NOTES:

1. ALL TEMPORARY TRAFFIC CONTROL WORK SHALL CONFORM TO THE LATEST EDITION OF THE "MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES" (MUTCD) AND ALL REVISIONS, UNLESS SUPERCEDED BY THESE PLANS.

2. ALL SIGN LEGENDS, BORDERS, AND MOUNTING SHALL BE IN ACCORDANCE WITH THE MUTCD.

3. TEMPORARY CONSTRUCTION SIGNING AND ALL OTHER TRAFFIC CONTROL DEVICES SHALL BE IN PLACE PRIOR TO THE START OF ANY WORK.

4. TEMPORARY CONSTRUCTION SIGNING, BARRICADES, AND ALL OTHER NECESSARY WORK ZONE TRAFFIC CONTROL DEVICES SHALL BE REMOVED FROM THE HIGHWAY OR COVERED WHEN THEY ARE NOT REQUIRED FOR CONTROL OF TRAFFIC.

5. SIGNS AND SIGN SUPPORTS LOCATED ON OR NEAR THE TRAVELED WAY, CHANNELIZING DEVICES, BARRIERS, AND CRASH ATTENUATORS MUST PASS THE CRITERIA SET FORTH IN NCHRP REPORT 350, "RECOMMENDED PROCEDURES FOR THE SAFETY PERFORMANCE EVALUATION OF HIGHWAY FEATURES" AND/OR "MANUAL FOR ASSESSING SAFETY HARDWARE" (MASH).

6. CONTRACTORS SHALL NOTIFY EACH ADJACENT AT LEAST 24 HOURS IN ADVANCE OF THE START OF ANY WORK THAT WILL REQUIRE THE TEMPORARY CLOSURE OF ACCESS, SUCH AS CONDUIT INSTALLATION, EXISTING PAVEMENT EXCAVATION, TEMPORARY DRIVEWAY PAVEMENT PLACEMENT, AND SIMILAR OPERATIONS.

7. THE FIRST FIVE PLASTIC DRUMS OF A TAPER SHALL BE MOUNTED WITH TYPE A LIGHTS.

8. THE ADVISORY SPEED LIMIT, IF REQUIRED, SHALL BE DETERMINED BY THE ENGINEER.

9. DISTANCES ARE A GUIDE AND MAY BE ADJUSTED IN THE FIELD BY THE ENGINEER.

10. MAXIMUM SPACING OF TRAFFIC DEVICES IN A TAPER (DRUMS OR CONES) IS EQUAL IN FEET TO THE SPEED LIMIT IN MPH.

11. MINIMUM LANE WIDTH IS TO BE 11 FEET (3.3m) UNLESS OTHERWISE SHOWN. MINIMUM LANE WIDTH TO BE MEASURED FROM THE EDGE OF DRUMS OR MEDIAN BARRIER.

12. ALL SIGNS SHALL BE MOUNTED ON THEIR OWN STANDARD SIGN SUPPORTS.

LEGEND:

- REFLECTORIZED PLASTIC DRUM OR 36" CONE
- WORK ZONE
- WORK VEHICLE
- DIRECTION OF TRAFFIC
- TRUCK MOUNTED ATTENUATOR
- IMPACT ATTENUATOR
- TRAFFIC OR PEDESTRIAN SIGNAL
- MEDIAN BARRIER
- SIGN
- MEDIAN BARRIER WITH WARNING LIGHTS
- ARROW BOARD

THE IDEAL CAPACITY OF A MAJOR HIGHWAY IS GENERALLY CONSIDERED TO BE 1900 PASSENGER CARS PER HOUR PER LANE (PCPHPL). IN WORK ZONES ON A MULTI–LANE DIVIDED HIGHWAY, THE FOLLOWING VOLUME GUIDELINES HAVE BEEN SUGGESTED:

MEASURED AVERAGE WORK ZONE CAPACITIES

<table>
<thead>
<tr>
<th>NUMBER OF LANES (NORMAL)</th>
<th>NUMBER OF STUDIES</th>
<th>AVERAGE CAPACITY</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>7</td>
<td>VPH</td>
</tr>
<tr>
<td>3</td>
<td>1</td>
<td>1,170</td>
</tr>
<tr>
<td>2</td>
<td>1</td>
<td>1,340</td>
</tr>
<tr>
<td>5</td>
<td>2</td>
<td>2,740</td>
</tr>
<tr>
<td>4</td>
<td>2</td>
<td>2,960</td>
</tr>
<tr>
<td>3</td>
<td>2</td>
<td>2,980</td>
</tr>
<tr>
<td>4</td>
<td>3</td>
<td>4,560</td>
</tr>
</tbody>
</table>

VPHPL

Source: Dudek, C., Notes on Work Zone Capacity and Level of Service, Texas Transportation Institute, Texas A&M University, College Station, Texas (1984)

By obtaining hourly traffic counts for a particular roadway (with a minimum of a 48-hour automatic traffic recorder (ATR) count), this will help to determine at what times of the day or night a certain number of lanes may be closed.
### Suggested Work Zone Warning Sign Spacing

<table>
<thead>
<tr>
<th>ROAD TYPE</th>
<th>DISTANCE BETWEEN SIGNS **</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>A</td>
</tr>
<tr>
<td>Local or low volume roadways*</td>
<td>350 (100)</td>
</tr>
<tr>
<td>Most other roadways*</td>
<td>500 (150)</td>
</tr>
<tr>
<td>Freeways and expressways*</td>
<td>1,000 (300)</td>
</tr>
</tbody>
</table>

* ROAD TYPE TO BE DETERMINED BY MASSDOT OFFICE OF TRANSPORTATION PLANNING.


THE "THIRD" SIGN ABOVE IS TYPICALLY REFERRED TO AS AN "ADVANCE WARNING" SIGN ON THE TTC SETUPS. THESE ADVANCE WARNING SIGNS ARE LOCATED PRIOR TO THE PROJECT LIMITS ON ALL APPROACHES (i.e. THE W20–1 SERIES (ROAD WORK XX FT) SIGNS), AND USUALLY REMAIN FOR THE DURATION OF THE PROJECT. ADDITIONAL SIGNS (i.e. "RIGHT LANE CLOSED 1 MILE" AND "LEFT LANE CLOSED 1 MILE") HAVE BEEN SHOWN IN SOME FIGURES AS EXAMPLES OF REINFORCEMENT SIGN PLACEMENT BUT ARE USED IN RARE OCCASIONS.

THE FIRST AND SECOND WARNING SIGNS ABOVE ARE REFERRED TO AS THE OPERATIONAL (DAY–TO–DAY) WORK ZONE SIGNS AND MAY BE MOVED DEPENDING ON WHERE THE SPECIFIC ROADWAY WORK FOR THAT DAY IS LOCATED.

R2–10a SIGNS SHALL BE PLACED BETWEEN THE SECOND AND THIRD SIGNS AS DESCRIBED ABOVE.

R2–10a, R2–10e, AND W20–1 SERIES SIGNS ARE TO BE INCLUDED ON ALL DETAILS/TYPICAL SETUPS.

**NOTES ON WORK ZONE DISTANCES**

Based on: Table 6C–1 MUTCD LATEST EDITION

### Stopping Sight Distance as a Function of Speed

<table>
<thead>
<tr>
<th>SPEED* (km/h)</th>
<th>DISTANCE (m)</th>
</tr>
</thead>
<tbody>
<tr>
<td>30</td>
<td>35</td>
</tr>
<tr>
<td>40</td>
<td>50</td>
</tr>
<tr>
<td>50</td>
<td>65</td>
</tr>
<tr>
<td>60</td>
<td>85</td>
</tr>
<tr>
<td>70</td>
<td>105</td>
</tr>
<tr>
<td>80</td>
<td>130</td>
</tr>
<tr>
<td>90</td>
<td>160</td>
</tr>
<tr>
<td>100</td>
<td>185</td>
</tr>
<tr>
<td>110</td>
<td>220</td>
</tr>
<tr>
<td>120</td>
<td>250</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>SPEED* (mph)</th>
<th>DISTANCE (ft)</th>
</tr>
</thead>
<tbody>
<tr>
<td>20</td>
<td>115</td>
</tr>
<tr>
<td>25</td>
<td>155</td>
</tr>
<tr>
<td>30</td>
<td>200</td>
</tr>
<tr>
<td>35</td>
<td>250</td>
</tr>
<tr>
<td>40</td>
<td>305</td>
</tr>
<tr>
<td>45</td>
<td>360</td>
</tr>
<tr>
<td>50</td>
<td>425</td>
</tr>
<tr>
<td>55</td>
<td>495</td>
</tr>
<tr>
<td>60</td>
<td>570</td>
</tr>
<tr>
<td>65</td>
<td>645</td>
</tr>
<tr>
<td>70</td>
<td>730</td>
</tr>
<tr>
<td>75</td>
<td>820</td>
</tr>
</tbody>
</table>

*POSTED SPEED, OFF–PEAK 85TH–PERCENTILE SPEED PRIOR TO WORK STARTING, OR THE ANTICIPATED OPERATING SPEED.

THESE VALUES MAY BE USED TO DETERMINE THE LENGTH OF LONGITUDINAL BUFFER SPACES.

THE DISTANCES IN THE ABOVE CHART REPRESENT THE MINIMAL VALUES FOR BUFFER SPACING.

Source: Table 6C–2 MUTCD LATEST EDITION

---

Notes for Traffic Management

FIGURE GEN-2

NOTES ON WORK ZONE DISTANCES
CONVENTIONAL ROADWAY— A STREET OR HIGHWAY OTHER THAN A LOW—VOLUME ROAD, EXPRESSWAY, OR FREEWAY.

EXPRESSWAY— A DIVIDED HIGHWAY WITH PARTIAL CONTROL OF ACCESS.

FREEWAY— A DIVIDED HIGHWAY WITH FULL CONTROL OF ACCESS.

LOW—VOLUME ROAD— A FACILITY LYING OUTSIDE OF BUILT—UP AREAS OF CITIES, TOWNS, AND COMMUNITIES, AND IT SHALL HAVE A TRAFFIC VOLUME OF LESS THAN 400 AADT. IT SHALL NOT BE A FREEWAY, EXPRESSWAY, INTERCHANGE RAMP, FREEWAY SERVICE ROAD OR A ROAD ON A DESIGNATED STATE HIGHWAY SYSTEM.

Source: MUTCD LATEST EDITION

### TAPER LENGTH CRITERIA FOR TEMPORARY TRAFFIC CONTROL ZONES

<table>
<thead>
<tr>
<th>TYPE OF TAPER</th>
<th>TAPER LENGTH (L)*</th>
</tr>
</thead>
<tbody>
<tr>
<td>MERGING TAPER</td>
<td>AT LEAST L</td>
</tr>
<tr>
<td>SHIFTING TAPER</td>
<td>AT LEAST 0.5L</td>
</tr>
<tr>
<td>SHOULDER TAPER</td>
<td>AT LEAST 0.33L</td>
</tr>
<tr>
<td>ONE—LANE, TWO—WAY TRAFFIC TAPER</td>
<td>50 FT MIN. (15 m) 100 FT (30 m) MAX.</td>
</tr>
<tr>
<td>DOWNSTREAM TAPER</td>
<td>50 FT MIN. (15 m) 100 FT MAX. (30 m) PER LANE</td>
</tr>
</tbody>
</table>

Source: Table 6C—3 MUTCD LATEST EDITION

### FORMULAS FOR DETERMINING TAPER LENGTHS

<table>
<thead>
<tr>
<th>SPEED LIMIT (S)</th>
<th>TAPER LENGTH (L) FEET</th>
<th>SPEED LIMIT (S)</th>
<th>TAPER LENGTH (L) Meters</th>
</tr>
</thead>
<tbody>
<tr>
<td>40 MPH OR LESS</td>
<td>L = ( \frac{WS^2}{60} )</td>
<td>60 KM/H OR LESS</td>
<td>L = ( \frac{WS^2}{155} )</td>
</tr>
<tr>
<td>45 MPH OR MORE</td>
<td>L = WS</td>
<td>70 KM/H OR MORE</td>
<td>L = ( \frac{WS}{1.6} )</td>
</tr>
</tbody>
</table>

WHERE: 

L = TAPER LENGTH IN FEET (METERS)

W = WIDTH OF OFFSET IN FEET (METERS)

S = POSTED SPEED LIMIT, OR OFF—PEAK 85TH—PERCENTILE SPEED PRIOR TO WORK STARTING, OR THE ANTICIPATED OPERATING SPEED IN MPH (KM/H)

Source: Table 6C—4 MUTCD LATEST EDITION
LEGEND

DIRECTION OF TRAVEL
CHANNELIZING DEVICE
WORK AREA
SIGN

TERMINATION AREA:
LETS TRAFFIC
RESUME NORMAL
OPERATIONS

ACTIVITY AREA:
WHERE WORK
TAKES PLACE

TRANSITION AREA:
MOVES TRAFFIC
OUT OF ITS
NORMAL PATH

ADVANCE WARNING
AREA: TELLS
TRAFFIC WHAT TO
EXPECT AHEAD

LONGITUDINAL
BUFFER SPACE:
PROVIDES PROTECTION FOR TRAFFIC
AND WORKERS = STOPPING SIGHT
DISTANCE. NOTHING SHALL BE
PLACED/STORED IN BUFFER SPACE

LONGITUDINAL BUFFER SPACE:
PROVIDES PROTECTION FOR
TRAFFIC AND WORKERS

LATERAL BUFFER SPACE:
PROVIDES PROTECTION FOR
TRAFFIC AND WORKERS

TRAFFIC SPACE: ALLOWS
TRAFFIC TO PASS THROUGH
THE ACTIVITY AREA

SHOULDER TAPER: GUIDES
TRAFFIC AWAY FROM
SHOULDER/BREAK-DOWN LANE

THE "A" DISTANCE CAN BE
MEASURED FROM THE START OF
THE TRAVEL LANE RESTRICTION
OR THE SHOULDER/BREAKDOWN
LANE RESTRICTION (IF
SHOULDER/BREAKDOWN LANE IS
ONLY LANE BEING CLOSED)

USE "G20-1" SIGN
AT PROJECT LIMIT
IF WORK OCCURS
OVER A DISTANCE
OF MORE THAN 2
MILES (3.2 KM)

NOT TO SCALE

FIGURE GEN-4
COMPONENT PARTS OF A
TEMPORARY TRAFFIC CONTROL
(TTC) ZONE

Standard
Details and Drawings
for the
Development of
Temporary Traffic Control Plans

massDOT
Massachusetts Department of Transportation
Highway Division
TYPES OF TAPERS AND BUFFER SPACES

FIGURE GEN-5

Standard Details and Drawings for the Development of Temporary Traffic Control Plans

NOT TO SCALE
**LATERAL DROP-OFF DETAIL**

NOT TO SCALE

- **TRAVEL WAY**
- **REFLECTORIZED DRUM**
- **24" (MIN.)**
- **Depth ≥ 4"**
- **WORK AREA**

**LONGITUDINAL DROP-OFF DETAIL**

NOT TO SCALE

- **W8-3**
- **OR**
- **W8-8**
- **OR**
- **W8-1**
- **EXIST. PAVEMENT**
- **LIMIT OF EXCAVATION**
- **DIRECTION OF TRAFFIC**
- **TEMPORARY BIT. CONC. PAVEMENT**
- **GRAVEL BORROW/SUBBASE**

* - INCREASE SLOPE RATIO FOR HIGHER SPEEDS
NOTES:

1. CURB RAMPS SHALL BE 60 IN. MINIMUM WIDTH WITH A FIRM, STABLE AND NON-SLIP SURFACE.
2. PROTECTIVE EDGING WITH A 2 IN. MINIMUM HEIGHT SHALL BE INSTALLED WHEN THE CURB RAMP OR LANDLING PLATFORM HAS A VERTICAL DROP OF 6 IN. OR GREATER OR HAS A SIDE APRON SLOPE STEEPER THAN 1:3 (33%). PROTECTIVE EDGING SHOULD BE CONSIDERED WHEN THE CURB RAMPS OR LANDLING PLATFORMS HAVE A VERTICAL DROP OF 3 IN. OR MORE.
3. DETECTABLE EDGING WITH 6 IN. MINIMUM HEIGHT AND CONTRASTING COLOR SHALL BE INSTALLED ON ALL CURB RAMP LANDINGS WHERE THE WALKWAY CHANGES DIRECTION (TURNS).
4. CURB RAMPS AND LANDINGS SHALL HAVE A 1:50 (2%) MAX CROSS-SLOPE.
5. CLEAR SPACE OF 48x48 IN. MINIMUM SHALL BE PROVIDED ABOVE AND BELOW THE CURB RAMP.
6. THE CURB RAMP WALKWAY EDGE SHALL BE MARKED WITH A CONTRASTING COLOR 2 TO 4 IN. WIDE MARKING. THE MARKING IS OPTIONAL WHERE COLOR CONTRASTING EDGING IS USED.
7. WATER FLOW IN THE GUTTER SYSTEM SHALL HAVE MINIMAL RESTRICTION.
8. LATERAL JOINTS OR CAPS BETWEEN SURFACES SHALL BE LESS THAN 0.5 IN. WIDTH.
9. CHANGES BETWEEN SURFACE HEIGHTS SHOULD NOT EXCEED 0.5 IN. LATERAL EDGES SHOULD BE VERTICAL UP TO 0.25 IN. HIGH, AND BEVELED AT 1:2 BETWEEN 0.25 IN. AND 0.5 IN. HEIGHT.

TEMPORARY CURB RAMP-PARALLEL TO CURB

TEMPORARY CURB RAMP-PERPENDICULAR TO CURB
TEMPORARY CURB RAMP-TYPE 2

WORK ZONE AREA (CLOSED)

DETECTABLE EDGING

DETECTABLE WARNING PANEL

48" MIN
72" MAX

LANDING AREA

PORTABLE WALKWAY

CURB RAMP

PORTABLE WALKWAY

AREA TURNING

EXISTING SIDEWALK

HIGH CONTRAST MARKING ON ALL NON-SMOOTH TRANSITION JOINTS (TYP)

GROUND CURB

SURFACE

TEMPORARY PEDESTRIAN FACILITY

3:1 MAX SLOPE INTO GUTTER
WITHOUT EDGE PROTECTION OR DETECTABLE EDGE

PORTABLE WALKWAY

TEMPORARY CURB RAMP

DETECTABLE EDGE

48" MIN LANDING AREA

48" MIN LANDING AREA

6" MAX

EXISTING SURFACE
OR TEMPORARY PEDESTRIAN FACILITY

GROUND CURB

EXISTING SIDEWALK

TEMPORARY PEDESTRIAN FACILITY
• When existing pedestrian facilities are disrupted, closed, or relocated in a TTC zone, temporary facilities shall be provided and they shall be detectable and include accessibility features consistent with the features present in the existing pedestrian facility.

• A pedestrian channelizing device that is detectable by a person with a visual disability traveling with the aid of a long cane shall be placed across the full width of the closed sidewalk.

• When used, temporary ramps shall comply with Americans with Disabilities Act (see Figures Ped-1 & Ped-2).

• The alternate pathway should have a smooth continuous hard surface for the entire length of the temporary pedestrian facility.

• The protective requirements of a TTC situation have priority in determining the need for temporary traffic barriers and their use in this situation should be based on engineering judgment.

• Audible information devices should be considered where midblock closings and changed crosswalk areas cause inadequate communication to be provided to pedestrians who have visual disabilities.

**AUDIBLE DEVICES**

For long term sidewalk closures (at a minimum overnight) a form of speech messaging for pedestrians with visual disabilities shall be provided. Audible information devices such as detectable barriers or barricades and other passive pedestrian activation (motion activated) devices should be considered for these cases. These audible devices can be mountable or stand alone.
PEDESTRIAN CHANNELIZING DEVICE

NOTES:

* THERE SHALL BE A 2 INCH GAP BETWEEN THE HAND–TRAILING EDGE AND ITS SUPPORT.

** A MAXIMUM 2 INCH GAP BETWEEN THE BOTTOM OF THE BOTTOM RAIL AND THE SURFACE MAY BE USED TO PROVIDE DRAINAGE.
SIDEWALK CLOSED WITHOUT DETOUR

NOTE: IF A MINIMUM WIDTH OF 48" OF SOLID SMOOTH UNOBSSTRUCTED SURFACE REMAINS ALONG THE WORK AREA THEN THE DETAIL CAN BE DISREGARDED. Delineation of the work area will still be required. All pedestrian detour routes shall be ADA/MAAB compliant in their entirety.
NOTE:
FOR LONG-TERM STATIONARY WORK, THE DOUBLE YELLOW CENTERLINE AND/OR LANE LINES SHOULD BE REMOVED BETWEEN THE CROSSWALK LINES.
NOTES
1. ADDITIONAL ADVANCE WARNING MAY BE NECESSARY.
2. CONTROLS ONLY FOR PEDESTRIAN TRAFFIC ARE SHOWN. VEHICULAR TRAFFIC SHOULD BE HANDLED AS SHOWN ELSEWHERE.
3. STREET LIGHTING SHOULD BE CONSIDERED WHEN LOCATING CONTROL DEVICES.
4. IF THE WORK ZONE DOES NOT PERMIT PEDESTRIANS TO TRAVEL ADJACENT TO IT AS SHOWN IN PEDESTRIAN BYPASS TYPE I, TEMPORARY CROSSWALKS WITH APPROPRIATE SIGNS SHOULD BE INSTALLED TO CROSS PEDESTRIANS TO THE OPPOSITE SIDE OF THE STREET AS SHOWN IN PEDESTRIAN BYPASS TYPE II, AND AS DIRECTED BY THE ENGINEER. TEMPORARY CURB RAMP WILL BE REQUIRED AT ALL TEMPORARY CROSSWALK LOCATIONS.
5. BYPASS IS TO BE USED IN CONJUNCTION WITH THE PROPOSED LANE CLOSURE DETAILS AND DURING CONSTRUCTION STAGING, AS DIRECTED BY THE ENGINEER.
6. THE TEMPORARY SIDEWALK SHOULD BE A MINIMUM OF 4 FEET WIDE. IF THIS WALKWAY EXCEEDS 200 FEET THEN A 5 FOOT X 5 FOOT PASSING ZONE. (FOR SHORT TERM SETUPS < 10 HOURS, THIS CONDITION MAY BE WAIVED. A NOTE WOULD NEED TO BE INCLUDED IN THE TTCP THAT STATES HOW THE CONTRACTOR SHOULD ADDRESS THIS ISSUE.)
DETAIL IS TO BE USED IN CONJUNCTION WITH THE PROPOSED LANE CLOSURE DETAILS AND DURING CONSTRUCTION STAGING, AS DIRECTED BY THE ENGINEER. ADJUSTMENTS TO SIGNING AND DELINEATION MAY BE REQUIRED.
FIGURE BIK-2

BICYCLE LANE CLOSURE WITH ON-ROAD DETOUR

NOT TO SCALE
Standard Details and Drawings for the Development of Temporary Traffic Control Plans

FIGURE BIK-3
TEMPORARY PATH DETOUR FOR SHARED-USE PATH
NOT TO SCALE
FIGURE BIK-5
PAVED SHOULDER CLOSURE WITH BICYCLE DETOUR ONTO PATH

DETAIL IS TO BE USED IN CONJUNCTION WITH THE PROPOSED LANE CLOSURE DETAILS AND DURING CONSTRUCTION STAGING, AS DIRECTED BY THE ENGINEER. ADJUSTMENTS TO SIGNING AND DELINEATION MAY BE REQUIRED.
Standard Details and Drawings for the Development of Temporary Traffic Control Plans

FIGURE INT-1

SINGLE LANE APPROACH CENTER CLOSURE

NOT TO SCALE
* THIS DELINEATION CAN BE REMOVED TO INCREASE CAPACITY OF THE INTERSECTION. POLICE OFFICER CAN BE REMOVED AS WELL.
FIGURE INT-3
DOUBLE LANE APPROACH
FAR SIDE CLOSURE
INSIDE LANE

NOT TO SCALE
FIGURE INT-4
DOUBLE LANE APPROACH
FAR SIDE CLOSURE
RIGHT LANE

NOT TO SCALE
Standard Details and Drawings for the Development of Temporary Traffic Control Plans

FIGURE INT-5
DOUBLE LANE APPROACH
HALF ROAD CLOSURE

NOT TO SCALE
FIGURE INT-6
MULTI-LANE APPROACH
MULTIPLE LANE CLOSURE

NOT TO SCALE
Standard Details and Drawings for the Development of Temporary Traffic Control Plans

FIGURE INT-7
MULTI-LANE APPROACH NEAR SIDE CLOSURE

NOT TO SCALE
NOT TO SCALE

SHOULDER CLOSED

TWO LANE ROAD

FIGURE TLR-1

TEMPORARY TRAFFIC CONTROL PLANS
FOR THE
DEVELOPMENT OF
DETAILS AND DRAWINGS
STANDARD

MassDOT

HIGHWAY DIVISION
Massachusetts Department of Transportation
FIGURE TLR-2

TWO LANE ROAD

SHOULDER AND TRAVEL LANE CLOSED

NOT TO SCALE

Standard Details and Drawings for the Development of Temporary Traffic Control Plans

100 FT (30m) MAX TAPER ZONE WORK DOWNSTREAM BUFFER L/2

L/3 BUFFER A

W5-1 W1-4L W1-4R W5-1

ROAD NARROW NARROWS ROAD NARROWS W1-4L W1-4R


downstream

a

w1-4r

w1-4l

w5-1

L/2 BUFFER

100 FT (30m) MAX TAPER ZONE WORK DOWNSTREAM BUFFER L/2
Standard Details and Drawings for the Development of Temporary Traffic Control Plans

Figure TLR-3

Two Lane Road

Not to Scale

Center of Road Closure

Mass DOT

Highway Division

Department of Transportation
Standard Details and Drawings for the Development of Temporary Traffic Control Plans

FIGURE TLR-4

ONE LANE ALTERNATING TRAFFIC WITH TEMPORARY SIGNAL

TWO LANE ROAD NOT TO SCALE
Standard Details and Drawings for the Development of Temporary Traffic Control Plans

FIGURE TLR-5

TWO LANE ROAD

ONE LANE ALTERNATING TRAFFIC

NOT TO SCALE
FIGURE TLR-6

TWO LANE ROAD

ONE LANE ALTERNATING TRAFFIC

NOT TO SCALE

With Yield

W1-4R

W3-2

R1-2a

YIELD

15 FT.

(5m)

WITH

ONE LANE ROAD

WORK ZONE

100 FT.

(30m) MAX.

BUFFER

100-150 FT.

(30-45 m)

OPTIONAL

BUFFER

Standard Details and Drawings for the Development of Temporary Traffic Control Plans

Mass DOT
*FOR SYMBOL SEE MUTCD LATEST EDITION FIGURE 6F-4
FIGURE DIV-2

DIVIDED HIGHWAY / LANE CLOSURE
(SHORT TERM)

NOT TO SCALE
FIGURE DIV-3

DIVIDED HIGHWAY
STATIONARY LANE CLOSURE
(LONG TERM AND INTERMEDIATE)
NOT TO SCALE

Standard Details and Drawings for the Development of Temporary Traffic Control Plans

TEMPORARY SWEL
100 FT (30m)
WORK ZONE
BUFFER

* INSERT TRUCK MOUNTED ATTENUATOR DURING ACTUAL WORKING OPERATIONS

W4-2R
W20-5R
W13-1p

RIGHT LANE CLOSED XXX
XX MPH
W20-5R
W13-1p

RIGHT LANE CLOSED XXX
XX MPH
W20-5R
W13-1p

Standard Details and Drawings for the Development of Temporary Traffic Control Plans

FIGURE DIV-3

DIVIDED HIGHWAY
STATIONARY LANE CLOSURE
(LONG TERM AND INTERMEDIATE)
NOT TO SCALE
Standard Details and Drawings for the Development of Temporary Traffic Control Plans

FIGURE DIV-4
DICVIDED HIGHWAY
ONE LANE CLOSED WITH BARRIER
NOT TO SCALE
Standard Details and Drawings for the Development of Temporary Traffic Control Plans

FIGURE DIV-5
DIVIDED HIGHWAY
MULTIPLE LANE CLOSURE
NOT TO SCALE
TEMPORARY SOLID WHITE LANE LINE AND EDGE LINE

IMPACT ATTENUATOR

BUFFER

TEMPORARY YELLOW EDGE LINE

TEMPORARY SOLID WHITE LANE LINE AND EDGE LINE

NOTE: SIGN TO REFLECT ACTUAL NUMBER OF LANES

W21-11

W1-4cR

W13-1p

L/3

L/2

500'

W8-25

W21-11

W1-4cR

W13-1p

* NOTE: SIGN TO REFLECT ACTUAL NUMBER OF LANES

FIGURE DIV-6

DIVIDED HIGHWAY MULTIPLE LANE SHIFT WITH BARRIER

NOT TO SCALE

Standard Details and Drawings for the Development of Temporary Traffic Control Plans

massDOT Massachusetts Department of Transportation Highway Division
Standard Details and Drawings for the Development of Temporary Traffic Control Plans

FIGURE DIV-7
DIVIDED HIGHWAY CENTER LANE CLOSURE
NOT TO SCALE
This setup may not be left after work hours. The W20-4 and W20-7b or W20-7 signs must be taken down or completely covered when both lanes are open.
Standard Details and Drawings for the Development of Temporary Traffic Control Plans

FIGURE BRG-3

PARTIAL BRIDGE CLOSURE STAGE ONE

STAGE TWO (SWITCH TO OTHER SIDE)

TEMPORARY MEDIAN BARRIER

TEMPORARY DYCL

REMOVE EXISTING PAVEMENT MARKINGS FROM TRAVEL PATH

TEMPORARY WHITE PAVEMENT MARKING

TEMPORARY WORK ZONE

IMPAKT ATTENUATOR

BUFFER ZONE WORK

BUFFER ZONE WORK

BUFFERS

TEMPORARY SWELL

L/2

L/3

A

B

A

B

W5-1

W4-1

W4-1

W5-1

ROAD WORK

ROAD WORK

ROAD WORK

ROAD WORK

ROAD WORK

ROAD WORK

ROAD WORK

ROAD WORK

ROAD WORK

ROAD WORK

ROAD WORK

ROAD WORK

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FIGURE BRG-4

PARTIAL CENTER CLOSURE
STAGE THREE

TEMPORARY MEDIAN BARRIER
TEMPORARY WHITE PAVEMENT MARKING

IMPACT ATTENUATOR

REMOVE EXISTING PAVEMENT MARKINGS FROM TRAVEL PATH

NOT TO SCALE

STANDARD DETAILS AND DRAWINGS FOR THE DEVELOPMENT OF TEMPORARY TRAFFIC CONTROL PLANS
FIGURE R-2

WORK IN VICINITY OF EXIT RAMP

NOT TO SCALE
Standard Details and Drawings for the Development of Temporary Traffic Control Plans

FIGURE R-3

WORK IN VICINITY OF EXIT RAMP

NOT TO SCALE
WHERE INADEQUATE ACCELERATION DISTANCE EXISTS FOR THE TEMPORARY ENTRANCE, THE "YIELD" SIGNS SHALL BE REPLACED WITH "STOP" AND "STOP AHEAD" SIGNS (ONE ON EACH SIDE OF THE APPROACH).

(MUTCD, P. 6H-92)
WORK ZONE

10 FT (3m) MIN.
LANE WIDTH

TRUCK
MOUNTED
ATTENUATOR

BUFFER

L/2

RAMP
NARROWS

A

XX
M.P.H.
W5-4
W13-1p

ROAD
WORK
XXX

B

ON
RAMP
W20-1
W13-4p

FIGURE R-5

PARTIAL EXIT RAMP CLOSURE

NOT TO SCALE

Standard Details and Drawings for the Development of Temporary Traffic Control Plans
FIGURE R-6
PARTIAL ENTRANCE RAMP CLOSURE

Standard Details and Drawings for the Development of Temporary Traffic Control Plans

NOT TO SCALE
Standard Details and Drawings for the Development of Temporary Traffic Control Plans

FIGURE MLR-1
MULTIPLE LANE ROAD
INTERIOR LANE CLOSURE
NOT TO SCALE
Standard Details and Drawings for the Development of Temporary Traffic Control Plans

FIGURE MLR-2

MULTIPLE LANE ROAD INTERIOR LANE CLOSURE W/ UNEVEN VOLUMES
NOT TO SCALE
Standard Details and Drawings for the Development of Temporary Traffic Control Plans

FIGURE MLR-3

MULTIPLE LANE ROAD
HALF ROAD CLOSURE

NOT TO SCALE
Figure RR-1

NOT TO SCALE

WORK NEAR RAILROAD CROSSING

FIGURE RR-1

TENney Traffic Control Plans
for the
Development of
Details and Drawings
Standard

NOT PRESENT
NOTE: INSTALL IF
R-8-8

TRACKS
ON
STOP
DO NOT

EXISTING

W20-7
OR
W20-4

W20-7
OR
W20-4

W20-4

RAIL
ROAD
STOP
ON
R15-1
(EXISTING)

NOTE: INSTALL IF
NOT PRESENT

Standard
Details and Drawings
for the
Development of
Temporary Traffic Control Plans

WORK NEAR RAILROAD CROSSING

FIGURE RR-1

NOT TO SCALE
Standard Details and Drawings for the Development of Temporary Traffic Control Plans

FIGURE D-2

NOT TO SCALE