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Wisconsin Department of Transportation
Division of Transportation System Development

Utility Coordination Newsletter

Welcome to the WisDOT Utility Coordination Newsletter. We have created this to highlight coordination efforts between the utility industry, WisDOT employees and other external partners that are involved in road projects for our state. In the newsletter we will give project updates, feature new technologies, and introduce new employees working at utility companies and WisDOT. Additionally, we will explain new processes, forms, and resources that can help with utility coordination efforts. If you have a question or something you would like to share in the newsletter, please send your ideas to the Utility Coordination email box DOTDTSDCOUtilityCoordination@dot.wi.gov Thank you for subscribing to our newsletter. We hope you enjoy it and find it useful for your utility coordination activities.

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UN #05-01

Utility Conflict Documentation Report

Utility conflicts and delays can occur on any type of highway project. WisDOT created a new, more user friendly document to help out in these situations.

In 2019, WisDOT will begin pilot testing this form on projects. Project engineers will fill out and submit a form for every utility conflict that occurs during construction. A document was created to provide direction on how to fill out the form and ensure consistency between projects.

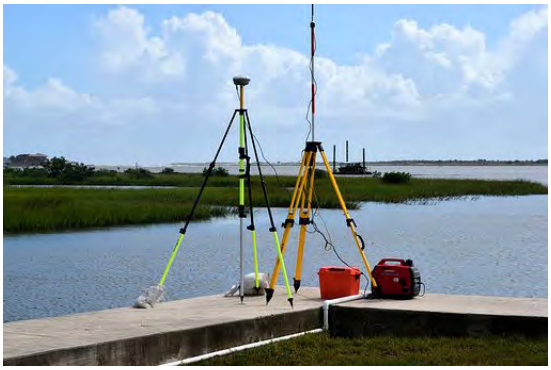
WisDOT will analyze each form that is submitted and track what caused the utility conflict and how it affected the project. If trends are discovered, WisDOT will provide training or make improvements to the utility coordination process. The goal will be to reduce the number of utility conflicts and delays on future projects.

Additional information and questions regarding the Utility Conflict Documentation Report can be directed to the Central Office Utility Unit inbox DOTDTSDCOUtilityCoordination@dot.wi.gov

UN #05-02

Conveyance of Rights in Land

Highway projects have existed for over 100 years. As a part of these projects, utility interests and rights in land may have been acquired.



In the early years, a Quit Claim Deed By Utility was the only option to acquire a utility land right. In 1962, WisDOT unveiled the first Conveyance of Rights in Land (COR). Since then, the COR has been revised several times to meet the changing needs of stakeholders and WisDOT.

At the International Right of Way Association (IRWA) Utility/DOT Liaison committee meetings, WisDOT shared the proposed language revision to the COR with utility partners. WisDOT anticipates implementing the new version of the COR in July of 2019.

Additional information and questions regarding the COR can be directed to the

Central Office Utility Unit inbox DOTDTSDCOUtilityCoordination@dot.wi.gov

UN #05-03

Overcoming Construction Challenges in Lake Mills Historic Downtown

The Lake Mills STH 89 project, ID 3300-01-73, is a 1.3 mile all-encompassing urban reconstruction project in a historic district. It consists of removing the existing concrete pavement and sidewalks, grading, and placing base aggregate. Additionally, new storm sewer, curb and gutter, concrete pavement, decorative lighting and sidewalks will be installed. Finally, the City of Lake Mills will be replacing its water and sanitary sewer as part of the project.

Construction started on March 4 and will last until November 1. Stage 1 is nearing completion with the final touches all underway for concrete pavement, curb and gutter, and sidewalk. Stage 2 is underway with the underground water, sanitary sewer and storm sewer. In the Spring of 2020 construction will resume to complete the final stage of construction.

“Some of the biggest challenges so far during construction have been dealing with the unknown facilities within the project limits,” says Craig Hardy, WisDOT SW Region civil engineer and former SW Region Madison office utility engineer. “Historic downtown areas tend to have many abandoned facilities and old facilities that need to be accommodated during construction.”

“With a myriad of variables to work around, it is always better to be proactive and coordinate as much as possible during design,” said Abby Schmidt, WisDOT statewide utility coordination engineer.

There was a lot of utility coordination associated with this project. An initial unsuccessful Let delayed the construction of this project for a year. This provided ample time for utility companies to complete their relocations well ahead of the construction season. It also gave the in-house Project Development Section (PDS) designer and the utility companies additional time to identify potential utility conflicts.

“Early and consistent communication between WisDOT and affected utility companies can be the necessary key to keeping projects within the budget and delivered on time. WisDOT can assist utility companies to find a solution that works best for everyone’s schedule and budget. That might be designing around a utility conflict so no utility work is necessary or helping to stage WisDOT and utility work in the most effective way possible,” said Schmidt.

The City of Lake Mills wanted all the overhead utilities to be placed underground. To meet that goal all utilities had to plan together to find a location that would accommodate all the city electric and the two telecom utilities along the project. The city was able to have their electrical contractor

install all the duct work for the electric and two telecom facilities. This helped alleviate the burden of multiple utility contractors working simultaneously in the same location. The gas relocations were completed by a contractor hired by the gas company.

“So far, it has been successful due to a very involved municipality, a contractor who wants to get things done the right way the first time, and construction staff who work efficiently to head off conflicts before they became delays during construction. These things, in addition to the thorough coordination done by Technical Services Section (TSS) and PDS during design, have helped to ensure that utility conflicts were kept to a minimum,” said Hardy.

“Having an engineer with an extensive background in utility coordination, such as Craig Hardy, overseeing this project is undoubtedly a huge reason this project is running so smoothly, as well,” said Schmidt.

UN #05-04

Congratulations Heather Dresel

WisDOT congratulates Heather Dresel on her new position as supervisor in Technical Services. Dresel just completed the DOT Leadership Development Program and will be a great addition to the Northwest Region management team. She will supervise Real Estate, Utilities and Railroad.

Dresel has been in state service for more than 18 years. In 2010 she transferred from Department of Agriculture, Trade and Consumer Protection to the NW Region as a real estate program associate. She moved up to the real estate specialist classification series in 2013 and became the real estate unit lead worker in 2014. Along the way, she developed skills and knowledge not only in real estate, but utility permitting and coordination, plats, and survey coordination. She grew in her lead worker role and is viewed as one of the department's experts in the real estate area. In her free time Dresel enjoys home improvement projects.

UN #05-05

TUMS-1078 Revision Letter Added

A new 1078 Revision Letter was added to TUMS and DOCR along with other changes that were implemented in April. This letter is used to inform utilities about changes to WisDOT Project Plans.

This new letter is complex and has many features and options which make it adaptable to unique situations. It is first created and saved using the DOCR Edit function and then exported using the DOCR Export function.

Business and technical decisions related to this letter include:

- The letter was added to each 1078 packet in DOCR (four packets total).
- Once a mailing date is entered in the letter, all other dates will auto-calculate and auto-fill throughout the letter and corresponding DT1078-Revision form.
- There is no longer a requirement to send a DT1078-Revision form with this letter; however, the form can be added if desired.
- All date calculations account for the “60 additional days” required by Administrative Rule Trans 220.
- Once the letter is successfully exported from DOCR, dates will transfer back to the Effort Summary Screen (ESS) tracking columns for Revised Sent and Required Return.
- The letter can only be created if a previous 1078 Sent date exists in TUMS. This is a revision letter, and “revision” implies that an initial project plan was already sent to the utility.
- More than 20 different forms can be selected and added to the letter automatically, as desired by the user.

The flexibility built into this letter will allow users to quickly construct a revision letter that specifically addresses a wide variety of issues.

Questions regarding this update or any other TUMS questions can be sent to DOTDTSDTUMS@dot.wi.gov

UN #05-06

3D Utility Survey Data

The Central Office Utility Unit has recently authorized a consultant contract with Jacobs Engineering that will provide research, analysis and recommendations for the use of 2D and 3D utility survey data in plans and models. This includes but is not limited to the depiction and transfer of survey data, clash detection practices and workflows, and requirements for permits. This contract started in early June 2019 and is planned to be a one year project.

People who have experience working with 3D utility data are encouraged to share their findings. Any information or questions can be directed to the Central Office Utility Unit inbox DOTDTSDCOUtilityCoordination@dot.wi.gov

UN #05-07

CenturyLink Shares Hwy 12 Experience

The Highway 12 construction project outside of Baraboo, Wis. was an extremely involved and complicated construction project that took four years to complete. Steve Bishop, senior engineer from CenturyLink, shares some of his experiences and advice for going through a big project.

What is your title and how long have you worked in your job?
I am a Senior Engineer at CenturyLink and have been working at CenturyLink since 2007.

How long did the project take?
Relocation planning began in 2014 and final payment from DOT was completed in 2018. Four years total.

What helped make the construction process go more smoothly?
I attended progress meetings with the WisDOT and road contractor to stay informed of changes as they occurred.

I adjusted my construction schedule to accommodate the numerous changes in phasing due to unknown/unidentified historical and DNR issues that arose as part of the project.

What were some of the biggest challenges you overcame during this process?
This project took multiple years to complete. During the project there were WisDOT staff and invoicing changes. It was challenging to work with new people and to learn a new process while in the midst of this big project. However, with guidance from WisDOT and planning on our end, we got it all resolved.

Bridge pier construction extents are not provided in WisDOT prints for Hydraulic soil areas, which creates a major issue in trying to avoid piling and construction related obstructions/conflicts. E xtents are the construction limits depicted on the plan. The DOT allows bridge contractors to design the items required for pier construction, but those limits are not depicted on the plan.

Did you have some unexpected things happen during the project? How did you deal with them?
There was a historical site identified during construction which stopped construction midstream and needed to be placed into a different work flow to accommodate the time required to perform the site work to clear the site. I had to pull that segment out of the main job and compile this work into a separate job to allow for work to continue on the main job as well as being able to get on this segment as soon as it was cleared for construction.

I needed to relocate my main fiber three times to accommodate the construction of the bridge. The road contractor provided me with what he considered a proper location for this facility, which following placement was identified to be in conflict with a bridge pier. I then reviewed the site with the WisDOT and we determined a route to relocate the relocated facility. Once the bridge contractor came on site, we needed to relocate this a third time as this route was found to be in conflict with a coffer dam required for pier construction.

DNR had limited the times that a small stream could be relocated. In order to accommodate this, I needed to re-phase my job to build a portion of this work much sooner than originally identified.

What other advice would you pass on to other utility coordinators?
Often you will need to dig into the responsible parties that will be building the various components of a job (bridges, fencing, landscaping…). The plan set is an accurate guide to the project, but the individuals that build the independent components of the overall project should be identified as soon as possible and routes for facilities should be verified before placement to ensure conflicts are avoided.

What do you like to do in your free time?
I like to golf and I am the Scoutmaster for the Scouts BSA Troop 77 in Baraboo, Wis.

UN #05-08

International Right of Way Association (IRWA) Utility / WisDOT Liaison Committee Meetings

This group of utility industry representatives and WisDOT staff gather at least three times per year in Fond du Lac, Wis. to discuss various topics related to utility industry updates and concerns, as well as, WisDOT's Utility Accommodation and Utility Coordination policies.

People who want to know more about the group or attend a meeting, can contact the BTS/U shared mailbox at DOTDTSDCOUtilityCoordination@dot.wi.gov Additionally, people interested in suggesting meeting topics can contact Nicole Smullen, WEC Energy Group, at 414-221-5617 or email nicole.smullen@wecenergygroup.com .

UN #05-09

Upcoming Meetings

August 8, 2019

November 7, 2019

Utility Coordination Tips-Barrier Systems

Utility coordination is critical when a buried utility facility crosses a barrier system. Good utility coordination during the design process will make it easier to identify and resolve any potential conflicts. While in the design process, decide the feasibility of adjusting the barrier system versus requiring the relocation of the buried utility facility. Effective utility coordination and investigation at this point can eliminate a costly delay.

During the utility coordination process, it is important to consider where the buried utility facility crosses the barrier system. When the buried utility facility crosses within the limits of the Midwest Guardrail System (MGS) guard rail/Class “A” or line posts of the barrier system, the following statement provides clarity on the extent of utility coordination that would be required and is useful language to include in the “Utilities” article of the special provisions:

“Due to the nature of the barrier system work, utility conflicts were not resolved with proposed post locations during design. Adjust barrier as allowed per standard detail drawings, detail drawings, and barrier system special provisions, to avoid all underground utilities as required by statute and according to the individual utility company’s special provision.”

This language is acceptable because the utility facility is crossing the barrier system at a location where the post spacing can be adjusted to avoid the buried utility facility.

If the utility facility crosses within the limits of the end terminals, thrie beam, or a short radius section, adjustments cannot be made to the barrier system to avoid a buried utility facility. In this situation, the contractor cannot be directed to adjust the barrier system as described in the example above. Conflicts will need to be identified and resolved during the design process with the designer and the utility companies. Some options are:

- **Review the cross sections** to determine the height of the roadway in-relation to the elevation of the ditch flow line. If the roadway is significantly higher than the ditch flowline, there should be adequate separation between the bottom of the post and the buried utility facility. If the separation is anticipated to be greater than at least two or more feet, no additional utility coordination should be required.

- **Adjust the barrier system design**. Sometimes all that is needed is to extend the barrier system, so the buried utility facility crossing is not within the limits of the end terminals. If the barrier system can be extended in this manner, then the special provision example mentioned above can be used.

- The **utility company reviews its records** to determine if elevations exist for the buried utility facility. If the elevation provided is lower than the bottom of the post by at least two or more feet, no additional utility coordination should be required.

- Using **Civil 3D** to **layout** the actual location of **each post**. Determine if a conflict exists between the underground utility facility and the barrier

system. If no conflict exists, no additional utility coordination is required.

- If elevations are not available or the buried utility facility is within two feet of the bottom of the post, the utility company will need to pothole its facility to determine the elevation and location. If a conflict is confirmed, the utility company will need to relocate the buried facility to resolve the conflict. If relocation is necessary, describe it in the special provisions using guidance from Chapter 14 of the WisDOT Guide to Utility Coordination.

WisDOT Regional Utility Staff is encouraged to work with the Central Office Utility Unit once they become aware of potential guardrail conflicts on projects to ensure proper notice and direction to the contractor is included in the special provisions.

Additional information and questions regarding the Utilities article of the special provisions can be directed to the Central Office Utility Unit inbox DOTDTSDCOUtilityCoordination@dot.wi.gov

UN #05-10

Submit questions, suggestions, comments and potential newsletter articles to DOTDTSDCOUtilityCoordination@dot.wi.gov . BTS/U will review each submission prior to publication.

This bulletin has been developed to provide updates, clarifications, job aids and news pertaining to WisDOT utility coordination and related WisDOT programs, policy and services. Information published in this bulletin will be of interest to those who work closely with utility coordination.