All subjects in the entire Utility Accommodation Policy have been combined into this file for easy searches. Click on the subject number link to go directly to that topic.

Subject #	Title	Pages
09-15-01	Purpose and General Policy	3
09-15-05	Statutes and Definitions	2
09-15-10	Compliance	2
09-15-15	Permit Process, Application Form & Instructions	6
09-15-20	Expedited Service Connection Permit	5
09-15-25	Location Requirements	5
09-15-30	Structure Attachments	1
09-15-35	Survey Monument Protection	6
09-15-40	Controlled-Access Highways	5
09-15-41	Cellular Facilities	7
09-15-45	Construction	8
09-15-50	Environmental Conditions	5
09-15-55	Erosion Control and Stormwater Management	2
09-15-60	Work Zone Traffic Control	9
09-15-65	Requirements for Specific Utilities	3
09-15-70	WisDOT Utility Permit Staff Directory and Region Boundary Map	2

1.0 Originator of the Utility Accommodation Policy

The State Maintenance Engineer in the Bureau of Highway Maintenance is the originator of this chapter and section. All questions and comments on its contents should be directed to Bob Fasick, State Right-of-Way Permits Engineer, at 608-266-3438, or email robert.fasick@dot.wi.gov.

2.0 Introduction to Utility Accommodation

WisDOT operates the state trunk highway system to provide a safe and convenient means for the transportation of people and goods, and utility companies provide essential services to the public. Both WisDOT and utility companies typically provide facilities that consider present as well as future needs. Cooperation between the two entities is essential if the public is to be served at the lowest possible cost consistent with their respective public service needs, obligations and interests. Although WisDOT strives to accommodate utility facilities whenever possible, the permitted use and occupancy of highway right-of-way (ROW) for non-highway purposes is ***subordinate*** to the primary interests and safety of the traveling public.

3.0 Utility Accommodation Policy – General Information

WisDOT's *Utility Accommodation Policy* (*UAP*) prescribes the policies and procedures that shall be met by any utility whose facility currently occupies, or will occupy in the future, any highway or bridge over which WisDOT has maintenance jurisdiction.

The *UAP* applies to all public and private utilities as defined in HMM 09-15-05, 2.0. It also applies to all existing utility facilities retained, relocated, replaced, or altered, and to new utility facilities installed on state ROW. Highway facilities (e.g., lighting, traffic signals, changeable message boards, etc.) operated by WisDOT for the purposes of motorist safety are not bound by the *UAP*.

The *UAP* is structured with integrated sections – meaning that two or more sections may need to be read together to fully understand a utility accommodation issue. The reader is cautioned that by only reading one section, and not the other related section(s), it may lead to *UAP* misinterpretation. HMM[1] 09-15-00 and the *UAP* are synonymous.

Typically, WisDOT utilizes 3.1 – 3.5 when handling requests for utility accommodation or managing facilities that are already located on the ROW:

3.1 Permits

WisDOT permits utility facilities on state trunk highways when:

1) Such use and occupancy does not adversely affect the primary functions of the highways or materially impair their safety, operational, or visual qualities,
2) There would be no conflict with the provisions of federal, state or local laws or regulations or the accommodation provisions stated herein, and
3) The occupancies would not significantly increase the difficulty or future cost of highway construction or maintenance.

A utility shall abide by the current version of the *UAP* each time a permit is authorized for its work. When future changes are made to the *UAP*, an existing utility facility is not required to meet the new version unless proposed changes to that facility require a new permit from WisDOT.

[1] Highway Maintenance Manual

3.2 Design Responsibility

The utility shall be responsible for the design of the facility to be installed or adjusted within the ROW. WisDOT shall be responsible for review of the utility's proposal and for permit approval.

3.3 Additions

Nothing in the *UAP* shall be construed as limiting the rights of WisDOT to impose restrictions or requirements in addition to and/or deviations from those stated herein in any permit where WisDOT deems it appropriate. An explanation for such action should be provided to the utility.

3.4 Adjustments/Relocations

If necessary, a utility shall adjust and/or relocate any affected portion of its permitted or unpermitted facility that occupies WisDOT ROW to facilitate the alteration, improvement, safety enhancement or maintenance of a highway as may be directed by WisDOT. The adjustment or relocation may affect facilities off the ROW as well. A utility is responsible for all costs associated with the adjustment or relocation unless a specific WisDOT executed utility parcel or agreement otherwise provides. See FDM 18-01-10.

3.5 FHWA Review

Under 23 CFR 645 subpart B, each state department of transportation must have a policy that addresses the accommodation of utilities within the ROW of Federal-aid or direct Federal-aid highway projects. The Federal Highway Administration (FHWA) approves WisDOT's *UAP* under the terms of the Federal-Aid Oversight Agreement[2] (section VI) between FHWA and WisDOT, which WisDOT must apply to utilities pursuant to 23 U.S.C. 106(c) and Wis. Stat. s. 84.015(1). Consequently, each utility permit issued by WisDOT must require a utility to comply by the terms and conditions of the *UAP* (3.0 and 3.1) consistent with Wis. Stat. s. 227.10(2m).

WisDOT is not required to send FHWA utility permit applications or preliminary occupation requests for their approval. However, WisDOT shall submit to FHWA all applications or requests on the National Highway System that propose the following:

1) Installations not in accordance with the *UAP*

2) Longitudinal installations of private utility facilities (See 6.0)

3.6 Electric Transmission Line Facilities

Nothing in the *UAP* affects the priorities for siting electric transmission facilities under Wis. Stat. ss. 1.12(6) and 196.491. In addition, Public Service Commission review and approval may be required prior to the relocation of any electric transmission line.

4.0 One-Call System Membership

Each applicant for a permit to construct, operate and maintain utility facilities on a state trunk highway shall become a member of Wisconsin's one-call system under Wis. Stat. s. 182.0175(1m)(a). The one-call system is known as Diggers Hotline.

If an applicant lacks membership in the one-call system when applying for a WisDOT utility permit, WisDOT shall withhold permit approval until the applicant submits proof of membership or some other type of evidence indicating that membership is immediately forthcoming.

5.0 Discontinued Utility Facilities

A discontinued utility facility is one that a utility has permanently placed out of service. The discontinued utility facility may be aboveground, underground or on a structure. In the past, the term "abandoned" was used to describe these facilities. However, the term "discontinued" provides clearer meaning since the utility still owns these facilities. Discontinued utilities may be restored into service through a new WisDOT permit or sold, traded or transferred to a different utility, which must also obtain a new WisDOT permit. For example, a discontinued gas line may be used by a communications company for the installation of a new fiber optic cable.

[2] The Oversight Agreement was incorporated as Appendix A of the FHWA – WisDOT Stewardship Agreement on September 28, 2010.

5.1 Discontinued Aboveground Facilities

If a utility discontinues use of an aboveground facility, the facility shall be entirely removed from the ROW within one year after its out-of-service date unless WisDOT grants written approval for a time extension.

5.2 Discontinued Underground Facilities

A utility should maintain a permanent record in its files of all underground facilities that are discontinued in the ROW. Discontinued underground facilities should be able to be located in the field. A utility is not required to physically remove any discontinued underground facility so long as a permanent record of it is maintained, and it does not prevent construction or modification of any highway improvement and/or structure.

Discontinued appurtenances such as manholes and pull boxes shall be filled in or removed in accordance with the Wisconsin Standard Specifications for Road and Bridge Construction, current edition.

5.3 Discontinued Facilities Attached to Structures

Utility facilities discontinued on a structure shall be removed within 60 days of the out-of-service date unless otherwise approved by WisDOT. A utility is responsible for all removal costs.

6.0 Private Utility Facilities

Private utility facilities may be allowed to cross state highways, and are not subject to approval by the Federal Highway Administration (FHWA). Longitudinal installations of private facilities shall not be allowed on state highways under Title 23, CFR 1.23. However, exceptions may be allowed by FHWA if it determines that the proposed occupancy or use of ROW is in the public interest and will not impair the highway or interfere with the free and safe flow of traffic. WisDOT shall make a similar public interest finding recommendation before submitting the permit application to FHWA for approval. Sewer and water laterals, although privately owned and maintained, are not regarded as private utilities within STH ROW under the *UAP.* See HMM 09-15-05, 2.0 #8.

All private utility facilities shall follow the requirements of the *UAP*, and shall be designed, constructed, operated, and maintained as described in the specific policies for communications, electric, fluid or gas lines, whichever more closely resembles the facility.

Privately owned pipelines or drain tiles located on or emptying onto the ROW for draining wetlands is prohibited. Pipelines crossing under a state trunk highway that do not adversely affect its safety, operation, maintenance and future construction may be allowed in certain circumstances. See HMM 09-15-65, 3.4.

6.1 Occupation Requirements

Private utility installations may be assessed a fee by WisDOT for ROW crossing or longitudinal occupation. The fee for each installation shall be determined on a case-by-case basis and may be based upon, but not limited to:

1) The value of the facility
2) Complexity of the installation
3) WisDOT review time
4) Comparison with the value of private easements adjacent to the proposed location
5) Comparison with fee schedules for other similar utility installations in Wisconsin and across the nation

Based on the proposed private utility installation's potential for damage to the highway, adjacent ROW, or the environment, WisDOT may require the following to be submitted with a permit application:

6) Evidence of commercial general liability, workers compensation and employer's liability, and commercial motor vehicle liability insurance
7) A certificate of insurance, which names WisDOT as an additional insured
8) Department of Natural Resources approval that the project will have no significant environmental impact

1.0 Utility Accommodation Statutes

WisDOT regulates the use, occupation and accommodation of the state trunk highway system by utilities under 23 CFR 645 subpart B and Wis. Stat. ss. 66.0831, 84.01(31), 84.08, 85.15, 86.07(2)(a), 86.16, and 182.017.

2.0 Definitions

Unless otherwise provided herein, the definitions accepted by the American Association of State Highway and Transportation Officials (AASHTO) shall prevail.

1. Clear zone

The portion of the right-of-way (ROW) free of nontraversable hazards and fixed objects. These areas provide drivers a reasonable opportunity to stop safely or otherwise regain control of their vehicles when they leave the traveled way. The clear zone generally varies with the type of highway, terrain traversed, road geometrics, and operating conditions. Use WisDOT's FDM 11-15-01, 1.10 as the guide for establishing clear zones.

2. Emergency utility work

Unforeseen action by a utility deemed necessary to restore an existing utility facility to protect the general public.

3. Expressway

A divided highway with partial access control and generally with grade separations at major intersections.

4. Freeway

A divided highway with full access control and with grade separations at all intersections.

5. Highway(s)

The State Trunk Highway (STH) system as authorized under Wis. Stat. s. 84.02. This includes the entire area within the highway ROW.

- **a.** Federally marked highways, such as "U.S." or "I" ("Interstate"), are part of the STH System.
- **b.** Connecting Highways as authorized under Wis. Stat. s. 86.32 are actually local jurisdictional streets and not part of the STH system – even though the road is still signed with a U.S. or WIS shield.

WisDOT's official State Trunk Highway maps denote all STHs within Wisconsin.

6. Permit

The document by which WisDOT grants a utility permission to work within, use, occupy, or cross the highway.

7. Pipeline

A utility facility installed to carry or convey a fluid, gas or other material, generally underground, including the casing and the carrier.

8. Private utility (private line)

A facility that conveys or transmits the commodities defined by utility (see #12), but are owned, operated and maintained by an individual(s) or business, devoted exclusively to the owner's use and typically not accessible to the public. Under the *UAP*, the portion of sewer and water laterals within STH ROW are regarded as extensions of the main, and therefore are public utilities even though main owners require them to be privately owned and maintained. Private utilities are usually not regulated by a United States or Wisconsin State government agency.

9. Responsible person

A person having control over a utility project that is not administered by WisDOT.

10. Right-of-way (ROW)

A general term denoting acquired interests or rights in land (either all or partial) that are necessary to build, maintain, and operate a highway facility. It is not just a fee interest or a permanent highway interest but encompasses all necessary rights of both a permanent and temporary nature.

11. Traveled way

The portion of the roadway for the movement of vehicles which includes auxiliary lanes and ramps but excludes the shoulders. The traveled way usually lies between the edgeline striping.

12. Utility

Any corporation, company, individual or association, including their lessees, trustees or receivers, or any sanitary district, cooperative association, town, village or city that owns, operates, manages or controls any plant or fixed equipment within Wisconsin for the production, transmission, delivery or furnishing of communications, electric power, light, heat, fuel, gas, oil, petroleum products, water, steam, fluids, sewerage, storm water not connected with highway drainage, irrigation, or similar commodity, which directly or indirectly serves the public.

The term includes the owners or operators of cable television systems, cellular phone and paging (wireless) systems, publicly-owned fire or police signal systems, traffic and street lighting facilities or privately-owned facilities that perform any of the utility functions above. It also includes those utility-type facilities that are owned or leased by a government agency for its own use or otherwise dedicated solely to governmental use.

The definition above is based on various statutes in Wisconsin law.[1] Federal law has a similar definition.[2]

13. Utility construction

Any use by a utility of labor or materials to install or to provide for the installation of a new or upgraded utility line or to replace all or a significant portion of an existing line.

14. Utility lines

a. Transmission line

A utility line with high capacity, which generally carries the product from the source to a distribution network.

b. Distribution line

A utility line with moderate capacity, which distributes the utility product from a transmission line to points convenient for their customers. An additional term for a distribution line is "trunk".

c. Service line

A utility line which serves a single customer via a connection with a distribution line. Additional terms for a service line include "lateral" and "drop".

15. Utility maintenance

Any use by a utility of labor or materials for repairs or replacement of parts of an existing utility line to retain its use as intended, limited to the work types as further defined herein.

16. Utility operation

Any activity by a utility to assure the function of an existing utility facility for its intended purpose.

17. WisDOT

The Wisconsin Department of Transportation

---

[1] Sources: Wis. Stat. ss. 196.01(5), 84.063(1)(b), 84.295(4m)(e)2. and Ch. 200.

[2] Source: 23 CFR 645.207

1.0 Introduction

WisDOT representatives have the authority to enforce the *Utility Accommodation Policy (UAP)* and specific provisions related to individual utility permits. These representatives (inspectors) generally include utility permit coordinators, area maintenance coordinators and supervisors, county highway commissioners and their patrol superintendents. It also includes project managers/engineers when utility permits are part of improvement projects. Any WisDOT staff person may take action on a utility project on STH R/W if public safety is at risk.

All utilities, including all consultants, contractors, and subcontractors working for utilities are required to abide by the *UAP* and those specific provisions related to individual utility permits.

2.0 Failure to Comply

At WisDOT's option, the following measures may be taken if a utility fails to comply with the *UAP* or their permit provisions:

2.1 Verbal Request for Corrective Action

The request shall include:

1) The reason(s) why the present or completed operation is (was) not in compliance with the *UAP* or the permit provisions,

2) What steps shall be taken to correct the situation, and

3) What additional action may be taken if step b is disregarded (items 2.2 through 2.7 listed below).

2.2 Written Reprimand

A written reprimand shall be sent to the utility for violating the *UAP* or their permit provisions when the utility does not comply with the verbal request. The written reprimand shall contain the same information as the verbal request and shall serve as documentation for the violation. WisDOT's region office shall be responsible for writing and sending this reprimand.

2.3 Suspension of Work Activities

If a responsible person of an inspected work site fails to comply with a verbal request, the inspector may order the suspension of all work activities at the site. If this occurs, the region utility permit coordinator shall be informed of the situation.

If the utility permit coordinator or appropriate representative (area maintenance coordinator, supervisor, etc.) cannot be contacted, then the region director shall be notified. The Statewide R/W Accommodation & Permits Engineer in the Bureau of Highway Maintenance should also be contacted to inform them of the situation.

WisDOT shall then contact an authority of the utility to explain why the operation was suspended and what action needs to be taken before work can resume.

2.4 Removal of Installed Facilities

Any utility facility installed shall be in the location shown on the approved permit. If such a facility is discovered in an unacceptable location, WisDOT shall take action to have that facility relocated or removed. The permittee shall remove the improperly placed facility and put it in an approved location. If the utility fails to relocate their facility, WisDOT shall have the facility removed and bill the permittee for such work.

2.5 Permit Revocation

When a utility continues to be in noncompliance with the *UAP* or their permit provisions, WisDOT may revoke the utility's permit. The utility may reapply for a permit to the district office when they can demonstrate a good faith effort to comply.

2.6 Public Service Commission (PSC) Notification

Continued violations by a utility of the *UAP* or their permit provisions may cause WisDOT to notify the PSC and request its assistance in correcting the situation.

2.7 Future Permit Approval Withholding

Continued violations by a utility of the *UAP* or their permit provisions may cause WisDOT to withhold approval of permit applications for that utility until the violations are corrected to the satisfaction of WisDOT. The severity and number of written reprimands against a utility may serve as a guide in determining future permit approval.

3.0 Inspection Procedures

When WisDOT or its representative inspects a utility site to determine compliance with the *UAP*, the following procedures may be utilized:

3.1 Work in Progress

Upon reaching a work site, the inspector shall locate a responsible person and ask to review and discuss the utility operation. If applicable, a review of the permit shall also be performed.

If the inspector decides that changes to the operation are needed in order to bring it into compliance with the *UAP* or provisions of their permit, then a verbal request is the first corrective measure, which shall be taken.

When a utility operation or installation is not in compliance with the *UAP* or the provisions of their permit and is adversely affecting public safety, the inspector shall take immediate action.

If a responsible person refuses to comply with the verbal request and does not take immediate corrective measures to ensure public safety, the inspector shall then call the local law enforcement agency to have the utility or its contractor(s), subcontractor(s), or consultant(s) removed from state R/W. The inspector shall also take corrective measures to return the highway to a safe operating condition.

3.2 Completed Work

After a permitted operation has been completed, the job site is subject to an inspection by WisDOT. If the work was done in violation of the *UAP* or the provisions of a utility's permit, then a verbal request is the first corrective measure that shall be taken.

1.0 Permit Required

A utility shall obtain a permit from WisDOT before any use or occupancy of state trunk highway (STH) right-of-way (ROW) is allowed. This includes utilities wanting to occupy an existing pole line or duct system (for example, communications attaching to an electric company's existing poles). It also includes the main owner, not a contractor, developer, property owner, etc., for the portion of sewer and water laterals within STH ROW. Exceptions to this are enumerated in 3.1, 3.2 and 3.3. A utility may also need a permit from the DNR. See 1.3.

1.1 Emergency Work

Emergency situations may arise when immediate action to protect public safety requires utility operations within a state trunk highway that are not in full compliance with the provisions of the *Utility Accommodation Policy (UAP)*. Nothing in the *UAP* shall be construed as requiring a utility to delay such emergency repair.

Emergency repairs may be performed within STH ROW when physical conditions or time considerations prevent application for the usual permit. However, as soon as practical, the utility shall advise the appropriate WisDOT region office of the emergency, its plans or actions for alleviating the unsafe situation(s), and arrangements made for the control and protection of traffic or pedestrians affected by its proposed operations. When the *UAP* requires a permit for such work, a utility shall obtain a permit as soon as possible and make any alterations that WisDOT deems necessary through the permit approval process.

1.2 WisDOT Permit Authorization to Use and/or Occupy Highway Right-of-Way

By issuance of a permit, WisDOT formally indicates that, subject to all applicable permit conditions, a specified use and/or occupancy of STH ROW is not adverse to highway interests at the time of permit approval.

WisDOT does not warrant that public title to the ROW is free and clear, does not certify that it has sole ownership, and does not indicate any intention to defend the utility in its peaceful use and occupancy of said lands.

The permit does not transfer any land, or give, grant or convey any land right, right in land, or easement in WisDOT ROW. It is not assignable or transferrable. When a WisDOT permit is issued, the permit terminates when a utility facility changes ownership. The new owner must obtain a permit in order to operate and maintain the facility in WisDOT ROW.

Written authorization from WisDOT does not relieve a utility from compliance with all applicable federal and state laws and codes, and local laws and ordinances that affect the design, construction, materials or performance of its work. WisDOT's authorization shall not be construed as superseding any other governmental agency's more restrictive requirements. However, if the utility is directly under contract with WisDOT, and WisDOT chooses to supersede local ordinances or permitting requirements, then the utility shall be exempt from a governing agency's ordinances or permits under WisDOT's statutory authority.

A utility should retain a copy of the permit in its files during the entire time the facility is located on, over or under STH ROW.

All utility permits issued by WisDOT are revocable. HMM 09-15-10 highlights the steps that WisDOT may use in order to revoke a permit.

1.3 Environmental Permit Coordination through the Department of Natural Resources (DNR)

Projects that involve trenching or plowing a utility line through a waterway require a Wis. Stat. Chapter 30 permit from DNR. In order to avoid any Ch. 30 permitting, utility lines may be directionally bored under waterways. If boring a waterway is not feasible and a utility needs to be plowed or trenched across the waterway, application materials can be obtained from the DNR. See link #3 in Table 1. Most public waterways can be found on the 24k hydrology maps.

Projects that involve placing fill in a wetland require a Wis. Stat. 281.36 wetland permit from DNR. Fill may include a pedestal, pole or backfilling a trench. In order to avoid wetland permitting, utility lines may be directionally bored under wetlands or vibratory plowed through wetlands. Wisconsin Wetland Inventory (WWI) maps are a useful tool to determine known wetlands, but are not a comprehensive map of all wetlands. In addition, a utility should review Unites States Department of Agriculture (USDA) web soil survey and look for mapped hydric soils, or utilize the 'wetland indicators' tab on the Surface Water Data Viewer (SWDV) web tool.

Projects that involve one acre or more of land disturbance require a utility to submit a Notice of Intent (NOI) erosion control permit under Wis. Adm. Code NR 216. See link #3 in Table 1.

If DNR makes a permit decision or jurisdictional determination for a project, it is also required to ensure that the project does not impact threatened or endangered species, or known archaeological or historical sites. However, protection of state-listed threatened or endangered species under Wis. Stat. 29.604 is applicable to your project regardless of whether other DNR permits or determinations are involved.

In order to determine whether or not a project requires a waterway or wetland permit, submit a detailed narrative describing the work to be completed, including the location for the entire project, how the line will be installed, and the type of equipment to be used to the DNR Bureau of Energy, Transportation and Environmental Analysis (DNR BETEA) representative. Additionally, submit maps showing the entire project, overlaid on an aerial photograph, including the waterways, the WWI and “wetland indicators,” as well as the locations for any bore pits, pedestals, vaults or handholes.

The DNR BETEA will use the information you prepare and submit to assist in making a jurisdictional determination for your project. If you have any questions or need more information, contact the DNR BETEA at (608) 266-3524.

Table 1 – Environmental Information Website Links by Topic

1. DNR Utility Permitting (Bureau of Energy, Transportation and Environmental Analysis)
   http://dnr.wi.gov/topic/sectors/utilitypermitting.html
2. Water Permit Information
   http://dnr.wi.gov/permits/water/
3. Construction Site Stormwater Permit Applications
   http://dnr.wi.gov/topic/stormwater/construction/
4. Surface Water Data Viewer (Wetland/Waterway Maps)
   http://dnrmaps.wi.gov/SL/Viewer.html?Viewer=SWDV&runWorkflow=Wetland
5. USDA Web Soil Survey
   http://websoilsurvey.nrcs.usda.gov/app/
6. Endangered-Threatened Species
   http://dnr.wi.gov/topic/endangeredresources/laws.html
7. Archaeological-Historical Info
   http://www.wisconsinhistory.org/Content

1.4 Environmental Permit Coordination under the DNR/DOT Cooperative Agreement

Activities that affect waters of the state and that are carried out under the direction and supervision of WisDOT in connection with a transportation project are exempt from certain DNR environmental permit requirements, if the activities are conducted through the DNR/DOT Cooperative Agreement (Wis. Stat. 30.2022). In accordance with the Agreement, there **may** be times when it is advantageous for WisDOT to include a utility’s environmental requirements with its own environmental review using the Liaison Process. WisDOT will make that decision during the utility coordination stage of the project. Use Table 2 as a guide to determine which agency to contact when environmental permits are needed whether working on STH ROW and/or privately-owned lands.

Table 2 – Environmental Permit Coordination for Utility Work

Guidelines for Utility Companies under the DNR/DOT Cooperative Agreement

Lead Agency:
- **BETEA = DNR, Bureau of Energy, Transportation and Environmental Analysis**
- **DOT = Utility Permit Coordinator, DNR/DOT Liaison, Project Manager, etc.**

Types of environmental permits include: ⇨ Wetland or waterway crossings[1] (Ch 30 & 281.36) ⇨ Land disturbance ≥ 1 Acre[2] (NR 216) ⇨ Threatened and Endangered Species (Ch 29)		Action Item:	
		Transportation Project "Directed & Supervised" by WisDOT	Utility's Own Project
Utility work is located:	Entirely on private land	**BETEA**	**BETEA**
	Entirely on DOT ROW	**DOT**[3]	**BETEA**[4,5]
	Both on private land & DOT ROW	**BETEA** and/or **DOT**[3]	**BETEA**[4,5]

Key to numbered comments:

1. Includes all construction methods such as trenching and plowing. Bore pits in close proximity to a wetland or waterway may also be included.
2. If land disturbance is less than one acre, a NR 216 permit is not required. Land disturbance includes equipment tracking and any excavation needed for construction.
3. **DOT** decides if the proposed utility work can be reviewed using the Liaison Process. If yes, **DOT** will coordinate with **BETEA** and inform the utility. **DOT** may require a utility to obtain environmental permits from **BETEA** for work in multiple counties, on large or complex improvement projects with work on and off WisDOT ROW, or in environmentally sensitive areas. If WisDOT assumes responsibility for a utility's environmental requirements through the Liaison Process, then DNR permits are not required.
4. If DNR permits are needed, include a copy along with utility permit application. If DNR permits are not needed, submit evidence of **BETEA** coordination/decision instead.
5. A utility must coordinate with **BETEA** unless its project does not impact any environmental resources and is not considered a "major" project with regards to Trans 401.

General comments:

A. WisDOT does not have statutory authority to issue utility permits on private lands.

B. All utility work on WisDOT ROW requires a permit from WisDOT with two exceptions: (1) Utility work that is considered a maintenance item in 3.1, 3.2 and 3.3 and (2) Utility work that is a pay (bid) item in a WisDOT transportation project. This means that it is under a WisDOT contract, which serves in lieu of a typical utility permit. It does not include a utility's own project or utility facility relocations before or during a WisDOT transportation project. Contracts do not include utility reimbursement agreements.

C. Utilities may contact the **BETEA** at 608/266-3524 or http://dnr.wi.gov/topic/sectors/utilitypermitting.html

D. All utility work on WisDOT ROW must comply with Wis. Adm. Code Trans 401 if a DNR permit is not issued. See HMM 09-15-55 for details on Trans 401 implementation for WisDOT-issued utility permits.

E. DNR may enforce environmental control requirements on WisDOT ROW even if WisDOT issues utility permits and is responsible for enforcing permit and *Utility Accommodation Policy* requirements. This may include temporarily suspending a job and/or levying a fine.

1.5 Native American Nation or Tribal Information

If any part of a utility's proposed work is located within the reservation boundaries of a Native American Nation or Tribe that has a federally designated Tribal Historic Preservation Officer (THPO), then the utility should contact the Tribe and/or THPO to determine what permits or other coordination may be needed.

- Tribal Government Contacts: http://witribes.wi.gov/section.asp?linkid=284&locid=57
- THPO Contacts: http://www.wisconsinhistory.org/pdfs/hp/HPR-THPO-Designation-List.pdf

2.0 Required Permit Information

A utility's request to use and occupy the ROW cannot be considered until adequate information is provided regarding its proposed work. The amount of detail will vary with the complexity of the installation and the highway involved, but must include the appropriate permit form, drawings or sketches, and installation information so the effect on highway operations, traffic safety and visual qualities can be evaluated.

2.1 Permit Limits

Include the limits (project endpoints) of all proposed work in the permit application. If the utility facility extends into more than one county, submit a separate permit application for each county. The permit authorizes only the described work of and for the applicant indicated on the permit. The permit does not grant authority for the present or future installation of any other facility.

2.2 Permit Application Form & Instructions

Use WisDOT's single-page, double-sided, *Application/Permit to Construct, Operate and Maintain Utility Facilities on Highway Right-of-Way* dt1553. Instructions are also available to explain each question and the information required on the permit application form as a separate document dt1553i. The indemnification language on the front page must be included with each permit application submitted. Altering the form is prohibited by the applicant and shall be just cause for application rejection or permit revocation.

Submit one original **with an authorized signature** of the permit application form to the appropriate region office (HMM 09-15-70, 2.0). The permit form, engineering drawings and other documentation should be sent by email attachment or file transfer protocol (FTP) site, either of which is preferred to provide the fastest processing. The application may also be sent via regular mail, courier service or in person. Copies[1] may be reproduced from the original. Submission of the materials by fax is prohibited.

If a utility has an expedited service connection permit, location drawings for the service may be submitted by fax or email (preferred) at least three working days prior to starting the work. See HMM 09-15-20 for details.

2.3 Permit Drawings

Each permit application shall contain adequate drawings showing the proposed location of the utility facility within the ROW with respect to the existing highway, any proposed highway improvement, and any existing utility facilities. The details shall include dimensions from the proposed utility installation to the commonly accepted ROW line and edge of the traveled way.

For highway crossings, provide cross-section details showing depth of bury or overhead clearance along with bore pit locations if needed. A distance reference from the crossing to the nearest public road intersection is also required. Submit land tie information (for example, approximate distance from the proposed facility to side road intersection(s), county line, section corner, etc.) with all permit drawings. Use plat maps to document location information since they are extremely useful for WisDOT in processing permit applications.

Do not submit drawings that have a proprietary disclosure language like the example shown in Figure 1. WisDOT permits are subject to the State's Open Records Law. Therefore, WisDOT cannot safeguard the information contained within them. Utilities are advised not to put proprietary or confidential information in a permit.

PROPRIETARY INFORMATION NOT FOR DISCLOSURE. These plans contain proprietary or confidential information, and the recipient must not disclose, copy, recreate or distribute the plans or information contained therein, either directly or indirectly, to other entities or individuals, without written or express permission from *utility name*."

Figure 1: Proprietary Disclosure Language

2.4 Installation Information

The utility shall provide the following installation information that shall include, but is not limited to:

1. A general description of the location, size, type, nature, and extent of the utility facilities to be installed or to be adjusted, and the impact on the utility's existing facilities to remain in place within the ROW. This includes operating voltages for transmission lines, fiber counts, gas line pressures, etc.

2. A description of proposed construction procedures, special traffic control and protection measures, erosion control measures, proposed access points, coordination of activities with the highway contractor, and trees/vegetation to be removed and replaced.

3. For structure attachments, the bridge number, weight of lines, hanger spacing, hanger details, and expansion/contraction details. See HMM 09-15-30 for additional structure attachment requirements.

[1] Consult the Region office for the number of copies desired with each paper application.

2.5 Application Modification

WisDOT reserves the right to modify a utility's permit application as needed to protect highway interests. The modifications may be more restrictive than what was originally proposed. The permit, as approved, shall embody the conditions to which the utility shall comply in order to use or occupy the ROW.

3.0 Maintenance Items Exempt from an Additional Permit

Certain maintenance and other types of utility activities are considered minor in nature, and shall be allowed to be performed without an **additional** permit. However, should any of these selected activities be performed on facilities located on freeway ROW or require a Lane Closure System notification (HMM 09-15-60, 4.0), a permit shall first be obtained from WisDOT.

3.1 Communication Utilities

No additional permit is required for:

1. Repair or replacement of overhead service wire
2. Repair or replacement of overhead cable and terminal hardware, two spans or less
3. Replace pole, same location, maximum of 10 poles per 5-mile section

   Note: Once a new pole is installed, transfer all attached facilities (electric, telephone, CATV, etc.) to the new pole in a timely manner. Completely remove the old pole in accordance with HMM 09-15-45, 5.1.
4. Locate buried cable
5. Stake route for proposed buried cable
6. Connect and test wiring at buried cable pedestal locations
7. Crossarm, bracket, and hardware repair/replacement
8. Add anchor, guy, or brace between pole and ROW line or no closer to traveled way than pole
9. Trench pole to maintain or increase roadside clearance
10. Repair or replacement of overhead conductor, two spans or less
11. Line patrolling
12. Inspection of manholes (includes water removal, cable tagging, and minor modifications, etc.)
13. Electrolysis surveys
14. Test for location of underground lines
15. Paint poles, towers, or crossarms
16. Straighten pole, crossarm, or brace
17. Test or treat existing pole
18. Remove debris from overhead line
19. Repair or add grounds
20. Re-sag, reattach, or rearrange conductor
21. Repair cable bonding
22. Survey lines
23. Replace pole tags and signs
24. Reinforce existing pole
25. Mark location of proposed pole; proposed cable
26. Grass cutting or snow plowing
27. Trim trees or remove brush for existing line
28. Minor line repair (splice, etc.)
29. Sign and marker installation/replacement
30. Replace/remove line in existing duct
31. Raise, lower or temporarily disconnect existing overhead lines to avoid interference with an oversize load

3.2 Electric Utilities

No additional permit is required for:

1. Switching
2. Fuse replacement
3. Transformer replacement
4. Crossarm, bracket, and hardware repair/replacement
5. Add anchor, guy, or brace between pole and ROW line or no closer to traveled way than pole
6. Trench pole to maintain or increase roadside clearance
7. Replace pole, same location, maximum of 10 poles per 5-mile section

   Note: Once a new pole is installed, transfer all attached facilities (electric, telephone, CATV, etc.) to the new pole in a timely manner. Completely remove the old pole in accordance with HMM 09-15-45, 5.1.
8. Repair or replacement of overhead conductor, two spans or less
9. Line patrolling
10. Manhole inspection (includes water removal, cable tagging, minor modifications, etc.)
11. Electrolysis surveys
12. Test for gas
13. Test for location of underground lines
14. Paint poles, towers, or crossarms
15. Straighten pole, crossarm, or brace
16. Test or treat existing pole
17. Clean insulators
18. Remove debris from overhead line
19. Repair or add grounds
20. Re-sag, reattach, or rearrange conductor
21. Sample or test insulating oil
22. Repair cable bonding
23. Install or remove transformer or regulator
24. Survey lines
25. Replace outdoor light bulbs and cleaning glass
26. Repair or replace outdoor lighting control
27. Reset time clock or control switch
28. Replace pole tags or signs
29. Reinforce existing pole
30. Mark location of proposed pole; proposed cable
31. Grass cutting or snow plowing
32. Trim trees or remove brush for existing line
33. Sign and marker installation/replacement
34. Minor line repair (splice, etc.)
35. Replace/remove line in existing duct
36. Repair or replace overhead service
37. Reading service meters. *Note: Access from freeway shoulder allowed during non-peak rush hours only.*
38. Raise, lower or temporarily disconnect existing overhead lines to avoid interference with an oversize load

3.3 Fluid and Gas Utilities

No additional permit is required for:

1. Leak surveys (vehicle/walk patrol), line patrolling
2. Pressure surveys (gauge check or chart setting)
3. Odorant checks
4. Regulator maintenance (change out, lockup check, spring change, etc.)
5. Valve maintenance (activation check, grease, replacement, etc.)
6. Line purging
7. Exposed line survey and maintenance (on bridges, exposed valve assembly, etc.)
8. Line locates and facility marking
9. Up rating pressure of main (monitoring)
10. Abandonment of main, services, etc.
11. Pit (vault) maintenance (water removal, painting, minor modifications)
12. Minor cutouts and repair of lines (installation of clamps, welds, etc.)
13. Cathodic protection checks and related repair
14. Sign and marker installation/replacement
15. Relief vent line inspections
16. Maintenance/repair of telemetering equipment
17. Land survey
18. Brush removal
19. Painting above ground facilities
20. Grass cutting or snow plowing
21. Trim trees or remove brush for existing line

1.0 General

Typically, a utility obtains a permit from WisDOT before installing a service connection to an existing distribution facility within the right-of-way (ROW). However, WisDOT recognizes that a utility must respond promptly to its customers when they request service connections for their homes or businesses. In order to accelerate this process, a utility may apply for an expedited service connection permit (ESCP) that bypasses the normal permit approval process. The ESCP acts as a universal permit through which a utility may submit a simple, one-page plan of a proposed service connection that WisDOT will strive to approve within three business days of the submittal.

This procedure does not affect HMM 09-15-15, 1.1 Emergency Work. Approvals for emergency service connections or repairs should still be handled by a phone call to the appropriate region office.

All work described in this policy shall comply with the entire *Utility Accommodation Policy (UAP)*. Any ESCP issued to a utility does not supersede the authority of other governmental agencies' more restrictive requirements.

Similar to other WisDOT utility permits, the ESCP is effective for perpetuity unless WisDOT revokes it for continuous *UAP* violations. In addition, WisDOT may also suspend an ESCP for repeated *UAP* violations (e.g., site restoration) or if a utility has been delinquent in complying with provisions of approved permits.

2.0 Application Information

Use WisDOT's standard permit/application form dt1553 to apply for an ESCP. Only one ESCP per utility company is needed – even for large companies – unless the company prefers an ESCP for each utility type it serves. For example, a utility company may obtain separate ESCPs for gas and for electric.

Fill out the form as shown in Attachment 1. The information inside each red box will be ***different*** for the various utilities. For question 1, list the utility company name and the address of its main headquarters. Multiple office locations such as service territory headquarters may be used instead. For question 9, select the utility facility type(s). For question 18, list the main contact for the utility company, or the main contacts in the various service territory offices. For question 19, fill out the 24/7 emergency contact information. For question 21, add any other information and/or use the form's back page to provide information that cannot be inserted in the respective boxes on the front page, or any other relevant information, e.g., providing service territory maps or lists.

3.0 Work Restrictions

If a utility cannot meet all of the conditions listed below, then it shall obtain a regular permit for that specific service connection. Under an ESCP, accomplish all work:

1) Without any interference or disruption to traffic. Exceptions may be granted for low-volume (2,000 ADT or less), two-lane rural highways.

2) Without open cutting any paved surface.

3) For long-side connections, using untrenched construction techniques only HMM 09-15-45, 3.2. In addition, the boring machine head shall not be guided from the highway surface. Bores shall be perpendicular to the highway, and bore pits established no closer to the highway than the toe of inslope or back of curb. The use of the median area is prohibited – even to check the boring machine head.

Overhead, long-side service connections may be allowed on low-volume (2,000 ADT or less), two-lane rural highways during off-peak travel hours. The use of a law enforcement officer to stop traffic may be required.

4.0 Coverage

The ESCP only applies to service connections. In addition, extending the existing distribution line up to 300 feet is allowable to facilitate installation of the service.

Both overhead and underground short-side[1] service connections are allowable (Figures 1 and 2).

Long-side[2] service connections are also allowable (Figures 3 and 4), but may be limited to underground installations.

Long-side service connections from distribution lines outside of the ROW are also allowable (Figure 5).

Installation of an appurtenance or pole in the ROW to accommodate the service is allowed.

KEY:
ROW = Right-of-Way
PL = Property Line
D = Distribution
S = Service
☒ = Pedestal, Pole, Valve or Handhole

Figure 1: Short-side service connection

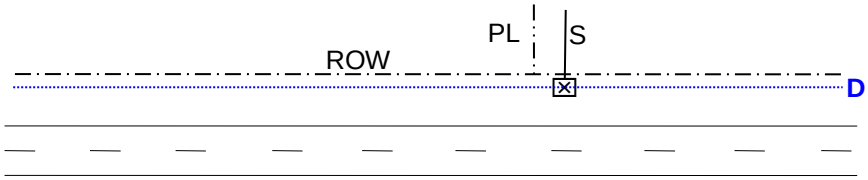


Figure 2: Short-side service connection plus distribution extension

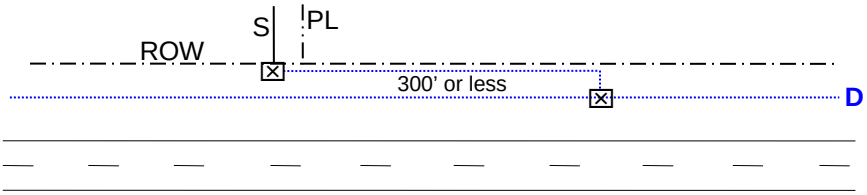


Figure 3: Long-side service connection

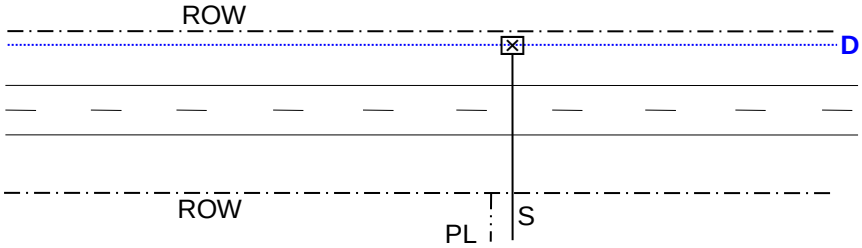


Figure 4: Long-side service connection plus distribution extension

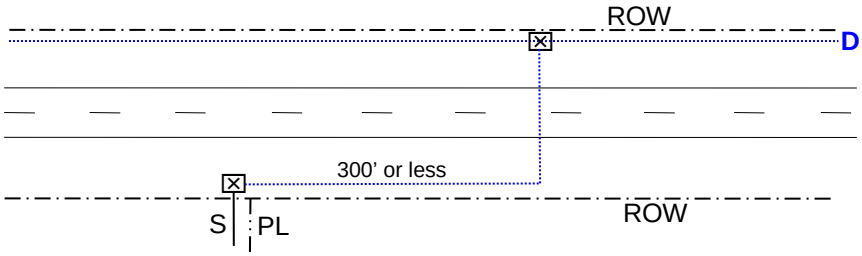
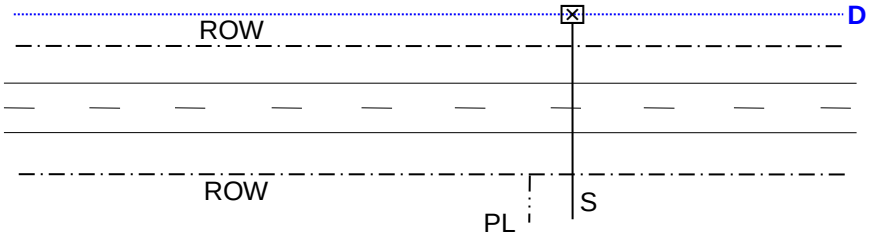


Figure 5: Service connection from distribution outside of ROW



[1] Same side of the highway as the distribution line
[2] Opposite side of the highway as the distribution line

5.0 Implementation

Once WisDOT has approved an ESCP, use the following process to obtain approval for installing a service connection. Submit, by email (preferred), fax or hand delivery, a simple one-page plan of the proposed service for WisDOT review ***at least three business days*** prior to the start of the work. See Figure 6. A copy of the utility's work order may be sufficient for this. Include the following information on the plan:

1) Utility ESCP number, utility name, employee contact along with his/her telephone, fax and email address.

2) County name, highway, town, range, section and quarter section numbers.

3) Distance from the nearest public road intersection to the proposed service line.

4) Distances from existing facility to nearest ROW line and total ROW width

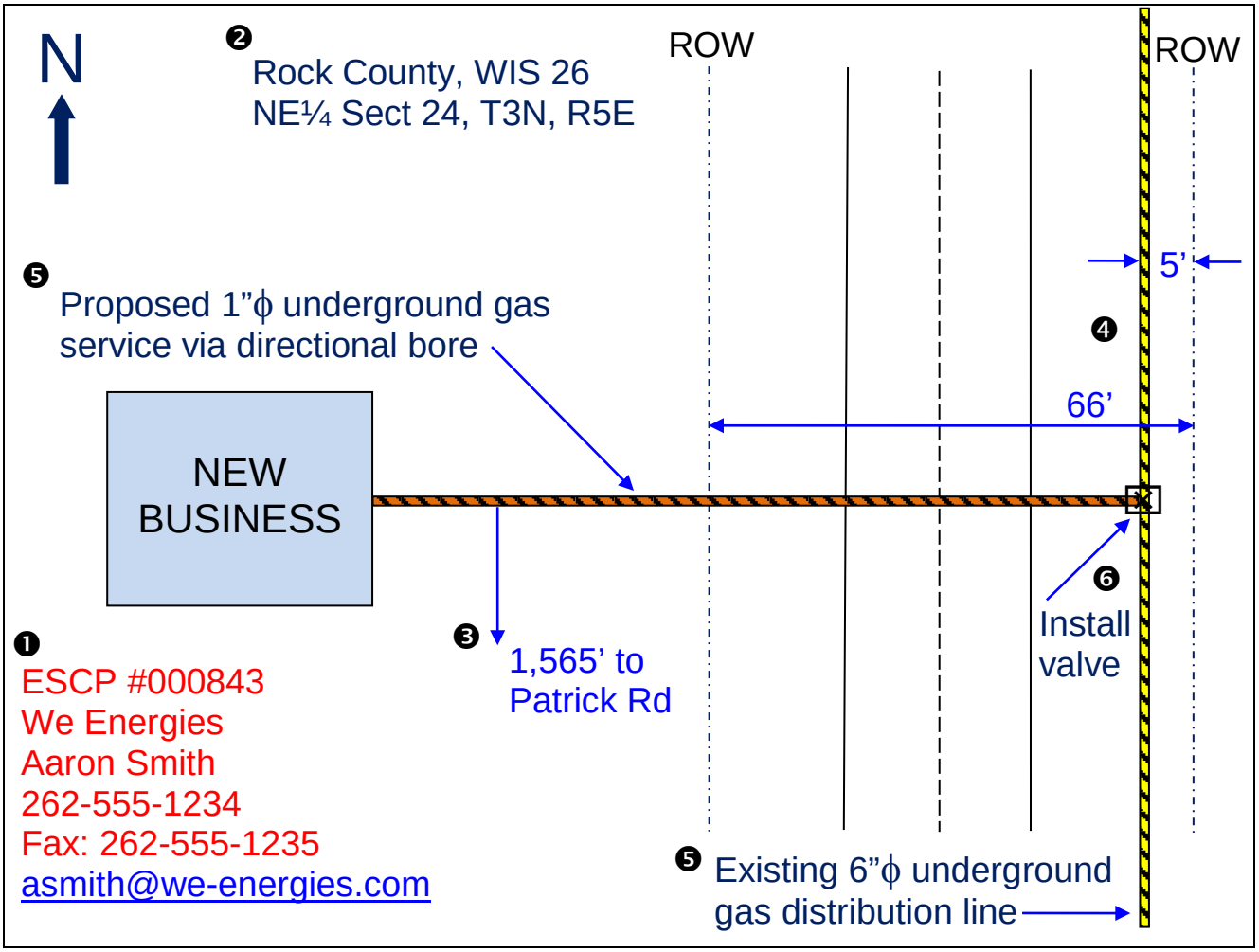
5) Existing distribution line and proposed service connection. Label aboveground or underground for both.

6) Location of any appurtenance or pole, if needed, to be installed within the ROW

7) Label ROW lines, other existing utilities, north arrow, etc. (not numbered on plan below)

Neither the ESCP nor the submitted plan authorizes a utility to start work. The plan is not to be used as an "FYI" to WisDOT that work will begin. Wait for the region utility permit coordinator or other WisDOT representative to approve the plan ***before*** proceeding with the proposed service work. The method will usually be by email or return fax. Call the region office if the utility representative does not hear from WisDOT after submitting the plan.

Figure 6: Sample Plan for Proposed Service Work under an ESCP



Attachment 1: Sample DT1553 Form Used as an ESCP

APPLICATION/PERMIT TO CONSTRUCT, OPERATE AND MAINTAIN UTILITY FACILITIES ON HIGHWAY RIGHT-OF-WAY Wisconsin Department of Transportation

DT1553 7/2017 s. 66.0831, 84.08, 85.15, 86.07(2)(a), 86.16, 182.017 and other applicable Wis. Stats.

1. Applicant (Utility facility owner) Name and Address
XYZ Communications, Inc.
123 Anywhere Street
Yourtown, WI 55555

2. Work Start Date: Varies
3. Work Finish Date★: Varies
4. Is the work due to a WisDOT highway project? ☐ Yes ☒ No
5. Applicant Work Order (If any): N/A

6. Location Description (¼ section, section, town, range; provide plat and/or location maps)
Varies – Plans for the proposed work shall be sent to the appropriate region office at least 3 working days prior to starting work. See HMM 09-15-20

7. Work Location (List all that apply)
Town: Varies
Village: Varies
City: Varies
County: Varies

8. Highway (List all that apply)
WIS: Varies
US: Varies
Interstate: ____

9. Facility Type (Check all that apply) and Description (Size, material, voltage, pressure, # fibers, etc.)
☒ Comm: Varies
☐ Electric: ____
☐ Gas/Oil: ____
☐ Water: ____
☐ Sewer: ____
☐ Casing: ____
☒ Conduit: Varies
☐ ____ : ____
☐ Transmission ☐ Service
☐ Distribution ☒ Service (ESCP)

10. Facility Orientation (Check all that apply)
☒ Underground ☒ Overhead
☒ Crossing ☒ Parallel
☐ OSOW high clearance route
☐ Structure attachment
☐ Scenic easement (Off right-of-way)

11. Work Types (Check all that apply)
☒ New facility ☒ Remove
☒ Joint install ☐ Maintenance
☒ Improve or repair existing ☒ Discontinue, left in place

12. Proposed Work Methods (Check all that apply)
☒ Trench ☒ Plow
☒ Place fill ☐ Rock blasting
☒ Place cable in conduit ☐ Open cut pavement
☒ Hand/mechanical excavation

Bore:
☐ Hydraulic (Auger/Jack/Tunnel)
☐ Pneumatic (Mole)
☐ Directional 1 (Manually tracked)
☐ Directional 2 (Computer tracked)
☒ Unknown (At this time)

Install or attach to poles/towers:
☒ New ☒ Existing ☒ Guys
Varies (~Diameter) Varies (Name of existing owner)
(Provide details for all guy-wires on plan sheets)

Pothole (Subsurface excavation):
☐ Air ☐ Water

Tree/vegetation control:
☐ Trim (Prune) ☐ Plant
☐ Remove (Cut) ☐ Mow
☐ Chemically treat

13. Work Zone Description (Check all that apply). (Provide relevant diagram(s) with application.)
☒ Not applicable
☐ Full road closure: detour
☐ Full road closure: temporary
☐ Lane closure: without flagging
☐ Lane closure: with flagging
☐ Lane encroachment (2 feet or less)
☐ Intersection/roundabout
☐ Shoulder/parking lane closure
☐ Railroad crossing

Freeway/expressway location
☐ Off shoulder: < 30' off white line
☐ Off shoulder: ≥ 30' off white line
☐ Near right-of-way line or fence

Non-freeway/expressway location
☒ Off shoulder: < 15' off white line
☒ Off shoulder: ≥ 15' off white line
☐ Back of curb: < 2' behind
☒ Back of curb: ≥ 2' behind

14. Is the facility near a survey monument? HMM 09-15-35 If yes, call (866) 568-2852 or email geodetic@dot.wi.gov.
☐ Yes ☒ No

15. Will appurtenances be installed with the facility? If yes, provide a description and/or specification for each item.
☒ Yes ☐ No

16. Trans 401 project designation? If Major, provide a formal erosion control plan. HMM 09-15-55
☐ Major ☒ Minor

17. Are any environmental approvals, certifications or permits required from other regulatory agencies, including tribal governments? If yes, provide a copy of each item. If no, provide proof of other agency coordination as needed.
☐ Yes ☒ No

★ **Includes permanent restoration. If the permitted work has not started by the "Work Finish Date", this permit is null and void. If the permitted work has started, but has not been completed by the "Work Finish Date", the work shall not be completed unless authorized through an approved written time extension or a subsequent permit.** ***ANY PERMIT ISSUED IS REVOCABLE.***

18. Utility Person Responsible for Construction: Joan Smith — Telephone Number: 800-555-5554
19. Utility or Project 24/7 Emergency Contact: XYZ Ops Center — Telephone Number: 800-800-8000
20. Provide company name and address of utility authorized representative if not employed by the applicant.

It is understood and agreed that WisDOT approval is subject to the applicant's full compliance with all pertinent statutes, as well as any regulations and rules of other jurisdictional agencies (which may be more restrictive), any supplemental permit provisions, and WisDOT's *Utility Accommodation Policy*, current edition.

John R. Public 7/4/2017
(Utility Authorized Representative Signature – If filled via computer, brush script font) (Date)

Operations Manager (Title) 800-555-5555 (Telephone Number) JQP@emailaddress.com (Email Address)

21. Provide additional work details, if needed (use back page or include separate pages)
Service installations that require something other than what is checked in questions 10-17 will be submitted with a regular permit application.

This permit does not transfer any land, or give, grant or convey any land right, right in land, or easement in WisDOT right-of-way. It is not assignable or transferrable. If a utility facility changes ownership, this permit terminates. The new owner must obtain a permit in order to operate and maintain the facility in WisDOT right-of-way.

⬇ For Wisconsin Department of Transportation Use Only ⬇

☒ **UTILITY SHALL NOTIFY WISDOT REPRESENTATIVE LISTED BELOW 3 DAYS BEFORE STARTING ANY WORK:**
Region contact, office address, telephone number and email address

See HMM 09-15-70

☐ **Review All Supplemental Permit Provisions**
☐ **Revisions Made to Drawings or Other Pages**
☐ Lane Closure System notification required HMM 09-15-60
☐ Insurance or performance bond required
☐ Joint installation: See permit(s) #____
☐ Private utility (Non-public ownership and/or use)
☒ Expedited Service Connection Permit
☐ This permit voids & supersedes #____ issued:____
☐

Application Received: 7/4/2017
Application Completed: 7/10/2017
Permit Issued: 7/13/2017
Permit Extended:
Permit Amended:

4802 Sheboygan Ave, Rm 501, Madison, WI 53705
(608) 266-3438 robert.fasick@dot.wi.gov
(Bureau of Highway Maintenance Contact Information)

Robert C. Fasick
(WisDOT Authorized Representative Signature – If filled via computer, Brush Script font)

Permit Number: **999999**

APPLICATION/PERMIT TO CONSTRUCT, OPERATE AND MAINTAIN UTILITY FACILITIES ON HIGHWAY RIGHT-OF-WAY *(continued)*

Wisconsin Department of Transportation DT1553

Use this section to provide information that does not fit on front page

INDEMNIFICATION

This Applicant shall save and hold the State, its officers, employees, agents, and all private and governmental contractors and subcontractors with the State under Chapter 84 Wisconsin Statutes harmless, as allowed by Wisconsin law, from actions of any nature whatsoever (including any by Applicant itself) which arise out of, or are connected with, or are claimed to arise out of or be connected with any of the work done by the Applicant, or the construction or maintenance of facilities by the Applicant, pursuant to this permit or any other permit issued by the State for location of property, lines or facilities on highway right-of-way, (1) while the Applicant is performing its work, or (2) while any of the Applicant's property, equipment, or personnel, are in or about such place or the vicinity thereof, or (3) while any property constructed, placed or operated by or on behalf of Applicant remains on the State's property or right-of-way pursuant to this permit or any other permit issued by the State for location of property, lines or facilities on highway right-of-way; including without limiting the generality of the foregoing, all liability, damages, loss expense, claims, demands and actions on account of personal injury, death or property loss to the State, its officers, employees, agents, contractors, subcontractors or frequenters; to the Applicant, its employees, agents, contractors, subcontractors, or frequenters; or to any other persons, whether based upon, or claimed to be based upon, statutory (including, without limiting the generality of the foregoing, worker's compensation), contractual, tort, or whether or not caused or claimed to have been caused by active or inactive negligence or other breach of duty by the State, its officers, employees, agents, contractors, subcontractors or frequenters; Applicant, its employees, agents, contractors, subcontractors or frequenters; or any other person.

Without limiting the generality of the foregoing, the liability, damage, loss, expense, claims, demands and actions indemnified against shall include all liability, damage, loss, expense, claims, demands and actions for damage to any property, lines or facilities placed by or on behalf of the Applicant pursuant to this permit or any other permit issued by the State for location of property, lines or facilities on highway right-of-way in the past or present, or that are located on any highway or State property or right-of-way with or without a permit issued by the State, for any loss of data, information, or material; for trademark, copyright or patent infringement; for unfair competition or infringement of personal or property rights of any kind whatever. The Applicant shall at its own expense investigate all such claims and demands, attend to their settlement or other disposition, defend all actions based thereon and pay all charges of attorneys and all other costs and expenses of any kind arising from any such liability, damage, loss, claims, demands and actions.

Any transfer, whether voluntary or involuntary, of ownership or control of any property constructed, placed or operated by or on behalf of the Applicant that remains on the State's property or right-of-way pursuant to this permit shall not release Applicant from any of the indemnification requirements of this permit, unless the State is notified of such transfer in writing. Any acceptance by any other person or entity, whether voluntary or involuntary, of ownership or control of any property constructed, placed or operated by or on behalf of the Applicant that remains on the State's property or right-of-way pursuant to this permit, shall include acceptance of all of the indemnification requirements of this permit by the other person or entity receiving ownership or control.

1.0 General

Locate utility facilities in the right-of-way (ROW) in such a way that minimizes the need for future adjustment in order to:

1) Accommodate proposed highway improvements.
2) Permit servicing or expanding such lines without obstruction or interference to the free flow of traffic.
3) Provide adequate vertical and horizontal clearance between an underground utility facility and a structure or other highway facility to allow maintenance of all facilities.
4) Be outside the 45-degree cone of support for highway structure footings and geodetic control monuments[1].

2.0 Crossing

Utility facilities shall cross the highway on a line as nearly perpendicular to the highway alignment as possible.

Conditions which are generally unsuitable or undesirable for underground crossings should be avoided. Crossing locations to be avoided include:

1) Deep cuts.
2) Near footings of bridges and retaining walls.
3) Across highway intersections at grade or ramp terminals (end of the ramp meets the crossroad or street).
4) At cross drains where the flow of water may be obstructed.
5) Within basins of an underpass drained by a pump.
6) In wet or rocky terrain where it will be difficult to attain minimum bury.

2.1 Depth of Bury

The depth of bury for underground facilities within the ROW shall be a minimum of 24 inches as measured from the finished ground surface to the top of the facility at the time of installation.

The depth of bury for underground facilities crossing the highway shall be a minimum of 30 inches as measured from a straight line connecting the lowest points of the finished ground or pavement surface on each side of the ROW to the top of the facility at the time of installation.

Where minimum bury is not feasible, the facility shall be rerouted or protected with a casing, concrete slab, or other suitable measures. In solid rock, the depth of bury may be reduced if adequate protection is provided. A utility shall obtain prior approval from WisDOT before burying any facility less than the minimum depth required.

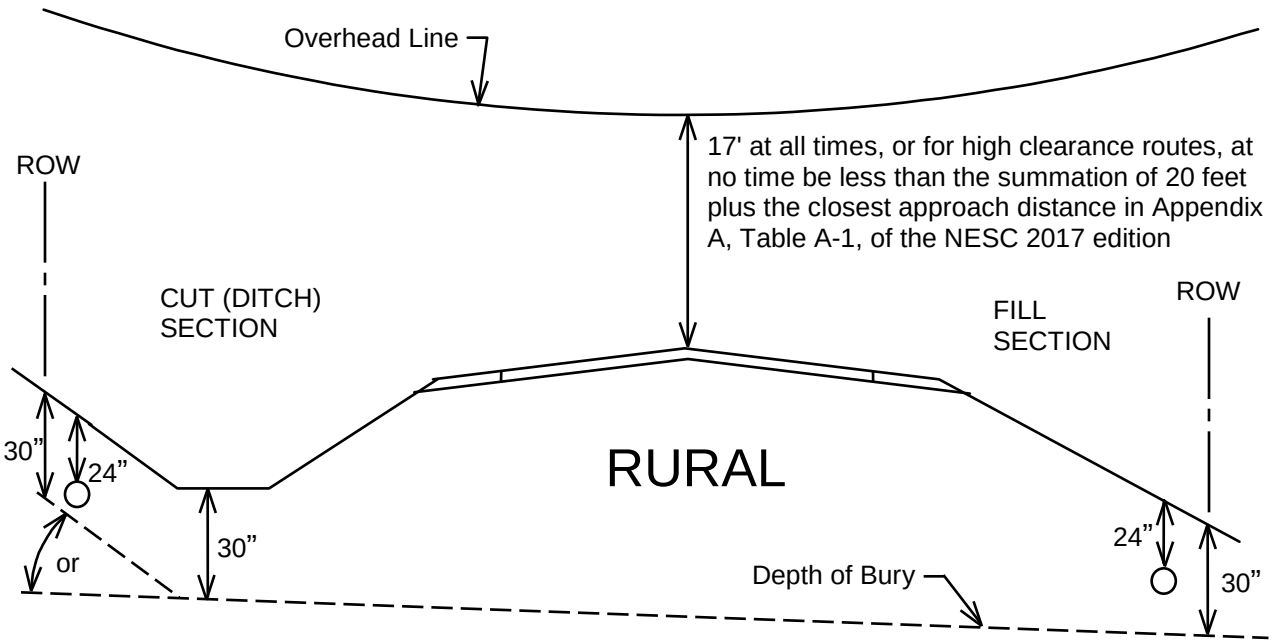
2.2 Overhead Clearances

Vertical clearances for overhead utility facilities shall comply with all applicable state and national electrical codes. In all cases, facilities crossing over the highway shall at no time be less than 17 feet above the high point of the traveled way. WisDOT has also adopted a network of high clearance routes that require additional clearance for all utility facilities enabling oversize vehicles to safely pass underneath. Facilities crossing over the highways identified on these maps shall at no time be less than the summation of 20 feet plus the closest approach distance in Appendix A, Table A-1, of the National Electrical Safety Code (NESC) 2017 edition.

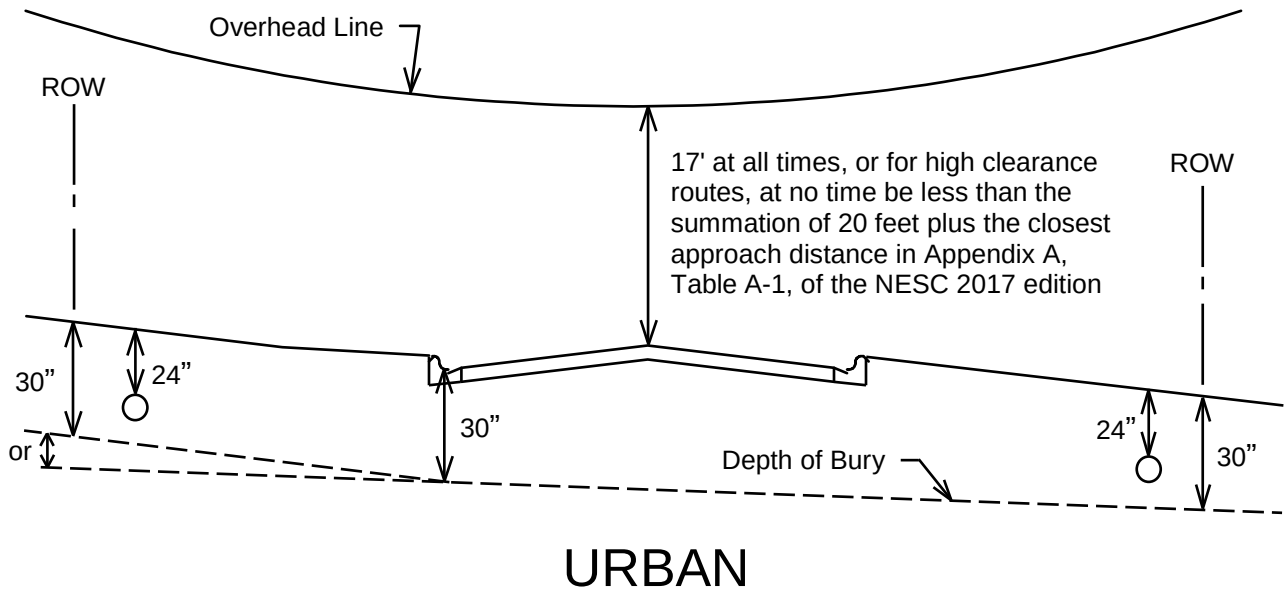
See Figure 1 for a clearance diagram.

[1] The 45-degree cone of support is measured from the top of the monument due to lateral movement potential, whereas it is measured from the bottom for a footing.

Figure 1: Highway Clearance Diagram



Minimum Clearances



3.0 Underground Longitudinal

The longitudinal location of underground utility facilities within the ROW shall provide as much clearance from the traveled way as conditions will allow. Such lines shall be on uniform alignment and located as near as practical to the ROW line without affecting ROW and geodetic control monuments referenced in HMM 09-15-35.

To maintain a reasonably uniform utility alignment, location variances may be allowed when irregular shaped portions of the ROW extend beyond the normal ROW limits.

3.1 Aboveground Longitudinal

The longitudinal location of aboveground utility facilities shall be outside of the clear zone. Such lines shall be on uniform alignment and be located as near as practical to the ROW line without affecting the ROW and geodetic control monuments referenced in HMM 09-15-35. Exceptions may be allowed when no other location is feasible or when the clear zone extends to the ROW line.

If any aboveground utility facility is within the clear zone or is determined to be in a location that has a higher than average accident potential, WisDOT may require:

1) The utility facility to be of approved yielding or breakaway construction, or
2) The utility facility to be protected by WisDOT approved barrier such as beam guard, crash cushion, etc.

To maintain a reasonably uniform utility alignment, location variances may be allowed when irregular shaped portions of the ROW extend beyond the normal ROW limits.

4.0 Relocating Existing Utilities

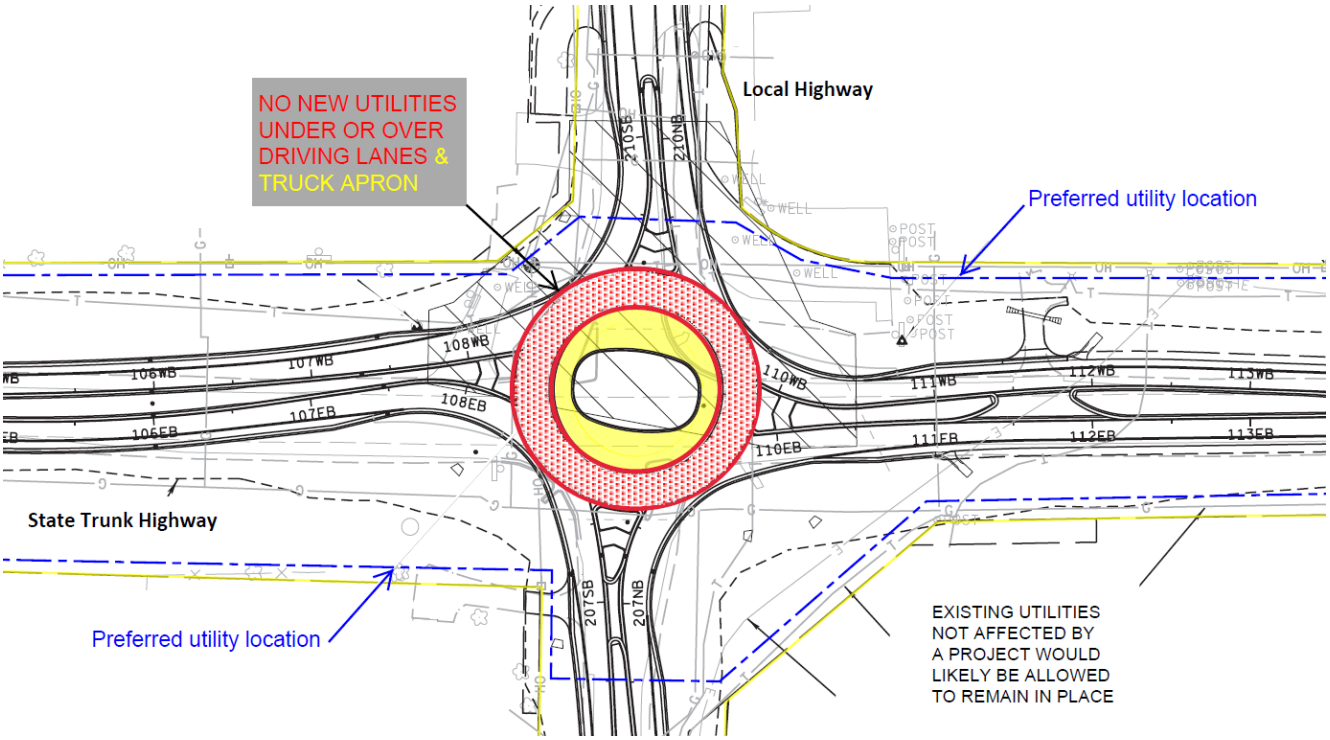
Existing utilities may remain within existing or proposed highway ROW provided they do not adversely affect the highway's safety, maintenance or operation in WisDOT's view. Existing utilities shall be relocated if they:

1) Conflict with any construction activities, or
2) Are located longitudinally under the pavement or shoulder for a reconditioning or reconstruction project.

Exceptions may be allowed based upon sound engineering judgment and economic considerations.

5.0 Intersections and Roundabouts

Place new utility facilities to the outside of intersections and roundabouts (RABs) rather than directly through their interior. On improvement projects, relocate utilities away from or to the outside of RABs if handholes, valves, or other appurtenances would be in the driving lanes or truck apron areas. The main reason for this is the difficulty associated with future maintenance and access to the facility due to the need for complex work zone traffic control and/or a detour or closure of the RAB.



6.0 Appurtenances

Appurtenant facilities such as pedestals, manholes, vents, drains, rigid markers, valve and regulator pits, etc., should be located outside of the clear zone and near or at the ROW line. Manholes, valve pits, etc., should be installed so that their uppermost surfaces are flush with the adjacent undisturbed surface.

6.1 Buildings

Do not locate utility buildings on the ROW. Exceptions may be allowed where the building can be located on WisDOT-owned ROW other than a state trunk highway. Examples include, but are not limited to, Park-n-Ride lots, rest areas and remnant parcels. Locate buildings outside of any clear zone when applicable.

6.2 Cabinets

Cabinets should not be located on the ROW. When cabinets are allowed on the ROW, they shall be placed at a location not vulnerable to an errant vehicle and at or as near as practical to the ROW line.

6.3 Manholes and Handholes (Vaults)

Manholes shall not be located in the pavement and should not be located in the shoulders of heavily traveled highways. Exceptions may be allowed on highways where manholes are essential parts of existing lines. New manhole installations shall be avoided at highway intersections.

7.0 Median Installations

On both crossing installations and longitudinal installations, poles, guys, or other related facilities shall not be located in a highway median. WisDOT may grant an exception for a crossing installation on a controlled-access highway. See HMM 09-15-40, 5.1.

7.1 Median Work

No work shall be performed in the median of any highway without prior approval from WisDOT. When median work is authorized, it shall conform to the following provisions unless otherwise stated within a utility's permit:

1) The permittee or their contractor shall follow its approved traffic control plan, which will likely include a lane closure system notification. See HMM 09-15-60, 4.0. It may also include State Patrol or other county/local law enforcement agency notification of the expected start and finish time of the median work.

2) All equipment, operations, and spoil material shall be located within the center of the median.

3) No openings, vehicles, equipment, nor materials of any type shall be located within the median overnight.

4) All vehicles used to conduct the work operation shall be equipped with conspicuously visible roof-mounted revolving or strobe lights. These lights shall be in operation just prior to and during the work operation. Hazard warning lights on the vehicles shall also be operating.

8.0 Scenic Considerations

When feasible, WisDOT strives to enhance visual qualities of the highway system by:

1) The retention and/or planting of trees, shrubs and other vegetation.

2) The selection of special alignments and corridors.

3) The acquisition of scenic easements.

Utilization of highways by utilities requires that the type and size of its facilities and the manner and extent of its installations shall not materially impair the scenic quality, appearance, or view of highway roadsides and adjacent areas. A utility shall reimburse WisDOT the value of any scenic easement that is released for a utility installation. The value shall be determined by a qualified appraiser hired or employed by WisDOT.

8.1 Scenic Areas

Areas which have been acquired or set aside for their scenic quality, such as scenic strips, overlooks, rest areas, recreation areas, public parks, historic sites, etc., and the ROW which traverses these areas, are in a special category and new utility installations shall not be permitted except as provided in this section.

1) New underground utility installations may be permitted within scenic areas when the installation does not require extensive removal or alteration of trees or other natural features visible to the highway user and does not impair the visual quality of the lands being traversed.

2) New overhead installations shall be prohibited at such locations where there is a feasible and prudent alternative to the use of scenic areas by the overhead facility. When this is not the case, installations will be considered only where:

   a) Other locations are unusually difficult, unreasonably costly, or are undesirable from the standpoint of visual quality,

   b) An underground installation is not technically feasible or is unreasonably costly, and

   c) The proposed installation can be made at a location (and will employ suitable designs and materials) which gives adequate protection to the visual qualities of the area being traversed.

3) These controls shall also be followed in the location and design of utility installations that are needed for a highway purpose, such as for continuous highway lighting, or to serve a weigh station, rest or recreational area.

1.0 General

Attachments to structures should be avoided. However, attaching utility facilities to highway structures may be permitted when they do not materially affect the:

1) Structure design and appearance,

2) Safe operation of traffic, and

3) Efficiency of maintenance.

Utilities currently attached to structures are not automatically allowed to reattach when WisDOT re-decks, reconstructs or does any other type of improvement that may force a utility to move its facilities. Utilities must prove to WisDOT that their situation warrants reattachment to the structure.

A utility shall be responsible for all WisDOT costs associated with structure attachments. This includes, but is not limited to, additional design time, increased bridge deck thickness and future bridge maintenance such as painting and inspection.

Pipelines that will be attached to a highway structure shall not exceed a maximum internal pressure of 150 PSIG. Pipelines carrying pressures in excess of 150 PSIG shall be considered only if no other alternative location off the structure is feasible.

2.0 Installation Requirements

When a utility facility is attached to a structure, the installation shall be located:

1) Beneath the structure floor,

2) Inside the outer girders or beams or within a cell, and

3) At an elevation above low superstructure steel or masonry that would not inhibit bridge inspections or repairs.

A utility facility may be located within the structure's deck for new construction or deck reconstruction projects if the utility notifies WisDOT in advance of or while the structure is being designed.

3.0 Installation Openings

The openings created in the bridge abutments and concrete diaphragms to allow passage of the permitted facility shall be of the minimum size necessary.

1) The opening in the abutment or and/or diaphragm around the permitted facility shall be completely filled to seal the opening and effectively preclude the leakage of any moisture or backfill material through the abutment/diaphragm.

2) If the utility sleeves the facility through the abutment and/or concrete diaphragm, the sleeve shall be tight-sealed into the abutment/diaphragm. Any space between the sleeve and the facility it encloses shall be sealed.

1.0 General

This procedure provides guidance on: (1) Preventing the disturbance or destruction of survey monuments due to utility work, (2) Preventing interference to survey operations by a utility facility (Figure 1), and (3) Providing WisDOT with sufficient notice when a survey monument must be relocated and there is no other viable location for placing a utility facility within WisDOT right-of-way (R/W).

Effective with permits issued on or after the effective date of this policy, a utility shall relocate any portion of its facility at its own cost when found not to be in compliance with the policy. Failure to do this may cause the utility's permit associated with the facility to be revoked.

Figure 1. Pedestal too close to R/W pin.

2.0 Definition of Terms

Five types of survey **monuments** are defined:

- **Right-of-Way (R/W)**: Typically, a yellow plastic cap on top of a metal pipe, rebar or pin in the ground that identifies a physical boundary point between property owned and property not owned by WisDOT (Figure 2).
- **Property**: Typically, a metal pipe, rebar or pin in the ground that identifies a physical boundary point between two properties.
- **Government Corner**: A metal, concrete or stone monument with or without a metal disk that identifies the location of a section corner, quarter-section corner or other boundary feature as defined by the U.S. Public Land Survey System. A government corner is often near the highway centerline, and a reference corner is usually near the R/W line.
- **Reference Corner**: A monument similar in construction to a government corner usually set within 200 feet of a government corner used to assist finding or relocating a government corner. When a government corner exists, a reference corner is usually expendable **if** a replacement reference corner is installed nearby in accordance with written instructions from the county surveyor. Ideally, the replacement reference corner should be installed prior to destroying the existing reference corner.
- **Geodetic Control**: A metal disk set in a stable object of substantial size (usually a concrete post or structure, or in bedrock) and intended to be permanent (Figure 3). Typically, three protective guard or witness posts surround a geodetic control monument used in the Wisconsin Height Modernization Program (WI-HMP) (Figure 4).

Figure 2. R/W monument with yellow cap and yellow plastic post with sign nearby. Posts may be metal too.

Figure 4. Orange guard or white witness posts surround a typical geodetic control monument installation. Some monuments may have 1 or 2 posts.

Figure 3. Typical geodetic control disks.

Other terms used in this procedure:

- **Geodetic control station (GCS)**: A geodetic control ***monument*** having accurate latitude and longitude, elevation, or both (a three-dimensional ***position***). Since any geodetic control station may have or may be upgraded to have a three-dimensional position, a geodetic control monument in Table 1 is assumed to be a three-dimensional GCS and therefore needs an unobstructed path between the monument and the satellites. A GCS used solely for elevation may be referred to as a "benchmark."
- **Right-of-way (R/W) line**: The physical boundary between property owned and property not owned by WisDOT that is typically established with straight lines between R/W monuments although some segments may be arced. Two or more R/W monuments define a R/W line location.
- **Property line**: The physical boundary between two properties that is typically established with straight lines between property monuments although some segments may be arced. Two or more property monuments define a property line location.

3.0 How Utilities Affect Survey Monuments

Utility excavation can disturb survey monuments either through collapsing soil or pushing dense/frozen soil. Conditions are worse when excavating five feet or deeper, or in sandy or loose soils. Improper backfilling may cause settlement and lead to monument disturbance. With deep excavations, a large area is needed for the removed soil. A monument must be visible to the excavator to avoid covering it with excavated dirt or disturbing it when backfilling. Equipment that runs over, hits, vibrates, or deposits soil (or other materials) on or near a monument can also disturb it. Any aboveground utility facility near a geodetic control station – including overhead lines, poles and guy wires – may interfere with radio signals from the GPS satellites.

Aboveground utility facilities such as poles, pedestals, cabinets, guy anchors, etc., are typically placed close to the R/W line to keep them out of the clear zone. Some may be placed near the intersection of property and R/W lines or bends in the R/W line. These locations follow typical utility accommodation policy as listed in HMM 09-15-25, 3.1 but they are also where survey monuments are located. These utility facilities need to be installed a sufficient distance away from survey monuments to minimize their interference with survey operations and to prevent the monuments from being disturbed or destroyed.

4.0 Utility Project Planning

When designing a proposed utility facility within the R/W, use the location guidance in Table 1. If obtaining the recommended minimum clearance from a survey monument poses a problem, contact a region utility permit coordinator (UPC) as soon as possible. Together with a WisDOT survey staff person, the UPC and utility shall determine the monument's importance, utility options, and a reasonable solution to the problem.

Positioning a large utility to avoid a monument may not be practical because the utility may be limited by other facilities within the R/W including the road itself or if a deep excavation is required. With deep excavations, gradual sideslopes may be needed to meet OSHA standards. The proposed location of a utility facility may seem far enough away from a monument, but the facility's sideslope excavation may actually affect it. In some situations, the only practical solution is to establish a new monument and then destroy the old one.

When the recommended minimum clearance cannot be maintained, regard the monument "in the way of construction" and contact the monument[A] owner(s) prior to disturbing or destroying it. A government corner (section corner) or reference corner monument in the way of construction should be identified to the county surveyor in accordance with Wis. Stat. s. 59.74. Specifically, Wis. Stat. 59.74(2)(b)1 requires the county surveyor to be notified in writing at least 30 days prior to destroying any corner, monument, etc. However, for projects in **WisDOT R/W, this notification shall be at least 60 days in advance.**

☑ **When the monument is a geodetic control station, a new station shall be established prior to disturbing[B] or destroying the existing one.**

For Wisconsin Height Modernization Program (WI-HMP) station monuments, contact WisDOT at 866-568-2852 or geodetic@dot.wi.gov when planning any utility work within 40 feet, when planning any overhead work within 150 feet, or when planning an overhead high-voltage transmission line within 500 feet of a monument.

For utility facility projects constructed using the minimum clearances in the table, do not specify that the facility be placed "**at** a monument" or "**on** the R/W line" in permit or contract language. Instead, use "**near** a monument" or "**near** the R/W line" since **near** is defined in the table as the **minimum** clearance.

5.0 Providing Adequate Protection for Monuments

If a R/W or property monument or a government or reference corner monument does not have a witness post, a lath should be placed nearby to visually indicate the location of the monument to minimize the chance of equipment disturbing the monument.[C] If soil is deposited on a monument, then hand dig within an 18-inch radius surrounding the monument when removing the material to minimize the potential risk of disturbing it. For a geodetic control monument, see Table 1 for specific instructions.

6.0 Disturbing or Destroying Monuments[1] and Associated Replacement Costs

When a utility disturbs or destroys a survey monument during its own project or during a facility move in advance of[2] a WisDOT improvement project, a utility shall make the proper contact to replace it according to the following:

Monument Type	Contact	Who Replaces
R/W or Property	Regional Utility Permit Coordinator	WisDOT* or Utility
Government or Reference Corner	County Surveyor	County Surveyor**
Geodetic Control	WisDOT Survey Unit: 866-568-2852 or geodetic@dot.wi.gov	WisDOT

* WisDOT staff may do the work or direct the utility to hire a Registered Land Surveyor
** County Surveyor will do the work or delegate it to a Registered Land surveyor

If a utility disturbs or destroys a monument during a WisDOT improvement project, the utility shall contact the WisDOT project manager who shall coordinate the replacement.

When a utility disturbs or destroys a monument, the utility shall pay for all costs to replace it. When a WisDOT project requires a utility to disturb, destroy or interfere with a monument, WisDOT shall pay for all costs to replace it. The cost to replace a disturbed or destroyed monument will typically be substantially less if a utility does the proper coordination prior to it being disturbed or destroyed. Anyone who destroys a monument of public record may be subjected to a fine or imprisonment under Wis. Stat. 59.74(2)(e). Under Wis. Stat. 236.32, failure to replace a subdivision monument, which can also be a R/W or property monument, may result in a fine or imprisonment.

7.0 Utility Facility Interference with Monuments

When WisDOT determines that:

- A utility facility was placed within the R/W after a survey monument was in place,
- The facility interferes with a survey operation, **and**
- The facility must be moved,

The utility shall move the facility at its own cost.

8.0 Utility Facility and Construction Clearances to Survey Monuments

Table 1 shows the minimum clearances necessary between various utility facilities/excavation/equipment and survey monuments. These values may be reduced or increased depending upon the construction techniques approved in a utility's permit. Deviations from the guidelines and the effect on monuments shall be discussed with the WisDOT region Survey Unit Coordinator prior to issuance of the permit.

[1] Assumes that disturbing or destroying monuments is **not** pre-approved by WisDOT
[2] "in advance of" means the project has not been let

Table 1: Utility Facility & Construction Clearances to Survey Monuments				
Construction Type	**Monument [D] Type**	**Minimum Clearance [E]**		**Comments/Recommendations**
		Facility or Excavation	**Equipment**	
(1) Trench or vault < 5' deep	R/W or Property	Greater of 1:1 slope or 2'	2' – Trench 3' – Vault	
	Government or Reference corner	Greater of 1:1 slope or 3'	3' – Trench 5' – Vault	
	Geodetic control	5'	5' – Trench 10' – Vault	Place fence to encircle monument and all witness/guard posts before working in the area. Use a 5' radius if posts are not present.
(2) Trench or manhole ≥ 5' deep	R/W or Property	1:1 slope	5'	
	Government or Reference corner	1:1 slope	Greater of ½:1 slope or 5'	
	Geodetic control	1:1 [1½:1][F] slope	Greater of ½:1 [1:1][E] slope or 10'	Place fence at minimum radius of 1:1 [1½:1][E] slope to encircle monument before working in the area.
(3) Foundation for poles, cabinets, or buildings (may or may not be in the R/W)	R/W or Property	1:1 slope	5'	
	Government or Reference corner	1:1 slope	Greater of ½:1 slope or 5'	
	Geodetic control	1:1 [1½:1][E] slope	Greater of ½:1 [1:1][E] slope or 10'	Place fence at minimum radius of 1:1 [1½:1][E] slope or 5', whichever is greater, to encircle monument before working in the area.
(4) Excavation for drainage, landscaping, driveway, etc. (may or may not be in R/W)	R/W or Property	Greater of 1:1 slope or 2'	2'	
	Government or Reference corner	Greater of 1:1 slope or 3'	3'	
	Geodetic control	Greater of 1:1 [1½:1][E] slope or 5'	Greater of 1:1 [1½:1][E] slope or 10'	Place fence at 10' radius to encircle monument before working in the area.
(5) Aboveground pedestal or cabinet	R/W or Property	2'	3'	
	Government or Reference corner	3'	5'	
	Geodetic control	5'	10'	Place fence to encircle monument and all witness/guard posts before working in the area. Use a 5' radius if posts are not present.

Table 1: Utility Facility & Construction Clearances to Survey Monuments				
Construction Type	**Monument [D] Type**	**Minimum Clearance [E]**		**Comments/Recommendations**
		Facility or Excavation	**Equipment**	
(6) **Pole or structure for supporting overhead lines or an antenna**	R/W or Property	1' between nearest edge of pole and R/W line 3' from monument	3'	A pole should not be placed **at** the monument or **on** a R/W or property line.
	Government or Reference corner	3' between nearest edge of pole and section line 1:1 slope	5'	A pole should not be placed **at** the monument or **on** the section line, or **on** the line between a government corner and its corresponding reference corner.
	Geodetic control	1:1 [1½:1][E] slope	10'	Place fence at minimum radius of 1:1 [1½:1][E] slope to encircle monument before working in the area. A pole should not obstruct the path between a monument and satellites. Contact WisDOT at 866-568-2852 or geodetic@dot.wi.gov when **planning:** ▪ An overhead line within 150' of a geodetic control monument. ▪ To place a transmitting antenna within 500' of a geodetic control monument.
(7) **Guy Anchor**	R/W or Property	3'	3'	A guy anchor should not be placed **at** the monument.
	Government or Reference corner	1:1 slope	5'	
	Geodetic control	1:1 [1½:1][E] slope	10'	Place fence at minimum radius of 1:1 [1½:1][E] slope to encircle monument and all witness/guard posts before working in the area. A guy anchor should not obstruct the path between a monument and satellites.
(8) **Overhead Line**	R/W or Property	N/A	N/A	N/A
	Government or Reference corner	N/A	N/A	N/A
	Geodetic control	The horizontal distance between a monument and a line should be greater than the height of the line above ground	N/A	Utility lines should not be strung over a station since they may cause interference to GPS signals. Different types of overhead lines cause different levels of interference. Contact WisDOT at 866-568-2852 or geodetic@dot.wi.gov when **planning** an overhead line within 150' of a geodetic control monument.

Table 1: Utility Facility & Construction Clearances to Survey Monuments				
Construction Type	**Monument [D] Type**	**Minimum Clearance [E]**		**Comments/Recommendations**
		Facility or Excavation	**Equipment**	
(9) **High voltage transmission (HVT) line**	R/W or Property	N/A	N/A	N/A
	Government or Reference corner	N/A	N/A	N/A
	Geodetic control	Four times the height of the line above ground level	N/A	HVT lines should not be strung over a station since they will cause interference to GPS signals. Contact WisDOT at 866-568-2852 or geodetic@dot.wi.gov when **planning** a HVT line within 500' of a geodetic control monument.

NOTES

A WisDOT is the owner or partial owner of all Wisconsin Height Modernization Program (WI-HMP) stations, geodetic control stations, and any R/W, property, government corner, and reference corner monuments set near or along STHs.

B "Disturbing," when referring to a WI-HMP station, means the movement of the geodetic control station monument by 1/16" or greater. If a monument is struck by a piece of equipment, it is generally considered as disturbed until it can be resurveyed and proven otherwise.

C Primary effort should be focused on **not disturbing the monument itself** although a witness post or lath near a monument should not be destroyed either.

D Not all geodetic control station monuments are part of the WI-HMP. Contact WisDOT's Geodetic Surveys Unit at 866-568-2852 or geodetic@dot.wi.gov to find out if a monument is a WI-HMP station. As conditions change, stations may be added or deleted from WI-HMP. For each utility project, it is recommended to learn the status of a station even if it was known in a previous year.

E Minimum horizontal clearance for a 1:1 slope should be based the vertical distance from the top of a monument to the bottom of the actual excavation or trench. Figure 5 shows an example for a 10-foot-deep excavation. Minimum facility or excavation clearance shall be measured horizontally between the nearest edge of a monument and the nearest edge of a utility trench, excavation, pole, pedestal, etc. Where the side of the trench or excavation is not vertical, the part of the trench or excavation side nearest the monument shall be used to measure the clearance distance. Minimum equipment clearance shall be measured horizontally between the nearest edge of a monument and the nearest edge of the equipment tracks, wheels, outrigger stabilization foot pads, frame, bucket, etc. used for making the trench, hole, or excavation or for setting a pole, vault, cabinet, building, etc.

F Use the larger slope values shown in blue brackets, [1½:1], when working in unconsolidated, clean granular, or saturated soils. The first number is the horizontal distance between the nearest edge of a monument and the nearest edge of a utility excavation, trench, pole, etc. The second number is the vertical distance from the top of a monument to the bottom of the actual excavation or trench.

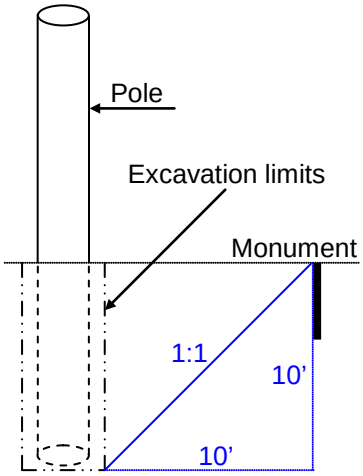


Figure 5. Slope measurement example.

1.0 Background

Controlled-access highways are separated into two categories: fully controlled or "freeways" (and "Interstates") and partially controlled or "expressways." See definitions 3 and 4 in HMM 09-15-05, 2.0. For the purposes of this policy, a list of these highways is provided in Table 1.

2.0 General Policy

Longitudinal utility installations on controlled-access highways are limited to communications and electric transmission facilities[1] only. Other types of utility facilities may be allowed to longitudinally occupy controlled-access highways in rare circumstances. See 3.0 for details.

A utility may be charged a fee or provide WisDOT with communication infrastructure (e.g., dark fiber), or a combination of fees and infrastructure, for the right to locate its facilities longitudinally on controlled-access highways (see 2.3). If this is warranted, shared resource agreements shall be negotiated with the utility on a case-by-case basis with a goal of providing mutual benefits to all parties involved. Under Wis. Stat. s. 86.16(6), WisDOT may not charge a fee for the initial issuance of any permit necessary to construct broadband infrastructure to unserved areas of the state as designated under Wis. Stat. s. 196.504(2)(d).

On highways not presently constructed as controlled-access but the right-of-way (ROW) has been acquired for the construction of such a facility, the requirements for utility installations shall be the same as for controlled-access highways.

2.1 Transmission, Distribution and Service Connection Facilities

Only transmission utility facilities are allowed to longitudinally occupy controlled-access highways. Distribution facilities may be considered in hardship or special cases such as a short underbuild section.

Service connections are not allowed longitudinally or to cross controlled-access highways, but may be permitted to help a utility's customers if feasible alternatives are not available. For example, a feasible alternative would allow access to a facility from a frontage road. Service connections are not allowed to outdoor advertising signs, i.e., the service shall be entirely installed on and accessed from private property.

2.2 Longitudinal Requirements

Longitudinal utility installations on controlled-access highways shall be located at or as near as practical to the ROW line. Facilities located on private easements may be allowed to overhang the ROW with a WisDOT permit. Below ground installations should not be within the clear zone. Aboveground installations shall not be within the clear zone. Utilities shall not be installed longitudinally within the median area.

Due to WisDOT's concerns regarding longitudinal installations on controlled-access highways with respect to safety, aesthetics, and multiple installations through the same corridor, special provisions may be warranted for the facilities. This includes, but is not limited to, requiring:

1) Utilities to resolve collocation issues with each other before permits are issued
2) Access restrictions to a site during construction and maintenance of the facility
3) A full-time inspector representing WisDOT and paid for by the utility
4) A full-time traffic control provider
5) Installation of a duct (conduit) system and/or placement of its facility within a duct
6) Replacement of damaged or destroyed trees/vegetation or transplanting trees that can be saved at the discretion of WisDOT. See HMM 09-15-45, 2.0 for additional requirements.

[1] See HMM 09-15-01, 3.6 for additional information on siting electric transmission line facilities.

2.3 Longitudinal Occupation Fees and Applicable Controlled-Access Highways

Under Wis. Stat. ss. 86.07(2)(a) and 84.01(31), WisDOT has authority to require fees or receive communication infrastructure in exchange for the longitudinal occupation of controlled-access highway ROW. The current rates and applicable controlled-access highways are listed in Table 1. State trunk highways (STHs) not listed in Table 1 are excluded from the fee/infrastructure requirement. The rates below also apply to private utility installations on all STHs. All rates cover a 20-year period. Occupation distance is measured along the highway centerline.

Table 1: Longitudinal ROW Occupancy Rates on Controlled-Access Highways*

*Includes Interstates, freeways and expressways listed below

Broadband Infrastructure	Controlled-Access Highways		Bridge Attachments[3]	
	≤ 100,000 AADT[1]	> 100,000 AADT	Interstate	Non-Interstate
No fee on all highways and bridges	$10,000/mile	$12,000/mile	$25,000	$10,000
	Add 20% per duct per mile[2]		Add 20% per duct[4]	
Initial issuance of any permit per Wis. Stat. s. 86.16(6)	1) AADT = Annual Average Daily Traffic (counts) 2) Each duct over two		3) Costs on unique bridges are below 4) Each duct over six	

Highway	From	To	Unique Bridge Cost – Description
I-39	IL state line	WIS 29(E), Wausau	$50,000 – All river bridges > 500 feet
I-41	IL state line	I-43, Green Bay	$100,000 – Lake Butte des Morts
I-43	I-90, Beloit	I-41, Green Bay	$250,000 – Frigo
I-90	IL state line	MN state line (no bridge)	$50,000 – All river bridges > 500 feet
I-94	IL state line	MN state line (includes bridge)	$50,000 – All river bridges > 500 feet
I-535	Superior	Duluth	$500,000 – Blatnik
I-794	I-43/94	WIS 794	$250,000 – Hoan
I-894	I-94/US 45 (Zoo interchange)	I-43/94 (Mitchell interchange)	
US 10	I-41	CTH J, Stockton	
US 10	I-39/USH 51	WIS 13, Marshfield	$25,000 – Wisconsin River
US 12	IL state line	WIS 67, Elkhorn	
US 12	CTH N, Cottage Grove	WIS 188	$25,000 – Yahara River
US 14	WIS 138, Oregon	US 12/14, Middleton (University Ave)	
US 18	US 151, Dodgeville	CTH N, Cottage Grove	
US 41	I-94	Lloyd Road, Milwaukee	
US 41	US 45	Bus 41(E), Peshtigo	
US 45	I-94/894	CTH D, West Bend	
US 51	Larson Beach Rd, McFarland	US 151, Madison (E Washington Ave)	
US 51	CTH CV, Token Creek	Grinde Road, DeForest/Windsor	
US 51	WIS 29(E), Wausau	US 8	$25,000 – All river bridges > 500 feet
US 53	I-90, La Crosse	CTH HD, Holmen	
US 53	I-94, Eau Claire	WIS 13, Superior	$25,000 – All river bridges > 500 feet
US 141	US 41, Green Bay	WIS 64, Pound	
US 151	IA state line (no bridge)	US 14, Madison (Park St)	
US 151	Zeier Road, Madison	WIS 23, Fond du Lac	
WIS 16	I-94, Waukesha	CTH P, Oconomowoc	
WIS 23	I-43	CTH C, Plymouth	
WIS 26	I-39, Janesville	WIS 16-60	$25,000 – All Rock River bridges
WIS 29	I-94	I-41, Green Bay	$25,000 – All river bridges > 500 feet
WIS 57	I-43	WIS 42/CTH MM	
WIS 145	WIS 181	US 41/45	
WIS 172	I-43	I-41	
WIS 312	I-94	US 53	$25,000 – Chippewa River
WIS 441	I-41(S)	I-41(N)	$100,000 – Little Lake Butte des Morts

When fees or infrastructure are warranted, WisDOT and a utility shall negotiate an agreement to determine these and other specific installation requirements (e.g., handhole placement) prior to permit issuance. Fees or services agreed to by WisDOT and a utility for the longitudinal occupation of controlled-access highway ROW are not part of the compensable/non-compensable policy regarding utility relocation unless noted in an agreement. Utilities may receive a prorated share of occupation fees paid if WisDOT requires the utility to move its facility off controlled-access highway ROW for an improvement project.

3.0 Occupation for Special Cases

WisDOT recognizes that a utility may need to longitudinally occupy controlled-access highway ROW in special or hardship situations. When longitudinal facility installations other than communications or electric transmission are requested, the utility shall show to WisDOT's satisfaction that:

1) Alternate locations are not available or cannot be implemented at reasonable cost from the standpoint of providing efficient utility services in a manner conducive to safety, durability and economy of maintenance and operations.

2) The accommodation will not adversely affect highway and traffic safety, and the design, construction, operation, maintenance or stability of the highway.

3) It will not interfere with or impair the present highway use or its future expansion.

4) Disapproval of using highway ROW would result in a loss of productive agricultural land, or loss of productivity of agricultural land. In this case, the utility must provide information on the direct and indirect environmental and economic effects of such loss. WisDOT will review and evaluate these effects.

5) The accommodation satisfies the conditions of 6.0 – 6.3.

6) The facility will be located at or as near as practical to the ROW line and in no case within the clear zone.

Utilities shall not be allowed to be installed longitudinally within the median area.

A longitudinal occupation fee shall also be charged to the utility to maintain consistent *UAP* application.

4.0 Existing Utilities

When a utility already exists within the ROW a proposed controlled-access highway and it can be serviced, maintained and operated without access from the traffic lanes or ramps, it may remain as long as it does not adversely affect the safety, design, construction, operation, maintenance, or stability of the highway. Otherwise, it shall be relocated.

5.0 Crossings

New utility installations and adjustments/relocations of existing utilities may be permitted to cross a controlled-access highway. Where a utility follows a crossroad or street that is over or under a controlled-access highway, the utility owner shall provide a way for crossing the highway at a location on the crossroad or street such that the utility can be constructed and/or serviced without access from the highway traffic lanes or ramps.

5.1 Overhead

Install overhead utility lines crossing a controlled-access highway such that supporting structures are located outside of the access control lines. Do not install supporting poles within the clear zone. Where required, intermediate supporting poles may be placed in medians of sufficient width to provide the clear zone from the edges of both traveled ways provided the conditions of 6.0 – 6.3 are also met. If additional lanes are planned, the clear zone shall be determined from the ultimate edges of the traveled way.

When ROW lines and access control lines are not the same (e.g. when frontage roads are provided) supporting poles may be located in the area between them.

Supports for overhead utilities within interchanges are only allowed when all of the following conditions are met:

1) The appropriate clear zone is provided with respect to the traffic lanes,

2) The appropriate clear zone from edge of ramp is provided,

3) Essential sight distance is not impaired, and

4) The conditions of 6.0 – 6.3 are satisfied.

5.2 Underground

Handholes, vaults and other points of access to underground utilities may be permitted within a controlled-access highway only when they are located beyond the clear zone of the traffic lanes or ramps and provided the conditions of 6.0 – 6.3 are satisfied. If additional lanes are planned, the clear zone shall be determined from the ultimate edges of the traveled way.

5.3 Irrigation Ditches and Water Canals

Irrigation ditches and water canals should be excluded from controlled-access highways. When a crossing is absolutely necessary, it may be made by underground siphon or through culverts or bridges as appropriate to the size of canal, topographic conditions, and highway safety aspects. Locations and structures are to be designed in the same manner as are facilities for natural transverse drainage.

All access and egress for servicing or patrolling such facilities shall be from outside the access control lines. Special ditch cleaning equipment may be allowed to cross the controlled-access highway in those cases where significant travel distance would otherwise be required to use grade separation structures provided a permit application containing an appropriate work zone traffic control plan is first obtained from the utility.

6.0 Right-of-Way Access

When permitted by WisDOT, access for constructing or servicing a utility along or across a controlled-access highway shall be limited to:

1) Frontage roads where provided.

2) Gates where permitted (see 6.3).

3) Nearby or adjacent public roads and streets.

4) Trails along or near the ROW line which connects only to an intersecting road.

Entry to the median area should be restricted to nearby grade separation structures, stream channel crossings, or other suitable locations not involving direct access from the highway traffic lanes or ramps.

Submit in the permit application the anticipated maintenance procedures for the proposed utility installation.

6.1 Special Cases: Direct Access from Highway/Ramp

When existing utility supports, manholes, or other appurtenances are located in medians, interchange areas, or otherwise inaccessible portions of the controlled-access highway, access to them from the traffic lanes or ramps may be permitted. A traffic lane closure may also be allowed to facilitate access provided the utility has an approved traffic control plan from WisDOT. Access would only be allowed in special cases and only by permits issued to the utility specifying the conditions that will ensure both motorist and worker safety.

6.2 Security Fence

WisDOT's security fence shall not be opened unless otherwise stated in a utility's permit. If the fence is damaged, the utility shall repair or replace the fence before concluding its work operations at the end of the day, or temporarily secure the fence in some manner to deter access by pedestrians and animals.

If the existing security fence must be opened to facilitate the utility operation, it shall be disassembled and, upon completion of the permitted work, reinstalled in its original location to a uniform profile. All fencing material, with the exception of the posts, may be reused. New posts shall be supplied by the utility. Any fencing material damaged during removal or reinstallation shall be replaced with new material.

During utility construction, the security of the controlled-access highway shall be maintained at all times by the installation of a temporary fence. The temporary fence shall be placed between the highway and the actual work area.

All work performed and the fencing and gate materials supplied shall conform to WisDOT's specifications.

6.3 Security Fence Gates

A utility may request to disassemble a portion of WisDOT's security fence and install a temporary or permanent gate in its location. A permanent gate in the security fence may be allowed, but only in rare cases. This type of access request must also be approved by the Federal Highway Administration (FHWA) when on an Interstate highway. When a gate is allowed, provisions to guard against unauthorized use are required.

Any gate should match the profile of the adjacent security fence. Wood posts may be substituted for the metal posts supporting the gate. Any fencing material damaged with the installation of the gate shall be replaced with new material. The gate and any other fencing material shall be supplied by the utility at its own expense.

Keep a gate locked whenever a utility work site is unattended. The utility shall keep all keys for a gate.

7.0 Vehicular Tunnels

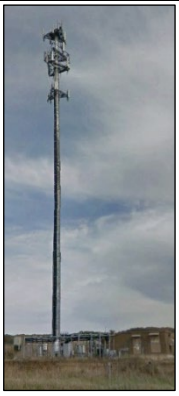
Utilities shall not be permitted to occupy vehicular tunnels on controlled-access highway on new location except in extreme cases. Under no circumstances, however, shall a utility which transports a hazardous material be allowed to occupy a vehicular tunnel.

When a utility occupies space in an existing vehicular tunnel that is converted to a controlled-access highway, relocation of the utility may not be required. Utilities that have not previously occupied an existing vehicular tunnel that is incorporated in a controlled-access highway will not be permitted therein except in extreme cases.

1.0 Background

There are many types of cellular installations that wireless providers may build depending upon their network needs. The following cellular facility descriptions are referenced throughout this policy.

TABLE 1 – CELLULAR FACILITY DESCRIPTIONS

Lattice towers or tall monopoles are traditional cellular installations designed to cover a maximum geographic territory. Typically, a fenced equipment compound is associated with the installation.			Macro cells may be installed on rooftops, building facades, monopoles and other steel structures. These cells provide coverage over a broad area (up to several miles). When on monopoles, they are typically over 50 feet in height.		
Small wireless facilities (SWFs) are miniature versions of traditional cell sites. They are self-contained, small, lightweight, low-power and an extension of the macro network. SWFs include microcells, picocells, metrocells and femtocells. Antenna attachments are SWFs mounted to existing infrastructure. In Wisconsin, a micro wireless facility[1] is defined as a SWF that does not exceed 24" in length, 15" in width, and 12" in height and has no exterior antenna longer than 11".			 		

2.0 Legal Authority

New federal and state laws were enacted in 2019 to enable the deployment of 5G technology using small-wireless facilities (SWFs). These laws affect the installation of SWFs on highway right-of-way (ROW) and other public infrastructure. Cellular installations not defined in statute as SWFs shall be handled using Wisconsin's existing utility and permitting laws as listed in HMM 09-15-05 and other corresponding federal laws.

2.1 Federal Law

On September 27, 2018, the Federal Communications Commission (FCC) released a Declaratory Ruling and Third Report and Order 18-133[2], on *Accelerating Wireless Broadband Deployment by Removing Barriers to Infrastructure Investment*. The Order requires state and local governments to follow specific rules for accommodating small-wireless facility (SWF) installations on highway ROW and other public infrastructure. The order revised 47 CFR, Part 1 by creating a new subpart U titled, "State and Local Government Regulation of the Placement, Construction, and Modification of Personal Wireless Service Facilities." The new requirements have been adopted into this policy where applicable.

[1] Wis. Stat. s. 66.0414(1)(p)
[2] Effective January 14, 2019

2.2 Wisconsin Law

On July 10, 2019, the Wisconsin Legislature enacted 2019 Wisconsin Act 14, which corresponds to the FCC ruling on SWFs but includes a few additional requirements. The law created Wis. Stat. s. 66.0404 *Mobile Tower Siting Regulations* and s. 66.0414 *Small Wireless Facilities*. The new requirements have been adopted into this policy where applicable.

3.0 General Policy

Cellular towers, monopoles, macro cells, SWFs and their associated equipment may be allowed on highway ROW. This includes controlled-access highways. WisDOT has the right to deny any cellular installation to protect public safety and welfare, or if it may adversely affect highway operations, maintenance, or a highway improvement project. This is consistent with utility accommodation policy in general. SWFs are also allowed on utility poles[3] and third party utility poles. A utility pole is any pole used for electric distribution, lighting, traffic control, signage, or a similar function.

Under Wis. Stat. s. 66.0414(1)(t), "Right-of-way" (ROW) means the area on, below, or above a highway, as defined in s. 340.01 (22), other than a federal interstate highway; a sidewalk; or other similar property, including property owned or controlled by WisDOT.

A permit is required for each cellular installation. If a wireless provider wants to install multiple cellular facilities in the ROW, WisDOT may develop an Agreement with the provider that details items germane to all permits thereby reducing the amount of documentation needed for each individual permit.

3.1 Right-of-Way Use Fees and Shared Resource Projects

Under Wis. Stat. ss. 66.0414, 86.07(2)(a) and 84.01(31), WisDOT has the authority to charge fees or receive communication services in exchange for the use of highway ROW. A utility may be charged a fee for locating cellular facilities in the ROW, which also includes rest areas, waysides, park-n-ride lots and other WisDOT-owned or controlled property. WisDOT's rate schedule is listed in Table 2. Instead of the use fee, WisDOT may enter into a shared resource project with a wireless provider to obtain tower space for State Patrol antennas or communication services for WisDOT traffic management systems.

TABLE 2 – RATE SCHEDULE for CELLULAR FACILITY USE on WisDOT ROW

Cellular Facility Description	Annual Site Rates	
	Not a controlled-access highway	Controlled-access highway
1. Lattice tower or tall monopole (with or without equipment compound)	$6,000	$12,000
2. Macro cell	$1,200	$2,400
3. Small wireless facility on utility pole or third party utility pole	$20 times the total number of SWF[4] in WisDOT ROW	
4. Small wireless facility on WisDOT utility pole	$250 per SWF[5]	
All rates are fixed for 5 years, then may be adjusted by: 1-2) the change in the Consumer Price Index (CPI)[6] – capped at double the published rate in Table 2. 3) 10 percent rounded to nearest dollar[7] 4) 10 percent rounded to the nearest multiple of five dollars[8]		

Fees or services agreed to by WisDOT and a utility for cellular installations on highway ROW are not part of the compensable/non-compensable policy regarding utility relocation unless noted in an Agreement. A utility may receive a prorated share of its fee if WisDOT requires the utility to move its facility off highway ROW for an improvement project.

[3] Utility pole defined in Wis. Stat. s. 66.0414(1)(x)
[4] Wis. Stat. s. 66.0414(2)(c)5. See WisDOT's website for the current number of permitted SWFs on these utility poles in WisDOT ROW.
[5] Wis. Stat. s. 66.0414(4)(d)1.
[6] CPI = U.S. City Averages for Urban Wage Earners and Clerical Workers, All Items (1982-84 = 100) published by the United States Department of Labor, Bureau of Labor Statistics
[7] Wis. Stat. s. 66.0414(2)(c)6.
[8] Wis. Stat. s. 66.0414(4)(d)2.

4.0 Permit Applications

Submit a separate permit application for each cellular facility via email to the State ROW Permits Engineer. An FTP site link may also be used. Use WisDOT's standard DT1553 permit application form and submit it as a Word document. Submit supporting items as PDF files, which include required drawings and information as detailed in HMM 09-15-15, sections 2.0 – 2.5, along with other statutory requirements.[9] Complete any required environmental and tribal reviews and submit any correspondence or permit approvals from applicable agencies. If required by local ordinances or zoning, submit any correspondence or permit approvals to meet local laws, aesthetic requirements or allow installations in designated historic or underground utility facility districts.

For the items listed in Table 3 #3, utility permits are only required when working in the ROW to replace existing SWFs or install micro wireless facilities, which may include obstructing or closing a lane, shoulder or sidewalk. A permit is not required for routine maintenance unless the work closes/obstructs a lane, shoulder or sidewalk.

4.1 Permit Application Processing

Federal and state laws have established specific periods or "shot clocks" in which permit applications for cellular facilities must be reviewed for completeness (initial review) and either approved or denied (final decision). The shot clock starts when WisDOT receives the application.

For SWFs, WisDOT shall notify the applicant within 10 days of receiving the permit application whether it is complete. For other cellular applications, WisDOT shall notify the applicant within 30 days of receiving the application whether it is complete. For an incomplete application, WisDOT shall inform the applicant what is needed to make the application complete. When resubmitted with the required information identified, the final decision shot clock restarts at zero.

TABLE 3 – WisDOT PERMIT APPLICATION PROCESSING "SHOT CLOCKS" for CELLULAR FACILITIES

Cellular Facility Description ▼ / Processing (Days) ▶	Initial Review	Final Decision
1. Collocation of small wireless facilities on an existing structure	10[10]	60
2. Small wireless facilities on new or replacement utility pole		90
3. Routine maintenance, replace existing SWF with similar/same size/smaller facility, or install/maintain/replace micro wireless facilities strung on cables between existing poles[11]	N/A	20[12]
4. Lattice tower, tall monopole or macro-cell – collocation involved on existing structure	30[13]	90[14]
5. Lattice tower, tall monopole or macro-cell – new structure		150[14]

- For all categories, the shot clock starts when the permit application is received. If WisDOT notifies an applicant that its application is complete with its initial submittal, the final decision shot clock starts at the initial submittal date – not when WisDOT notifies the applicant.
- For both 1 and 2, the applicant may consider its permit application approved if WisDOT fails to approve or denies it within the 60- or 90-day period.[15] The applicant and WisDOT may mutually agree to extend the deadline for WisDOT to approve or deny a permit application.

If a permit for a SWF is denied, WisDOT shall provide the applicant with written documentation explaining the basis for the denial no later than the date that the permit application is denied. An applicant may cure the deficiencies identified in the documentation and resubmit the permit application no later than 30 days after receipt of the documentation without being required to pay an additional application fee. WisDOT shall approve or deny the revised permit application no later than 30 days after its receipt.

If a permit for a non-SWF is denied, the process identified in s. 86.16(5) shall be used.

[9] Wis. Stat. s. 66.0414(3)(c)2.
[10] Wis. Stat. s. 66.0414(3)(c)1.c.
[11] WisDOT may require a permit under Wis. Stat. s. 66.0414(3)(e)2. or s. 66.0414(3)(f)
[12] If a permit is issued, WisDOT would follow s. 86.16(5) since they are standard utility permits
[13] 47 CFR, Part 1, Subpart U, s. 1.6003(d)(2)(iii)
[14] 47 CFR, Part 1, Subpart U, ss. 1.6003(c)(1)(ii) and (iv)
[15] Wis. Stat. s. 66.0414(3)(d)2.

4.2 Permit Application Fees

Submit a non-refundable permit application fee for cellular facilities shown in Table 4. No permit application fee is charged for the items listed in #4 unless WisDOT charges a general fee to review all utility permit applications.

TABLE 4 – PERMIT APPLICATION FEE SCHEDULE for CELLULAR FACILITY on WisDOT HIGHWAY ROW

Cellular Facility Description	Application Fee
1. Lattice tower, tall monopole or macro-cell	$1,000
2. Installation or replacement of a utility pole together with collocation of an associated SWF	$1,000*[16]
3. Small wireless facility on existing utility pole	$100*[17]
4. Routine maintenance, replace existing SWF with similar/same size/smaller facility, or install/maintain/replace micro wireless facilities strung on cables between existing poles[18]	$0
* WisDOT may adjust these fees by 10 percent every five years, rounded to the nearest multiple of five dollars. During each 5-year period, the adjustment may be applied incrementally or as a single adjustment.[19]	

Make all checks for cellular permit applications payable to the "Wisconsin Department of Transportation" and mail them to the State ROW Permits Engineer at the address listed on the right:

Wisconsin DOT
Bureau of Highway Maintenance
4822 Madison Yards Way, 5th Floor South
Madison, WI 53705

5.0 Specific Small Wireless Facility Requirements

The following requirements for small wireless facilities (SWFs)[20] are a part of state and/or federal law:

1. "Small wireless facility" means a wireless facility to which all of the following apply:
   a. The SWF (satisfies any of the following):
      i. Is mounted on a structure 50 feet or less in height including any antenna, or
      ii. Is mounted on a structure no more than 10 percent taller than other adjacent structures, or
      iii. Does not extend existing structures on which they are located to a height of more than 50 feet or by more than 10 percent, whichever is greater.
   b. Each antenna associated with the deployment of the SWF, excluding associated antenna equipment, is no more than three cubic feet in volume.
   c. All other wireless equipment associated with the structure, including the wireless equipment associated with the antenna and any pre-existing associated equipment on the structure, is no more than 28 cubic feet in volume.
   d. The SWF does not require registration as an antenna structure under 47 CFR Part 17.
   e. The SWF is not located on Tribal lands, as defined in 36 CFR 800.16 (x).
   f. The SWF does not result in human exposure to radio frequency in excess of the applicable safety standards specified in 47 CFR 1.1307.

2. The height of a SWF installed or modified in the ROW may not exceed the greater of:[21]
   a. A height that is 10 percent taller than the existing utility pole or wireless support structure on which the SWF is located.
   b. Fifty feet above ground level.

3. SWFs may be erected on a utility pole in the ROW. The height of an installed or modified utility pole in the ROW may not exceed the greater of:[22]
   a. A height that is 10 percent taller that the tallest existing utility pole as of July 12, 2019, that is located within 500 feet of the new or modified pole in the same ROW.
   b. Fifty feet above ground level.

4. These height limits may be exceeded if the wireless provider complies with the height limits under zoning ordinances enacted by a municipality or county.[23]

[16] Wis. Stat. s. 66.0414(3)(d)1.c.
[17] Wis. Stat. s. 66.0414(3)(d)1.
} Up to 30 permit applications may be submitted as a consolidated application using the one fee under Wis. Stat. s. 66.0414(3)(c)1.j.
[18] Wis. Stat. s. 66.0414(3)(e)
[19] Wis. Stat. s. 66.0414(3)(d)2.
[20] Wis. Stat. s. 66.0414(1)(u)
[21] Wis. Stat. s. 66.0414(2)(e)2.
[22] Wis. Stat. s. 66.0414(2)(e)3.
[23] Wis. Stat. s. 66.0414(2)(e)4.

5.1 Specific Requirements for Small Wireless Facilities with Permit Submittals

In addition to the information required on form DT1553 and detailed in section 4.0, submit the following items with permit applications involving SWFs:[24]

1. A general description of the proposed SWF and associated utility pole, if applicable. The details of such description shall be appropriate to the type of work to be performed with special emphasis on matters likely to be affected or impacted by the proposed work (e.g., accommodating vehicles, pedestrians, erosion, etc.). Include site plans and detailed construction drawings to scale that identify the proposed SWF and ROW use.
2. To the extent the proposed SWF involves collocation on a new utility pole, existing utility pole, or existing wireless support structure, a structural report performed by a licensed professional engineer documenting that the utility pole or wireless support structure will structurally support the collocation, or that the utility pole or wireless support structure will be modified to meet structural requirements, in accordance with applicable codes.
3. If the SWF will be collocated on a utility pole or wireless support structure owned by a third party, other than a governmental pole or a utility pole for designated services, certification that the wireless provider has permission from the owner to collocate on the utility pole or wireless support structure.
4. Certification by the wireless provider that the SWF will comply with relevant FCC regulations concerning radio frequency emissions from radio transmitters and unacceptable interference with public safety spectrum, including compliance with the abatement and resolution procedures for interference with public safety spectrum established by the FCC in 47 CFR 22.970 - 22.973 and 47 CFR 90.672 - 90.675.
5. Certification by the wireless provider that the SWF will not materially interfere with any of the following:
   a. The safe operation of traffic control equipment
   b. Sight lines or clear zones for transportation or pedestrians
   c. The Federal Americans with Disabilities Act or similar federal or state standards regarding pedestrian access or movement
6. A statement that the SWF shall comply with all applicable codes.
7. If SWF collocation is on a WisDOT utility pole for street lights, traffic signals, signage, or ITS facilities, the wireless provider shall include plans and specifications using WisDOT as-built plans, which will be provided by WisDOT as part of the make-ready work process.[25]

5.2 Specific Requirements for non-SWFs

Submit the following items with permit applications involving lattice towers, monopoles and macro cells:

1. A general description of the proposed facilities. The details of such description shall be appropriate to the type of work to be performed with special emphasis on matters likely to be affected or impacted by the proposed work (e.g., accommodating vehicles, pedestrians, erosion, etc.). Include site plans and detailed construction drawings to scale that identify the proposed facilities and ROW use.
2. A structural report performed by a licensed professional engineer documenting that the facility will structurally support itself or will be supported by a wireless support structure (e.g., a macro cell attached to a building), including any collocation of other wireless facilities, in accordance with applicable codes.
3. For collocation installations, submit a copy of the attachment agreement or other certification from the tower, monopole or macro cell owner that the wireless provider has permission to collocate.
4. Items 4 - 6 in section 5.1 above (replacing non-SWFs for SWFs in the language).
5. Include zoning statements or other approvals as needed to certify that the facilities comply with local ordinances.
6. Include copies of purchased private easements for equipment compounds or other facilities adjacent to WisDOT ROW when a portion of those facilities overhangs WisDOT ROW.
7. A STH Connection application/permit for a driveway when an equipment compound or similar facilities are a part of the installation. Note: a driveway permit is not automatically granted especially if there is existing access to a parcel.

[24] Items 1-6: Wis. Stat. s. 66.0414(3)(c)2.
[25] Item 7: Wis. Stat. s. 66.0414(4)(g)

6.0 Cellular Facility Location on WisDOT ROW

Locate cellular facilities as near as practical to the ROW line. Facilities located on private easements may be allowed to overhang the ROW with a WisDOT permit. Cellular installations should not be within the clear zone. If they must be in the clear zone, they must be either breakaway or behind guardrail or other impact attenuator. Due to the nature of SWFs, many of these locations may be on utility poles closer to the roadway. However, SWFs shall still follow clear zone rules. Do not install cellular facilities within the median area since these areas are typically used for WisDOT lighting, traffic signals and ITS operations. Do not install cellular facilities at intersections if they obstruct sight distance or vision corners.

Due to WisDOT's concerns regarding the proliferation of cellular antennas, collocation on cellular towers, utility poles or utility service structures is encouraged. WisDOT may schedule meetings with wireless providers to resolve collocation issues before permits are reviewed.

7.0 Controlled-Access Highway Right-of-Way Access

When permitted by WisDOT, access for constructing or maintaining cellular facilities on or adjacent to a controlled-access highway shall be limited to:

1. Frontage roads where provided
2. Gates where permitted (see 7.3)
3. Nearby or adjacent public roads and streets
4. Trails along or near the ROW line that connect only to an intersecting road

Submit in the permit application the anticipated maintenance procedures for the proposed cellular installation.

7.1 Special Cases: Direct Access from Highway/Ramp

In special cases when cellular facilities are permitted within interchange areas or otherwise inaccessible portions of a controlled-access highway, access to them from traffic lanes or ramps may also be permitted. An approved WisDOT traffic control plan for a lane, shoulder or ramp closure is required and will likely include day and time restrictions for access.

7.2 Security Fence

Do not open WisDOT’s security fence unless otherwise authorized in a permit. A wireless provider shall repair or replace damaged fence before concluding its work operations at the end of the day, or temporarily secure the fence in some manner to deter access by pedestrians and animals.

When the existing security fence is opened to facilitate construction, it shall be disassembled and, upon work completion, reinstalled in its original location to a uniform profile. All fencing material, except for the posts, may be reused. The provider shall supply new posts. Replace any fencing material damaged during removal or reinstallation with new material.

During construction, install a temporary fence to maintain controlled-access highway security at all times. Place the temporary fence between the highway and work area and attach it to the existing, upright security fence.

All work performed, and the fencing and gate materials supplied, shall conform to WisDOT’s specifications.

7.3 Security Fence Gates

A wireless provider may request to disassemble a portion of WisDOT’s security fence and install a temporary or permanent gate in its location. A permanent gate in the security fence may be allowed, but only in rare cases. This type of access request must be approved by the Federal Highway Administration (FHWA). When a gate is allowed, provisions to guard against unauthorized use are required.

Any gate should match the profile of the adjacent security fence. Wood posts may be substituted for the metal posts supporting the gate. Any fencing material damaged with the installation of the gate shall be replaced with new material. The provider shall supply the gate and any other fencing material at its own expense.

Keep the gate locked whenever the work site is unattended. The provider shall keep all keys for the gate.

8.0 Existing Cellular Facilities on a Proposed Controlled-Access Highway

Existing cellular facilities in the ROW of a proposed controlled-access highway may remain if they can be maintained and operated without access from the traffic lanes or ramps, and they do not adversely affect the design, safety, construction, maintenance, or operation of the highway. Otherwise, they shall be relocated.

9.0 Vehicular Tunnels

SWFs may be allowed in vehicular tunnels if needed to provide emergency communications for motorists.

10.0 Locating SWFs on WisDOT Facilities

Wisconsin law allows SWF collocation on WisDOT utility poles for streetlights, traffic signals, signage, or ITS facilities. It is *recommended* that SWF installations be placed on streetlights since there are more problems associated with locating on other WisDOT facilities. This includes wires and other infrastructure attached to the outside of these facilities, resolving power supply issues, and access and potential interference with signals, cameras, etc.

1.0 General

Utility construction is comprised of many different components. Smaller items are detailed in section 1. More specific items are detailed in sections 2-5.

1.1 Permit at the Job Site

A complete copy of the WisDOT issued utility permit shall be in the possession of the utility's on-site work force, consultant, contractor or subcontractor at all times when work is being performed within the right-of-way (ROW). This includes a copy of WisDOT's approval for a service connection under an expedited service connection permit (see HMM 09-15-20) when used. Copies of permits or approvals may be electronic.

1.2 Use of Highway Median

Any use of a highway median is prohibited unless specifically authorized by a permit. See HMM 09-15-25, 7.1 for specific conditions that shall be met if median work is permitted.

1.3 Use of Temporary Guard Poles

No guard pole shall be set within the ROW unless specifically authorized by a permit. By definition, a guard pole is used to prevent aerial lines from falling onto the traveled way. Any guard poles permitted in the clear zone shall comply with HMM 09-15-25, 3.1

1.4 Unexpected Field Conditions

Any modification of the terms of the approved permit to meet changed or unexpected field conditions shall require prior approval from WisDOT.

1.5 Blasting

Blasting on the ROW is prohibited unless specifically authorized by a permit.

1.6 Traffic Signs

Do not remove any traffic sign (Figure 1) unless approved in a permit. This includes guide signs, warning signs, route markers, street names, etc. If needed, erect temporary traffic signs to guide motorists while the utility work is occurring.

Figure 1: Improper Sign Removal

1.7 Work Site Cleanup

Remove all debris, refuse and waste resulting from the utility's activities from the site and the motorists' view unless otherwise provided by the permit. Do not burn cuttings, brush or other debris within the ROW limits. Trees and other vegetation may be chipped and used as mulch if approved in a utility's permit.

1.8 Work Start and Completion Notices

If checked at the bottom of a utility's approved permit, contact the WisDOT utility permit coordinator listed on the permit form at least three days prior to starting the work. File written (email or fax okay) notice of completion of the permitted work and restorations within ***10 calendar days*** with the same person. WisDOT may use the sample form in Attachment 1 to assist with these notices.

2.0 Tree/Vegetation Control

Chemically treating, removing, trimming or damaging trees/vegetation on WisDOT ROW is prohibited to aid with utility installation unless specifically authorized by permit or except as provided under maintenance type activities (HMM 09-15-15, 3.0). At WisDOT's discretion, trees/vegetation proposed to be damaged or destroyed may have to be replaced (e.g., living snow fence). Remove each stump and properly backfill the hole when tree removal is permitted. Cutting the stump flush with the ground may also be allowed upon WisDOT approval.

Compensate WisDOT $200 for each tree ≥ 2" DBH (diameter at breast height) damaged or destroyed on electric transmission line projects unless specified in a utility's permit. Compensation is ***not*** required for trees that are dead, diseased, dying, located in the clear zone, or an invasive species as defined in Wis. Admin. Code Ch. NR 40. Upon WisDOT approval, a utility may plant prairie and/or pollinator seed mixtures in lieu of payment to restore ROW where trees have been removed provided restoration and compensation values are comparable.

Be aware of rare or endangered plant species, animal and insect species that feed off native vegetation, and invasive species that must be protected or avoided by law. Contact a local Department of Natural Resources (DNR) office or a region utility permit coordinator to receive assistance in identifying these areas in the ROW. The Karner Blue Butterfly, for example, is an endangered species that feeds off the wild lupine plant. In addition, exercise special care when handling ash trees due to the Emerald Ash Borer.

2.1 Cutting/Spraying Guidelines

All permit applications for spraying/cutting require Central Office review but submit them to the Region office initially. When submitting a permit application for spraying/cutting, explain or identify:

1) The highway side(s) the activity will be occurring (map highlighting is acceptable if it is on both sides) along with the corridor width(s).
2) The chemical(s) that will be sprayed and their active ingredients (provide list to WisDOT upon request)
3) How the chemicals will be applied (wand, broadcast)
4) The person(s) who will be applying the chemicals and their Wisconsin applicators license number(s)
5) How adjacent property owners will be notified prior to spraying (mail, door card, phone, in-person)?
6) If the spraying will occur near wetlands or waterways. If yes, has DNR been notified?
7) The type of cutting (trimming, selective cutting, whole tree removal)
8) What will be done with the cut wood (removed from site, given to nearby property owner, chipped/mulched)?
9) How will Oak Wilt and Emerald Ash Borer guidelines be handled, if applicable?
10) The types of equipment that will be used (bucket trucks, brushhogs, ATVs)
11) The names and cell phone numbers for the lead workers or supervisors on each crew or contractor working in the ROW. If it is not available now, provide when giving WisDOT the 3-day advance start notice.
12) How will traffic be handled, i.e., what type(s) of work zone traffic control will be used?

Include pictures as needed to clarify what vegetation will be targeted. For faster application processing, provide Google Earth kmz files. This helps match cutting/spraying locations with WisDOT's living snow fence database.

3.0 Construction Methods

Section 3 details construction methods that a utility may use in the ROW. This and other utility work shall follow WisDOT's applicable Standard Specifications for Highway and Structure Construction, current edition.

3.1 Trenched Construction

Trenched construction and backfill shall:

1) Restore the structural integrity of the highway facility (see Attachment 2),
2) Secure the utility facility against deformation that may cause leakage,
3) Assure against the trench entrapping excessive moisture or becoming a drainage channel, and
4) Assure against any backfill blocking highway drainage.

When necessary, backfill trenches for underground utility facilities with pervious material and provide the necessary outlets to prevent water entrapment. This may also include the construction of underdrains. If needed, WisDOT may direct contracted county maintenance staff to backfill and repave at the utility's expense.

3.2 Untrenched Construction

Use untrenched construction for all underground utility crossings of all highways that have a paved surface and are open to traffic unless specifically authorized in the permit. Special restoration methods are required if open cutting of pavement is allowed. See 5.2.

Accomplish untrenched installation of utility facilities by tunneling, driving, coring, directional boring and/or dry boring (augering). Water boring under a highway is prohibited unless specifically authorized in a permit. Specify the boring method on a utility permit application (see question 12). Using a manually tracked bore head is prohibited when crossing a major highway like an Interstate or other high-speed multi-lane highway.

Boring shall result in a close fit to the facility being installed. As a minimum, extend untrenched construction beneath the entire highway prism (from toe of inslope to toe of inslope or from back of curb to back of curb). Locate ground openings or pits for such work outside the clear zone and do not interfere with highway drainage.

When specifically authorized by WisDOT, the extent of the untrenched crossing may be reduced or eliminated where such construction methods are impractical or physically restricted by the terrain.

3.3 Potholing

Use potholing as a necessary means for the accurate vertical location of utilities. WisDOT allows air (vacuum) and water (jetting) methods. Within the pavement structure (lanes, shoulders, curb & gutter), use ***air*** only. Water may be allowed if the air method cannot penetrate frozen or densely compacted soil. Air or water may be used in other ROW areas beyond the pavement structure. Table 1 outlines the basic steps for potholing work.

Consult WisDOT prior to using water methods. If WisDOT agrees to its use, check the water jetting box on the permit application and show pothole locations on a drawing. Submit ***before*** pavement condition pictures at each pothole with the permit application and provide pictures of the fully restored potholes ***after*** the job is completed. This provides documentation that the restoration was finished. Monitor the potholes over the next few years, until WisDOT is satisfied that no additional settling is occurring, or until a new resurfacing or pavement replacement project is done. A utility must repair any pothole settlement (Figure 2).

Numerous pictures are not needed. Pictures should be taken from the same angle and distance for the before and after conditions and be far enough away to provide perspective for the location (i.e., not right next to the pothole). Send pictures to WisDOT in a jpg or pdf format. Pictures are not required for air potholing.

Use round cores for potholes within the pavement structure. Round cores are preferred since they prevent stress cracks due to elimination of corners. The maximum size of a pothole is 12" in diameter in the wheel paths and 16" in diameter outside the wheel paths. Beyond the pavement structure, the pothole size may be larger (18”-24”) and square upon WisDOT approval.

Table 1: Basic Potholing Steps

1) Saw cut pavement full-depth with a bit 12” to 16” in diameter resulting in a “core”.
2) Remove core and save for reuse if structurally sound.
3) Place a protective steel ring to protect the edge of the opening from damage.
4) Use vacuum equipment to excavate compacted material from the bottom of base course to beneath the utility facility.
5) Perform utility work (e.g., watch bore head, leak repair, service connection).
6) Protect utility facility with fine material.
7) Place self-mixing flowable fill material from the top of the fine material to bottom of the base course (fill is designed to be traffic-bearing in ~90 minutes).
8) Place non-shrink grout (grout is designed to be traffic-bearing in ~90 minutes).
9) Place the removed core (or a generic equivalent replacement core) in the remaining opening (original alignment and orientation is maintained if removed core is used) forcing the grout to the surface to fill the annular space and core extraction hole.
10) Seal the restored opening.

Figure 2: Improper pothole restoration

3.4 Nonmetallic Lines

Any nonmetallic pipe, cable or other kind of utility line that lacks a continuous and integral metallic component capable of detection by locating instruments shall be accompanied in its location by a continuous detectable metallic tracer wire or metallic tape.

3.5 Casing

WisDOT does not require casing. WisDOT recommends casing for facility protection, to aid in future expansion, and to eliminate future boring costs. When underground lines are cased, extend the casing at least two feet beyond the toe of slope, three feet beyond the ditch line, or two feet beyond the outer curbs in a curbed section.

4.0 Work Site Safety

The utility is responsible to secure its work site from any hazard to the public at all times until all work is done. Monitor vehicles, equipment and materials in active use at the work site to ensure consistently safe conditions.

WisDOT may require sheeting, shoring, bulkheads, temporary/permanent concrete barrier, etc. if considered necessary to protect the highway and the traveling public.

4.1 Equipment/Materials Storage

Store utility equipment and materials located at the work site but not in immediate (same day) use in a safe location off the ROW. If this not practical, then the equipment or materials may be stored beyond the clear zone and as close to the fence or ROW line as possible.

4.2 Vehicle/Equipment Visibility

Vehicles and equipment shall have their high intensity flashing (strobe or revolving) and hazard warning lights operating when they are within the clear zone during work operations.

4.3 Safety Garments

All WisDOT, county, utility, consultant and contractor personnel who are out of their vehicles and within the ROW shall wear Type 2 or 3 retro-reflective safety garments at all times.

5.0 ROW Restoration

A utility shall restore the highway and the adjacent ROW to its original (as close as possible) condition within ***two weeks*** after completing facility installation. Exceptions may be allowed (e.g., for bad weather) with prior approval from WisDOT. Failure of the utility to make prompt and satisfactory restorations of the highway or adjacent ROW may cause WisDOT to arrange for restoration by others at the utility's expense.

Restore any curb, gutter, pavement, shoulder, sidewalk, driveway, gravel base, ballast, or other highway element disturbed to the qualities, grades, compactions, conditions, etc., in accordance with WisDOT's Standard Specifications for Highway and Structure Construction, current edition. See 5.2 for additional requirements for pavement restoration. Any subsequent heavings, settlings, or other faultings attributable to the permitted work shall be repaired in a manner satisfactory to WisDOT at the utility's expense. Use Attachment 2 as a guide for backfilling excavations. Avoid situations as shown in Figure 3.

Figure 3: Examples of Improper ROW Restoration

Restore any disturbed turfed ROW area with at least 4" of topsoil and reseed with perennial grass or sod to the satisfaction of WisDOT. See section 2.0 for details on trees or vegetation restoration. Once restored, the utility shall maintain turfed areas, trees and vegetation until they achieve sustained growth.

If, in WisDOT's opinion, the permitted works or facilities are found to obstruct highway drainage, unduly increase the difficulty of highway maintenance, or in any other manner adversely affect a highway interest, the utility shall, upon notice, cure the fault as directed and restore the highway facility to the satisfaction of WisDOT.

5.1 Poles and Anchor Rods

Completely remove replaced poles from the highway. No replaced pole shall be allowed to remain, in whole or in part, nor shall it be sawed off. The pole's hole shall be properly backfilled and compacted. All anchor rods shall be removed or cut off one foot below ground level.

5.2 Pavement Restoration Requirements

Sawcut all pavement full-depth when open cutting. Attachment 3 has examples when pavement is not sawcut.

Concrete pavement shall be restored in conjunction with WisDOT standard detail drawing 13C9. Avoid creating additional joints when possible. The minimum dimension for a patch will be 6' by the full lane or shoulder width. High early strength concrete may be specified when needed. Additional guidance on concrete pavement repair can be found in FDM 14-25-10, Exhibit 10.1.

The minimum dimension for an asphaltic concrete patch will be 6' by the distance to the nearest joint or seam. Use hot mix asphalt whenever possible. If cold patch is needed in an emergency, replace with hot mix as soon as possible. Figure 4 below shows improper asphaltic pavement restoration.

Figure 4: Both patches improperly backfilled/compacted, and not patched to nearest joint or seam

6.0 Temporary Driveways for Utility Construction

Do not build temporary driveways for utility construction unless WisDOT has granted prior approval. If a temporary driveway is needed, submit a separate STH connection permit application dt1504 for WisDOT review along with the utility permit application. The reason(s) for needing the temporary driveway should be included on both applications. A temporary driveway may not be approved, so a utility is advised to have a back-up access plan. Do not locate a temporary driveway within the functional area of an intersection. See Figure 5.

Existing driveways may be used for utility construction as long as permission is obtained from the property owner. A STH connection permit is not required unless there will be a significant change in use, e.g., an agricultural driveway will experience heavy truck traffic or a major increase in the number of vehicle trips per day. In this situation, submit a STH connection permit to make temporary modifications to the driveway.

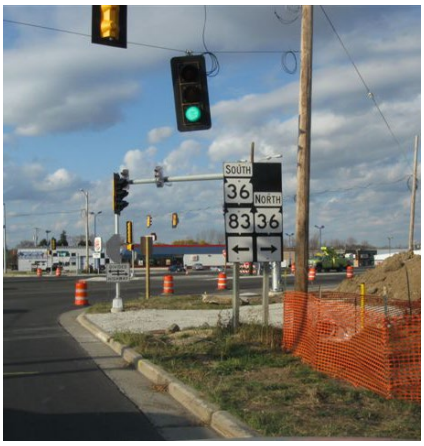


Figure 5: Temporary driveway within the functional area of an intersection

Note: When printing the sheet using this button, make sure that "current page" is checked; otherwise all 8 pages will print.

Attachment 1: Start and Work Completion Notice

Utility Permit Start Work Notice

Provide all information and email or fax to the utility permit coordinator or other region contact listed on the approved permit form a minimum three working days prior to the start of the work. When restoration is complete and ready for inspection, email or fax to the same contact.

WisDOT Utility Permit Number:

Utility Job Number:

Utility Company:

Utility Contractor Contact Name and 24-Hour Number:

Traffic Control Provider and 24-Hour Number:

Construction Start Date:

Construction Completion Date:

SOUTHWEST REGION
dotdtsdswutilitypermits@dot.wi.gov
Madison Office Fax: 608-243-3380
La Crosse Office Fax: 608-789-7896

SOUTHEAST REGION
dotdtsdseutilitypermits@dot.wi.gov
Fax: 262-521-4425

NORTHEAST REGION
dotdtsdneutilitycoordination@dot.wi.gov
Fax: 920-492-0144

NORTH CENTRAL REGION
dotdtsdncutilitypermits@dot.wi.gov
Wisconsin Rapids Office Fax: 715-423-0334
Rhinelander Office Fax: 715-365-5780

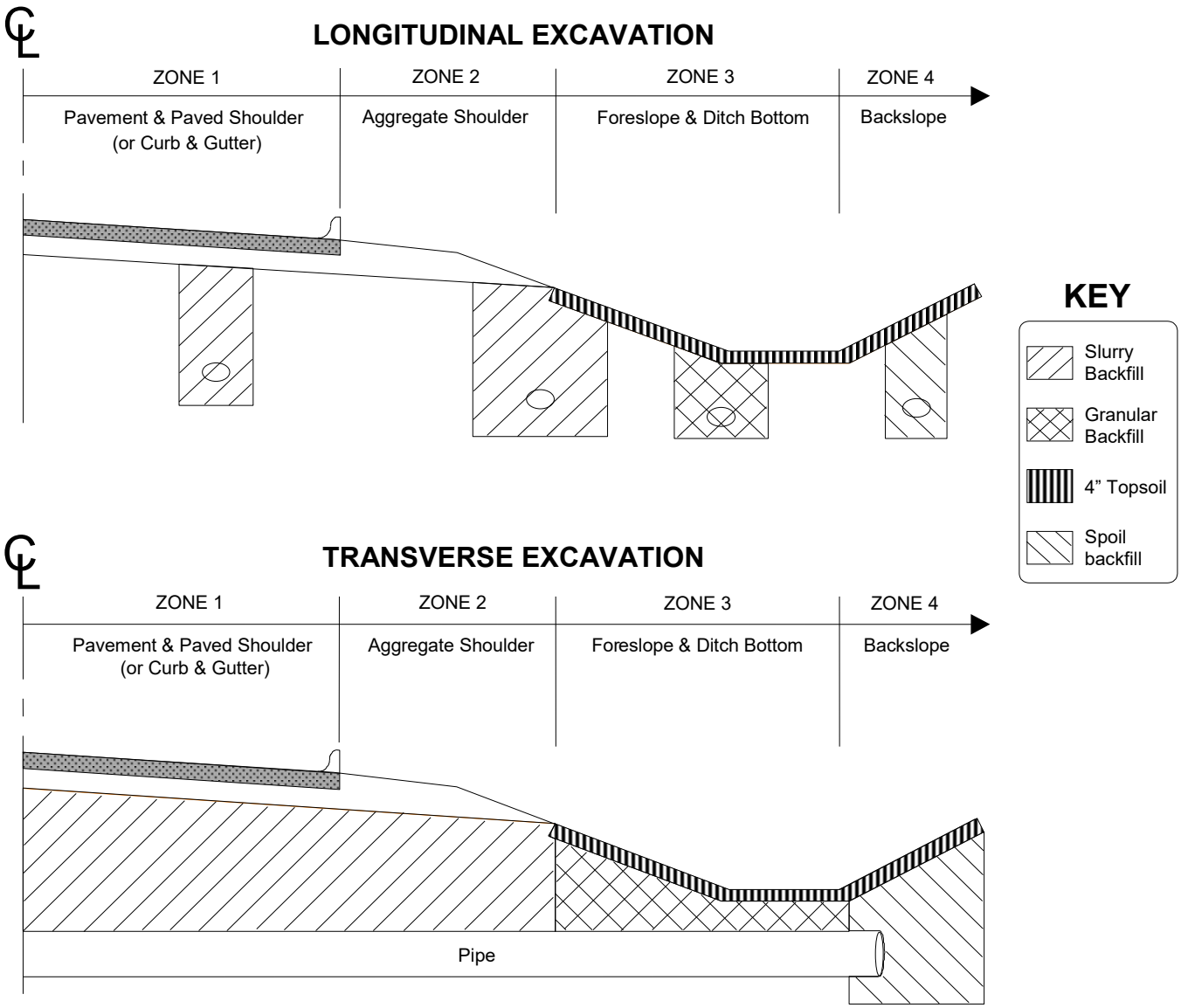
NORTHWEST REGION
dotdtsdnwecpermitcoordination@dot.wi.gov
Fax: 715-830-8102

Completion Notice

Restoration is complete and ready for inspection. File notices within 10 calendar days of restoration completion. Restore within two weeks from completion of utility construction.

Restoration Completion Date:

Attachment 2: Backfilling Excavation Detail Drawings



NOTES

1) Use slurry backfill to replace the excavated material in ZONES 1 and 2.

2) If the work area covers BOTH ZONES 2 & 3, use slurry backfill to replace the excavated material.

3) Use granular backfill to replace the excavated material in ZONE 3. Granular backfill placement and gradation shall conform to WisDOT's Standard Specifications for Road and Bridge Construction, current edition.

4) Place backfill in ZONES 3 & 4 to within 4" of the finished grade to allow for topsoil placement.

5) Suitable spoil backfill may be used in ZONE 4 at the discretion of WisDOT.

SLURRY BACKFILL

The materials shall be placed in a clean concrete mixer truck and thoroughly mixed in the following quantities FOR EACH CUBIC YARD REQUIRED:

- SAND 1,350 lbs
- #1 STONE 750 lbs
- #2 STONE 1,150 lbs
- WATER 25 gals (0 to -0.5 gal variance)

No additional water will be allowed. The above weights are damp weights. Just prior to placing the slurry backfill, the mixer shall be run at mixing speed for one full minute to assure an even mixture.

Attachment 3: Pavement Restoration Examples

Figure 1a: Excavation with planned sawcut[1]

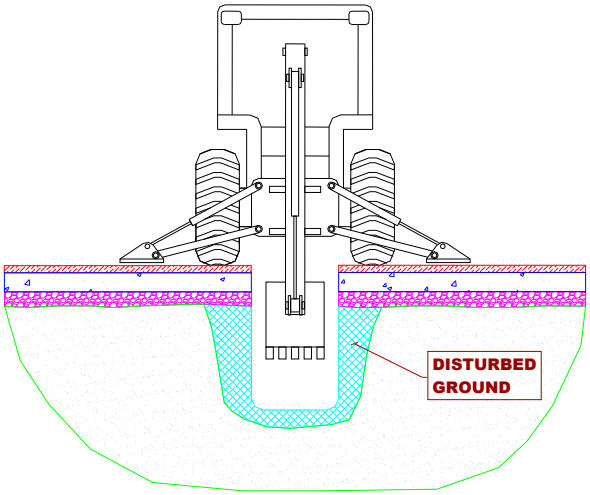


Figure 1b: Actual excavation without sawcut

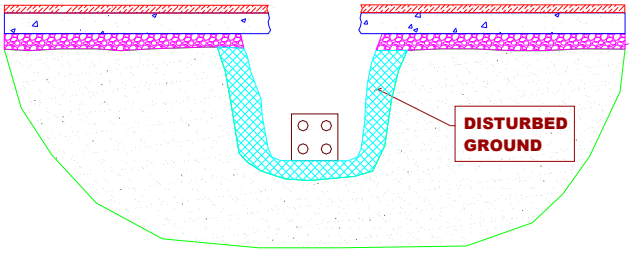


Figure 1c: Trench backfilling without slurry

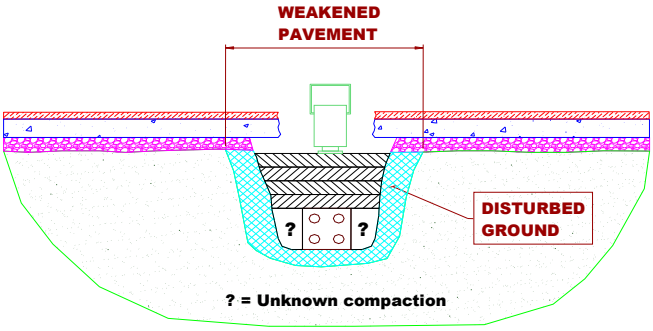


Figure 2: Concrete pavement repair without sawcut. Note top of pavement edge and missing dowel bar. In lower picture, dowel bars in gutter are bent and not ready to accept slurry.

[1] Drawings courtesy of CNA Consulting Engineers

1.0 General

This policy specifies responsibilities and the procedures that a utility shall follow when environmental conditions are encountered in the right-of-way (R/W). These conditions include, but are not limited to:

1) Cultural resources: archeological sites, historic structures, burial sites, etc.
2) Contaminated soils
3) Underground storage tanks (USTs)
4) Leaking underground storage tanks (LUSTs)

2.0 WisDOT Responsibility

Under Wisconsin Administrative Rule Trans 220, WisDOT shall notify a utility when its facilities may be affected by a proposed improvement project. If the utility confirms that its facilities are in the vicinity of the improvement, then WisDOT shall mail the utility at least that portion of the improvement plan that concerns those facilities. WisDOT shall also provide any additional and duplicate plan information needed by the utility to design and layout the removal, relocation, or adjustment of the existing utility facilities and the placement of relocated or additional facilities within the project limits. This includes furnishing a utility with information regarding any environmental conditions when site assessments are performed as a required part of WisDOT's project investigation. This information shall be considered for ***informational purposes only*** since data may change from the time an investigation is completed until the time a report is reviewed.

3.0 Utility Responsibility

When a utility wants to locate its facility on the R/W and WisDOT is not required to furnish the utility with information regarding environmental conditions, the utility has the responsibility of determining if these conditions exist at its proposed site. The utility should perform a site assessment to accomplish this.

4.0 Site Assessments

When a utility needs to do site assessments (investigations), the procedures listed in WisDOT's Facilities Development Manual may be used as a guide. Specifically, Chapter 26 has information on cultural resource preservation (archeological, historical, etc.), and Chapter 21, Section 35, has information regarding contaminated sites and remediation.

WisDOT recommends that site assessments be performed by a qualified historian, archeologist, or environmental consultant if the utility does not employ personnel specifically qualified for this work.

5.0 Discovery of Environmental Conditions

Whether the discovery of environmental conditions occurs during a site assessment, facility installation, or maintenance operation, ***ALL WORK SHALL BE SUSPENDED IMMEDIATELY***. If the site poses a possible health risk, the local police and fire departments shall be notified immediately, and the utility shall take the necessary steps to provide for the safety of people and property in the area. After suspending operations, the utility shall contact the offices listed Table 1 depending upon the type of conditions discovered:

Failure to stop work immediately upon discovery of environmental conditions ***may*** result in financial responsibility (Table 2) for the utility due to subsequent site assessments, mitigation, remediation, or possible fines. A checklist has been developed (Attachment 1) to help utilities obtain the necessary information which may be asked of them by site investigators.

WisDOT will notify the utility when it can resume its operation.

Table 1: Environmental Conditions Discovery Notification list

Utility Discovers Environmental Conditions while Working on WisDOT Right-of-Way (R/W)	
Category	Contact Information **(Note: Contact All That Apply)**
Cultural Resources	
Historic structure	State Historic Preservation Office: (608)264-6506
Archeological site	State Historic Preservation Office: (608)264-6507
Burial site	Burial Sites Preservation Office: (608)264-6503 or (800)342-7834
Contaminated Soils, USTs, LUSTs	
Department of Natural Resources[2]	http://dnr.wi.gov/topic/spills/report.html (800)/943-0003 or (888)936-7463
For Any Discovery	
Utility project but no WisDOT project	WisDOT region utility permit coordinator[1]
WisDOT project	WisDOT construction project manager or district construction supervisor[1]

1. These people shall also notify the WisDOT's Bureau of Equity and Environmental Services:
   Jim Becker .....(608) 261-0137 ..... Cultural Resources
   Shar TeBeest .....(608) 266-1476 ..... Contaminated Soils, USTs, LUSTS, etc.
2. Required under Wisconsin law

6.0 Utility Facility Placement Options

When environmental conditions are discovered in the R/W, the Department of Natural Resources, State Historic Preservation Office, or Burial Sites Preservation Office (collectively: Agency) shall determine whether a utility can locate its facility within the affected area. Based upon the Agency's decision, the following may occur:

6.1 Utility Entirely Avoids the Affected Area

1) An Agency mandates that the area be left in its natural state, and utility facilities shall not be allowed in the area.

2) The utility decides that it wants to locate in another area and avoid possible delays to its project due to site assessments, remediation, mitigation, or the possible decision noted in 1.

6.2 Utility Locates Around or through the Affected Area

1) An Agency orders the site to be completely remediated or mitigated before any utility installation can take place. The utility would then have a clear corridor in which to locate its facility.

2) An Agency decides that the area can be left in its natural state, but any area that is disturbed or affected by the utility operation (based upon the Agency's assessment) has to be remediated or mitigated. The utility may also elect to go around the area, if possible, and avoid remediation or mitigation.

3) An Agency decides that the area can be left in its natural state, and the conditions do not have to be remediated or mitigated as long as the utility exercises extreme care to avoid any significant disruption to the area. In the case of an archeological or historical site, a utility may be allowed to place a facility in an area that was already disturbed. In the case of a hazardous materials site, a utility would have to utilize construction methods that would prevent any contamination from spreading.

Unless WisDOT has taken charge of the remediation or mitigation process due to a WisDOT project, a utility that decides to locate its facility through an affected area, as described in items 1-3 above, shall document in its permit application that it has contacted the Agency and has received the proper authorization to locate in the area along with its proposed construction methods. These permits may also be routed through the Region's environmental coordinator or the Bureau of Equity and Environmental Services as a final check.

7.0 Financial Responsibility

When a utility performs an initial site assessment on WisDOT R/W – either with a project of its own or because a WisDOT project is not required to obtain environmental information – the utility shall bear the cost of the assessment. No matter who performed the initial assessment or even if they were not done, a utility that discovers any environmental conditions shall not be responsible for assessment, mitigation, or remediation costs proved it had complied with section 5.0 of this policy and avoids the site by placing its facility in another location. Table 2 specifies who may have to pay for assessment, mitigation, or remediation costs depending upon the situation.

Table 2: Financial Responsibility Table

Utility Discovers Environmental Conditions while Working on WisDOT Right-of-Way and Decides to Locate in the Affected Area	
Category/Activity	Who Pays for the Activity?
Cultural Resources	
Site Assessments (Identification or evaluation surveys)[1]	
• Utility project but no WisDOT project	Utility
• WisDOT project	Utility or WisDOT[2]
Mitigation[1]	
• SHPO or BSPO order	Utility
• No SHPO or BSPO order	Utility
Contaminated Soils, USTs, LUSTs, etc.	
Site Assessments	
• Utility project but no WisDOT project	RP or WisDOT or Utility[3]
• WisDOT project	RP or WisDOT or Utility[3]
Remediation	
• DNR order	RP or WisDOT or Utility[3]
• No DNR order	Utility

1. WisDOT policy is to **not** spend available resources for assessments or mitigation, but rather preserve archeological sites and historic structures in place. This is in accordance with Section 106 of the National Historic Preservation Act.
2. Applicable only when WisDOT is required to obtain environmental information for its project.
3. If a utility fails to comply with section 5.0 of this policy, it may be responsible for a percentage of the costs depending upon how much worse the situation becomes due to the utility's actions.

If the WisDOT is **not** the RP, then a utility which incurs costs due to encountering contaminated soils, USTs, or LUSTs will have to recover them from the RP.

SHPO = State Historic Preservation Office
BSPO = Burial Sites Preservation Office
DNR = Department of Natural Resources
RP = Responsible Party (owner of the source of the hazard as determined by DNR)

Attachment 1: Environmental Conditions Discovery Checklist (Page 1 of 2)

As soon as environmental conditions are discovered in WisDOT's right-of-way,

STOP WORK IMMEDIATELY

and be prepared to report the following information to the contacts listed in HMM 09-15-50 Table 1

1. SITE LOCATION

a. Highway(s): _____ b. Direction[1]: ☐ NB ☐ SB ☐ EB ☐ WB

c. County: _____ d. ☐ City ☐ Village ☐ Town of: _____

e. Distance and direction from nearest public road intersection or mile marker? _____

f. Nearest public road intersection name or mile marker number? _____

g. Other landmarks? _____

2. ENVIRONMENTAL CONDITION – Cultural Resources

a. What was found (burial site, building foundation, artifact)? _____

b. Is the location of the find marked? ☐ Yes ☐ No If yes, how is it marked? _____

c. Approximate area (dimensions) of the find? _____

3. ENVIRONMENTAL CONDITION – Contaminated Sites, USTs[2], LUSTs[3]

a. What was found? _____

b. Appearance of soils or liquid? _____

c. Odor of soils or liquid? _____

d. Approximate size of tank or area of contamination uncovered? _____

e. Obvious liquid or product in the tank? ☐ Yes ☐ No

f. Obvious smell in the tank? ☐ Yes ☐ No If yes, can you describe it (varnish, kerosene, gasoline, diesel, other, unknown? _____

g. Soil type(s) encountered (sand, gravel, clay, till)? _____

h. Depth to groundwater (if known)? _____

i. Any previous land use knowledge (local history, memory of site as a business)? ☐ Yes ☐ No
If yes, please describe. _____

j. Is the location of the find marked? ☐ Yes ☐ No If yes, how is it marked? _____

4. STATUS OF UTILITY WORK

a. Has the work stopped in the area? ☐ Yes ☐ No ***If NO, STOP WORK IMMEDIATELY!***

b. Has the area been secured (fenced, staked or marked, roped off, or delineated by traffic control devices)? ☐ Yes ☐ No

c. Can the work continue in another area? ☐ Yes ☐ No If yes, for how long? _____

d. Can the affected area be avoided (utility facility placed in another location)? ☐ Yes ☐ No

e. Has any completed utility work been clearly marked (staked, painted, or flagged)? ☐ Yes ☐ No

f. Is any of the completed utility facility active, energized, etc.? ☐ Yes ☐ No

g. Is this utility being relocated to facilitate a highway project? ☐ Yes ☐ No

---

1 Direction is the cardinal or route direction, not the actual compass direction:
NB = Northbound, SB = Southbound, EB = Eastbound, WB = Westbound
2 Underground storage tanks
3 Leaking underground storage tanks

Attachment 1: Environmental Conditions Discovery Checklist (Page 2 of 2)

5. CONTACTS

a. Was the State Historic Preservation Office (SHPO) contacted if building foundations or artifacts were discovered? ☐ Yes ☐ No

If yes, date: _____ By (name/phone): _____

SHPO contact (name/phone): _____

b. Was the Burial Sites Preservation Office (BSPO) contacted if a burial site was discovered? ☐ Yes ☐ No

If yes, date: _____ By (name/phone): _____

BSPO contact (name/phone): _____

c. Was the Department of Natural Resources (DNR) contacted if a contaminated site, UST or LUST was discovered? ☐ Yes ☐ No

If yes, date: _____ By (name/phone): _____

DNR contact (name/phone): _____

d. Was the WisDOT utility permit coordinator, construction project manager, or other WisDOT project representative (e.g., consultant) contacted? ☐ Yes ☐ No

If yes, date: _____ By (name/phone): _____

WisDOT contact (name/phone): _____

WisDOT contact (name/phone): _____

Consultant contact (name/phone): _____

e. Was WisDOT's Bureau of Equity & Environmental Services contacted (Note: this is not a utility responsibility)? ☐ Yes ☐ No

If yes, date: _____ By (name/phone): _____

WisDOT contact (name/phone): _____

WisDOT contact (name/phone): _____

f. Other contacts or e-mail addresses: _____

_____

6. RESUMING WORK

a. Did WisDOT indicate a timeframe in which someone would respond? ☐ Yes ☐ No

b. What is that timeframe? _____

c. Who will authorize resuming work? _____

d. When can the work be resumed? _____

e. Date authorization received? _____

1.0 Authority

Under Wisconsin Administrative Rule Trans 401, a utility shall assure that proper erosion control and storm water management measures are implemented at all times during work operations. The utility shall also be responsible for providing erosion control and storm water management measures to protect all restored areas upon project completion until the replacement vegetation achieves sustained growth.

2.0 Implementation

WisDOT has divided utility operations into two categories – minor and major – for the purpose of determining erosion control and storm water management plan requirements. When submitting a permit application, check the appropriate box in question 16 for the category that the proposed operation belongs. Based upon the information submitted, the region utility permit coordinator has the option to change the category.

If a change becomes necessary, the utility has a couple options. If the change is from the minor to major category, the utility may elect to submit an erosion control plan. It could also amend, or revise and resubmit its permit application provided a change in work methods that could put the utility operation into the minor category. If the change is from major to minor, the utility may still use its proposed erosion control plan.

3.0 Major Projects

Major projects are defined as excavations that will not be restored in the same day or immediately the next day. Examples of utility projects that may fall under the major category include, but are not limited to:

1) Grading on R/W.

2) Large, open pavement/shoulder cuts.

3) Large boring operations and boring pits.

4) Trenching operations.

5) Any project adjacent to a waterway which is not classified as "routine" under the DNR Waterway Crossings Agreement.

3.1 Specific Guidelines

Specific guidelines for proper erosion control and storm water management are contained in Administrative Rule Trans 401. Some key elements of this administrative rule are highlighted as follows.

[401.07] A utility shall submit an erosion control plan along with its permit application. The plan may be either in written or pictorial format, or both formats. A utility may use WisDOT's FDM Chapter 10 as a guide in the proper selection, installation, and maintenance of erosion control and storm water management measures. Standard Detail Drawings for some erosion control devices are also available in FDM Chapter 16. Joint WisDOT/utility field meetings may also be needed to review proposed erosion control and storm water management plans.

[401.09(1)] All required erosion control and storm water management measures shall be installed at the job site prior to the commencement of work. The utility shall notify WisDOT at least 24 hours before the installation of the measures.

Comment: It is evident that with minor projects, there is no need for a utility to have erosion control and storm water management measures in place prior to the start of construction. Therefore, prior notification to WisDOT is not required.

[401.06(2), 401.09(1)] After the installation of the permanent erosion control and storm water management measures is completed at a site or when the temporary erosion control and storm water management measures are no longer required for their intended purpose, the utility shall remove all temporary erosion control and storm water management measures. A utility should be aware that after the installation or alteration of a facility, a considerable amount of time (e.g. one to three months) may lapse between restoration of the right-of-way and removal of temporary erosion control measures. WisDOT will not consider a utility project to be "final" until the right-of-way has been restored and all temporary erosion control measures have been removed. Failure to remove temporary erosion control measures shall be handled under the guidelines listed in HMM 09-15-10.

[401.09(2)(b)] After completion of construction activities and the installation of permanent erosion control and storm water management measures, the utility shall promptly notify WisDOT which will render an inspection of the site. The purpose of this inspection is to ensure that all permanent erosion control and storm water management measures are adequate and functioning properly.

[401.10(2)(b)] In the case of a project not administered by WisDOT, [inspections shall be performed by an inspector] at least once per week during the time construction or maintenance activity is being pursued on a project site.

[401.04(14)] "Inspector" means an employee or authorized representative of WisDOT assigned to make inspections.

WisDOT authorizes a utility to perform the once per week inspections required for a major project. The utility shall maintain a written record of the inspections and keep those notes on file for at least three years along with the utility's permit.

4.0 Minor Projects

WisDOT is aware of various utility operations that disturb minor amounts of soil or, in fact, no soil. These "minor" projects shall not require a formal erosion control plan; however, a utility shall follow the guidelines listed in the next section. Minor projects are defined as excavations that will be restored in the same day or immediately the next day. Examples of utility projects that may fall under the minor category include, but are not limited to:

1) Overhead crossings

2) Pole installations

3) Plowing operations

4) Trenching operations

5) Any project adjacent to a waterway, which is classified as "routine" under the DNR Waterway Crossings Agreement.

6) Hand digging

7) Small boring operations

8) Small open pavement/shoulder cuts

The DNR defines "routine" water crossings as commonly simple plowed-in or directional bored crossings.

4.1 Specific Guidelines

The utility shall respond to any soil disturbance by promptly replacing the soil and topsoil and/or temporary seeding and mulching the soil. This includes repairing equipment and vehicle tracks that also may disturb soil.

Erosion control devices such as hay or straw bales and silt fence shall be present at the job site or be immediately accessible in case changing weather conditions force a utility to take immediate action to protect bare or loose soil. Soil piles left overnight shall be covered or protected with silt fence etc., to prevent possible runoff.

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.) 2) Available sight distance 3) Posted speed limit 4) Traffic volume	5) Type and duration of work 6) Time of day 7) Weather conditions 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[1], service ramp[2], 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/
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[3] 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

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[4].
- 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[5] 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[5] 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.

4 These permits have a 14-day lead time.
5 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

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?

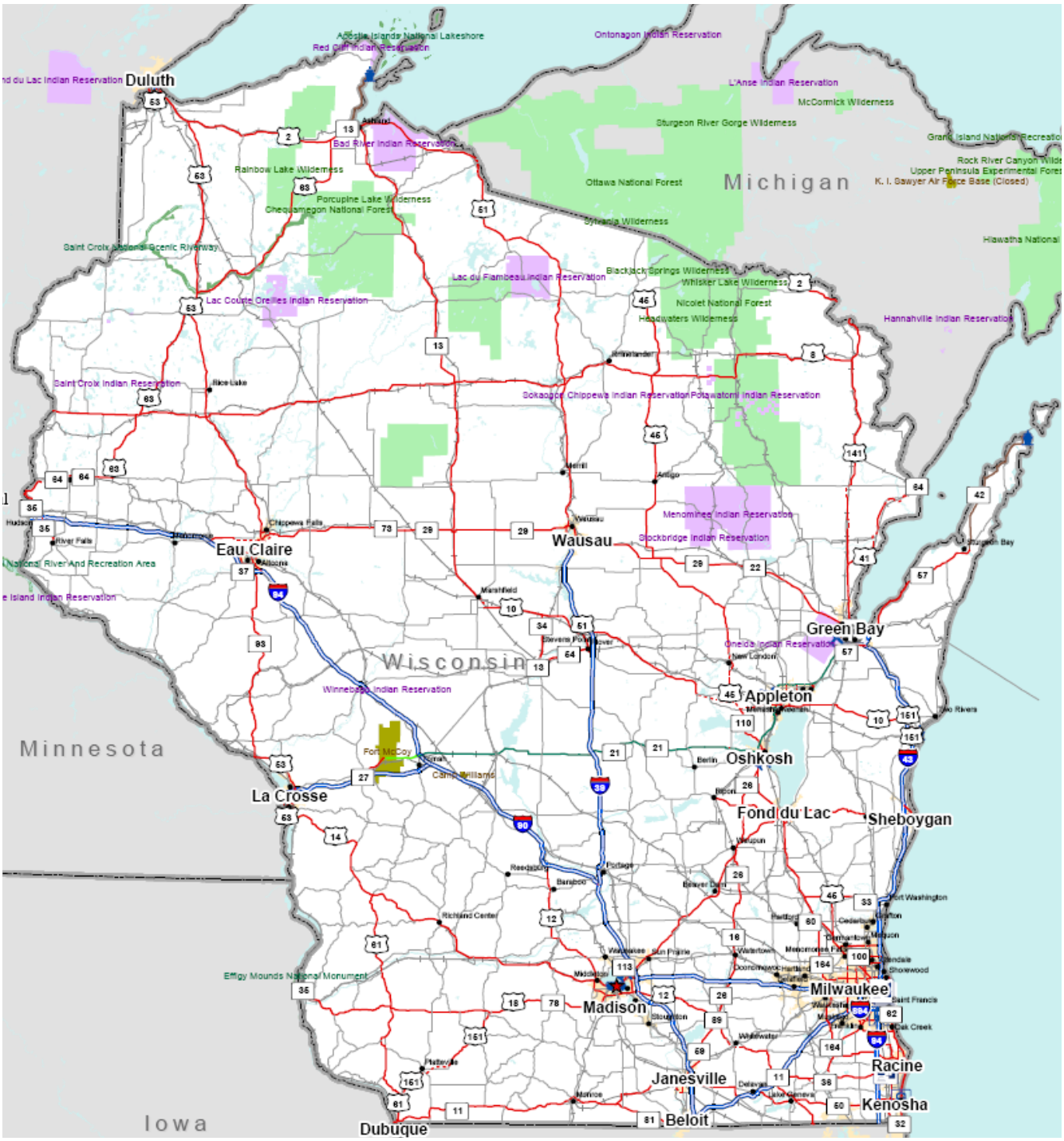
6) Are there any special events in the area?

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 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
North Central	**Northwest**	
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, 5th 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

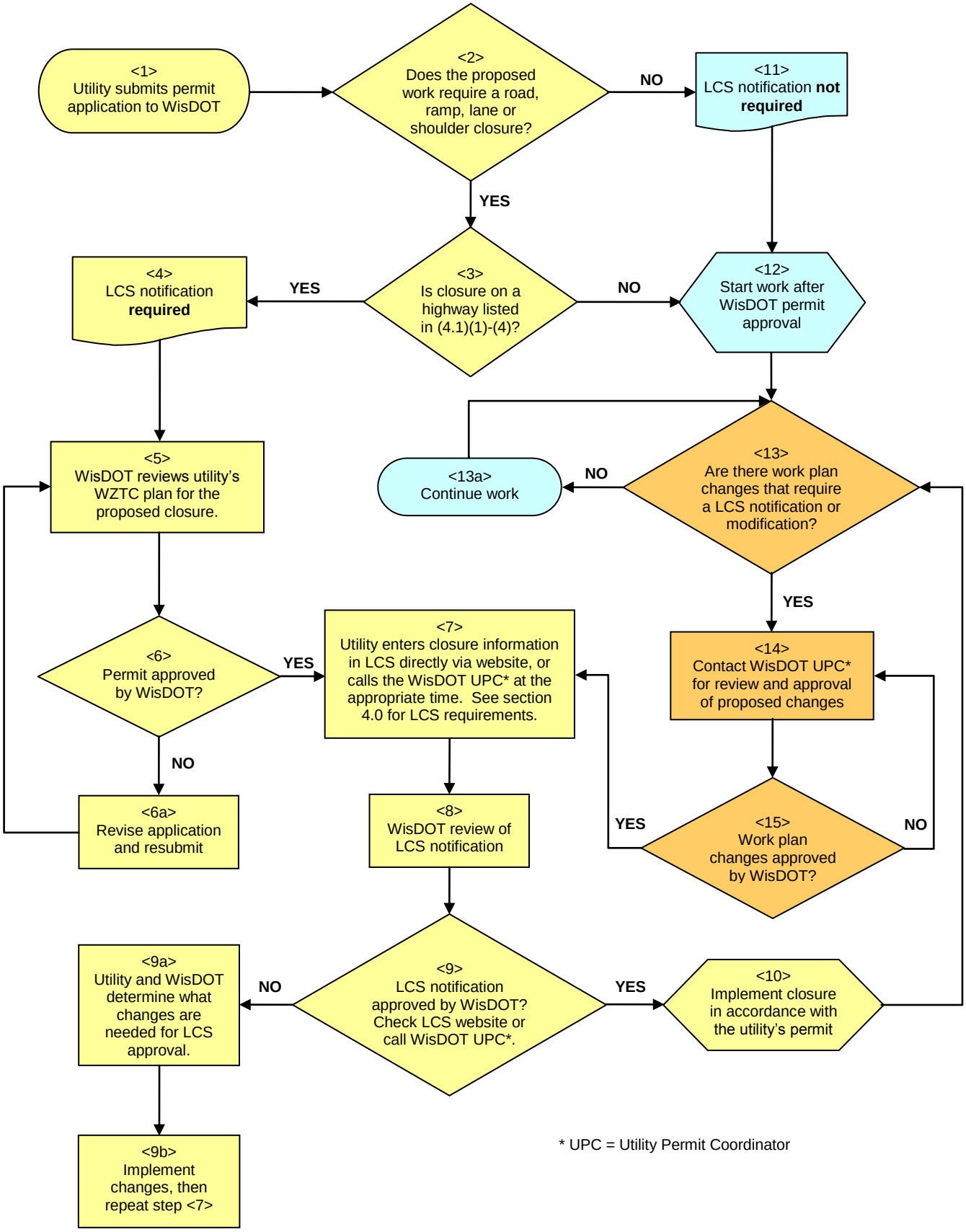
General Section:

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



1.0 Utility Facility Condition Requirements

All utility facilities shall be maintained in a good state of repair both structurally and aesthetically.

2.0 Communication & Electric Standards

The minimum standards for the design, construction, operation, and maintenance of communication- and electric-type utility facilities shall be those embodied in the Wisconsin Administrative Code for each of the various utilities and phases of utility activities covered therein. When the codes, ordinances, or laws of governmental agencies having jurisdiction are more restrictive, they shall govern. When neither the Wisconsin Administrative Codes nor the local governmental regulations apply, the communication facility shall at least conform to the currently applicable National Electrical Safety Code.

2.1 Type of Construction

For aboveground (overhead) installations, consider the following:

1) Single Pole: Longitudinal installations within the ROW should utilize single pole construction.

2) Joint Use: Joint use single pole construction should be used:

   a) At locations where more than one utility or type of facility is involved
   b) When right-of-way (ROW) widths approach the minimum needed for safe operations or maintenance requirements
   c) When separate installations require extensive removal or alteration of trees

2.2 Down Guy Locations

Guy wires to ground anchors and other supporting or bracing devices shall not be placed between a pole and the traveled way where they would encroach upon the clear zone unless specifically authorized by WisDOT utilizing breakaway technology. All down guy locations shall be labeled on plan sheets or other drawings submitted with a utility's permit application and shall have the distances noted as measured from the edge of the travelled way.

3.0 Fluid & Gas Standards

The minimum standards for the design, construction, operation, and maintenance of fluid- and gas-type utility facilities shall be those embodied in the Wisconsin Administrative Code for each of the various utilities and phases of utility activities covered therein. When the codes, ordinances or laws of governmental agencies having jurisdiction are more restrictive, they shall govern.

In addition to the Wisconsin Administrative Codes and local governmental regulations, the utility installations shall at least meet the following requirements:

1) Water lines shall conform to the currently applicable specifications of the American Water Works Association and the Standard Specifications for Water and Sewer Construction in Wisconsin.

2) Pressure pipelines shall conform to the currently applicable requirements of Title 49, Code of Federal Regulations of the Office of Pipeline Safety.

3) Liquid petroleum pipelines shall conform to the currently applicable recommended practice of the American Petroleum Institute for pipeline crossings under railroads and highways.

4) Sanitary and storm sewers shall conform to the currently applicable specifications of the Standard Specifications for Water and Sewer Construction.

3.1 Irrigation, Drainage and Manure Pipes, Ditches and Canals

Design and construct permanent irrigation, drainage and manure facilities across the ROW in accordance with WisDOT's specifications as shown in FDM Chapter 16, Standard Detail Drawings. Appurtenances that would constitute a hazard to traffic shall not be permitted within the clear zone and should be located outside of the ROW. Where ditch rider roads are adjacent to ditches or canals that cross the highway, consideration shall be given to safety, traffic, operations, and economic features when providing for the continuity of such roads.

3.2 Requirements for Appurtenances

Vent standpipes are not required for casings, but when used, locate and construct them to not interfere with highway maintenance nor be concealed by vegetation. Locate standpipes near a fence or the ROW line. Locate shut-off valves for pipelines outside of the clear zone and preferably off the ROW.

If drains are provided for casings, tunnels, or galleries enclosing carriers of liquids, liquefied gases, or heavy gases, they shall not outfall into highway ditches or natural water courses.

3.3 Special Pipeline Treatments

Special treatment of pipelines beneath highways, including interstates and other freeways and including any median, should not be required provided the pipe would be installed by jacking and/or dry boring the carrier pipe to an essentially snug fit.

Special treatment such as casing, cathodic protection, thickened wall carrier pipe, coating and wrapping, concrete sleeves, or caps of particular pipe crossings shall be required if, in the determination of WisDOT, such installation shall be more protective of the highway or of the safety and convenience of the traveling public. Some examples where special treatment may be required include, but are not limited to, locations where:

1) A pipeline (whether crossing or a portion of pipe paralleling the highway) would pass in close proximity to a substructural part of a highway structure. This refers to pipes underground and not to pipes suspended on a highway structure, the latter of which should not require special treatment.

2) A pipeline would pass beneath the slope wall below a highway structure

3) Restraints inhibit a pipe from being placed or remaining at the depth required by code

4) The ground conditions are known to be particularly unstable

5) Restraints inhibit a water pipe from being placed or remaining below the frost line

3.4 Crossing Requirements for Privately-Owned Pipelines

Allow privately-owned pipelines to cross under a state trunk highway (STH) when they have no adverse affect on the safety, operation, maintenance and future construction of the highway. This includes pipelines for potable water, irrigation, liquid manure, dairy effluent and similarly functioning facilities. Pipelines transporting frac sand slurry do not fall under the utility definition in HMM 09-15-05 as “other commodities” since they do not serve the public. Apply for these installations using a WisDOT work on highway ROW permit (DT1812).

Issue a utility permit only to the pipeline owner, who is responsible for any relocation and/or adjustment of the facility due to a highway improvement or maintenance project. The WisDOT utility permit does not transfer any land; nor give, grant or convey any land right, right in land, nor easement in WisDOT ROW. It is not assignable or transferrable. If the pipeline owner changes and WisDOT is notified in writing of the change, then void and supersede the old permit and issue a new permit to the new owner as long as sufficient proof of ownership is provided.

The applicant should consult with a local DNR office to determine if there are any potential waterways/wetlands or other environmental issues that may be affected by the proposed work. WisDOT may require proof of DNR coordination or copies of actual DNR permits prior to WisDOT permit issuance. See environmental coordination for more information.

When privately-owned pipelines cross under a STH, WisDOT may include the following supplemental permit provisions that require the owner to:

1) Bore the facility under the ROW from outside ROW to outside ROW, i.e., no excavation in the ROW. This may eliminate the need for work zone traffic control.

2) Install a shut-off valve on the upstream end of the flow and outside the ROW to avoid clear zone issues. A shut-off valve may also be needed on the downstream end if there is a chance for backup flow to occur.

3) Install casing if the pipe is under a major highway or the pipe size may increase in future years (thereby eliminating the need for an additional bore).

4) Not place the pipeline through any culvert or on top of any ditch or other portion of highway ROW.

5) Maintain the same ownership on each side of the highway. The permit shall be issued to the pipeline owner, not a lessee. If someone is leasing the land and will be involved in some manner with the permit, then WisDOT will require an agreement between the owner(s) and lessee(s) that will be included with the permit to document specific details including any financial responsibility that is apportioned.

6) Become a member of Diggers Hotline (DH). This is mandatory under Wis. Stat. s. 182.0175. This benefits other utilities that have to excavate in the area and is especially critical if hitting the pipeline could create adverse economic or environmental impacts. In addition, WisDOT may require that aboveground markers for the pipeline are placed on each side of the highway near the ROW line including a placard with the owner's name and 24/7/365 telephone number.

7) Provide an as-built record of bore depth (track) under the STH. This would require the use a bore head that can be tracked by a computer, i.e., a device that records the X, Y and Z components.

8) Record the permit with the Register of Deeds office to ensure that the document can be traced with a title search. This ensures that a prospective buyer knows about the private facility and its permit requirements if the associated property is for sale. WisDOT will record the permit on behalf of the permittee, and may charge the permittee for the cost.

9) Maintain sufficient insurance in case of a pipeline break causing highway damage and/or loss of use. The insurance can be a rider on a permittee's homeowners or business policy and shall name the State of Wisconsin or WisDOT and its officers, agents and employees as an additional insured with respect to the permitted work. The policy must also include a severability of interest endorsement. See the attached file for these requirements. WisDOT's risk manager may be consulted to determine insurance coverages based on potential damage to the highway.

   Provide WisDOT with a certificate of insurance (or similar document) prior to permit issuance. Also, provide an annual written or email notice that the insurance is still in effect, and every time the insurance limits or coverages are amended. WisDOT will keep the certificate and subsequent notices on file with the permit. See the attached file for an example.

1.0 WisDOT Utility Permit Staff Directory

The staff below review/issue utility permits that are not associated with WisDOT highway improvement projects. Send permit applications to the general email address listed for the region. For staff who review/issue utility permits in conjunction with WisDOT projects, see http://wisconsindot.gov/dtsdManuals/utility/dtsd-utilcoord.pdf.

A transportation region boundary map is provided in section 2.0 to show county coverages.

Name / Position	Phone	County Number and Coverage		
SOUTHWEST REGION: Madison Office 2101 Wright St, Madison, WI 53704-2583				
Mark Goggin Permit coordinator	608/789-5955 608/792-1366 (cell) Fax: 608/243-3380	11 Columbia 23 Green 33 Lafayette	13 Dane 25 Iowa 53 Rock	14 Dodge 28 Jefferson 56 Sauk
SOUTHWEST REGION: La Crosse Office 3550 Mormon Coulee Rd, La Crosse, WI 54601-6767				
Mark Goggin Permit coordinator	608/789-5955 608/792-1366 (cell) Fax: 608/789-7896	12 Crawford 32 La Crosse 62 Vernon	22 Grant 41 Monroe	29 Juneau 52 Richland
Send permit applications to: SW Utility Permits Unit General Email: dotdtsdswutilitypermits@dot.wi.gov				
SOUTHEAST REGION 141 NW Barstow St, PO Box 798, Waukesha, WI 53187-0798				
Chue Hang Permit engineer	262/548-5671 Fax: 262/521-4425	30 Kenosha 51 Racine 67 Waukesha	40 Milwaukee 64 Walworth	45 Ozaukee 66 Washington
Send permit applications to: SE Utility Permits Unit General Email: dotdtsdseutilitypermits@dot.wi.gov				
NORTHEAST REGION 944 Vanderperren Way, Green Bay, WI 54304-0080				
Linda Skaleski Permit coordinator Joseph Coughlin Permit support	920/492-4166 Fax: 920/492-0144 920/492-4101	5 Brown 20 Fond du Lac 38 Marinette 59 Sheboygan	8 Calumet 31 Kewaunee 42 Oconto 70 Winnebago	15 Door 36 Manitowoc 44 Outagamie
Send permit applications to: NE Utility Unit General Email: dotdtsdneutilitycoordination@dot.wi.gov				
NORTH CENTRAL REGION: Wisconsin Rapids Office 1681 2nd Ave South, Wisconsin Rapids, WI 54495-8021				
Keith Rutkowski Permit coordinator	715/421-8035 Fax: 715/423-0334	1 Adams 39 Marquette 69 Waushara	24 Green Lake 49 Portage 71 Wood	37 Marathon 68 Waupaca
NORTH CENTRAL REGION: Rhinelander Office 510 N Hanson Lake Rd, Rhinelander, WI 54501				
Terry Catlin Permit coordinator	715/365-5763 Fax: 715/365-5780	19 Florence 34 Langlade 50 Price 72 Menominee	21 Forest 35 Lincoln 58 Shawano	26 Iron 43 Oneida 63 Vilas
Send permit applications to: NC Utility Permit Unit General Email: dotdtsdncutilitypermits@dot.wi.gov				

Name / Position	Phone	County Number and Coverage
NORTHWEST REGION: Eau Claire Office 718 W Clairemont Ave, Eau Claire, WI 54701-5108		
Jeorgia Dahl Permit coordinator	715/836-2724 Fax: 715/830-8102	6 Buffalo 17 Dunn 46 Pepin 61 Trempealeau 9 Chippewa 18 Eau Claire 47 Pierce 10 Clark 27 Jackson 55 St. Croix
NORTHWEST REGION: Spooner Office W7102 Green Valley Rd, Spooner, WI 54801 **Superior Office** 1701 N 4th St, Superior, WI 54880		
Jeorgia Dahl Permit coordinator	715/836-2724	2 Ashland 7 Burnett 54 Rusk 65 Washburn 3 Barron 16 Douglas 57 Sawyer 4 Bayfield 48 Polk 60 Taylor
Send permit applications to: NW Utility Unit General Email: dotdtsdnwecpermitcoordination@dot.wi.gov		
BUREAU of HIGHWAY MAINTENANCE 4822 Madison Yards Way, 5th Floor South, Madison, WI 53705		
Robert (Bob) Fasick State ROW Permits Engineer	608/266-3438 Fax: 608/267-7856	*Utility Accommodation Policy (UAP)* development, statewide permit issuance on controlled-access highways (freeways & expressways), cellular installations, exceptions to the *UAP*, and private longitudinal installations

Note: When office addresses have both a box number and a street number, use the box number for correspondence via regular mail and the street number for delivery services such as UPS, Federal Express, etc.

Email addresses for WisDOT staff use the following format: firstname.lastname@dot.wi.gov

First names are provided in the directory with nicknames in parenthesis.

To email all WisDOT utility staff (utility coordinators and utility permit coordinators), click on this link: DOTDLDTSDUtilityCoordinators@dot.wi.gov

2.0 WisDOT Region Boundary Maps and Contacts

Contact the transportation region office that has jurisdiction in the county where the proposed utility work will take place.

NORTHWEST REGION
Superior Office
1701 N 4th St
Superior, WI 54880

NW Utility Unit General Email
Send permit applications to:
dotdtsdnwecpermitcoordination@dot.wi.gov

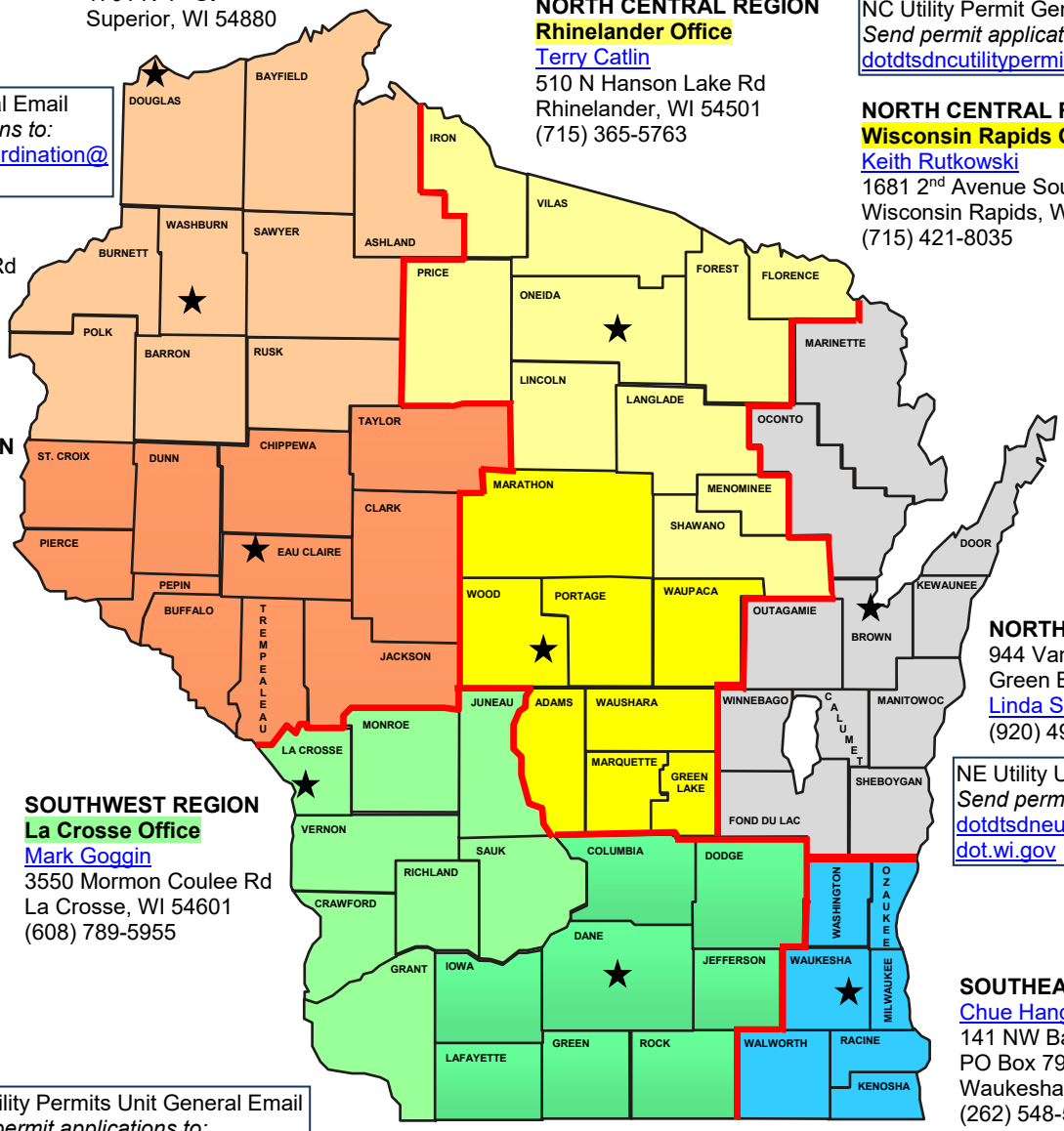
Spooner Office
W7102 Green Valley Rd
Spooner, WI 54801
(715) 635-4962

NORTHWEST REGION
Eau Claire Office
Jeorgia Dahl
718 W Clairemont Ave
Eau Claire, WI 54701
(715) 836-2724

NORTH CENTRAL REGION
Rhinelander Office
Terry Catlin
510 N Hanson Lake Rd
Rhinelander, WI 54501
(715) 365-5763

NC Utility Permit General Email
Send permit applications to:
dotdtsdncutilitypermits@dot.wi.gov

NORTH CENTRAL REGION
Wisconsin Rapids Office
Keith Rutkowski
1681 2nd Avenue South
Wisconsin Rapids, WI 54495
(715) 421-8035



NORTHEAST REGION
944 Vanderperren Way
Green Bay, WI 54304
Linda Skaleski
(920) 492-4166

NE Utility Unit General Email:
Send permit applications to:
dotdtsdneutilitycoordination@dot.wi.gov

SOUTHWEST REGION
La Crosse Office
Mark Goggin
3550 Mormon Coulee Rd
La Crosse, WI 54601
(608) 789-5955

SOUTHEAST REGION
Chue Hang
141 NW Barstow St
PO Box 798
Waukesha, WI 53187
(262) 548-5671

SW Utility Permits Unit General Email
Send permit applications to:
dotdtsdswutilitypermits@dot.wi.gov

SOUTHWEST REGION
Madison Office
Mark Goggin
2101 Wright St
Madison, WI 53704
(608) 792-1366

SE Utility Permits Unit General Email
Send permit applications to:
dotdtsdseutilitypermits@dot.wi.gov