA-R4-32	2G.20	–	–	90 x 60	90 x 60	–	–
Travel Prohibited in Breakdown Lane	MA-R4-33	2G.20	–	–	36 x 48	48 x 60	–	–
Left Lane Trucks Prohibited	MA-R5-2-LL	2B.45	–	–	36 x 48	48 x 60	–	–
Left 2 Lanes Trucks Prohibited	MA-R5-2-L2L	2B.45	–	–	36 x 54	48 x 72	–	–
Trucks Prohibited In Lane (overhead)	MA-R5-2-OH	2B.45	–	–	36 x 54	48 x 66	–	–
Pedestrians, Bicycles & Horses Prohibited	MA-R9-15	2B.45	24 x 24	24 x 24	30 x 30	30 x 30	–	–
Bus Signal	MA-R10-31P	8D.15	24 x 18					
Weight Limit	MA-R12-5	2B.64	36 x 36	36 x 36	48 x 48	48 x 48		
Weight Limit– Specialized Hauling Vehicles	MA-R12-6	2B.64	36 x 48	36 x 48	48 x 60	48 x 60		
State Law Seat Belts Required	MA-R16-18a	2B.74	36 x 36	36 x 36	48 x 48	48 x 48		

SIGNING FOR RIGHT-OF-WAY AT INTERSECTIONS

Section 2B.06 General Considerations

Support:

06A YIELD or STOP signs are intended to assign right-of-way at intersections in order to reduce the potential for collisions. They are ineffective as long-term traffic calming devices and may increase crash rates if installed inappropriately.

Section 2B.10 YIELD Control

Insert the following paragraphs:

Standard:

06A **A YIELD (R1-2) sign shall be provided at entrance ramps onto freeways and expressways where minimum acceleration lengths for entrance terminals, per Section 10.9.6 of AASHTO's A Policy on Geometric Design of Highways and Streets, have not been met.**

06B **A YIELD (R1-2) sign shall be provided at entrance ramps onto freeways and expressways where shoulder "breakdown lane" travel is permitted during certain hours.**

Guidance:

06C *A YIELD (R1-2) sign should not be used on entrance ramps onto freeways and expressways where the ramp enters as an added lane and does not have to yield the right-of-way.*

Option:

06D At cloverleaf interchanges and other areas where on- and off-ramps are closely spaced, a YIELD (R1-2) sign may be used to assign right-of-way to mainline traffic.

Support:

06E Section 2C.46 contains information regarding the use of added lane warning signs.

Section 2B.18 STOP Sign or Yield Sign Placement

Insert the following paragraph:

Option:

8A When traffic in a specific lane of a multi-lane approach to a circular intersection is not required to yield, a LEFT (RIGHT) LANE ONLY (MA-R3-5cP, MA-R3-5dP) sign may be mounted below the YIELD sign (see Figure MA-2B-28 and Table MA-2B-1).

Section 2B.19 Yield Here To Pedestrians Signs and Stop Here For Pedestrians Signs (R1-5 Series)

Insert the following paragraphs:

Standard:

00A **R1-5b and R1-5e signs shall not be used.**

Support:

00B The legal requirements stated in MGL Ch. 89, Sec. 11 require vehicle operators to yield to pedestrians.

Standard:

03A **R1-5 Series signs shall not be used on single-lane approaches to crosswalks.**

Support:

03B The purpose of providing advanced yield lines and R1-5 series signs is to limit the potential for a dual threat type crash where a vehicle yielding to a crossing pedestrian blocks the view of the pedestrian from a vehicle traveling in the same direction in an adjacent lane. This condition does not exist where there is only a single approach lane.

Section 2B.20 <u>In-Street and Overhead Pedestrian Crossing Signs (R1-6 and R1-9 Series)</u>

Insert the following paragraphs:

Standard:

00A **R1-6a, R1-6e, R1-9a, and R1-9e signs shall not be used.**

Support:

00B The legal requirements stated in MGL Ch. 89, Sec. 11 require vehicle operators to yield to pedestrians.

Standard:

03A **In-Street and Overhead Pedestrian Crossing (R1-6, R1-6d, R1-9 and R1-9d) signs shall include the "STATE LAW" legend.**

03B **A fluorescent yellow-green background shall be used instead of a yellow background on In-Street and Overhead Pedestrian Crossing (R1-6, R1-6d, R1-9 and R1-9d) signs.**

SPEED LIMIT SIGNS AND PLAQUES

Section 2B.21 <u>Speed Limit Sign (R2-1)</u>

Insert the following paragraphs:

Standard:

00A **Except as provided in Paragraph 00B, 16A, and 16B below, the Speed Limit (R2-1) sign shall not be used unless a Special Speed Regulation has been established for that section of the street or highway.**

Option:

00B Speed Limit (R2-1) signs may be used on the Metropolitan Highway System, the Tobin Bridge, the Massachusetts Turnpike, and parkways under the care and control of the Department of Conservation and Recreation without establishment of a Special Speed Regulation if the maximum speed limits on those facilities are governed by sections of the CMR.

Support:

00C Certain Metropolitan Highway System highways , the Tobin Bridge, the Massachusetts Turnpike, and parkways under the care and control of the Department of Conservation and Recreation have speed limits governed by sections of the CMR. These highways and parkways are exempt from requiring Special Speed Regulations.

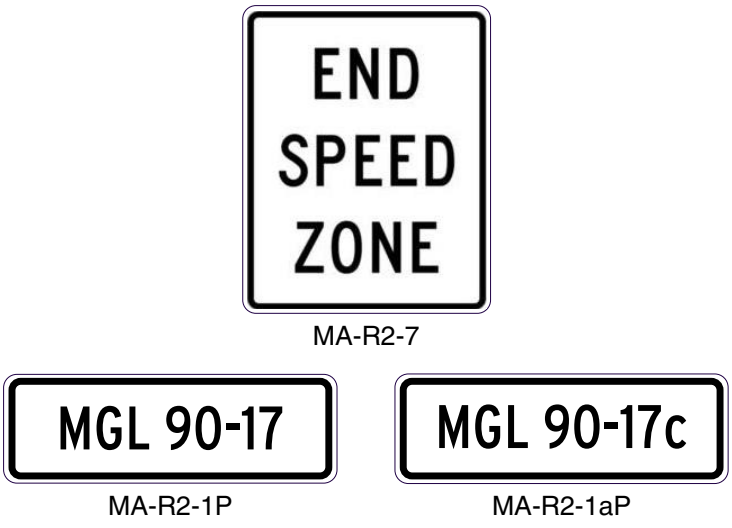
00D Work Zone Speed Limits established using the Department's procedures allow for the temporary posting of Speed Limit (R2-1) signs with a Work Zone (G20-5aP) plaque.

Support:

00E Information on how to enact a Special Speed Regulation may be found in the Department's Procedures for Speed Zoning on State Highways and Municipal Roads.

Insert Figure MA-2B-3 (Speed Limit and Photo Enforcement Signs and Plaques, MA Standard).

Figure MA-2B-3. Speed Limit and Photo Enforcement Signs and Plaques, MA Standard



Insert the following paragraphs:

Guidance:

15A *Where the beginning of a speed zone is at, or just before, an intersection, the Speed Limit (R2-1) sign should be placed downstream from the intersection.*

15B *Additional Speed Limit (R2-1) signs should be placed at suitable intervals throughout a speed zone. The additional signs should be suitably placed to remind motorists on the highway, as well as inform motorists entering the highway, of the speed limit. Signs should be placed beyond, rather than immediately in advance of, intersections or locations where reduced speed may be necessary.*

15C *If a Speed Zone Regulation terminates and the street or highway returns to a statutory speed limit, an END SPEED ZONE (MA-R2-7) sign (see Figure MA-2B-3) should be used.*

Option:

15D If a Speed Zone Regulation terminates at the terminal point of a street or highway, the END SPEED ZONE (MA-R2-7) sign may be omitted.

16A A municipality may, on streets under their control that aren't governed by a Special Speed Regulation, post a Speed Limit (R2-1) sign with a MGL 90-17 (MA-R2-1aP) plaque or MGL 90-17C (MA-R2-1bP) plaque, whichever governs.

Standard:

16B **If a Speed Limit (R2-1) sign is posted on a street that is not governed by a Special Speed Regulation, a MGL 90-17 (MA-R2-1aP) plaque or MGL 90-17C (MA-R2-1bP) plaque shall be displayed below the R2-1 sign. (see Figure MA-2B-1 and Table MA-2B-1). It shall be the municipality's responsibility to determine the numerical speed limit displayed on the R2-1 sign is in compliance with MGL Ch. 90, Sec. 17 or Sec. 17C.**

Option:

19A A municipality may, on streets under its control, post a Thickly Settled Citywide Speed Limit (MA-R2-9A) sign or Thickly Settled Townwide Speed Limit (MA-R2-9B) sign at jurisdictional boundaries to remind drivers of the statutory speed limit on roads that do not have a posted speed limit.'

Support:

19C The authority to establish Safety Zone Speed Limits is granted in MGL c. 90 §18B.

Standard:

19D **Safety Zone Speed Limits shall be 20 miles per hour.**

Guidance:

19E *Safety Zone Speed Limits should be used when the adjacent land use is likely to generate vulnerable road users, such as parks, playgrounds, senior citizen housing, hospitals, and childcare centers.*

19F *The Safety Zone should contain one or more features that may create potential conflicts between motor vehicles and vulnerable road users, such as crosswalks, driveways, or side streets, that would warrant a reduction in speed.*

19G *The minimum length of a safety zone should be at least ¼ of a mile and it should not extend more than 500 feet beyond a side street unless an applicable land use continues along the adjacent block.*

19H *An Engineering Study, as described in Paragraphs 06-12, should be the basis for establishing a Safety Zone Speed Limit.*

Standard:

19I **A Safety Zone Speed Limit shall be terminated by one of the following:**

A. A Speed Limit (R2-1) sign, if a Special Speed Regulation governs the speed on the roadway.

B. A Speed Limit (R2-1) sign with a MGL 90-17 (MA-R2-1aP) plaque or MGL 90-17C (MA-R2-1bP) plaque posted below it, if the speed on the roadway is governed by MGL c. 90 §17 or §17C.

Section 2B.22 Night Speed Limit Plaque (R2-3P)

Delete this Section. Massachusetts General Laws do not allow for changing speed limits by day/night.

Section 2B.25 Higher Fines Signs and Plaque (R2-6P, R2-10, and R2-11)

Delete this Section. The use of higher fines signage is restricted to work zone applications. Refer to Section 6G.08 for additional information.

MOVEMENT AND LANE CONTROL SIGNS AND PLAQUES

Section 2B.27 Intersection Lane Control Signs (R3-5 through R3-8)

Insert the following paragraph:

Guidance:

00 *The standard arrows should be used on signs on an approach to a roundabout. Curved stem arrows (see Figure 2B-5) should not be used.*

Delete Paragraph 08.

Insert the following paragraph:

Standard:

09 **At rotaries and other circular intersections, Intersection Lane Control (R3-5, R3-6, and R3-8 series) signs shall have curved-stem arrows as depicted in Figure 2B-5(B) and shall include the "center island" marking for the leftmost lane on multi-lane approaches.**

Section 2B.28 Mandatory Movement Lane Control Signs (R3-5, R3-5a, R3-7, R3-19 and R3-20) and Plaques

Insert the following paragraphs:

Standard:

00 **Alternate legends, such as LEFT LANE FOR LEFT TURN, shall not be used as a substitute for a Mandatory Movement Lane Control (R3-7) sign.**

Guidance:

05A *The use of Mandatory Movement Lane Control (R3-7) signs should be limited to Dropped Lane conditions as defined in Section 1C.02. Where this occurs, the sign should be installed no less than 500 feet from the intersection.*

Option:

05B Under certain geometric conditions that may create driver confusion, a single Mandatory Movement Lane Control (R3-7) sign may be placed at the upstream end of the full-width turn bay. If the turn bay exceeds 500 feet in length, a second sign may be placed near the midpoint of the full-width turn bay.

Support:

05C The use of duplicate and/or redundant regulatory signs on an approach may lead to sign clutter and reduce the effectiveness of other traffic control devices.

05D See paragraph 4 of Section 3B.23 regarding installation of two lane use arrow markings, one at or near the upstream end of the full-width turn lane, and one an appropriate distance upstream from the stop line or intersection.

Section 2B.30 Advance Intersection Lane Control Signs (R3-8 Series)

Insert the following paragraphs:

Option:

02A Where constraints on sign width exist, the word message ONLY may be omitted.

Section 2B.31 RIGHT (LEFT) LANE MUST EXIT Sign (R3-33 and R3-33a)

Delete Paragraph 01.

SELECTIVE EXCLUSION SIGNS AND PLAQUES

Section 2B.45 Selective Exclusion Signs and Plaques

Insert Figure MA-2B-12 (Selective Exclusion Signs, MA Standard).

Figure MA-2B-12. Selective Exclusion Signs, MA Standard



Delete Paragraphs 06 and 09.

Insert the following paragraphs:

Standard:

06A **At ramps to limited access highways where travel is restricted to motor vehicles, only, a PEDESTRIANS, BICYCLES, HORSES PROHIBITED (MA-R9-15) sign shall be used.**

Guidance:

06B *The PEDESTRIANS, BICYCLES AND HORSES PROHIBITED (MA-R9-15) sign should be installed in a location where it is clearly visible to any non-motorized vehicle attempting to enter the limited access facility from a street intersecting the exit ramp.*

Standard:

09A **Unless otherwise permitted by special regulations, on highways with three lanes in the same direction, a LEFT LANE TRUCKS PROHIBITED (MA-R5-2-LL) sign (see Figure MA-2B-12) shall be placed at regular intervals but shall not be placed within 2 miles of a left exit or major split.**

09B **Unless otherwise permitted by special regulations, on highways with four lanes in the same direction, a LEFT 2 LANES TRUCKS PROHIBITED (MA-R5-2-L2L) sign (see Figure MA-2B-12) shall be placed at regular intervals but shall not be placed within 2 miles of a left exit or major split.**

Option:

09C Where possible, a LEFT LANE TRUCKS PROHIBITED (MA-R5-2-LL) sign, a LEFT 2 LANES TRUCKS PROHIBITED (MA-R5-2-L2L) sign, or a TRUCKS PROHIBITED IN LANE (OVERHEAD) (MA-R5-2-OH) sign (see Figure MA-2B-12) may be mounted overhead as a substitute for a ground-mounted sign at a location where there is an existing overhead sign structure available.

Support:

09D MGL Ch. 89, Sec. 4C restricts heavy commercial vehicles, except buses, traveling on highways with more than one passing lane in the same direction to the rightmost lane for travel and the adjacent lane for passing.

Standard:

12A **To restrict heavy commercial vehicles from a specific roadway, a request for a heavy commercial vehicle exclusion (HCVE) shall be reviewed and approved by the Department.**

Support:

12B Massachusetts General Law prohibits municipalities from promulgating any rules that would exclude heavy commercial vehicles from any way without receiving approval from the Department.

Option:

12C One or more of the following criteria may be sufficient justification for truck exclusion:

A. A volume of heavy commercial vehicles, usually in the range of 5% to 8% of the total traffic, reduces the utilization of the facility and is cause for a substantial reduction in capacity or safety.
B. The condition of the pavement structure of the route to be excluded indicates that further repeated heavy wheel loads will result in severe deterioration of the roadway, subject to Department review.
C. In certain instances where land use is primarily residential in nature and a municipality has requested exclusion only during hours of darkness, a nighttime exclusion may be granted.

Standard:

12D **Prior to considering an HCVE, a suitable alternate route must be available and must have an effective width and pavement structure which can safely accommodate the additional truck traffic.**

12E **The alternate route shall meet one of the following conditions:**

A. The alternate route lies wholly within the community submitting the application.
B. The alternate route lies partially in an adjacent community, but only on State Highway in the adjacent community.
C. The alternate route lines wholly or partially in an adjacent community, but the adjacent community has provided written acceptance of the proposal.

12F **The decision to exclude heavy commercial vehicles shall be based on an engineering study. The engineering study shall be submitted by the municipality to the Department, and shall include the following data:**

A. A 24-hour continuous count of all vehicles using the subject street. The count shall be broken into 30-minute intervals showing:
1. Commercial vehicles with a GVWR over 10,000 lbs. (5 tons). This would include Class 3 and larger vehicles, as defined by FHWA.
2. All other vehicles.

B. A map of the area, with the excluded street marked in red, the alternate route in green.
C. The physical characteristics of excluded and alternate streets in question, i.e, length, width, type and condition of surface and sidewalks.
D. The types of buildings or property abutting street (residential dwellings, businesses, educational, playgrounds, etc.).
E. The zoning of street (residential, industrial, etc.).
F. The proximity of probable alternate route to the proposed excluded route and the additional distance to be traveled using the alternate route.
G. The types of traffic control existing on street.
H. The hours during which the proposed exclusion is to be in effect.
I. A written statement from the municipality as to the need for the exclusion and an acknowledgement of acceptance of the responsibility for installation and maintenance of appropriate signage and enforcement.

Option:

12G If the exclusion is requested for only twelve hours, a 12-hour count may be substituted for a 24-hour count.

Standard:

12H **Numbered routes shall not be eligible for heavy commercial vehicle exclusions per Board of Commissioners, November 22, 1995.**

12I **Exclusions shall not apply to heavy commercial vehicles going to or coming from places upon the specific roadway for the purpose of making deliveries of goods, materials, or merchandise to or similar collections from abutting land or buildings or adjacent roadways to which access cannot otherwise be gained; or to vehicles used in connection with the construction, maintenance and repair of said streets or public utilities therein; or to Federal, State, Municipal or public service corporation owned vehicles; or to registered farm vehicles.**

12J **A HCVE shall be signed at the entry point(s) to the excluded portion of roadway using a NO TRUCKS (R5-2) sign with EXCEPT LOCAL DELIVERIES (R5-2aP) plaque or a NO THRU TRUCKS (R5-2b) sign.**

Option:

12K Additional regulatory signs and plaques may be used in advance to notify drivers of the HCVE prior to turning onto an excluded roadway.

DO NOT ENTER, WRONG WAY, ONE WAY, AND RELATED SIGNS AND PLAQUES

Section 2B.48 Wrong-Way Traffic Control at Interchange Ramps

Insert the following paragraphs:

Guidance:

02A *At least one WRONG WAY sign should be placed on both sides of exit ramps at partial cloverleaf, diamond, and other interchange designs that may be subject to wrong way entries. Where physical constraints prevent the installation of WRONG WAY signs on both sides of the ramp, additional enhanced devices such as pavement markers or delineators with red retroreflective material facing wrong way traffic should be used.*

Option:

02B A strip of red, retroreflective material may be added to the sign support(s) facing potential wrong way traffic to enhance conspicuity.

Section 2B.49 ONE WAY Signs (R6-1, R6-2)

Insert the following paragraph:

Guidance:

11A *R6-2 signs should be used at locations where one-way streets depart from intersections. R6-1 signs should be used in all other conditions.*

PEDESTRIAN SIGNS

Section 2B.58 Traffic Signal Pedestrian and Bicycle Actuation Signs (R10-1 through R10-4, and R10-24 through R10-26)

Delete Paragraph 06.

Insert the following paragraphs:

Guidance:

06A *Where countdown pedestrian signals have been provided, the R10-3e sign should be used. Where non-countdown pedestrian signals have been provided, the R10-3b sign should be used.*

Option:

06B The R10-3i and R10-3f signs may be substituted for the R10-3e or R10-3b signs, respectively, if the pushbutton locations cannot meet the location guidelines stated in Section 4I.05 and it is determined that the additional information will be beneficial to pedestrians. The R10-3d sign may be substituted for the R10-3b sign in order to inform pedestrians that the pedestrian clearance time is sufficient only for the pedestrian to cross to the median at locations where pedestrians cross in two stages using a median refuge island.

Standard:

06C **Where pushbutton-actuated Rectangular Rapid Flashing Beacons or pedestrian crossing warning beacons have been installed, the R10-25 sign shall be used.**

TRAFFIC SIGNAL SIGNS AND PLAQUES

Section 2B.59 Traffic Signal Signs and Plaques (R10-5 through R10-30)

Insert the following Paragraphs:

Standard:

09A **A fluorescent yellow-green background shall be used instead of a yellow background on R10-15 and R10-23 signs.**

09B **R10-15 signs shall only be used at signalized intersections.**

Insert Figure MA-2B-28 (Traffic Signal Signs and Plaques, MA Standard)

Figure MA-2B-28. Traffic Signal Signs and Plaques, MA Standard



MA-R10-31P
(See Part 8)



MA-R3-5cP



MA-R3-5dP

Section 2B.60 No Turn on Red Signs (R10-11 Series, R10-17a, and R10-30)

Insert the following paragraphs:

Standard:

01A **Where a right turn on red (or a left turn on red from a one-way street to a one-way street) is to be prohibited and a RED ARROW signal indication is displayed, a NO TURN ON RED (R10-11 and R10-11b) word message sign shall be used.**

Support:

01B Massachusetts General Law allows vehicles facing a red arrow indication to turn on red. If the intent is to prohibit turns on red, supplemental signage is required.

Guidance:

01C *For all new or reconstructed traffic signals, a no-turn-on-red restriction should be used on each approach to the intersection as the default unless an engineering study clearly shows all of the conditions listed in Paragraph 03 do not exist.*

Support:

01D Permitting right-turns-on-red may increase the likelihood of crashes at intersections, including vehicle to pedestrian crashes.

ROAD CLOSED AND WEIGHT LIMIT SIGNS

Section 2B.64 Weight Limit Signs (R12-1 through R12-7)

Insert the following paragraphs:

Standard:

00A **Weight Limit Signs (R12-1 through R12-7) shall not be used to indicate a heavy commercial vehicle exclusion (HCVE).**

Option:

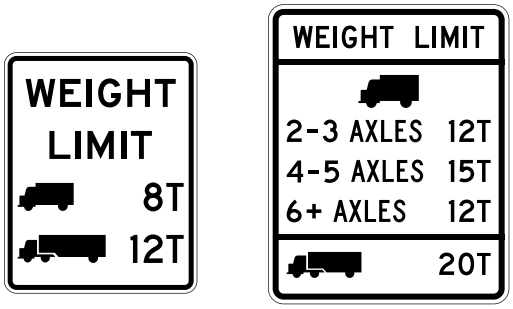
01A Where tandem vehicles are prohibited by the Commonwealth of Massachusetts General Laws and not in conflict with 23 USC 127, weight limit signs MA-R12-5 and MA-R12-6 (see Figure MA-2B-30) may be substituted for weight limit signs (R12-5 and R12-6) to indicate a section of highway or structure that has vehicle weight restriction.

Support:

02A Procedures for establishing an HCVE may be found in Chapter 2B.45.

Insert Figure MA-2B-30 (Weight Limit Signs, MA Standard).

Figure MA-2B-30. Weight Limit Signs, MA Standard



MA-R12-5 MA-R12-6

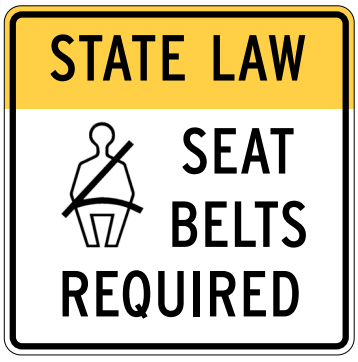
Section 2B.74 Seat Belt Symbol

Option:

03A If used, the STATE LAW SEAT BELTS REQUIRED (MA-R16-18a) sign may be installed downstream of the Massachusetts state border on the inbound side of the roadway, or at other locations where additional awareness to seat belt use is warranted.

Insert Figure MA-2B-33 (Other Regulatory Signs, MA Standard).

Figure MA-2B-33. Other Regulatory Signs, MA Standard



MA-R16-18a

CHAPTER 2C. WARNING SIGNS AND OBJECT MARKERS

GENERAL

Section 2C.03 Size of Warning Signs and Plaques

Insert Table MA-2C-1 (Warning Sign and Plaque Sizes, MA Standard).

Table MA-2C-1. Warning Sign and Plaque Sizes, MA Standard

Sign or Plaque	Sign Designation	Section	Conventional Road		Expressway	Freeway	Minimum	Oversized
			Single Lane	Multi-Lane				
Plows Use Caution	MA-W8-13c	2C.34	30 x 30	36 x 36	36 x 36	36 x 36	–	–
Caution Breakdown Lane Travel Permitted	MA-W8-26	2C.29	–	–	48 x 60	48 x 60	–	–
Breakdown Lane in Use	MA-W8-27	2C.29	–	–	36 x 36	36 x 36	–	48 x 48
[days] [times] (2 lines, plaque)	MA-W8-27aP	2C.29	–	–	24 x 18	24 x 18	–	30 x 24
Emergency Pull-Off	MA-W8-28	2C.29	–	–	42 x 24	42 x 24	–	–
Freeway Ends XX Miles	MA-W19-1a	2C.22	–	–	–	84 x 60	–	–
Expressway Ends XX Miles	MA-W19-2a	2C.22	–	–	108 x 60	–	–	–
Type 1 Object Marker	OM1-1	2C.70	24 x 24	24 x 24	36 x 36	36 x 36	18 x 18	–

HORIZONTAL ALIGNMENT WARNING SIGNS AND PLAQUES

Section 2C.12 Advisory Exit and Ramp Speed Signs (W13-2 and W13-3) and Combination Horizontal Alignment/Advisory Exit and Ramp Speed Signs (W13-6 through W13-13)

Insert the following paragraph:

Standard:

02A **At freeway or expressway exits when an Advisory Exit Speed sign is used, an Advisory Ramp Speed sign shall be installed on the exit ramp beyond the raised gore.**

Section 2C.13 Vehicle Speed and Feedback Sign and Plaque (W13-20 and W13-20aP)

Insert the following paragraph:

Standard:

04A **The Vehicle Speed Feedback sign and plaque shall not include any text or symbols other than the legend YOUR SPEED and the displayed vehicle speed.**

ROADWAY GEOMETRY WARNING SIGNS

Section 2C.22 Freeway or Expressway Ends Signs (W19 Series)

Insert Figure MA-2C-6 (Miscellaneous Warning Signs, MA Standard).

Figure MA-2C-6. Miscellaneous Warning Signs, MA Standard



MA-W19-1a



MA-W19-2a

Insert the following paragraph:

Option:

03A Where constraints on sign width exist, the FREEWAY ENDS XX MILES (W19-1) sign or EXPRESSWAY ENDS XX MILES (W19-2) sign may be substituted with W19-1a or W19-2a signs, respectively.

ROADWAY GEOMETRY WARNING SIGNS

Section 2C.29 Shoulder Signs (W8-4, W8-9, W8-17, W8-23, and W8-25)

Insert Figure MA-2C-7 (Roadway and Weather Condition and Advance Traffic Control Signs and Plaques, MA Standard).

Figure MA-2C-7. Roadway and Weather Condition and Advance Traffic Control Signs and Plaques, MA Standard



MA-W8-13c



MA-W8-26*



MA-W8-27



MA-W8-27aP*



MA-W8-28

*The days and/or times shown on these signs may be modified to match permitted use

Insert the following paragraphs:

Standard:

08A **Where travel in breakdown lane is allowed during certain hours of the day, a CAUTION BREAKDOWN LANE TRAVEL PERMITTED (MA-W8-26) sign (see Figure MA-2C-7) shall be installed on every on-ramp within the limits of breakdown lane travel.**

Option:

08B Where space constraints exist, a BREAKDOWN LANE IN USE (MA-W8-27) sign (see Figure MA-2C-7) with appropriate Days and Times (MA-W8-27aP) plaque may be substituted.

Guidance:

08C *Where an emergency pull-off area has been constructed to mitigate the lack of a full-time or part-time shoulder, an Emergency Pull-Off (MA-W8-28) sign (see Figure MA-2C-8) should be placed near its upstream end.*

ROADWAY AND WEATHER-CONDITION WARNING SIGNS AND PLAQUES

Section 2C.34 Weather Condition Signs (W8-18, W8-19, W8-21, and W8-22)

Insert the following paragraphs:

Option:

06C The PLOWS USE CAUTION (MA-W8-13c) sign (see Figure MA-2C-7) may be used to warn snowplow operators that they are in the vicinity of an overpass.

TRAFFIC CONTROL AND INTERSECTION WARNING SIGNS AND PLAQUES

Section 2C.40 Reduced Speed Limit Ahead Signs and Speed Zone Signs (W3-5, W3-5a, W3-5b, and W3-5c)

Insert the following paragraph:

Standard:

04A **The W3-5a sign shall not be used.**

Section 2C.41 Intersection Warning Signs (W2-1 through W2-8)

Insert the following paragraph:

Standard:

04A **If an Advisory Speed (W13-1P) plaque is provided with a Circular Intersection (W2-6) sign, educational plaques (W16-17p or W16-12p) shall be omitted.**

MISCELLANEOUS WARNING SIGNS

Section 2C.54 Vehicular Traffic Warning Signs (W8-6, W11-1, W11-5, W11-8, W11-10, W11-11, W11-12P, W11-14, W11-15, and W11-15a)

Delete Paragraph 06.

Insert the following paragraphs:

Standard:

06A **The W11-15 and W11-15P signs shall have a fluorescent yellow-green background.**

06B **The W11-15a sign shall not be used.**

Guidance:

06C *At locations controlled by RRFB with a W11-15 sign (see Section 7B.02), the W11-15 sign (and W11-15P plaque if used on the same sign assembly) should be installed on both sides of each approach (curb and curb, or curb and median).*

Section 2C.55 Non-Vehicular Warning Signs (W11-2, W11-3, W11-4, W11-6, W11-7, W11-9, and W11-16 through W11-22)

Insert the following paragraphs:

Guidance:

01A *Non-Vehicular Warning signs should not be used in the following conditions:*

A. In advance of crossings where traffic is controlled by traffic control signals or pedestrian hybrid beacons;
B. Where traffic on the approach is controlled by a STOP sign, YIELD sign (with exception to approaches to circular intersections), or flashing red signal at the crossing location; or
C. On the same approach with an Intersection Warning sign.

01B *The Wildlife Warning (W11-3, W11-6, W11-21) signs should be used only after wildlife crossing locations or roadway sections have been carefully identified and there is repeated evidence, such as wildlife-related crashes, that motorist warning is necessary.*

01C *The diagonal downward pointing arrow (W16-7P) plaque should not be used with Wildlife Warning signs, or with other signs in this series where road crossing locations are unpredictable.*

01D *At mid-block crosswalks with a W11-2 sign or a S1-1 sign (see Section 7B.02), the sign should be installed on both sides of each approach (curb and curb, or curb and median)*

OBJECT MARKERS

Section 2C.71 Object Markers for Obstructions Within the Roadway

Insert the following paragraphs:

Standard:

01A **OM1-1 markers shall only be used where traffic can pass on either side of a physical gore, raised median, or other obstruction.**

Guidance:

01B *OM1-1 markers should be used to supplement another sign, such as an Exit Gore (E5-1) sign. If no other signs are needed and traffic can pass on either side of the obstruction, a Double Arrow (W12-1) sign should be used (see Section 2C.23).*

Standard:

01C **OM1-2 and OM1-3 markers shall not be used.**

CHAPTER 2D. GUIDE SIGNS FOR CONVENTIONAL ROADS

GENERAL DESIGN

Section 2D.03 Size of Signs

Insert Table MA-2D-1 (Conventional Road Guide Sign Sizes, MA Standard).

Table MA-2D-1. Conventional Road Guide Sign Sizes, MA Standard

Sign	Sign Designation	Section	Conventional Road	Minimum	Oversized
State Route Number (1 or 2 digits)	MA-M1-5	2D.11	24 x 24	24 x 24	36 x 36
State Route Number (3 digits)	MA-M1-5a	2D.11	30 x 24	30 x 24	45 x 36
Directional, State Route	MA-D1-5	2D.36	Varies, typically 54 x 54		
Directional, Interstate	MA-D1-6	2D.36	Varies, typically 60 x 48		
Double Directional	MA-D1-7	2D.36	Varies, typically 66 x 108		

Delete Paragraph 01.

Insert the following paragraphs:

Support:

00A Destination signs may vary in size depending upon the number of destinations included in the legend, the number of characters in the destination(s), the presence of route shields (or lack thereof), and other factors. Refer to the MassDOT Standard Sign book for more information on the dimensions, spacing, and design of these sign types.

Standard:

01A **Except as provided in Section 2A.07, the minimum sizes of conventional road guide signs that have standardized designs shall be as shown in Tables 2D-1 and MA-2D-1 and the MassDOT Standard Signs book.**

ROUTE SIGNS AND AUXILIARY PLAQUES

Section 2D.11 Design of Route Signs

Insert Figure MA-2D-4 (Route Signs, MA Standard).

Figure MA-2D-4. Route Signs, MA Standard



MA-M1-5



MA-M1-5a

Insert the following paragraph:

Standard:

10A **Massachusetts State Route Number (MA-M1-5 and MA-M1-5a) signs shall conform to Table MA-2D-1 and Figure MA-2D-4. Massachusetts State Route Number (MA-M1-5 and MA-M1-5a) signs shall always include a border and inset, whether mounted independently or on guide signs.**

Delete Paragraphs 12, 13, 14, 15, and 16.

DESTINATION AND DISTANCE SIGNS

Section 2D.36 Destination Signs (D1 Series)

Insert the following paragraphs:

Guidance:

04A *Typical guide signs for use on secondary state highways should be as follows:*

A. A MA-D1-6-series sign for the major movement at an intersection; and
B. A MA-D1-5-or MA-D1-5a-series sign for the minor movement at an intersection.

Support:

04B The purpose of MA-D1-5- and MA-D1-6-series signs is to display the cardinal direction (i.e. North), route sign, destination(s), and action message (or directional arrow) on a single sign panel.

Option:

04C Where MA-D1-5- and MA-D1-6-series signs are to be mounted on the same support and the dimensions of the MA-D1-6-series sign requires the use of an extruded aluminum substrate, a single MA-D1-7-series sign that replaces both signs may be considered.

Guidance:

04D *Except as provided in Section 2D.38, MA-D1-5-, MA-D1-6-, and/or MA-D1-7-series guide signs should be used at all intersections between non limited-access numbered routes and at the ends of exit ramps from limited-access highways where a single ramp intersects with both directions of the secondary route, road, or street.*

Standard:

04E **MA-D1-5-, MA-D1-6-, and MA-D1-7-series signs used at the ends of exit ramps from limited-access highways shall display the same destinations used on the Advance Guide Signs.**

Option:

04F An additional destination, matching a destination provided on a supplemental guide sign on the limited-access highway, may be included on MA-D1-5-, MA-D1-6-, or MA-D1-7-series signs used at the ends of exit ramps.

Standard:

04G **Route signs shall be used for all intersecting numbered routes on MA-D1-5-, MA-D1-6-, and MA-D1-7-series signs.**

Guidance:

04H *Route signs should be used for all trailblazer information on MA-D1-5-, MA-D1-6-, and MA-D1-7-series signs.*

Option:

04I Legend (i.e. TO ROUTE 202), may be substituted for trailblazer information to conserve space, where needed.

Guidance:

04J *Except as noted Paragraph 09B in Section 2D.49, where two or more numbered routes overlap on the same highway, MA-D1-6-series signs should display all route signs and one destination for each numbered route.*

Option:

04K Where spacing, sight distance, lateral clearance, and/or other right-of-way restrictions exist, Route Sign Assemblies, Advance Route Turn Assemblies, Directional Assemblies, and Destination Signs, per Sections 2D.29, 2D.31, 2D.32, and 2D.36, respectively, may be substituted.

Standard:

04L **Distances to destinations shall not be placed on MA-D1-5-, MA-D1-6-, and MA-D1-7-series signs.**

Option:

04M Advance MA-D1-5-, MA-D1-6-, or MA-D1-7-series signs may use alternative directional legends such as KEEP RIGHT, 2ND LEFT, NEXT RIGHT, etc. to provide guidance to the location of the point of turn.

Insert Figure MA-2D-9 (Destination Signs, MA Standard)

Figure MA-2D-9. Destination Signs, MA Standard



MA-D1-5



MA-D1-6



MA-D1-7

Section 2D.39 Destination Signs at Circular Intersections

Insert the following paragraphs:

Support:

11A Refer to the MassDOT Standard Signs book for additional details on design standards for MA-D1-3-series and MA-D1-7 (Cir Int) signs.

Section 2D.42 Location of Destination Signs

Insert the following paragraphs:

Guidance:

01A *Point-of-turn MA-D1-5-, MA-D1-6-, and MA-D1-7-series signs should be placed on the near right corner of the intersection approach.*

Option:

01B Point-of-turn MA-D1-5-, MA-D1-6-, or MA-D1-7-series signs may may be placed on the far right corner of the intersection approach or far side of the minor street approach to a T-intersection if site constraints inhibit placement on the near right corner.

Guidance:

01C *Advance MA-D1-5-, MA-D1-6-, and MA-D1-7-series signs should be placed a minimum distance of 400 feet in advance of the intersection.*

Option:

01D Actual placement of Advance MA-D1-5-, MA-D1-6-, or MA-D1-7-series signs and Advance Entrance Direction signs may be dependent upon field conditions, particularly in urban and residential areas.

Insert the following paragraph:

Guidance:

03A *A Junction assembly should be located 200 feet or more in advance of a MA-D1-5-, MA-D1-6-, and MA-D1-7-series sign.*

STREET NAME AND PARKING SIGNS

Section 2D.45 Street Name Signs (D3-1 and D3-1a)

Delete paragraphs 09, 10 and 24:

Insert Table MA-2D-6 (Recommended Minimum MA-D3-1 Sign Sizes and Letter Heights, MA Standard).

Table MA-2D-6. Recommended Minimum MA-D3-1 Sign Sizes and Letter Heights, MA Standard

Type of Mounting	Speed Limit	Minimum Sign Height	Minimum Letter Height (Initial Upper-Case)	Minimum Letter Height (Lower-Case)	Minimum Letter Height (Supplementary Lettering)
Overhead (freeways and expressways)	All speed limits	24 inches	12 inches	9 inches	8 inches
Overhead (signalized intersections) or Post-mounted (12 ft or greater above roadway)	All speed limits	18 inches	8 inches	6 inches	5.33 inches
Post-mounted on multi-lane roadway (less than 12 ft above roadway)	45 mph or greater	18 inches	8 inches	6 inches	5.33 inches
Post-mounted on multi-lane roadway (less than 12 ft above roadway)	Less than 45 mph	12 inches	6 inches	4.5 inches	4 inches
Post-mounted on 2-lane roadway (less than 12 ft above roadway)	All speed limits	12 inches	6 inches	4.5 inches	4 inches
Bicycle facility (no motor vehicles allowed)	–	6 inches	3 inches	2.25 inches	2 inches

Insert the following paragraphs:

Guidance:

07A *The minimum sign heights and letter heights for Street Name (MA-D3-1) signs in Table MA-2D-6 should be used.*

Standard:

24A **Borders shall be provided on all street name signs.**

Guidance:

33A *Overhead Street Name signs should be used at all signalized intersections.*

Support:

38A Refer to the MassDOT Standard Signs book for additional details on design standards for MA-D3-1-series signs.

FREEWAY INTERCHANGE APPROACH SIGNS

Section 2D.49 Signing on Conventional Roads on Approaches to Interchanges

Insert the following paragraphs:

Guidance:

09A *Entrance Direction and Advance Entrance Direction signs should display the same destinations.*

Standard:

09B **On signs for entrance ramps where Interstate 95 and State Route 128 overlap between Canton and Peabody, only the I-95 route sign and destinations shall be displayed.**

Option:

11A If standard Entrance Direction and/or Advance Entrance Direction signs cannot be used due to spacing, sight distance, width, or right of way restrictions, the use of a MA-D1-6 sign is an acceptable alternative.

Support:

11B Refer to the MassDOT Standard Signs book for additional details on design standards for MA-D1-6-series signs.

Guidance:

11C *Advance Entrance Direction signs should be placed a minimum distance of 600 feet in advance of the entrance ramp.*

11D *A Junction assembly should be located 200 feet or more in advance of an Advance Entrance Direction sign.*

WEIGH STATION, CROSSOVER, TRUCK AND PASSING LANE, AND EMERGENCY AND SLOW VEHICLE TURN-OUT SIGNS

Section 2D.54 Emergency and Slow Vehicle Turn-Out Signs (D17-5 through D17-7)

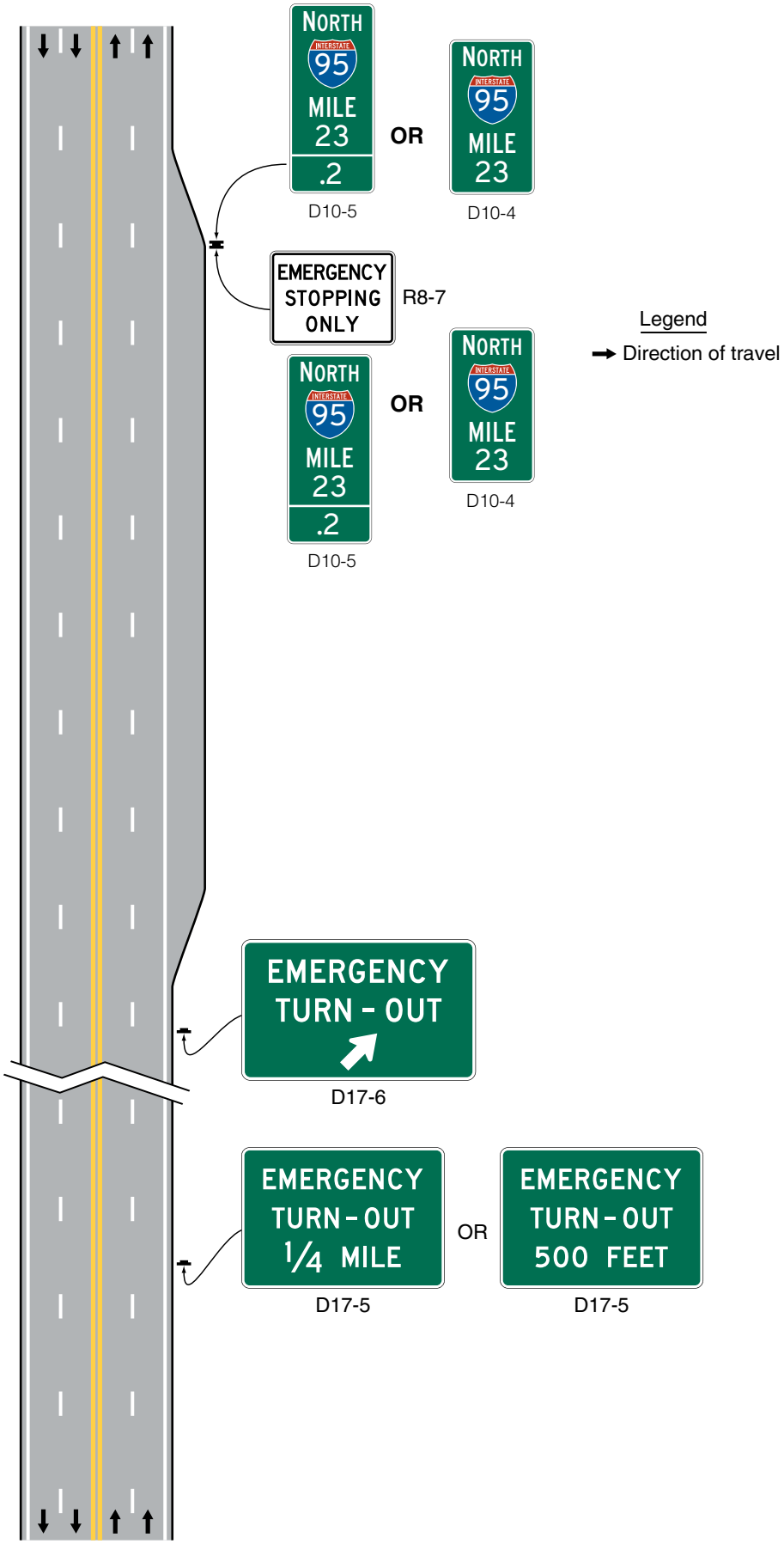
Insert the following paragraph:

Guidance:

03A *Where the EMERGENCY STOPPING ONLY (R8-7) sign is used for an emergency turn-out as shown in Figure 2D-29, it should be supplemented with the Intermediate Enhanced Reference Location Sign (D10-5) or Enhanced Reference Location (D10-4) sign with the appropriate decimal integer in place of the D10-5 sign to inform users who have stopped in the emergency pullout of their current location along the roadway.*

Insert Figure MA-2D-29 (Example of Signing for an Emergency Turn-Out, MA Standard).

Figure MA-2D-29. Example of Signing for Emergency Turning



CHAPTER 2E. GUIDE SIGNS FOR FREEWAYS AND EXPRESSWAYS

SIGN DESIGN

Section 2E.12 Size and Signs and Letters

Insert Table MA-2E-1 (Freeway or Expressway Guide Sign and Plaque Sizes, MA Standard).

Table MA-2E-1. Freeway or Expressway Guide Sign and Plaque Sizes, MA Standard

Sign	Sign Designation	Section	Minimum Size
Street Name	MA-D3-1	2D.45	Varies x 24
Interchange Advance Guide Sign Left Exit Tab	MA-E1-5P	2E.23	Varies x 30
State Route Number (1 or 2 digits)	MA-M1-5	2D.11	36 x 36
State Route Number (3 digits)	MA-M1-5a	2D.11	45 x 36

Delete Paragraph 01.

Insert the following paragraph:

Standard:

01A **Except as provided in Section 2A.07, the sizes of freeway and expressway guide signs that have standardized designs shall be as shown in Tables 2E-1 and MA-2E-1.**

Insert the following paragraph:

Option:

07A In situations where the height or width of the sign are constrained such that the full name of the intended destination would not fit on the sign, such as cases where there are structural limitations and a new sign is added to an existing support structure, the minimum letter spacing for destination sign legends may be reduced to 85 percent of the values shown in the "Standard Highway Signs" publication.

Section 2E.13 Interline and Edge Spacing

Insert the following paragraph:

Standard:

01A **For overhead and large ground-mounted directional signs, the lateral spacing to the vertical borders shall be no less than three-fourths the upper-case letter height of that legend.**

Section 2E.15 Amount of Legend on Guide Signs

Insert the following paragraph:

Option:

01A A street name and a city name may both be displayed on signs where the intersecting roadway is not a numbered route.

Section 2E.16 Abbreviations

Insert the following paragraph:

Standard:

01A **Where compass direction texts (North, South, East, West) are abbreviated in destination names in sign legends (i.e. N. Attleboro), a period shall be used for emphasis.**

Section 2E.17 Symbols

Insert the following paragraph:

Option:

01A Local transit authority symbols may be displayed on PARK - RIDE signs and other supplemental guide signs directing users to rail and bus stations.

INSTALLATION

Section 2E.19 Overhead Sign Installations

Insert the following paragraph:

Standard:

00 **The use of overcrossing structures for mounting signs shall be avoided unless it is impractical to mount the sign(s) to a separate structure.**

GUIDE SIGNING FOR INTERCHANGES

Section 2E.22 Interchange Exit Numbering

Insert the following paragraphs:

Standard:

05A **Where exits are located less than one mile apart, separate exit integer numbers are to be provided. Numbers suffixed by letters (i.e. 2A, 2B, 2C, etc.) shall be used only at multi-exit interchanges where both exits serve different directions of the same route or street, or at collector/distributor roads that access multiple exits from a single ramp.**

Support:

05B Overhead signs for separate closely spaced exits are often mounted on the same supports or in close proximity to each other. In these instances, use of separate numbers instead of numbers suffixed by letters will enable drivers to identify each individual exit more quickly.

Standard:

05C **Where exits to the same route, street, and/or destination are offset from each other on the expressway/freeway mainline by less than one mile, they are to have the same number from each direction on the expressway/freeway.**

Support:

05D Identifying such 'offset' exits with the same exit number facilitates easier navigation for drivers and enables businesses to identify their location more clearly to customers

Standard:

05E **For circumferential, loop, or spur routes that cross from an adjacent state, both the mile-posting and the exit numbering shall reset at the state border.**

Support:

05F Resetting mile-posting and exit numbering at the state border on these routes is consistent with those primary routes that cross state lines.

Section 2E.23 <u>Interchange Advance Guide Signs (E1-1 through E1-3)</u>

Insert the following paragraph:

Standard:

04A **For Interchange Advance guide signs at multi-exit interchanges, the distance displayed shall be measured from the sign to the gore point of the first exit ramp.**

Support:

04B See Figure MA-2E-9 for an example of an Interchange Advance guide sign with left exit tabs

Insert Figure MA-2E-9 (Example of Interchange Advance Guide Sign with Left Exit Tab)

Figure MA-2E-9. Example of Interchange Advance Guide Sign with Left Exit Tab



MA-E1-5P



Example of MA-E1-5P
with E1-5P Exit Tab

OTHER GUIDE SIGNS

Section 2E.55 Route Signs and Trailblazer Assemblies

Insert the following paragraph:

Standard:

02A **Massachusetts State Route Number (MA-M1-5 and MA-M1-5a) signs shall always include a border and inset, whether mounted independently or on guide signs.**

Section 2E.56 Eisenhower Interstate System Signs (M1-10, M1-10a)

Insert the following paragraph:

Option:

01A If used, M1-10 signs may be installed with the first mainline reassurance route assembly provided on an interstate route when entering Massachusetts from a bordering jurisdiction.

CHAPTER 2F. TOLL ROAD SIGNS

GUIDE SIGNS

Section 2F.17 Guide Signs for Entrances to Electronic Toll Collection (ETC) Only Facilities

Insert the following paragraph:

Option:

00 In accordance with Section 2F.12, a plaque indicating NO CASH OPTION (See Figure MA-2F-16) may be incorporated into guide signs for entrance ramps to ETC facilities.

Insert Table MA-2F-1 (Toll Road Sign and Plaque Minimum Sizes, MA Standard)

Table MA-2F-1. Toll Road Sign and Plaque Minimum Sizes, MA Standard

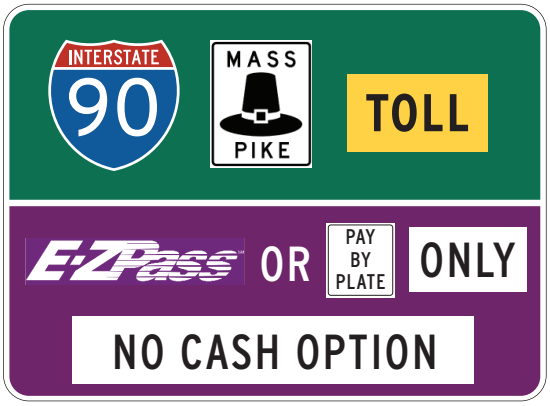
Sign	Sign Designation	Section	Minimum Size
No Cash Option Plaque	MA-R3-32P	2F.17	Varies

Insert Figure MA-2F-16 (Example of Guide Sign for an Entrance Ramp to an ETC-only Facility)

Figure MA-2F-16. Example of Guide Sign for an Entrance Ramp to an ETC-only Facility



MA-R3-32P



Example of MA-R3-32P
incorporated into guide sign at
an entrance to an ETC-only facility

CHAPTER 2G. PREFERENTIAL AND MANAGED LANE SIGNS

MANAGED LANE SIGNS, PLAQUES, AND LANE-USE CONTROL SIGNS

Section 2G.20 Signs for Part-Time Travel on a Shoulder - General

Insert the following paragraphs:

Standard:

00A **Where peak hour travel in breakdown lane is legally permissible during certain hours of the day, an Authorized Travel in Breakdown Lane (MA-R4-30) sign (see Figure MA-2G-1) shall be installed downstream of every interchange.**

00B **The Authorized Travel in Breakdown Lane sign shall include the days and times when travel in the breakdown lane is legally permissible.**

Standard:

00C **A No Trucks (R5-2) sign shall be mounted below the Authorized Travel in Breakdown Lane sign.**

00D **A Travel Prohibited in This Lane (MA-R4-31) sign with a MA-R4-31aP plaque (see Figure MA-2G-1) shall be placed at the downstream end of any emergency pull-off area adjacent to a breakdown lane where travel is legally permissible during certain hours of the day.**

Option:

00E The Travel Prohibited in This Lane sign with MA-R4-31aP plaque may be installed at regular intervals where breakdown lane travel is legally permissible during certain hours of the day.

Guidance:

00F *An Emergency Stopping Only (R8-7) sign (see Figure 2B-26) should be placed at the midpoint of any emergency pull-off area adjacent to a breakdown lane where travel is legally permissible during certain hours of the day.*

Standard:

00G **An END BREAKDOWN LANE TRAVEL (MA-R4-32) sign (see Figure MA-2G-1) shall be installed upstream of the last exit prior to the end of a section of breakdown lane where travel is legally permissible during certain hours of the day.**

Option:

00H A TRAVEL PROHIBITED IN BREAKDOWN LANE (MA-R4-33) sign (see Figure MA-2G-1) may be installed where illegal travel in breakdown lanes has been observed or may be expected.

Standard:

00I **Where travel in breakdown lane is allowed during certain hours of the day, a CAUTION BREAKDOWN LANE TRAVEL PERMITTED (MA-W8-26) sign (see Figure MA-2G-2) shall be installed on every on-ramp within the limits of breakdown lane travel.**

Option:

00J Where space constrains exist, a BREAKDOWN LANE IN USE (MA-W8-27) sign (see Figure MA-2G-2)with appropriate Days and Times (MA-W8-27aP) plaque may be substituted.

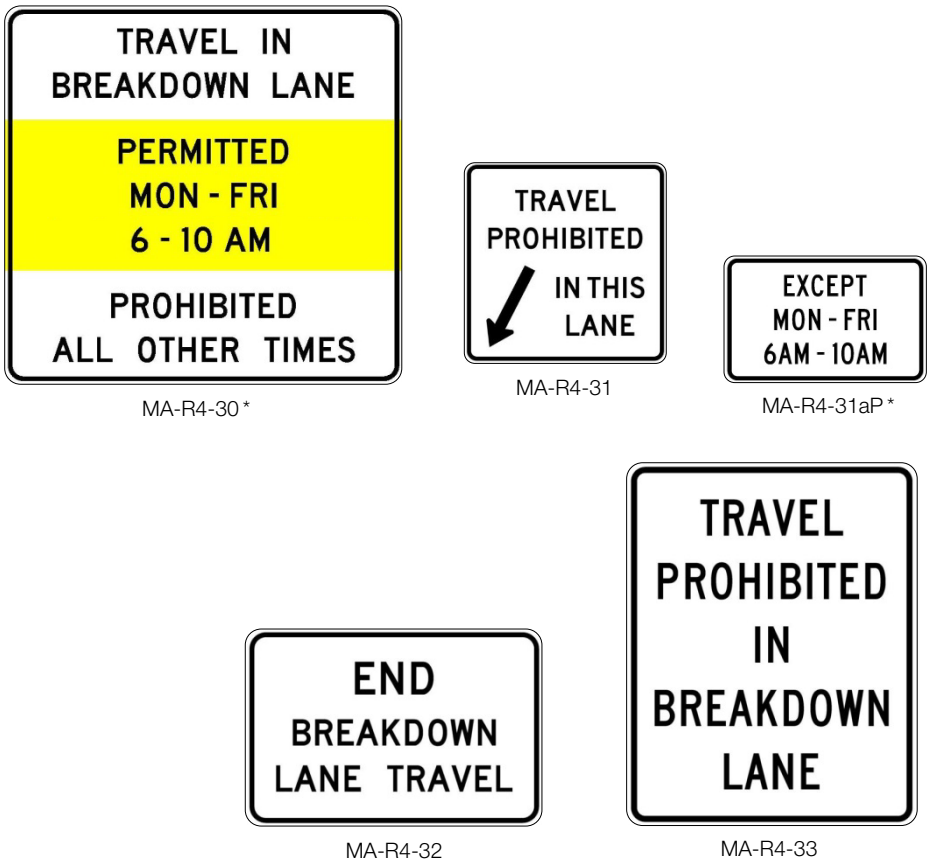
Guidance:

00K *Where an emergency pull-off area has been constructed to mitigate the lack of a full-time or part-time shoulder, an Emergency Pull-Off (MA-W8-28) sign (see Figure MA-2C-7) should be placed near its upstream end.*

Insert Figure MA-2G-1 (Passing, Keep Right, and Slow Traffic Signs, MA Standard)

Insert Figure MA-2G-2 (Miscellaneous Warning Signs, MA Standard)

Figure MA-2G-1. Passing, Keep Right, and Slow Traffic Signs, MA Standard



*The days and/or times shown on these signs may be modified to match permitted use

Figure MA-2G-2. Miscellaneous Warning Signs, MA Standard



MA-W8-26*



MA-W8-27



MA-W8-27aP*

*The days and/or times shown on these signs may be modified to match permitted use

CHAPTER 2H. GENERAL INFORMATION SIGNS

Section 2H.02 Sizes of General Information Signs

Insert Table MA-2H-1 (General Information Sign Sizes, MA Standard).

Table MA-2H-1. General Information Sign Sizes, MA Standard

Sign	Sign Designation	Section	Conventional Road	Freeway or Expressway
State Highway Begins	MA-I-13	2H.05	24 x 30	–
State Highway Ends	MA-I-14	2H.05	24 x 30	–

Insert Figure MA-2H-1 (General Information and Miscellaneous Information Signs, MA Standard).

Figure MA-2H-1. General Information and Miscellaneous Information Signs, MA Standard



MA-I-13 MA-I-14

Section 2H.03 Airport Signs

Insert the following paragraphs:

Standard:

00A **Airport signing shall conform to the applicable provisions of the MassDOT Supplemental Sign Policy.**

Support:

00B MGL Ch. 85, Sec. 2D provides MassDOT with the authority to establish the Supplemental Sign Policy.

Section 2H.05 Jurisdictional Boundary Signs (I2-1)

Insert the following paragraph:

Option:

03A The State Highway Begins (MA-I-13) and State Highway Ends (MA-I-14) signs (see Figure MA-2H-1) may be used on secondary highways to designate the limits of the State Highway system.

Section 2H.13 Acknowledgment Signs and Plaques (I20 Series)

Insert the following paragraphs:

Standard:

02A **Acknowledgement signs shall conform to the MassDOT Supplemental Sign Policy, latest edition.**

02B **Acknowledgement signs shall only be placed on secondary state highways.**

Section 2H.14 Alternative Fuels Corridor Sign (D9-19)

Standard:

00A **Alternative Fuel signs shall conform to the latest edition of the MassDOT Supplemental Sign Policy.**

Support:

00B MGL Ch. 85, Sec. 2D provides MassDOT with the authority to establish the Supplemental Sign Policy.

CHAPTER 2I. GENERAL SERVICE SIGNS

Section 2I.02 General Service Signs for Conventional Roads

Delete Paragraphs 07 and 12.

Insert the following paragraphs:

Standard:

00A **General Service signs shall conform to the MassDOT Supplemental Sign Policy, latest edition.**

Support:

00B MGL Ch. 85, Sec. 2D provides MassDOT with the authority to establish the Supplemental Sign Policy.

Standard:

00C **Pharmacy (D9-20) signs shall not be permitted.**

Standard:

07A **To be eligible for an EV Charging General Service sign on a conventional road, the EV chargers provided shall meet the criteria for Direct Current Fast Chargers provided in 23 CFR 680.106 and be in continuous operation at least 24 hours per day, 7 days per week.**

Section 2I.03 General Service Signs for Freeways and Expressways

Delete Paragraph 07:

Insert the following paragraphs:

Standard:

00A **Pharmacy (D9-20) signs shall not be permitted.**

Standard:

06A **General Service signs shall conform to the MassDOT Supplemental Sign Policy, latest edition.**

Support:

06B MGL Ch. 85, Sec. 2D provides MassDOT with the authority to establish the Supplemental Sign Policy.

Standard:

07A **To be eligible for an EV Charging General Service sign on freeways and expressways, the EV chargers provided shall meet the criteria for Direct Current Fast Chargers provided in 23 CFR 680.106 and be in continuous operation at least 24 hours per day, 7 days per week.**

Section 2I.04 Interstate Oasis Signing (D5-12 Series)

Delete entire section. The Interstate Oasis Signing program does not conform to the MassDOT Supplemental Sign Policy. Typical service sign installations on Massachusetts Interstates are for Specific Service signs and conform to Chapter 2J.

Section 2I.08 Tourist Information and Welcome Center Signs (D5-7 Series and D5-8)

Insert the following paragraph:

Standard:

01A **Privately operated Tourist Information Center signs shall conform to the MassDOT Supplemental Sign Policy, latest edition.**

CHAPTER 2J. SPECIFIC SERVICE SIGNS

Section 2J.01 Eligibility

Delete paragraph 12

Insert the following paragraphs:

Standard:

01A **Specific Service signs shall conform to the MassDOT Supplemental Sign Policy, latest edition.**

01B **Pharmacy (D9-20) signs shall not be permitted.**

Option:

11A MGL Ch. 85, Sec. 2D provides MassDOT with the authority to establish the Supplemental Sign Policy.

Standard:

12A **To be eligible for an Electric Vehicle (EV) CHARGING business identification sign panel, the EV chargers provided shall meet the criteria for Direct Current Fast Chargers provided in 23 CFR 680.106 and be in continuous operation at least 24 hours per day, 7 days per week.**

Section 2J.02 Application

Delete Paragraphs 06, 12 and 14.

Insert the following paragraph:

Standard:

14A **No service type shall appear on more than one sign for a given interchange.**

Section 2J.04 Number and Size of Signs and Business Identification Sign Panels

Delete Paragraphs 03 and 04. Section 2J.02 prohibits the usage of more than one sign per interchange for any single specific service type.

Insert the following paragraph:

Support:

00 Typical sign details for specific service signs are contained in the MassDOT Standard Signs Book.

CHAPTER 2L. CHANGEABLE MESSAGE SIGNS

Section 2L.08 Permanently-Located Changeable Message Signs

Insert the following paragraph:

Standard:

00A **Permanent changeable message sign panels and their support structures shall be installed with a minimum of 800 feet spacing from any adjacent major guide signs, and as far as practicable from all other regulatory and warning signs.**

CHAPTER 2M. RECREATIONAL AND CULTURAL INTEREST AREA SIGNS

Section 2M.10 Memorial or Dedication Signing

Insert the following paragraph:

Standard:

05A **Pictographs on Memorial signs shall be limited to the Massachusetts State Shield and/or other appropriate insignias or symbols as approved by MassDOT.**

PART 3
MARKINGS

CHAPTER 3A. GENERAL

Section 3A.04 Functions, Widths, and Patterns of Longitudinal Pavement Markings

Insert the following paragraphs:

Standard:

02A **Normal lines on all State Highways shall be 6 inches in width.**

Guidance:

02B *Normal lines on all National Highway System roads, and on any roadways with a speed limit of 45 miles per hour or greater, should be 6 inches in width.*

Standard:

02C **Wide lines on all State Highways shall be 12 inches in width.**

Guidance:

02D *Wide lines on all National Highway System roads, and on any roadways with a speed limit of 45 miles per hour or greater, should be 12 inches in width.*

CHAPTER 3B. PAVEMENT AND CURB MARKINGS

Section 3B.03 No-Passing Zone Pavement Markings

Insert the following paragraphs:

Standard:

08A **Passing zones shall not be allowed within 200 feet approaching and 100 feet departing of any of the following:**

- **A. Traffic control signal or pedestrian hybrid beacon.**
- **B. Intersection with a public way that has a functional classification other than Local or a cluster of intersections that produce significant turning movements.**
- **C. Bus stop or marked crosswalk.**
- **D. Designated School Zone or school driveway.**
- **E. Hospital, Fire, or other driveway serving emergency services.**
- **F. Any other driveway for a significant traffic generator or cluster of driveways that would collectively generate significant traffic.**
- **G. Roundabout or other circular intersection.**
- **H. At-grade railroad crossing.**
- **I. Raised median or two-way left-turn lane.**

08B **The minimum length of a passing zone in any single direction shall be 800 feet.**

08C **Passing zones shall not be marked on roads with a posted or statutory speed limit of less than 45 mph.**

Section 3B.05 Pavement Markings for Two-Way Left-Turn Lanes

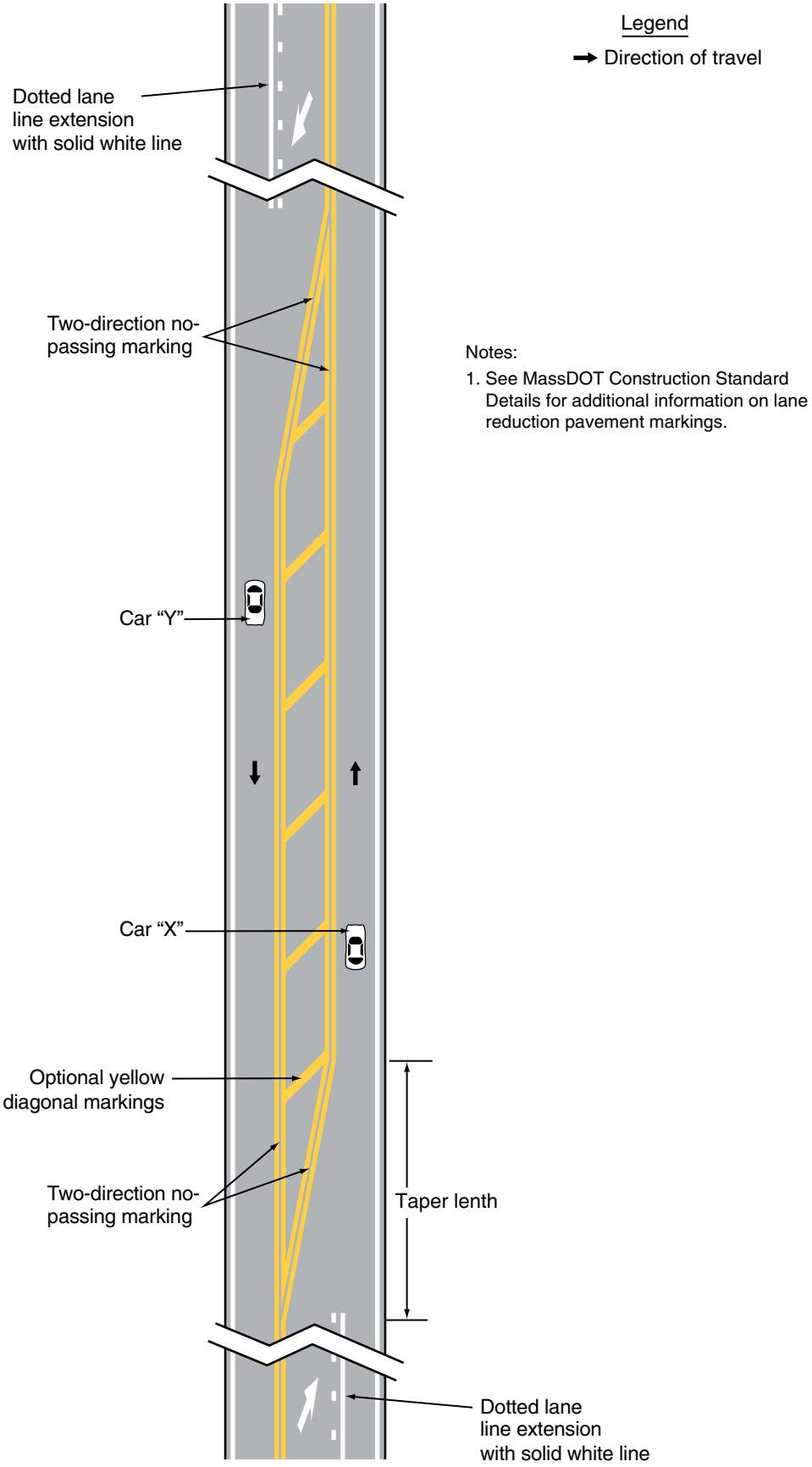
Insert the following paragraph:

Standard:

09A **On three-lane roadways where the direction of travel in the center lane transitions from one direction to the other, a no passing buffer zone, consisting of a flush median island (see Section 3J.04) at least 50 feet in length, shall be provided in the center lane as shown in Figure MA-3B-5. A lane-reduction transition (see Section 3B.12) shall be provided approaching each end of the buffer zone.**

Insert Figure MA-3B-5 (Application of Three-Lane, Two-Way Markings for Changing the Direction of the Center Lane).

Figure MA-3B-5. Application of Three-Lane, Two-Way Markings for Changing the Direction of the Center Lane



Section 3B.07 White Lane Markings for Non-Continuing Lanes

Delete Paragraphs 02, 05, and 07.

Insert the following paragraphs:

Standard:

04A **On roadways with a speed limit of 45 miles per hour or greater, for exit ramps with a parallel deceleration lane, a normal width dotted white line shall be installed in the taper area upstream from the full-width deceleration lane as shown in Drawings A and C of Figures 3B-9 and MA-3B-9.**

04B **On roadways with a speed limit of 45 miles per hour or greater, for an exit ramp with a tapered deceleration lane, a normal width dotted white line shall be installed from the theoretical gore through the taper area such that it meets the edge line at the upstream end of the taper as shown in Drawing B of Figures 3B-10 and MA-3B-10.**

4C **On roadways with a speed limit of 45 miles per hour or greater, for entrance ramps with a parallel acceleration lane, a normal width dotted white line shall be installed from the downstream end of the dotted white lane line to the downstream end of the acceleration taper, as shown in Drawing A of Figures 3B-10 and MA-3B-10.**

4D **On roadways with a speed limit of 45 miles per hour or greater, for entrance ramps with a tapered acceleration lane, a normal width dotted white line shall be installed from the downstream end of the channelizing line adjacent to the through lane to the downstream end of the acceleration taper, as shown in Drawings B and C of Figures 3B-10 and MA-3B-10.**

4E **At a full-width turn bay, a normal width dotted white line extension shall be used through the taper, as shown in Drawings A and B of Figure 3B-12.**

Standard:

07A **A wide dotted white lane line shall be used:**

- **A. As a lane drop marking in advance of lane drops at exit ramps to distinguish a lane drop from a normal exit ramp (see Drawings A, B, and C in Figures 3B-11 and MA-3B-11),**
- **B. In advance of freeway route splits with dedicated lanes (see Drawing D in Figures 3B-11 and MA-3B-11),**
- **C. In advance of freeway route splits with an option lane (see Drawing E in Figures 3B-11 and MA-3B-11),**
- **D. To separate a through lane that continues beyond an interchange from an adjacent continuous auxiliary lane between an entrance ramp and an exit ramp (see Drawing F in Figures 3B-11 and MA-3B-11),**
- **E. As a lane drop marking in advance of lane drops at intersections to distinguish a lane drop from an intersection through lane (see Drawing A in Figure 3B-12), and**
- **F. To separate a through lane that continues beyond an intersection from an adjacent auxiliary lane between two intersections (see Drawing B in Figure 3B-12).**

Insert Figure MA-3B-9 (Examples of Exit Ramp Markings).

Insert Figure MA-3B-10 (Examples of Entrance Ramp Markings).

Insert Figure MA-3B-11 (Examples of Applications of Freeway and Expressway Lane-Drop Markings).

Figure MA-3B-9. Examples of Exit Ramp Markings (Sheet 1 of 2)

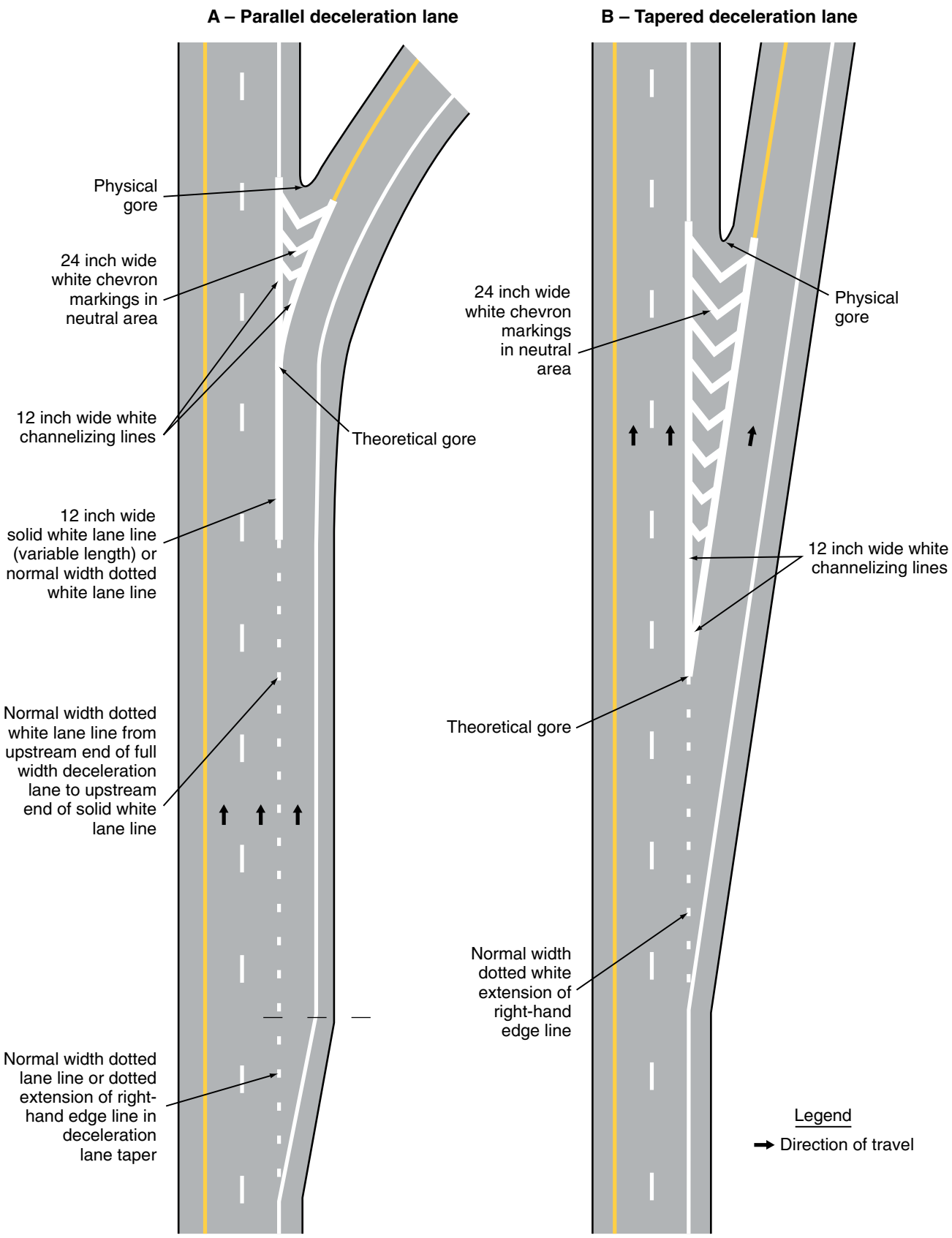


Figure MA-3B-9. Examples of Exit Ramp Markings (Sheet 2 of 2)

C – Parallel deceleration lane at a multi-lane exit ramp having an optional exit lane that also carries the through route

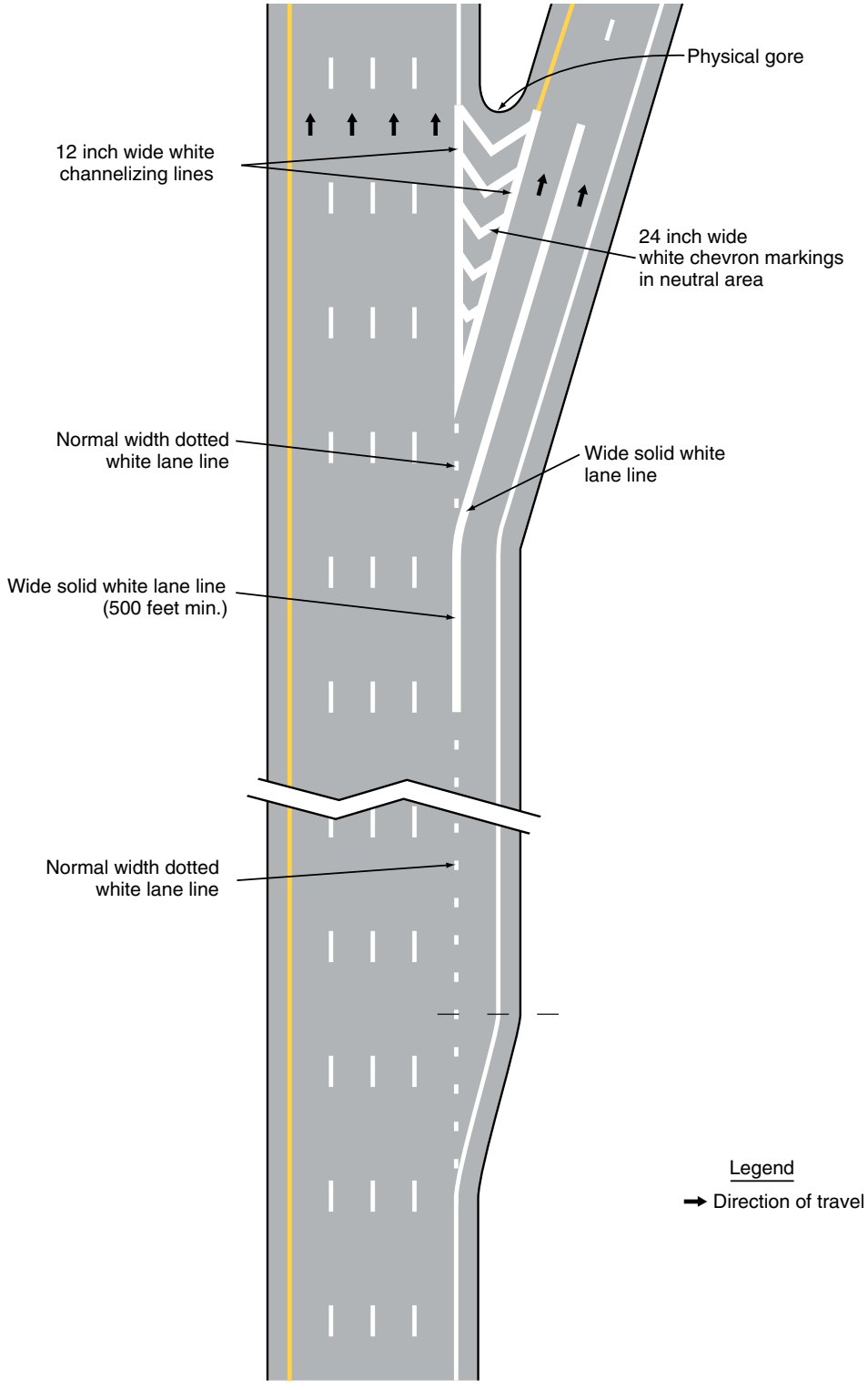


Figure MA-3B-10. Examples of Entrance Ramp Markings

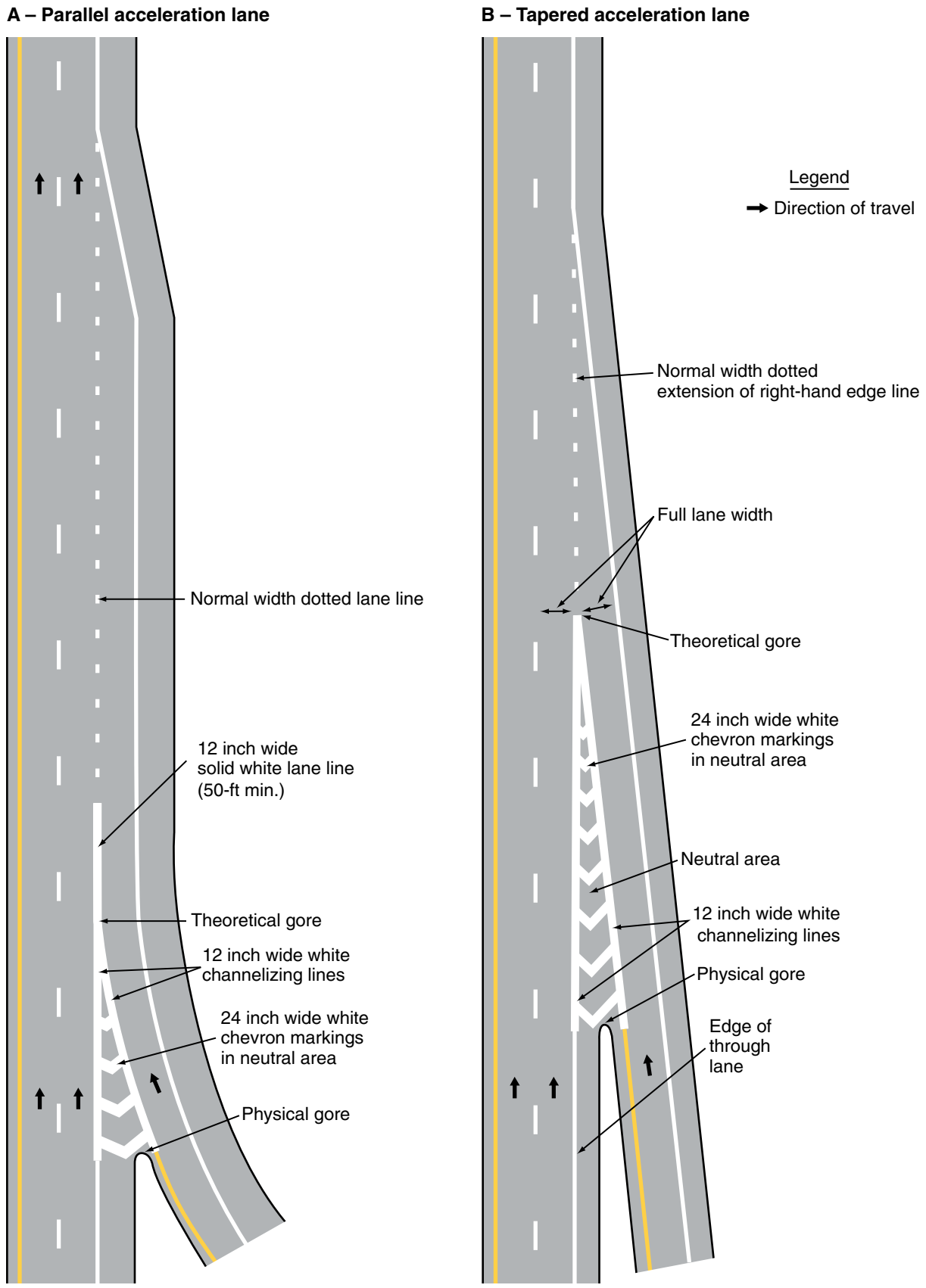


Figure MA-3B-11. Examples of Applications of Freeway and Expressway Lane-Drop Markings (Sheet 1 of 3)

A – Lane drop at a single lane exit ramp

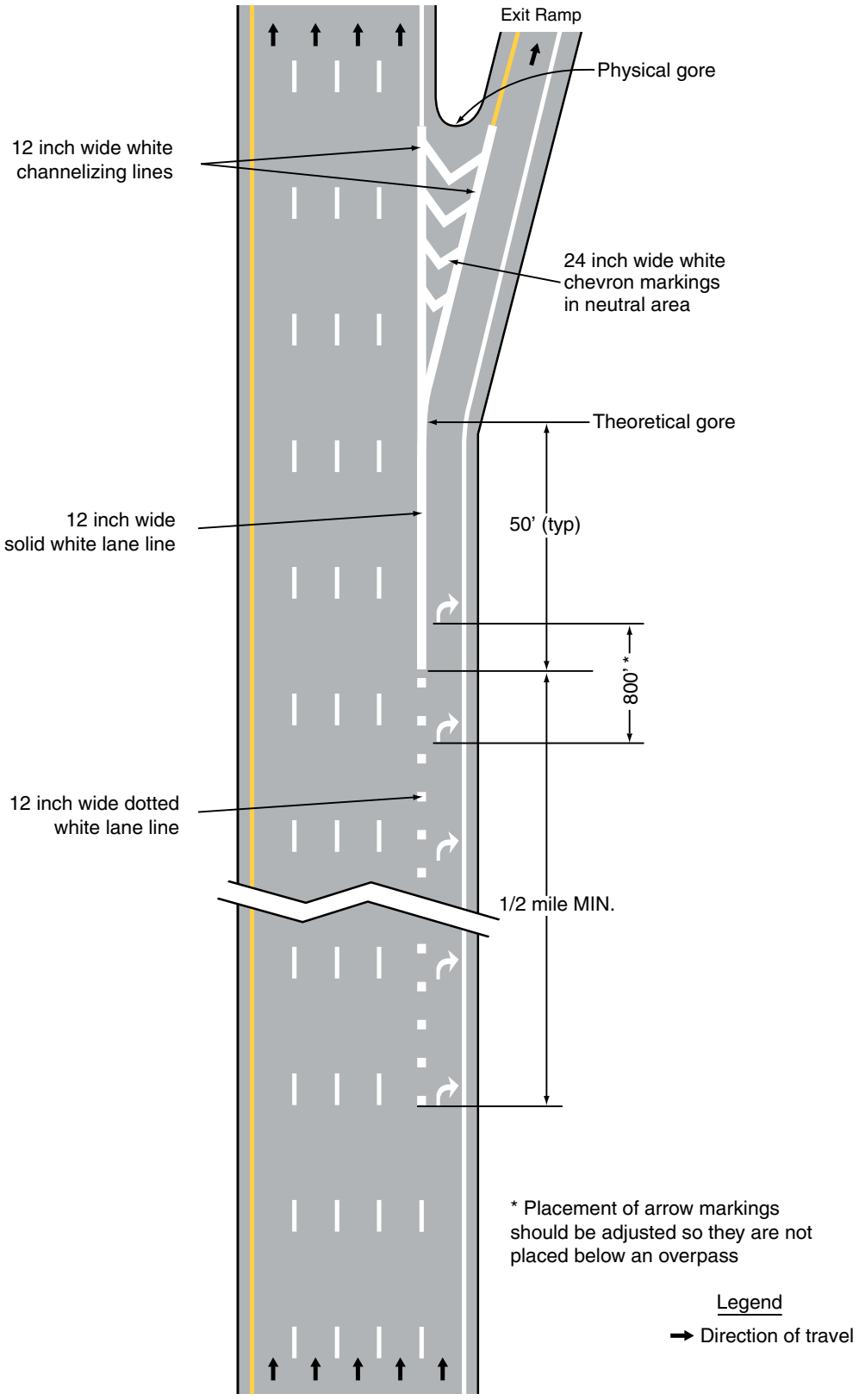


Figure MA-3B-11. Examples of Applications of Freeway and Expressway Lane-Drop Markings (Sheet 2 of 3)

B – Lane drop at a multi-lane exit ramp having an optional exit lane that also carries the through route

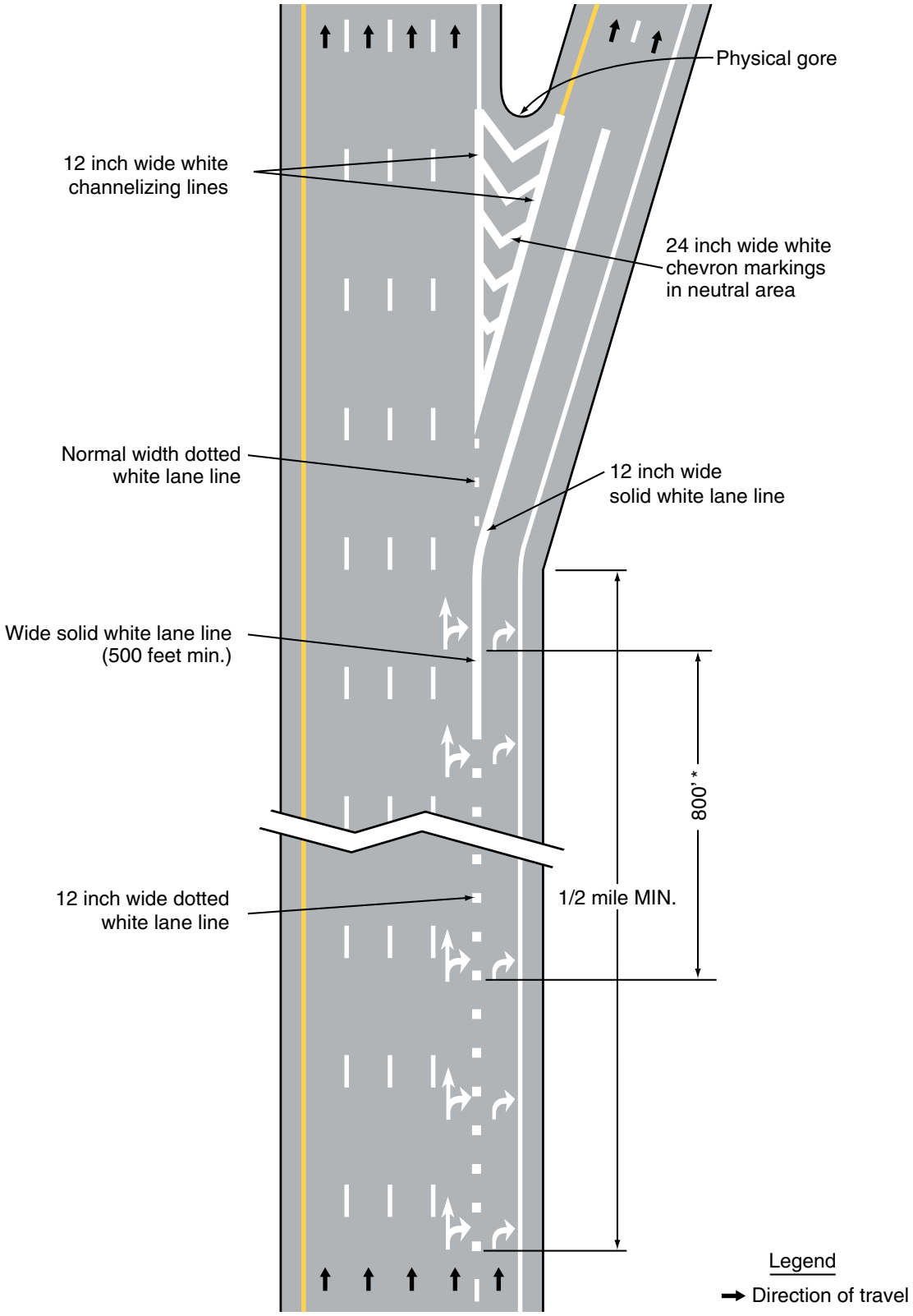
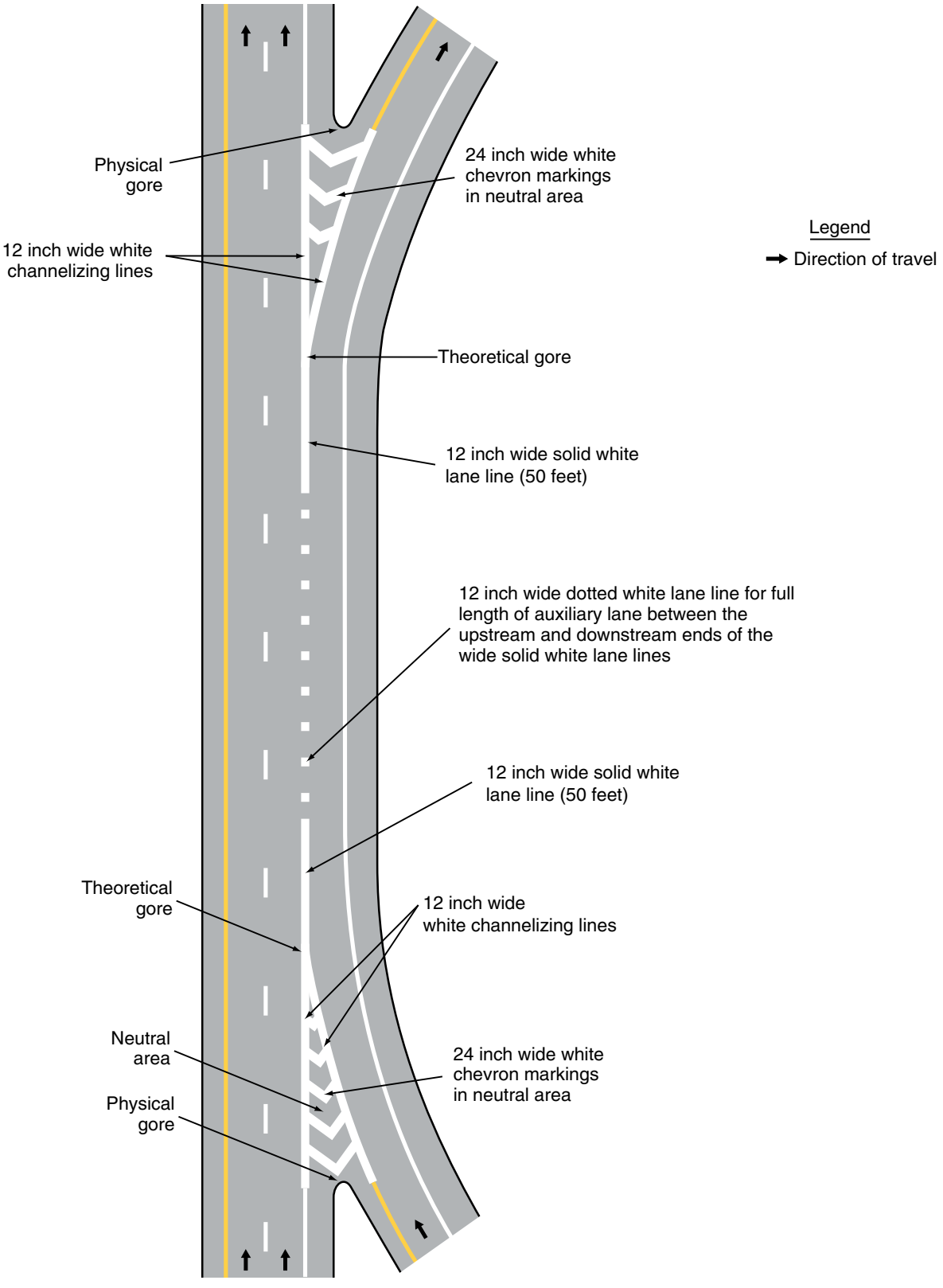


Figure MA-3B-11. Examples of Applications of Freeway and Expressway Lane-Drop Markings (Sheet 3 of 3)

C – Continuous auxiliary lane, such as at a cloverleaf interchange



Section 3B.12 Lane-Reduction Transitions

Delete Paragraph 16:

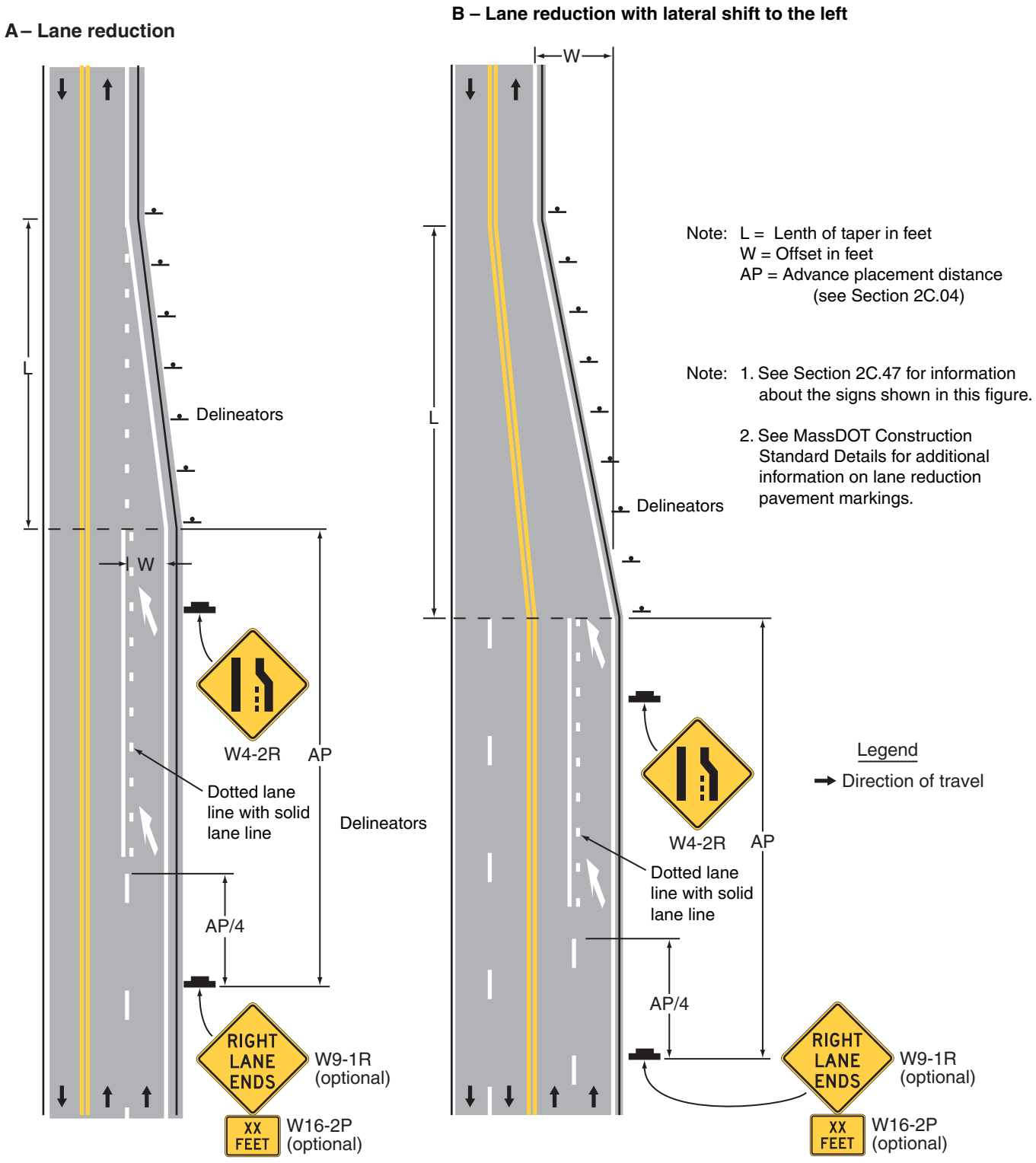
Insert the following paragraphs:

Standard:

16A **Lane reduction transition markings shall be as shown in Figure MA-3B-14.**

Insert Figure MA-3B-14 (Examples of Applications of Lane-Reduction Transition Markings).

Figure MA-3B-14. Examples of Applications of Lane-Reduction Transition Markings, MA Standard



Section 3B.14 Raised Pavement Markers - General

Insert the following paragraphs:

Standard:

00A **Permanent pavement markers on State Highways shall be limited to recessed applications, only. Permanent raised pavement markers shall not be used.**

00B **The term "raised pavement markers" shall be applied to recessed applications in all other Sections.**

Guidance:

07A *Raised pavement markers used to supplement dotted lane lines should use a value of N that is equal to the length of line segment plus one gap of the dotted lines used on the highway.*

Section 3B.17 Raised Pavement Markers Substituting for Pavement Markings

Delete this Section. Raised pavement markers may not be used as a substitute for pavement markings.

Section 3B.19 Stop and Yield Lines

Delete Paragraph 01

Insert the following paragraphs:

Option:

01A Stop lines may be used to indicate the point behind which vehicles are required to stop in compliance with a STOP (R1-1) sign or some other traffic control device that requires vehicles to stop, except YIELD signs that are not associated with passive grade crossings.

Guidance:

05A *On roadways with a speed limit of 45 miles per hour or greater, stop lines should be 24 inches in width.*

Guidance:

10A *At locations where a stop line or yield line is installed, all longitudinal lines (e.g. center lines, lane lines, edge lines) should terminate at the stop or yield line, and should not resume until after the far side of the intersection and/or crosswalk. If needed, single dotted white or yellow line extensions may be used.*

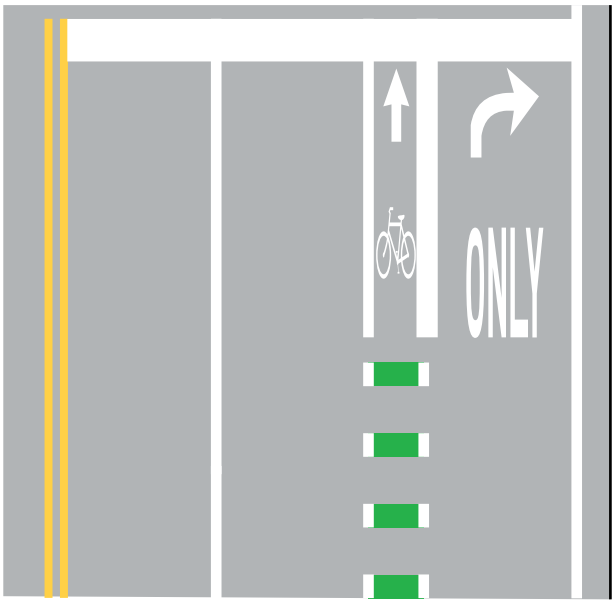
10B *At locations where a stop line or yield line are installed on a bike facility, all longitudinal lines should terminate at the stop or yield line and should not resume until after the far side of the intersection and/or crosswalk. If needed, single dotted white or yellow line extensions may be used. If a pavement marking buffer is used to separate the vehicular and bicycle travel lanes, the stop or yield line should be installed as a continuous line through the buffer (see figure MA-3B-16).*

12A *Yield lines should not be used at a crosswalk that crosses an uncontrolled single-lane approach.*

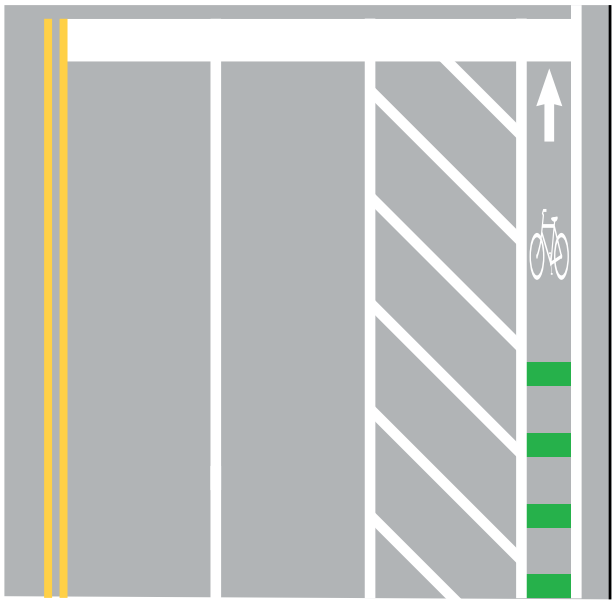
Insert Figure MA-3B-16 (Examples of Stop and Yield Line Applications for Bicycle Facilities).

Figure MA-3B-16 Examples of Stop and Yield Line Applications for Bicycle Facilities

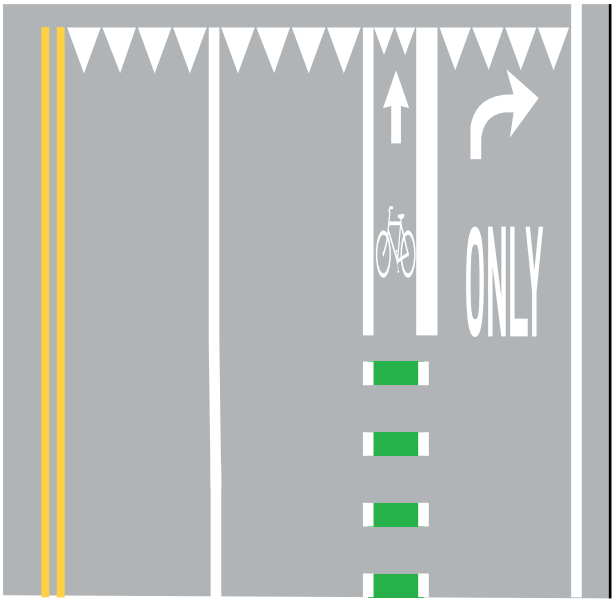
A - Stop Line for a Bicycle Lane with a Buffer



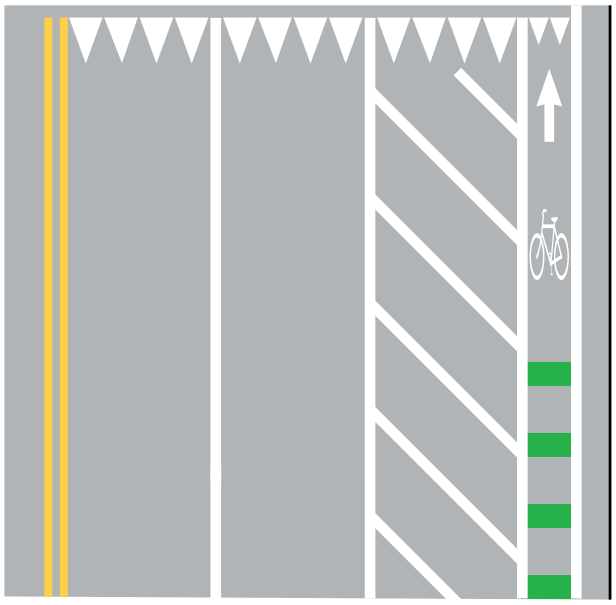
B - Stop Line for a Buffered Bicycle Lane



C - Yield Line for a Bicycle Lane with a Buffer



D - Yield Line for a Buffered Bicycle Lane



Section 3B.21 Word Pavement Markings

Insert the following paragraphs:

Standard:

03A **When a route shield pavement marking is used in combination with a cardinal direction pavement marking, the route shield shall be nearest to the road user followed by the cardinal direction pavement marking.**

03B **Pavement markings simulating the Massachusetts State Route Shield shall mimic the design shown in Figure MA-2D-4. The State Route Shields shown in Figure 3B-18 shall not be used.**

Guidance:

08A *If used, other lane drop markings such as lane-use arrows and ONLY word legends, should be placed at the start of the wide dotted lane line. On roadways with a speed limit of 45 miles per hour or greater, the lane-use arrows and ONLY word legends should be repeated at intervals of approximately 800 feet until the theoretical gore.*

Section 3B.22 Symbol Pavement Markings

Insert the following paragraph:

Standard:

00A **Pavement markings simulating the Massachusetts State Route Shield shall mimic the design shown in Figure MA-2D-4 (See Part 2). The State Route Shields shown in Figure 3B-18 shall not be used.**

Section 3B.23 Lane Use Arrows

Insert the following paragraphs:

Guidance:

00A *The standard lane-use arrow markings should be used on an approach to a roundabout. Curved-stem lane-use arrows (see Figure 3B-21) should not be used.*

Standard:

00B **At rotaries and other circular intersections, lane use arrows shall be curved-stem arrows as depicted in Figure 3B-21(F) and shall include the "center island" marking for the leftmost lane on multi-lane approaches.**

Section 3B.25 Chevron and Diagonal Markings

Delete paragraph 10.

Insert the following paragraphs:

Guidance:

10A *Except as provided in Paragraphs 11 and 11A of Section 3B.25, chevrons and diagonal markings should be at least 24 inches wide for roadways having a speed limit of 45 mph or greater, and at least 8 inches wide for roadways having a speed limit of less than 45 mph. The longitudinal spacing of the chevrons or diagonal lines should be determined by engineering judgment considering factors such as speeds and desired visual impacts. The chevrons and diagonal lines should form an angle of approximately 30 degrees with the longitudinal lines that they intersect..*

Standard:

11A **The yellow diagonal markings found within a continuous flush median shall be wide lines per Section 3A.04.**

Section 3B.26 Do Not Block Intersection Markings

Delete Paragraph 03

Insert the following paragraphs:

Support:

01A There is no law prohibiting a stationary car in operation from blocking a driveway. However, MGL Chapter 89, Section 9 includes a law prohibiting a vehicle from blocking an intersection.

Standard:

03A **Do Not Block Intersection markings shall be accompanied by one or more Do Not Block Intersection (CROSSING) (R10-7) signs (see Section 2B.59), one or more Do Not Stop On Tracks (R8-8) signs (see Section 8B.07), or one or more similar signs.**

CHAPTER 3C. CROSSWALK MARKINGS

Section 3C.02 Application of Crosswalk Markings

Delete paragraph 05.

Insert the following paragraphs:

Standard:

05A **Except as provided in Paragraph 05B, crosswalk markings shall be provided at legally established crosswalks at non-intersection locations.**

Support:

05B 700 CMR 9.09 indicates that a legally established crosswalk at a non-intersection location includes both marked crosswalks as well as unmarked crossings within 300 feet of a marked crosswalk.

Section 3C.03 Design of Crosswalk Markings

Insert the following paragraphs:

Guidance:

00A *Where provided, stop lines should be placed no less than 4 feet behind an adjacent crosswalk line.*

Standard:

06A **For marked crosswalks at midblock crossings, at Pedestrian Hybrid Beacons, at roundabouts, and at any location not controlled by a STOP sign, YIELD sign, or traffic control signal, the crosswalk shall use longitudinal bars per Figure 3C-1.**

Guidance:

08A *To enhance the conspicuity of the crosswalk markings, no other pavement markings should be placed within 4 feet of the outer edge of the transverse or longitudinal lines used in crosswalk markings.*

Option:

11A If an aesthetic treatment is used to supplement a crosswalk at a midblock crossing, a Pedestrian Hybrid Beacon, a roundabout, or any other location not controlled by a STOP sign, YIELD sign, or traffic control signal, the longitudinal bars may be omitted as long as the pair of transverse solid white lines are used to mark the crosswalk.

Standard:

12A **Aesthetic treatments used within crosswalk lines shall conform to Section 3H.03.**

CHAPTER 3D. CIRCULAR INTERSECTION MARKINGS

Section 3D.04 Yield Lines for Roundabouts

Delete Paragraph 02.

Insert the following paragraph:

Standard:

02A **A yield line (see Section 3B.19) shall be used to indicate the point behind which vehicles are required to yield at the entrance to a roundabout (see Figure 3D-1).**

Section 3D.06 Arrow Pavement Markings for Roundabouts

Delete Paragraphs 04 and 05.

Insert the following paragraphs:

Standard:

05A **At rotaries and other circular intersections, lane use arrows shall be curved-stem arrows as depicted in Figure 3B-21(F) and shall include the "center island" marking for the leftmost lane on multi-lane approaches.**

Guidance:

05B *The standard lane-use arrow markings should be used on an approach to a roundabout. Curved-stem lane-use arrows (see Figure 3B-21) should not be used.*

Section 3D.07 Markings for Other Circular Intersections

Insert the following paragraphs:

Guidance:

00A *The standard lane-use arrow markings should be used on an approach to a roundabout. Curved-stem lane-use arrows (see Figure 3B-21) should not be used.*

Standard:

00B **At rotaries and other circular intersections, lane use arrows shall be curved-stem arrows as depicted in Figure 3B-21(F) and shall include the "center island" marking for the leftmost lane on multi-lane approaches.**

CHAPTER 3E. PREFERENTIAL MARKINGS FOR MOTOR VEHICLES

Section 3E.02 Longitudinal Markings

Insert the following paragraphs:

Standard:

00A **Where the preferential lane is used primarily for bus travel and the preferential lane is on the right-hand side of other traffic lanes including vehicular or bike lanes in the same direction, the preferential lane shall be considered a contiguous right-hand side lane and separated from other traffic lanes per Table 3E-1.**

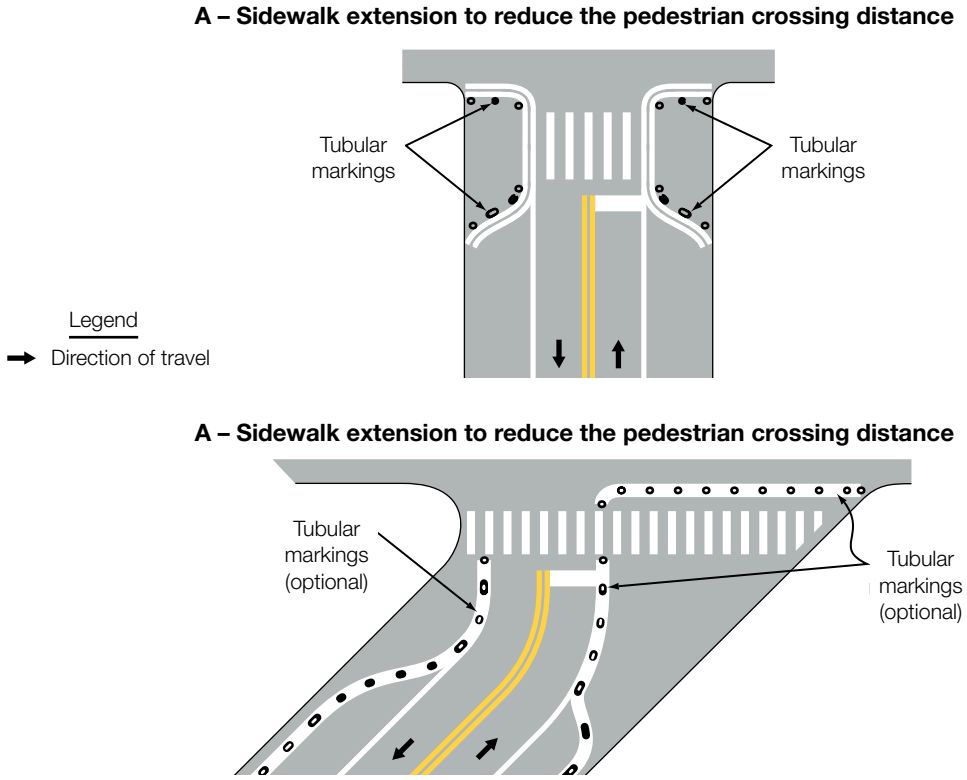
00B **Where the preferential lane is used primarily for bus travel and the preferential lane is on the left-hand side of other traffic lanes including vehicular or bike lanes in the same direction, the preferential lane shall be considered a contiguous left-hand side lane and separated from other traffic lanes per Table 3E-1.**

00C **At driveways, the preferential lane shall be separated by normal width dotted white lines.**

Section 3J.07 Sidewalk Extensions Designated by Pavement Markings

Insert Figure MA-3J-6 (Examples of Sidewalk Extensions Designated by Pavement Markings, MA Standard)

Figure MA-3J-6. Examples of Sidewalk Extensions Designated by Pavement Markings and Channelization, MA Standard



PART 4
HIGHWAY TRAFFIC SIGNALS

CHAPTER 4B. TRAFFIC CONTROL SIGNALS – GENERAL

Section 4B.03 <u>Alternatives to Traffic Control Signals</u>

Insert the following paragraph:

Guidance:

02A *An Intersection Control Evaluation (ICE) should be performed prior to the consideration of the installation of any new traffic control signal.*

CHAPTER 4C. TRAFFIC CONTROL SIGNAL NEEDS STUDIES

Section 4C.01 Studies and Factors for Justifying Traffic Control Signals

Insert the following paragraph:

Guidance:

12A *Regardless of the traffic signal warrant(s) that are investigated, a minimum of eight hours of traffic count data should be collected as part of the engineering study of traffic conditions performed to justify the installation of a traffic control signal.*

12B *For the traffic signal warrants described in Section 4C.02 to Section 4C.10 that allow the option to use reduced volume thresholds when the posted or statutory speed limit or the 85th-percentile speed on the major street exceeds a particular speed, the 85th-percentile speed should only be used in the absence of a regulatory posted speed.*

Section 4C.02 Warrant 1, Eight-Hour Vehicular Volume

Insert the following paragraphs:

Guidance:

03A *Except as provided in Paragraph 3B below, Warrant 1 should be met prior to the consideration of the installation of any new traffic control signal on State Highway.*

Option:

03B If an intersection on State Highway meets the criteria for Warrant 7, per Section 4C.08, and an Intersection Control Evaluation shows that alternatives to a traffic control signal are not practical or do not provide the same benefit, then a traffic control signal may be considered.

CHAPTER 4D. DESIGN FEATURES OF TRAFFIC CONTROL SIGNALS

Section 4D.02 Provisions for Pedestrians

Insert the following paragraph:

Standard:

07A **Where pedestrian signal heads are provided, crosswalk markings shall be used to delineate crossings for pedestrians.**

Section 4D.05 Number of Signal Faces on an Approach

Insert the following paragraph:

Guidance:

06A *Overhead signal indications should be provided on any approach with three or more total lanes or any approach with two or more through lanes.*

Section 4D.06 Visibility, Aiming, and Shielding of Signal Faces

Insert the following paragraph:

Option:

11A If a supplemental signal indication is provided on an approach due to sight distance that is limited by horizontal alignment, it may be post-mounted on the near-left or near-right corners.

Section 4D.07 Lateral Positioning of Signal Faces

Insert the following paragraph:

Standard:

13A **On an approach with a protected left-turn movement, an overhead supplemental signal indication for the through movement shall not be placed to the left of the left-turn signal on the same overhead support, and a post-mounted supplemental signal indication for the through movement shall not be placed on the far-left or far-side median.**

CHAPTER 4E. TRAFFIC CONTRL SIGNAL INDICATIONS

Section 4E.01 Signal Indications – Design, Illumination, Color, and Shape

Insert the following paragraph:

Guidance:

06A *New or reconstructed signal installations should not use alternate display (bimodal, or dual-arrow signal section) of a GREEN ARROW and a YELLOW ARROW.*

CHAPTER 4F. STEADY (STOP-AND-GO) OPERATION OF TRAFFIC CONTROL SIGNALS

Section 4F.07 Signal Indications for Protected/Permissive Mode Left-Turn Movements in a Shared Signal Face

Insert the following paragraph:

Standard:

00A **Where a mandatory left-turn lane exists and the signal operates with a protected/permissive mode for left turns on that approach, a shared signal face including through movement indications shall not be used. A separate left-turn signal indication with a flashing left-turn yellow arrow signal face per Paragraph 03 of Section 4F.08 shall be provided.**

Section 4F.17 Yellow Change and Red Clearance Intervals

Insert the following paragraph:

Support:

00A Engineering practices for determining the duration of yellow change and red clearance intervals can be found in MassDOT's "Guidance on Calculating Clearance Intervals at Traffic Signals" (2013).

CHAPTER 4H. BICYCLE SIGNALS

Section 4H.01 Use of Bicycle Signal Faces

Delete Paragraph 09.

Insert the following paragraphs:

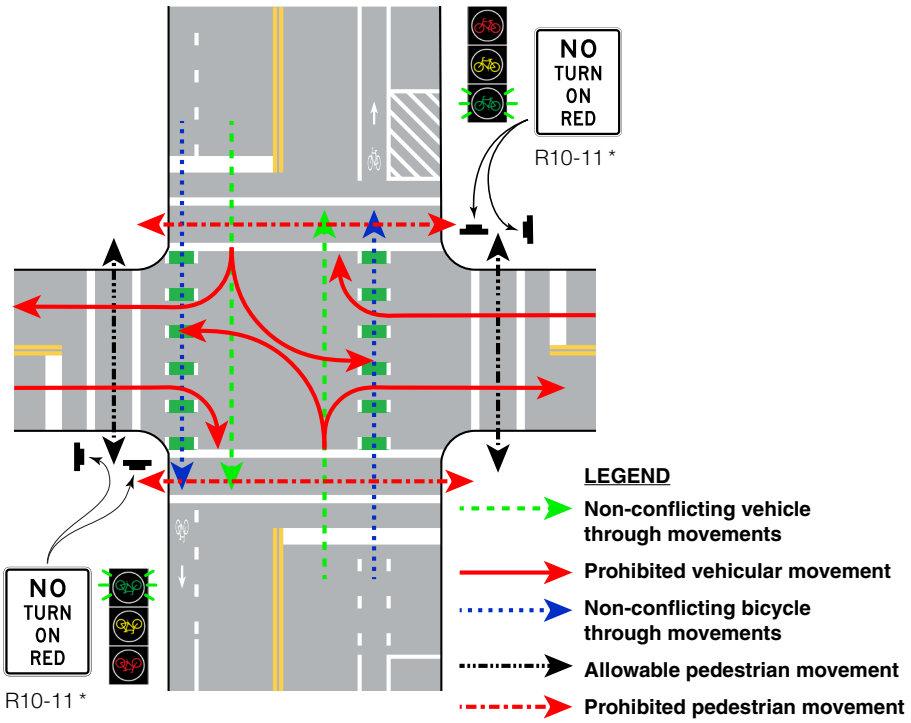
Standard:

09A **If used, a bicycle signal face shall only be used to control bicyclist movements where bicyclists moving on a GREEN BICYCLE or YELLOW BICYCLE signal indication are not in conflict with any simultaneous motor vehicle or pedestrian movement at the signalized location, including right (or left) turns on red.**

09B **Where a motor vehicle right (or left) turn on red would conflict with a simultaneous bicycle or pedestrian movement, turns on red shall be prohibited for motor vehicle traffic for that movement (see Figure MA-4H-1).**

Insert Figure MA-4H-1 (Prohibited and Permissible Movements During Green or Yellow Bicycle Signal Indication)

Figure MA-4H-1. Prohibited and Permissible Movements During Green or Yellow Bicycle Signal Indication



Other R10-11 series signs or a blank-out R10-11 series sign may be substituted. Sign may also be mounted overhead.

CHAPTER 4I. PEDESTRIAN CONTROL FEATURES

Section 4I.05 Pedestrian Detectors

Delete Paragraph 05.

Insert the following paragraphs:

Standard:

05A **Pedestrian pushbuttons shall be placed in locations that comply with MAAB standards.**

Support:

05B 521 CMR 21.00 regulates the design of sidewalks, walkways, and curb cuts on streets and ways when they are constructed, reconstructed, or repaired.

CHAPTER 4J. PEDESTRIAN HYBRID BEACONS

Section 4J.02 Design of Pedestrian Hybrid Beacons

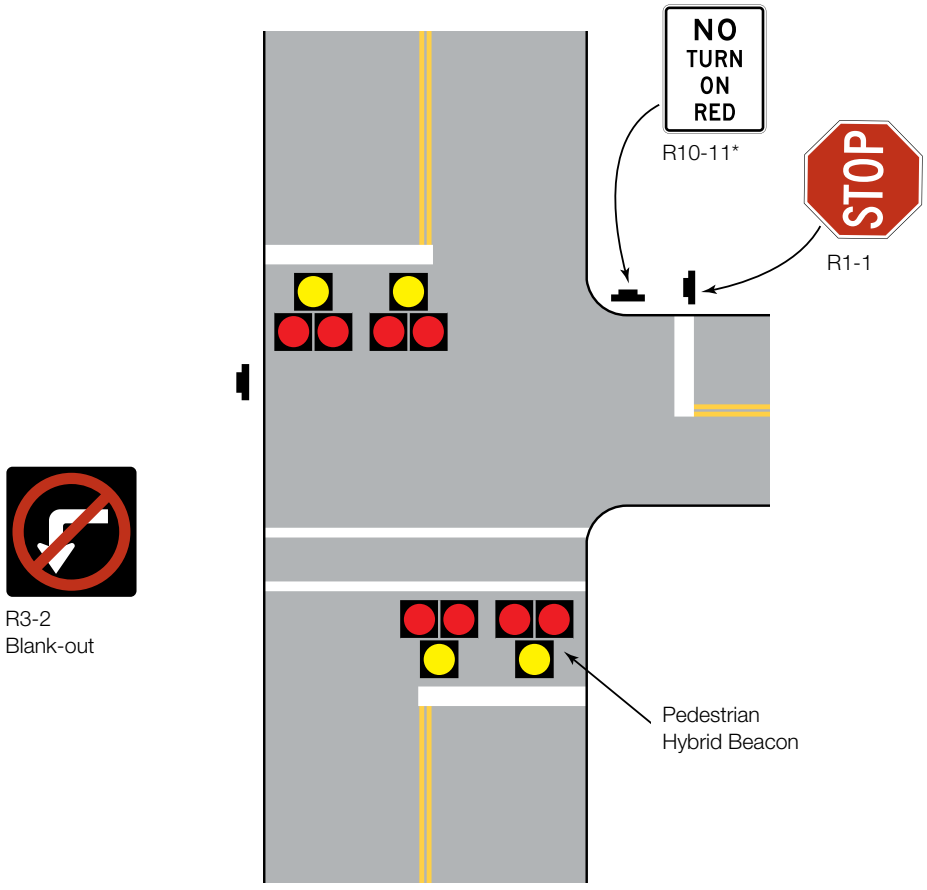
Insert the following paragraph:

Guidance:

03A *If the pedestrian hybrid beacon is installed at or immediately adjacent to an intersection with the minor street, a blank-out No Right Turn (R3-1) and/or No Left Turn (R3-2) sign should be used to restrict turns from the minor street during the pedestrian walk interval (See Figure MA-4J-3).*

Insert Figure MA-4J-3 (Minor Street Traffic Control at a Location with a Pedestrian Hybrid Beacon)

Figure MA-4J-3. Minor Street Traffic Control at a Location with a Pedestrian Hybrid Beacon



* R10-11 sign may be substituted for a different R10-11 series sign, a dynamic no turn on red sign, or it may be mounted overhead.

PART 5

TRAFFIC CONTROL DEVICE CONSIDERATIONS FOR AUTOMATED VEHICLES

CHAPTER 5A. GENERAL

Section 5A.01 Scope and Purpose

Insert the following paragraph:

Guidance:

00A *As automated vehicle technologies advance in Massachusetts it is important to consider the needs of automated vehicles to operate safely, efficiently, and predictably, which requires careful consideration of traffic control devices to accommodate both automated and non-automated vehicles. The Massachusetts Amendments to the MUTCD as they relate to the requirements and recommendations for traffic control devices should be used in addition to those in the MUTCD and any applicable interim approvals when designing traffic control devices for automated vehicles.*

PART 6

TEMPORARY TRAFFIC CONTROL

CHAPTER 6C. PEDESTRIAN AND WORKER SAFETY

Section 6C.05 High-Visibility Safety Apparel

Insert the following paragraph:

Standard:

01A **All flaggers performing work on public roadways in Massachusetts must, at a minimum, be equipped with the following equipment:**

1. **White hard hat with reflectorized tape;**
2. **Fluorescent yellow-green vest and pants conforming to ANSI 107 Class III;**
3. **Two-way radios;**
4. **STOP/SLOW paddles per Section 6D.02; and**
5. **Weighted red flags per Section 6D.03 for emergency work**

CHAPTER 6D. FLAGGER CONTROL

Section 6D.01 Qualifications for Flaggers

Insert the following paragraphs:

Support:

00A The Department has guidelines and promulgated regulations on the use of road flaggers and police details as authorized by the Executive Office of Transportation and Public Works and the Executive Office of Public Safety and Security through Chapter 86 of the Acts of 2008.

Standard:

00B **Flaggers used on public roadways in Massachusetts shall be certified by the Massachusetts Department of Transportation.**

Section 6D.05 Flagging Procedures

Insert the following paragraph:

Standard:

07B **All flaggers shall be equipped with airhorns.**

Section 6D.06 Flagger Stations

Insert the following paragraph:

Standard:

01A **Where two or more flaggers must coordinate to control traffic, such as with one-lane, two-way traffic control (see Chapter 6E) or to control movements at an intersection, each flagger in the setup shall have the ability to communicate to each other via two-way radio.**

CHAPTER 6F. TEMPORARY TRAFFIC CONTROL ZONE SIGNS – GENERAL

Section 6F.01 General Characteristics of TTC Zone Signs

Delete paragraph 02:

Insert the following paragraphs:

Standard:

01A **The colors for regulatory signs shall follow the Standards for regulatory signs in Table 2A-5 and Chapter 2B. Warning signs in TTC zones shall have a black legend and border on a fluorescent orange background, with the following exceptions:**

- **A. Route Signs (see Figure 2D-4) and Route Sign Auxiliary Plaques and Combination Junction Sign (see Figure 2D-5).**
- **B. Signs that have colors specifically identified elsewhere in Chapter 6H.**

01B **Colors for guide signs shall follow the Standards in Table 2A-2 and Chapter 2E, except for guide signs as otherwise provided in Section 6I.01.**

06A **Except as provided in Section 2A.07, the sizes for TTC signs and plaques shall be as shown in Tables MA-6G-1, MA-6H-1 and MA-6I-1. The sizes in the minimum column shall only be used on low-volume rural roads, local streets, or roadways where the operating speed is 30 mph or less.**

Option:

07A The dimensions of signs and plaques shown in Tables MA-6G-1, MA-6H-1 and MA-6I-1 may be increased wherever necessary for greater legibility or emphasis.

Support:

09A Sign design details are contained in the “Standard Highway Signs” publication (see Section 1A.05) and the “MassDOT Standard Signs” publication.

CHAPTER 6G. TTC ZONE REGULATORY SIGNS

Section 6G.01 Regulatory Sign Authority

Insert the following paragraphs:

Support:

01A Regulatory signs such as those shown in Figure 6G-1 and Figure MA-6G-1 inform road users of traffic laws or regulations and indicate the applicability of legal requirements that would not otherwise be apparent.

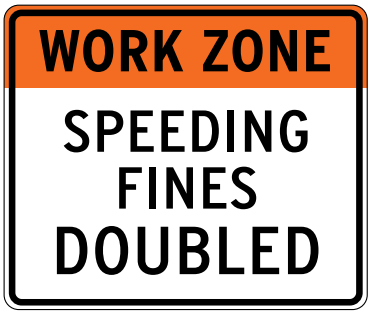
Insert Table MA-6G-1 (Regulatory Sign and Plaque Sizes, MA Standard)

Insert Figure MA-6G-1, (Regulatory Signs and Plaques in Temporary Traffic Control Zones, MA Standard)

Table MA-6G-1. Regulatory Sign and Plaque Sizes, MA Standard

Sign	Sign Designation	Section	Conventional Road	Freeway or Expressway	Minimum
Work Zone Speeding Fines Doubled	MA-R2-10a	6G.08	-	48 x 48	-
End Road Work Double Fines End	MA-R2-10e	6G.08	48 x 36	60 x 48	-
Bridge Closed	MA-R11-2b	6G.04	48 x 30	-	-
Ramp Closed	MA-R11-2d	6G.04	48 x 30	-	-

Figure MA-6G-1 Regulatory Signs and Plaques In Temporary Traffic Control Zones, MA Standard



MA-R2-10a



MA-R2-10e



MA-R11-2b



MA-R11-2d

Section 6G.02 Regulatory Sign Design and Size

Insert the following paragraphs:

Standard:

01A **TTC regulatory signs shall comply with the Standards for regulatory signs presented in Part 2 and in the FHWA's "Standard Highway Signs" publication (see Section 1A.05) and the "MassDOT Standard Signs" publication.**

02A **The sizes for TTC regulatory signs shall be as shown in Table 6G-1, Table MA-6G-1, and the "MassDOT Standard Signs" publication.**

Section 6G.04 Road Closed Signs (R11-2 Series)

Delete Paragraph 02.

Insert the following paragraph:

Option:

02A STREET CLOSED (R11-2a), BRIDGE OUT (R11-2b), PATH CLOSED (R11-2c), or RAMP CLOSED (MA-R11-2d) signs may be substituted for Road Closed signs where applicable. The words BRIDGE CLOSED may be substituted for the words BRIDGE OUT on the R11-2b sign.

Section 6G.06 Weight Limit Signs (R12-1, R12-2, and R12-5)

Insert the following paragraph:

Standard:

01 **A Weight Limit sign (see Figure 6G-1 and Figure MA-2B-30), which shows the gross weight or axle weight that is permitted on the roadway or bridge, shall be consistent with State or local regulations and shall not be installed without the approval of the authority having jurisdiction over the highway.**

Section 6G.08 Work Zone and Higher Fines Signs and Plaques

Delete paragraphs 02 and 03

Insert the following paragraph:

Guidance:

02A *A WORK ZONE SPEEDING FINES DOUBLED (MA-R2-10a) sign (see Figure MA-6G-1) should be used for all temporary traffic control setups lasting 24 hours or longer.*

Standard:

02B **If a WORK ZONE SPEEDING FINES DOUBLED (MA-R2-10a) sign is installed, then an END ROAD WORK DOUBLE FINES END (MA-R2-10e) sign (see Figure MA-6G-1) shall be installed in the termination area of the work zone.**

Support:

02C The legal requirements in MGL Ch. 90, Sec. 17D state that a fine of double the amount shall be imposed if a speeding violation occurs in an active construction zone.

Section 6G.09 PEDESTRIAN CROSSWALK Sign (R9-8)

Insert the following paragraph:

Guidance:

02A *If a temporary crosswalk is established, it should be signed with a Pedestrian Crossing (W11-2) sign (see Figure 2C-11) and a diagonal downward pointing arrow (W16-7P) plaque (see Figure 2C-12) on fluorescent yellow-green backgrounds.*

CHAPTER 6H. TTC ZONE WARNING SIGNS

Section 6H.01 Warning Sign Function, Design, and Application

Delete paragraphs 01, 02, 03, 04 and 05.

Insert the following paragraphs:

Support:

01A TTC zone warning signs (see Figure 6H-1 and Figure MA-6H-1) notify road users of specific situations or conditions on or adjacent to a roadway that might not otherwise be apparent.

Standard:

02A **TTC warning signs shall comply with the Standards for warning signs presented in Part 2 and in the FHWA's "Standard Highway Signs" publication (see Section 1A.05) and the "MassDOT Standard Signs" publication.**

03A **The sizes for TTC warning signs shall be as shown in Table 6H-1 and Table MA-6H-1.**

04A **Except as provided in Paragraphs 05 and 05A of Section 6H.01, TTC warning signs shall be a black legend and border on a fluorescent orange background, except for the Grade Crossing Advance Warning (W10-1) sign, which shall have a black legend and border on a yellow background.**

Standard:

05A **Warning signs that, per Parts 2 or 7, are required, recommended, or permitted to have a fluorescent yellow-green background in permanent applications shall have that color background in TTC zones.**

Insert Table MA-6H-1 (Warning Sign and Plaque Sizes, MA Standard)

Insert Figure MA-6H-1, (Warning Signs and Plaques in Temporary Traffic Control Zones, MA Standard)

Table MA-6H 1. Warning Sign and Plaque Sizes, MA Standard

Sign	Sign Designation	Section	Conventional Road	Freeway or Expressway
Thru Traffic Merge Left	MA-W4-7L	6H.07	36 x 36	48 x 48
Thru Traffic Merge Right	MA-W4-7R	6H.07	36 x 36	48 x 48
Lanes Narrow Ahead	MA-W5-5	6H.38	36 x 36	48 x 48
Trucks Entering and Exiting	MA-W8-6b	6H.21	36 x 36	48 x 48
Ramp Work Ahead	MA-W20-1d	6H.09	36 x 36	48 x 48
Police Officer Ahead	MA-W20-7b	6H.15	36 x 36	48 x 48
Emergency Scene Ahead	MA-W20-9	6O.01	36 x 36	48 x 48
Exit Closed (with distance)	MA-W20-10	6H.01	36 x 36	48 x 48
Moving Operations Ahead	MA-W21-9	6H.20	36 x 36	48 x 48
Median Crossover (with distance)	MA-W24-3	6H.16	36 x 36	48 x 48
Rumble Strips Ahead	MA-W28-1	6M.06	36 x 36	48 x 48

Figure MA-6H-1. Warning Signs and Plaques In Temporary Traffic Control Zones, MA Standard



Section 6H.05 ROAD (STREET) CLOSED Sign (W20-3)

Insert the following paragraphs:

Guidance:

01A *The EXIT CLOSED (E5-2a) sign (see Figure 6I-1) should be used in advance of an exit ramp closure. The RAMP CLOSED (MA-R11-2d) sign (see Figure MA-6G-1) should be used in advance of an entrance ramp closure.*

Option:

02A A Street Name or Route sign (see Chapter 2D) may be mounted above a W20-3, E5-2a, or MA-R11-2d sign

03A The E5-2a or MA-R11-2d signs may be a diamond-shaped sign mounted on a temp support for a period of time as determined by the agency.

Section 6H.07 Lane(s) Closed Signs (W20-5, W20-5a, and W9-3)

Insert the following paragraphs:

Option:

04A The THRU TRAFFIC MERGE RIGHT (LEFT) (MA-W4-7) sign (see Figure MA-6H-1) may be used on the multi-lane approach to an intersection where a departure lane is closed but the corresponding approach lane is retained as a mandatory turn lane.

Guidance:

04B *The use of the THRU TRAFFIC MERGE RIGHT (LEFT) (MA-W4-7) sign should be limited to short duration and short-term stationary work. For longer durations, the lane should be closed upstream from the intersection, and a turn bay formed downstream from the merging taper (see Figures 6P-22, 6P-23, 6P-24, and 6P-25).*

Standard:

04C **When the THRU TRAFFIC MERGE RIGHT (LEFT) (MA-W4-7) sign is used, the RIGHT (LEFT) LANE MUST TURN RIGHT (LEFT) (R3-7) sign (see Section 6G.02) shall be provided for the mandatory turn lane.**

Section 6H.09 ON RAMP Plaque (W13-4P)

Insert the following paragraphs:

Option:

01A During short- or intermediate-term stationary work, the RAMP WORK (MA-W20-1d) sign (see Figure MA-6H-1) may be substituted for a ROAD WORK (W20-1) sign supplemented by an ON RAMP (W13-4P) plaque.

01B The distance legend on the RAMP WORK (MA-W20-1d) sign may be either XX FEET, XX MILES, or AHEAD.

Section 6H.12 EXIT OPEN and EXIT CLOSED Signs (E5-2 and E5-2a)

Insert the following paragraphs:

Option:

01A An Exit Gore (MA-E5-1wz) sign (see Figure MA-6I-1) may be used where the theoretical gore for an exit ramp has been temporarily adjusted or relocated using pavement markings, channelizing devices, or other devices.

Guidance:

01B *At numbered exits, the Exit Gore (MA-E5-1wz) sign should be used to supplement the existing Exit Gore sign that displays the exit number, and not as a replacement. If the existing Exit Gore sign is removed or is not visible to traffic at the temporary theoretical gore, then a temporary Exit Gore sign that displays the exit number should be used.*

01C When used, the EXIT OPEN (E5-2) or EXIT CLOSED (E5-2a) sign should be located upstream from the deceleration lane taper.

01D When used, the EXIT OPEN (E5-2) or EXIT CLOSED (E5-2a) sign should only be used for a period of time as determined by the agency.

Standard:

01E **When used, the Exit Gore (MA-E5-1wz) sign shall be located in the gore of the exit ramp.**

Section 6H.15 Flagger Signs (W20-7 and W20-7a)

Insert the following paragraph:

Guidance:

01A *The Police Officer Ahead (MA-W20-7b) sign (see Figure MA-6H-1) should be used in advance of any point where a uniformed traffic officer is stationed to control road users.*

Section 6H.16 Two-Way Traffic Sign (W6-3)

Insert the following paragraph:

Option:

01A When one roadway of a normally divided highway is closed, with two-way divided or undivided vehicular traffic maintained on the other roadway, the MEDIAN CROSSOVER (MA-W24-3) sign (see Figure MA-6H-1) may be used in advance of the median crossover.

01B The distance legend on the MEDIAN CROSSOVER (MA-W24-3) sign may be either XX FEET, XX MILES, or AHEAD.

Section 6H.20 ROAD MACHINERY AHEAD Sign (W21-3)

Insert the following paragraph:

Option:

01A The MOVING OPERATIONS AHEAD (MA-W21-9) sign (see Figure MA-6H-1) may be used to warn of mobile operations (see Section 6N.01) in or adjacent to the roadway.

Section 6H.21 Motorized Traffic Signs (W8-6 and W11-10)

Insert the following paragraph:

Option:

01A The TRUCKS ENTERING AND EXITING (MA-W8-6b) sign (see Figure MA-6H-1) may be used in advance of construction access and egress points to alert road users to locations where construction vehicles might unexpectedly enter into or depart from the roadway.

Section 6H.36 END ROAD WORK Sign (G20-2)

Insert the following paragraphs:

Standard:

01A **If a ROAD WORK SPEEDING FINES DOUBLED (MA-R2-10a) sign is used, an END ROAD WORK DOUBLE FINES END (MA-R2-10e) sign (see Figure MA-6G-1) shall be placed after the downstream end of the termination area.**

Support:

02A The amendment to Section 6G.08 contains information about the END ROAD WORK DOUBLE FINES END (MA-R2-10e) sign.

Section 6H.38 Other Warning Signs

Insert the following paragraphs:

Support:

05A Section 2C.17 contains information about the ROAD NARROWS (W5-1) sign, which is intended for use on single-lane roads. The LANES NARROW (MA-W5-5) sign is intended for use on multi-lane conventional roads where there is no shoulder.

Option:

05B The LANE NARROWS (MA-W5-5) sign (see Figure MA-6H-1) may be used in advance of a transition area that reduces the width of one or more marked lanes on a multi-lane roadway, where other warning signs pertaining to the transition area, such as those for a lane shift, lane closure, or shoulder work, are not applicable.

CHAPTER 6I. TTC ZONE GUIDE SIGNS

Section 6I.01 Guide Signs – General

Delete Paragraph 07

Insert the following paragraph:

Standard:

07A **The sizes for TTC guide signs shall be as shown in Table 6I-1 and Table MA-6I-1.**

Insert Table MA-6I-1 (Exit Detour Sign and Plaque Sizes, MA Standard)

Insert Figure MA-6I-1 (Exit Detour Signs and Plaques, MA Standard)

Table MA-6I-1: Exit Detour Sign and Plaque Sizes, MA Standard

Sign	Sign Designation	Section	Conventional Road	Freeway or Expressway	Minimum
Exit Gore	MA-E5-1wz	6I.01	-	48 x 48	-

Figure MA-6I-1. Exit Detour Signs and Plaques, MA Standard



MA-E5-1wz

CHAPTER 6K. TTC ZONE CHANNELIZING DEVICES

Section 6K.01 Channelizing Devices – General

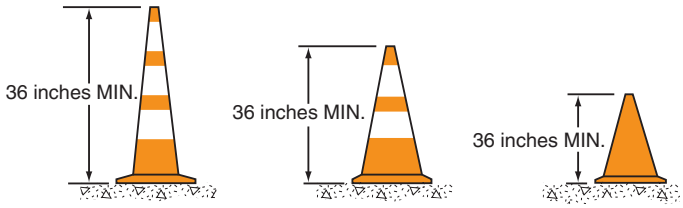
Insert the following paragraphs:

Standard:

01A **The minimum height of a cone shall be 36 inches as shown in Figure MA-6K-1.**

Insert Figure MA-6K-1 (Cones, MA Standard)

Figure MA-6K-1 Cones, MA Standard



CONES

Note: All other aspects of cones including dimensions and spacing of reflective bands shall be as shown in MUTCD Figure 6K-1.

CHAPTER 6L. OTHER TTC ZONE TRAFFIC CONTROL DEVICES

Section 6L.06 Arrow Boards

Delete Paragraphs 17 and 18.

Insert the following paragraphs:

Standard:

17A **Except as provided in Paragraph 17B of Section 6L.06, an arrow board that is used for a lane closure on a multi-lane roadway shall display the Flashing Arrow mode.**

Option:

17B When an arrow board is used for a lane closure on a multi-lane roadway in mobile operations or on a shadow vehicle, the arrow board may display the Sequential Chevron mode.

Standard:

18A **For shoulder work, blocking the shoulder, or for roadside work near the shoulder, and arrow board shall be used only four corners Flashing Caution mode per the first option of Operating Mode 3 in Figure 6L-3.**

18B **For temporarily closing one lane on a two-lane, two-way roadway, an arrow board shall be used only in the caution mode.**

18C **When an arrow board is used on a shadow vehicle within the activity area (see Section 6B.06) of a work zone that includes a lane closure, and that arrow board is in addition to the arrow board(s) used to close the lane(s) (see Paragraph 21 of Section 6L.06), the arrow board shall be used only in the caution mode.**

18D **Except as provided in Paragraph 18E of Section 6L.06, when an arrow board is used in the caution mode, it shall display the four-corners Flashing Caution mode, shown as the first option of Operating Mode 3 in Figure 6L-3. The horizontal line Flashing Caution mode, shown as the second option of Operating Mode 3, shall not be used.**

Option:

18E When an arrow board is used in the caution mode in mobile operations or on a shadow vehicle, or when it is used for closing one lane on a two-lane, two-way roadway, it may display the Alternating Diamond Caution mode, shown as the third option of Operating Mode 3 in Figure 6L-3.

Guidance:

18F *An arrow board should not be used to indicate that a shoulder is obstructed when the shoulder obstruction is incidental to an associated roadway obstruction, such as a lane closure or a lane shift.*

Insert Figure MA-6L-3 (Advance Warning Arrow Board Display Specifications, MA Standard)

Figure MA-6L-3 Advance Warning Arrow Board Display Specifications, MA Standard

Operating Mode	Display (Type C arrow board illustrated)
1. At least one of the two following modes shall be provided:	(right arrow shown; left is similar)
Flashing Arrow	 Stationery Board for Lane Closure
Sequential Chevron	 Mobile Board for Lane Closure
3. At least one of the following modes shall be provided: Flashing Caution or Alternating Diamond Caution	 Stationary Board for Shoulder Closure or  Mobile Board for Shoulder Closure

Arrow Board Type	Minimum Size	Minimum Legibility Distance	Minimum Number of Elements
A	48 x 24 inches	1/2 mile	12
B	60 x 30 inches	3/4 mile	13
C	96 x 48 inches	1 mile	15
D	None*	1/2 mile	12

*Length of arrow equals 48 inches, width of arrowhead equals 24 inches

CHAPTER 6M. OTHER TTC ZONE DESIGN FEATURES AND SAFETY DEVICES

Section 6M.06 Rumble Strips

Insert the following paragraph:

Standard:

05A **Where transverse rumble strips are used, the RUMBLE STRIPS AHEAD (MA-W28-1) sign (see Figure MA-6H-1) shall be used in advance of the first array of rumble strips.**

CHAPTER 6N. TYPES OF TEMPORARY TRAFFIC CONTROL ZONE ACTIVITIES

Section 6N.05 Work Outside of the Shoulder

Insert the following paragraph:

Option:

07A Where work is being performed within or adjacent to the shoulder such that TTC devices are directly adjacent to and behind the shoulder, the SHOULDER ENDS (W8-25) sign may be used.

CHAPTER 6O. CONTROL OF TRAFFIC THROUGH INCIDENT MANAGEMENT AREAS

Section 6O.01 General

Delete Paragraph 10:

Insert the following paragraphs:

Option:

10A Warning and guide signs used for TTC traffic incident management situations may have a black legend and border on a fluorescent pink background (see Figure 6O-1, Figure MA-6O-1 and Table MA-6H-1).

Guidance:

21 *The EMERGENCY SCENE AHEAD (MA-W20-9) sign (see Figure MA-6O-1), which serves as a general warning of the traffic incident, should be installed as the first static sign in the advance warning area of an incident zone.*

Insert Figure MA-6O-1, (Example of Traffic Incident Management Area Sign, MA Standard)

Figure MA-6O-1: Example of Traffic Incident Management Area Sign, MA Standard



MA-W20-9

PART 7

TRAFFIC CONTROL FOR SCHOOL AREAS

CHAPTER 7A. GENERAL

Section 7A.01 Introduction

Insert the following paragraphs:

Standard:

02A **For the purpose of Part 7, school zones shall only be applicable to schools including all public, private, charter, vocational technical, and approved special education schools serving students in one or more grades between K and 12.**

Support:

02B The intent of establishing school zones is to provide increased protection for school children and their guardians walking and bicycling on roadways in the vicinity of schools. The establishment of school zones on roadways that are not crossed by school children and/or not expected to be used by children biking to school may reduce the effectiveness of school zones and school zone speed limits.

Standard:

02C **A school zone on State Highway shall be approved by the Department.**

Insert the following Section and subsequent paragraphs:

Section 7A.03 Warrants for Establishing a School Zone

Standard:

01 **For a school zone to be established, all the following conditions shall be met:**

- **A. The facility is a school (see Section 7A.01).**
- **B. Children walk or bicycle to or from the school and are expected to cross or enter the roadway where the school zone is proposed; or the school and related facilities (e.g., classrooms, cafeteria, gymnasium, playground, athletic fields, parking lots) are separated by the roadway and require the children to cross the roadway on foot to access the facilities.**
- **C. The school facility or municipality provides a plan showing the routes that students will use to walk and/or bike to the school and shows the limits of the proposed school zone.**
- **D. The municipality provides written documentation of their support and/or approval of the school zone.**

CHAPTER 7B. SIGNS

Section 7B.03 School Crossing Signs

Insert the following paragraphs:

Standard:

08A **The R1-5c, R1-6a, R1-6c, and R1-9c signs shall not be used.**

Support:

08B The legal requirements state in MGL Ch. 89, Sec. 11 that vehicle operators are required to yield to pedestrians.

Standard:

14A **In-Street and Overhead Pedestrian Crossing (R1-6 and R1-9) signs shall include the "STATE LAW" legend.**

14B **A fluorescent yellow-green background shall be used instead of a yellow background on In-Street and Overhead Pedestrian Crossing (R1-6 and R1-9) signs.**

Section 7B.05 School Speed Limit Signs and Plaques

Delete Paragraphs 03, 04, 05, 06, and 07.

Insert the following paragraphs:

Support:

00A MGL Ch., 85 Sec. 2 provides the Department with the authority for establishing minimum criteria for school speed limits.

Standard

00B **School Speed Limits shall be 20 mph.**

Support:

00C MGL Ch., 90 Sec. 17 defines speeding within a school zone as a "rate of speed exceeding twenty miles per hour."

Standard:

00D **Changes in speed limit within a reduced school speed limit zone shall be prohibited.**

02A **There shall be no other Speed Limit (R2-1) signs placed between a School (S1-1) sign and a School Speed Limit Assembly.**

03A **Except as provided in Paragraph 03B, the downstream end of an authorized and posted reduced school speed limit zone shall be identified with an END SCHOOL SPEED LIMIT (S5-3) sign (see Figures 7B-1, 7B-2, and 7B-4).**

03B **Where a reduced school speed limit zone is within the limits of a Special Speed Regulation, a Speed Limit (R2-1) sign, corresponding to the authorized speed limit, shall be placed just beyond the end limit of the reduced school zone speed limit, facing traffic that has passed the school property.**

Guidance:

05A *The beginning point of a reduced school speed limit zone should be at least 200 feet in advance of the school grounds, a school crossing, or other school related activities*

Standard:

05B **Where a reduced school speed limit zone is within the limits of a Special Speed Regulation, the beginning of the reduced school speed limit zone shall be not greater than 500 feet or one block, whichever is less.**

Guidance:

05C *The maximum length of a reduced school speed limit zone should be ¼ mile or the total length of the school grounds frontage plus the advanced distances described in Paragraphs 05A and 05B, whichever is greater.*

Support:

05D The school zone length should be kept as short as possible while including the section of roadway in the vicinity of the school property that school children will be entering or crossing. The effectiveness of the school zone speed limit may be reduced the further it is located from the school.

Standard:

06A **The School Speed Limit assembly shall be either a standalone fixed-message sign assembly or shall be supplemented with two flashing yellow beacons (see Section 4S.04) with a WHEN FLASHING legend.**

Option:

06B If a reduced school speed limit zone is established upon a street or highway controlled by a Speed Regulation, as defined in MGL Ch. 90, Sec. 18, the School Speed Limit assembly may include a changeable message sign in lieu of the legend for the numerals.

Standard:

07A **The fixed-message School Speed Limit assembly shall consist of a top plaque (S4-3P) with the legend SCHOOL, a Speed Limit (R2-1) sign, and a bottom plaque (S4-1P, S4-2P or S4-6P) indicating the specific periods of the day and/or days of the week that the school speed limit is in effect (see Figure 7B-1). If two flashing yellow beacons are included, the bottom plaque S4-4P shall be used.**

07B **The School Speed Limit shall only be in effect during days and times when school children would be entering or crossing the roadway on foot or on bicycle.**

Guidance:

07C *If used, the School Speed Limit hours of operation should be one of the following:*

A. Between a set of core hours, such as 7:00 AM to 4:00 PM, inclusive.
B. Two ranges of times within the core hours that coincide with typical arrival and dismissal periods, such as 7:00 AM to 9:00 AM and 2:00 PM to 4:00 PM.

07D *Terms that are vague or may be unfamiliar to all roadway users, such as "SCHOOL DAYS," "WHEN SCHOOL IS IN SESSION," or "WHEN CHILDREN ARE PRESENT," should not be used.*

Standard:

07E **Where an S4-1P plaque is used to show the hours of operation, a maximum of two ranges of time shall be used.**

Guidance:

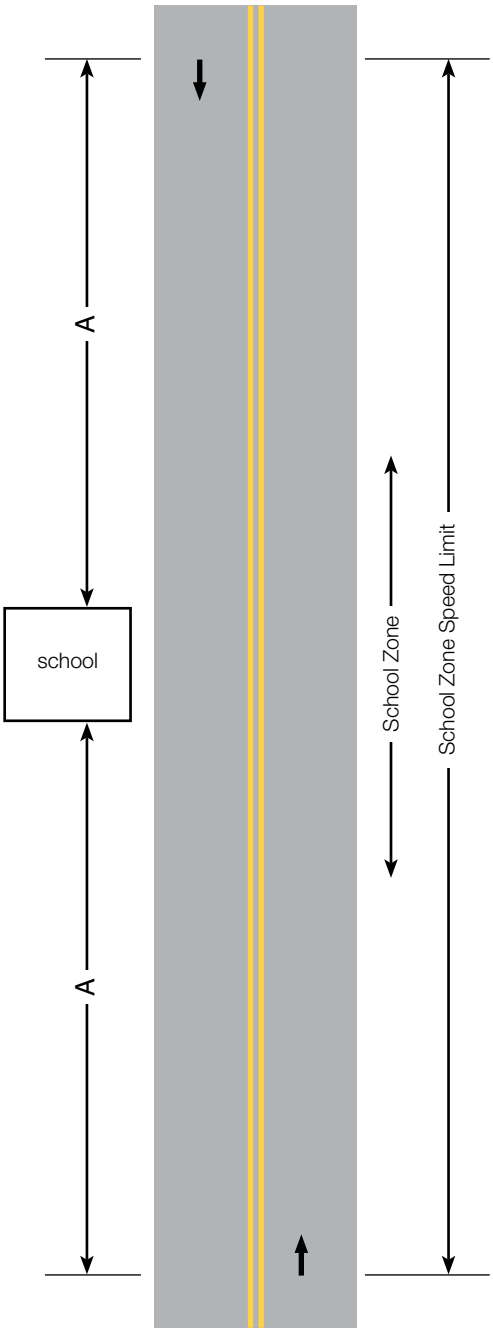
07F *Where School Speed Limit hours of operation vary by day of the week, the School Speed Limit assembly should include a flashing yellow beacon and the S4-4P plaque to decrease driver confusion.*

Standard:

07G **Where flashing beacons are used to denote the School Speed Limit, the municipality shall keep written documentation of operating hours on file.**

Insert Figure MA-7B-4, (Minimum Length of School Zone Speed Limit for Streets Governed by a Special Speed Regulation)

Figure MA-7B-4. Minimum Length of School Zone Speed Limit for Streets Governed by a Special Speed Regulation



"A" = 500 feet or one block, whichever is less

CHAPTER 7C. MARKINGS

Section 7C.02 Pavement Word, Symbol, and Arrow Markings

Delete Paragraph 02.

Insert the following paragraphs:

Guidance:

02A *If the SCHOOL word marking is used on one-lane approaches, the letters should be 6 feet or more in height.*

02B *If the SCHOOL word marking is used on multi-lane approaches, the letters should be 10 feet or more in height.*

PART 8

TRAFFIC CONTROL FOR RAILROAD AND LIGHT RAIL TRANSIT GRADE CROSSINGS

CHAPTER 8D. FLASHING-LIGHT SIGNALS, AUTOMATIC GATES, AND TRAFFIC CONTROL SIGNALS

Section 8D.15 Use of LRT Signals for Control of LRT Vehicles at Highway-LRT Grade Crossings

Insert the following paragraph:

Standard:

04A **Where LRT signal indications or traffic control signal indications are used for the sole purpose of controlling bus traffic, a BUS SIGNAL (MA-R10-31P) plaque shall be installed directly adjacent to the signal indications.**

CHAPTER 8E. PATHWAY AND SIDEWALK GRADE CROSSINGS

Section 8E.09 Active Traffic Control Devices – Automatic Pedestrian Gates

Delete Paragraph 12

Insert the following Paragraph:

Guidance:

12A *A horizontal hanging bar (see Figure 8E-12) should be attached to an automatic pedestrian gate at a pathway or sidewalk grade crossing to inform pedestrians with vision disabilities that the automatic pedestrian gate is in the down position and to reduce the likelihood that pedestrians will violate a lowered crossing gate.*

PART 9

TRAFFIC CONTROL FOR BICYCLE FACILITIES

CHAPTER 9A. GENERAL

Section 9A.02 Standardization of Application for Signing

Delete Paragraphs 09 and 10.

Insert the following paragraphs:

Standard:

09A **If the sign or plaque applies to motorists and bicyclists, then the size shall be as shown for conventional roads in Tables 2B-1, MA-2B-1, 2C-1, MA-2C-1, 2D-1, or MA-2D-1 and 8B-1 as applicable.**

10A **The minimum sign and plaque sizes for shared-use paths shall be those shown in Tables 9A-1 or MA-9A-1 and shall be used only for signs and plaques installed specifically for bicycle traffic applications. The minimum sign and plaque sizes for bicycle facilities shall not be used for signs or plaques that are placed in a location that would have any application to other vehicles.**

Insert Table MA-9A-1 (Bicycle Facility Sign and Plaque Minimum Sizes, MA Standard).

Table MA-9A-1. Bicycle Facility Sign and Plaque Minimum Sizes, MA Standard

Sign or Plaque	Sign Designation	Section	Shared-Use Path	Roadway
Bicycle Passing Sign	MA-R4-19	9B.15	-	30 x 30
Street Name	MA-D3-1	2D.45, 9D.01	varies x 6	see Table MA-2D-6

CHAPTER 9B. REGULATORY SIGNS

Section 9B.08 Selective Exclusion Signs

Insert the following item G to the list of typical exclusion messages in Paragraph 02:

G. PEDESTRIANS, BICYCLES AND HORSES PROHIBITED (MA-R9-15).

Section 9B.11 Bicycles Use Ped Signal Sign (R9-5)

Delete Paragraphs 01 and 03.

Insert the following paragraphs:

Standard:

01A **The BICYCLES USE PED SIGNAL (R9-5) sign shall not be used to control crossing of a street by bicyclists using pedestrian signal indications.**

Support:

01B Under Massachusetts General Laws, bicycles are defined as vehicles, thus the BICYCLES USE PED SIGNAL (R9-5) sign is not applicable.

Section 9B.15 Bicycle Passing Clearance Sign (MA-R4-19)

Delete Paragraph 02:

Insert the following paragraphs:

Standard:

03A **If used, the specific clearance displayed on the Bicycle Passing Clearance (MA-R4-19) sign (see Figure MA-9B-1) shall be 4 feet as stated in MGL Ch. 90, Sec 14.**

Support:

03B MGL Ch. 90, Sec 14 requires motorists passing a vulnerable road user at a safe distance of not less than 4 feet and at a reasonable and proper speed.

Insert Figure MA-9B-1 (Regulatory Signs and Plaques for Bicycle Facilities, MA Standard).

Figure MA-9B-1. Regulatory Signs and Plaques for Bicycle Facilities, MA Standard



MA-R4-19

CHAPTER 9E. MARKINGS

Section 9E.07 Separated Bicycle Lanes

Delete Paragraph 12:

Insert the following paragraph:

Standard:

12A **Turns on red shall be prohibited across bicycle or pedestrian movements while bicyclists and pedestrians are permitted to enter the intersection (see Figure MA-4H-1).**

Section 9E.09 Shared-Lane Marking

Delete Paragraph 08.

Insert the following paragraph:

Guidance:

08A *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 centered in the travel lane.*