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1.0 Originator of the Utility Accommodation Policy

The State Maintenance Engineer in the Bureau of Highway Maintenance for the Wisconsin Department of Transportation (WisDOT) is the originator of chapter 9, section 15. Direct questions and comments on its content to Bob Fasick, Statewide Right-of-Way Permits Engineer, 608-266-3438, or robert.fasick@dot.wi.gov.

2.0 Introduction to Utility Accommodation

WisDOT operates the state trunk highway (STH) 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. HMM[1] 09-15-00 and the *UAP* are synonymous.

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 STH ROW. WisDOT operated highway facilities (e.g., lighting, traffic signals, changeable message boards, etc.) for the purposes of motorist safety are not bound by the *UAP*. Typically, WisDOT utilizes 3.1 – 3.5 when handling requests for utility accommodation or managing facilities that are already located on the ROW.

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.

For new subjects and subject revisions, the *UAP* is being written with sentences in the active voice-imperative mood. These are direct commands to a utility that eliminate the need to use "shall." For example, "Restore the ROW...," would be written instead of, "A utility shall restore the ROW..." While both are requirements, the first sentence and those similar mean that a utility is the actor, which agrees with the *UAP's* intent as being written for utility use. Requirements to be performed by others are written in the active voice, which identify the party responsible for performing the action. For example, "WisDOT is responsible for utility permit issuance."

3.1 Permits

WisDOT permits utility facilities on STHs when:

1) Such use and occupancy do 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.

Abide by the current version of the *UAP* each time a permit is authorized for utility 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

Utilities are responsible for the design of their facilities to be installed or adjusted within the ROW. WisDOT is responsible for review of the utility's proposal and for permit approval.

3.3 Additions

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

3.4 Adjustments/Relocations

If necessary, adjust and/or relocate any affected portion of a permitted or unpermitted utility 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: (1) Installations not in accordance with the *UAP*, and (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

Become a member of Wisconsin's one-call system Diggers Hotline[3] to construct, operate and maintain utility facilities on a STH. 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.

5.1 Discontinued Aboveground Facilities

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

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

[3] Required under Wis. Stat. s. 182.0175(1m)(a)

5.2 Discontinued Underground Facilities

Maintain a permanent record in utility 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

Remove discontinued utility facilities on a structure 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 cross state highways and are not subject to approval by the Federal Highway Administration (FHWA). Longitudinal installations of private facilities are 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.

Follow the requirements of the *UAP* when designing, constructing, operating, and maintaining private utility facilities 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 STH 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

WisDOT may assess a fee for private utility installations that cross or longitudinally occupy STH ROW. 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

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[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 WisDOT Permit Required

Obtain a WisDOT utility permit before using and/or occupying state trunk highway (STH) right-of-way (ROW). This includes:

- Underground (buried) and aboveground (on surface, aerial, blow-out clearances) locations
- Occupying existing poles or ducts owned by a different utility (e.g., communications cable attached to electric company poles)
- Application by the *main owner*, not a contractor, developer, property owner, etc., for the portion of sewer and water laterals within STH ROW (See animation).

Exceptions to permits are listed in 3.1, 3.2 and 3.3.

1.1 Emergency Work

Emergency situations may arise when immediate action to protect public safety requires utility operations within STH ROW 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 when physical conditions or time considerations prevent applying for the usual WisDOT utility permit. However, as soon as practical, advise the appropriate WisDOT region office of the emergency, the plans or actions for alleviating the unsafe situation(s), and the arrangements made for the control and protection of traffic or pedestrians affected by the proposed operations. When the *UAP* requires a utility permit for such work, obtain one 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* (1) warrant that public title to the ROW is free and clear, (2) certify that it has sole ownership, and (3) indicate any intention to defend the utility in its peaceful use and occupancy of said lands.

A permit does not transfer any land, or give, grant, or convey any land right, right in land, or easement in STH ROW. It is not assignable or transferrable. It terminates when the associated facility changes ownership. The new owner must then obtain a permit to occupy, operate and maintain the utility facility on STH ROW.

WisDOT's permit approval does not relieve a utility from compliance with all applicable federal, state, local, and tribal laws, codes, regulations, and ordinances that affect the design, construction, materials, or performance of its work and 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.

Retain a copy of the WisDOT permit in a utility's files during the entire time the utility facility is located on, over or under STH ROW. All WisDOT utility permits are revocable. See HMM 09-15-10 for possible step-by-step compliance actions.

1.3 *Environmental Checklist*

Environmental permits, approvals, or coordination may be required from other regulatory agencies as part of a utility's project or relocation in STH ROW. Perform an environmental review prior to submitting a WisDOT permit application (dt1553). HMM 09-15-16 provides an environmental checklist (Checklist) for a utility to fill out and determine the level of environmental coordination required. Submit the completed and signed Checklist with the permit application.

2.0 Required Permit Information

A utility's request to use and occupy STH ROW cannot be considered until adequate information is provided regarding its proposed work. The amount of detail will vary with the installation's complexity and the highway involved but must include the current permit application form, Checklist, drawings, work zone traffic control plans, and installation information so WisDOT can fully evaluate the effect on future WisDOT projects, highway operations, maintenance, traffic safety, and visual qualities.

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 back page must be included with each permit application submitted. An application may be rejected or permit revoked if the applicant or authorized representative alters the form.

Submit one original **with an authorized signature** of the permit application form to the appropriate region office HMM 09-15-70. 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 permit materials by fax is prohibited.

If a utility has an expedited service connection permit, submit location drawings for the service by email at least three working days prior to starting the work. See HMM 09-15-20 for details.

2.3 Permit Drawings

Provide adequate drawings with each permit application showing the proposed utility facility location within the ROW with respect to the existing highway, any proposed highway improvements, and existing utility facilities. The details shall include dimensions from the proposed utility installation to the commonly accepted ROW line or edge of the traveled way (white edge line or fog line).

For highway crossings, provide cross-section details showing overhead clearance or depth of bury along with bore pit locations if needed, and a distance from the crossing to the nearest public road intersection. Submit land tie information (for example, approximate distance from the proposed facility to a side road intersection, county line, section corner, etc.) with all permit drawings. Use a plat map (Figure 1) or a similar map depicting Public Land Survey System (PLSS) information since WisDOT uses it to document section-town-range information listed in dt1553 question 6 and to file approved permits.

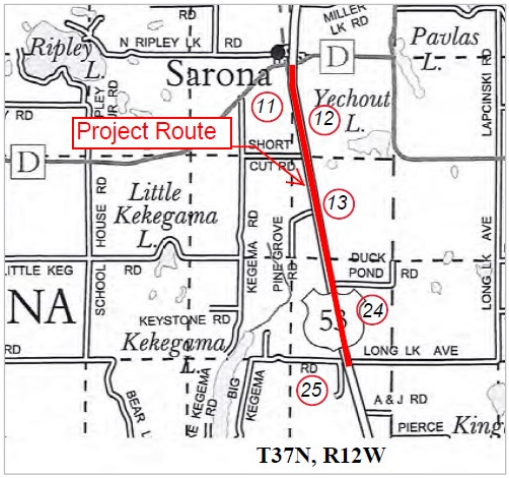


Figure 1: Plat Location Map

Do not submit drawings that have a proprietary disclosure language like the example shown in Figure 2. 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 2: Proprietary Disclosure Language

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

2.4 Installation Information

Provide the following installation information, which includes, but is not limited to:

1. A 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, fluid or gas line pressures, etc.
2. A description of proposed construction procedures, work zone traffic control, pedestrian traffic control (if required), other work site protection measures, erosion control measures, proposed access points, coordination of activities with a highway contractor, and trees/vegetation[2] 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.

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 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 may 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), obtain a WisDOT utility permit prior to performing the work.

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. Survey lines
13. Test for location of underground lines
14. Inspection of manholes (includes water removal, cable tagging, and minor modifications, etc.)
15. Electrolysis surveys
16. Paint poles, towers, or crossarms
17. Straighten pole, crossarm, or brace
18. Test or treat existing pole
19. Remove debris from overhead line
20. Repair or add grounds
21. Re-sag, reattach, or rearrange conductor
22. Repair cable bonding
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 (not cutting or spraying)
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

[2] Includes living snow fence. See HMM 09-15-45, 2.2

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 (not cutting or spraying)
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. Land survey
8. Exposed line survey and maintenance (on bridges, exposed valve assembly, etc.)
9. Line locates and facility marking
10. Up rating pressure of main (monitoring)
11. Abandonment of main, services, etc.
12. Pit (vault) maintenance (water removal, painting, minor modifications)
13. Minor cutouts and repair of lines (installation of clamps, welds, etc.)
14. Cathodic protection checks and related repair
15. Sign and marker installation/replacement
16. Relief vent line inspections
17. Maintenance/repair of telemetering equipment
18. Brush removal
19. Painting aboveground facilities
20. Grass cutting or snow plowing
21. Trim trees or remove brush for existing line (not cutting or spraying)

1.0 Introduction

Complete an environmental review (coordination) for a utility project or relocation in state trunk highway (STH) right-of-way (ROW) as part of the WisDOT utility permit application process.[1] The coordination is associated with question 17 on form dt1553. This subject provides guidance for a utility owner (or designee) to complete the required coordination along with an environmental checklist (Checklist) to use and submit with the application.

2.0 Environmental Checklist

Use the Checklist to document the required environmental coordination for a utility project or relocation. Since the Checklist only applies to utility work in STH ROW, environmental coordination or permitting outside the ROW may also be required to comply with federal, state, local and/or tribal laws, regulations, and ordinances. A utility is responsible to comply with all environmental requirements for its project.

2.1 Checklist Process

Complete and sign the Checklist in Attachment 1 and include it with form dt1553 along with any necessary supporting documentation as part of the permit application process. WisDOT Region Utility Permit Coordinators will review the Checklist for completeness and may contact the utility to clarify or provide additional information if there are potential issues or concerns about a resource identified or not adequately addressed. A Checklist may be incomplete if a question is not answered, or documentation is not supplied. An incomplete Checklist will be returned to the utility, and its permit application will not be processed.

Supporting documentation may be required to prove environmental coordination with a regulatory agency. If an agency does not require documentation, a utility is not required to submit it to WisDOT.[2] Supply documentation if it may be helpful in WisDOT's review of the Checklist.[3] Supporting documents may include, but are not limited to, permits, approvals, certifications, checklists, correspondence, website screenshots/PDFs, mapping, etc. WisDOT may request documentation to show proof of environmental compliance or agency coordination. Keep supporting documents on file with WisDOT's permit for its duration and provide upon request.

3.0 Enforcement

If there are any environmental issues during a utility project, it is up to those regulatory agencies (DNR, federal agencies, tribes, etc.) having statutory authority to take enforcement action. WisDOT may take compliance actions as set forth in the *UAP*, i.e., suspend permit/work operations, revoke permit, withhold future permit approvals, etc., until a utility complies with WisDOT requirements.

4.0 Federal Actions – NEPA Document

If a utility project involves any of the items listed at the right, then the utility **may** need to complete a National Environmental Policy Act (NEPA) document. Inform WisDOT of potential Federal actions as soon as possible prior to submitting a permit application. Consider hiring a consultant if adequate utility staff are not available to complete a NEPA document.

A NEPA document **is required** for any utility work within tribal reservations. It may also apply to tribal lands outside of a reservation. Do not start utility work until a Tribal permit and Bureau of Indian Affairs approved NEPA document is obtained even if a WisDOT permit has been issued.

1. Use of Federal funds for utility facility relocations associated with WisDOT highway projects
2. Use of Federal funds for utility project construction on a STH **not** associated with WisDOT highway projects
3. Approvals from the Federal Highway Administration (FHWA) for utility accommodation on Interstate highways as determined by FHWA and WisDOT
4. Approvals from FHWA for exceptions to WisDOT's Utility Accommodation Policy or privately-owned utility facilities installed longitudinally on any STH
5. Involvement in Federal actions (e.g., funding, permitting, approval, etc.) other than in items 1-4.

Potential Federal Actions

[1] Note: HMM 09-15-15 covers the permit process.

[2] For example, DNR *non-reporting* utility general coverage permit

[3] For example, DNR Surface Water Data Maps

5.0 Resources: WisDOT Website and Links

Permit approval from WisDOT does not relieve a utility from compliance with all applicable laws, codes, regulations, and ordinances pertaining to (not a comprehensive or all-inclusive list):

- Local agencies – city, town, village, or county
- State agencies – Department of Natural resources (DNR), State Historic Preservation Office (SHPO), Department of Agriculture, Trade, and Consumer Protection (DATCP)
- Federal agencies – U. S. Army Corp of Engineers (USACE), Federal Highway Administration (FHWA), U.S. Fish and Wildlife Service (USFWS)
- Tribal governments – Wisconsin has 11 sovereign tribal nations

WisDOT has established a website to guide a utility with its environmental or other agency coordination when applying for a WisDOT state ROW permit. The website contains links to various regulatory agencies and has also been repeated below as a guide.

1. Construction Site Storm Water Permits
2. Erosion Control and Storm Water Management Plans
3. Waterway & Wetland Permits: Wetland Disturbance
4. Surface Water Data Viewer (Wetland/Waterways Maps)
5. USDA Web Soil Survey
6. Wisconsin Endangered and Threatened Species Permits
7. Preservation of Wisconsin Archaeological Sites
8. Wisconsin Historic Preservation Database
9. Tribal Government Contacts
10. Tribal Historic Preservation Officer Contacts
11. National Heritage Inventory Public Portal
12. WI Department of Natural Resources Utility Permit website
13. IpaC: Home (fws.gov)
14. DNR Bureau of Remediation and Redevelopment Tracking System (BRRTS)

Attachment 1 - Environmental Checklist

Note: To print the Checklist, click on the icon and set *Pages to Print* to "⊙ Pages 3-5"

Include this Checklist and any supplemental documentation with form dt1553, *Application/Permit to Construct, Operate and Maintain Utility Facilities on Highway Right-of-Way.* The application will be returned if the Checklist is not included or is incomplete.

Answer the following questions related to the proposed utility project to show environmental compliance or coordination with various agencies/Tribes. WisDOT's permit approval does not relieve a utility from compliance with all applicable federal, state, local and tribal laws, codes, regulations, and ordinances and shall not be construed as superseding any other governmental agency's more restrictive requirements. Keep all supporting documents on file with WisDOT's permit for its duration and provide upon request.

Remember: Supporting documentation may be required to prove environmental coordination with a regulatory agency on the Checklist. If an agency does not require documentation, a utility is not required to submit it to WisDOT. However, supply documentation if it may be helpful in WisDOT's review of the Checklist, e.g., permits, approvals, certifications, checklists, correspondence, website screenshots/PDFs, mapping, etc. Checkboxes that only have yes, no, or not applicable answers are automatically set to no or not applicable.

1. *Aquatic Resource Impacts*

Use the Wisconsin Wetland Inventory maps and the DNR Surface Water Data Viewer (SWDV) to identify waterways, surface waters and potential wetlands. These tools are not comprehensive, and field surveys may be required to identify aquatic resources within the footprint of a proposed project. Consult with Department of Natural Resources and U.S. Army Corps of Engineers as needed.

Does the proposed project have the potential to impact any aquatic resources (wetlands, waterways, etc.)?

☒ No – Skip to question 2 ☐ Yes – Continue below

State Wetland/Waterway Permit

Does the proposed project meet all necessary terms, conditions, and eligibility criteria to receive non-reporting coverage under the DNR utility general permit (DNR-GP3-2023) for wetland/waterway impacts?

☐ Yes – Project meets all requirements for DNR *non-reporting* utility general permit coverage

☐ No – Project received *reporting* utility general permit coverage or individual wetland/waterway permit
https://dnr.wisconsin.gov/topic/Sectors/UtilityPermitting.html

☒ Not applicable – Project is exempt from all wetland/waterway permitting requirements
Wetlands: https://dnr.wisconsin.gov/topic/Waterways/Permits/Exemptions.html
Waterways: https://dnr.wisconsin.gov/topic/Wetlands/permits/exemptions.html

☐ Not applicable – Project occurs wholly within boundaries of a Native American Nation or Tribal reservation and DNR does not have jurisdiction. See question 6.

Federal Wetland/Waterway Permit

Does the proposed project meet all necessary terms, conditions, and eligibility criteria to receive no-preconstruction notification (PCN) coverage under the USACE utility or other regional general permit (RGP) or a nationwide permit (NWP) for wetland/waterway impacts?
https://www.mvp.usace.army.mil/Missions/Regulatory/Permitting-Process-Procedures/

☐ Yes – Project meets all requirements for no-PCN coverage under a USACE RGP or NWP

☐ No – Project covered under USACE's RGP or NWP coverage obtained through submittal of a preconstruction notification or other Section 404 permit coverage.

☒ Not applicable – Project does not impact waters of the United States.

2. *Protected Species*

Projects with the potential to affect protected species must be covered under the DNR Broad Incidental Take Permit/Authorization for No/Low Impact Activities or undergo an endangered resources preliminary assessment or review. A preliminary assessment may be completed through the DNR Natural Heritage Inventory (NHI Public Portal). An Endangered Resources Review may be conducted through the Endangered Resources Review Program.

All components of the proposed project covered under this permit:

Are covered by the **DNR Broad Incidental Take Permit/Authorization for No/Low Impact Activities**.

☐ **Table 1** and additional conditions are incorporated as required OR

☐ **Table 2** and additional conditions/avoidance measures are incorporated as required.

☐ Received one of the following results from the **NHI Public Portal preliminary assessment** . WisDOT encourages implementing DNR recommended actions By requesting an Endangered Resources Review.

- No further actions are needed
- Further actions are recommended
- Further actions are strongly recommended

☐ Are implementing all required actions from the **DNR Endangered Resources Review**. WisDOT also encourages implementation of DNR recommended actions.

☐ Are covered by a **DNR Individual Incidental Take Permit** and/or USFWS coordination under the Endangered Species Act.

3. *Construction Site Stormwater Permits*

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.

Does the proposed project affect one acre or more of land disturbance?

☒ No – Meets criterion ☐ Yes – Coordination completed

4. *Erosion Control Plan & Stormwater Management Plans*

Does the proposed project meet the Trans 401 "Minor" category?

☒ Yes – Meets criterion for minor project ☐ No – Attach formal erosion control plan

For minor projects, immediately replace disturbed soil and topsoil and/or temporary seed and mulch the soil, which includes repairing equipment and vehicle tracks. Have erosion control devices (hay or straw bales, wattles, silt fence, erosion mat, etc.) at the site or immediately accessible in case weather conditions cause immediate action to protect bare or loose soil. Cover soil piles left overnight with plastic or protect with silt fence or other approved perimeter control devices on the downslope side to prevent possible runoff.

Does the proposed project require a Stormwater Management Plan?

☒ No – Meets criterion ☐ Yes – Coordination completed

For more information: DNR Erosion Control and Stormwater Management Plans

5. *Wisconsin Historic Preservation Database*

Are any historic resources located within the proposed project limits?

☒ No – Meets criterion ☐ Yes – Coordination completed

Contact: State Historic Preservation Office or go to: Wisconsin Historic Preservation Database

6. *Tribal Government Coordination*

Is any part of the work located within the reservation boundaries of a Native American Nation or Tribal reservation? Any utilities placed within a Native American Nation or Tribal reservation require Bureau of Indian Affairs (BIA)/Tribal approval prior to placing their facilities in WisDOT ROW.

☒ No – Meets criterion ☐ Yes – Coordination completed

Tribal Government Contacts: http://witribes.wi.gov/

Note: A utility must obtain a Tribal permit and BIA approval of a NEPA document to proceed with utility work on a STH within a Tribal Reservation. WisDOT's utility permit does not grant automatic approval.

7. *Open or Closed Contaminated Sites, DNR Water Supply Permit, Underground Storage Tanks (USTs), Leaking Underground Storage Tanks (LUSTs)*

Does the proposed project affect any of these items?

Decision / Item	Contaminated sites	DNR water supply permit	USTs	LUSTs
No – Meets criterion	☒	☒	☒	☒
Yes – Coordination completed	☐	☐	☐	☐

DNR: Wisconsin Remediation and Redevelopment Database (WRRD) and Remediation & Redevelopment (RR) Program staff contacts

DATCP: MyDATCP: Storage Tank Search
Region Environmental Coordinators and Regionwide SWECE and Mega/Major project coordinators

8. *Asbestos*

Does the project include replacement of asbestos wrapped utility conduit or Transite piping?

☒ No – Meets criterion ☐ Yes – Document who will complete required notification to the DNR or DHS, the abatement methods, and the disposal location.

9. *Project Comments*

Provide any additional comments or extenuating circumstances that may assist in the review of the project's environmental coordination. List all utility work request, project plan set, or other identification numbers or references included in the environmental coordination and permitting of the project.

Certification Statement: Upon executing the signature below, the signatory certifies that the Checklist is complete, all information is accurate and true, and all required environmental compliance/coordination is complete and on file with the utility.

Disclaimer: Any change in project scope requires this Checklist to be resubmitted and certified to reflect the most updated set of project details.

Signature: _____ Date: _____

Name & Title (print): _____

Company: _____

Email: _____

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

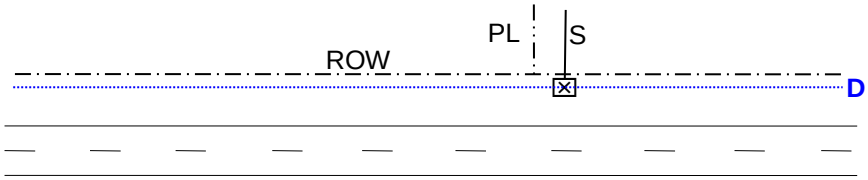


Figure 2: Short-side service connection plus distribution extension

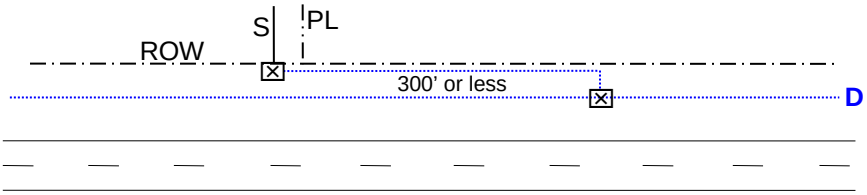


Figure 3: Long-side service connection

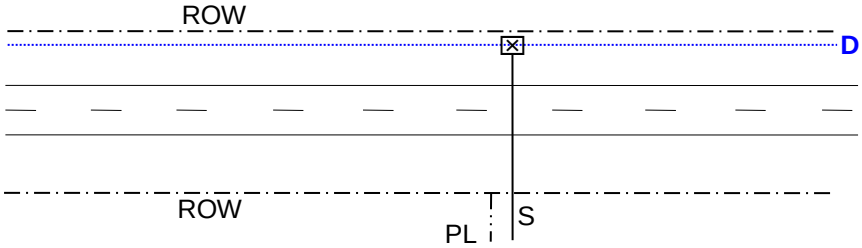


Figure 4: Long-side service connection plus distribution extension

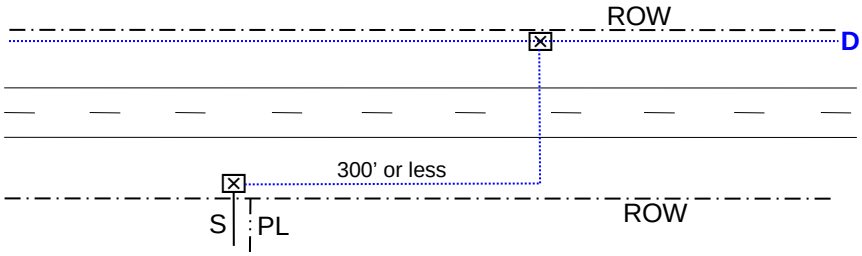
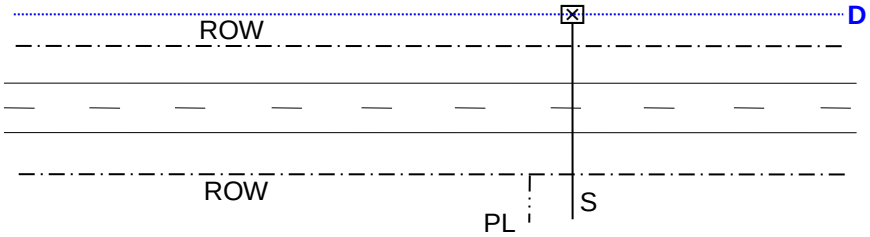


Figure 5: Service connection from distribution outside of ROW



[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

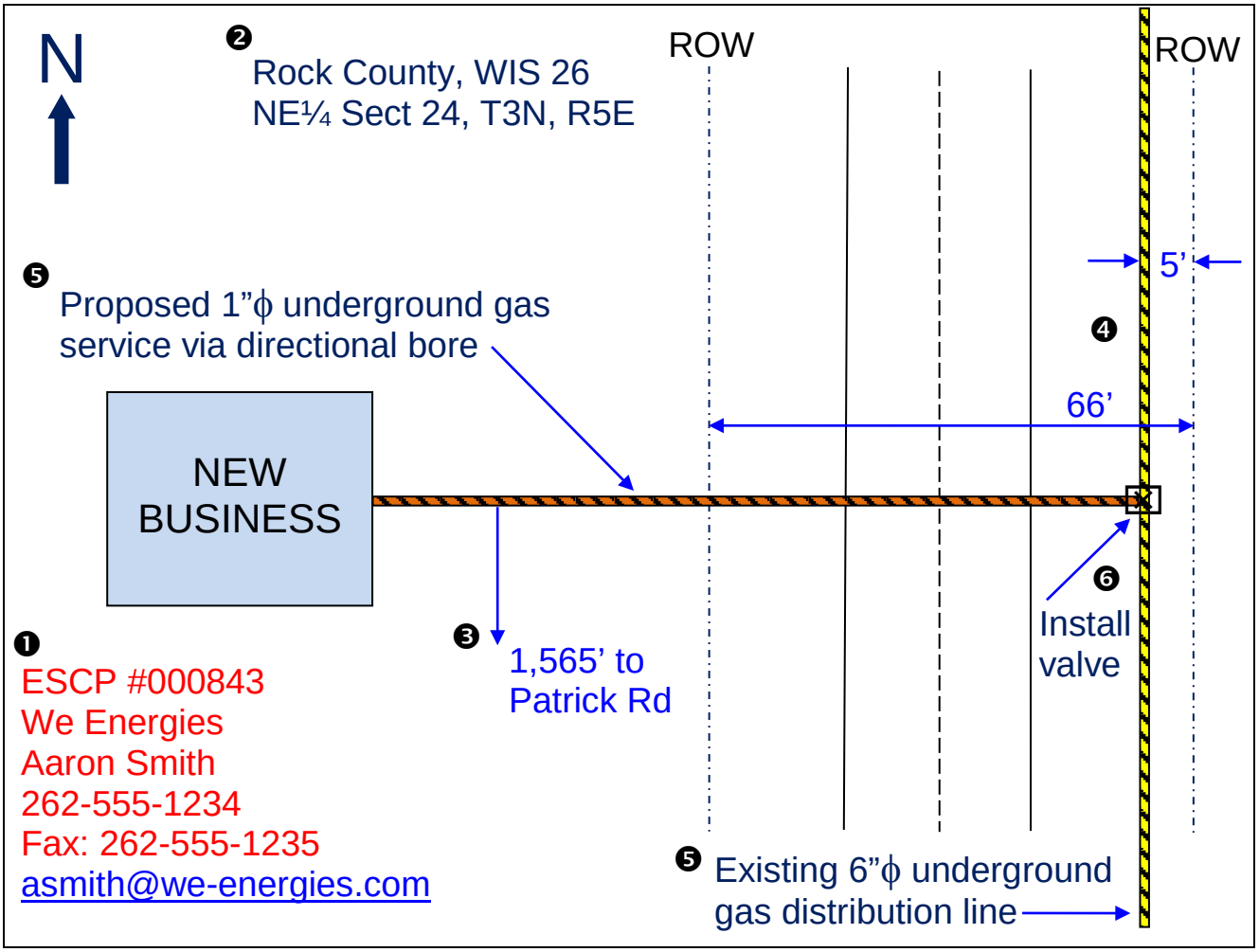
5) Existing distribution line and proposed service connection. Label aboveground or underground for both.

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.

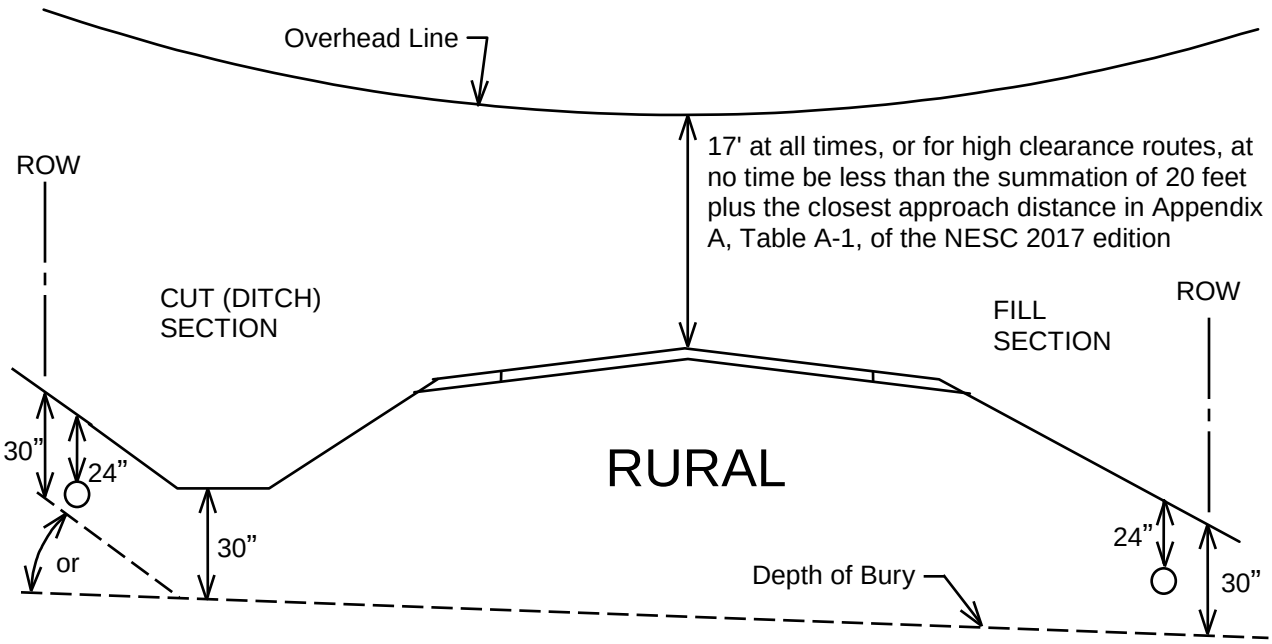
2.2 Overhead Clearances

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.

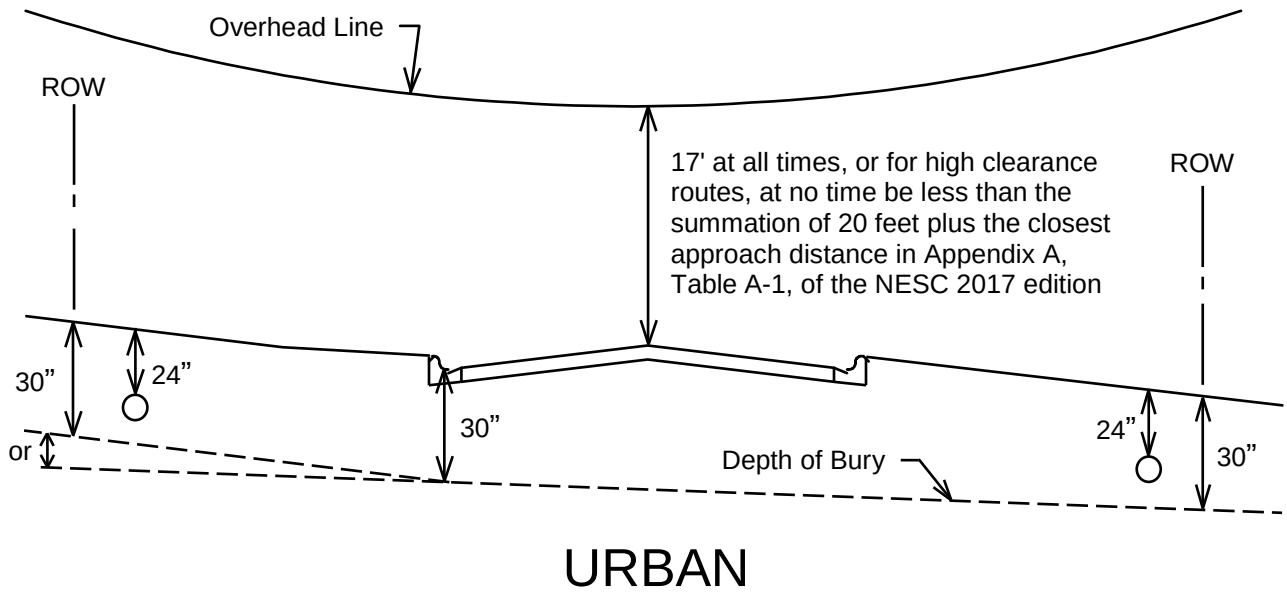
See Figure 1 for a clearance diagram.

[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

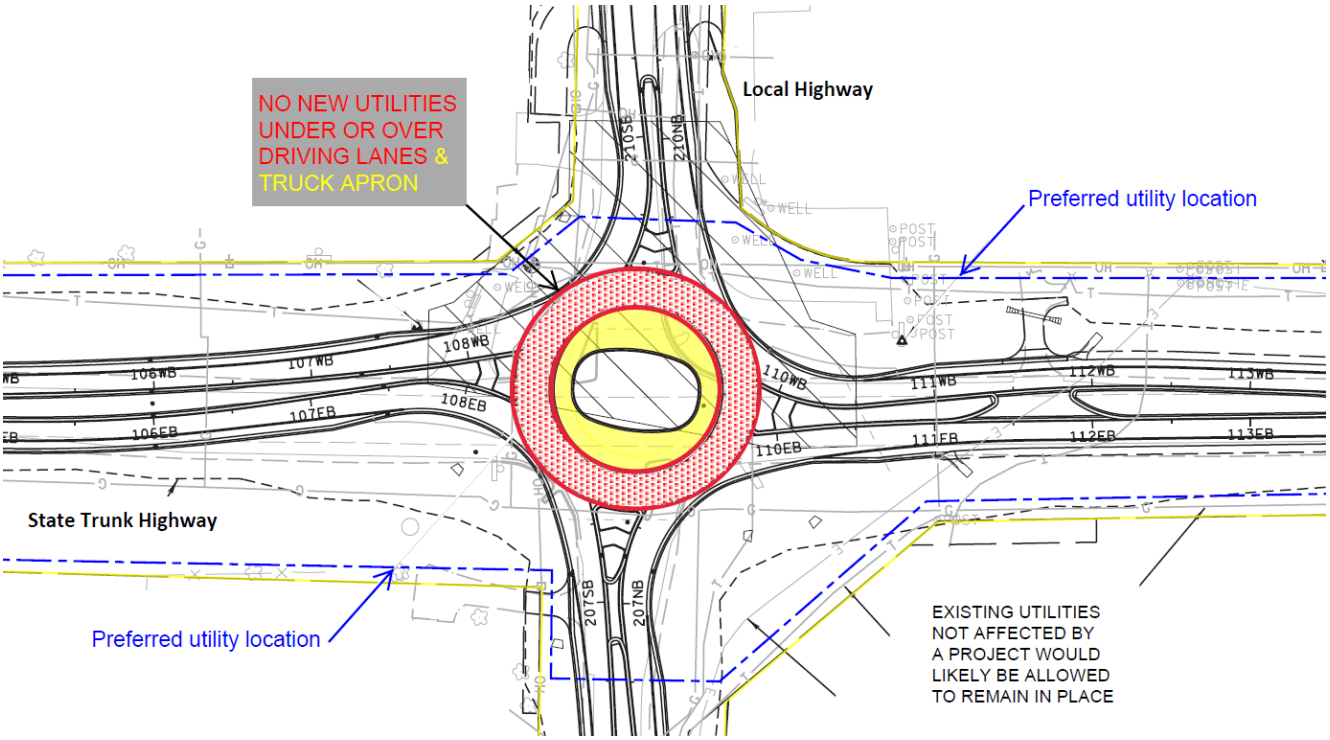
Existing utilities may remain within existing or proposed highway ROW provided they do not adversely affect the highway's safety, maintenance or operation in WisDOT's view. Existing utilities shall be relocated if they:

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 policy provides guidance on:

- Preventing survey monument disturbance or destruction due to utility work,
- Preventing survey operation interference by a utility facility (Figure 1), and

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 (ROW).

Effective with utility permits issued on or after December 1, 2010, a utility shall relocate any portion of its facility at its own cost when found not to be in compliance with this policy. Failure to do this may cause the utility's permit associated with the facility to be revoked.

Figure 1. Pedestal too close to ROW pin.

2.0 Definition of Terms

The following terms are defined and used in this policy:

1. **Boundary line.** A line of demarcation between adjoining lands. Boundary lines may delineate areas of different political jurisdiction and/or land parcels. Land parcel boundaries are more commonly referred to as "property lines."

2. **Geodetic Survey Control Station:** A survey monument with a precise latitude and longitude used for horizontal control, a precise elevation used for vertical control, or both, which has been established by the most rigorous surveying methods to meet the specifications set forth by the National Geodetic Survey (NGS). A typical geodetic survey control station established by WisDOT's Height Modernization Program is a 3.5" bronze disk set in a 16" diameter concrete post (Figure 2) with the survey monument's position of record published as part of NGS' National Spatial Reference System (NSRS).

Figure 2. Geodetic survey control station

3. **Global Navigation Satellite System (GNSS):** A term used to describe a satellite navigation system from any country or region that is also available for civilian surveying applications. In the United States, the GNSS system is the global positioning system (GPS).

4. **Monument:** A physical object that indicates the location of a point determined by survey. Monuments may include, but are not limited to, a brass disk in concrete, iron rods or pipes with or without plastic caps, chiseled Xs, PK nails, etc. (Figure 3). More than one monument may define a location. The terms monument, mark, landmark, corner, point and station are not synonymous but are often used interchangeably.

5. **Property monument:** Monument(s) placed on or near a boundary line (typically at a corner) that identifies a boundary point between two properties.

6. **Reference monument:** A monument used in situations where a USPLSS corner is in a location where a permanent monument cannot be established, would be subject to destruction, or causes safety concerns. Most reference monuments are in road ROW where the corner is located in the road. Contact the county surveyor if a Refence Monument is disturbed.

Figure 3. Monuments

7. **Right-of-way line:** The line delineating where WisDOT and non-WisDOT interests or ownership is located and established by connecting ROW monuments with tangents or curves.

8. **Right-of-way monument**: Typically, a yellow plastic cap on top of a metal pipe, rebar or pin in the ground that identifies a point on a boundary line where WisDOT owns property or interest(s) on one side of the line (Figure 4).

9. **United States Public Land Survey System (USPLSS) monument:** A monument 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. When a USPLSS monument is located in a road, there may be Reference Monument(s) located in the nearby ROW. The county surveyor shall manage the replacement of any disturbed USPLSS monument. This monument is sometimes called a "government corner."

10. **Wisconsin Height Modernization Program (WI-HMP):** The statewide vertical, horizontal and gravitational geodetic control network that supports the Wisconsin Spatial Reference System. WisDOT's Geodetic Surveys Unit (GSU) is responsible for WI-HMP development and maintenance. GSU also serves as chief custodian of the statewide Geodetic Survey Control Network including the core functions of replacing/reestablishing disturbed or destroyed geodetic survey control stations. Typically, three protective guard or witness posts surround a geodetic survey control station for the WI-HMP (Figure 5).

Figure 4. ROW monument with yellow cap and yellow plastic post with sign nearby. Posts may be metal too.

Figure 5. Orange guard or white witness posts surround a typical geodetic survey control station installation. Some of these monuments may have only 1 or 2 posts.

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 survey control station – including overhead lines, poles and guy wires – may interfere with signals from the GNSS satellites.

Aboveground utility facilities such as poles, pedestals, cabinets, guy anchors, etc., are typically placed close to the ROW line to keep them out of the clear zone. Some may be placed near the intersection of property and ROW lines or bends in the ROW 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 ROW, 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 ROW 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 adversely 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[B] or destroying it. A USPLSS monument (section corner) or reference 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 ROW, this notification shall be at least 60 days in advance.**

For Wisconsin Height Modernization Program station monuments, contact WisDOT at 866-568-2852 or email geodetic@dot.wi.gov as early in the planning process as possible 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 ROW line" in permit or contract language. Instead, use "**near** a monument" or "**near** the ROW line" since **near** is defined in the table as the **minimum** clearance.

5.0 Providing Adequate Protection for Monuments

A utility shall do the following to avoid disturbing monuments:

- Surround WI-HMP monuments and all witness/guard posts with orange safety fence to make the monument more visible for protection. Use a 5-foot radius if posts are not present. Contact WisDOT's Geodetic Surveys Unit if posts are broken or missing.
- Place a lath painted pink and/or with pink survey flagging nearby to visually indicate the monument location if a monument does not have a witness post.[C]
- Do not place soil or debris on a monument. If a soil pile spills onto a monument, remove the material by hand or a soft brush.
- See Table 1 for specific instructions regarding geodetic survey control stations.

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

If 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 for replacing it according to the following:

Monument Type	Contact	Who Replaces
ROW or Property	Region Utility Permit Coordinator	Utility*
USPLSS or Corner	County Surveyor	County Surveyor**
Any Geodetic Survey Control Station	WisDOT Geodetic Survey Unit: 866-568-2852 or geodetic@dot.wi.gov	WisDOT GSU***

* The utility must hire a Wisconsin Professional Land Surveyor to replace disturbed property monuments per Wis. Stat. 443.01(6s)(c). Refer to FDM 9-5-1 for more information on preserving survey monuments.
** The County Surveyor will coordinate the replacement of the monument(s).
*** WI-HMP Program Manager will coordinate the location, construction and survey of all replacement Geodetic Control Station Monuments.

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 ROW or property monument, may result in a fine or imprisonment.

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

7.0 Utility Facility Interference with Monuments

If WisDOT determines that:

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

The utility shall move its 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 Coordinator prior to permit issuance.

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	ROW or Property	Greater of 1:1 slope or 2'	2' – Trench 3' – Vault	
	USPLSS or Reference	Greater of 1:1 slope or 3'	3' – Trench 5' – Vault	
	Geodetic survey control station	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	ROW or Property	1:1 slope	5'	
	USPLSS or Reference	1:1 slope	Greater of ½:1 slope or 5'	
	Geodetic survey control station	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 ROW)	ROW or Property	1:1 slope	5'	
	USPLSS or Reference	1:1 slope	Greater of ½:1 slope or 5'	
	Geodetic survey control station	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 ROW)	ROW or Property	Greater of 1:1 slope or 2'	2'	
	USPLSS or Reference	Greater of 1:1 slope or 3'	3'	
	Geodetic survey control station	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	ROW or Property	2'	3'	
	USPLSS or Reference	3'	5'	
	Geodetic survey control station	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**	ROW or Property	1' between nearest edge of pole and ROW line 3' from monument	3'	A pole should not be placed **at** the monument or **on** a ROW or property line.
	USPLSS or Reference	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 survey control station	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**	ROW or Property	3'	3'	A guy anchor should not be placed **at** the monument.
	USPLSS or Reference	1:1 slope	5'	
	Geodetic survey control station	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**	ROW or Property	N/A	N/A	N/A
	USPLSS or Reference	N/A	N/A	N/A
	Geodetic survey control station	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	ROW or Property	N/A	N/A	N/A
	USPLSS or Reference	N/A	N/A	N/A
	Geodetic survey control station	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's Geodetic Surveys Unit is the primary point of contact for all, geodetic survey control station monuments. The primary point of contact for any USPLSS or Reference Monument in the county surveyor. Contact the Region Survey Coordinator about all other monuments or if there are questions.

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 6 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.

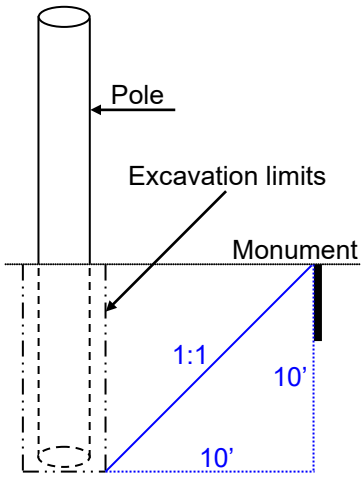


Figure 6. Slope measurement example.

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

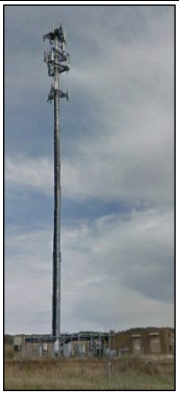
Utilities shall not be permitted to occupy vehicular tunnels on controlled-access highway on new location except in extreme cases. Under no circumstances, however, shall a utility which transports a hazardous material be allowed to occupy a vehicular tunnel.

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 wireless provider 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 ROW use fee schedule is listed in Table 2. Instead of the use fee, WisDOT may enter into a shared resource project with a provider to obtain tower space for State Patrol antennas or communication services for WisDOT traffic management systems.

TABLE 2 – FEE SCHEDULE for CELLULAR FACILITY USE of WisDOT HIGHWAY ROW and COLLATION of SMALL WIRELESS FACILITY on WisDOT UTILITY POLE

Cellular Facility Description	Annual Site Fees	
	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	$20 per SWF[4]	
4. Collocation of small wireless facility on WisDOT utility pole	$250 per SWF[5]	
All ROW use fees are fixed for 5 years, then may be adjusted by: 1-2) the change in the Consumer Price Index (CPI)[6] 3) 10 percent rounded to nearest dollar[7] 4) 10 percent rounded to the nearest multiple of five dollars[8]		

Fees are not compensable nor are services agreed to by WisDOT and a provider for cellular installations on highway ROW per WisDOT's policy on utility relocation unless noted in an Agreement. A provider may be refunded a prorated share of its ROW use fee if WisDOT requires the provider to move its facility off highway ROW for an improvement project. A secondary carrier shall pay the same fee as a primary carrier with 50% paid to WisDOT and 50% paid to the primary carrier as compensation for building and maintaining the facility.

[3] Utility pole defined in Wis. Stat. s. 66.0414(1)(x)
[4] Wis. Stat. s. 66.0414(2)(c)5.
[5] Wis. Stat. s. 66.0414(4)(d)1. Includes permit application fee if pole is not installed or replaced. Table 4 #4.
[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 the cellular facilities listed in Table 4. No permit application fee is charged for the items in #5 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. Small wireless facility on existing utility pole (no pole replacement)	$500/$100*[16]
3. Installation or replacement of utility pole together with collocation of SWF	$1,000*[17]
4. WisDOT utility pole – no installation or replacement	$0[18]
5. Routine maintenance, replace existing SWF with similar/same size/smaller facility, or install/maintain/replace micro wireless facilities strung on cables between existing poles[19]	$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.[20]	

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

Wisconsin DOT
Bureau of Highway Maintenance
Attn: Statewide ROW Permits Engineer
4822 Madison Yards Way, 6th Floor South
Madison, WI 53705

5.0 Specific Small Wireless Facility Requirements

The following requirements for small wireless facilities (SWFs)[21] 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:[22]
   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:[23]
   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.[24]

[16] Wis. Stat. s. 66.0414(3)(d)1.a.&b.
[17] Wis. Stat. s. 66.0414(3)(d)1.c.
[18] Wis. Stat. s. 66.0414(4)(d)1. Included with $250 collocation fee. If WisDOT utility pole is installed or replaced, then (3)(d)1.c. applies.
[19] Wis. Stat. s. 66.0414(3)(e)
[20] Wis. Stat. s. 66.0414(3)(d)2.
[21] Wis. Stat. s. 66.0414(1)(u)
[22] Wis. Stat. s. 66.0414(2)(e)2.
[23] Wis. Stat. s. 66.0414(2)(e)3.
[24] 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:[25]

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.[26]

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 STH Connection permit is not automatically granted especially if there is existing access to a parcel.

[25] Items 1-6: Wis. Stat. s. 66.0414(3)(c)2.
[26] 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

On December 3, 2021, the Federal Highway Administration (FHWA) implemented a new rule on broadband infrastructure deployment in the right-of-way (ROW) of applicable federal-aid highway projects. This rule only applies to WisDOT highway improvement projects on state trunk highways (STHs). The rule does not have any requirements for broadband projects on STHs that are unrelated to WisDOT highway improvement projects.

1.1 Legal Authority

The 2018 Consolidated Appropriations Act, Division P, Title VI ("MOBILE NOW Act"), Section 607[1], Broadband Infrastructure Deployment (47 U.S.C. 1504), directed the U.S. Secretary of Transportation to promulgate regulations ensuring that each state Department Of Transportation (DOT) meet specific registration, notification, and coordination requirements to facilitate broadband infrastructure deployment in the ROW of applicable federal-aid highway projects. Accordingly, the new FHWA rule is required by statute to implement Section 607 requirements.

1.2 Overview

The FHWA rule, which aims to facilitate the installation of broadband infrastructure, applies to each state DOT that receives federal funds under Chapter 1 of title 23, U.S.C. The MOBILE NOW Act defines the following terms that are used in the rule:

- **Appropriate state agency:** A state governmental agency that is recognized by the executive branch of the state as having the experience necessary to evaluate and carry out projects relating to the proper and effective installation and operation of broadband infrastructure.
- **Broadband infrastructure:** Any buried, underground, or aerial facility, and any wireless or wireline connection, that enables users to send and receive voice, video, data, graphics, or any combination thereof.
- **Broadband infrastructure entity:** Any entity that owns or operates broadband infrastructure and provides broadband services in a manner consistent with the public interest, convenience, and necessity, as determined by the State of Wisconsin. Throughout this policy, the term "company" is used to represent "broadband infrastructure entity."

1.3 Broadband Speed

The official Federal Communications Commission definition of broadband speed is at least 25 Mbps (megabytes per second) download and 3 Mbps upload.

1.4 Rule Implementation

The FHWA rule does not establish a mandate or requirement that a state install or allow the installation of broadband in STH ROW. WisDOT has defined broadband as a utility per HMM 09-15-05, 2.0 (#12) and permitted it within STH ROW since the mid-1990s and therefore decided to implement the new rule.

2.0 Rule Requirements

In s. 645.307(a), FHWA establishes four new requirements of Section 607 of the MOBILE NOW Act, which are discussed in sections 2.1-2.5. Unrelated to this rule, additional guidance on broadband infrastructure fees for the longitudinal occupation of controlled-access highway ROW is provided in HMM 09-15-40.

[1] All citations to section (s.) 607 in this policy reference federal law.

2.1 Broadband Utility Coordinator

Section 645.307(a)(1) requires WisDOT, in consultation with appropriate state agencies, to identify a broadband utility coordinator who is responsible for facilitating the infrastructure ROW efforts within the state. WisDOT has designated the following personnel for this position.

Primary Contact:	**Office Address:**
Kathy Jennings Highway Maintenance Engineer (608) 261-8976 kathy.jennings@dot.wi.gov	Wisconsin DOT Bureau of Highway Maintenance 4822 Madison Yards Way, 6th Floor South Madison, WI 53705

2.2 Broadband Company Registration

Section 645.307(a)(2) requires WisDOT, in consultation with appropriate state agencies, to establish a registration process for broadband companies that want to be included with the deployment program detailed in this policy. To do this, WisDOT has established a website. Broadband companies interested in placing broadband infrastructure on STH ROW must sign-up through the website.

2.3 Annual Notification of the WisDOT Highway Program

Section 645.307(a)(3) requires WisDOT, in consultation with appropriate state agencies, to establish a process for electronically notifying broadband companies identified under s. 645.307(a)(2), on an annual basis, of WisDOT's highway improvement program and providing other notifications as necessary. Broadband companies that have registered through WisDOT's website will receive these notifications.

The notification process consists of an email informing broadband companies of where to find WisDOT's highway improvement program information, which is currently available at these WisDOT websites:

- 6-year improvement program (list)
- 6-year improvement program (GIS version)
- 2-year improvement program (GIS version)

2.4 Coordination with Various Plans

Section 645.307(a)(4) requires WisDOT, in consultation with appropriate state agencies, to coordinate initiatives[2] under Section 607 of the MOBILE NOW Act with other:

1. Statewide telecommunication and broadband plans
2. State and local transportation plans
3. Land use plans

All coordination should include strategies to minimize repeated excavations involving broadband infrastructure installation in the ROW.

2.5 No Disadvantages

The FHWA rule mandates that WisDOT must carry out any appropriate measures to ensure existing broadband companies are not disadvantaged, as compared to other broadband companies, with respect to this program.

[2] "Initiatives" means the event, occurrence, etc. when a highway improvement project accommodates a broadband infrastructure project.

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

Always possess a complete copy of the WisDOT issued utility permit when work is being performed within STH right-of-way (ROW). When used, it also includes a copy of WisDOT's approval for a service connection under an expedited service connection permit (see HMM 09-15-20). Copies of permits or approvals may be electronic.

1.2 Use of Highway Median

Highway median use 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

Do not set temporary guard poles (TGPs) within the ROW unless specifically authorized by a permit. By definition, TGPs are used to prevent aerial lines from falling onto the traveled way during construction. Comply with HMM 09-15-25, 3.1 when TGPs are permitted in the clear zone.

1.4 Unexpected Field Conditions

Obtain prior approval from WisDOT prior to ***any*** modification of the approved permit to meet changed or unexpected field conditions.

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. Verify traffic sign removal with the region work zone engineer prior to submitting a utility permit application.

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. Submit written notice of permitted work completion including all restorations within ***15 calendar days*** with the same person via email. 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 to aid with utility installation is prohibited 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 prior WisDOT approval. Follow section 2.2 for reestablishing or replacing trees/vegetation identified as living snow fence that are removed, destroyed, or damaged as part of a utility construction or maintenance project.

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 initially submit them to the Region office, and include a description of or the specific items listed below:

1) Highway side(s) the activity will be occurring along each corridor. A highlighted map is acceptable if work is on both sides. Include town, range, and section information on the map.
2) Chemicals that will be sprayed, their active ingredients (provide ingredient list upon request), and how they will be applied (wand broadcast)
3) Person(s) who will be applying the chemicals and their Wisconsin applicators license number(s)
4) Method(s) adjacent property owners will be notified prior to spraying (mail, door card, phone, in-person)
5) Locations, if any, spraying will occur near wetlands or waterways. If yes, has DNR been notified?
6) Types of cutting performed (trimming, selective cutting, whole tree removal)
7) Methods for cut wood disposal (removed from site, given to nearby property owner, chipped/mulched)
8) Methods for handling Oak Wilt and Emerald Ash Borer requirements, if applicable
9) Types of equipment that will be used (bucket trucks, brushhogs, ATVs)
10) 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.
11) Appropriate work zone traffic control diagram(s). Use WisDOT's Work Zone Field Manual as needed.
12) Pictures to clarify what vegetation will be targeted
13) Google Earth .kmz files to match cutting/spraying locations with WisDOT's living snow fence database

2.2 Living Snow Fence

Living snow fence (LSF) is strategically placed vegetation along state highways and within the ROW that creates a natural buffer to help control blowing and drifting snow from accumulating on the highway. See Figure 2.

Reestablish LSF damaged, destroyed, or removed in conjunction with a utility construction or maintenance project at a utility's sole cost.

Figure 2: LSF along WIS 82 east of Oxford

Plant new LSF within one year of removing existing LSF plantings or vegetation serving as LSF. WisDOT will provide drawings and specifications for allowable plantings for the affected area(s). Maintain all transplanted or newly planted trees and vegetation for a period of two years. If any trees or vegetation die within the two-year period, replace, and maintain them for another two-year period.

2.3 Temporary Snow Fence

A time factor is involved for LSF to establish maturity and work effectively. Until this occurs, highways are left exposed to increased safety risks and winter maintenance costs from blowing and drifting snow.

Install wood or plastic temporary snow fence (TSF) in locations where utility construction or maintenance activities remove, damage, or destroy existing LSF. Install TSF prior to November 1 in the same calendar year existing LSF vegetation is removed and maintain it until the new LSF vegetation is mature and working effectively (typically no less than three years from the installation date). WisDOT will periodically inspect TSF installation until the new LSF reaches maturity and will contact the utility to maintain/repair TSF as required. Remove TSF upon reestablishment of LSF plantings and approval from WisDOT, or at three years from installation, whichever occurs first.

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) Ensure against the trench entrapping excessive moisture or becoming a drainage channel, and
4) Ensure 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 5.1.

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 such as 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 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.

3.4 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.

3.5 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 a 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 3).

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 3: Improper pothole restoration

4.0 Work Site Safety

Always secure the work site from any hazard to the public until all permitted utility work is completed. 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

Operate vehicles and equipment with their high intensity flashing (strobe or revolving) and hazard warning lights on when they are within the clear zone during work operations.

4.3 Safety Garments

Always wear Type 2 or 3 retro-reflective safety garments when working outside of vehicles or equipment (e.g., backhoe) and within the ROW. This applies to all WisDOT, county, utility, consultant, and contractor personnel.

5.0 ROW Restoration

Restore the highway and the adjacent ROW to its original (as close as possible) condition within ***two weeks*** after completing utility facility construction or maintenance operations. Exceptions may be allowed (e.g., for inclement weather) with WisDOT prior approval. Failure 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 5.1 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 4.

Figure 4: Examples of Improper ROW Restoration

Restore any disturbed turfed ROW area with at least **four inches** 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 Pavement Restoration Requirements

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

Restore concrete pavement in conjunction with WisDOT standard detail drawing 13C9. Avoid creating additional joints when possible. The minimum dimension for a patch will be **six feet** 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 **six feet** 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 5 below shows improper asphaltic pavement restoration.

Figure 5:
Both patches improperly backfilled/compacted, and not patched to nearest joint or seam

5.2 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.

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. Include the reason(s) for needing the temporary driveway on both applications. A temporary driveway may not be approved, so the 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 6.

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.

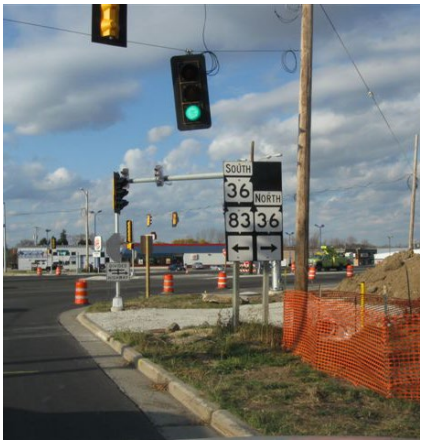


Figure 6: Temporary driveway within the functional area of an intersection

7.0 As-Built Location Data

Provide X (easting), Y (northing), and Z (elevation) as-built coordinate data for all open cut, trenched and other utility projects in which a facility is exposed to facilitate a survey. This includes buried handholes, valves, etc. Provide boring logs if such equipment can produce X, Y and Z data. The purpose for this data is to minimize future utility conflicts with WisDOT improvement/maintenance projects and utility project permits.

7.1 Data Collection

Collect data every 50 feet and at all angle points/changes of direction along the facility centerline. Survey the top-center of each utility facility. For multiple facilities (e.g., multiple conduit packages or pipelines), measure the total width (outside-to-outside) of the facilities. Facility depths may be determined using permit information.

7.2 Data Accuracy

Use FDM 9-30-15 Real Time Kinematic (RTK) Surveys to obtain the most accurate data possible. The appropriate RTK application is General (Topo) Positioning, which requires using a RTK survey instrument. Mapping/GIS grade equipment does not provide as accurate positional data.

Improve accuracy when surveying in less-than-ideal situations such as urban canyons or heavily wooded areas where satellite signals may be blocked or impeded. For example, use longer observation times, survey more data points along a line, perform multiple/redundant measurements and average the results, etc. When needed, use established benchmarks that have published X, Y and Z data as part of the survey, which provides greater confidence in the data accuracy.

7.3 Format, Storage and Submittal of Data

Submit data on as-built plans to WisDOT using the Wisconsin Coordinate Reference System (WISCRS) a/k/a "County Coordinates." In WISCRS, grid and ground coordinates are the same value, so there is no need to convert from grid to ground values using a combination factor.[1] Data post-processing is generally not required for a RTK survey procedure, but processing methods and strategies vary with equipment manufacturer/model.

7.4 Data Retrieval

To be determined

[1] Combination factors were needed when WisDOT mapped projects in State Plane Coordinates.

Attachment 1: Start/Completion Work Notice

RESET FORM

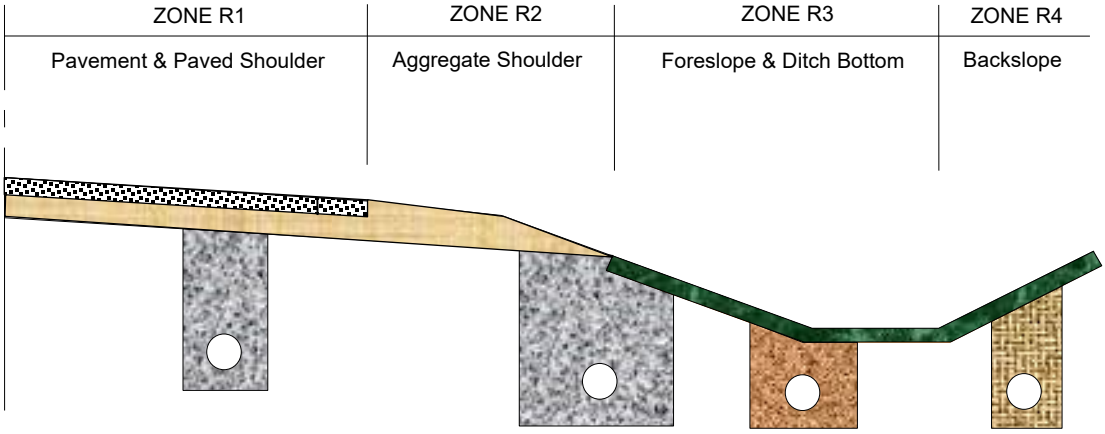
Utility Permit Start/Completion Work Notice

Provide all information below and email this form to the applicable region utility permit office at least three working days prior to starting work. When restoration is complete and ready for inspection, email the same contact. For all date boxes, click in the middle of the box to highlight a drop-down calendar.

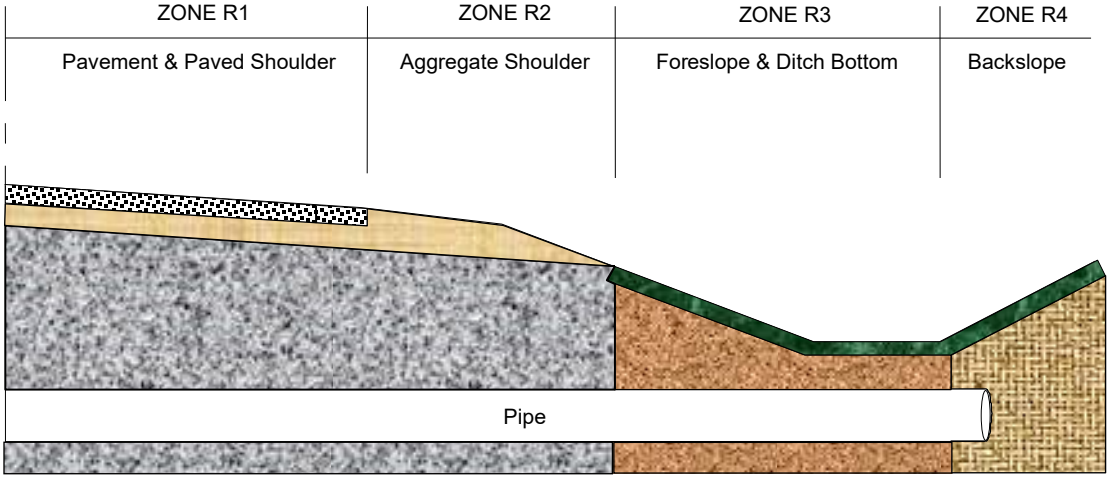
Select Region Office *(Click for map if needed)* Click button for list →	**Region Email Address** *(Auto-populates once Region Office is selected)*
WisDOT Utility Permit Number *(Enter number)*	**Utility Work Order or Project ID Number (if any)** *(Enter number from question 5 on WisDOT DT1553 permit form)*
Utility Company Name *(Enter name from question 1 on WisDOT permit form)*	**County** / **Highway(s)**
Utility or Utility Contractor Contact Name & 24-Hour # *(Provide information if utility hires a separate contractor to perform the work. If not, provide utility company contact information.)*	**Traffic Control Contractor and 24-Hour #** *(Provide information if utility hires a separate work zone traffic control contractor for the work.)*
Utility Subcontractor #1 Contact Name & 24-Hour # *(Provide information if contractor hires a separate subcontractor to perform the work.)*	**Lane Closure System (LCS) Notification** *(Enter date if LCS notification is required otherwise leave blank. Utility is required to submit all LCS information prior to starting work.)* Date Submitted: LCS Number:
Utility Subcontractor #2 Contact Name & 24-Hour # *(Provide information if contractor hires a separate subcontractor to perform the work.)*	**Proposed Work Start Date** *(Enter proposed work start date. Failure to provide the work start notice may result in permit suspension or revocation.)*
Work Suspension Date *(Enter date that utility decides to suspend work due to material shortages, other priority work, etc.)*	**Work Resumption Date** *(Enter date that utility decides to resume work.)*
Work Completion Date *(All work is finished including restoration and site is ready for inspection. Enter date and resubmit form to the region office using same email address above within 15 calendar days of completion.*	**3D (X-Y-Z) As-Built Utility Data** *(Follow section 7 in HMM 09-15-45. Click yes if required to submit 3D as-built utility data and provide it within 30 calendar days of the completion date.)* ☐ Yes ☐ Not Required

Attachment 2: Excavation Backfilling Detail Drawings, Page 1 of 2

LONGITUDINAL EXCAVATION: RURAL CROSS-SECTION



TRANSVERSE EXCAVATION: RURAL CROSS-SECTION



KEY

- Slurry Backfill
- Granular Backfill
- 4” Topsoil
- Spoil backfill

NOTES

1) Use slurry backfill to replace the excavated material in ZONES R1 and R2. Drain slurry water either naturally (e.g., through soil) or mechanically (e.g., using temporary standpipe and pump) at lowest excavation elevation.

2) If the work area covers BOTH ZONES R2 & R3, use slurry backfill to replace the excavated material.

3) Use granular backfill to replace the excavated material in ZONE R3..

4) Place backfill in ZONES R3 & R4 to within 4" of the finished grade to allow for topsoil placement.

5) Suitable spoil backfill may be used in ZONE R4 at WisDOT’s discretion.

6) Conform to the current edition of WisDOT’s Standard Specifications for Road and Bridge Construction for granular backfill placement and gradation, and for slurry fine and coarse aggregate gradation requirements (use concrete aggregate 501 standard specification).

WisDOT BACKFILL SLURRY FORMULA

Place the materials in a clean concrete mixer truck and thoroughly mixed in the following quantities FOR EACH CUBIC YARD REQUIRED:

More Flowable

- SAND 1,600 lbs
- #1 STONE 1,400 lbs
- #2 STONE 1,000 lbs
- WATER 25 gals

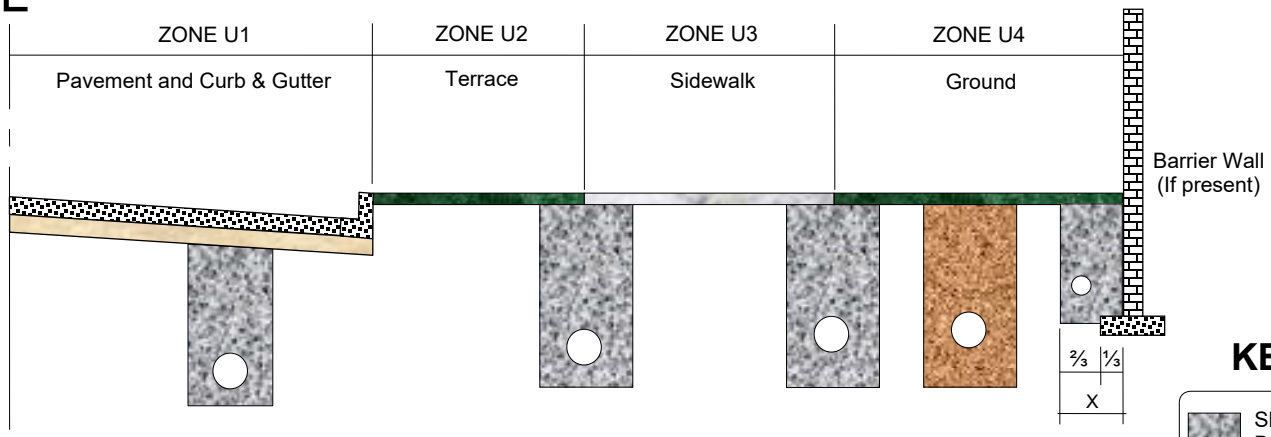
More Rigid

- SAND 1,600 lbs
- #1 STONE 1,000 lbs
- #2 STONE 1,400 lbs
- WATER 25 gals

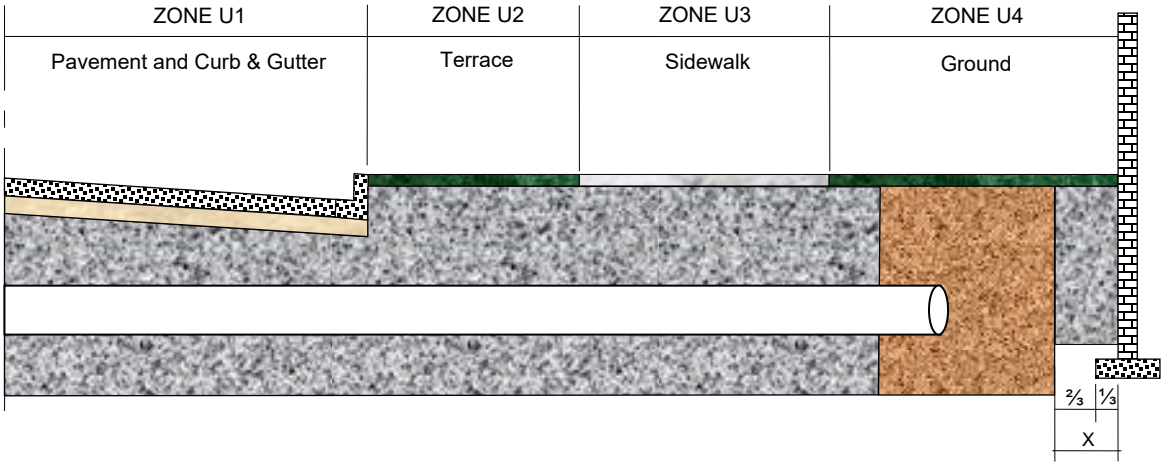
No additional water is allowed. The above weights are **damp** weights. Just prior to placing the slurry backfill, run the truck at mixing speed for one full minute to ensure an even mixture. The coarse aggregate (#1/#2 STONE) combined weight is 2,400 lbs with #1 STONE between 35-65% and remaining #2 STONE for workability. No other formulas are allowed.

Attachment 2: Excavation Backfilling Detail Drawings, Page 2 of 2

LONGITUDINAL EXCAVATION: URBAN CROSS-SECTION



TRANSVERSE EXCAVATION: URBAN CROSS-SECTION



KEY

- Slurry Backfill
- Granular Backfill
- 4" Topsoil
- Spoil backfill

NOTES

1) Use slurry backfill to replace the excavated material in ZONES U1, U2 and U3. Drain slurry water either naturally (e.g., through soil) or mechanically (e.g., using temporary standpipe and pump) at lowest excavation elevation.

2) If the work area covers BOTH ZONES U3 & U4, use slurry backfill to replace the excavated material.

3) Use slurry backfill to replace the excavated material in ZONE U4 if it is adjacent to a barrier wall.

4) Place backfill in ZONES U2 & U4 to within 4" of the finished grade to allow for topsoil placement.

5) Use granular backfill in ZONE U4. Suitable spoil backfill may be used at WisDOT's discretion.

6) Conform to the current edition of WisDOT's Standard Specifications for Road and Bridge Construction for granular backfill placement and gradation, and for slurry fine and coarse aggregate gradation (use concrete aggregate 501 standard specification).

WisDOT BACKFILL SLURRY FORMULA

Place the materials in a clean concrete mixer truck and thoroughly mixed in the following quantities FOR EACH CUBIC YARD REQUIRED:

More Flowable

- SAND 1,600 lbs
- #1 STONE 1,400 lbs
- #2 STONE 1,000 lbs
- WATER 25 gals

More Rigid

- SAND 1,600 lbs
- #1 STONE 1,000 lbs
- #2 STONE 1,400 lbs
- WATER 25 gals

No additional water is allowed. The above weights are **damp** weights. Just prior to placing the slurry backfill, run the truck at mixing speed for one full minute to ensure an even mixture. The coarse aggregate (#1/#2 STONE) combined weight is 2,400 lbs with #1 STONE between 35-65% and remaining #2 STONE for workability. No other formulas are allowed.

Attachment 3: Pavement Restoration Examples

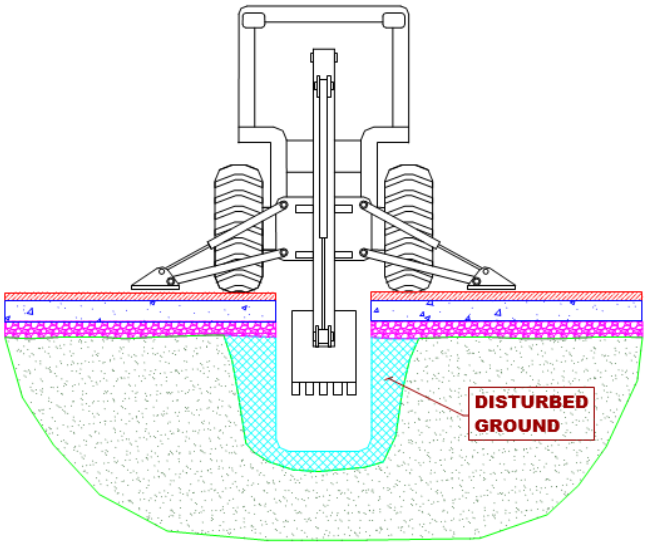


Figure 1a: Excavation with planned sawcut[2]

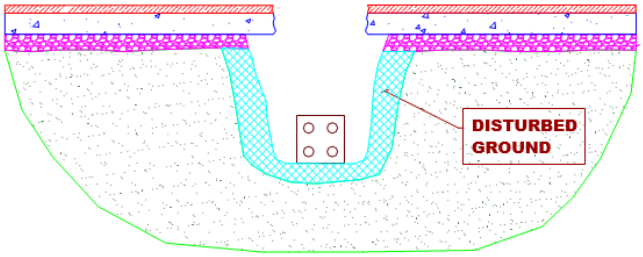


Figure 1b: Actual excavation without sawcut

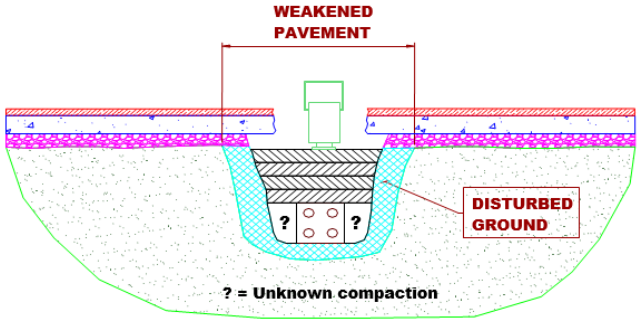


Figure 1c: Trench backfilling without slurry

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.

[2] Drawings courtesy of CNA Consulting Engineers

1.0 General

Follow the responsibilities and procedures listed in this subject when environmental conditions are discovered in state trunk highway (STH) right-of-way (ROW). These conditions include, but are not limited to:

1) Tribal and non-tribal cultural resources: archeological sites, historic structures, burial sites, etc.
2) Endangered resources: rare plants, animals, and natural communities
3) Threatened and endangered species or their habitats
4) Contaminated sites, underground storage tanks (USTs), leaking underground storage tanks (LUSTs)

To mitigate discovery of environmental conditions as best as practicable, perform environmental coordination and complete the associated Checklist in HMM 09-15-16.

2.0 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, notify local police and fire departments immediately and take all necessary steps to provide for the safety of people and prevent property damage in the area. After suspending operations, contact the offices listed in 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. Use the checklist in Attachment 1 to collect the necessary information that may be asked by site investigators.

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

Table 1: Environmental Conditions Discovery Notification List

Category	Contact Information **(Note: Contact All That Apply)**
Tribal Cultural Resources	
All areas: contact specific Tribal Nation	Tribal historic preservation officers
Non-Tribal 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 Sites, 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 region construction supervisor[1]

1. These people also notify the following staff in WisDOT's Bureau of Technical Services:
   Lynn Cloud..... (608) 266-0099 .....Cultural Resources
   Shar TeBeest ..... (608) 266-1476 .....Contaminated Sites, USTs, LUSTs, etc.
2. Required under Ch. 292 Wis. Statutes

3.0 Utility Facility Placement Options

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

Utility Entirely Avoids the Affected Area

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

Utility Locates Around or Through the Affected Area

3) 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.
4) An Agency decides that the area can be left in its natural state, but any area disturbed or affected by the utility operation (based upon the Agency's assessment) must be remediated or mitigated. The utility may also elect to go around the area, if possible, and avoid remediation or mitigation.
5) An Agency decides that the area can be left in its natural state, and existing 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 3-5 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 Environmental Coordinator or the Bureau of Technical Services as a final check.

4.0 Financial Responsibility

When a utility performs an initial site assessment on STH ROW – either with a project of its own or because a WisDOT project is not required to obtain environmental information – the utility pays for the assessment cost. No matter who conducted the initial assessment or even if one was not done, a utility that discovers any environmental conditions is not responsible for assessment, mitigation, or remediation costs provided it had complied with section 2.0 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 – Utility Discovers Environmental Conditions while Working on STH ROW and Decides to Locate in the Affected Area

Category/Activity		Who Pays for 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, BSPO, or Tribal order; or no order	Utility
Contaminated Sites, USTs, LUSTs, etc.		
Site Assessments	• Utility project but no WisDOT project • 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 2.0 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.

Recover utility costs incurred due to discovering contaminated sites, USTs, or LUSTs from the RP **when WisDOT is not the RP**.

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

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

Note: For "Yes/No" questions, box initially set to "No"

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? _____

h. Is this work part of a highway project? ☐ Yes ☐ No If yes, list the project ID _____

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[4]? ☐ 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
4 Fenced, staked/marked, roped off, delineated by traffic control devices, etc.

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 Technical Services contacted? ☐ Yes ☐ No
Note: This is not a utility responsibility

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

WisDOT contact (name/phone): _____

WisDOT contact (name/phone): _____

f. Other contacts or email 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 General Policy

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

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

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

2.0 General Requirements

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

1) **Before starting any permitted work**, install required warning signs, devices, etc. and ensure all are fully functional and maintained to protect the public, workers, and work site until all work is complete.

2) Augment the work zone with additional signs, devices, and flaggers as needed to always protect people and property from injury or damage in all conditions, including changed or changing conditions.

3) Remove, cover, or lay flat warning signs when workers or workers' vehicles are not at the job site or when the signs' messages are not relevant.

4) Do not keep vehicles, equipment, or materials related to this permit within the highway ROW limits except those items that are actively being used in the work operation.

5) Use a reboundable sheeting material for all barricades, barrels, cones, etc., and retroreflective sheeting for all signs, that complies with the work zone sheeting guidelines in WisDOT's approved product list.

6) Provide signs, arrow boards, barricades, warning lights, drums, and 42-inch cones that comply with Section 643 of WisDOT's *Standard Specifications for Highway and Structure Construction*, current edition and WisDOT Standard Detail Drawing 15c11.

7) Secure the work site and associated traffic control zone against any hazard to the public, both when the site is attended and unattended during off-hours, holidays, and nighttime hours. This includes vehicles, equipment, materials, and drop-off protection under *Standard Specifications* Section 104.6.1.2.3.

8) At all times while working within the highway ROW, (a) wear high-visibility safety attire meeting performance Class 2 or 3 requirements of ANSI/ISEA 107-2015 type R, and (b) activate flashing (or strobe) amber or white lights on all vehicles and equipment. *Note: Under Wis. Stat. s. 347.26(7), flashing **green** warning lamps may be used **only** by WisDOT or county or municipal highway department vehicles when working on a highway.*

3.0 DT1553 Work Zone Description

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' or less)
- ☐ Shoulder/parking lane closure
- ☐ Turn lane closure
- ☐ Sidewalk or trail closure
- ☐ Terrace (Area from curb to sidewalk)
- ☐ Off shoulder/parking lane
- ☐ Near right-of-way line or fence
- ☐ Freeway/expressway
- ☐ Intersection/roundabout
- ☐ Railroad crossing
- ☐ Mobile operation

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

(a) **Not applicable –** Use when traffic control will not be needed with utility work. This may occur with a directional bore under the highway or when the work area is near the ROW line and/or access is from private property (especially on roads with wide ROW).

(b) **Full road closure: detour** – Use when a single closure lasts more than 15 minutes or there are multiple daily closures lasting 15 minutes or less. Submit a detour plan with the permit application. The plan will be reviewed by WisDOT's traffic section and may be altered as needed.

(c) **Full road closure: temporary –** Typically, this covers line stringing, moving equipment and/or materials across the highway, or directional bores under the highway that require manual tracking. A flagger or flaggers may be needed. Also, law enforcement may be needed to assist with the closure especially if it is associated with a rolling stop on a freeway. For the latter situation, provide documentation of coordination with the law enforcement agency including proposed times for the rolling stops.

(d) **Lane closure without flagging –** Use when a thru lane is being closed on a multi-lane highway. Typical signing and devices are shown at the right.

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

(f) **Lane encroachment (2' or less) –** Some lane encroachments may be allowed without closing the adjacent lane. However, to provide a lateral buffer space for safety, it may be necessary to close the adjacent lane instead.

(g) **Turn lane closure –** Do not check this box for closing thru traffic lanes. Use when needed to close a left-turn, right-turn, 2-way-left-turn, or bypass lane. When closing thru a traffic lane and a turn lane, check both boxes.

(h) **Sidewalk or trail closure –** Submit a pedestrian/trail detour plan, pedestrian/trail traffic control plan, or provide a detailed information on the plans or specifications for how pedestrians and people using mobile-assisted devices will be accommodated. Submit proof of coordination with the maintaining authority of the sidewalk/trail with a permit application.

(i) **Intersection/roundabout –** There are several diagrams that cover various closures at intersections and roundabouts but do not consider them a "one-size-fits-all" for utility work. Sometimes, lane or shoulder closure staging will be needed. With roundabouts, certain leg closures may require a detour plan. If the utility work will be accomplished in various stages, submit the TCP labeled with the associated stages.

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

3.1 Short Duration Work – Specific Situations Only

For short duration work that occupies a location up to one hour or less and only involves a shoulder[1] or parking lane closure, static warning signs and channelizing devices may be omitted. Operate utility vehicles using their high intensity flashing (strobe or revolving) and hazard warning lights and place traffic cones behind them if needed. Additional traffic control such as guard (shadow) vehicles and impact attenuators may also be utilized. See WZFM layouts 4 and 7.

[1] Also includes a work area adjacent to the shoulder.

4.0 Lane Closure System (LCS) Requirements

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

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

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

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

4.1 Required LCS Information/Timing of Submittals

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

4.2 Utility Access to LCS

The LCS is a web-based system in which a utility or utility representative must become a 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.

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

4.3 LCS Compliance

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

5.0 Flagging Operations

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

6.0 Pedestrian Accommodations

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

Figure 1: Sidewalk work not meeting ADA requirements

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

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

7.0 Suspension of Utility Operations

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

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

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

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

Attachment 1

Traffic Control Plan Worksheet

Prior to permit submittal:

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

Before and During Project

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

During and After Project

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

Attachment 2

Sample Work Zone Inspection Checklist

Permit Number:	Inspector Name:	Date:

	Item	Yes	No	Provide details for "Yes" answers
1	Was traffic observed to see if the work zone is functioning properly?			
2	Was the condition and orientation of signs and devices checked (see WZFM, Quality Standards)?			
3	Are any signs or devices missing or need repair?			
	Were all items replaced or repaired?			
4	Are any lights (bulbs, flashers, etc.) not functioning?			
	Were all lights replaced or repaired?			
5	Are any signs or devices improperly placed?			
	Were all positions corrected?			
6	Do any signs or devices need cleaning?			
	Were all items cleaned?			
7	Were any modifications needed to the work zone layouts (diagrams) or standard detail drawings?			
8	Provide any additional comments as needed:			

Attachment 3

Lane Closure System (LCS) Notification Worksheet

Permittee will enter the data into the LCS

General Section:

1. Permit Number
2. General Description (brief description of the type of work)
3. County (Begin/End if different)
4. Highway/Direction
5. Primary Contact (WisDOT Regional Utility Permit Coordinator) – *Required*
6. Emergency Traffic Control Contractor Contact (name/number - 24 hour contact) – *Required*
7. Contractor Contact (such as contractor or utility name/number) – *Required*
8. Law Enforcement Contact (if applicable)
9. Other Contact (other WisDOT contact names if applicable)

Each Facility:

1. Facility Type (mainline, ramp, system interchange)
2. Closure/Roadway Status (Full closure, Lane/shoulder closure, Flagging operations, One lane road, One lane road temporary signal, Moving lane closure, Rolling full closure)
3. Duration (daily/nightly, weekly, continuous)
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)

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 near 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 effect 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 must 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 X, Y and Z coordinates.

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.

4.0 Specific Utility Facilities Allowed on STH Right-of-Way

The facilities described in the following sections are defined as utility facilities although not public utilities. Ownership may be government, quasi-government or private. All are approved for installation in WisDOT ROW since they are in the public interest and do not adversely affect highway safety, maintenance, or operations.

4.1 Traffic Surveillance and Law Enforcement Cameras

The use of cameras by municipalities/counties for traffic surveillance or law enforcement for capturing vehicle information or license plate images in response to AMBER alerts, SILVER alerts, retail theft, etc. is allowed as a communications type facility. Cameras used for traffic enforcement such as red-light running are not allowed under Wisconsin Statutes. All equipment necessary for traffic surveillance or law enforcement cameras shall meet *UAP* guidelines. Cameras and associated equipment that need to be installed within the highway clear zone shall be crashworthy if not behind a guardrail or other protective barrier.

Some cameras run on solar power and communicate data via radio signals. These facility types do not need to be on Diggers' Hotline. Any other camera type with underground supporting infrastructure shall be on Diggers' Hotline. No camera shall be placed on WisDOT infrastructure (signs, sign bridges, traffic signals, etc.). No camera shall be placed in a highway median per HMM 09-15-25 (7.0). Exceptions to median installations may be allowed if WisDOT concurs no other location is feasible to capture the same data, however, the camera shall only be located on municipal-owned facilities. A municipality, county or law enforcement agency shall be the applicant for any camera. In addition to the permit application, the applicant shall submit the specifications or

cut sheets for the proposed camera(s) along with a location map, plan drawings, photo simulation and work zone traffic control plan.

4.2 Safety Weight Enforcement Facility (SWEF) Infrastructure

Utility infrastructure that serves WisDOT's SWEFs and provides weigh-in-motion and credential screening services for commercial motor vehicles (trucks) on the Interstate system and other freeways is allowed as a communications-type facility. Commonly known as an Advance Vehicle Identification (AVI) system, it includes private services such as PrePass, which is used in Wisconsin. Installed equipment varies and may include:

- An advanced pole/antenna to signal a truck that it is approaching a SWEF
- An in-cab notification pole/antenna to signal a truck to either bypass or enter the SWEF
- A compliance pole/antenna to signal a non-complaint truck that it failed to enter the SWEF
- Fiber optic cables interconnecting the poles and the SWEF building
- Buried electrical and communication conduits, pull boxes, wayside cabinets, electrical pedestals, camera systems, in-pavement sensors, etc.

All AVI facilities shall meet UAP guidelines and be placed on Digger's Hotline (DH) with the owner responsible for responding to DH locate requests. In addition, all AVI facilities shall have their:

1. Fiber optic lines marked with aboveground posts.
2. Handholes and pull boxes mounted flush with the ground to prevent being struck by a mower.
3. Private structural elements or any type of private equipment placed over or adjacent to traffic approved by WisDOT's Bureau of Structures. This requires plans sealed by a registered professional engineer licensed in Wisconsin.
4. Structural elements inspected annually. The owner shall pay for the cost of structural inspection.
5. Poles and other aboveground equipment located out of the clear zone, or if needed to be inside the clear zone, be crashworthy or protected by guardrail or other protective barrier.

AVI equipment shall **not** be installed on any WisDOT infrastructure unless prior approval has been obtained from WisDOT.

1.0 WisDOT Utility Permit Staff Directory – Statewide Map

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 each region. A statewide staff listing by county number is in section 2.0. For staff who review/issue utility permits associated with WisDOT projects, see http://wisconsindot.gov/dtsdManuals/utility/dtsd-utilcoord.pdf.

NORTHWEST REGION
Utility permits general email
nwutilitypermits@dot.wi.gov
▸ Meagan Kersten (all three offices)
715-395-3031

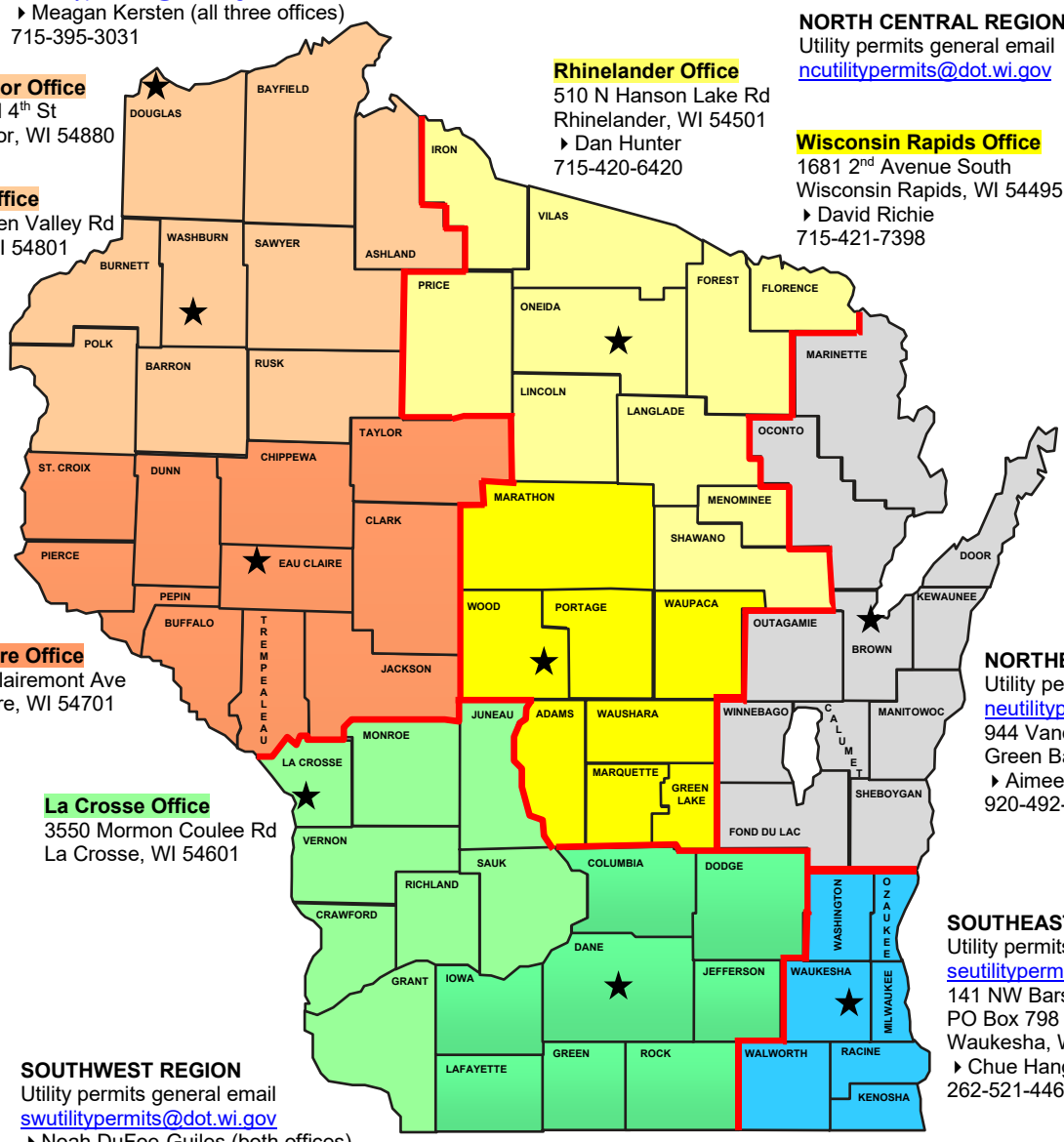
Superior Office
1701 N 4th St
Superior, WI 54880

Spooner Office
W7102 Green Valley Rd
Spooner, WI 54801

Rhinelander Office
510 N Hanson Lake Rd
Rhinelander, WI 54501
▸ Dan Hunter
715-420-6420

NORTH CENTRAL REGION
Utility permits general email
ncutilitypermits@dot.wi.gov

Wisconsin Rapids Office
1681 2nd Avenue South
Wisconsin Rapids, WI 54495
▸ David Richie
715-421-7398



Eau Claire Office
718 W Clairemont Ave
Eau Claire, WI 54701

NORTHEAST REGION
Utility permits general email:
neutilitypermits@dot.wi.gov
944 Vanderperren Way
Green Bay, WI 54304
▸ Aimee Stoffregen
920-492-4121

La Crosse Office
3550 Mormon Coulee Rd
La Crosse, WI 54601

SOUTHEAST REGION
Utility permits general email
seutilitypermits@dot.wi.gov
141 NW Barstow St
PO Box 798
Waukesha, WI 53187
▸ Chue Hang
262-521-4461

SOUTHWEST REGION
Utility permits general email
swutilitypermits@dot.wi.gov
▸ Noah DuFoe-Guiles (both offices)
608-246-5629

Madison Office
2101 Wright St
Madison, WI 53704

2.0 WisDOT Utility Permit Staff Directory – Statewide Listing

Name / Position	Phone[1]	County Number and Coverage		
SOUTHWEST REGION: Madison Office 2101 Wright St, Madison, WI 53704-2583				
Noah DuFoe-Guiles Permit coordinator	608-246-5629	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				
Noah DuFoe-Guiles Permit coordinator	608-246-5629	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: swutilitypermits@dot.wi.gov				
SOUTHEAST REGION 141 NW Barstow St, PO Box 798, Waukesha, WI 53187-0798				
Chue Hang Permit engineer	262-521-4461	30 Kenosha 51 Racine 67 Waukesha	40 Milwaukee 64 Walworth	45 Ozaukee 66 Washington
Send permit applications to: SE Utility Permits Unit General Email: seutilitypermits@dot.wi.gov				
NORTHEAST REGION 944 Vanderperren Way, Green Bay, WI 54304-0080				
Aimee Stoffregen Permit coordinator	920-492-4121	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: neutilitypermits@dot.wi.gov				
NORTH CENTRAL REGION: Wisconsin Rapids Office 1681 2nd Ave South, Wisconsin Rapids, WI 54495-8021				
David Richie Permit coordinator	715-421-7398	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				
Daniel (Dan) Hunter Permit coordinator	715-420-6420	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: ncutilitypermits@dot.wi.gov				
NORTHWEST REGION: Eau Claire Office 718 W Clairemont Ave, Eau Claire, WI 54701-5108				
Meagan Kersten Permit coordinator	715-395-3031	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				
Meagan Kersten Permit coordinator	715-395-3031	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: nwutilitypermits@dot.wi.gov				

[1] Fax numbers are available upon request.

Name / Position	Phone	Statewide Responsibilities
BUREAU of HIGHWAY MAINTENANCE (Central Office) 4822 Madison Yards Way, 6th Floor South, Madison, WI 53705		
		Permit issuance:
Kathy Jennings Highway Maintenance Engineer	608-261-8976	• Broadband related projects • Surveillance cameras • Cellular installations
Kathy and Dan		• Utility Accommodation Policy (UAP) development • Longitudinal installations on controlled-access highways (freeways & expressways) over 300 feet
Dan Schultz Highway Maintenance Engineer	414-227-2150	• Electric transmission line projects • Exceptions to the UAP • Longitudinal, privately owned utility installations
Send permit applications to: Central Office Right-of-Way Permits General Email: corowpermits@dot.wi.gov		

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.