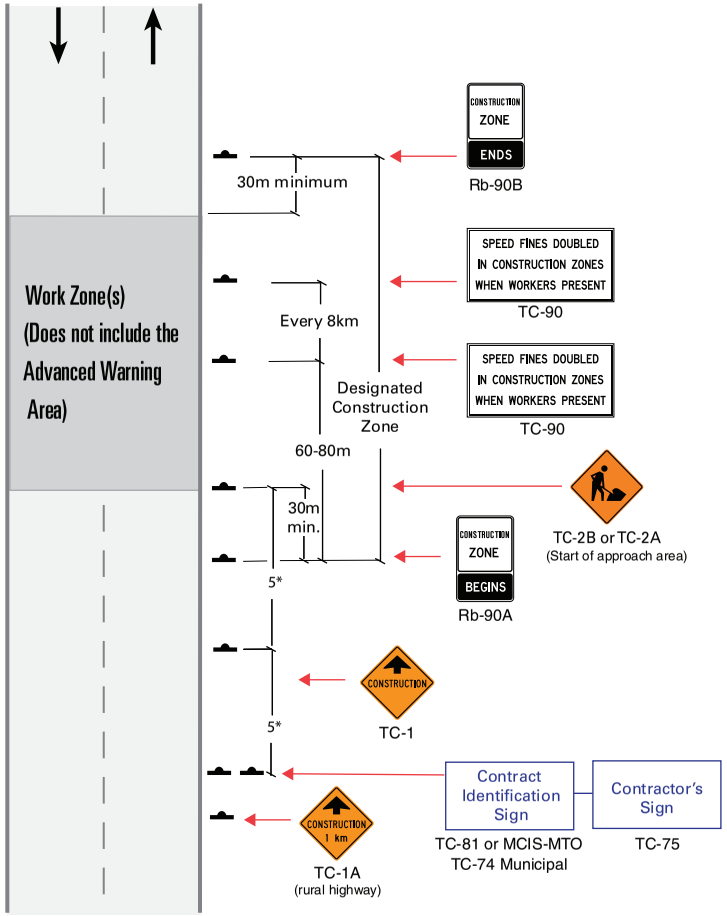
Figure TL-1 Designated Construction Zone Signing

☑ Two-Lane
☐ Multi-Lane
☐ Undivided Non-freeway
☐ Divided Non-freeway
☐ Freeway

☐ Mobile Operations
☐ Very Short Duration
☐ Short Duration
☑ Long Duration



* See *Table B*.

NOTES

i) The same signing is required in the opposite direction.

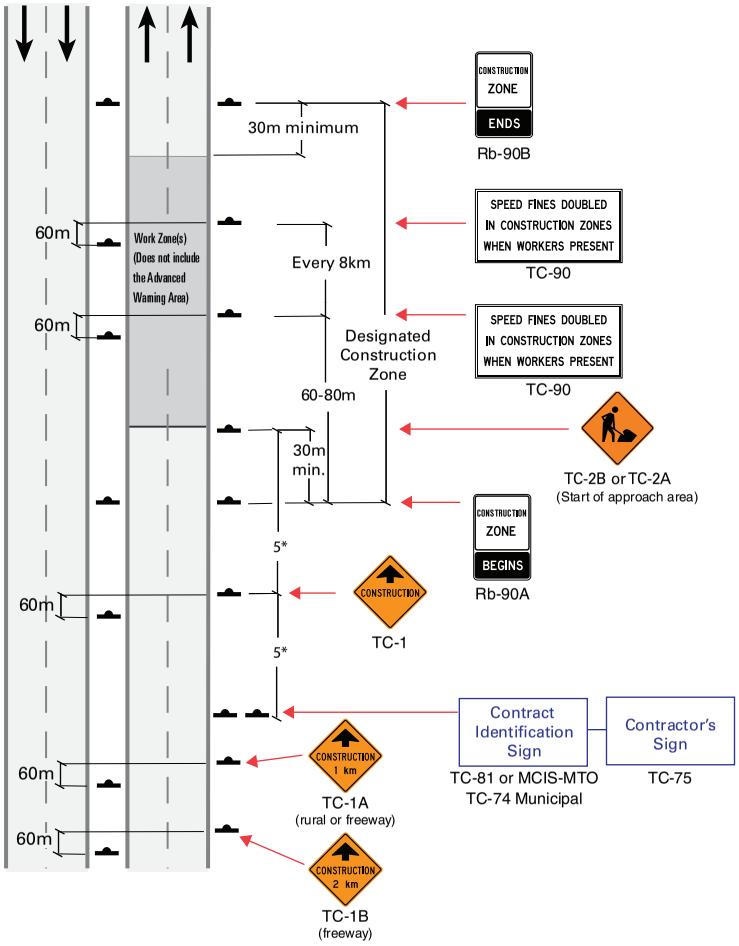
ii) Speed Fines Doubled signs are recommended, but not required.

iii) As shown, the limits of the Designated Construction Zone do not need to include TC-1, TC-1A, TC-1B, TC-5, TC-5A, TC-5B and information signs.

Figure TL-2 Designated Construction Zone Signing

☐ Two-Lane
☑ Multi-Lane
☑ Undivided Non-freeway
☑ Divided Non-freeway
☑ Freeway

☐ Mobile Operations
☐ Very Short Duration
☐ Short Duration
☑ Long Duration



* For Non-Freeways, see *Table B*. For Freeways, see *Table C*.

NOTES

i) Where signs cannot be accommodated in the median, provide additional signs on the right shoulder or oversize as practicable.

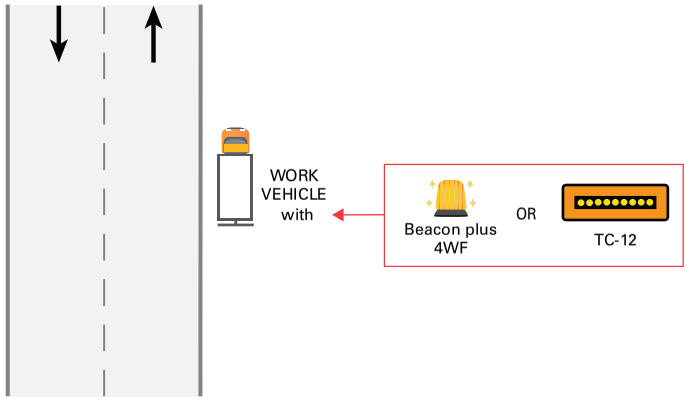
ii) Speed Fines Doubled signs are recommended, but not required.

iii) As shown, the limits of the Designated Construction Zone do not need to include TC-1, TC-1A, TC-1B, TC-5, TC-5A, TC-5B and information signs.

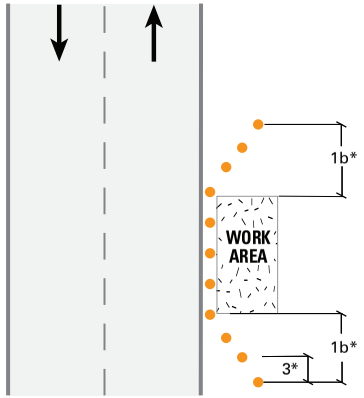
Figure TL-5 Shoulder Work

- ☑ Two-Lane
- ☑ Multi-Lane
- ☑ Undivided Non-freeway
- ☑ Divided Non-freeway
- ☐ Freeway
- ☑ Mobile Operations
- ☑ Very Short Duration
- ☐ Short Duration
- ☐ Long Duration

With work vehicle - Mobile or VSD



No work vehicle - VSD



* See *Table A*.

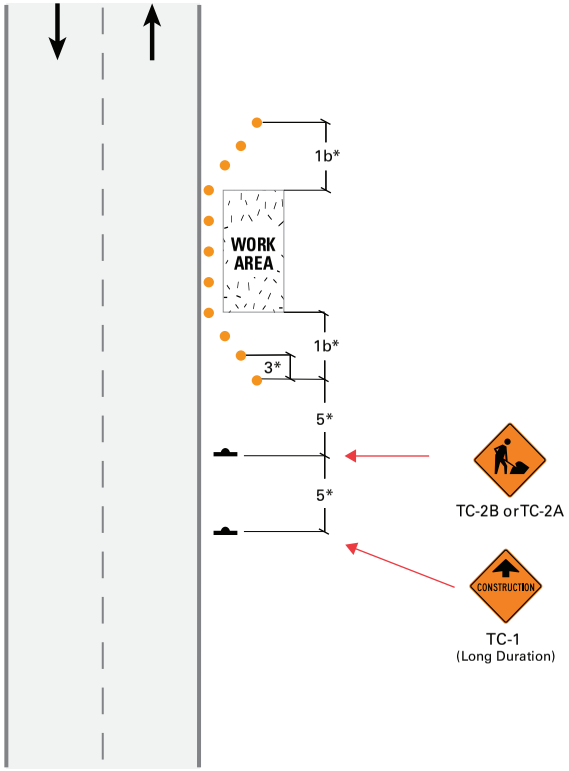
NOTES

i) Work on the left shoulder mirror image for multi-lane divided road.

ii) Termination taper optional.

Figure TL-6 Shoulder Work

- ☑ Two-Lane
- ☑ Multi-Lane
- ☑ Undivided Non-freeway
- ☑ Divided Non-freeway
- ☐ Freeway
- ☐ Mobile Operations
- ☐ Very Short Duration
- ☑ Short Duration
- ☑ Long Duration



* For Short Duration, see *Table A*. For Long Duration, see *Table B*.

NOTES

i) Work on the left shoulder mirror image for multi-lane divided road.

ii) Termination taper optional.

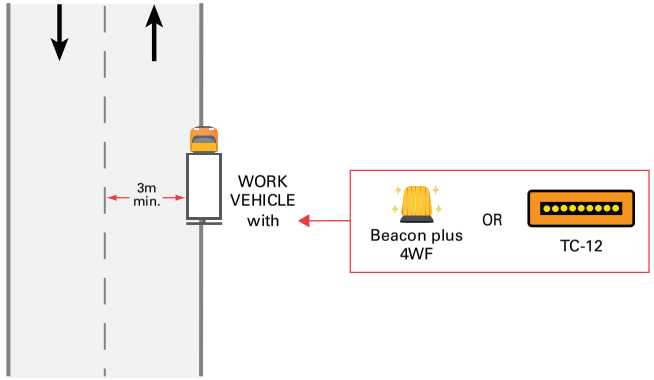
iii) Work area may or may not contain a work vehicle. See General Notes to Typical Layouts #4.

iv) A work vehicle with a TC-12 may replace cones for Short Duration work.

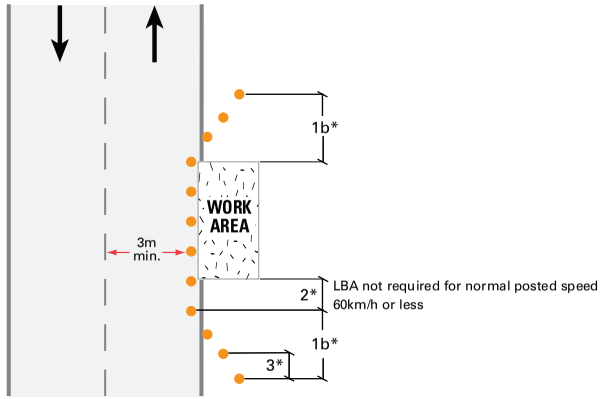
Figure TL-7 Lane Encroachment

- ☑ Two-Lane
- ☑ Multi-Lane
  - ☑ Undivided Non-freeway
  - ☑ Divided Non-freeway
  - ☐ Freeway
- ☑ Mobile Operations
- ☑ Very Short Duration
- ☐ Short Duration
- ☐ Long Duration

With work vehicle - Mobile or VSD



No work vehicle - VSD



* See *Table A*.

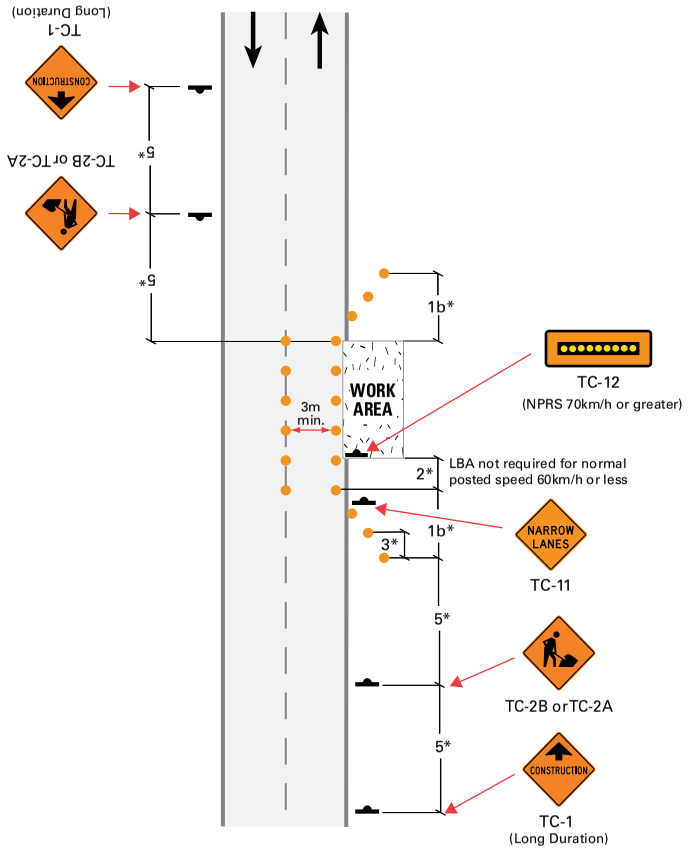
NOTES

i) Termination taper optional.

ii) Encroachment in the left lane, mirror image for multi-lane divided road.

Figure TL-8 Lane Encroachment

- ☑ Two-Lane
- ☐ Multi-Lane
  - ☐ Undivided Non-freeway
  - ☐ Divided Non-freeway
  - ☐ Freeway
- ☐ Mobile Operations
- ☐ Very Short Duration
- ☑ Short Duration
- ☑ Long Duration



* For Short Duration, see *Table A*. For Long Duration, see *Table B*.

NOTES

i) If Available Lane Width (ALW) is less than 3m, use partial lane shift (See TL-9, TL-10) or lane closures (TL-20A, TL-20B, TL-21).

ii) Center line cones are optional and are to be used if lane keeping is an issue.

iii) On unpaved roads with low volume (<3000 vehicles per day):
- Where remaining roadway width is at least 6m, and ALW is less than 3m, use Rb-91, a distance 5* upstream of start of taper, and move the TC-1 and TC-2B an additional distance 5* upstream.

iv) Work area may or may not contain a work vehicle. See General Notes to Typical Layouts #4.

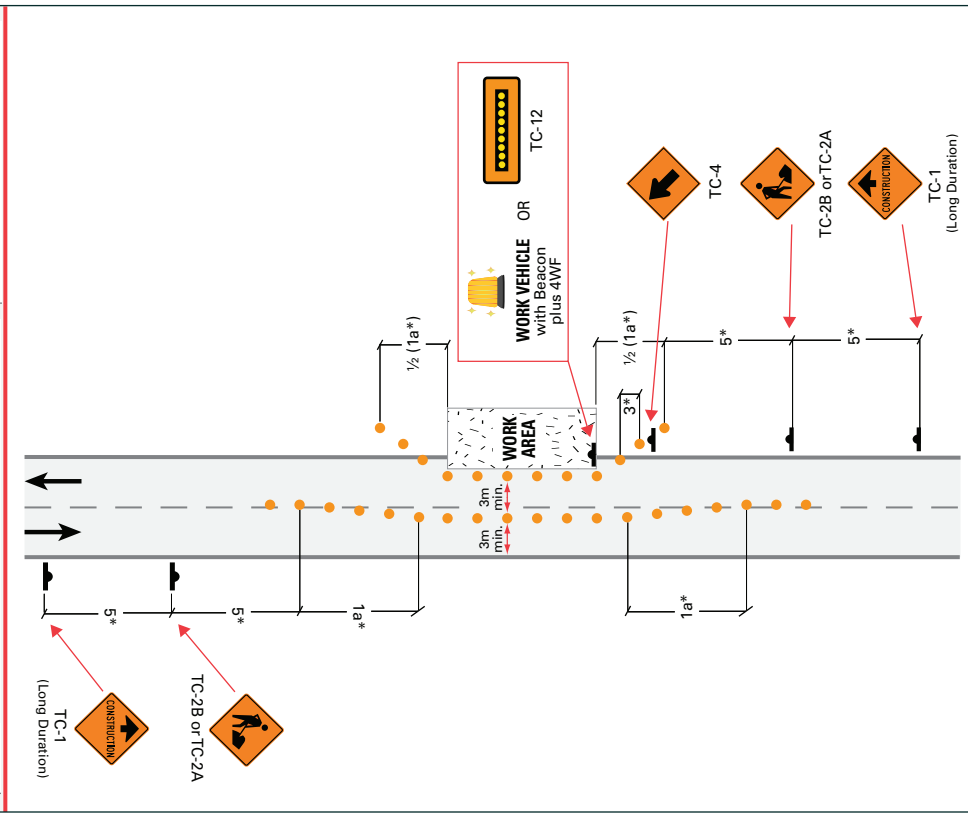
v) A work vehicle with a TC-12 may replace cones for Short Duration work where NPRS is under 70km/h.

Figure TL-9 **Partial Lane Shift**

☑ Two-Lane ☐ Multi-Lane

☐ Undivided Non-freeway ☐ Divided Non-freeway ☐ Freeway

☐ Mobile Operations ☐ Very Short Duration ☑ Short Duration ☑ Long Duration



NOTES

* For Short Duration, see *Table A*. For Long Duration, see *Table B*.

i) Remaining roadway must be at least 6m with a lane width of at least 3m in each direction.

ii) Traffic should not be shifted onto a surface texture different from the main roadway without a posted speed reduction.

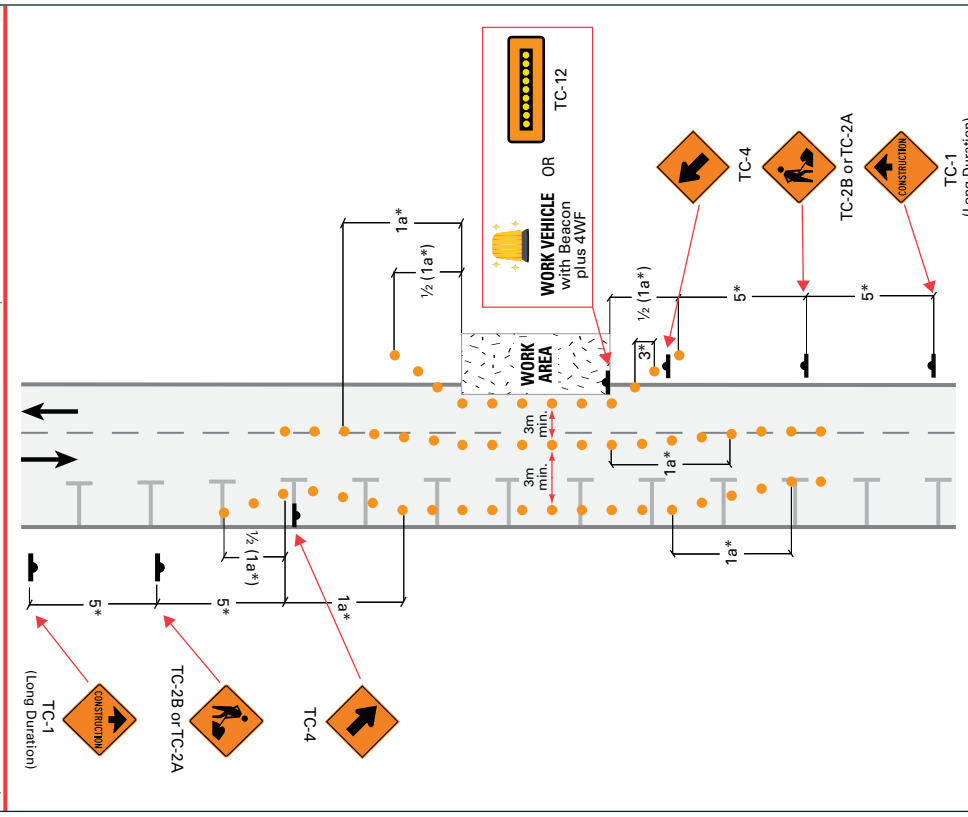
iii) For Work Areas 50m or less.

Figure TL-10 **Partial Lane Shift: Wide Platform**

☑ Two-Lane ☐ Multi-Lane

☐ Undivided Non-freeway ☐ Divided Non-freeway ☐ Freeway

☐ Mobile Operations ☐ Very Short Duration ☑ Short Duration ☑ Long Duration



NOTES

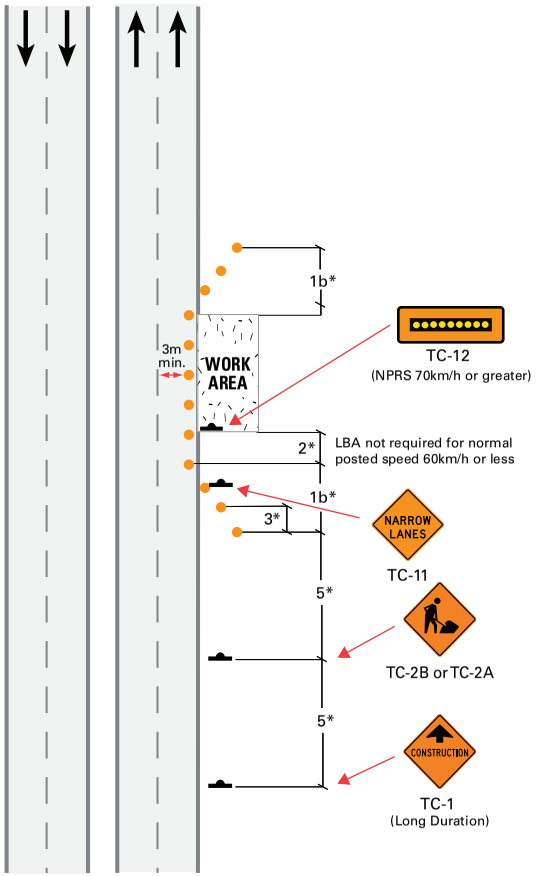
* For Short Duration, see *Table A*. For Long Duration, see *Table B*.

i) Remaining roadway must be at least 6m with a lane width of at least 3m in each direction.

ii) Traffic should not be shifted onto a surface texture different from the main roadway without a posted speed reduction.

Figure TL-14 Lane Encroachment

- ☐ Two-Lane
- ☑ **Multi-Lane**
  - ☑ **Undivided Non-freeway**
  - ☑ **Divided Non-freeway**
  - ☐ Freeway
- ☐ Mobile Operations
- ☐ Very Short Duration
- ☑ **Short Duration**
- ☑ **Long Duration**



* For Short Duration, see *Table A*. For Long Duration, see *Table B*.

NOTES

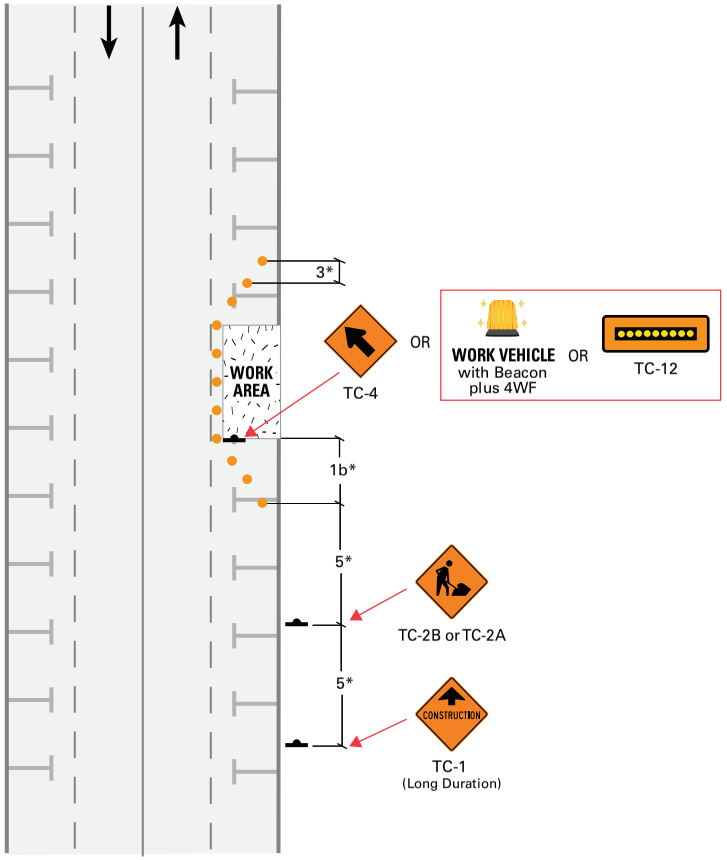
i) Encroachment in the left lane: mirror image of right lane (divided roads only).

ii) Work area may or may not contain a work vehicle. See General Notes to Typical Layouts #4.

iii) A work vehicle with a TC-12 may replace cones for Short Duration work where NPRS is under 70km/h.

Figure TL-16 Parking Lane Closed

- ☐ Two-Lane
- ☑ **Multi-Lane**
  - ☑ **Undivided Non-freeway**
  - ☑ **Divided Non-freeway**
  - ☐ Freeway
- ☐ Mobile Operations
- ☑ **Very Short Duration**
- ☑ **Short Duration**
- ☑ **Long Duration**



* For Very Short and Short Duration, see *Table A*. For Long Duration, see *Table B*.

NOTES

i) Placement of TC-1 or TC-2 may need to be adjusted if visibility is obstructed due to parked vehicles.

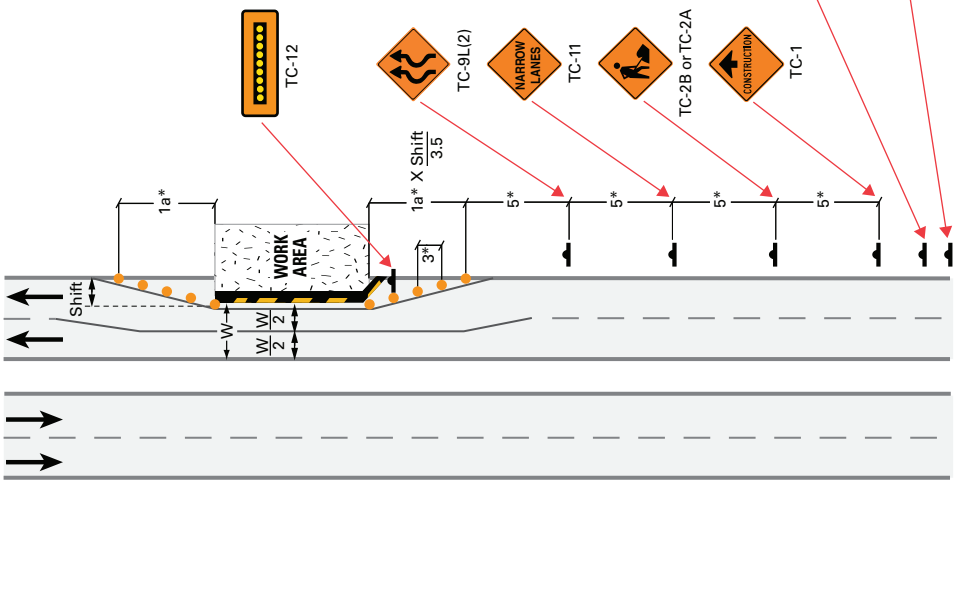
ii) For very short or short duration work, a work vehicle with Beacon/4WF or a TC-12 in bar mode can replace cones.

Figure TL-17 **Partial Lane Shift: Narrow Lanes**

☐ Two-Lane
☑ **Multi-Lane**

☑ **Undivided Non-freeway**
☑ **Divided Non-freeway**
☑ **Freeway**

☐ Mobile Operations
☐ Very Short Duration
☐ Short Duration
☑ **Long Duration**



NOTES

* For Non-Freeways, see *Table B*. For Freeways, see *Table C*.

i) $\frac{W}{2}$ = 3m minimum (3.5m preferred on Freeways).

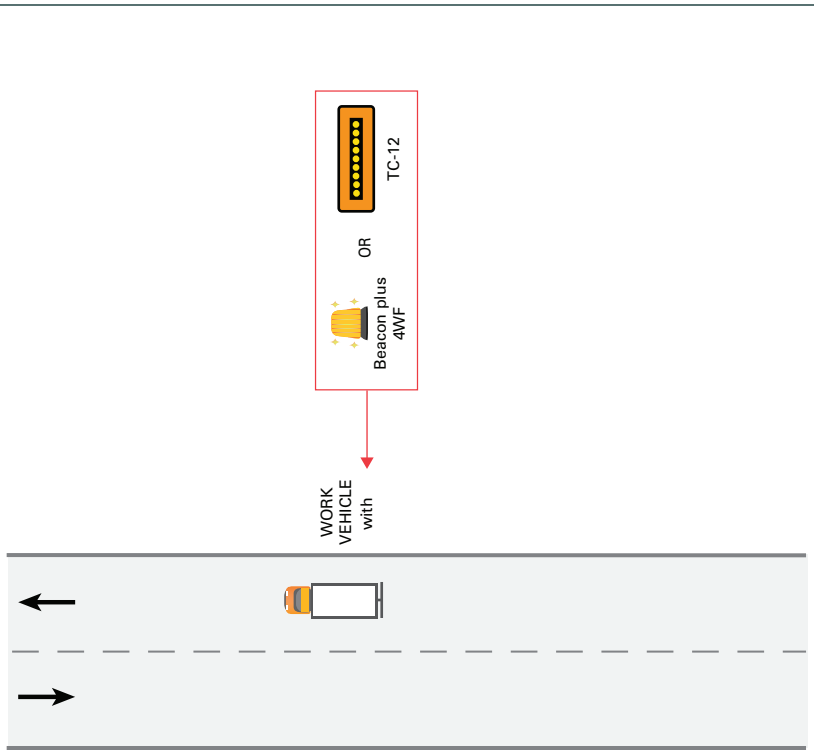
ii) For narrowed lanes exceeding 2 km, use a TC-16EL (ER) in place of the TC-9L(R). Add an additional TC16ER(EL) at the beginning of end taper.

Figure TL-18 **Lane Closed or Occupied**

☑ **Two-Lane**
☐ Multi-Lane

☐ Undivided Non-freeway
☐ Divided Non-freeway
☐ Freeway

☑ **Mobile Operations**
☐ Very Short Duration
☐ Short Duration
☐ Long Duration



NOTES

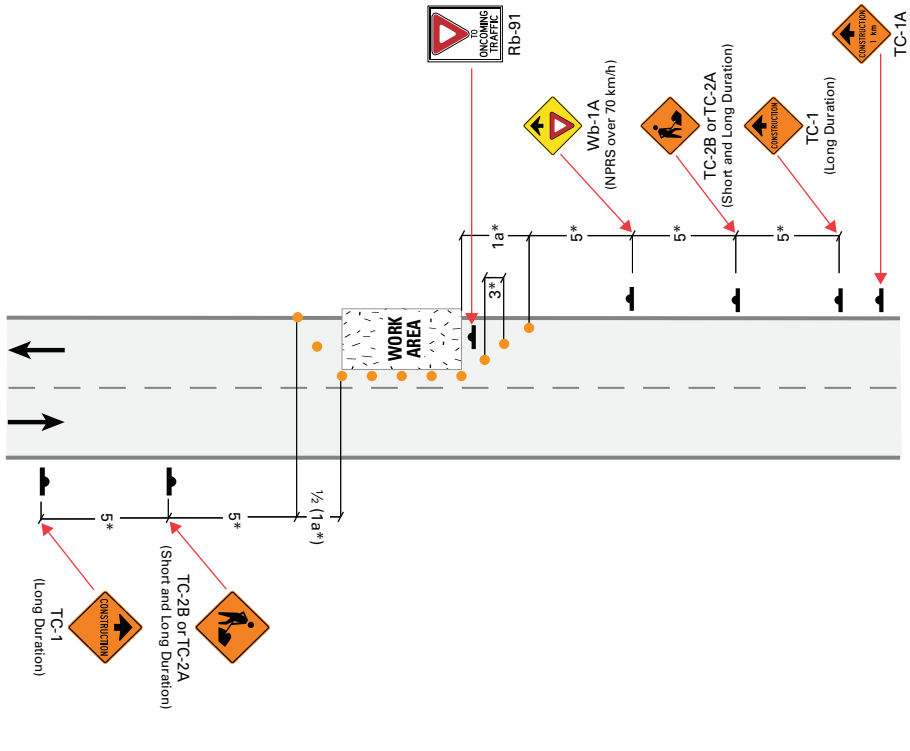
* See *Table A*.

Figure TL-19 **Lane Closed** (Yield to Oncoming Traffic) Low Volume Roads

☑ Two-Lane ☐ Multi-Lane

☐ Undivided Non-freeway ☐ Divided Non-freeway ☐ Freeway

☐ Mobile Operations ☑ Very Short Duration ☑ Short Duration ☑ Long Duration



NOTES

* For Very Short and Short Duration, see *Table A*. For Long Duration, see *Table B*.

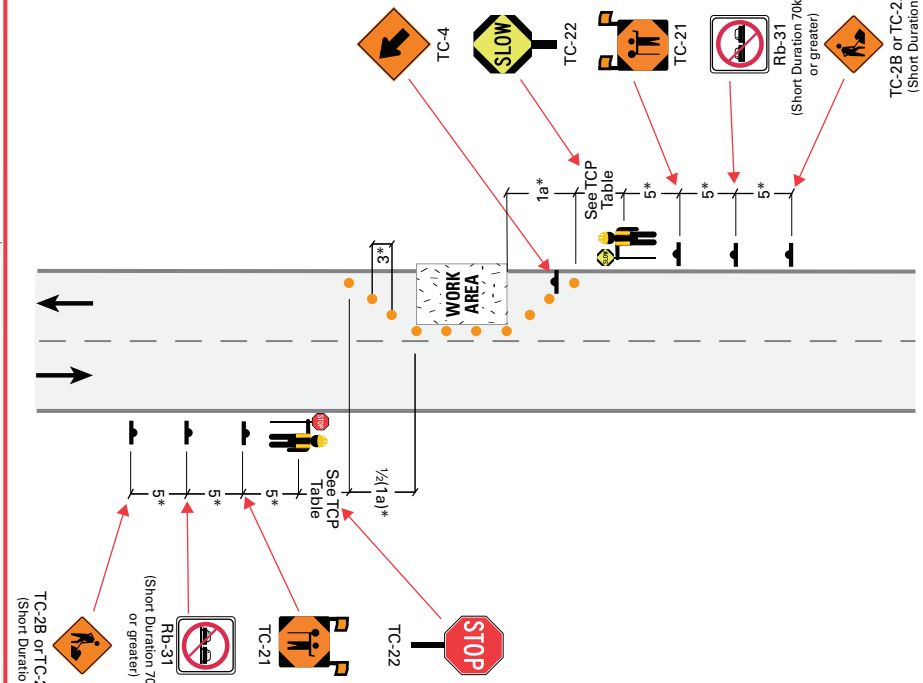
i) Use only on roads with low traffic volume (< 3000 vehicles per day).
ii) To be used for short length work areas (< 150m).
iii) May also be used on roads with no centreline.
iv) Use only where there is unobstructed visibility of oncoming traffic in both directions.
v) Work area may or may not contain a work vehicle. See General Notes to Typical Layouts #4. If work vehicle has a TC-12, it must be in bar mode.

Figure TL-20A **Lane Closed** (Traffic Control Persons)

☑ Two-Lane ☐ Multi-Lane

☐ Undivided Non-freeway ☐ Divided Non-freeway ☐ Freeway

☐ Mobile Operations ☑ Very Short Duration ☑ Short Duration ☐ Long Duration



NOTES

* See *Table A*.

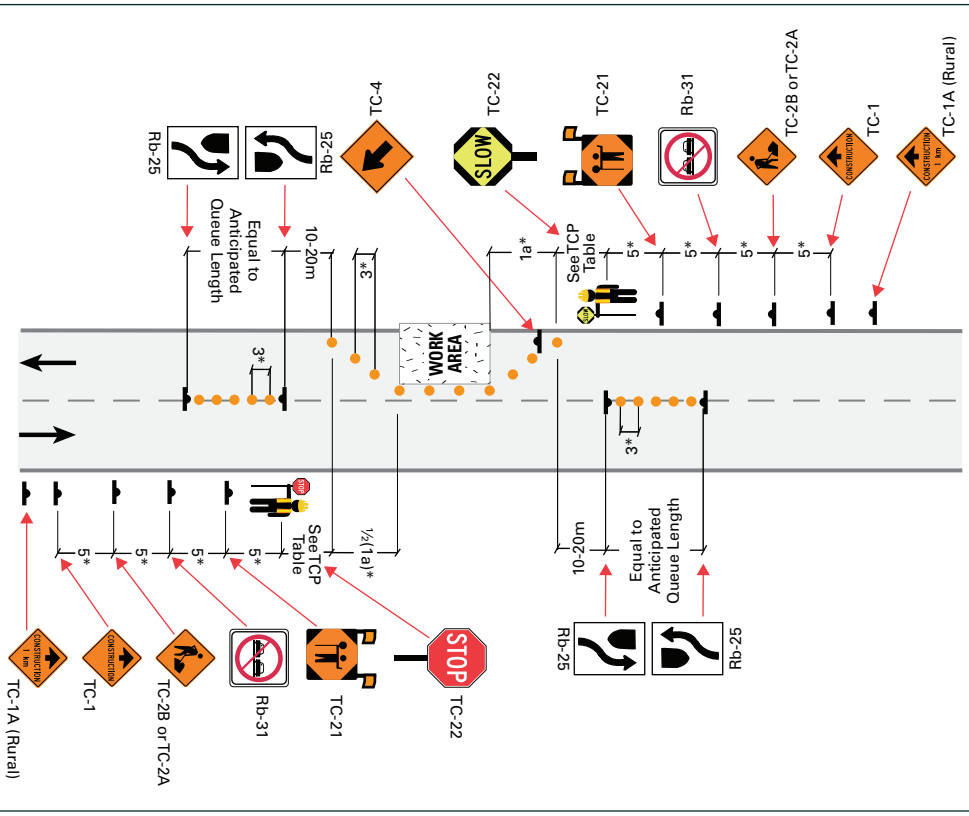
i) For low-volume roads (< 3000 vehicles per day) and visibility more than 150m beyond the end taper, the TCP and TC-21 may be eliminated for the direction that is not closed.
ii) For Very Short duration, work on low-volume roads with a normal posted speed less than 70km/h, the cones are not required.
iii) On high speed (70 km/h or greater) or where lane keeping/compliance is an issue, consider using TL-20B.

Figure TL-20B **Lane Closed (Traffic Control Persons)**

☑ Two-Lane ☐ Multi-Lane

☐ Undivided Non-freeway ☐ Divided Non-freeway ☐ Freeway

☐ Mobile Operations ☐ Very Short Duration ☐ Short Duration ☑ Long Duration



NOTES

* See *Table B*.

i) For low-volume roads (< 3000 vehicles per day) and visibility more than 150m beyond the end taper, the TCP and TC-21 may be eliminated for the direction that is not closed.

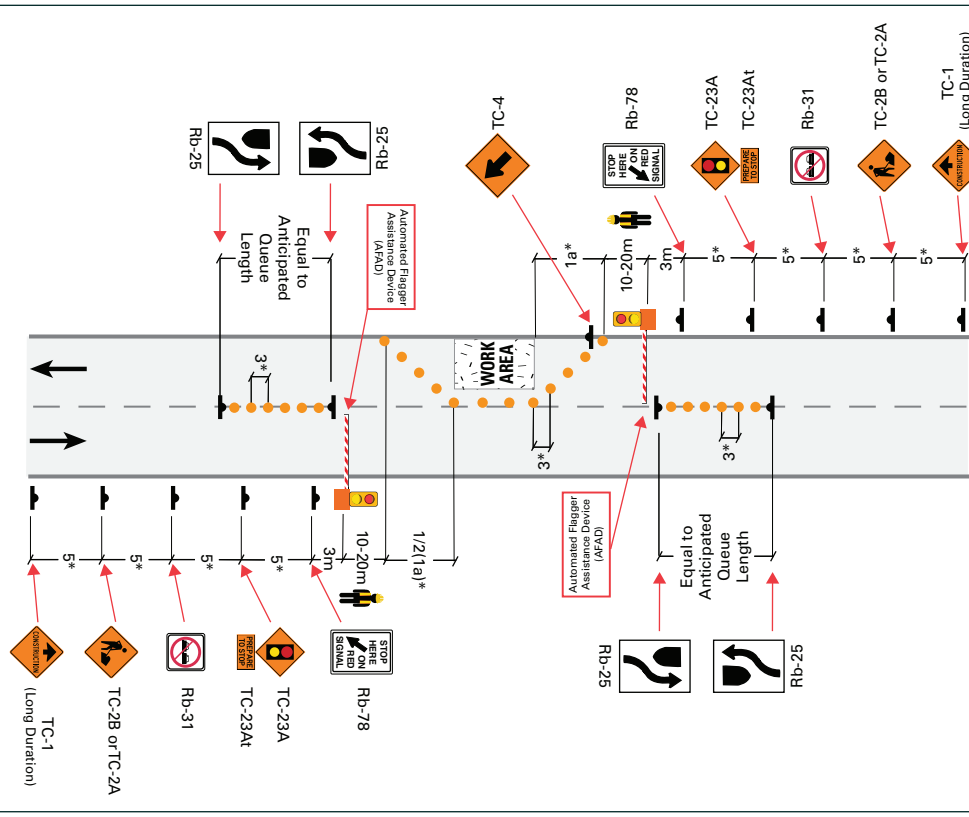
ii) Centreline cones between RB-25 signs and RB-25 signs are optional and may be used in one or both directions if lane keeping becomes an issue.

Figure TL-20C **Lane Closed (Automated Flagger Assistance Device)**

☑ Two-Lane ☐ Multi-Lane

☐ Undivided Non-freeway ☐ Divided Non-freeway ☐ Freeway

☐ Mobile Operations ☐ Very Short Duration ☑ Short Duration ☑ Long Duration



NOTES

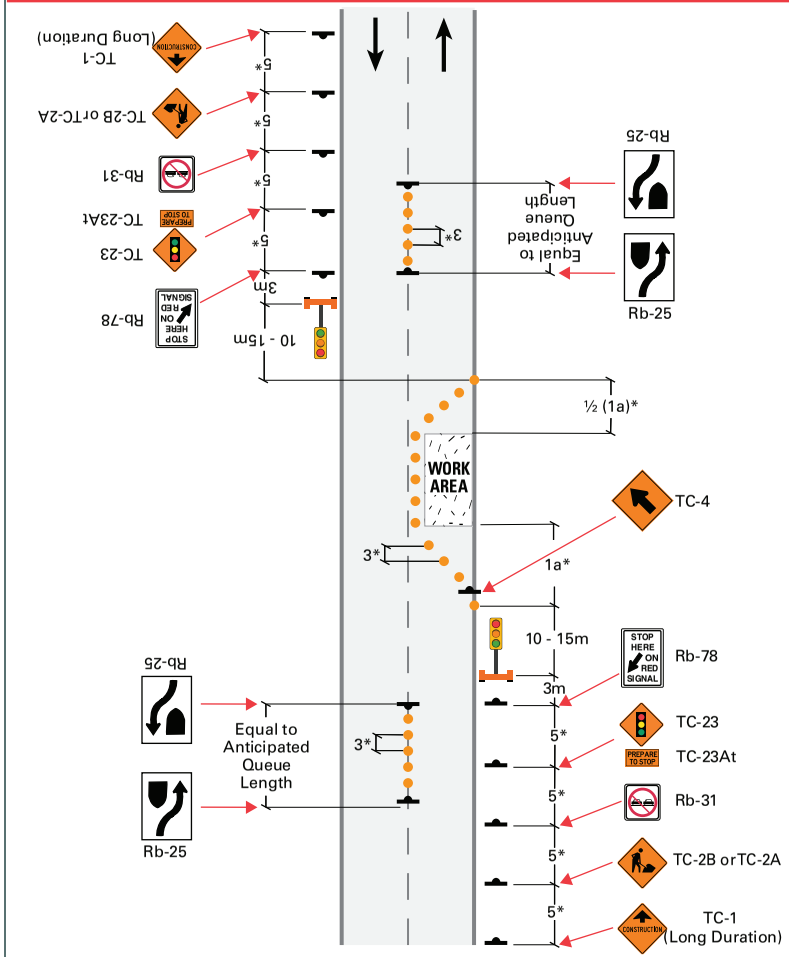
* For Short Duration, see *Table A*; For Long Duration, see *Table B*.

i) TCP is required to control Automated Flagger Assistance Device and to have a paddle (TC-22) available in the event of failure.

Figure TL-21 Lane Closed (Portable Lane Control Signals)

- ☑ **Two-Lane**
- ☐ Multi-Lane
  - ☐ Undivided Non-freeway
  - ☐ Divided Non-freeway
  - ☐ Freeway

- ☐ Mobile Operations
- ☐ Very Short Duration
- ☑ **Short Duration**
- ☐ Long Duration



* See *Table A*.

NOTES

i) To determine the appropriate timing of the lane control signals, see Section 5.3.2 (Office Edition).

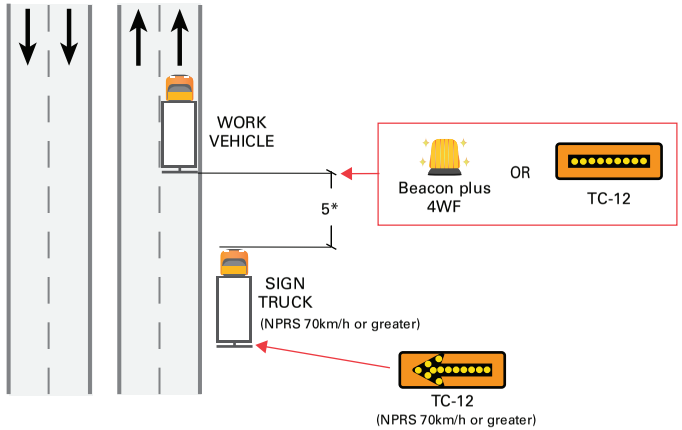
ii) Lane control signals are only to be used while the contractor is on site and on roads with NPRS of 60km/h or less. Portable signals that are to operate when no contractor is present or on roads with a NPRS of 70km/h or greater are Portable Temporary Traffic Control signals (PTTS) and require Road Authority approval of layout and signal timing. MTO applications require the completion of a PHM-125 (see OTM Book 12).

Figure TL-22 Lane Closed or Occupied

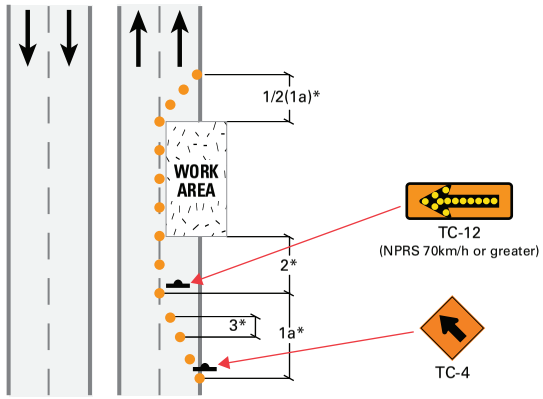
- ☐ Two-Lane
- ☑ **Multi-Lane**
  - ☑ **Undivided Non-freeway**
  - ☑ **Divided Non-freeway**
  - ☐ Freeway

- ☑ **Mobile Operations**
- ☑ **Very Short Duration**
- ☐ Short Duration
- ☐ Long Duration

With work vehicle - Mobile or VSD



No work vehicle - VSD



* See *Table A*.

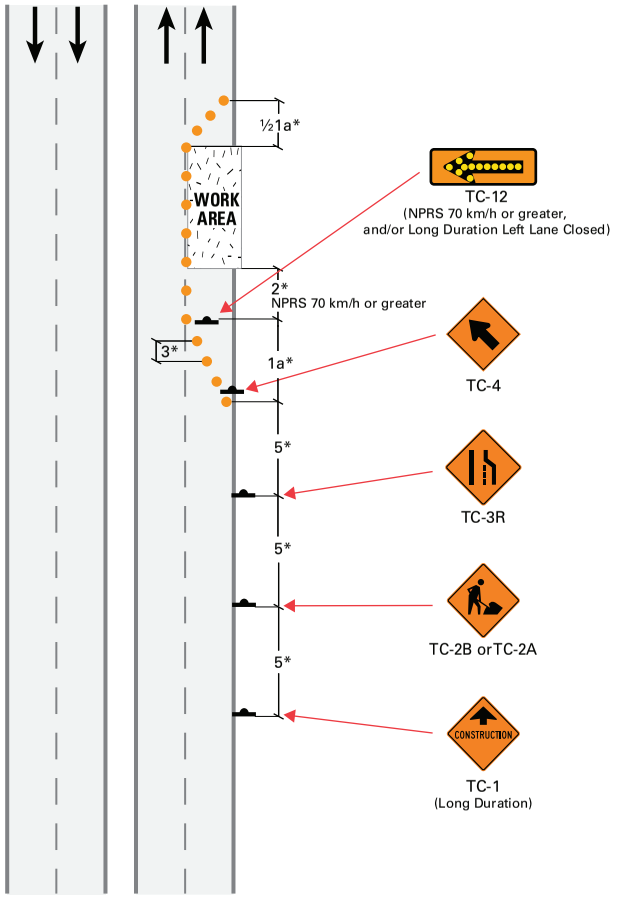
NOTES

i) Distance between sign truck and work vehicle may be adjusted to accommodate hills, curves, restricted visibility, or other site specific conditions.

ii) Left lane closed mirror image on divided roads only. Undivided or no shoulder see TL-25.

Figure TL-23 Lane Closed

- ☐ Two-Lane
- ☑ **Multi-Lane**
  - ☑ **Undivided Non-freeway**
  - ☑ **Divided Non-freeway**
  - ☐ Freeway
- ☐ Mobile Operations
- ☐ Very Short Duration
- ☑ **Short Duration**
- ☑ **Long Duration**



* For Short Duration, see *Table A*. For Long Duration, see *Table B*.

NOTES

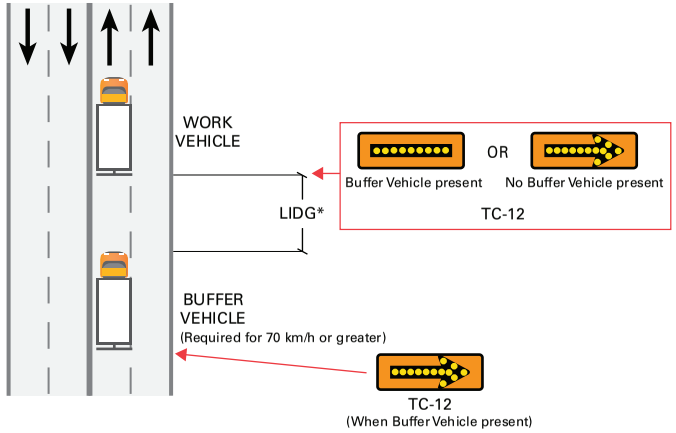
i) Left Lane Closed: mirror image for divided roads only. For Left lane closed, TC-3R, TC2A or A, TC-1 are to be repeated on opposite shoulder where NPRS is 70km/h or greater.

ii) For Left Lane Closed Undivided or with no shoulder, see TL-26.

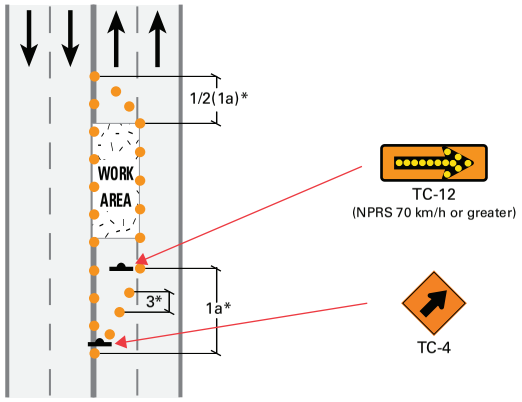
Figure TL-25 Left Lane Closed or Occupied - Undivided or No Shoulder

- ☐ Two-Lane
- ☑ **Multi-Lane**
  - ☑ **Undivided Non-freeway**
  - ☑ **Divided Non-freeway**
  - ☐ Freeway
- ☑ **Mobile Operations**
- ☑ **Very Short Duration**
- ☐ Short Duration
- ☐ Long Duration

With work vehicle - Mobile or VSD



No work vehicle - VSD



* See *Table A*. For LIDG*, see *Table D*.

NOTES

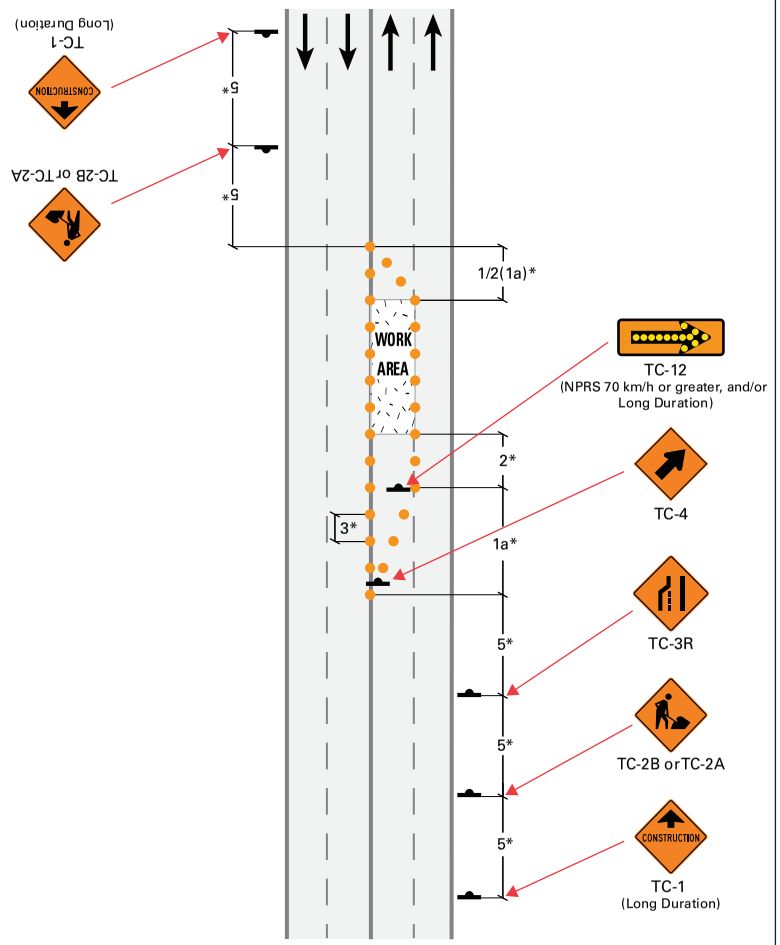
i) Distance between sign truck and work vehicle may be adjusted to accommodate hills, curves, restricted visibility, or other site specific conditions.

ii) Centreline delineation is not required on divided roads.

Figure TL-26 Left Lane Closed - Undivided or No Shoulder

- ☐ Two-Lane
- ☑ **Multi-Lane**
  - ☑ **Undivided Non-freeway**
  - ☐ **Divided Non-freeway**
  - ☐ Freeway

- ☐ Mobile Operations
- ☐ Very Short Duration
- ☑ **Short Duration**
- ☑ **Long Duration**



* For Short Duration, see *Table A*. For Long Duration, see *Table B*.

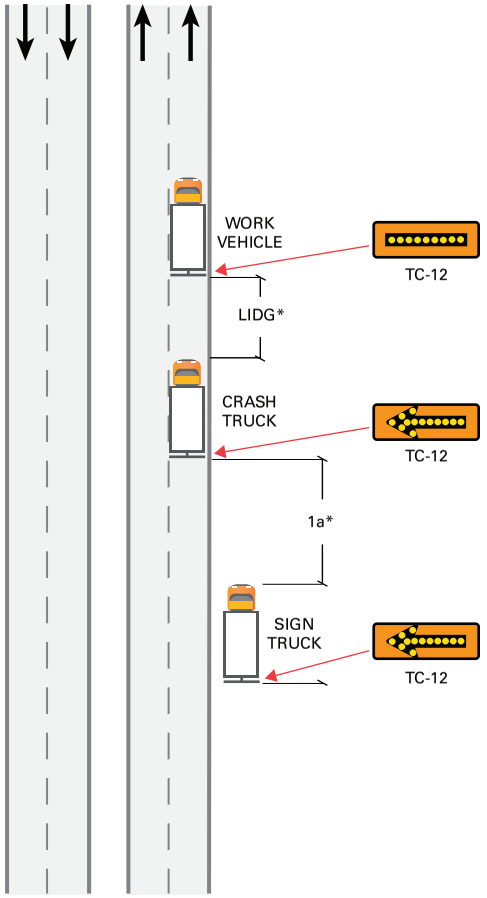
NOTES

i) Centreline delineation and advance warning signs on opposite direction (TC-1 & TC-2) are not required on divided roads.

Figure TL-27 Right or Left Lane Closed or Occupied

- ☐ Two-Lane
- ☑ **Multi-Lane**
  - ☐ Undivided Non-freeway
  - ☐ Divided Non-freeway
  - ☑ **Freeway**

- ☑ **Mobile Operations**
- ☐ Very Short Duration
- ☐ Short Duration
- ☐ Long Duration



* For Freeways, see *Table C*. For LIDG*, see *Table D*.

NOTES

i) Distance between Sign Truck and Crash Truck may be adjusted to accommodate hills, curves, restricted visibility, or other site specific conditions.

ii) Left Lane Closed: mirror image of Right Lane Closed, where shoulder exists. Where no shoulder Sign Truck maybe eliminated and the TC-12 on the Work Vehicle should be in arrow mode. Optionally a Crash Truck with TC-12 in arrow mode can replace the Sign Truck and follow in the occupied lane.