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## Design Scene Part 2 – Plan Conventions

Chapter 5 Utilities

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## Chapter 5 Utilities

### Policy and Guidance

MnDOT has a policy which prescribes practices and procedures to regulate and accommodate utility facilities along, across, or on the right of way of all trunk highways and other transportation facilities under the jurisdiction of the Minnesota Commissioner of Transportation.

In addition, MnDOT has developed a utility coordination process that emphasizes communication and coordination early and throughout the design of a project. Continuous coordination also helps avoid costly unexpected delays and claims during construction.

MnDOT Utility Accommodation on Highway Right of Way Policy and Procedures as well as the MnDOT Utility Accommodation and Coordination Manual can be found online at: [Policy and Guidance - Utility Agreements & Permits - MnDOT \(state.mn.us\)](https://www.mn.gov/Policy-and-Guidance-Utility-Agreements-Permits-MnDOT-state.mn.us)

### Buy America

Buy America is a federal legal requirement which may apply under certain circumstances. Additional information and guidance can be found at: [Buy America - Utility Agreements & Permits - MnDOT \(state.mn.us\)](https://www.mn.gov/Buy-America-Utility-Agreements-Permits-MnDOT-state.mn.us)

### Federal and State Laws, Statutes and Rules

Many federal and state laws, rules, and regulations govern how the state handles utilities on its projects. The list can be found: [Policy and Guidance - Utility Agreements & Permits - MnDOT \(state.mn.us\)](https://www.mn.gov/Policy-and-Guidance-Utility-Agreements-Permits-MnDOT-state.mn.us)

### General Requirements

If there is a petroleum or high-pressure gas line in the vicinity of the project, include a warning note on the title sheet of the plan. (e.g. WARNING! PETROLEUM PIPELINE CROSSING)

Ensure that the names of the utility owners on the plan sheets are the correct, legal names of those companies or agencies. Refer to the contact list on the Utilities website, for the most current names. Do NOT include contact names, phone numbers and/or e-mail addresses.

Include the utility quality level note:

The subsurface utility information in this plan is utility quality level \_\_\_\_\_. This utility quality level was determined according to the guidelines of CI/ASCE 38-22, entitled, "Standard Guidelines for Investigating and Documenting Existing Utilities". This must be included in the plan whether utilities are affected or not.

Identify overhead and underground electric facilities are transmission or distribution. Include the voltages of all power lines that are 69 kV or more.

### Depicting Utility Facilities in Plans

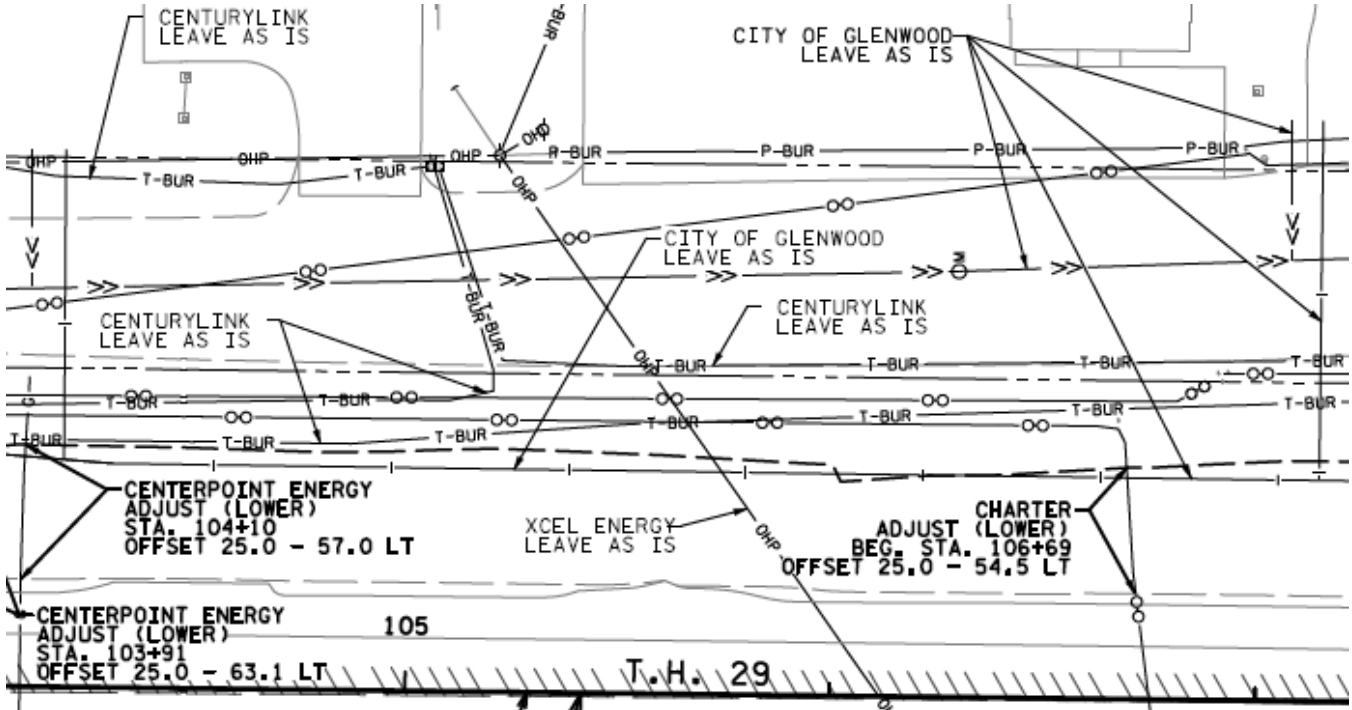
State law dictates how we must address utilities in our construction plans. If any required utility information is missing, the state is responsible for the costs for any damages to facilities or disruptions of service.

Utilities can be depicted on plan sheets or tabulated.

**Utilities on plan sheets**

A graphical representation of utilities and areas with conflict is the preferred method of depicting utilities in plans. The utility owner and required action such as relocate, adjust, or remove must be shown. If the action is adjust, a description such as raise or lower must be provided.

An example showing utility conflicts graphically is below:



**Utility tabulations**

All utility facilities that appear on the plan sheets can also be shown tabulation form. The utility owner and required action such as relocate, adjust, or remove must be shown. If the action is adjust, a description such as raise or lower must be noted.

A sample of a utility tabulation is shown below:

COMMUNICATION TABULATION

STATION TO STATION	OFFSET (FT)	DESCRIPTION	OWNER	ACTION			REMARKS
				ADJUST	RELOCATE	LEAVE AS IS	
T.H. 12							
41+19 R1 TO 41+39 R1	337 L - 65 R	TV-BUR	TCI		X		
41+19 R1 TO 43+88 R1	56 R - 65 R	TV-BUR	TCI			X	
43+55 R1 TO 43+88 R1	56 R - 278 R	TV-BUR	TCI			X	
43+84 R1 TO 45+00 R1	85 R - 275 L	T-BUR	CENTURY LINK	X			VERTICAL ADJUSTMENT

In general, if utilities impacts are limited to specific locations, those specific locations may be shown or tabulated. For example, if the project is a ten-mile mill and overlay with two culvert replacements, provide plan views of the culvert replacements and show the utility facilities along with any conflicts, in those locations. If there are other utilities within the project limits, but not in the vicinity of the specific work, include the following statement and list the utility owners:

The following utility owners have facilities within the limits of the project but will not be affected.

### **No Affected Utilities**

If there are no utility facilities in the project limits, include the utility quality level note and the following sentence:

There are no utility facilities within the project limits.

If utility facilities are present but not affected by the project, graphical representations or tabulations are not necessary. In those cases, in addition to the information provided in the *General Requirements* section above, use one of the following notes or something similar in the plan:

No utilities are affected by this project.

This project does not include excavation; therefore no utilities will be affected.

The utilities on this project are located outside the limits of excavation and will not be affected.

In addition to one of the statements above, include following language followed by a list of the utility owner names:

The following utility owners have facilities inside the limits of the project.

### **Left in-Place Out-of-Service vs. Abandoned**

On occasion, utility owners will stop using certain facilities without removing them from the right of way. In this case, make sure to use the correct term to describe the situation. In general, use the phrase “Leave In-Place Out-of-Service” for the affected facilities. This language tells the utility owner that it will retain ownership and responsibility, and therefore liability for the facilities. The term “Abandon,” however, turns responsibility and liability of the facilities over to the state.

### **Utility Locations and Elevations**

Show the location of all utility facilities on the plan, profile, and cross section sheets of the plan. Appendix M of the *Utilities Manual* shows the standard symbols to use to represent each facility.

If you do not know the depth of underground facilities, use the following assumptions on the cross-section sheets:

Telecommunications: 3.0 feet below the surface;

Gas: 3.0 feet below the surface;

Electric: 3.5 feet below the surface; and

Water: 7.5 feet below the surface.

### **Utility Agreements and Permits Unit**

The Utilities Unit sends a copy of the plan to all utility owners listed. They must send a Notice and Order to ALL utility owners that need to adjust or relocate their facilities because of our construction, whether there will be

an agreement or not. The Utilities Engineer makes the final decision about whether utility work is reimbursable. There are three situations in which the state MAY reimburse utility owners.

The utility owner must relocate facilities from a location on which it has a property right, such as an easement. The relocation meets the requirements of a municipality's first move. The project is on interstate right of way.

Agency agreements are receivable agreements that are required when MnDOT's contractor will be placing, adjusting, or relocating utilities as part of the construction contract. A bridge attachment is the most common type of work covered by an agency agreement.

## **Municipal Utilities**

When constructing a trunk highway project, MnDOT frequently encounters utility facilities owned by local units of government. These facilities include, but are not limited to:

Sanitary sewer systems and their related appurtenances, water mains and their associated hydrants, gate valves, and manholes, and street lighting facilities.

While MnDOT often designs street lighting facilities, it considers the design of sanitary sewer and water main systems to be outside its area of expertise. This memo clarifies and provides guidance for dealing with sanitary sewer and water main systems affected by MnDOT construction projects.

Construction projects often make the relocation or adjustment of utility facilities necessary. Any party performing such relocation or adjustment work must do so pursuant to the MnDOT Utility Accommodation on Highway Right of Way Policy and the Utility Accommodation and Coordination Manual.

Minnesota Statutes, section 161.45, subdivision 2 allows a utility owner to appoint MnDOT as its agent to design and construct utility work as part of a state construction contract. MnDOT includes utility adjustment or relocation work in its contracts in cases where performing the work separately would be too difficult or expensive for the utility owner or would be too disruptive to the operations of the roadway (e.g., a relocation that would require digging up the road the contractor is building). Minnesota Statutes, section 161.45, "Utility on Highway Right-of-Way, Relocation;" Minnesota Statutes, section 161.46, "Reimbursement of Utility;" and Minnesota Administrative Rules 8810.3100 – 8810.3600, "Utilities and Equipment" determine which party is responsible for the costs associated with relocating or adjusting a utility owner's facilities as part of a MnDOT project. The Utilities Engineer provides the final determination on cost responsibility. For work included in a MnDOT construction contract, MnDOT is required to either execute a utility agreement or a cooperative construction agreement with that agency. The agreement details the cost responsibility, terms and conditions of the utility work.

If MnDOT includes a municipality's sanitary sewer or water main work in its construction contract, MnDOT and its consultants may not design those facilities; therefore, the municipality or its engineering consultant must perform the design engineering work. This is the case regardless of who is responsible for the cost of the relocation. If a consultant under the MnDOT contract is willing to perform the sanitary sewer or water main design, that consultant must enter into a separate contract with that municipality. The municipality is required to indemnify and certify any plans that will become part of MnDOT's project.

MnDOT may include minor modifications to the sewer and water facilities in its plans without detailed design sheets. Minor modifications include, but are not limited to, adjusting castings and valve boxes, vertically adjusting hydrants (but not horizontally adjusting them), and removing out-of-service facilities.

### **Trenching for Utilities**

There has been concern that consideration is not being taken for excavating for larger utility pipes. Be sure to allow for enough area to excavate for the deeper/larger utilities.

### **Utilities Near Foundations**

When working near bridge foundations be sure to check out the Bridge LRF Manual regarding utilities near foundations. Utility location restrictions occur within 50 feet laterally, 50 feet below, and 15 feet above the base of spread footing foundations. Utility installations in this region requires review and approval by the MnDOT Bridge Office. Additional restriction on the locations of the utilities may be specified in other documents relevant to the project.