

City of Edmonds Development Information



TRAFFIC CONTROL REQUIREMENTS SAFETY PRINCIPLES, PLAN DESIGN, AND EQUIPMENT STANDARDS

Traffic Control Requirements are regulated in conjunction with the Manual on Uniform Traffic Control Devices (MUTCD), Washington State Department of Transportation (WSDOT) and the American Traffic Safety Service Association (ATSSA).

This handout outlines basic safety principles and standards to be observed by all who perform work in the public right of way. All work performed in the public right-of-way requires an approved Traffic Control Plan (TCP). A checklist of TCP requirements is included on page 5 of this handout.

Guidelines, standard traffic control devices, and examples of traffic control plans are included in this handout to assist applicants in designing traffic control plans that provide safe and effective work areas. Well designed traffic control plans warn, control, protect and expedite all transportation modes.

The City of Edmonds traffic control plan (TCP) requirements are in conjunction with the *Manual of Uniform Traffic Control Devices* (MUTCD), published by the United States Department of Transportation, and as established by *Washington State Department of Transportation* (WSDOT) and the *City of Edmonds Traffic Codes*. The *American Traffic Safety Service Association* (ATSSA) guidelines are utilized when evaluating the location and suitability of construction signs and temporary channelization devices.

All TCPs for work performed within Limited Access areas of a State Route (such as Highway 99 or SR-104) will also require contacting WSDOT as they will need to provide their own review.

Traffic Control Plans shall be submitted in conjunction with a Right of Way permit application. See **Handout #E63** for information regarding the submittal requirements for a Right of Way permit.

For additional guidance on completing a traffic control plan and the appropriate measures to follow (correct signage, spacing of signs, etc.), please reference the following websites:

- WSDOT: http://www.wsdot.wa.gov/publications/fulltext/Standards/psl/TC-1-18/TC1_18Combined.pdf
- MUTCD: http://mutcd.fhwa.dot.gov/pdfs/2009/pdf_index.htm
(Part 6: *Temporary Traffic Control*)

General information regarding Traffic Control

1. General Requirements

- a) Two-way traffic must be maintained, whenever safe conditions are possible. The traffic control should be easily understood by all users, with no confusion.
- b) Flaggers are required when other reasonable traffic control methods won't adequately control traffic in the work zone or the work zone creates a conflict between two opposing movements (except on low-volume roads with less than 30 houses where *Figure 6H-18* of MUTCD (attached) should be followed. Flaggers are responsible for their own safety, the safety of the workers, and all modes of transportation going through the construction zone (including pedestrians and bicycles).
Flaggers must:
 - be certified by the State of Washington Department of Labor and Industries and;
 - at all times, wear protective clothing that complies with MUTCD and ATSSA, including high visibility vest to guarantee roadway safety, and;
 - use MUTCD compliant STOP / SLOW paddles when controlling traffic.
- c) The appropriate signs shall be installed as indicated in *Figure 6F-4* of MUTCD (attached). For multi-day projects, signs should be covered, rotated, or removed upon completion of daily work and re-installed the next day prior to start of construction. Signs can only be covered if they don't restrict the access to any facility (such as minimum 48" clearance for sidewalks).
- d) The correct sequence of signs shall be installed, alerting drivers of up-coming roadway conditions. Sign spacing shall comply with *Table 6H-3* of MUTCD (attached).
- e) Refer to *Table 6H-4* of MUTCD (attached) to determine appropriate Taper Length. The maximum distance (in feet) between cones should not exceed the speed limit (in mph).
- f) When construction impacts the operation of a signalized intersection and causes conflicts / safety concerns between opposing vehicular movements, a police officer is required to control the intersection. Additionally, the traffic signal must operate on 4-way flash. The contractor is required to contact the appropriate agency at least (3) weeks prior to the flashing signal operation by contacting the appropriate agency:
 - *City traffic signal:*
Edmonds Public Works: (425)771-0235 and
Edmonds Police Department: (425)771-0200
 - *WSDOT traffic signal:*
WSDOT NW Region Electrician: (425)339-1777

g) If the traffic control causes a significant increase in queuing at a signalized intersection, Edmonds Public Works should be contacted as signal timing modifications are necessary such as:

- Additional green time for a specific phase(s) to reduce delay for specific movements
- pedestrian phase should be placed on recall => during each phase holding a pedestrian movement, the WALK and DON'T WALK will be activated for each cycle, even without the activation of the pedestrian push buttons

2. Street Closure / Detour requirements

- a) Streets closed shall be posted with “Street Closed” signs and barricades. “Detour Route” signage shall be provided prior to the construction zone (starting at the nearest intersection) and leading the vehicles around the construction zone. For street closure, it must be shown that there is no other alternative (*City of Edmonds must review and approve closure*).
- b) *Local access* signage shall be added when safe passage through construction zone is still possible.
- c) Refer to *Figure 6H-20* of the MUTCD (attached) for appropriate signage.
- d) “Detour ahead” sign should be at least 500’ in advance of the intersection where the detour route begins.
- e) Directional Detour signs should be provided for all turns throughout the detour route (for all directions).
- f) Streets should be reopened immediately upon completion of the work.
- g) Fire, Police, Public Works Department, Edmonds School District (if closure along bus school route), Community Transit (if closure along CT bus route), and any other affected jurisdictions must be notified at least 2 week prior to closure.
- h) Affected residents shall be notified by mailers or door hangers.

3. Sidewalk Closure requirements

If construction area causes a safety hazard for pedestrians, the sidewalk should remain closed and pedestrians diverted to the other side of street (if possible), with proper signage (see *Figure 6H-28* attached).

4. Bike Lane Closure requirements

If construction area causes a safety hazard for cyclists in the bike lanes, the bike lanes should be closed, with proper signage.

5. Notification of affected agencies, property owners and the public.

If construction has a direct impact or causes significant delays to any of the following agencies, notification is necessary a minimum of 2 weeks prior to start of construction:

- Edmonds School District: to re-route school buses if needed
- Community Transit: relocate bus stop if extensive delays on service due to traffic control
- Property owners: if traffic control will impede access to their property or cause a temporary suspension of any utility service
- Washington State Ferry if construction is along a ferry route (SR-524 and SR-104)
- Other jurisdictions that may be impacted by the project
- If construction affects parking, proper signage shall be installed a minimum of 48 hours prior to the start of work.

6. Public Information: via press release and/or the City website only for long term construction impacting arterial streets and/or adjacent jurisdictions.

7. Traffic control for multiple days

Signs should be covered, rotated, or removed upon completion of daily work and re-installed the next day, prior to the start of construction. The sign can be covered **only** if this action allows the sidewalk to remain accessible (maintaining 48" clearance). If this isn't possible, the signs should then be removed or rotated.

Traffic Control Plan Checklist

The following checklist will assist with the completion of a traffic control plan:

- Location of construction (specify street names, adjacent addressees)
- Orientation w/ North arrow
- Lane configuration (4-approach intersection, T-intersection, # lanes / approach)
- Construction zone limits
- Date and hours of operation
 - avoid peak hours, especially when construction impacts a busy intersection (along State Route) or within close proximity of a school
 - hours must comply with City of Edmonds Construction Hours:
(M – F: 7am – 6pm); (Sat: 10am – 6pm); (No work on Sunday or Holiday)
- Signage consistent with *Figure 6F-4* of MUTCD
- Sign spacing consistent with *Table 6H-3* of MUTCD
- Correct sign sequence
- “Detour Route” signage (if necessary)
- Non-motorized facilities (sidewalks, bike lanes)
- Pedestrian detour / sidewalk closure signs placed at all required locations (see *Figure 6H-28* of MUTCD)
- Appropriate signs for sidewalk closure (minimum 48” sidewalk width maintained if sidewalk is to remain open / as required)
- Appropriate signs for bike lane closure (as required)
- Sight distance issues addressed as the construction zone could affect the motorist’s sight distance.
(flaggers to be utilized as required and noted as such on plans).
- Based on project magnitude, verify that construction vehicles and equipment have safe means to enter and exit the work zone. If this maneuver is unsafe, add comment on plan that flaggers are required.
- Parking restrictions: note on plan that signage (if necessary): must be installed at least 48 hours prior to start of construction if parking stalls will be blocked/used
- “End of Road Work” sign placed at all required locations

Table 6H-2. Meaning of Symbols on Typical Application Diagrams






















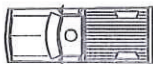

	Arrow board		Shadow vehicle
	Arrow board support or trailer (shown facing down)		Sign (shown facing left)
	Changeable message sign or support trailer		Surveyor
	Channelizing device		Temporary barrier
	Crash cushion		Temporary barrier with warning light
	Direction of temporary traffic detour		Traffic or pedestrian signal
	Direction of traffic		Truck-mounted attenuator
	Flagger		Type 3 barricade
	High-level warning device (Flag tree)		Warning light
	Longitudinal channelizing device		Work space
	Luminaire		Work vehicle
	Pavement markings that should be removed for a long-term project		

Table 6H-3. Meaning of Letter Codes on Typical Application Diagrams

Road Type	Speed	A	B	C
Urban (Low Speed)	25/30 mph	100 feet	100 feet	100 feet
Urban (High Speed)	35/40 mph	350 feet	350 feet	350 feet
Rural/State Roads	45 mph	500 feet	500 feet	500 feet

- (1) All spacing may be adjusted to accommodate at-grade intersections and driveways
- (2) The spacing may be reduced in urban areas to fit roadway conditions

Table 6H-4. Formulas for Determining Taper Length

Speed (S)	Taper Length (L) in feet
40 mph or less	$L = \frac{WS^2}{60}$
45 mph or more	$L = WS$

Where: L = taper length in feet
 W = width of offset in feet
 S = posted speed limit, or off-peak 85th-percentile speed prior to work starting, or the anticipated operating speed in mph

Figure 6F-4. Warning Signs and Plaques in Temporary Traffic Control Zones
(Sheet 1 of 3)



W1-1



W1-2



W1-3



W1-4



W1-4b



W1-4c



W1-6



W1-8



W3-1



W3-2



W3-3



W3-4



W3-5



W3-5a



W4-1



W4-2



W4-3



W4-5



W4-5P



W4-6



W5-1



W5-2



W5-3



W5-4



W6-1



W6-2



W6-3



W6-4



W7-1



W7-3aP



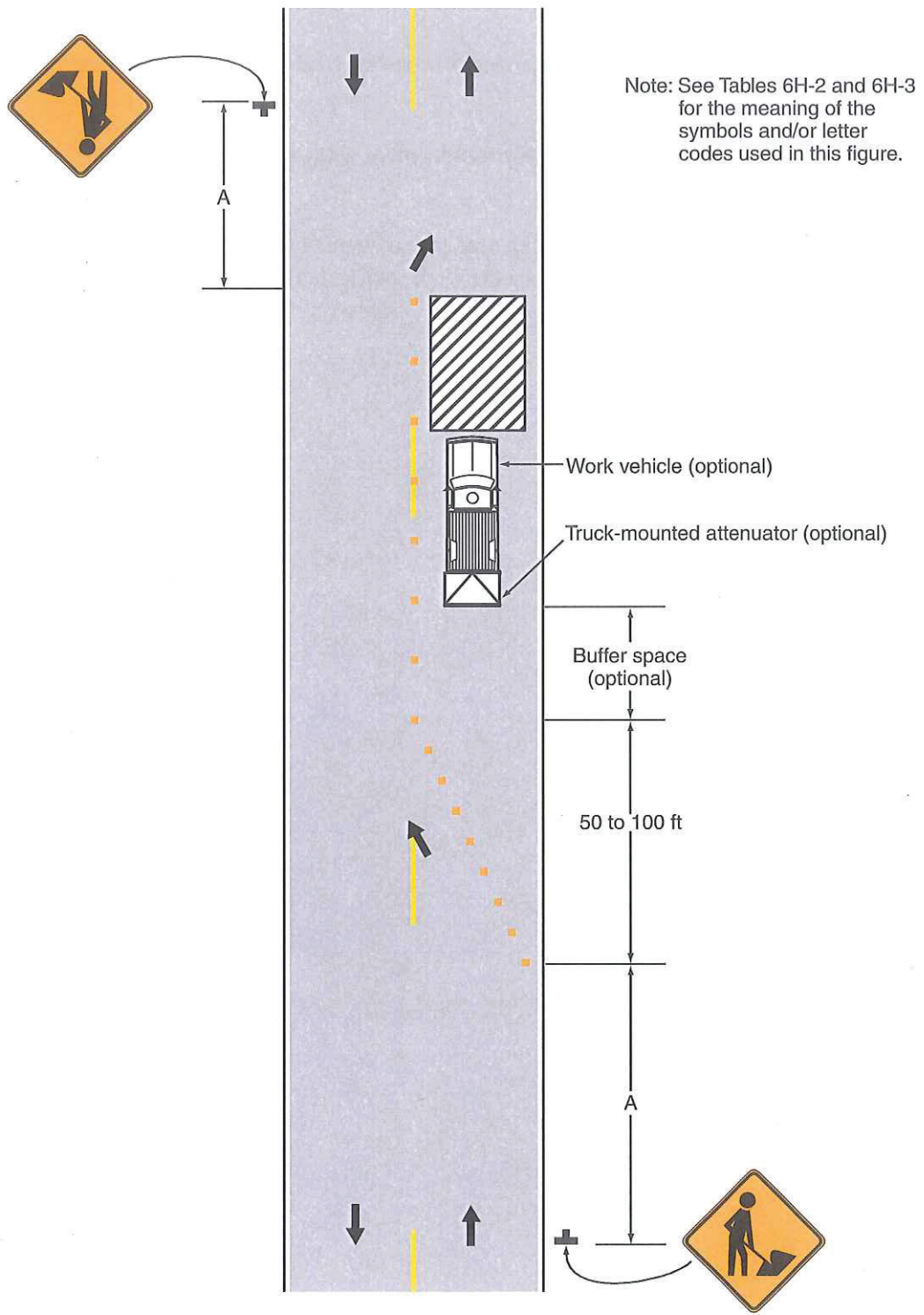
W8-1

Figure 6F-4. Warning Signs and Plaques in Temporary Traffic Control Zones (Sheet 3 of 3)



* An optional STREET WORK word message sign is shown in the "Standard Highway Signs and Markings" book.
 ** An optional STREET CLOSED word message sign is shown in the "Standard Highway Signs and Markings" book.
 *** An optional FLAGGER (W20-7a) word message sign is shown in the "Standard Highway Signs and Markings" book.
 **** An optional FRESH TAR word message sign is shown in the "Standard Highway Signs and Markings" book.

Figure 6H-18. Lane Closure on a Minor Street (TA-18)



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Figure 6C-2. Types of Tapers and Buffer Spaces

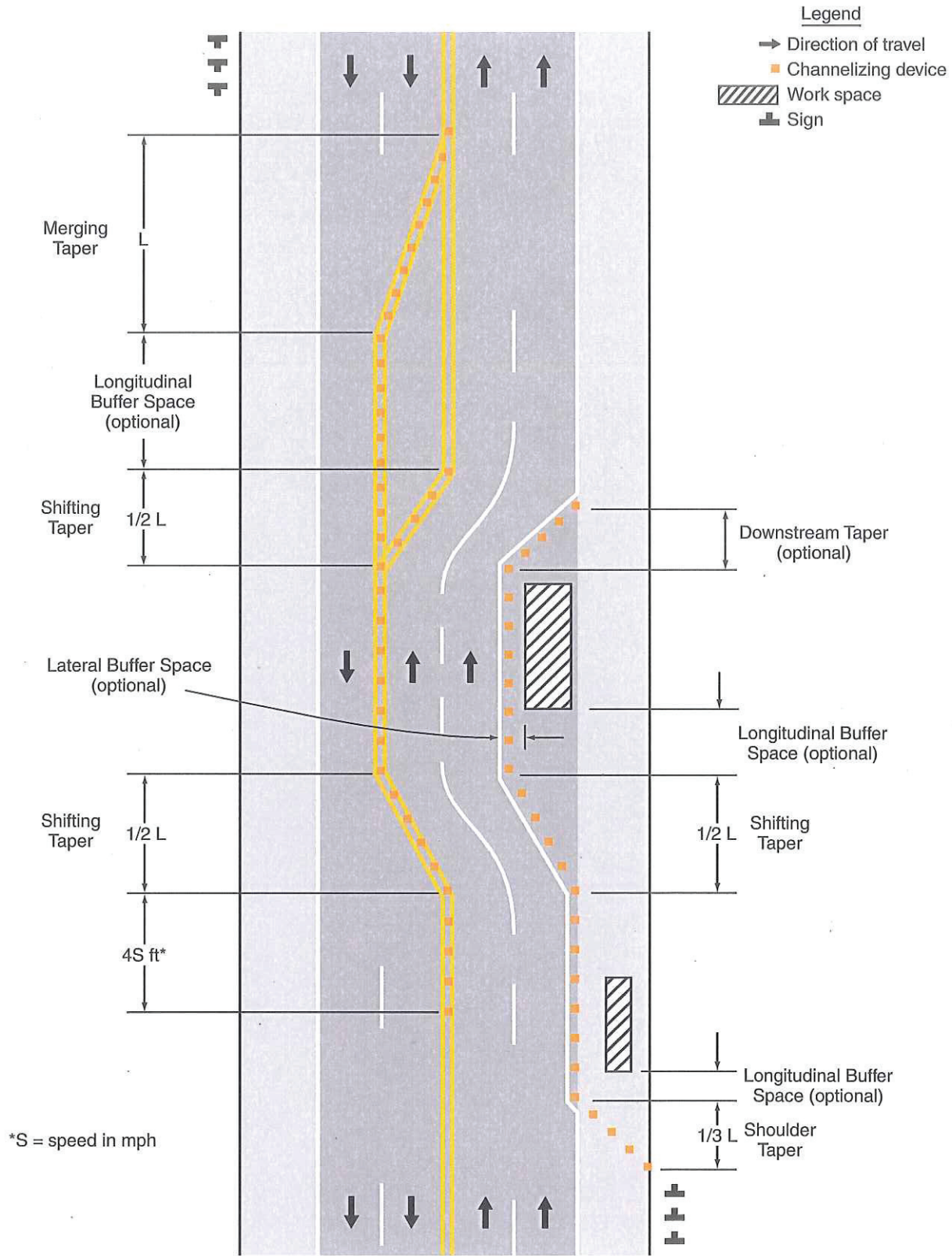
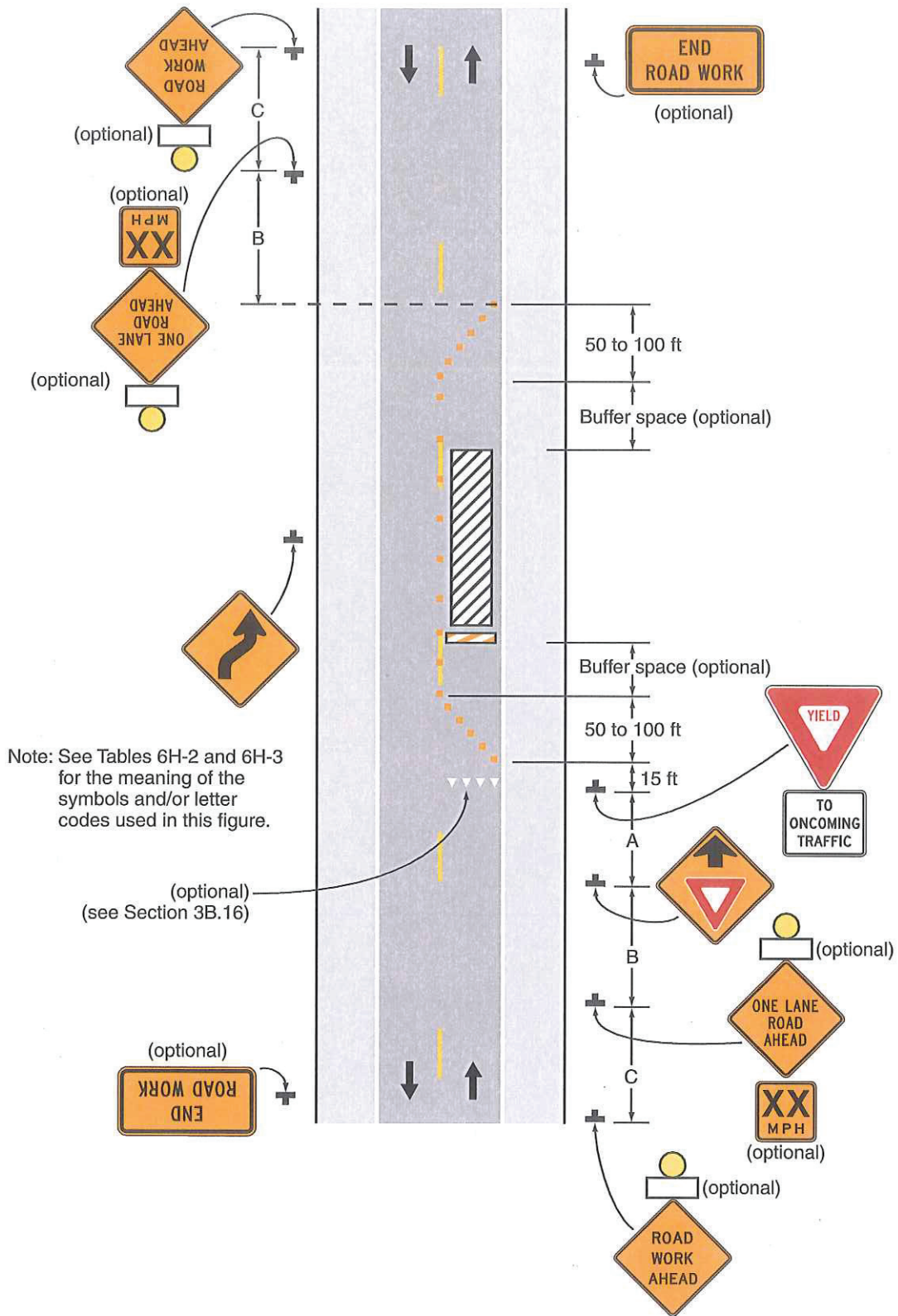


Figure 6H-11. Lane Closure on a Two-Lane Road with Low Traffic Volumes (TA-11)



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

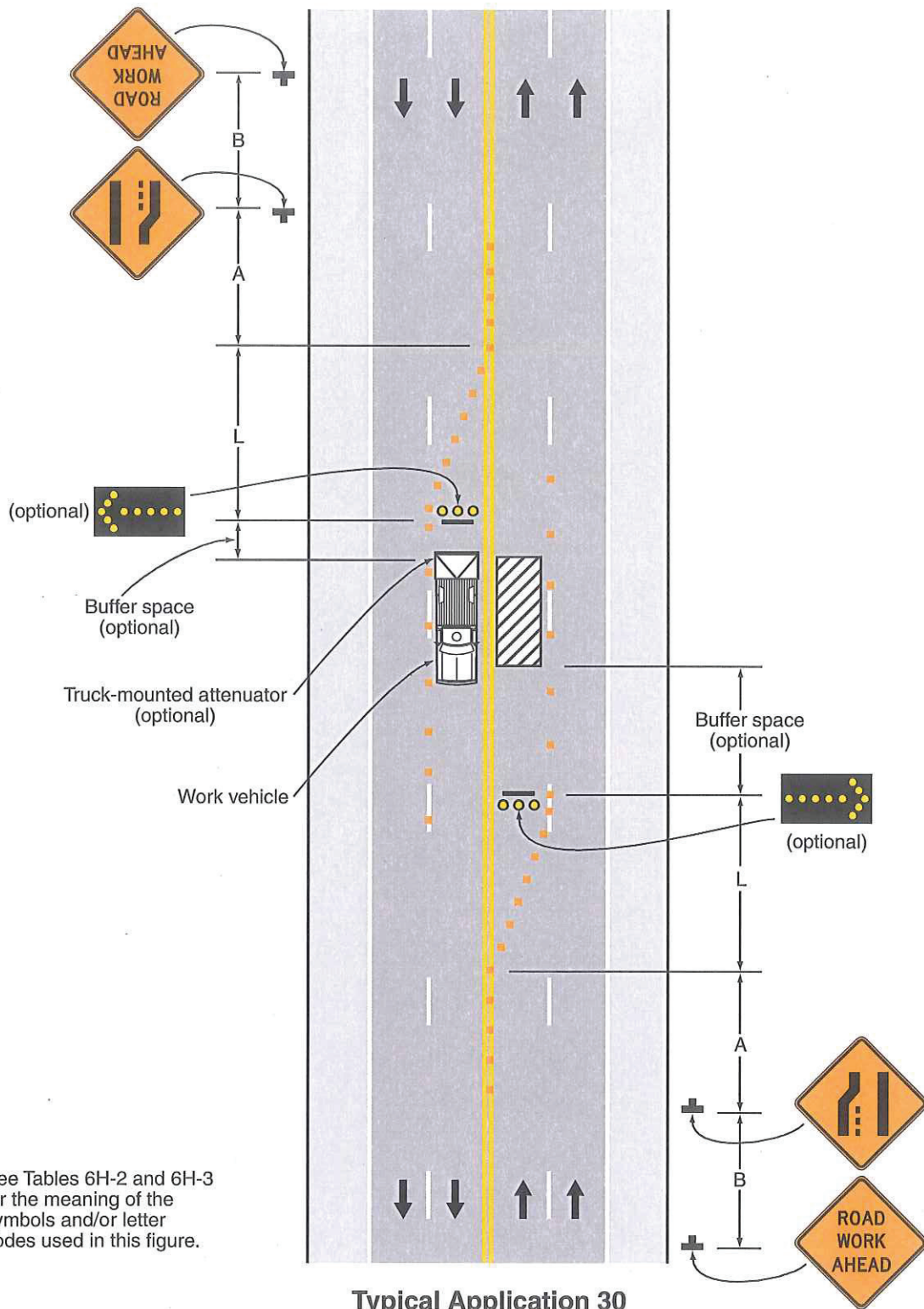
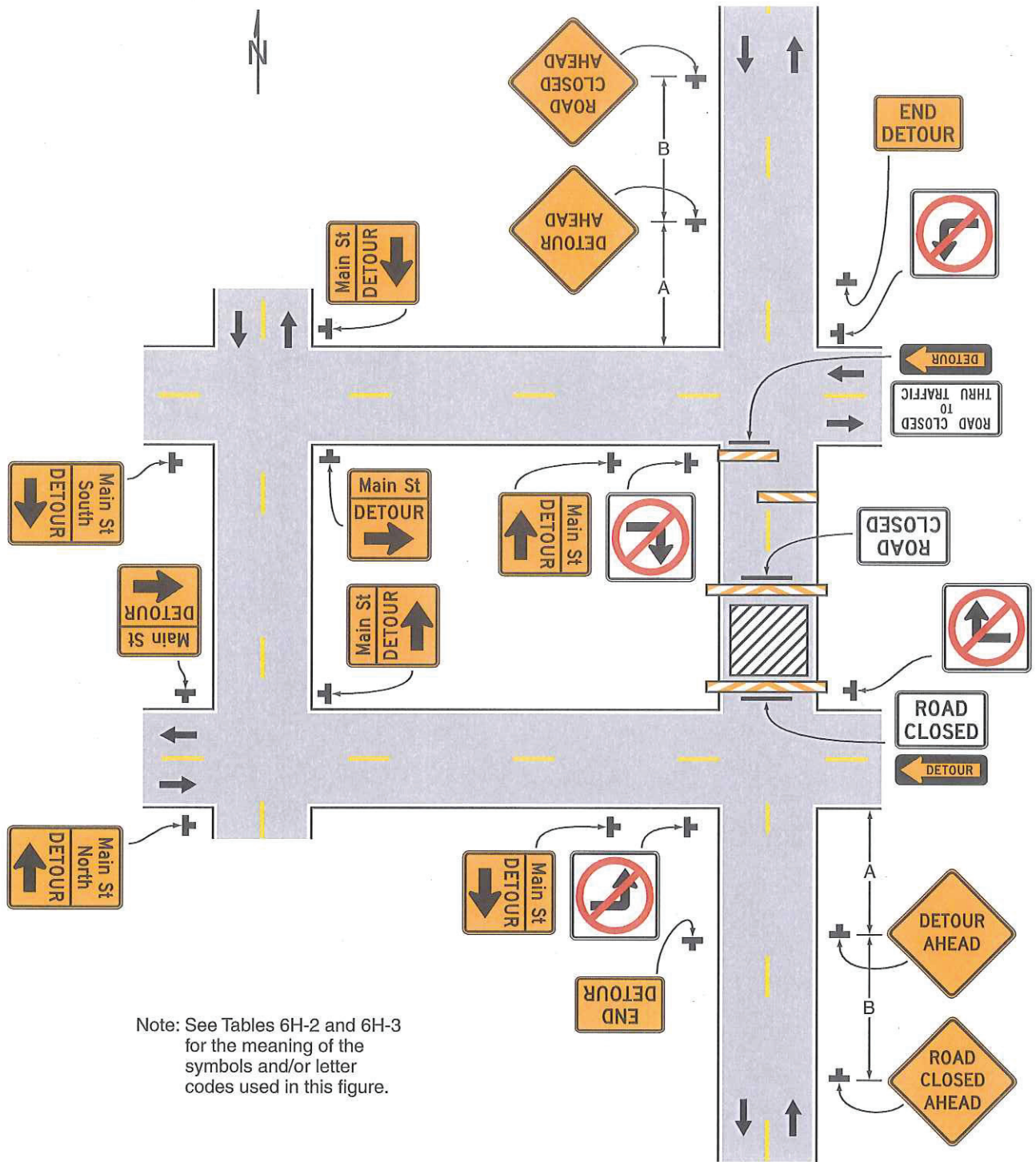


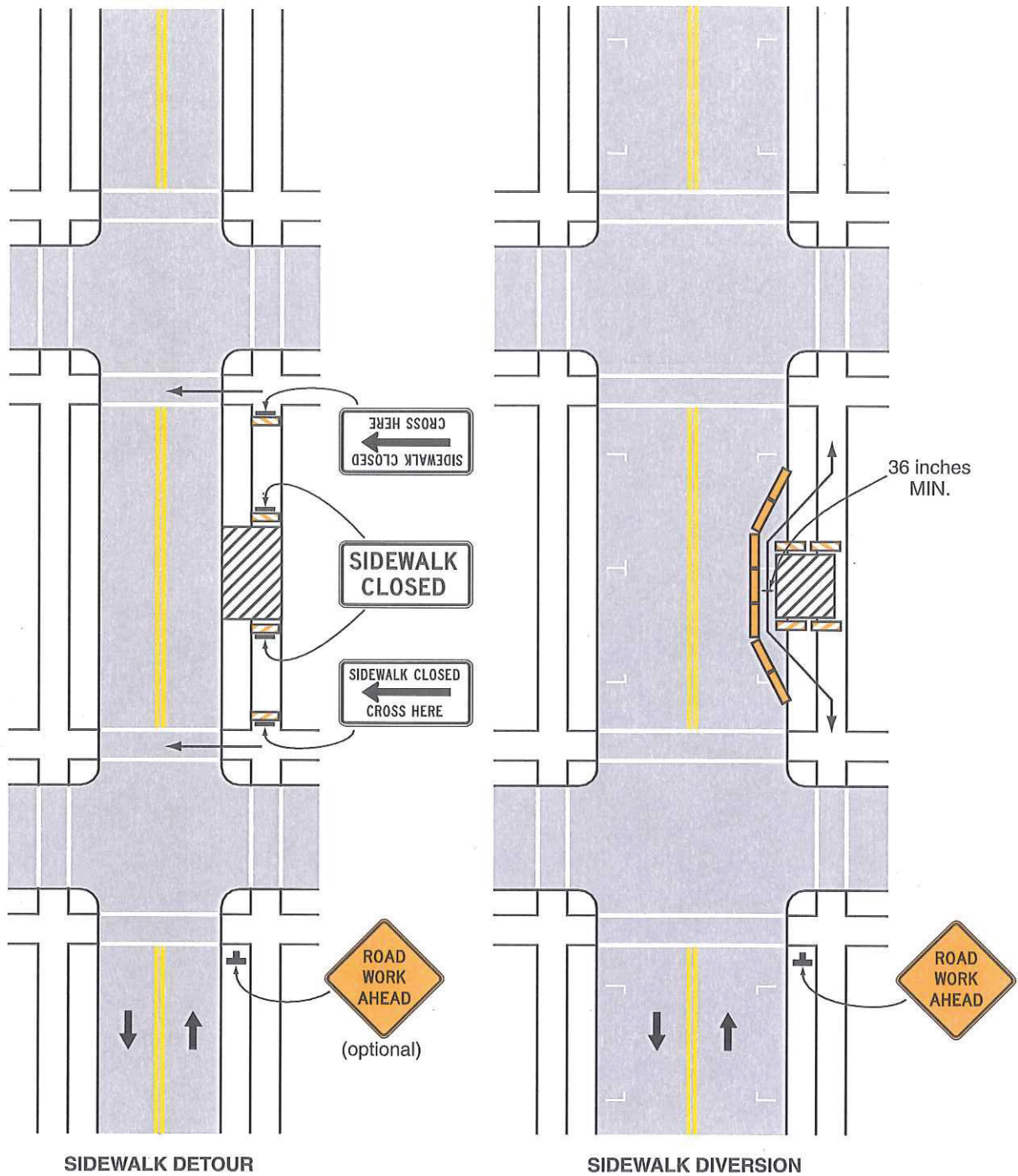
Figure 6H-20. Detour for a Closed Street (TA-20)



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

Typical Application 20

Figure 6H-28. Sidewalk Detour or Diversion (TA-28)



Typical Application 28

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