

**Highway Maintenance Manual** 

**Chapter 9** 

Right-of-Way Use & Permits

Section 15 Utility Accommodation
Subject 60 Work Zone Traffic Control

June 2023

**Bureau of Highway Maintenance** 

## 1.0 General Policy

Perform all utility work and other related operations on or adjacent to roadways or within highway right-of-way (ROW) in accordance with this policy. Plan and implement utility work with full regard for safety and to minimize interference with traffic, which includes pedestrians and bicycles, and to minimize the closure of roads, ramps, lanes, roundabouts, intersections, and driveways. On heavily traveled highways, utility work interfering with traffic may not be allowed during peak travel hours. Use WisDOT's Lane Closure System (LCS) as required (see Section 4.0).

Perform utility work in compliance with the Wisconsin Work Zone Field Manual (<u>WZFM</u>) for durations of three days or less. For work durations longer than three days in a single location, road/ramp closures requiring a detour, and nighttime or complex operations, develop a traffic control plan (TCP). Submit the applicable WZFM layouts, WisDOT <u>Standard Detail Drawings (Series 15)</u>, or specialized diagrams with a utility permit application. A TCP worksheet for use before, during, and after the project is available in Attachment 1.

Deviate from the above traffic control policy only in accordance with the latest revision of Part VI of the Wisconsin Manual of Uniform Traffic Control Devices for Streets and Highways (WisMUTCD). Submit these deviations as part of the TCP with the utility permit application. Site (field) deviations require prior WisDOT approval via a permit amendment – except for making immediate corrections for emergency situations, or for inadequate measures that are creating safety and operational issues.

### 2.0 General Requirements

Follow the general requirements below for utility work zones. Any deviation requires WisDOT's prior approval.

- 1) **Before starting any permitted work**, install required warning signs, devices, etc. and ensure all are fully functional and maintained to protect the public, workers, and work site until all work is complete.
- 2) Augment the work zone with additional signs, devices, and flaggers as needed to always protect people and property from injury or damage in all conditions, including changed or changing conditions.
- 3) Remove, cover, or lay flat warning signs when workers or workers' vehicles are not at the job site or when the signs' messages are not relevant.
- 4) Do not keep vehicles, equipment, or materials related to this permit within the highway ROW limits except those items that are actively being used in the work operation.
- 5) Use a reboundable sheeting material for all barricades, barrels, cones, etc., and retroreflective sheeting for all signs, that complies with the <u>work zone sheeting</u> guidelines in WisDOT's approved product list.
- 6) Provide signs, arrow boards, barricades, warning lights, drums, and 42-inch cones that comply with Section 643 of WisDOT's Standard Specifications for Highway and Structure Construction, current edition and WisDOT Standard Detail Drawing 15c11.
- 7) Secure the work site and associated traffic control zone against any hazard to the public, both when the site is attended and unattended during off-hours, holidays, and nighttime hours. This includes vehicles, equipment, materials, and drop-off protection under *Standard Specifications* Section 104.6.1.2.3.
- 8) At all times while working within the highway ROW, (a) wear high-visibility safety attire meeting performance Class 2 or 3 requirements of ANSI/ISEA 107-2015 type R, and (b) activate flashing (or strobe) amber or white lights on all vehicles and equipment. Note: Under Wis. Stat. s. 347.26(7), flashing green warning lamps may be used only by WisDOT or county or municipal highway department vehicles when working on a highway.

### 3.0 DT1553 Work Zone Description

For question 13 on WisDOT's DT1553 utility permit application form, check all items applicable to the utility work. Details for some items are listed below. Items not listed are considered self-explanatory.

- (a) **Not applicable –** Use when traffic control will not be needed with utility work. This may occur with a directional bore under the highway or when the work area is near the ROW line and/or access is from private property (especially on roads with wide ROW).
- (b) Full road closure: detour Use when a single closure lasts more than 15 minutes or there are multiple daily closures lasting 15 minutes or less. Submit a detour plan with the permit application. The plan will be reviewed by WisDOT's traffic section and may be altered as needed.
- 13. Work Zone Description (Check all that apply) Not applicable Full road closure: detour Full road closure: temporary Lane closure without flagging Lane closure with flagging Lane encroachment (2' or less) Shoulder/parking lane closure Turn lane closure ☐ Sidewalk or trail closure Terrace (Area from curb to sidewalk) Off shoulder/parking lane Near right-of-way line or fence ☐ Freeway/expressway Intersection/roundabout Railroad crossing Mobile operation
- (c) **Full road closure: temporary –** Typically, this covers line stringing, moving equipment and/or materials across the highway, or directional bores under the highway that require manual tracking. A flagger or flaggers may be needed. Also, law enforcement may be needed to assist with the closure especially if it is associated with a rolling stop on a freeway. For the latter situation, provide documentation of coordination with the law enforcement agency including proposed times for the rolling stops.
- (d) Lane closure without flagging Use when a thru lane is being closed on a multi-lane highway. Typical signing and devices are shown at the right.

devices are shown at the right.

(e) Lane closure with flagging – Use when a single lane is being closed on a two-lane, two-way highway or if the entire road would be closed as described in (c). Typical signing is shown at the right.

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- (f) Lane encroachment (2' or less) Some lane encroachments may be allowed without closing the adjacent lane. However, to provide a lateral buffer space for safety, it may be necessary to close the adjacent lane instead.
- (g) **Turn lane closure –** Do not check this box for closing thru traffic lanes. Use when needed to close a left-turn, right-turn, 2-way-left-turn, or bypass lane. When closing thru a traffic lane and a turn lane, check both boxes.
- (h) Sidewalk or trail closure Submit a pedestrian/trail detour plan, pedestrian/trail traffic control plan, or provide a detailed information on the plans or specifications for how pedestrians and people using mobile-assisted devices will be accommodated. Submit proof of coordination with the maintaining authority of the sidewalk/trail with a permit application.
- (i) Intersection/roundabout There are several diagrams that cover various closures at intersections and roundabouts but do not consider them a "one-size-fits-all" for utility work. Sometimes, lane or shoulder closure staging will be needed. With roundabouts, certain leg closures may require a detour plan. If the utility work will be accomplished in various stages, submit the TCP labeled with the associated stages.

If any bus stops will be closed, note the closures on the permit drawings along with the contact's name and information for coordinating the closure.

# 3.1 Short Duration Work - Specific Situations Only

For short duration work that occupies a location up to one hour or less and only involves a shoulder or parking lane closure, static warning signs and channelizing devices may be omitted. Operate utility vehicles using their high intensity flashing (strobe or revolving) and hazard warning lights and place traffic cones behind them if needed. Additional traffic control such as guard (shadow) vehicles and impact attenuators may also be utilized. See <a href="WZFM">WZFM</a> layouts 4 and 7.

<sup>&</sup>lt;sup>1</sup> Also includes a work area adjacent to the shoulder.

# 4.0 Lane Closure System (LCS) Requirements

Use WisDOT's Lane Closure System (LCS) when utility work involves the closures listed in Table 1. The LCS is used to populate WisDOT's 511 system, which provides motorists with current road/ramp closure, lane/shoulder closure, or lane width restriction information on WisDOT improvement projects, highway incidents, maintenance work, permits, and other planned events. <a href="https://www.511wi.gov/">https://www.511wi.gov/</a>

TABLE 1: Closure Type and Required Minimum Adv	ance Notification to WisDOT
Closure type with height, weight, or width restrictions (available width, all lanes in one direction < 16')	MINIMUM NOTIFICATION
Lane and shoulder closures	7 calendar days
Full roadway closures	7 calendar days
Ramp closures	7 calendar days
Detours	7 calendar days
Closure type without height, weight, or width restrictions (available width, all lanes in one direction ≥16')	MINIMUM NOTIFICATION
Shoulder closures	3 calendar days
Lane closures	3 business days
Ramp closures	3 business days
Modifying all closure types	3 business days

Contact WisDOT's Traffic Management Center at (414) 227-2142 as soon as possible if a utility has an emergency closure or restriction. See Table 2 for additional LCS notification requirements.

Table 2: Additional LCS Information		LCS Notification	
Situation	Required	Not Required	
Any temporary stop of any duration on a freeway	✓		
Shoulder closure on any highway of 30 minutes or less		✓	
Multiple shoulder closures of 30 minutes or less in one day on any highway	✓		
Temporary stop of all traffic (full road closure) for stringing overhead lines if: the closure last no more than 15 minutes, occurs no more than three times in a day, and does not take place on any Interstate or freeway		✓	

#### 4.1 Required LCS Information/Timing of Submittals

Use the worksheet in <u>Attachment 3</u> to collect information required for LCS notifications. Allow sufficient time for WisDOT to approve LCS notifications prior to needing the closure. Do not plan for LCS approval the same day as permit approval. If a closure is needed soon after permit approval, submit the application well in advance of the work start date.

# 4.2 Utility Access to LCS

WisDOT may assist a utility if it does not have requestor status. However, a utility may experience work delays if WisDOT staff are not readily available when LCS information needs to be entered into the system.

### 4.3 LCS Compliance

If a utility fails to perform LCS notifications, then WisDOT may suspend a utility's work operations, revoke its permit, and/or withhold future approvals of other permits until the problem has been corrected to WisDOT's satisfaction.

### 5.0 Flagging Operations

Ensure that when performing flagging operations, flaggers are certified by a training program that meets the requirements outlined in the <u>Wisconsin Flagging Handbook</u>. WisDOT may restrict utility work for those portions of the project with deficient flagging operations or for using flaggers that are not certified. Follow the Handbook for the requirements on high-visibility safety attire.

#### 6.0 Pedestrian Accommodations

If any proposed utility work will impact a pedestrian facility (Figure 1), make appropriate accommodations for all pedestrians, especially those who are visually impaired or must use a personal assistive mobile device (wheelchair, scooter, etc.), in accordance with the Americans with Disabilities Act (ADA) of 1990. Reference the Facilities Development Manual 11-50-31 for additional temporary pedestrian accommodation guidance. Use materials conforming to Standard Specifications for Temporary Pedestrian Accommodations Section 644.





Figure 1: Sidewalk work not meeting ADA requirements

Do not park vehicles, store materials, or place signs/devices on a pedestrian facility that remains open to the public (Figure 2). If a utility work operation may impact a pedestrian facility, submit a pedestrian traffic control plan with a permit application (see Standard Detail Drawing <a href="15D-30">15D-30</a>) or develop a special plan if those drawings are not applicable.







Figure 2: Sidewalks blocked by vehicles, materials, signs, and devices

# 7.0 Suspension of Utility Operations

If the work zone traffic control part of a permitted utility operation is not being performed in accordance with this policy, a WisDOT representative<sup>2</sup> may suspend all utility work and:

- Remove all traffic control devices, or
- Add to, partially remove, and/or rearrange existing devices as needed to achieve a safe work area until WisDOT approves the utility work to resume.

The utility is responsible for all costs associated with either of the above items.

<sup>2</sup> Includes WisDOT employees, consultants, county highway department personnel working under contract to perform WisDOT maintenance activities, and local law enforcement.

# Attachment 1 Traffic Control Plan Worksheet



#### Prior to permit submittal:

- 1) Investigate alternatives to eliminate the need for a closure
- 2) Determine if there are any special events in the area
- 3) Determine if there is other work (WisDOT highway improvement or maintenance work) in the area
- 4) Determine:
  - a) Roadway type
  - b) Road users (vehicles, pedestrians, bicyclists) and potential impacts to them
  - c) Work area needed including access to and from the work area
  - d) Traffic volume
  - e) Posted speed limit(s)
  - f) Duration of the work
- 5) Select the appropriate layouts (diagrams) or standard detail drawings based on #3
- 6) Determine if portable changeable message signs (PCMS) are needed, where they should be located, and what messages will be on them
- 7) Allow for buffer space free of obstructions
- 8) Determine if any modifications are needed to the typical layouts or standard detail drawings
- 9) Check Decision Sight Distance(s) (D) in the WZFM
- 10) Review the appropriate Index Chart at the start of each <u>WZFM</u> section. Review notes on all layouts and standard detail drawings.
- 11) Propose work hours that avoid peak traffic periods
- 12) Coordinate with mass transit if needed
- 13) Obtain permits from all affected road authorities
- 14) Submit detailed work zone traffic control plans with the permit application

#### **Before and During Project**

- 15) Determine if any coordination needed with the region communication's manager
- 16) If possible, maintain access to intersections, parking areas, driveways, and mass transit
- 17) Contact the road authority if the work zone interferes with normal traffic signal operation in the area
- 18) Develop contingency plans:
  - a) Can the closure be removed quickly if there is an incident?
  - b) If it cannot be removed quickly, is there an alternate (either signed or unsigned) route available?
  - c) Who is responsible to stop work due to weather or an incident and how others will be notified?
- 19) Coordinate with law enforcement (State Patrol, County Sheriff, local) if needed for work zone support

#### **During and After Project**

- 20) Install signs and devices beginning with the first one the driver will see
- 21) Conduct a drive-through after all signs and devices are properly in-place. Check for problems, make modifications, and document as needed. Use the inspection checklist in <a href="https://example.com/Attachment2">Attachment 2</a> if needed.
- 22) Remove or cover signs and devices as soon as work is suspended or completed

# Attachment 2





Pé	ermit Number:	Inspector Name:			Date:
					T.
	Item		Yes	No	Provide details for "Yes" answers
1	Was traffic observed to see if the functioning properly?	e work zone is			
2	Was the condition and orientatio devices checked (see <u>WZFM</u> , Q				
	Are any signs or devices missing or need repair?				
3	Were all items replaced or re	paired?			
4	Are any lights (bulbs, flashers, e	tc.) not functioning?			
	Were all lights replaced or re	paired?			
					T
5	Are any signs or devices improp	erly placed?			
	Were all positions corrected?				
6	Do any signs or devices need cle	eaning?			
0	Were all items cleaned?				
7	Were any modifications needed layouts (diagrams) or standard d				
			-	•	
8	Provide any additional comment	s as needed:			

# Attachment 3

# Lane Closure System (LCS) Notification Worksheet



# Permittee will enter the data into the LCS

# **General Section:**

1.	Permit Number
2.	General Description (brief description of the type of work)
3.	County (Begin/End if different)
4.	Highway/Direction
5.	Primary Contact (WisDOT Regional Utility Permit Coordinator) – Required
6.	Emergency Traffic Control Contractor Contact (name/number - 24 hour contact) – Required
7.	Contractor Contact (such as contractor or utility name/number) – Required
8.	Law Enforcement Contact (if applicable)
9.	Other Contact (other WisDOT contact names if applicable)
Eacl	n Facility:
Eacl	n Facility: Facility Type (mainline, ramp, system interchange)
1.	Facility Type (mainline, ramp, system interchange)  Closure/Roadway Status (Full closure, Lane/shoulder closure, Flagging operations, One lane road, One
	Facility Type (mainline, ramp, system interchange)
1. 2.	Facility Type (mainline, ramp, system interchange)  Closure/Roadway Status (Full closure, Lane/shoulder closure, Flagging operations, One lane road, One lane road temporary signal, Moving lane closure, Rolling full closure)
1.	Facility Type (mainline, ramp, system interchange)  Closure/Roadway Status (Full closure, Lane/shoulder closure, Flagging operations, One lane road, One
1. 2. 3.	Facility Type (mainline, ramp, system interchange)  Closure/Roadway Status (Full closure, Lane/shoulder closure, Flagging operations, One lane road, One lane road temporary signal, Moving lane closure, Rolling full closure)  Duration (daily/nightly, weekly, continuous)
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<ol> <li>2.</li> <li>3.</li> <li>4.</li> <li>5.</li> </ol>	Facility Type (mainline, ramp, system interchange)  Closure/Roadway Status (Full closure, Lane/shoulder closure, Flagging operations, One lane road, One lane road temporary signal, Moving lane closure, Rolling full closure)  Duration (daily/nightly, weekly, continuous)  Begin/End Date  Begin/End Time  Begin/End Location
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<ol> <li>2.</li> <li>3.</li> <li>4.</li> <li>6.</li> </ol>	Facility Type (mainline, ramp, system interchange)  Closure/Roadway Status (Full closure, Lane/shoulder closure, Flagging operations, One lane road, One lane road temporary signal, Moving lane closure, Rolling full closure)  Duration (daily/nightly, weekly, continuous)  Begin/End Date  Begin/End Time  Begin/End Location