



# Highway Maintenance Manual

Bureau of Highway Maintenance

Chapter 9 Right-of-Way Use & Permits

December 2010

Section 15 Utility Accommodation

Subject 60 Work Zone Traffic Control

## 1.0 Authority

All utility work shall be planned and implemented with full regard for safety and to minimize interference with traffic, which includes pedestrians and bicycles. On heavily traveled highways, utility work interfering with highway traffic may not be allowed during peak travel hours. Any such work allowed shall be planned to minimize the closure of roads, ramps, lanes, intersecting streets, and driveways. The use of WisDOT's Lane Closure System (LCS) shall also be included as needed with utility work. Information on LCS requirements including the affected highways is detailed in [4.0](#).

All traffic control for utility work performed on state trunk highways shall abide by:

- 1) The *Wisconsin Manual on Uniform Traffic Control Devices (WMUTCD)* and any supplements thereto.
- 2) The booklet, [Work Zone Safety, Guidelines for Construction, Maintenance, and Utility Operations](#), published by the Transportation Information Center – LTAP, University of Wisconsin – Madison.
- 3) Sections [637](#) and [643](#) in WisDOT's *Standard Specifications for Highway and Structure Construction*.
- 4) The specific provisions within this section.

The standards set forth in the *WMUTCD* are considered minimums, and additional traffic control shall be used when necessary. All publications in 1-3 refer to their current editions.

## 2.0 General Requirements

No utility work shall begin until all appropriate warning signs, devices, and public protection methods are in place and fully functional, which shall be maintained until all utility work is complete. For those operations that entirely close or encroach a traffic lane, a proper traffic control plan shall be submitted or made reference to (e.g. Work Zone Safety booklet page 25) with a utility's permit application.

Warning signs shall have prismatic, reflectorized sheeting material that complies with section [643.2.9.2](#) of WisDOT's *Standard Specifications for Highway and Structure Construction*, current edition. Warning signs shall be removed, covered, turned, or laid flat when workers or workers' vehicles are not at the job site or when the signs' messages are not relevant. Barricades and barrels shall be reflectorized with Type H reflective sheeting as a minimum. Cones used during nighttime operations shall be at least 28" in height and reflectorized.

## 3.0 Traffic Control Selection

A utility shall review the traffic control items in 3.1-3.3 with each permit application:

### 3.1 Factors

Review the factors in Table 1 when selecting an appropriate traffic control plan (TCP) for a utility project. A TCP worksheet is available for use in [Attachment 1](#), and shall be sent in with a utility's permit application as needed.

**Table 1: Traffic Control Selection Factors**

Highway related:	Project related:
1) Physical characteristics (hills, curves, access points, etc.)	5) Type and duration of work
2) Available sight distance	6) Time of day
3) Posted speed limit	7) Weather conditions
4) Traffic volume	8) Visibility conditions
	9) Road, lane, shoulder closures, etc.

### **3.2 Long-term, Intermediate-term & Short-term Stationary Work**

All utility work that takes longer than 60 minutes to perform should utilize the [WMUTCD](#) or [Work Zone Safety booklet](#) diagrams, or a utility may develop its own TCP contingent upon WisDOT approval. In any of the following situations, WisDOT may require a more extensive TCP for utility work that:

- 1) Is performed during nighttime hours.
- 2) During non-work times, traffic control is required overnight to protect a work zone.
- 3) Is performed in a continuously moving work zone. This excludes moving from one stationary work zone to another.
- 4) Cannot be adequately protected using the *WMUTCD* or *Work Zone Safety Booklet* diagrams.

### **3.3 Short Duration Work**

Daytime utility work that will be done in 60 minutes or less and does not encroach a traffic lane usually does not require a TCP. A utility is still responsible for providing traffic control adequate to protect public safety.

For short duration traffic control, a utility may omit warning signs and channelizing devices. Utility vehicles shall have their high intensity flashing (strobe or revolving) and hazard warning lights operating and should have traffic cones placed behind them. Additional traffic control such as guard (shadow) vehicles and impact attenuators may also be utilized

### **4.0 Lane Closure System (LCS) requirements**

When utility work involves a road, system ramp<sup>1</sup>, service ramp<sup>2</sup>, lane, or shoulder closure on selected groups of highways, the closure shall be tracked on WisDOT's Lane Closure System (LCS). The LCS is used to populate WisDOT's 511 system, which provides motorists with current information on WisDOT improvement projects, highway incidents, and planned events involving the aforementioned closures. <http://www.511wi.gov/Web/> Details on the various LCS requirements are divided into sections 4.1-4.5:

#### **4.1 Highways Affected/When Needed**

Utility work that involves a closure or restriction<sup>3</sup> should be entered for:

- 1) Interstates & US highways
- 2) Major state highways (Corridors 2030 – see [Attachment 2](#))
- 3) Any multi-lane highway
- 4) Any fully closed state highway in which a detour must be established

For any temporary stop of any duration on a freeway, a LCS notification is required. For a shoulder closure on any highway of 30 minutes or less, a LCS notification is not required. With multiple shoulder closures of 30 minutes or less in any given day, a LCS notification is required.

LCS notifications are not required for temporary stops of all traffic (full road closure) for stringing overhead lines if the closure:

- Lasts no more than 15 minutes, **and**
- Occurs no more than three times in a day, **and**
- Does not take place on a freeway

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1 Typically a free flow ramp, for example, a ramp from one interstate to another

2 Typically a ramp from an interstate to a state trunk highway or local road

3 A restriction is a minor lane encroachment or shoulder closure. Throughout this policy, restrictions will be referenced as closures.

## 4.2 Required LCS Information/Timing of Submittals

The LCS worksheet shown in [Attachment 3](#) provides detailed information that is required for all LCS notifications. The worksheet shall be filled out by a utility for all freeway closures and most other closures unless proper coordination has been done directly with WisDOT staff.

The LCS request should be sent to WisDOT for review and approval **14 calendar days** prior to the need for a freeway closure, or **3 business days** prior to the need for a non-freeway closure. A utility should allow WisDOT more advanced time with LCS notifications as possible. LCS notifications must be timed appropriately with WisDOT permit approval. For example, if a closure is needed soon after permit approval, a utility should submit the LCS notification along with its permit application.

## 4.3 LCS Process Steps

See [Attachment 4](#) for a flowchart depicting the various steps in the LCS process. Each numbered step is referenced by a <#> in the narrative below. Steps not referenced should be self-explanatory on the flowchart.

If a LCS notification is required <4>, WisDOT will check the associated box on a utility's approved permit and may provide more details in a supplemental provision. The LCS notification correlates with the traffic control plan (TCP) that is submitted with a utility's permit <5>. A TCP worksheet for utility use is in [Attachment 1](#).

After WisDOT has reviewed and approved a utility's permit <6>, the utility enters the closure information into LCS at the appropriate time <7> in accordance with the following advanced notification guidelines:

- 14 calendar days: Any freeway ramp, lane or shoulder closure; full roadway closure of any state highway (detour involved); closures that may impact oversize/overweight (OSOW) permits<sup>4</sup>.
- 3 business days: Non-freeway lane or shoulder closures

After the information is submitted in the LCS <7>, WisDOT will review the request <8>. If approved, the utility may implement the closure in accordance with the approved permit <10>. If the request is not approved, the utility and WisDOT shall determine what changes are needed for the notification <9a>, and then implemented <9b>, before repeating step <7>.

A utility representative who has requestor status needs to periodically check the LCS website to see if approval has been given <9>. If a utility does not have requestor status, WisDOT will get back to a utility within 3-7 calendar days in all situations. If the utility has not heard from WisDOT in that period, it should contact WisDOT. **Reminder: A utility shall not move forward with any closure until WisDOT gives its approval.**

WisDOT also has the option to modify the utility's LCS notification and then approve it. If a utility does not become a LCS requestor, it must submit the required information to WisDOT<sup>5</sup> who will then enter the information on behalf of the utility. Whether a LCS request is modified or returned, WisDOT shall contact the utility directly to discuss revisions to the request and resolve any impending issues. For example, a planned project, planned event, oversize load, etc. may be affected by a utility's proposed lane closure schedule.

If a LCS closure or restriction is cancelled or needs to be modified (for example due to weather delays or the work taking longer than planned) <13>, the utility shall contact WisDOT's utility permit coordinator for review and approval of the proposed changes <14>. Once approved, the utility may make those inputs directly into LCS if it has requestor status <7>.

Once again, after the information is submitted in the LCS <7>, WisDOT will review the request <8>. If approved, the utility may implement the closure in accordance with the approved permit <10>. If the request is not approved, the utility and WisDOT shall determine what changes are needed for the notification <9a>, and then implemented <9b>, before repeating step <7>. If a utility does not have requestor status, it shall contact WisDOT<sup>5</sup> who will make the changes on behalf of a utility. If a modification is needed and the notification is less than the standard lead time needed, then a utility shall call WisDOT as soon as possible to make the change (even if the utility has requestor status).

If a utility has an emergency closure or restriction, it shall contact the State Traffic Operations Center at (800) 375-7302 as soon as possible. This number is not for public use.

<sup>4</sup> These permits have a 14-day lead time.

<sup>5</sup> The region utility permit coordinator, traffic supervisor, or a STOC representative will handle LCS requests.

#### **4.4 Utility Access to LCS**

The LCS is a web-based system in which a utility may become a LCS requestor. This involves establishing a username and password from the [UW Traffic Operations and Safety \(TOPS\) Laboratory](#), who maintains LCS for WisDOT. A requestor status means that a utility may enter the necessary information directly into the LCS after a utility permit is approved. WisDOT recommends that for large utility companies, one person should be responsible for obtaining the password, and then share it with the appropriate staff within the company.

If a utility does not have requestor status, it shall contact WisDOT who will enter the information on behalf of the utility. WisDOT recommends that a utility become a requestor to minimize utility work delays if WisDOT staff are not readily available when LCS information needs to be processed.

#### **4.5 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.

**Attachment 1: Traffic Control Plan Worksheet**

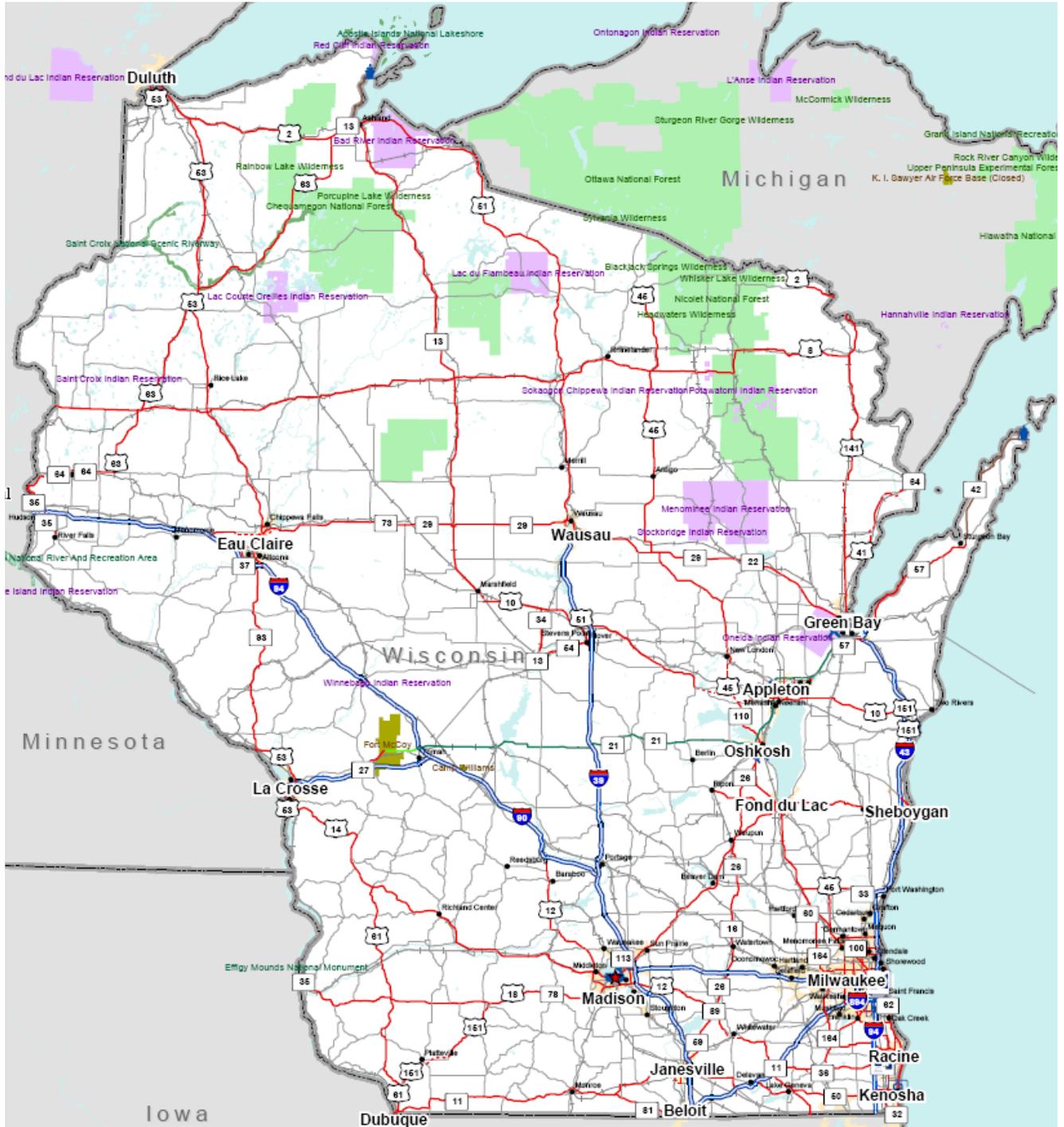
**WISCONSIN DEPARTMENT OF TRANSPORTATION  
Traffic Control Plan Worksheet**

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- 1) Have alternatives been investigated to eliminate need for a closure?
- 2) Provide detailed work zone traffic control plans
- 3) Description of Wisconsin State Patrol (WSP), local law enforcement, and local agency communications that have occurred
- 4) Contingency plan
  - a) Can the closure be removed quickly if there is an incident?
  - b) If the closure 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?
- 5) Coordination needed with region communications manager?
- 6) Are there any special events in the area?
- 7) Is there any other work in the area?
- 8) Portable changeable message boards (PCMBs) – are they needed, where should they be located, who controls, message, where do we get additional PCMBs?

**Attachment 2: Corridors 2030 Map (below) /**

**List of Affected Highways by Region (next page)**



**List of Affected Highways by Region**

Southwest	Southeast	Northeast
I39, I43, I90, I94, US 14, US 61, US 151, WIS 11, WIS 30  US 12, Rock NCL - I90/94 (Exit 85 Wis Dells)  US 18, Cambridge - IA  WIS 19, WIS 113 - US 151  WIS 26, I90 - Fond du lac SCL  US 53, WIS 16 - CTH HD	I43, I94, I794, I894, US 12, WIS 24, WIS 100, WIS 145, WIS 190, WIS 241  US 14, Rock ECL - I43  WIS 11, I43 - WIS 32  WIS 36, WIS 11 - I894  US 41, I94 to Dodge SCL  US 45, US 41/45 split - WIS 33  WIS 50, I43 - WIS 32	I43, US 41, WIS 441  US 10, Winnebago WCL - Oneida St  US 10, WIS 114/USH 10 split - WIS 114  WIS 23, I43 - CTH P  WIS 15, WIS 76 - US 41  WIS 21, US 41 - Leonard Point Roa  WIS 29, US 41 - Brown WCL  WIS 42, I43 - CTH Y
North Central	Northwest	US 45, US 41 (Oshkosh) - Winnebago NCL  WIS 47, US 41 - CTH J (Appleton)  WIS 57, Sheboygan SCL - WIS 23 (Plymouth)  WIS 57, I43 (Green Bay) - Bayview Bridge (North Side @ Sturgeon Bay)  US 141, Abrams - WIS 64  US 151, Fond du Lac SCL - CTH WH (Fond du Lac)  WIS 172, US 41 - I43
I39, US 51, US 8, US 10, US 45, US 2/141, WIS 29  Bus 51: Rothschild Schofield Wausau Weston Whiting Plover  WIS 13, Wis Rapids - US 2  WIS 34, Wis Rapids - US 10  WIS 54, Wis Rapids - I39  WIS 47, WIS 29 - Shawano SCL	I94, US 2, US 8, US 63  I535, 5 <sup>th</sup> St (MP 1) to MN (Blatnick Bridge)  WIS 13, Clark ECL - US 2  WIS 29, I94 - Clark ECL  WIS 35, WIS 65 - I94  WIS 64, MN - US 63  WIS 93, Trempealeau SCL - I94  US 53, I94 - MN	

ECL = East County Line  
 WCL = West County Line  
 SCL = South County Line  
 NCL = North County Line

**Attachment 3: Lane Closure System (LCS) Notification Worksheet**

**WISCONSIN DEPARTMENT OF TRANSPORTATION  
Lane Closure System (LCS) Notification Worksheet**

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**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)
6. Emergency Traffic Control Contractor Contact (name/number - 24 hour contact)
7. Secondary Contact (other WisDOT contact names if applicable)
8. Law Enforcement Contact (if applicable)
9. Other Contact (such as contractor or utility name/number)

**Each Facility:**

1. Type (mainline, ramp, bridge, system interchange)
2. Closure/Restriction (lanes/shoulders affected)
3. Duration (daily/nightly, weekly, continuous, long term)
4. Begin/End Date
5. Begin/End Time
6. Begin/End Location
7. Oversize/Overweight Restrictions (height, width, weight restrictions if applicable)
8. Detour Route (if applicable)

**Attachment 4: Lane Closure System (LCS) Notification Flowchart**

