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Utility Relocation: A Communication And Coordination Process For Local Governments

Minnesota Local Road Research Board

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Oftentimes roadway projects, whether new construction, reconstruction, or maintenance of an existing facility, involve either temporarily or permanently relocating utilities within the project area. Ensuring that utility relocation is done in a timely manner requires coordination not only by the utility companies, but by the local government planning the roadway project, and, oftentimes, by the contractor chosen to conduct the roadway work. Lack of effective coordination can result in costly delays and aggravation to the traveling public.

This report summarizes a review of recent efforts to facilitate the process of utility relocation as part of roadway construction, identifies coordination resources, presents the findings of a survey administered to county and city engineers, utility companies, and construction contractors, and provides recommendations and materials to make the process of utility relocation at the county and city level in Minnesota more efficient and effective.

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Utility Relocation:

A Communication and Coordination Process for Local Governments

FINAL REPORT

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EXECUTIVE SUMMARY

Oftentimes a roadway project, whether new construction, reconstruction, or maintenance of an existing facility, involves either temporarily or permanently relocating utilities within the project area. Ensuring that utility relocation is done in a timely manner requires coordination by the utility companies, the local government planning the roadway project, and, most importantly, by the contractor chosen to conduct the roadway work. Lack of effective coordination can result in costly delays and aggravation to the traveling public.

This report summarizes a review of recent efforts to facilitate the process of utility relocation as part of roadway construction for local governments, identifies coordination resources, presents the findings of surveys administered to county and city engineers, utility companies, and construction contractors, and provides recommendations and materials to make the process of utility relocation at the county and city level in Minnesota more efficient and effective.

The conclusion and recommendation resulting from this endeavor is that a utility relocation coordination meeting should be held on an annual basis. This annual meeting would be hosted by a local government and could be coordinated with neighboring local governments. If this activity were undertaken at the county-wide level, the county could host the annual meeting which could include all cities within the county. Another possibility is to host these meetings at the Minnesota Department of Transportation (Mn/DOT) District level with State Aid offices hosting meetings with breakout sessions for individual counties and cities within the District. The focus of these coordination meetings would be:

- To provide a venue for utility companies to submit and/or update contact information for their representative to the local government;
- To provide a venue for local governments to communicate their short-term plans (one- and two-year construction plans), as well as long-term plans (three to five-year Capital Improvement Plans).
- To provide an opportunity to discuss and plan for utility relocation as part of project development, both immediate and long term.

To facilitate this annual meeting, an outline of the process and a series of templates were created for use by local governments to gather and disperse the necessary information. These templates are located in Appendix C of this document and are also available electronically on the Local Road Research Board's (LRRB) website at www.lrrb.gen.mn.us.

INTRODUCTION

Oftentimes a roadway project, whether new construction, reconstruction, or maintenance of an existing facility, involves either temporarily or permanently relocating utilities within the project area. Ensuring that utility relocation is done in a timely manner requires coordination by the utility companies, the local government planning the roadway project, and oftentimes by the contractor chosen to conduct the roadway work. Lack of effective coordination can result in costly delays and aggravation to the traveling public. This document summarizes the results of a research implementation study conducted by the LRRB aimed at defining the scope and range of problems regarding utility relocation and developing materials for use by Minnesota's local units of government in order to facilitate efficient utility relocation.

UTILITY RELOCATION RESOURCES

One of the first project activities involved gathering resources produced by agencies and utility companies involved in coordinating utility relocation efforts. This included a literature review as well as a review of resources compiled by other Minnesota agencies and authorities, including statutory requirements. The legal background of the utility location and relocation process is discussed here in addition to two recent and noteworthy documents, a *Utility Relocation Study Report* published by Mn/DOT in February 2000, and a Model Ordinance developed to regulate the placement and maintenance of utilities within publicly-owned rights-of-way.

Another resource for utility relocation is a video, which just became available, from the Federal Highway Administration (FHWA), *CCC: Making the Effort Works!* This video, developed with the help of the American Association of State Highway and Transportation Officials' Highway Sub-committees on Construction and Right-of-Way and Utilities, discusses how utility relocation projects can improve the development of the project and help to reduce project costs. As stated in the video, "The Internet and *World Wide Web* technologies are being used by some states to expand their communication efforts. Face-to-face communication, however, remains one of the most effective means of coordination activities and in developing cooperative working relationships." More information about this video, including a discussion guide, can be obtained at the following website: http://www.fhwa.dot.gov/programadmin/viewer.htm**.** Copies can be obtained by contacting Paul Scott of FHWA at 202-366-4104 (fax: 202-366-3988; email: paul.scott@fhwa.dot.gov).

MINNESOTA STATUTE 216D

The placement of utilities within rights-of-way owned by Minnesota cities and counties is contained in State Rules established by the Minnesota Public Utilities Commission. Minnesota Statutes 216D.04 contain requirements for utility information that must be provided with all roadway construction plans involving excavation, and field locations required prior to excavation. Utility information is often obtained early in the design process; however, Statute 216D requires that utility information contained in final plans must not be more than 90 days old. This necessitates multiple points of coordination between utility company contacts, city and county contacts and, oftentimes, roadway contractors to ensure that coordination is carried out in such a way that all information is provided to the parties in a process that meets best design practices as well as legal requirements.

Mn/DOT's UTILITY RELOCATION STUDY REPORT

In response to action taken by the 1999 State Legislature, Mn/DOT convened a task force to study issues related to relocating or removing utility facilities from highway construction projects. This task force consisted of representatives of highway construction and utility industries, Gopher State One Call, and Mn/DOT. Their efforts resulted in a report, the *Utility Relocation Study Report*, published in February 2000, containing a number of recommendations aimed at improving mutual understanding, coordination, and cooperation among all parties involved in the utility relocation process. These recommendations are summarized in Appendix A of this document.

MODEL RIGHT-OF-WAY ORDINANCE

Federal legislation adopted to govern telecommunications led to further legal definition of how Minnesota cities and counties can manage their rights-of-way. The Federal Congress passed the Telecommunications Act of 1996 recognizing that public rights-of-way were a public asset. In 1997, the Minnesota legislature addressed local government concerns regarding the impact of this federal legislation by amending Minnesota Statute 237 giving local units of government authority to regulate and manage their rights-of-way and recover management costs. However, local units of government were first required to adopt an ordinance outlining their practices. In 1999, the League of Minnesota Cities (LMC), in association with the City Engineers Association of Minnesota (CEAM), worked to develop a model ordinance managing public rights-of-way in Minnesota cities. This model ordinance was then used by the Association of Minnesota Counties (AMC) to develop a similar model ordinance for use by Minnesota Counties. Managing the right-of-way was defined in the model ordinances to allow the local government to do the following:

1. require registration;
2. require construction performance bonds and insurance coverage;
3. establish installation and construction standards;
4. establish and define location and relocation requirements for equipment and facilities;
5. establish coordination and timing requirements;
6. require right-of-way users to submit henceforth required by the City/County project data reasonably necessary to allow the City/County to develop a right-of-way mapping system including GIS system information;
7. require right-of-way users to submit, upon request of the City/County, existing data on the location of user's facilities occupying the public right-of-way within the City/County. The data may be submitted in the form maintained by the user in a reasonable time after receipt of the request based on the amount of data requested;
8. establish right-of-way permitting requirements for excavation and obstruction;

9. establish removal requirements for abandoned equipment or facilities, if required in conjunction with other right-of-way repair, excavation, or construction; and,

10. impose reasonable *(obstruction and use fees)*/penalties for unreasonable delays in construction.

Minnesota counties and cities were authorized to use the model ordinance in its original form or to modify it as necessary for their own use. Since this ordinance was developed, several Minnesota cities and counties have adopted it, adapting it for their own use.

INTERNET RESOURCES

A number of resources are available at Mn/DOT's website devoted to utility agreements and permits, http://www.dot.state.mn.us/tecsup/utility/index.html. Information available at this site includes

- A recent **technical memorandum** summarizing the utility relocation process;
- A **utility relocation brochure**;
- A **list of contacts** at various utility companies; and,
- **Sample letters** for local governments to send to utilities asking for information regarding location of utilities.

SURVEY OF UTILITIES, CONTRACTORS AND COUNTIES

Individual surveys were developed and administered to the three groups involved in utility relocation:

- City and county engineers (local governments);
- Utility companies; and,
- Contractors involved in roadway construction.

Each of these surveys was developed independently, to gauge experiences with utility relocation from the perspective of each separate group; however, some similar questions were asked of all three groups.

All surveys were kept brief, in order to maximize the survey return rate, aimed at keeping a responder's time to complete the survey to no more than five minutes. The following table shows how many surveys were sent to each group and the response rate.

TABLE 1: Survey Response Rate

Response Rate of Surveys			
Group	**Number Sent**	**Number Returned**	**Percentage Rate**
Local Government	201	54	27%
Utility Companies	132	99	75%
Construction Contractors	127	34	27%

The findings of these three surveys are summarized below, with more detailed survey results found in Appendix B of this document.

SURVEY FINDINGS

Project Notification

- All local governments responding to the survey indicated that they provided advance notification of roadway construction to utility companies. However, utility companies do not believe they receive construction notification in all instances.

- A majority of utility companies would like to receive construction plans one to three months in advance of roadway construction. Most local governments are submitting construction plans within this timeframe.

- Only 25 percent of all roadway contractors responding to the survey believed that project plans received from Local Governments provided adequate information regarding utility information and the extent of relocation activities.

Communication and Coordination

- Most utility companies (76 percent) would prefer plans to be submitted to them in a hard copy format.
- Although the majority of utility companies (75 percent) complete as-builts after projects have been finalized, only 20 percent of them send the as-builts to the appropriate permitting agency (local government).
- The majority (51 percent) of contractors wait until the pre-construction meeting to initiate contact with the utility companies involved. In light of this information, it is interesting to note that most utility companies indicated that they receive one week's notice or less regarding the scheduling of a pre-construction meeting.
- The great majority of utility companies (86 percent) assign one person to be the point-of-contact for each roadway construction project.
- Less than half (41 percent) of the contractors indicated that they consult with utility companies prior to project schedule changes. Once schedule changes are made, most utility companies were only given notification within the week.
- Approximately half (48 percent) of all local governments experience difficulties in getting timely and meaningful information on utility location to include in their plans.

Utility Relocation Activities

- Most utility companies indicated that they use subcontractors to carry out utility relocations in the majority of instances.
- Contractors reported that when project delays due to utility relocation are experienced, they are typically due to lack of cooperation from utility companies.

Process Improvement

Utility companies and contractors alike were asked an open-ended question regarding how the process of utility relocation could be improved.

- Contractors identified the need for better communication and coordination among all parties as a key to improvement. Several of them also indicated that fines should be levied on utilities that do not complete utility relocation in the agreed-upon timeframe.
- Utility companies also indicated the need for better communication and coordination among all parties. In addition, they mentioned a need for more lead-time in order to respond to relocation requests. Other process improvements mentioned revolved around the need to address right-of-way issues in advance of relocation, and the need for better documentation of utilities within the roadway right-of-way. Some also expressed a desire to be sent a 5-year CIP annually.

CONCLUSIONS

Based on survey findings and input from the Technical Advisory Panel (including representatives from Mn/DOT, counties, cities, and utility companies) **communication** and **coordination** were the two significant factors that needed to be focused upon to reduce future delays related to utility relocation.

PROJECT DELIVERABLES

Initially, project deliverables were intended to be a brochure and materials for presentation that would give an overview of a successful utility relocation process. However, it soon became known that Mn/DOT was in the process of developing a brochure aimed at communicating this information, now available at the Technical Support website, http://www.dot.state.mn.us/tecsup/utility/index.html. Given the importance placed on communication and coordination that emerged from the survey analysis, the focus for study deliverables changed to enhancing the process of communication and coordination during the utility relocation process. This was best addressed through an annual utility relocation coordination meeting.

Recommendations that follow describe a process for this annual meeting to comprehensively communicate roadway plans for construction and maintenance to utility companies, and the respective role of all players in ensuring a clear process for relocation. The process for this meeting has been outlined below and materials for use during this annual meeting are included in Appendix C of this document. They include:

- Meeting sign-in sheets;
- Forms to update utility contact databases;
- Forms for communicating roadway construction information;
- Forms for communicating roadway maintenance information;
- Forms for communicating utility construction and maintenance information.

STUDY RECOMMENDATIONS

The following study recommendations are intended for implementation by local governments, utilities and contractors. Most activities are aimed at enhancing processes and mechanisms for communication and coordination between the parties involved in utility relocation, primarily through establishing an annual Utility Relocation Coordination Meeting, as well as using materials developed during the course of this study for use at this meeting. Recommendations are displayed in three categories:

1) Annual Coordination Meeting Activities;
2) Design Stage Activities; and,
3) Project Coordination Activities.

The goal of the annual Utility Relocation Coordination Meeting is to ensure that all partners in the process are informed of future activities, timelines, and contact persons involving planned projects of local governments and also of utilities. The intended outcome is to facilitate the process of project delivery by ensuring a mutual communication and coordination process involving all parties (local governments, utility companies, and contractors). The annual meeting would be hosted by a local government and could be coordinated with neighboring local governments. If this activity were undertaken at the countywide level, the county could host the annual meeting, which could include all cities within the county (as is done in Minnehaha County, South Dakota). Another possibility is to host these meetings at the Mn/DOT District level, with State Aid offices hosting meetings with breakout sessions for individual counties and cities within the District.

Annual Coordination Meeting Activities

The focus of this coordination meeting would be:

- To provide a venue for utility companies to submit and/or update contact information for their representative to the local government;
- To provide a venue for local governments to communicate their short-term plans (one and two-year construction plans), as well as long-term plans (three to five-year Capital Improvement Plans).
- To provide an opportunity to discuss and plan for utility relocation as part of project development, both immediate and long-term.

Activities at the meeting include the following:

- View the video recently produced by FHWA entitled, *CCC: Making the Effort Works!*
- Utility companies should provide updates on points-of-contact annually, to every local government that has company utilities within their rights-of-way. This should occur in real-time mode, or, at a minimum, every January.
- The local government should host an annual utility coordination meeting in the first quarter of each calendar year. It is advisable to coordinate this meeting with other local governments within the Mn/DOT District. Local governments should:
    - Invite all utility companies and contractors;
    - Provide a meeting agenda that includes:
        - Detailed review of the upcoming construction season *(1 year plan);*
        - Discussion of planned projects for the following year *(2 year plan);*
        - Review of the 5-year CIP *(5 year plan);*
            - Identify projects that need utility coordination
            - Establish a Utility Coordination Work Team for identified projects

- Review Road Maintenance Program not included above, including roadway, ditch, culvert and any other work that may impact utilities, up to five years out, to identify potential scheduling coordination with utility companies and their programmed utility maintenance;
- Highlight projects that have utility relocates;
- Inquire as to what utility companies have programmed for new construction and maintenance over the next five years.

- Utility Companies should provide information on their plans for new construction and maintenance at the annual utility coordination meeting for the next 1, 2, and 5-year construction programs.

Design Stage Activities

- Obtain location of the utilities within the project area by written request.
- Review plans with utility companies during project design.
- Submit preliminary plan and profile design to utility company as soon as available.
- Provide notice and order to relocate to utility companies as soon as need is determined.
- Send a set of plans to utility companies as soon as they are signed by the engineer.

Project Coordination Activities

- After contractor selection, the local government should call a Pre-Construction Meeting to which the contractor and all utility companies involved with the project should be invited. At this meeting:
  - The contractor should submit the construction schedule, including utility relocation;
  - All parties should define "Significant Change" as it relates to the construction schedule;
  - All parties should agree to the schedule and the process;
  - If necessary, a schedule of utility coordination meetings should be established.
- The contractor should communicate all changes in the original construction schedule to the local government and all other affected parties.
- If construction schedule delay is due to issues involving utility relocation, the contractor should call for a Utility Coordination meeting, attended by all affected utility companies and the local government. At this meeting:
  - The cause of schedule delay should be identified;
  - The local government should determine the next course of action, including whether to apply penalties from the original contract, or to adjust either the contract or the schedule;
  - A new work schedule should be agreed upon.
- Utility companies should submit new "as-builts" to the local government in X-Y-Z coordinates (in accordance with the local government system) upon completion of relocation.

Table 2
Summary of Recommended Utility Relocation Responsibilities

Party	Responsibility
Local Government	Hold annual coordination/update meeting Hold Pre-Construction/Project Coordination meeting
Contractor	Determine Construction schedule Project management Notify of any "Significant Changes" in construction schedule Complete project within agreed upon schedule
Utility Company	Provide up-to-date point-of-contact information to all Road Authorities Conduct utility relocation within agreed upon schedule Submit new "as-builts" to local government agency

Appendix A:

Summary of Recommendations

From

Mn/DOT's Utility Relocation Study Report

UTILITY RELOCATION STUDY REPORT TO THE 2000 MINNESOTA LEGISLATURE (FEBRUARY 2000)

SUMMARY OF RECOMMENDATIONS

General Actions

Recommendation 1: Utility companies should provide current and accurate information about their appropriate contacts for relocations.

Recommendation 2: Mn/DOT should create and maintain a Web site with the utility contact information.

Recommendation 3: Gopher One should consider establishment of utility coordination committees statewide.

Recommendation 4: Mn/DOT should reconvene study participants again to review progress.

Utility Installation Phase

Recommendation 1: Utility companies should create and retain accurate installation information.

Recommendation 2: Road authorities should develop reasonable enforceable conditions for when utility installation information is not received as required by the permit.

System Planning Phase

Recommendation 1: Road authorities should meet with utility companies to review upcoming projects and discuss short- and long-term project schedules and other issues.

Recommendation 2: Road authorities should take the lead to develop a relocation procedure document, which includes a general process flow chart. A process to educate and inform all parties should also be developed and implemented.

Recommendation 3: Utility companies should communicate the time needed to respond to road authority relocation requests based on the level of magnitude of relocation.

Project Development Phase

Recommendation 1: Road authorities should take the lead for early project notification to utility companies to integrate and coordinate utility relocation with total project view and utility company needs in mind.

Recommendation 2: Gopher One procedures should be studied and revised if necessary so that road authorities may obtain early utility location information for design in a timely fashion from utility companies without triggering a field locate.

Recommendation 3: Road authorities should take the lead to coordinate right-of-way acquisition activities, and should provide adequate space for utility companies to accomplish their relocation work to the extent possible.

Recommendation 4: Road authorities and utility companies should consider other utility relocation options including, but not limited to, purchase of additional right-of-way.

Recommendation 5: Road authorities should work with utility companies before project letting to develop contract special provisions and establish the construction schedule information to be included in contract documents.

Recommendation 6: Utility companies should provide accurate and timely location information maps, as-builts, and/or field location information when requested.

Recommendation 7: Road authorities should hold pre-letting conferences when it is anticipated that major utility relocation conflicts may arise during construction. Utility companies need to attend.

Recommendation 8: Whenever possible, relocate utilities ahead of project construction.

Construction Phase

Recommendation 1: Road authorities should take the lead to coordinate and communicate mutually agreeable schedules. All parties should agree on the schedule and accept responsibility to perform.

Recommendation 2: Road authorities should create a process for recovering costs incurred as a result of the utility company's failure to comply with the permit and "Notice and Order".

Recommendation 3: Contractors should take the lead to coordinate construction activities and schedule utility relocations.

Recommendation 4: Road authorities should develop a plan of action if unforeseen circumstances occur.

Recommendation 5: Road authorities should hold pre-construction conferences with all parties involved.

Recommendation 6: Road authorities should assume greater responsibility to ensure utility relocation occurs and that both utility companies and contractors are held accountable for agreed-upon schedules.

Recommendation 7: Utility companies should commit to a firm schedule when necessary, early coordination has occurred, and should communicate when "acts of God" and/or emergencies require a change.

Recommendation 8: During construction, the contractor takes the lead and is responsible for prosecuting the work according to the schedule agreed to by all, within the parameters established in the contract language.

Appendix B:

Detailed Summary of Utility Coordination Surveys

LOCAL ROAD RESEARCH BOARD
UTILITY RELOCATION DURING ROADWAY CONSTRUCTION

DETAILED SURVEY RESULTS

PROJECT NOTIFICATION

Do You Send Advance Construction Plans?

City and county engineers were queried as to whether their agencies provided advance copies of construction plans for roadway improvements to utility companies. All (100 percent) of the responders indicated that they did so.

Table B-1: Project Notification

Does your agency provide advance construction plans to utilities?	Local Governments
Yes	44 (100%)
No	0 (0%)

ADVANCE NOTIFICATION

When utility companies were asked what percent of Local Governments sent out advance notice of roadway projects, they indicated that not all Local Governments do provide advance construction notice.

Table B-2: Advance Notification

What percent of Local Governments provide advance notice of projects?	Utility Companies
Less than 25 percent	9 (9%)
25 – 50 percent	14 (14%)
51 – 75 percent	26 (27%)
76 – 100 percent	49 (50%)

When Are Construction Plans Sent/Received?

Utility companies stated that they received roadway construction plans earlier than the local governments indicated that plans were typically sent. A total of 43 percent of all utility companies stated they received plans more than four months in advance of project construction, compared to 20 percent of local governments who indicated the same.

Table B-3: Construction Plans Sent/Received

How early does your agency send plans to utility companies?	Local Governments
More than 6 months	1 (3%)
4 – 6 months	6 (17%)
1 – 4 months	20 (57%)
With bid distribution	6 (17%)
During pre-construction	2 (6%)

How far in advance of project construction do you receive plans?	Utility Companies
More than 6 months	13 (16%)
4 – 6 months	22 (27%)
1 – 3 months	40 (47%)
1 week – 1 month	8 (10%)
1 week	0 (0%)

When Should Construction Plans Be Received?

Most utility companies responding to the survey indicated that they would like to receive information regarding the need to relocate utilities approximately one to three months prior to project letting (62 percent of all responders). As seen above, 90 percent of utility companies already receive construction plans within this timeframe. Interestingly, 38 percent of all utility companies are indicating that construction plans should be sent earlier than 90 days currently required by Statute 216D.

Table B-4: Construction Plans Received

When do you need information from local government agencies regarding utility relocation?	Utility Companies
More than 12 months	3 (3%)
7 – 12 months	11 (11%)
4 – 6 months	24 (24%)
1 – 3 months	60 (62%)

How Complete/Adequate are Construction Plans Sent in Advance?

City and county engineers responding to the survey indicated that the majority of construction plans sent to the utility companies were either complete or 70 percent complete.

Table B-5: Construction Plan Adequacy

How complete are plans sent to utilities?	Local Governments
Less than 70 percent	8 (22%)
70 percent or greater	14 (39%)
Finished	14 (39%)

ADEQUACY OF PROJECT PLANS

Whether the information contained in these plans is sufficient for efficient utility relocation by roadway contractors is debatable, as 73 percent of all contractors responding to the survey believed that they did not receive adequate information regarding utility location and extent of relocation activities in the majority of instances. When utility companies were queried as to what percentage of construction plans received show their buried utilities per Minnesota Statutes 216D, the majority of the survey responders believed that most of the plans they received did not contain this critical information.

Table B-6: Adequacy Of Project Plans

What percent of project plans received provide adequate information regarding utility location and extent of relocation activity?	Contractors
Less than 25 percent	16 (49%)
25 – 50 percent	8 (24%)
51 – 75 percent	8 (24%)
76 – 100 percent	1 (3%)

What percentage of construction plans received show your buried facilities per Minnesota Statutes 216D?	Utility Companies
Less than 25 percent	21 (25%)
25 – 50 percent	25 (30%)
51 – 75 percent	23 (28%)
76 – 100 percent	14 (17%)

INFORMATION AND COMMUNICATION

INFORMATION

One of the first steps in utility relocation activities during roadway construction in Minnesota is often to contact Gopher State One Call (GSOC) to receive information on underground utility information within the project construction limits. When local governments were asked whether they conducted GSOC utility location as part of plan preparation, 66 percent indicated that they did; however, 34 percent did not.

Table B-7: Information

Do you conduct GSOC utility location as part of plan preparation?	Local Governments
Yes	23 (52%)
No	15 (34%)
Sometimes	6 (14%)

PLAN FORMAT

Hard copy format is how most utility companies would prefer to receive plans from local governments.

Table B-8: Plan Format

In what format would you prefer to receive information about upcoming projects?	Utility Companies
Hard Copy	70 (76%)
Electronic (Microstation, AutoCAD, ArvView, GIS)	22 (24%)

COMPLETION AND DISTRIBUTION OF AS-BUILT PLANS

Most utility companies do complete as-built construction plans following project completion; however, relatively few forward this information along to the permitting agency (local governments).

Table B-9: Completion and Distribution of As-Built Plans

Are as-builts completed after projects have been finalized?	Utility Companies
Yes	74 (75%)
No	25 (25%)

Are as-builts sent to the permitting agency?	Utility Companies
Yes	20 (20%)
No	79 (80%)

COMMUNICATION

Better communication between all parties involved in utility relocation was something many survey responders felt was necessary in order to make the process work better. The following sets of questions were aimed at defining how to make communications clearer and timelier.

Roadway contractors responding to the survey indicated that they typically make contact with utility companies just prior to or at the pre-construction meeting. Utility companies indicated that they typically received notice of one week or less of roadway pre-construction meetings

Table B-10: Communication

At what point in the process do you typically initiate contact with utility companies?	Contractors
After bid	2 (6%)
Prior to pre-construction meeting	12 (38%)
At pre-construction meeting	16 (50%)
After pre-construction meeting	0 (0%)
Just prior to construction	2 (6%)

How much notice do you get for pre-construction meetings?	Utility Companies
1 week or less	50 (51%)
1 month	35 (35%)
1 – 3 months	12 (12%)
3 months	2 (2%)

FREQUENCY OF COORDINATION MEETINGS

After construction begins, coordination meetings between utility companies and contractors are typically held every one to four weeks.

Table B-11: Frequency of Coordination Meetings

After construction begins, how often are coordination meetings with utility representatives held?	Contractors
Every week or less	12 (45%)
1 – 4 weeks	10 (37%)
1 – 2 months	2 (7%)
2 months or more	3 (11%)

SCHEDULE CHANGE LEAD TIME AND COORDINATION

A high majority of contractors (87 percent) give utility companies notification of project schedule changes within the week, or on the same day. Only about half of the contractors responding to the survey consult utility companies prior to project schedule changes.

Table B-12: Schedule Change Lead Time And Coordination

How much lead time do you provide utility companies when schedule changes arise?	Contractors
Same day notification	9 (30%)
Within the week	17 (57%)
Within two weeks	4 (13%)
Within a month	0 (0%)

If schedule changes are made, are utility companies consulted prior to changes?	Contractors
Yes	14 (41%)
No	20 (59%)

PROVISION OF CIPS TO UTILITY COMPANIES

Three-fourths of local governments provide a capital improvement plan (CIP) to utilities informing them of potential roadway projects.

Table B-13: Provision of CIPs To Utility Companies

Does your agency provide a one-year or more capital improvement plan to utility companies?	Local Governments
Yes	33 (75%)
No	11 (25%)

PROJECT POINT-OF-CONTACT

One person from the utility company is typically assigned as the point of contact for each roadway construction project requiring utility relocation.

Table B-14: Project Point-of-Contact

Do you assign one person to be the point of contact for each project?	Utility Companies
Yes	85 (86%)
No	14 (14%)

DIFFICULTY IN RECEIVING INFORMATION

Over half of the responding local governments experience difficulties in getting timely and meaningful information on utility location to include in their plans.

Table B-15: Difficulty in Receiving Information

Do you have difficulty getting timely and meaningful utility information to include on your plans?	Local Governments
Yes	21 (42%)
No	23 (46%)
Sometimes	6 (12%)

UTILITY RELOCATION ACTIVITIES

Over 50 percent of all utility companies responding to the survey use subcontractors to carry out their utility relocations in the majority of instances.

Table B-16: Utility Relocation Activities

What percentage of utility relocation work is carried out by subcontractors?	Utility Companies
Less than 25 percent	24 (24%)
25 – 50 percent	18 (18%)
51 – 75 percent	13 (13%)
76 – 100 percent	43 (45%)

CONTRACTOR PROJECTS INVOLVING UTILITY RELOCATION

The majority of roadway contractors responding to the survey (64 percent) indicated that their projects usually involve utility relocation.

Table B-17: Contractor Projects Involving Utility Relocation

What percentage of your projects involve utility relocation?	Contractors
Less than 25 percent	6 (18%)
25 – 50 percent	6 (18%)
51 – 75 percent	8 (24%)
76 – 100 percent	13 (40%)

PROJECT DELAYS DUE TO UTILITY RELOCATION

All three of the surveyed groups were queried as to their experiences with project delays due to issues involving utility relocation. In general, although all three groups recognize it as a problem, roadway contractors indicated that utility relocation activities contribute to project delay with far greater frequency than did local governments or utility companies.

Table B-18: Project Delays Due To Utility Relocation

What percentage of your projects experience delays due to utility relocation?	Local Governments	Contractors	What percentage of your commitments for utility relocation are completed on time?	Utility Companies
Less than 25	34 (79%)	3 (9%)	Less than 25	5 (5%)
25 – 50	6 (14%)	12 (37%)	25 – 50	7 (7%)
51 – 75	2 (5%)	11 (33%)	51 – 75	36 (38%)
76 – 100	1 (2%)	7 (21%)	76 – 100	46 (50%)

FACTORS CONTRIBUTING TO PROJECT DELAY

Contractors were asked a series of yes/no questions as to the contributing factors to project delays due to issues involving utility relocation. Ninety percent (90%) of all contractors responding to the survey indicated that lack of cooperation from utility companies was a significant factor.

Table B-19: Factors Contributing To Project Delay

What is the most significant contributing factor to project delays due to utility relocation issues?	Contractors
Poor information from road authority	11 (33%)
Change in project scope	9 (27%)
Lack of cooperation from utility companies	29 (88%)
Lack of utilities coordination by road authority	13 (39%)
Lack of utilities coordination by contractor	1 (3%)

NOTE: Respondents could check multiple options

Appendix C

Annual Utility Relocation Coordination Meeting Materials

Utility Coordination

logo *Agency Name*

Annual Coordination Meeting

Date:

Attendance Roster					
Name	**Company**	**Address**	**Phone**	**Fax**	**E-mail**

logo *Agency Name*

Utility Company Contact Information

Date:

Contact Information			
Utility Company			
Corporate Address			
Corporate Phone			
Corporate Fax			
Web site			
Primary Contact		**Mailing Address:**	
Name:			
		Mailing Address:	
Name:			

Utility Coordination

logo *Agency Name*

Planned Projects Year 1: 200_

Date:

Project Information			
Project Name:		**Project Location**	
Project ID:		**Project Type**	
Letting Date:		**Construction Date:**	

Project Manager		Mailing Address:
Name:		
Office:		

Utility Company	Contact	Phone		Relocation Required	
		Office	Cell	Yes	No

Utility Coordination

logo *Agency Name*

Planned Projects Year 2: 200_

Date:

Project Information			
Project Name:		**Project Location:**	
Project ID:		**Project Type:**	
Letting Date:		**Construction Date:**	

Project Manager		Mailing Address:
Name:		
Office:		
Cell:		
Pager:		
Fax:		
E-mail:		

Identified Utilities within Construction Limits

Utility Company	Contact	Phone	Relocation Required			Early Coordination Required		Utility Maintenance Scheduled	
			Yes	No	TBD	Yes	No	Yes	No

Utility Coordination

logo *Agency Name*

Planned Projects Years 3-5: 200_ - 20__

Date:

Project Information			
Project Name:		**Project Location**	
Project ID:		**Project Type**	
Letting Date:		**Construction Date:**	
Project Manager		**Mailing Address:**	
Name:			
Office:			
Cell:			
Pager:			
Fax:			
E-mail:			

Identified Utilities within Construction Limits

Utility Company	Contact	Phone	Relocation Required			Early Coordination Required		Utility Maintenance Scheduled	
			Yes	No	TBD	Yes	No	Yes	No

Utility Coordination

logo *Agency Name*

Maintenance Schedule Year 2-5: 200_ - 20__

Date:

Road Maintenance Schedule					
Project Location	**Termini**	**Maintenance Activity**	**Scheduled Dates**	**Utility Maintenance Scheduled**	
				Y/N	**Type**

logo *Utility Name*

Maintenance and New Construction Schedule: 200_ - 20__

Date:

Utility Maintenance and New Construction Schedule			
Utility Company:		**Project Location:**	
Project Type:		**Scheduled Date:**	
Project Manager		**Mailing Address:**	
Name:			
Office:			
Cell:			
Pager:			
Fax:			
E-mail:			
Utility Company:		**Project Location:**	
Project Type:		**Scheduled Date:**	
Project Manager		**Mailing Address:**	
Name:			
Office:			
Cell:			
Pager:			
Fax:			
E-mail:			