

**POLICY FOR ACCOMMODATING UTILITIES  
ON THE COUNTY AND CITY  
NON-PRIMARY FEDERAL-AID ROAD SYSTEM**

EFFECTIVE OCTOBER 2006

IN COOPERATION WITH THE  
FEDERAL HIGHWAY ADMINISTRATION,  
IOWA DEPARTMENT OF TRANSPORTATION,  
IOWA COUNTY ENGINEERS ASSOCIATION, AND  
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## UTILITY ACCOMMODATION

### SECTION 1: General information.

#### 1. Scope of policy.

This policy covers initial placement, adjustment and maintenance of utility facilities in, on, above or below the right-of-way of non-primary federal-aid highways, including attachments to structures. It embodies the basic specifications and standards needed to ensure the safety of the highway user and the integrity of the highway.

This policy applies to new construction or complete reconstruction projects on county and city federal-aid highways involving new utility installations and existing utility facilities which need to be relocated because of the construction limits.

The agency reserves the right to make exceptions to this policy where the exercise of sound and reasonable judgment indicates that the literal enforcement of this policy would defeat its objectives, consistent with applicable state law.

#### 2. Definitions.

**Adjustment.** A physical change to an existing utility facility including improvement, rearrangement, reinstallation, protection, relocation or removal of the utility facility.

**Agency.** The city / county having jurisdiction over the right-of-way.

**Agency representative.** A city / county employee who processes utility accommodation requests in an assigned geographical area.

**Agreement.** A contract between the agency and a utility owner.

**Appurtenance.** A utility facility-related feature such as a vent, drain, utility access or marker.

**Backfill.** Replacement of suitable material and compaction of the material as specified in these rules.

**Breakaway.** Designed to shatter, bend easily or separate from a solid foundation.

**Cable.** An insulated conductor or a combination of insulated conductors.

**Carrier.** A pipe directly enclosing a transmitted fluid (liquid or gas) or slurry. "Carrier" also means an electric or communication cable, wire or line.

**Casing.** An oversize load-bearing pipe, conduit, duct, or structure through which a carrier or cable is inserted.

**Clear zone.** The roadside border area, starting at the edge of the traveled way, available for use and recovery by errant vehicles.

**Communication line or communication cable.** A circuit for telephone, telegraph, alarm system, television transmission or traffic control purposes.

**Conduit, cell or duct.** An enclosed tubular runway for protecting wires or cables.

**Cover.** The depth from the grade of a roadway or ditch to the top of an underground utility facility.

**Drain.** An appurtenance used to discharge moisture or liquid contaminants from casings.

**Emergency.** An unplanned situation that presents a danger to the life, safety or welfare of motorists, persons working within or users of the right-of-way or the general public and that requires immediate attention.

**Encasement.** Placing a casing around a utility facility.

**Engineer.** A professional engineer registered in the State of Iowa; normally the County Engineer for counties, the City Engineer or Public Works Director for cities, or a consultant engineer hired by the local government for a particular project.

**Federal-Aid Highways.** Highways eligible to receive federal-aid other than highways classified as local roads or rural minor collectors.

**FHWA.** The Federal Highway Administration.

**Foreslope.** The sloping surface of an embankment, ditch, or borrow pit of which the downward inclination is away from the traveled way.

**Franchise.** An agreement by which a utility is authorized to provide utility service in a city.

**Freeway.** A fully controlled access primary highway. The rights of ingress and egress from abutting properties have been legally eliminated by the Iowa Department of Transportation. Permanent access to the highway is allowed only at interchange locations. A freeway is generally five or more miles in length.

**Highly energized.** An electrical energy level that could be hazardous if the utility facility is struck or exposed. For purposes of this policy, voltage exceeding 60 volts is considered to be highly energized.

**Highway, street, road or alley.** A public way for the purpose of vehicular and non-vehicular travel, including the entire area between the right-of-way lines. For purposes of this policy, these terms are interchangeable.

**Interchange.** A system that provides for the movement of traffic between intersecting roadways via one or more grade separations.

**Iowa One Call.** A statewide notification center that provides contractors/excavators, homeowners, and others who may be disturbing the earth, with a single toll-free number to call for the locating and marking of underground facilities.  
(1-800-292-8989 / [www.iowaonecall.com](http://www.iowaonecall.com))

**Jurisdiction.** The limits or territory within which the authority may be exercised by the local, state or federal agency or railroad company.

**Maintenance.** As the term is used in conjunction with a utility facility means any repair or replacement of the utility facility that is not an adjustment and that does not increase the capacity or change the function of the original installation. The term "maintenance" when used in conjunction with a highway means repair or other operational activities performed by the agency within the highway right-of-way to preserve the function of the highway and its structures.

**Median.** That portion of a divided highway separating traffic moving in opposite directions.

**Multiduct.** A system comprised of two or more conduits.

**MUTCD.** The Manual on Uniform Traffic Control Devices, as adopted in IAC 761--Chapter 130.

**Nonfreeway highway.** A highway that is not a freeway.

**Occupy the highway right-of-way.** Located or to be located in, on, above or below the highway right-of-way. The term includes attachments to highway structures.

**Pavement.** That portion of a roadway used for the movement of vehicles, excluding shoulders.

**Permit.** A written authorization granting the utility permission to install, maintain and operate facilities on county/city right of way.

**Pipe.** A tubular product used to transport solids, liquids or gases.

**Pipeline.** A carrier system used to transport liquids, gases, or slurries.

**Plowing.** The installation of a utility line in the ground by means of a plow-type mechanism that breaks the ground, places the utility line and closes the break in the ground in a single operation.

**Primary highway.** A road or street designated as a "primary road" in accordance with Iowa Code subsection 306.3(6). This definition includes primary highway extensions in cities and primary highways under construction.

**Record drawing.** A drawing that is filed for record with the agency showing the utility facility as constructed.

**Right-of-way.** The land for a public highway, street, road, alley or non-vehicular passage, including the entire area between the property lines. For the purpose of this policy, public utility easements may be considered right-of-way.

**Roadway.** That portion of a highway used for the movement of vehicles, including shoulders and auxiliary lanes. A divided highway has two or more roadways.

**Rural-type roadway.** A roadway that does not have a curb as its outside extremity.

**Service connection.** A water, gas, power, communication, sanitary sewer or storm sewer line that extends from the main or primary utility facility into an adjacent property and that is used to serve the property.

**Shoulder.** That portion of a roadway contiguous to the traveled way for emergency use and for the lateral support of the pavement base and surface courses.

**Structure.** Bridges, culverts, intakes, drop inlets, retaining walls, cribbing, utility accesses, end walls, buildings, sewers, service pipes, underdrains, foundation drains, and other features which may be encountered in the work and not otherwise classed herein.

**SUDAS.** Statewide Urban Design and Specifications. The SUDAS Design Standards and Specifications manuals are owned by the non-profit Iowa SUDAS Corporation. The manuals include design standards and construction specifications for urban public improvements. They are available on the SUDAS website at [www.iowasudas.org](http://www.iowasudas.org).

**Toe of foreslope.** The intersection of the foreslope and the natural ground or ditch bottom.

**Traveled way.** That portion of a roadway used for the movement of vehicles, excluding shoulders and auxiliary lanes.

**Trenched.** Installed in a narrow open excavation.

**Trenchless.** Installed without breaking the ground or the pavement surface, such as by jacking, boring, tunneling or mechanical compaction.

**Urban-type roadway.** A roadway that has a curb as its outside extremity.

**Utility.** A system for supplying water, gas, power, or communications; a storm sewer, sanitary sewer, drainage tile or other system for transmitting liquids; a pipeline system; or like service systems. The term "utility" includes traffic signal systems, street and intersection lighting systems and railroad crossing signals.

**Utility access.** An opening in an underground utility system through which workers or others may enter for the purpose of making installations, inspections, removals, repairs, connections or tests.

**Utility facility.** Any pole, pipe, pipeline, pipeline company facility, sewer line, drainage tile, conduit, cable, aqueduct or other utility-related structure or appurtenance.

**Utility owner.** The owner of a utility facility.

**Vent.** An appurtenance used to ventilate or to discharge gaseous contaminants from casings.



## **SECTION 2: General requirements for occupancy of the right-of-way.**

### **1. Permit required and exceptions to permit.**

#### **a. Permit required.**

- 1) A utility owner shall obtain permission from the agency in the form of a permit before it places its utility facilities in, on, above or below the highway right-of-way; attaches its utility facilities to a highway structure; or adjusts existing utility facilities occupying the right-of-way.
- 2) The purpose of the permit process is to ensure the safety of motorists, pedestrians, construction workers and other highway users; to ensure the integrity of the highway; and to document the location of utility facilities for use in managing the highway right-of-way and in locating the facilities in the future.
- 3) The utility owner shall obtain permission from the railroad company when their planned work is within railroad right of way or affects a railroad crossing.

#### **b. Exceptions to required permit.**

- 1) A permit is not required for agency-owned utilities designed and constructed as part of an agency highway construction project.

### **2. Agreement required.**

For certain utility facility adjustments, the agency may require an agreement between the agency and the utility owner. However, the agreement or franchise by itself does not constitute a permit nor does it grant permission to occupy the highway right-of-way. The utility owner is responsible for obtaining a permit prior to commencing work within the right-of-way. The agreement shall then be attached to and become a part of the permit.

### **3. Compliance with requirements.**

It is the responsibility of the utility owner to ensure that its utility facility complies with all applicable federal, state, local and franchise requirements and meets generally accepted industry standards at the time of installation.

### **4. Performance bond.**

The agency may require a performance bond for utility work within the highway right-of-way under the following circumstances: the installation is unusual; abnormal site conditions exist, such as but not limited to unstable soil or unique vegetation; or the utility owner or its contractor has a history of performance problems.

- a. If a performance bond is required, the utility owner or its designated representative shall file the bond with the agency prior to commencing work within the right-of-way.
- b. The minimum amount of a required performance bond is \$5,000 per permit. Depending on the type and extent of the facility installed, the agency may require a higher bond

amount. The bond shall be in force for the duration of the permit. The agency shall have the right to file a claim against the bond for two years thereafter.

- c. The agency may accept an annual performance bond in the minimum amount of \$10,000 for agency-wide activities in lieu of an individual bond for each permit. The agency-wide performance bond shall be kept in force for as long as the utility owner's facilities occupy the highway right-of-way anywhere within the agency's jurisdiction. The agency shall have the right to file a claim against the bond for two years thereafter.
- d. A performance bond shall guarantee prompt restoration of any damage that is the result of the utility facility's occupancy of the highway right-of-way.

**5. Disturbance of other contractors.**

Utility construction and maintenance work within the highway right-of-way shall be accomplished in a manner that minimizes disturbance to any other contractor working within the right-of-way. It is the responsibility of the utility owner to coordinate work with other contractors.

**6. No adverse effect on highway.**

A utility facility shall not adversely affect the safety, design, construction, operation, maintenance or stability of the present use or future expansion of a highway.

**7. Safety, health and sanitation.**

Construction and maintenance of a utility facility shall be accomplished in a manner that minimizes disruption of highway traffic and other hazards to the highway user. The utility owner shall comply with the MUTCD and all applicable federal, state and local statutes, ordinances and regulations governing safety, health and sanitation. The owner shall furnish such additional safeguards, safety devices and protective equipment and shall take such actions as are reasonably necessary to protect the life and health of the public.

**8. Parking or storage in clear zone or median.**

When not in actual use, vehicles, equipment and materials shall not be parked or stored within the clear zone or median.

**9. Protection of landscaped or planted areas.**

A landscaped or planted area that is disturbed shall be restored as nearly as practical to its original condition. Specific authorization must be obtained from the agency representative prior to trimming trees or spraying within the right-of-way. In the case the agency is not the underlying owner of the land, (i.e. road right-of-way by easement) the agency will direct the utility owner to the landowner for notification.

**10. Noncompliance.**

The agency may take any or all of the following actions for noncompliance with any provision of this policy or any term of a permit:

- a. Halt utility construction or maintenance activities within the right-of-way.
- b. Withhold an adjustment reimbursement until compliance is ensured.

- c. Revoke the permit.
- d. Remove the noncomplying construction or maintenance work, restore the area to its previous condition, and assess the removal and restoration costs to the utility owner.
- e. Place all pending and future permits on hold until the issue is resolved.
- f. File a claim under the provisions of the performance bond.

**11. Private utility facility.**

A utility facility that is dedicated to private use shall be accommodated in accordance with this policy. However, the agency representative may, when necessary, allow an exception to private utility installations based on sound engineering principles.

**12. Insufficient capacity of right-of-way.** The agency may deny issuance of a permit if it determines there is insufficient room for additional utility facilities within the right-of-way.

### **SECTION 3: General design provisions.**

**1. Plans.**

Design plans for a utility facility shall be prepared by a person knowledgeable in highway design and in work zone traffic control and shall include the measures to be taken to preserve the safe and free flow of traffic, structural integrity of the roadway and highway structures, ease of highway maintenance, appearance of the highway and integrity of the utility facility.

**2. Materials.**

All utility facilities shall meet industry standards and applicable codes and regulations.

**3. Number of crossings.**

The number of utility facilities crossing the highway right-of-way shall be kept to a minimum. The agency may require distribution facilities to be installed on each side of the highway to minimize the number of crossings and service connections. In individual cases, the agency may require several facilities to cross in a single conduit or structure. Crossings should be as near to perpendicular to the highway alignment as practical.

**4. Aboveground facilities.**

The design of aboveground utility facilities shall be compatible with the visual quality of the specific highway section being traversed.

**5. Clear zone requirements and aboveground obstructions.**

Highway roadsides shall be as free as practical from physical obstructions above the ground. The agency shall determine the clear zone distance. The current requirements can be found in [Instructional Memorandum 3.215, Clear Zone](#).

- a. The clear zone distance on rural-type roadways is based on present day traffic, current DOT traffic counts and the existing foreslope adjacent to and preceding the utility facility.
- b. Unless otherwise specified, the clear zone shall be measured from the back of curb, when one exists, or the edge of the traveled way.
- c. A permanent, aboveground obstruction is restricted to an area beyond the clear zone or the highway foreslope, whichever area locates the obstruction a greater distance from the edge of the traveled way.
- d. If sufficient right-of-way or designated utility easement is not available to accommodate the clear zone distance, the agency may require the utility facility to have a breakaway design, require regrading of the right-of-way, require the utility facility to be located underground, or authorize the facility to be placed near the right-of-way line.

**6. Uniform alignment.**

Longitudinal utility facility installations shall be located on uniform alignment as near as practical to the right-of-way line so as to provide a safe environment for traffic operations and to preserve space for future highway improvements and other utility installations.

## **SECTION 4: Scenic enhancement.**

### **1. Introduction.**

The type and size of a utility facility and the manner in which it is installed can materially alter the scenic quality, appearance and view of highway roadsides and adjacent areas. For these reasons, additional controls are applicable in areas that have been acquired or set aside for their scenic quality. Such areas may include, but are not limited to, scenic strips, scenic overlooks, rest areas, recreation areas, public parks and historic sites, aesthetically enhanced corridors, and the right-of-way of highways that pass through or are adjacent to these areas. These additional controls are addressed in this policy.

### **2. Underground installations.**

The agency may permit a new underground installation if it does not require extensive removal or alteration of trees or other natural features visible to the highway user and if it does not impair the visual quality of the area being traversed.

### **3. Aboveground installations.**

The agency may permit a new aboveground installation only if the following three conditions are met:

- a. Other locations for an aboveground installation are unusually difficult, are unreasonably costly, or are less desirable from the standpoint of visual quality.
- b. Underground installation is not technically feasible or is unreasonably costly.
- c. The location, design and materials to be used for the proposed aboveground installation will give adequate attention to the visual qualities of the area being traversed.

## **SECTION 5: Liability.**

### **1. Liability under a permit.**

The following are conditions of a utility accommodation permit.

- a. The owner of the utility facility shall indemnify and save harmless the agency, its representative bodies and employees from any and all causes of action, suits at law or in equity, for losses, damages, claims or demands, and from any and all liability and expense of any nature (including reasonable attorney fees), arising out of or in connection with the owner's use or occupancy of the highway right-of-way.
- b. The agency, its representative bodies or employees, will be liable for expense incurred by the permit holder in its use and occupancy of the highway right-of-way only when negligence of the agency, its representative bodies or employees, is the sole proximate cause of such expense. Whether in contract, tort or otherwise, the liability of the agency, its representative bodies, and employees is limited to the reasonable, direct expenses to repair damaged utilities, and in no event will such liability extend to loss of profits or business, indirect, special, consequential or incidental damages.

## **SECTION 6: Utility accommodation permit.**

### **1. Application for permit.**

- a. To apply for a permit, the utility owner shall submit an application to the appropriate agency on a form prescribed by the agency and receive approval prior to commencing actual physical work within the public right of way. In no case shall this application be submitted less than 30 days prior to the planned start date for the work. The agency shall review and provide an approved permit to the utility owner. Once the approved permit is received, the utility owner should follow-up with a 48-hour notice prior to commencing work.
- b. The utility owner shall maintain the following insurance for bodily injury, death and property damage arising out of or in connection with the construction, maintenance and operation of the facility:
  - 1) General public liability insurance with limits of not less than \$500,000 for injury to or death of a single person, or not less than \$1,000,000 for any one accident, and not less than \$250,000 per accident for property damage.
  - 2) Comprehensive automobile liability insurance with limits of not less than \$500,000 for injury to or death of a single person, or not less than \$1,000,000 for any one accident, and not less than \$250,000 per accident for property damage.
  - 3) Excess liability coverage with limits of not less than \$1,000,000.
  - 4) Statutory workers' compensation coverage.
- c. This insurance shall be in effect before the utility owner commences any work within the right of way.
- d. Coverage may be provided by blanket policies of insurance covering other property or risks.
- e. The agency, its officers and employees, shall be named as an additional insured party in the general public liability and excess liability policies.
- f. The utility owner must submit proof of insurance in the form of a Certificate of Insurance to the agency, prior to commencing actual physical work within the right of way.

### **2. Permit.**

- a. At a minimum, a permit allows:
  - 1) The applicant (the utility owner) or its representative to perform the work covered by the permit.
  - 2) The utility facility described in the permit to occupy the right-of-way.

- 3) The utility facility to be operated and maintained.
- b. A permit does not convey a permanent right of occupancy.
- 3. **Plan.**

Each permit application shall be accompanied by a plan showing the following:

  - a. Location of the utility facility by street name, route, county, section, township, range, milepost and highway stationing, where these references exist.
  - b. Highway centerline and right-of-way limits.
  - c. Location of the utility facility by distance to the nearest foot at each point where the facility's location changes alignment, as measured from the centerline of the highway or back of curb.
  - d. All construction details including the:
    - 1) Depth of burial.
    - 2) Types of materials to be used in the installation.
    - 3) Operating pressures and voltages.
    - 4) Vertical and horizontal clearances.
    - 5) Traffic control plan prepared by a person knowledgeable in work zone traffic control, or a reference to a standard traffic control plan of the agency or Iowa Department of Transportation.
- 4. **Discharging into waterways.**
  - a. A permit application for the placement of a utility facility that will discharge materials into the nation's waters must be accompanied by satisfactory evidence of compliance with all applicable federal, state and local environmental statutes, ordinances and regulatory standards.
  - b. The utility owner is responsible for obtaining all necessary approvals from the appropriate agencies. The agency will not issue a permit until these approvals are obtained.
- 5. **Agency action on permit application.**
  - a. The agency shall act on the permit application within 30 days after its filing with the appropriate agency representative. If an emergency should exist, the agency shall act on the application as expeditiously as practical.
  - b. A separate Iowa DOT permit is required if the proposed work is in, on, or above or below the right-of-way of a freeway or non-freeway state highway, including attachments to a



bridge carrying city/county traffic over a freeway, or attachments to a non-freeway structure. Iowa DOT does not allow attachments to a structure carrying freeway traffic. Iowa DOT will determine if FHWA approval is required for the Iowa DOT permit.

- c. Failure on the part of the utility owner to provide complete information may result in a delay in the agency's taking final action on the application.

**6. Changes to work.**

Changes in the work as described in the original permit require the prior approval of the agency.

**7. Copy of permit at job site.**

The utility owner or its contractor shall have a copy of the permit on the construction site at all times for examination by agency representatives.

**8. Record drawings.**

- a. Within 90 days after completion of construction, the utility owner shall submit to the agency representative a record drawing or a letter certifying that the actual placement of the utility facility is as described in the original permit.
- b. If the utility owner fails to submit the record drawing or letter within the time required, the agency may hire an independent contractor to locate the utility facility and prepare a record drawing or withhold approval of future permits. All costs associated with this activity are the responsibility of the utility owner.
- c. Any costs incurred by the agency or its contractors due to incorrect record drawing information supplied by the utility owner or deviations in actual placement from that described in the original permit are the responsibility of the utility owner.

**9. Transfer of permit.**

A new permit is not needed when a utility facility is transferred or leased in its entirety. The requirements of the permit and this policy remain in force for as long as the utility facility continues to occupy the right-of-way and serve its intended purpose. The transferee or lessee shall submit the following information to the appropriate agency representative:

- a. The name and address of the transferee or lessee.
- b. Geographical area involved in the transaction.
- c. Designated telephone number, fax number, cellular phone number, pager number and e-mail address for notification purposes.

## **SECTION 7: Traffic protection.**

### **1. Traffic control for all work.**

- a. When performing work within the right-of-way, the utility owner is responsible for providing, installing, maintaining and cleaning warning signs and protective devices; removing warning signs and protective devices when the work is complete; and providing flaggers.
- b. Flagging operations and the placement of warning signs, protective devices, barricades and channelizing devices shall comply with the MUTCD and agency requirements for the protection of the traveling public and workers on the site.
- c. Flaggers are required at work sites to stop traffic intermittently as necessitated by work progress or to maintain continuous traffic past a work site at reduced speeds to help protect the work crew. For both of these functions the flagger must, at all times, be clearly visible to approaching traffic for a distance sufficient to permit proper response by motorists to the flagging instructions, and to permit traffic to reduce speed before entering the work site. In positioning flaggers, consideration must be given to maintaining color contrast between the work area background and the flaggers' protective garments.
- d. The utility owner shall provide additional protection when special complexities and hazards exist.
- e. Special requirements may be necessary when working at or near a railroad crossing. The utility owner is responsible for obtaining any permits or agreements with the railroad company and any associated costs.

### **2. Traffic control for construction and maintenance work that is not emergency work.**

- a. The utility owner is responsible for using the types of traffic controls that are adequate for the nature, location and duration of work, type of roadway, traffic volume and speed, and potential hazards.
- b. Where high traffic volumes cause frequent congestion, routine scheduled maintenance and construction should be avoided during hours of peak traffic.
- c. Work areas should be occupied for only as long as it is necessary to safely move in, finish the work, remove all utility work signs and move out.
- d. Special care should be taken to clearly mark suitable boundaries for the workspace with channelizing devices so that pedestrians and drivers can see the workspace. If any of the traveled lanes are closed, tapers shall be used as required by the MUTCD.
- e. Pedestrians should not be expected to walk on a path that is inferior to the previous path. Repairs (temporary or permanent) to damaged sidewalks should be made quickly. This may include bridging with steel plates or good quality wood supports. Pedestrian paths

that remain open must comply with the American Disability Act (ADA). Pedestrian paths that are closed must adequately address ADA requirements.

- f. Work areas involving excavations on the roadway should not exceed the width of one traffic lane at a time. The work should be staged and, if needed, approved bridging should be used. The utility owner should fully coordinate this type of activity with the agency representative or, in a city, with the city's traffic or public works office.

**3. Traffic control for emergency work.**

- a. The extent of traffic control used for emergency work may be less than that used for longer-term construction or maintenance. However, the utility owner shall provide for the safety of pedestrians, motorists and workers. It may be necessary for the utility owner to contact local law enforcement officials to assist in securing the safety of the traveling public.
- b. The emergency work vehicle should be equipped with all necessary traffic control devices to address the situation. These should be kept in a good state of repair and functioning properly.

## **SECTION 8: Construction responsibilities and procedures.**

### **1. Permit required before work may begin.**

The utility owner shall not commence construction work in the highway right-of-way until it has received an approved permit from the agency for the work.

### **2. Notice of construction.**

The utility owner shall give the agency representative at least 48 hours prior notice of its intent to start construction within the right-of-way.

### **3. Authority of the agency representative.**

- a. The agency representative has the authority to resolve any issues or concerns that arise regarding the intent of the permit and compliance therewith, as they relate to the condition of the highway.
- b. During the progress of the work, the agency representative may approve minor alterations in the plans or character of the work, as they relate to the condition of the highway, that the agency deems necessary or desirable to satisfactorily complete the work. Such an alteration is not a waiver of the permit nor does it invalidate any provision of the permit.

### **4. Work in progress.**

The utility owner is responsible for the care and maintenance of partially completed work within the right-of-way. Unless otherwise required or approved by the permit or the agency representative, all work performed within the right-of-way is restricted to a time frame of 30 minutes after sunrise to 30 minutes before sunset.

### **5. Authority of agency to inspect and approve.**

- a. The agency may inspect and/or approve any construction work performed within the right-of-way as it relates to the condition of the highway.
- b. The utility owner shall provide reasonable cooperation.

### **6. Agency inspectors.**

The agency may appoint inspectors to represent the agency in the inspection of construction. Inspectors are placed on the job to keep the agency representative informed of the progress of the work and the manner in which it is being performed, and to call to the utility owner's attention any infringements of the permit. The inspectors shall not:

- a. Modify in any way the provisions of the permit.
- b. Delay the work by failing to inspect the work with reasonable promptness.
- c. Act as a supervisor for the work or perform any other duties for the utility owner or its contractor.
- d. Improperly interfere with the management of the work.

- e. Approve or accept any portion of the work on behalf of the agency.
- f. Incur liability for failure to identify defects in materials or workmanship or non-compliance with permit.

**7. Repair and cleanup.**

Prior to the agency's final inspection, the utility owner shall:

- a. Upon notification by the agency, immediately make any repairs to the right-of-way that are necessary due to the construction work.
- b. Remove from the right-of-way all unused materials and rubbish resulting from the work and leave the right-of-way in a clean, presentable condition.

**8. Final inspection.**

- a. Upon notification by the owner of the utility facility or its authorized representative that the work is complete, the agency representative may inspect each item of work included in the permit as it relates to the condition of the highway.
- b. If the agency representative finds that the work is not in compliance with the permit, the agency representative shall provide to the utility owner written notice of the particular defects found. The owner is responsible for remedying these defects in a timely manner.

## **SECTION 9: Vertical overhead clearance requirements.**

### **1. Conformance to standards.**

The vertical clearance for overhead utility facilities and the lateral and vertical clearances for bridges shall conform to accepted industry standards as well as applicable codes and regulations.

### **2. Minimum vertical clearance.**

In no event shall the vertical clearance be less than 18 feet above the roadway for non-paved roadways and 20 feet above the roadway for hard-surfaced roadways.

## **SECTION 10: Utility facility attachments to structures.**

### **1. Electrical power and communication cable attachments.**

- a. An electrical power or communication cable may be attached to an existing highway structure if the agency determines that the attachment is in the best interests of the public. The agency may accommodate an electrical power or communication cable attachment in its design for a new bridge if the agency determines that the accommodation is in the best interests of the public.
- b. The permit application shall include a detailed sketch showing the method of attachment and weights of attachment. A separate permit is required for each structure.
- c. All attachments shall be placed in conduits, pipes or trays; beneath the bridges floor; and above low steel or masonry of the bridge. Agency-approved clamps shall be used for any attachment to structural steel. Installation on any structure other than a highway bridge shall be reviewed on a case-by-case basis by the agency.
- d. Cables in cells or casings shall be grounded wherever necessary. Carrier pipe shall be suitably insulated from electrical power line attachments. Facilities shall be designed to withstand expected expansion or contraction forces. If necessary, expansion devices such as expansion joints, offsets or loops shall be used.
- e. All costs attributable to the installation of an attachment to a structure shall be paid by the utility owner unless the attachment is installed pursuant to a utility agreement.
- f. Welding or drilling holes in or attaching to structural steel primary members is prohibited.
- g. Utility facilities may be attached to noncritical concrete areas.
- h. Any modifications, including holes cut, shall not be made to any structure.

### **2. Indemnity bond.**

Where required, the utility owner shall provide an indemnity bond to be executed by either itself or by a responsible bonding company, at the agency's option.

- a. The indemnifier under the bond shall, in the event of damage resulting from any cause whatsoever arising out of or from permission to attach a facility, indemnify the agency against all loss or damage to it or any third party therefrom, including but not limited to the expense of repairing or replacing the structure and the cost of alternate highway facilities for traffic during the period when the structure is being repaired or replaced.
- b. The indemnity bond shall be kept in force for as long as the facility is attached to the structure. The agency may periodically review the amount of the bond and require adjustments in the bond amount.

### 3. Pipeline attachments.

- a. Pipelines may be attached to highway structures when installation below ground is not feasible, the design of the structure can accommodate the attachment, and space is available.
- b. The permit application shall include a detailed sketch showing the method of attachment and weights of attachment. A separate permit is required for each structure.
- c. Pipes shall be placed beneath a bridge's floor, inside the outer girders or beams (or in cells specifically designed for the installation), and above low steel or masonry of the bridge. Installation on any structure other than a highway bridge shall be reviewed on a case by case basis by the agency.
- d. Pipes shall be designed to withstand expected expansion or contraction forces. If necessary, expansion devices such as expansion joints, offsets or loops shall be used.
- e. Pipelines in cells or casings shall be vented and grounded whenever necessary.
- f. Pipelines that have an operating pressure of more than 75 pounds per square inch or that are larger than two inches in diameter shall have shutoffs not more than 300 feet from each end of the structure.
- g. The agency shall consider casing requirements on an individual basis. In some instances, thicker-walled or extra-strength pipe may be considered in lieu of encasement. Encasement is required for plastic pipe attachments to structures.
- h. All costs attributable to the installation of an attachment to a structure shall be paid by the utility owner unless the attachment is installed pursuant to a utility agreement.
- i. Welding or drilling holes in or attaching to structural steel primary members is prohibited.
- j. Utility facilities may be attached to noncritical concrete areas.
- k. Any modifications, including holes cut, shall not be made to any structure.
- l. The utility owner shall provide an indemnity bond to be executed by either itself or by a responsible bonding company, at the agency's option.
  - 1) The indemnifier under the bond shall, in the event of damage resulting from any cause whatsoever arising out of or from permission to attach a pipeline, indemnify the agency against all loss or damage to it or any third party therefrom, including but not limited to the expense of repairing or replacing the structure and the cost of alternate highway facilities for traffic during the period when the structure is being repaired or replaced.



- 2) The indemnity bond shall be kept in force for as long as the pipeline is attached to the structure. The agency may periodically review the amount of the bond and require adjustments in the bond amount.

4. **Attachment fee.**

- a. An attachment fee may be required by the agency.
- b. If required, the attachment fee is due before any construction work commences within the right-of-way.
- c. Utility facilities belonging to or exclusively serving a local agency may, if the agency considers it desirable, be attached to a highway bridge without assessment of an attachment fee.

5. **Engineering fee.**

When a highway structure is in the planning stages and the agency designs the structure to accommodate a requested attachment, the agency may assess to the utility owner an engineering fee. The engineering fee shall reimburse the agency for the agency's increased costs of design, construction and inspection due to the attachment. The agency shall bill the fee to the utility owner when the agency's work is complete.

## **SECTION 11: Underground utility facilities.**

Underground utility facilities shall be installed in accordance with federal and state laws, and according to agency regulations and in urban areas with the current SUDAS requirements.

### **1. Depth requirements.**

If using compaction methods of trenchless construction under pavements, in order to avoid heaving problems, one foot of cover for every inch diameter should be provided, if conditions allow.

### **2. Measurement of cover.**

The cover is measured from one of the following:

- a. On rural-type roadways, the lowest pavement surface.
- b. On urban-type roadways, the gutter flow line, excluding local depressions at inlets.
- c. Outside the pavement area, the surface of the surrounding ground.

### **3. Casing.**

A casing shall:

- a. Protect the highway from damage.
- b. Protect the carrier pipe from external loads or shock, either during or after construction of the highway.
- c. Convey leaking liquids or gases away from the area directly beneath the traveled way.
- d. Provide for repair, removal and replacement of the utility facility without interference to the highway.
- e. In urban areas, comply with Section 3020, Part 2 of SUDAS Specifications for materials requirements.

### **4. Seals.**

Casing pipe shall be sealed at both ends with manufactured synthetic rubber casing end seals or concrete, both meeting the requirements of SUDAS Section 3020, to prevent water or debris from entering the annular space between the casing and the carrier, in accordance with generally accepted industry standards.

### **5. Transverse occupancy--encasement and related requirements.**

- a. Trenchless construction. Underground transverse crossings of existing paved roadways shall be made by trenchless construction whenever practical. Any exception to this requirement must be specifically authorized by the agency representative and noted in the permit.

- b. Electrical service. Underground electrical service must be placed in a conduit from right-of-way line to right-of-way line and shall be clearly marked by the utility owner at the outer limits of the right-of-way.
- c. Pipelines.
- 1) Except as set out in paragraph 2 below, a pipeline carrying natural gas at an operating pressure of greater than 60 pounds per square inch, liquid petroleum products, ammonia, chlorine or other hazardous or corrosive products shall be encased from right-of-way line to right-of-way line.
  - 2) Encasement of a pipeline carrying a product listed in paragraph 1 above is not required if the pipeline meets all of the following requirements and the utility owner certifies as a part of the permit that these requirements are met:
    - It is welded steel pipeline.
    - It is cathodically protected.
    - It is coated in accordance with accepted industry standards.
    - It complies with federal, state and local requirements and meets accepted industry standards regarding wall thickness and operating stress levels.
  - 3) A pipeline carrying a product listed in paragraph 1 above shall be vented and marked at the outer right-of-way limits. The markers shall comply with accepted industry standards and include the following information: name of the owner, telephone number to contact in case of an emergency, and type of product carried.
  - 4) Encasement of a natural gas pipeline with an operating pressure that is 60 pounds per square inch or less is not required if the pipeline is made of copper, steel or plastic; the pipeline is protected and installed in accordance with accepted industry standards; and the utility owner certifies as a part of the permit that these standards are met. Otherwise, encasement is required. The agency may require encasement based upon operating diameter of carrier.
- d. Communication cable. The agency may require encasement of communication cable.
- e. Installations vulnerable to damage. Utility facilities that by reason of shallow depth or location are vulnerable to damage from highway construction or maintenance operations shall be protected with a casing, suitable bridging, concrete slabs or other appropriate measures.
- f. Other installations. When it is acceptable to both the utility owner and the agency, an underground utility facility not otherwise addressed in this policy may be installed without protective casing if the installation involves trenched construction or small bores. Encasement requirements will be determined on an individual basis.

**6. Longitudinal occupancy--encasement.**

- a. As conditions dictate and as determined by the agency, utility lines installed longitudinally to the highway right-of-way shall be encased at crossings of hard-surfaced side roads, streets and entrances.

**7. Multiduct systems.**

The agency may require installation of a multiduct system to be shared with others. Details of the installation are subject to agency approval.

- a. The agency shall designate a “lead company” for the system. The lead company is generally the first utility owner requesting occupancy. The lead company is responsible for:
  - 1) Design and construction of the multiduct system.
  - 2) Maintenance of the multiduct system.
  - 3) Providing all capital required to construct the multiduct system.
- b. Once a multiduct system has been established, the agency shall require future occupancies to be located within one of the unoccupied inner ducts of the system. If all inner ducts are occupied, the agency may require the establishment of an additional multiduct system.
- c. Each occupant of a multiduct system shall share in the entire capital costs of the facility. As each new occupant is added to an existing system, the agency shall require the new occupant to pay its proportionate share based on the number and size of inner ducts it occupies.

**8. Procedures for backfilling trenched construction and jacking or boring pits.**

- a. In urban areas, follow SUDAS Specifications Section 3010.
- b. When a carrier, pipe, conduit, or cable is placed by trenched construction, the backfill shall be placed and compacted so that there is no settlement or erosion. If settling or erosion of a trench is observed, it is the responsibility of the utility owner to correct the problem.
- c. Jacking or boring pits shall be backfilled in the same manner as that described above.
- d. Backfill under roadways or entrances shall be of a suitable material to minimize settlement. Examples of suitable material include granular backfill or flowable mortar.

**9. Procedures for trenchless construction.**

- a. In urban areas, follow SUDAS Specifications Section 3020.
- b. When trenchless construction techniques are used, the bore shall be as small as practical and in no case more than four inches larger than the facility or casing inserted.
- c. Grout backfill is required for all unused holes and abandoned pipes. Grout or sand backfill is required for any borehole more than two inches larger than the installed casing or other facility. All bored facilities shall be constructed in such a manner that surface water is not transported to or otherwise allowed access to groundwater.
- d. If using compaction methods of trenchless construction under pavements, to avoid heaving problems, provide one foot of cover for every inch of diameter, if conditions allow.

**10. Procedures for pavement removal.**

- a. In urban areas, follow SUDAS Specifications Section 7040.
- b. Existing pavement must be saw-cut to accommodate a utility installation.
- c. The width of the pavement removal shall be a minimum of six feet. If the distance from the specified cut to any adjacent longitudinal or transverse joint or crack is less than four feet, the pavement shall be removed to that joint or crack.
- d. The agency representative shall make the final determination on the required depth and width of cut.

**11. Procedures for pavement replacement.**

- a. In urban areas, follow SUDAS Specifications Section 7040.
- b. Restoration of pavement shall be accomplished in accordance with methods approved by the agency representative.
- c. The agency representative may authorize temporary repair with bituminous material.
- d. A permanent patch shall be placed as soon as conditions permit.

**12. Clear zone for pits.**

- a. A jacking or boring pit shall be located in an area beyond the clear zone or the highway foreslope, whichever area locates the pit a greater distance from the edge of the traveled way, right-of-way width permitting. However, a jacking or boring pit may be allowed within the foreslope if it is specifically authorized by the agency representative and noted in the permit.

- b. Jacking or boring pits authorized within the clear zone shall be protected at all times. Protection may include backfilling of the pit, temporary barrier rail, reflective fence, or other measures. All measures must be approved by the agency representative.
- c. On rural-type highways, jacking or boring pits are not allowed within the median.
- d. On urban-type highways, jacking or boring pits should be located at least two feet back from the curb.

**13. Construction methods.**

Casing and pipeline installations shall be accomplished by dry boring, tunneling, jacking, trenching, directional drilling or other approved methods.

- a. The use of water under pressure (jetting) or puddling to facilitate boring, pushing or jacking operations is not allowed.
- b. However, a boring operation that requires the use of water only to lubricate the cutter and pipe is considered dry boring and is allowed.

**14. Encasement material.**

It is the responsibility of the utility owner to ensure that it complies with all applicable federal, state, local and franchise requirements and meets generally accepted industry standards in the selection of encasement materials.

## **SECTION 12: Maintenance and emergency work.**

### **1. Maintenance responsibilities.**

The owner of a utility facility is responsible for its maintenance. The owner shall:

- a. Maintain the facility in a good state of repair in accordance with applicable federal, state and local statutes, ordinances and regulatory standards.
- b. Replace and stabilize all earth cover and vegetation where they have eroded over an underground utility facility when the erosion is due to or caused by the placement or existence of the facility.
- c. Give the agency's representative 48 hours prior notice of its intent to perform predictable routine maintenance within the right-of-way. Exception: Notice is not required if the predicable routine maintenance is for a service connection located beyond the clear zone of a highway.

### **2. Utility emergency work.**

Access to the worksite is permissible from roadways and ramps when an emergency exists.

- a. The utility owner shall take all necessary, appropriate and reasonable measures to protect the safety of the traveling public and cooperate fully with the law enforcement personnel and the agency in completing the emergency work.
- b. The utility owner shall notify the agency of the emergency as soon as practical, describing the steps being taken to protect the traveling public, the extent of the emergency, and the steps being taken to address the emergency.
- c. If the nature of the emergency is such that it interferes with the free movement of traffic, the utility owner shall immediately notify the law enforcement personnel having jurisdiction in the area and the agency.
- d. When an emergency occurs on the primary road system, the agency shall notify the Iowa Department of Transportation as soon as practical, describing the steps being taken to protect the traveling public and the steps being taken to address the emergency.

### **3. Agency emergency work.**

There will be times when the agency performs highway-related emergency work. Examples include but are not limited to stop sign replacement, handling hazardous material spills, and addressing natural disasters and acts of terrorism. If utility facilities are affected, the agency shall, as soon as practical, notify the utility owner of the emergency condition and what steps are necessary to protect the utility facility.

**SECTION 13: Abandonment or removal of utility facilities.**

**1. Notice to agency.**

Within 90 days after the abandonment or removal of all or a portion of an existing utility facility that occupies the highway right-of-way, the utility owner shall submit a written notice of abandonment or removal to the agency. The notice shall include:

- a. Type of facility.
- b. Location of the utility facility by street name, route, county, section, township, range, milepost and highway stationing, where these references exist.
- c. Name of the original utility owner if different than the current owner.
- d. Original utility permit number and date of approval, if known.