UTILITY COORDINATION
MANUAL OF INSTRUCTION
Utah Department of Transportation
2017
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<tr>
<th>Acronym</th>
<th>Description</th>
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<tbody>
<tr>
<td>AASHTO</td>
<td>American Association of State Highway and Transportation Officials</td>
</tr>
<tr>
<td>APWA</td>
<td>American Public Works Association</td>
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<tr>
<td>ATC</td>
<td>Alternative Technical Concepts</td>
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<tr>
<td>CEMT</td>
<td>Construction Engineering Management Training</td>
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<tr>
<td>CFR</td>
<td>Code of Federal Regulations</td>
</tr>
<tr>
<td>CMGC</td>
<td>Construction Manager/General Contractor</td>
</tr>
<tr>
<td>DB</td>
<td>Design-Build(er)</td>
</tr>
<tr>
<td>DBB</td>
<td>Design Bid Build</td>
</tr>
<tr>
<td>EA/EIS</td>
<td>Environmental Assessment/Environmental Impact Statement</td>
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<tr>
<td>FAP</td>
<td>Federal Aid Project</td>
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<tr>
<td>FHWA</td>
<td>Federal Highway Administration</td>
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<tr>
<td>GIS</td>
<td>Geographic Information System</td>
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<tr>
<td>GPS</td>
<td>Global Positioning System</td>
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<tr>
<td>IQF</td>
<td>Independent Quality Firm</td>
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<tr>
<td>LG</td>
<td>Local Government</td>
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<tr>
<td>MOI</td>
<td>Manual of Instruction</td>
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<tr>
<td>M&amp;P</td>
<td>Measurement and Payment Document</td>
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<tr>
<td>MUA</td>
<td>Master Utility Agreement</td>
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<tr>
<td>MUTCD</td>
<td>Manual on Uniform Traffic Control Devices</td>
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<tr>
<td>NEPA</td>
<td>National Environmental Policy Act</td>
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<tr>
<td>NESC</td>
<td>National Electric Safety Code</td>
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<td>NHTSA</td>
<td>National Highway Traffic Safety Administration</td>
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<tr>
<td>Acronym</td>
<td>Definition</td>
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<tr>
<td>NTP</td>
<td>Notice to Proceed</td>
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<td>OSHA</td>
<td>Occupational Safety &amp; Health Administration</td>
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<td>PDBS</td>
<td>Project Development Business System</td>
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<td>PDN</td>
<td>Project Delivery Network</td>
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<tr>
<td>PM</td>
<td>Project Manager</td>
</tr>
<tr>
<td>PSC</td>
<td>Public Service Commission</td>
</tr>
<tr>
<td>PS&amp;E</td>
<td>Plans, Specifications &amp; Estimates</td>
</tr>
<tr>
<td>PUE</td>
<td>Public Utility Easement</td>
</tr>
<tr>
<td>QC/QA</td>
<td>Quality Control/Quality Assurance</td>
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<tr>
<td>RE</td>
<td>Resident Engineer</td>
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<tr>
<td>RFC</td>
<td>Request for Clarification</td>
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<tr>
<td>RFP</td>
<td>Request for Proposal</td>
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<tr>
<td>ROW</td>
<td>Right of Way</td>
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<tr>
<td>RMP</td>
<td>Rocky Mountain Power Company</td>
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<tr>
<td>STIP</td>
<td>State Transportation Improvement Program</td>
</tr>
<tr>
<td>SUE</td>
<td>Subsurface Utility Engineering</td>
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<tr>
<td>SULA</td>
<td>Statewide Utility License Agreement</td>
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<tr>
<td>UACP</td>
<td>Utility Adjustment Conceptual Plan</td>
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<tr>
<td>UC</td>
<td>Utah Code</td>
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<tr>
<td>UCOFN</td>
<td>Utility Contract Overrun Funding Need</td>
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<tr>
<td>UDOT</td>
<td>Utah Department of Transportation</td>
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<tr>
<td>UIS</td>
<td>Utility Information Sheet</td>
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<tr>
<td>UMUTCD</td>
<td>Utah Manual on Uniform Traffic Control Devices</td>
</tr>
<tr>
<td>UPRR</td>
<td>Union Pacific Railroad Company</td>
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</table>
USC United States Code
USDOT United States Department of Transportation
UTA Utah Transit Authority
UTR Utility Tracking Report
**DEFINITIONS**

*Abandoned Facility* — A utility facility that is not in use, no longer actively providing a service and is physically disconnected from the operating facility that is still in use and still providing a service. Abandoned facilities remain the property of the utility company.

*Administrative Order* — An order from UDOT to a utility company citing one or more non-compliance items or actions to an Administrative Rule and proper redress requirements.

*Administrative Rule R930-7 Utility Accommodation* — The rule that outlines the installation and maintenance of utilities in state highway Rights of Way.

*Administrative Rule R930-8 Utility Relocations Required by Highway Projects* — The Utah Administrative Code addresses the utility relocation process required by highway projects.

*As-Built or As-Constructed Plans* — Depiction of the placed utility facilities within the highway Right of Way showing the location and elevation of the utility facility as constructed incorporating all field changes.

*Baseline Construction Schedule* — A schedule created in Oracle’s Primavera P6 showing the proposed timeline of the work to allow the contractor and the Department to jointly manage the work and evaluate work progress. The schedule also serves to evaluate the effect of changes and delays to the scheduled project completion.

*Betterment* — Any upgrading of the facility being relocated that is not attributable to the highway construction and is made solely for the benefit of and at the election of the utility (https://www.fhwa.dot.gov/legsregs/directives/fapg/cfr0645a.htm).

*Change Order* — An order that is issued by the Department that alters the original utility agreement and is agreed to by the Department and the utility company.

*Clear Zone* — The total roadside border area, starting at the edge of the traveled way, available for safe use by errant vehicles. This area may consist of a shoulder, a recoverable slope, a non-recoverable slope and a clear run-out area. The desired width is dependent upon traffic volumes, speeds and roadside geometry (https://www.fhwa.dot.gov/programadmin/clearzone.cfm).

*Construction Manager/General Contractor (CMGC)* — A project delivery contracting method using a two-phase contract for services during the preconstruction and, if there is an agreed price, construction phases of a project.

*Construction Manager/General Contractor (CMGC) Contractor* — The entity that has been awarded a two-phase contract for a CMGC project and is responsible for providing preconstruction services under the first phase and, if a price agreement is reached, construction services under the second phase of such contract.

*Cost of Relocation* — The entire amount paid by or on behalf of the utility properly attributable to the relocation after deducting from that amount any increase in value of the new facility, and any salvage derived from the old facility.
**Cost of Removal** — The amount expended to remove utility property including the cost of demolishing, dismantling, removing, transporting, or otherwise disposing of utility property and of cleaning up to leave the site in a neat and presentable condition.

**Cost of Salvage** — The amount expended to restore salvaged utility property to usable condition after its removal (https://www.fhwa.dot.gov/legsregs/directives/fapg/cfr0645a.htm).

**Delay** — An event, action, force, or factor causing work to extend beyond the specified contract time.

**Department** — The Utah Department of Transportation

**Depth of Bury (cover)** — The depth from ground or roadway surface to top of pipe, conduit, casing, cable, utility tunnel, or similar facility.

**Design-Build (DB)** — A project delivery contracting method where a single contractor is selected to provide engineering/design services, construction services, maintenance services, or a combination thereof, for a highway project based on best value.

**Design-Builder** — A contractor or team of contractors selected to complete a Design-Build project.

**Deviation from Admin. Rule** — A granted permission to depart from the standards and requirements of Administrative Rule R930-7, *Utility Accommodation* in a specifically defined situation.

**Encroachment Permit** — A document issued by the Department that specifies the requirements and conditions for performing work within the highway right of way.

**Force Account** — A basis of payment for the direct performance by the utility company for utility relocation work with payment based on the actual cost of labor, equipment, and materials furnished and consideration for overhead.

**Horizontal Directional Drilling (HDD)** — Also known as directional boring and directional drilling, a method of installing underground pipes and conduits from the surface along a prescribed bore path. The process is used for installing telecommunications and power cable conduits, water lines, sewer lines, gas lines, oil lines, product pipelines, and casings used for environmental remediation. HDD is used for crossing waterways, roadways, congested areas, environmentally protected areas, and any area where other methods are not feasible.

**License Agreement or Statewide Utility License Agreement** — A document by which the Department licenses the use and occupancy, with conditions, of highway Rights of Way for utility facilities.

**Local Government** — Any city, county, township, local district, or other political subdivision that may be empowered to cooperate with the Department in highway matters.

**Lump Sum** — A method of reimbursing a utility company an agreed to amount when the utility relocation work can be clearly and concisely defined. The cost estimate supporting a lump
sum agreement must be accurate, comprehensive, verifiable and in sufficient detail to give a clear picture of the work involved.

**Non-operating Real Property** — Property owned by a Utility Company that is not directly part of the Utility Company's physical plant or facilities that provide the utility service.

**Political Subdivision** — Any city, county, township, school district, and local district.

**Prescriptive Easement** — A prescriptive easement is an easement that is not created by any document but is created by adverse possession of the property. Prescriptive easements are created when the use of the real property meets the following requirements:

- Open, or used in such a way that the property owner would be aware that the property is being used.
- Notorious, or used in such a way that the general public would be aware that the property is being used.
- Adverse to the owner’s interest, or without permission or approval from the property owner.
- Continuously used for at least 20 years.

The scope of the prescriptive easement is defined during the 20 years. If the use expands, then an additional 20 years is needed to establish the prescriptive use for the additional area.

**Utility Easement** — A recorded easement for the use and installation of a utility facility.

**Public Utility Easement (PUE)** — The area on a recorded plat map or other recorded document that is dedicated for the use and installation of public utility facilities.

**Relocation** — The adjustment of utility facilities required by the highway project. It includes removing and reinstalling the facility, including necessary temporary facilities, acquiring necessary Right of Way on the new location, moving, rearranging or changing the type of existing facilities and taking any necessary safety and protective measures. Relocation shall also mean constructing a replacement facility that is both functionally equivalent to the existing facility and necessary for continuous operation of the utility service, the project economy, or sequence of highway construction.

**Right of Way** — A general term denoting land, property, or interest therein acquired for or devoted to transportation purposes.

**Salvage Value** — The amount received from the sale of utility personal property that has been removed or the amount at which the recovered material is charged to the utility's accounts, if retained for reuse.

**Statewide Transportation Improvement Program (STIP)** — A six-year plan of highway and transit projects on state, city and county highway systems using various federal and state funding programs.

**Subsurface Utility Engineering (SUE)** — A branch of engineering practice involving the management of certain risks associated with utility mapping at appropriate quality levels, as
described in *ASCE Standard 38-02, Standard Guideline for the Collection and Depiction of Existing Subsurface Utility Data*.

**Third Party** — An individual or entity affected by the project other than the Department and the Contractor.

**Utility** — A privately, publicly, cooperatively, or municipally owned pipelines, facilities, or systems for producing, transmitting, or distributing communications, power, electricity, light, heat, gas, oil, petroleum products, cable television, water, sewer, steam, waste, storm water not connected with highway drainage, and other similar commodities, which serves the public.

**Utility Agreement** — A legally binding document outlining the responsibilities of each party, including cost allocation, work to be performed, and any special provisions specific to the highway project and the utility work.
General

The Utah Department of Transportation (UDOT) is charged with operating and maintaining over 6000 miles of highways, along with bridges, traffic operations systems, rest areas and other facilities, to provide safe and efficient transportation for the motoring public. The reconstruction and rehabilitation of existing facilities and the construction of new facilities are significant parts of UDOT’s program to provide this safety and efficiency and ultimately “Keeping Utah Moving.”

The use of UDOT Right of Way by electric, communications, gas, water, sewer and other utilities is in the public interest. UDOT recognizes the benefits gained by this sharing of the Right of Way however; sharing of the Right of Way also means that needed construction work on the UDOT highway system will conflict with these utilities. This manual provides direction on how to coordinate with utility companies and mitigate these conflicts, which if not mitigated in an effective and timely manner often result in costly delays and claims that affect UDOT, utility companies and the motoring public. The utility coordination task is often critical to the success of a project and therefore needs to be properly addressed.

Proactive utility coordination early in the scoping and design of a project will reduce the effort needed later in the design and construction of a project. History has shown that doing early coordination and continuing coordination through the life of a project, a concept promoted by UDOT and this Manual of Instruction (MOI), known as Coordination, Cooperation and Communication (CCC), is the most effective tool to:

- identify and resolve issues as early as possible
- eliminate arbitrary and unnecessary utility relocations
- minimize costly unexpected issues
- facilitate timely utility relocations

In the longer term, beyond just immediate project needs, this also has a significant positive effect on UDOT’s relationships with utility companies. The processes in this manual for coordinating with utility companies are based on these CCC principles.

Statewide/Regionwide Utility Meetings/Communication of STIP

In addition to coordination on individual projects, UDOT has other means to work with utility companies to further establish positive relationships. UDOT invites utility companies to attend a coordination meeting in April and October to communicate relevant project program information and anticipated schedules from the Statewide Transportation Improvement Program (STIP). In addition, UDOT provides utility companies with
training to better understand each other’s needs and processes and promote good working relationships.

C. Manual Overview

The purpose of this manual is to establish step-by-step instructions that clearly identify the keys to successful utility coordination on UDOT projects. This will further provide for uniformity in the administration of state and federal laws, rules and regulations that are applicable to utility matters on UDOT projects.

The manual provides the following information about the process of managing utility facility relocation, installation and protection during transportation projects:

- acronyms, abbreviations and definitions of commonly used terms
- an overview of the roles and responsibilities of UDOT staff and external groups that handle the various aspects of utility facility installations, relocations and protection on UDOT projects
- an overview of the federal and state laws, rules and regulations that apply to utility relocations and issues on UDOT projects
- a step-by-step explanation of utility coordination on design-bid-build projects
- a step-by-step explanation of utility coordination on design-build projects
- an explanation of utility coordination on CMGC projects
- an overview of utility coordination requirements for Federal Aid Local Government projects
- a step-by-step explanation of utility coordination on Purple and Orange Book projects
- appendices that provide further detail on subjects as needed and example letters and forms to be utilized

This manual also provides an explanation of the processing of permits for utility-initiated projects.

This manual does not cover coordination regarding railroads. For coordination involving railroads, refer to the *Railroad Coordination Manual of Instruction*.
D. Project Delivery Networks and Timing of Utility Coordination Activities

Utility related activities are included in most UDOT Networks. Please refer to the individual Network webpages for more information. The Project Delivery Network (PDN) discussed in detail later in this manual.

- Project Delivery Network
- Concept Phase Design Network
- Environmental Network
- Construction Engineering Management Network
- Project Closeout Network
SECTION 2
ROLES AND RESPONSIBILITIES

A. General

This section describes the roles and responsibilities of various parties involved in utility related functions within UDOT and other agencies. The descriptions describe the general functions of the positions and do not include a detailed list of all responsibilities.

B. UDOT Central Office Functions

Statewide Railroad and Utilities Director – Manages the Utility and Railroad Coordination Program at the Central Project Development level; serves as the program resource for the Regions; serves as UDOT’s Management Liaison with utility companies and other agencies; issues policy statements; promotes statewide utility program consistency; provides training to project team members and utility owners; sponsors statewide utility coordination meetings; participates in the resolution of issues escalated from the project or Region level; maintains Statewide Utility License Agreements and Master Reimbursement Agreements.

Outdoor Advertising Control Manager – Oversees UDOT’s Utility Encroachment and Permits functions at the Central Project Development level as part of the Right of Way Division; provides program support for the Region Permits Units; oversees the enforcement of Utah Administrative Rule R930-7, Utility Accommodation.

UDOT Counsel – Represents the Utah State Attorney General’s Office; provides legal review of utility agreements and legal assistance as necessary.

Contracts and Compliance Specialist – Manages utility reimbursement agreement billing, payment, audit, and close-out processes; enters and maintains utility reimbursement agreements, billing and payment records; coordinates with Resident Engineers to facilitate utility relocation payments and resolve payment issues; reviews status of project billings with utility company representatives.

UDOT Structures Division – Reviews and approves or denies requests by utility companies to attach facilities to UDOT structures; evaluates requests to place utility facilities within 50 feet of bridge structures.

Comptroller’s Office – Assigns Finance Numbers to executed agreements; maintains files of agreements by project and party; requests payment of verified billings from State Finance Office upon authorization from the Contracts, Estimates and Agreements Specialist.
Internal Audit Division – Receives final utility and railroad billing packages and support documentation and reviews for compliance with applicable State and Federal reimbursement regulations; issues Audit Findings and recommends additional payments or recovery of overpayments.

C. UDOT Region Functions

Region Utility and Railroad Leader or Coordinator – Coordinates with utility companies and develops utility reimbursement agreements necessary to successfully complete projects within their respective Regions; oversees the design and coordination efforts of consultants as defined in the most current version of the UDOT Project Delivery Network; serves as the Region utility program resource on project delivery teams.

Utility Designer – Depending on the specifics of the Region and situation, this person could be the Region Utility and Railroad Leader, someone from the roadway design team, an assigned person in the Region, or a consultant. The Utility Designer, being more familiar with the details of an individual project and having related technical / design expertise, performs utility coordination activities consistent with said knowledge and expertise.

Region Right of Way and Survey Manager – Verifies utility company fee title and easement documents for determination of reimbursement eligibility; prepares utility related Right of Way documents as necessary.

Project Managers – Oversees the delivery of projects from concept / environmental phases, through design phase, to the completion of construction delivery phase; provides continuity of project knowledge and history throughout all phases.

Region Right of Way Control Coordinator or Permits Engineer – Manages permitting operations programs for Access Management, Encroachment Permits and Special Event Permits. Receives and reviews permit requests for use of UDOT Right of Way within their respective Regions; provides inspection to ensure work is completed correctly.

Region Blue Stakes Coordinator – Receives and evaluates Blue Stake notifications for UDOT-owned utility facilities; field marks UDOT facilities in accordance with State Code upon notification and verification of UDOT facilities within an identified excavation area.

Fiber Operations Manager – Manages the operation and maintenance of the Region’s Traffic Signal and Lighting facilities; provides input during the design of traffic signals and inspects new signals prior to connecting to the power source.

Resident Engineers – Facilitates and manages coordination between utility companies and contractors during the construction of projects; enforces the provisions of UDOT’s Standard Specifications, contract documents and utility reimbursement agreements; monitors scheduling of utility relocation work; maintains daily force account documentation of utility relocation work performed on actual cost basis; verifies completion of utility relocations and approves billings for payment.
D. Non-UDOT Functions

**Blue Stakes of Utah** – The Statewide one-call notification system for underground utilities; notifies member agencies of locating requests; provides information and guidance for excavators. (Utah Code Title 54, Chapter 8a requires any organization or individual whose plans include excavation anywhere in the state to contact Blue Stakes of Utah before digging.) Blue Stakes can also be contacted to provide a list of potential utility owners during project planning and design.

**Local Governments (cities, counties, and local districts)** – Coordinate with UDOT for the accommodation, installation and relocation of publicly owned utility facilities in state rights-of-way.

**Utility Companies** – Participate in Statewide Utility Coordination Meetings to share long and short range project plans; provide information and coordinate with UDOT’s project delivery teams; verify the depiction of their facilities on UDOT plans; review UDOT plans and participate in project design and construction meetings; develop and submit relocation plans, schedules and cost estimates to UDOT; coordinate schedules with UDOT contractors and perform utility relocation work.

Utility relocation or other utility work can be completed by the utility company’s own forces, by an approved utility company contractor under their direction, or included in the UDOT contract. Water and sanitary sewer relocation work is often included in UDOT’s contract. Sometimes it is appropriate to include other work that is part of utility relocations, such as trenching for utility installations and conduit placement. Utility work that is included in the UDOT contract is tested, inspected, documented and paid for by UDOT like any other contract item. The utility company, through their inspection of the work performed and coordinated with UDOT, will provide UDOT's Resident Engineers with information covering any problem or concerns the utility company may have with acceptance of facilities upon completion of construction. The utility company will take responsibility for the acceptability of the work as it progresses and will not be allowed to reject and suggest correction after completion. Design of utility work that is to be constructed by the utility company or their contractor is typically completed by the utility company, but can be completed by an approved consultant. Depending on the specifics of the project, it might be UDOT or the utility company that is responsible for the design of the utility work to be included in the UDOT contract. If it is the utility company’s responsibility they may choose to do the design with their own staff or with an approved engineering consultant of their own. If it is UDOT’s responsibility to do the design, there are three general scenarios that may be chosen based on the specifics of the project:

- the design is performed by UDOT staff directly
- the design is included as part of the project design scope of work and performed by the consultant (or a subconsultant) responsible for the project design
- the design is performed by a consultant under a contract that is separate from the project design contract
SECTION 3
LAWS, RULES, AND REGULATIONS

A. General

This section highlights key elements of federal and state laws, rules and regulations that apply to utility accommodation and relocation. This manual references specific laws and rules as appropriate.

B. Federal Laws and Regulations for Federal-Aid Highways

1. Federal Laws


   a. 23 U.S.C. 109 (I) - Standards

      This section deals with the accommodations of utility facilities on the Right of Way of federal-aid highways.

   b. 23 U.S.C. 123 – Relocation of Utility Facilities

      This section deals with reimbursement for the relocation of utility facilities necessitated by the construction of a project on any federal-aid highway.

   c. 23 U.S.C. 313 – Buy America

      This section deals with the applicability of Buy America Provisions to federal-aid highway projects.

2. Federal Regulations

UDOT’s Policies, Procedures and Agreement format for the administration of utilities and utility issues are based on the requirements and authority of 23 CFR 645 - Utilities.

For federal-aid highways, the utility regulations are contained in part 645 of title 23 of the Code of Federal Regulations (23 C.F.R. §645). Non-regulatory supplements are contained in chapter 1, subchapter G, part 645 of the Federal-Aid Policy Guide (FAPG).
23 C.F.R. §645 - Utilities

a. **Subpart A of Part 645**

Subpart A of part 645 deals with utility relocations, adjustments, and reimbursement.

b. **Subpart B of Part 645**

Subpart B of part 645 deals with the accommodation of utility facilities. 23 CFR 645.215(B) requires each state that receives federal funding for highways to develop and submit its own statement on the authority of utility companies to use and occupy the Right of Way of State highways, the State transportation department’s power to regulate such use, and the policies the State transportation department employs or proposes to employ for accommodating utility facilities within the Right of Way of Federal-aid highways under its jurisdiction. Once the statement is approved by the FHWA, any utility installations to be installed on federal-aid highways in accordance with the approved state statement may be approved by the state without referral to the FHWA. Administrative Rule R930-7 sets forth the legal authority UDOT employs for accommodating utility facilities within the Right of Way.


This publication contains and explains the federal utility regulations contained in 23 CFR 645 and provides non-regulatory guidance for using federal-aid highway funds for the relocation and adjustment of utility facilities and for accommodating utility facilities on highway Right of Way.

C. **State Laws and Rules**

1. **Utah Code - Title 72 Transportation Code**

   *Section 72-1-201 – Creation of Department of Transportation – Functions, powers, duties, rights and responsibilities.*

   - Provides that the Department of Transportation shall coordinate with utility companies for the reasonable, efficient and cost-effective installation, maintenance, operation, relocation and upgrade of utilities within state highway Rights of Way.
Section 72-6-116 – Regulation of Utilities – Relocation of Utilities

- Defines the "cost of relocation" to include the entire amount paid by the utility company properly attributable to the relocation of the utility after deducting any increase in the value of the new utility and any salvage value derived from the old utility
- Defines "utility" to include telecommunication, gas, electricity, cable television, water, sewer, data, and video transmission lines, drainage and irrigation systems and other similar utilities located in, on, along, across, over, through or under any state highway
- Defines "utility company" as a privately, cooperatively or publicly owned utility, including utilities owned by political subdivisions
- Establishes that the department may make rules for the installation, construction, maintenance, repair, renewal, system upgrade and relocation of all utilities
- Establishes that if the department determines under the rules established that it is necessary that any utilities should be relocated, the utility company owning or operating the utilities shall relocate the utilities in accordance with the rules and the order of the department
- Establishes the department will pay 100 percent of the cost of relocation of a utility to accommodate construction of a state highway project, including construction, improvement, widening or modification of an existing highway if the:
  1. utility is owned or operated by a political subdivision of the state
  2. utility company owns the easement or fee title to the Right of Way in which the utility is located
  3. utility is located in a public utility easement as defined in Section 5-3-27
- Establishes the department shall pay 50 percent of the cost of relocation of a utility to accommodate construction of a state highway project, including the construction of a proposed state highway and the improvement, widening, or modification of an existing state highway, and the utility company shall pay the remainder of the cost of relocation
- Establishes that if a utility is relocated, the utility company owning or operating the utility, its successors or assigns, may maintain and operate the utility, with the necessary appurtenances, in the new location
- Establishes that the cost of relocating a utility in connection with any project on a highway is a cost of highway construction
- Establishes that the department shall notify affected utility companies whenever the relocation of utilities is likely to be necessary because of a reconstruction project and that this notification shall be made during the preliminary design of the project or as soon as practical to minimize the number, costs, and delays of utility relocations
- Establishes that a utility company that has been notified shall coordinate with the department and the department's contractor on the utility relocations, including the scheduling of the utility relocations
2. **Utah Code - Title 54 Public Utilities**

The following are significant with relation to UDOT’s involvement with utilities:

**Section 54-1-2 Public Service Commission – Powers and duties**

- Establishes that the Public Service Commission is vested with power and jurisdiction to supervise and regulate every public utility in this state, and to supervise all of the business of every such public utility in this state, and to do all things, whether herein specifically designated or in addition thereto, which are necessary or convenient in the exercise of such power and jurisdiction; provided, however, that the Department of Transportation shall have jurisdiction over those safety functions transferred to it by the Department of Transportation Act.

**Section 54-8a is Damage to Underground Utility Facilities**

- Commonly known as the “Blue Stakes” Law
- Establishes practices to prevent damages to underground utility facilities

**Section 54-3-29 Removal, relocation, or alteration of utility facility in public highway construction or reconstruction – Notice – Cooperation**

- If a public agency engages in or proposes to engage in a construction or reconstruction project on a public highway that may require the removal, relocation, or alteration of a utility facility, the public agency shall:
  1. contact an association, established under Title 54, Chapter 8a, Damage to Underground Utility Facilities, to identify each utility company that may have a utility facility in and around the construction or reconstruction project
  2. identify a utility company that has an above-ground utility facility in or around the proposed construction or reconstruction project
  3. electronically notify each utility company identified

- The notice required shall:
  1. be made as early as practicable and at least 30 days:
     - before the preliminary design or project development meeting
     - before the issuance of a request for proposal for a design-build project
     - after a change in scope of a design-build project
  2. include:
     - information concerning the proposed project design
     - the proposed date of a required removal, relocation, or alteration of a utility facility
     - the federal identifying project number, if applicable
  3. advise the utility company if the proposed project may qualify for aid for the utility company’s expense in removing, relocating, or altering a utility facility
A public agency shall permit a utility company to participate in the preliminary design or project development meeting, or similar meeting at which the project design is addressed.

A public agency shall, not less than 30 days after providing notice to each utility company, provide the utility company an opportunity to meet with the public agency to allow the utility company to:

1. review project plans
2. understand the objectives and funding sources for the proposed project
3. provide and discuss recommendations to the public agency that may reasonably eliminate or minimize utility removal, relocation, or alteration costs, limit the disruption of utility company services, or eliminate or reduce the need for present or future utility facility removal, relocation, or alteration
4. provide reasonable schedules to enable coordination of the construction project and removal, relocation, or alteration of a utility facility

If a public agency provides a utility company with reasonable opportunities to meet, the utility company’s failure to meet does not affect the public agency’s ability to proceed with the project.

While recognizing the essential goals and objectives of the public highway agency in proceeding with and completing a project, the parties shall use their best efforts to find ways to:

1. eliminate the cost to the utility of relocation of the utility facilities
2. if elimination of the costs is not feasible, minimize the relocation of costs to the extent reasonably possible

A utility company notified shall coordinate with the public agency concerning the utility facility removal, relocation, or alteration, including the scheduling of the utility facility removal, relocation, or alteration.

A public agency and a utility company may address the removal, relocation, or alteration of a utility facility in relation to a construction or reconstruction project on a public highway in a franchise agreement in lieu of this section, if the public agency is otherwise permitted to enter into the franchise agreement.

This does not affect a public agency’s authority over a public Right of Way, including any rule, ordinance, order to relocate a utility.

The utility coordination processes included in this MOI are compliant with the provisions Section 54-3-29.

3. **Utah Administrative Code R930-7 – Utility Accommodation**

Administrative Rule R930-7 sets forth the policies UDOT employs for accommodating utility facilities within the Right of Way. Utility companies must execute a License Agreement with UDOT for permission and terms to locate their facilities on the State’s property, and obtain an Encroachment Permit for permission and terms to physically construct the facility. Facilities are commonly referred to as being in UDOT’s Right of Way by “Permit”. Included in this Rule are:

- General Installation Requirements
- General Design Requirements
• Definitive Design Requirements
• Utilities on Highway Structures
• Utilities within Interstate, Freeway, and Access Controlled Right of Way
• Utility Construction and Inspection
• Maintenance Responsibility
• Deviations
• Enforcement

4. Utah Administrative Code R930-8 – Utility Relocations Required by Highway Projects

Administrative Rule R930-8 sets forth the Department’s requirements and authority as to utility company’s coordination and cooperation when removal, relocation, or alteration of a utility facility is made necessary by a highway project. The Rule sets forth options the Department may pursue to proceed with a project in the event a utility company fails to cooperate or coordinate with the Department as required by statute or rule. Included in this Rule are provisions for:

• Utility Company Coordination and Cooperation
• Timeliness
• Relocation
• Replacement of Property Rights
• Reimbursement of Relocation Costs
• Betterments
• Issuance of Administrative Order – Enforcement
• Agency Review

In addition to establishing an expectation that utility companies will coordinate and cooperate with the Department for the planning and accomplishment of utility facility relocations required by highway projects and providing definitive guidance on relocations, replacement of property rights, reimbursement of relocation costs and betterments, this Rule provides the department with the authority to issue Administrative Orders and pursue remedies against utility companies who fail to timely coordinate or cooperate and any point in the relocation process. Administrative Orders are issued by the Department’s Statewide Railroad and Utilities Director upon sufficient evidence that the Department fully complied with the requirements of the Rule, state and federal laws and regulations, the Standard Specifications and contract documents (in the case of construction delays) and that the utility company failed to meet its obligations or acknowledged work plan and schedule.

When an event occurs involving non-compliance or non-responsiveness by a utility company on a project, the Region Utility and Railroad Leader/Coordinator or Resident Engineer should notify the utility company’s project representative that the issue is being escalated. The Region Utility Leader will then confer with the utility company and escalates the issue to the Statewide Railroad and Utilities Director along with all pertinent information and documentation. The Statewide Railroad and Utilities Director will decide whether to issue an Administrative Order based on the evidence presented.
A first Administrative Order explains the event or situation and includes a reasonable time frame for the utility company to rectify the situation or complete the relocation design or construction work. This puts the utility company on notice that the Department may act against the utility company if they fail to comply.

If the utility company fails to comply with the first Administrative Order and the failure is not caused by a third party who the utility company has no control over, the Department may issue a second Administrative Order to remedy non-compliance. The Department may order any or all of the following remedies:

• recover increased costs caused by the utility company’s unreasonable or unjustified delays. Such actual and indirect costs may include, but are not limited to, increased costs on the current highway project or related projects, added expenses from loss of a construction season and loss of project funding

• deny further Encroachment Permits for utility installations until the non-compliance is resolved

• perform design or construction work on behalf of the utility company except for fiber for telecommunication, electricity, and natural gas facility construction

In addition, the Department may pursue additional remedies or claims against a utility company in a Utah district court.

A utility company aggrieved by an Administrative Order issued under this Rule may file a request for agency review with the Department pursuant to the Administrative Procedures Act. The presiding office for the agency review will be the Department’s Director of Operations who will issue the Department’s Final Order. The Administrative proceedings shall be informal.


Administrative Rule R907-64 sets forth the policies UDOT employs for accommodating and facilitating the installation, operation and maintenance of cable and wireless telecommunication facilities within the Right of Way of the Interstate system. The Rule recognizes the importance of quality infrastructure and is intended to encourage competition and the deployment of advanced telecommunication technologies while protecting the safety and convenience of highway users.
The Rule includes provisions for:

- Authority
- Definitions
- Access Policy
- Limitations and Conditions
- Compensation
- Permits and Agreements
- Public Involvement

Removal and Facilities installed under this Rule must comply with all the requirements of *Administrative Rule R930-7 Utility Accommodation* as well as any additional requirements set forth by UDOT. The department requires compensation from the telecommunication provider and the removal or relocation of facilities as required by highway operations or projects is at the facility provider’s expense.
A. Environmental Phase

Overview

The identification of potential significant utility relocations and involvement during the environmental phase of the project facilitates decision making related to design alternatives, the setting of project schedule, budgeting and Right of Way requirements. Gather utility information and meet with utility companies to the extent necessary to gather preliminary information to make these assessments. Analyzing and considering utility impacts during this phase can be critical to the later success of the project.

Tasks

Activities included in the Environmental Document (EA/EIS) Process with tasks that address utility related issues are:

O2E (Obtain Consultant Services and Develop Project Environmental Scope Schedule and Budget) suggests the Region Utility and Railroad Leaders/Coordinator as a potential Environmental Kick-off Meeting attendee if significant or numerous utility facilities are in the study area.

17E (Define Project’s Draft Purpose and Need) includes analysis of infrastructure conditions including gathering utility information from utility companies to determine preliminary utility locations, discussion of potential utility upgrades and determining if Subsurface Utility Engineering (SUE) investigation is necessary.

18E (Obtain Mapping and/or Photography) includes the completion of Subsurface Utility Engineering (SUE) Mapping as determined by the project team.

21E (Identify Environmental Resources) lists utility relocations as potential environmental resources to be identified.

23E (Determine Impacts and Analyze Alternatives) includes decision making related to design alternatives, the setting of project schedule, budgeting and Right of Way requirements including analysis of identified potential utility relocations and service disruptions. Analyzing and considering utility impacts during this phase can be critical to the later success of the project.

The activity leader and responsible party for tasks that include utility coordination may be the consultant (for environmental documents prepared by a consultant) or the Region...
Environmental Manager (for environmental documents prepared internally). For the utility related items in these tasks, the Region Utility and Railroad Leader is to be involved.

### B. Design Phase

The **Project Delivery Network (PDN)** outlines the phases, activities, deliverables and tasks typically required to prepare a UDOT Project for advertisement. A flowchart of the Utilities (U) tasks in the PDN is as follows:


Utility Right of Way Considerations

Right of Way tasks have been included in this utility task flow chart to emphasize the importance of identifying utility company property rights, not only for the determination of eligibility for reimbursement but also to provide for the proper replacement of property rights during the right of way planning, design and acquisition process. Right of Way Certification cannot be issued until the replacement of utility property rights has been addressed. Coordination and communication between the project utility, design, and Right of Way staff is vital to the timely advertisement of the project and completion of utility relocation agreements and construction. For more information, refer to Chapter 7 – Utilities of the Right of Way Design Manual of Instruction.

Guidance on reimbursement eligibility and the replacement of utility company property rights is provided in:

- Utah Code 72-6-116 Regulation of Utilities – Relocation of Utilities
- Utah Administrative Code R930-8 Utility Relocations Required by Highway Projects

2U1- Utility & Railroad Identification

Overview

Early identification of existing utilities and early coordination supports the development of accurate plans and are critical to the success of the project. Identify all utility companies and complete an accurate depiction of existing utility facilities within the project limits.

The Region Utility and Railroad Leader or Coordinator is the activity leader and is directly responsible for some tasks while ensuring that other tasks have been completed by the directly responsible party.

Note: Concurrent with the Activity 1J1 Identify Existing Right of Way – Obtain utility maps and deeds to identify utility easements and rights of way.

Tasks

The directly responsible party for completing each task is noted following the title of each task.

Identify Utility Companies within Project Limits – Region Utility Leader or Designer

This task involves the following components:

- Identify all utility companies, service districts and political subdivisions with facilities within the project limits
- Identify a point of contact for each company for project design coordination
• Use the Utility Agreement Tracker to develop a Utility Companies Contacts List, which includes name, address, phone number(s), fax and email address.

To facilitate this task first call Blue Stakes to obtain a list of potential utility companies. Make direct contact with the utility companies and follow through with the additional tasks below. To obtain the list of potential utility companies, access the Utility Contacts for Planning and Design at www.bluestakes.org. Click on Utility Contacts, enter the required information and look up under planning and design. You may also contact Blue Stakes by calling 811, 801-208-2100 or 800-662-4111. A field review allows the reviewer to observe the above-ground utilities such as overhead power, telephone, cable telecoms, and bridge attachments.

**Field Review**
Look for features that identify underground utilities, such as:
- Valves and meters
- Manholes
- Communication or electric pedestals
- Markers for underground natural gas or petroleum products pipelines, fiber optic lines, buried telephone, buried electric, water and sanitary sewer

Many utility companies with underground facilities mark their lines with above-ground markers. The markers usually include a phone number to contact before digging in the area. This information may be useful to contact the company, if no other information is available through other available resources or online searches.

Take photographs for future reference; they sometimes can save a future trip to the site. Photograph potential conflict areas, such as overhead facilities at the intersection where traffic signals are to be installed, or utilities that may pose a problem with the clear zone areas.

Other sources of information that can be used to identify potentially affected utility companies include previous UDOT project plans, land owners, UDOT Maintenance Shed Foremen.

**Notify Utility Companies of Project and Request Utility Records/Plans – Region Utility and Railroad Leader or Coordinator**

This task involves notifying each utility company within the project limits as required by *Section 54-3-29 Removal, relocation, or alteration of utility facility in public highway construction or reconstruction – Notice – Cooperation*. Provide each utility company with the project area and project description. Request that each utility company provide records of their existing facilities that are within the project limits.

In addition to providing PDF files to utility companies, consider exchanging information in a CADD format (with capable utility companies) for greater efficiency and eliminating interpretation issues.
UDOT utility facilities also need to be accounted for. Coordinate with the Region Blue Stakes Coordinator and UDOT Fiber Operations Manager to identify these facilities.

Coordinate with Survey Team – Utility Designer

Coordinate with the survey team to gather overhead and surface facilities within the project limits. Subsurface utility location information is not available from Blue Stakes during planning and design (Blue Stakes will only provide utility company contact information). Good communication with the Survey Team is extremely important to ensure repeat visits are not required. Clearly identify all utility facilities that are needed, including the inverts to be collected from accessible underground facilities. Provide utility plans, easements, and records to the Survey Team as appropriate to assist their efforts in locating facilities and understanding what is required.

Develop Subsurface Utility Engineering (SUE) Levels B, C, and D – Utility Designer

Use utility company records, field observations, and collected survey information to develop a depiction of underground utility facilities within the project limits. On projects where a SUE consultant is being utilized, have the SUE consultant collect quality level B, C, and D information. Provide a complete depiction of the utility facilities within the project limits. Follow UDOT Computer-Aided Design and Drafting (CADD) Standards and provide the information in the appropriate project CADD file format.
UDOT requires the use of SUE at appropriate quality levels on all projects. Qualified SUE providers are available through the General Engineering and Local Government Consultant Services Pool.

For additional information about SUE and project applications, see Appendix A.

**Issue Authorization for Design Expenditures** – Region Utility and Railroad Leader or Coordinator

Use the Agreement Tracker to prepare and issue Authorization for Design Expenditure letters to each utility company that may have conflicts on a specific project. This authorization covers in-house non-construction expenditures. The letter will typically address the next two tasks, an invitation to the utility scoping meeting (if one is to be held) and the reviewing of horizontal utility locations (if a scoping meeting is not to be held). Plans that accompany the letter are typically sent electronically in PDF format. CADD files should be provided if requested by a utility company. See Appendix B for a sample authorization for design expenditures letter.

If the utility company is not adequately staffed to pursue the necessary preliminary engineering and related work for the utility relocation, the utility company can secure the services of an engineering consultant. UDOT pre-approval of the engineering consultant is required prior to eligibility for reimbursement. Review the proposed consultant contract between the utility company and the engineering consultant to see that it meets the requirements of 23 C.F.R. §645.109 and to the extent practicable 23 CFR §172. See Appendix C for a sample engineering consultant authorization letter.

**Preliminary Engineering Agreements**

While not routinely used, UDOT may enter into an agreement with the utility company for reimbursement of preliminary engineering expenses only in advance of the utility relocation construction work and relocation agreement. This may be done in instances where cash flow is of importance, such as the payment of engineering consultant expenses, and other special circumstances such as where different design scenarios are being assessed over a lengthy period of time or the construction schedule is uncertain. The Region Utility and Railroad Leader or Coordinator needs to make sure preliminary engineering agreements are managed properly by the utility company. Consider including monthly joint management and performance reviews, sharing of progress reports and invoices, etc.
The Authorization for Design Engineering letter typically requests documentation of all easements or property rights that existing utility facilities occupy. Unless there is no chance of affecting a utility, research of existing rights will be done by both UDOT and the utility company. The utility company will provide replacement Right of Way forms to UDOT. These forms vary depending on utility design (i.e. overhead, underground, etc.). If utility or roadway designs change, forms may need to be revised. Ensure the project team’s Right of Way representative has the correct forms and has a Right of Way contact with the utility company.

Hold Utility Scoping Meeting (as needed) – Region Utility and Railroad Leader or Coordinator

Hold a Utility Scoping Meeting on major projects and projects where utility impacts may be significant. Routine projects with utility involvement may not need a Utility Scoping Meeting. This ideal approach is to include all potentially affected utility companies in one meeting. Hold the Utility Scoping Meeting near the time that the project scoping meeting is conducted. The Utility Scoping Meeting may be held before, after, or in conjunction with the project scoping meeting as appropriate to fit the needs of the project. Regardless of order, UDOT personnel conducting the first meeting communicate relevant information to the UDOT personnel conducting the second meeting.

The purpose of the Utility Scoping Meeting is an early exchange of information between UDOT and the utility companies to gain a broad perspective of the project and potentially significant utility impacts. Provide an agenda prior to the meeting. Prepare for the meeting by reviewing the project scope and known utility information. Reminder phone calls, emails, and electronic calendar appointments facilitate greater utility company attendance. Prepare a sign-in sheet prior to the meeting.

Hold the meeting at a location that best addresses attendee’s needs. The meeting may be at an office or at the project site, or a combination of both, depending on specific needs. The following UDOT staff should also be invited to this meeting:

- UDOT Project Manager
- Consultant Project Manager (if applicable)
- Roadway Design Team (including hydraulics)
- Resident Engineer
- UDOT Maintenance Shed foreman (also send a copy of the invite to the Area Supervisor and District Engineer)
- Fiber Operations Manager (if applicable)
- Bridge / Structures Designer (if applicable)

Discuss the following items at the meeting:

- Project scope and schedule
- Coordination/communication plan
- Location, size, type, and significance (as relates to customers served, cost and time to relocate, outage windows, if needed) of utility facilities
• Needs of utility owners to comply with environmental and regulatory requirements, and the associated costs, limitations, and duration.
• Facilities on structures and whether utility companies will retain or install their facilities on a structure.

**Utility Attachments and Proximity to UDOT Structures**

In cases where UDOT must determine if structure installations will be allowed, proposed structure installations are subject to review and approval by UDOT’s Structures Division. Utility installations on structures will not be considered unless the structure is of a design that is adequate to support the additional load and can accommodate the utility without compromising highway features. UDOT may require the utility company to enter into a written agreement to address unique conditions and limitations of installation on UDOT structures. These limitations may include the utility company bearing 100 percent of future costs due to impacts of UDOT maintenance or construction work. See *Administrative Rule R930-7-9 – Utilities on Highway Structures* for further details on requirements for allowing utility structure installations.

• Environmental handling and disposal issues such as asbestos coated pipe
• Design alternatives that may avoid or minimize conflicts
• Existing utility easements, prescriptive rights and real property interests that would be a basis for reimbursement claims
• New property needs to facilitate potential utility relocations
• Utility relocation partnering between utilities, (e.g., joint facilities, joint trenches, using a common contractor, etc.)
• Future utility company improvement plans and schedules and their relationship to the project. Any proposed permitted utility improvement scheduled prior to the project needs to be reviewed with the scope of the proposed project to eliminate any conflicts.
• Anticipated schedule for further utility meetings, utility relocation review, and utility relocation
• Other utility companies that may be involved that aren’t on the current potentially affected list. Often local utility company personnel will be able to identify utility companies on site as they work together with each other on a regular basis.
• Buy America requirements (if applicable)

Following the meeting, provide meeting notes to all attendees of all decisions and important discussions and highlight action items to be completed and the responsible party for each action item. Request that attendees respond with any comments on the meeting notes within 10 days.

**Review Horizontal Location with Utility Company** – Region Utility and Railroad Leader or Coordinator

Send plans with the depicted horizontal utility location, size, type, and related information for each facility to all utility companies to review for completeness and accuracy. If available, send the plans with the Authorization for Design Expenditure transmittal.
If a Utility Scoping Meeting is held this task is addressed at that meeting. If the meeting is not held indicate a date on the transmittal, typically 30 days from the date of the letter, for the utility companies to respond back with their review comments. Be proactive and follow-up where needed with the utility companies.

Address review comments received from the utility companies and resolve concerns with horizontal locations and any other issues. Provide updated maps or plans based on the review comments.

QC Review - Utility Designer

Initiate the QC Review in accordance with UDOT Quality Control/Quality Assurance (QC/QA) Procedures – Utility Design QC Checklist before distribution.

- Provide checker with a check print of each deliverable and supporting documentation
- Provide the checker with applicable cover sheets
- Complete revisions based on QC comments

Deliverables

- Utility Companies Contact List
- Depiction of utility facilities within the project limits (including SUE deliverables with defined quality levels, if SUE is utilized)
- Authorization for Design Expenditure Letters for all identified utility companies
- Utility Scoping Meeting Minutes (if required) and list of potential utility facilities that might present a significant challenge or project risk
- QC Documentation
3U1 - Identify Potential Utility Conflicts

Overview

Early identification of potential conflicts with existing utility facilities supports the development of accurate plans and schedules which are critical to the success of the project. Complete and detailed information about the location of potential utility conflicts allows for the development of potential design alternatives which can mitigate, minimize or even eliminate these potential conflicts and avoid potential issues later in the life of the project.

The Region Utility and Railroad Leader or Coordinator is the activity leader and is directly responsible for some tasks while ensuring that other tasks have been completed by the directly responsible party.

Tasks

The directly responsible party for completing each task is noted following the title of each task.

Evaluate Potential Utility Conflicts – Utility Designer

Using the current design files and a complete depiction of utility facilities within the project limits (including SUE deliverables with defined quality levels if utilized) as provided in 2U1-Utility & Railroad Identification, determine all potential utility conflicts and organize the information into a utility conflict matrix in UDOT Interchange (see Appendix D). See Appendix E for a list of items to consider when evaluating potential utility conflicts. This task involves the following components:

- Meet with project team designers to discuss potential conflict locations and determine reasonable design modifications to avoid or minimize utility impacts
- Develop a preliminary utility conflict matrix summary based on design modifications

The preliminary utility conflict matrix summary sheet includes the following:

- The general location of a facility, typically indicated by station and offset from the roadway alignment shown on the plans
- The utility company
- The size and type of facility (include descriptive terms for critical facilities such as high-voltage power, large conduit systems, large petroleum pipelines, high pressure gas, etc.)
- Identification of additional utility companies, besides the owner, for joint use situations such as shared conduit systems or shared poles

The utility conflict matrix summary sheets include each potential conflict. The Utility Designer uses one of the notes in the following table to describe preliminary resolution to each of these potential conflicts. At this stage in the project development the document is
considered preliminary because it isn’t typically possible to positively identify all conflicts and resolutions. Further design and coordination will facilitate completion of the utility conflict matrix summary.

**Coordinate Utility Information Meeting** – Regional Utility and Railroad Leader or Coordinator

This meeting should be scheduled near the time that the Geometry Review meeting is held. To schedule the meeting, send utility companies a Utility Information Meeting notification letter through SharePoint along with the appropriate project design plans/files and the preliminary utility conflict matrix summary. Provide notice at least 30 days in advance for this meeting. Project design plans are typically sent electronically in PDF format. Alternately, where desired by utility companies, provide design files in CADD format. The letter states the meeting time and place and asks the utility companies to (a) verify the facilities that have been identified; (b) mark any discrepancies on the plan sheets/files; (c) mark their existing easements on the plan sheets/files; and (d) attend the Utility Information Meeting. Utility companies also must submit any relevant utility easement or other land rights documentation that would be a basis for reimbursement or replacement, and the appropriate ROW replacement forms.

**Hold Utility Information Meeting** – Region Utility and Railroad Leader or Coordinator

The purpose of this meeting is an exchange of information between UDOT and the utility companies. It is intended to provide a perspective of the project, an understanding of the potential utility conflicts (and resulting impacts and effects) and establish direction for project design and utility issue mitigation. Hold the Utility Information Meeting near the time that the Geometry Review meeting is conducted. The Utility Information Meeting may be held before, after or in conjunction with the Geometry Review meeting as appropriate to fit the needs of the project. UDOT personnel conducting whichever meeting is held first communicate relevant information to the UDOT personnel conducting the second meeting.

Provide an agenda prior to the meeting. Prepare for the meeting by reviewing the project scope and known utility information. Reminder phone calls, emails or electronic calendar appointments facilitate greater utility company attendance. Prepare a sign-in sheet prior to the meeting.

Hold the meeting at a location that best addresses attendee’s needs. The meeting may be at an office, at the project site, or a combination of both, depending on specific needs.

Refer to 2U1-Utility & Railroad Identification for UDOT staff invited to this meeting.

In addition to the agenda items located in 2U1-Utility & Railroad Identification, discuss the following items at the meeting:

- Potential conflicts and design alternatives that may avoid or minimize conflicts
- Potential locations where utility depths may need to be identified
• Potential inclusion of utility relocation work, or other utility work, in the UDOT contract. This is typical for municipal water and sewer work and adjusting appurtenances such as manhole structures to grade. It might also be appropriate to include other work that is part of utility relocations, such as trenching for utility installations and pipe and conduit placement. Inclusion of other types of utility relocation work is possible but not common as there are complexities from both the utility company and UDOT perspectives to include such work.

• Potential utility betterments. For further discussion on utility betterments see 4U2-Prepare and Obtain Utility and Railroad Agreements and Appendix F.

• Potential additional ROW required for utility betterments.

• Utility easements or other land rights documentation that would be a basis for reimbursement or replacement, and the appropriate ROW replacement forms.

• UDOT owned utility facilities, related impacts and items to be included in the UDOT contract.

• Anticipated schedule for further utility meetings, utility relocation review and utility relocation schedules (including outage windows) and lead times needed for ordering materials.

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**Betterments**

Early communication and coordination with utility companies, public and private, also allows them to consider including upgrades or replacements of their facilities prior to or during the construction of UDOT’s projects and any corresponding right of way needs. UDOT is only responsible to participate in the cost of the minimum relocation work required to make the utility systems functional as in their existing configuration. Betterments increase the facility capacity or improve transmission, including function and quality. In most cases, UDOT shall receive credit for the difference between the cost of the functional replacement of the original facility and the cost of the facility as constructed. The utility company submits an estimate for approval by UDOT. Some exceptions, as outlined in Utah Administrative Rule R930-8-9, exist to the general rule. No betterment credit is required for the replacement of utility devices or materials that are:

• required by the highway project
• of equivalent standards although not identical
• of the next highest grade or size when the existing devices or materials are no longer regularly manufactured
• required by law pursuant to government and appropriate regulatory commission code
• required by current design practices regularly followed by the utility company in its own work, and there is a resulting direct benefit to the highway project

A betterment credit includes the cost of materials and the increased costs of engineering and installing the betterment facilities, such as additional engineering, special construction methods and increased overhead.
Roadway construction and the relocation of utilities can be so closely related that they should be thought of as one element, especially with respect to scheduling, maintaining workflow and providing for the safety of the traveling public and the workers. The utility relocation schedules must match up with the highway construction schedule and any proposed phasing and/or anticipated phasing.

Utility companies use the information they receive at the Utility Information Meeting to learn about their involvement and plan their budgets. Utility companies often need sufficient lead times to order materials to perform relocations. The following table contains typical time durations to perform certain relocations. In instances where long lead time is needed for procuring materials, review the circumstances and, if appropriate, issue an authorization to order materials to the utility company (see Appendix G for a sample authorization to order long lead time materials letter).

<table>
<thead>
<tr>
<th>TYPE OF FACILITY</th>
<th>TYPE OF MATERIAL</th>
<th>TIME*</th>
</tr>
</thead>
<tbody>
<tr>
<td>Electric Transmission Lines</td>
<td>Standard wood transmission line with no new Right of Way</td>
<td>9 months</td>
</tr>
<tr>
<td></td>
<td>Standard wood transmission line with new Right of Way</td>
<td>12 months</td>
</tr>
<tr>
<td></td>
<td>Steel or non-standard wood transmission line with new right-of-way and potential condemnation, customized or specially designed structures, long lead times for material fabrication and/or power outage planning</td>
<td>18 months</td>
</tr>
<tr>
<td>Electric Distribution Lines (Overhead and Underground)</td>
<td>Up to 0.5 mile of line</td>
<td>3 months</td>
</tr>
<tr>
<td></td>
<td>0.5 to 1 mile of line</td>
<td>4 months</td>
</tr>
<tr>
<td></td>
<td>1 to 4 miles of line</td>
<td>9 months</td>
</tr>
<tr>
<td></td>
<td>Underground duct line</td>
<td>9 months</td>
</tr>
<tr>
<td>Gas Transmission Lines</td>
<td>All lines</td>
<td>6 to 18 months**</td>
</tr>
<tr>
<td>Gas Distribution Lines</td>
<td>Up to 0.5 mile of line</td>
<td>3 months</td>
</tr>
<tr>
<td></td>
<td>0.5 to 1 mile of line</td>
<td>4 months</td>
</tr>
<tr>
<td>Telecommunications (Telephone, Cable TV, Fiber Optic)</td>
<td>All lines</td>
<td>3 to 12 months</td>
</tr>
</tbody>
</table>

* Includes time needed for ordering for design, ordering of materials, and installation
** From the date of the executed agreement
Following the meeting, provide meeting notes to all attendees of all decisions and important discussions and highlight action items to be completed and the responsible party for each action item. Request that attendees respond with any comments on the meeting notes within 10 days.

Follow-up on all action items to see that they are completed.

**Typical Follow-Up Activities**
- As appropriate, initiate design modifications to eliminate or minimize utility relocations.
- Review easement or other ownership documentation and utility-marked plans, to make sure that information is complete and accurately incorporated into UDOT’s project plans and files. Notify utility companies of any errors, omissions or questions on what they submitted. The Region Right of Way Engineer verifies utility company fee title and easements for determination of reimbursement or replacement eligibility and prepares utility related right of way documents as necessary using utility company’s ROW forms.
- Consider Right of Way needs and address accordingly.
- Use the Utility Conflict Matrix to identify areas where SUE Quality Level A information will help utility companies or designers to positively identify utility conflicts. Quality Level A information will allow utility companies to limit the extent of the relocation of their facilities or allow the designer to redesign that portion of the project that conflicts with the utility. See 3U3- Identify Utility Depth SUE Level A in this Manual.
- Obtain initial Quality Level A information. Depending on specific project needs, it may be beneficial to obtain initial Quality Level A information at this point in a project. Obtaining this information can facilitate the design of certain project elements, such as the alignment and grades of trunk line storm sewers. Obtaining this information can also minimize utility conflicts, particularly with respect to significant utility facilities, and minimize design changes later during project development. This initial Quality Level A information will supplement any other Quality Level A information that is typically obtained closer to the timing of the activities in 3U2-Initial Design Utility Coordination when all potential conflicts are identified. If SUE is not part of the project, utility companies may be able to provide some of this type of information.

**Compile Initial Utility Relocation Costs** – Utility Leader or Coordinator

Request initial utility relocation cost estimates from each impacted utility. These are high level estimates for budgeting purposes. Detailed estimates for actual relocations and preparation of agreements are requested later during project development. Give the utility companies a deadline for response. Provide cost estimates to the Design Leader for inclusion in the total project cost estimate.
Initiate QC Review – Utility Designer

Initiate the QC Review in accordance with UDOT Quality Control/Quality Assurance (QC/QA) Procedures – Utility Design QC Checklist before distribution.

- Provide Checker with a check print of each deliverable and supporting documentation.
- Provide the Checker applicable cover sheets
- Complete revisions based upon QC comments

Deliverables

- Preliminary utility conflict matrix summary
- Initial/preliminary estimates of utility company relocation costs
- QC Documentation

3U2 - Initial Design Utility Coordination

Overview

Begin this activity once design is complete enough to identify all potential utility conflicts. A utility design meeting is held to facilitate mitigation of utility conflicts and develop relocation solutions. Hold the Utility Design Meeting near the time that the Plan-in-Hand meeting is conducted. The Utility Design Meeting may be held before, after, or in conjunction with the Plan-in-Hand Meeting as appropriate to fit the needs of the project. UDOT personnel conducting whichever meeting is held first communicate relevant information to the UDOT personnel conducting the other meeting. Relocation plans, schedules, and cost estimates are requested from the utility companies. This request is typically sent in the early part of the PS&E stage.

The Region Utility and Railroad Leader or Coordinator is the activity leader and is directly responsible for some tasks while ensuring that other tasks have been completed by the directly responsible party.

Tasks

The directly responsible party for completing each task is noted following the title of each task.

Re-evaluate Utility Conflicts – Utility Designer

Using the current design files, determine potential utility conflicts and organize the information into an updated utility conflict matrix (see Appendix D) or similar summary. See Appendix E for a list of items to consider when reevaluating utility conflicts. This task involves the following components:
• Meet with project designers to discuss design modifications to avoid or minimize utility impacts
• Revise the utility conflict matrix summary based upon current design
• Identify conflict locations that need vertical (SUE Level A) verification
• Develop a cost estimate for the SUE Level A verification efforts

The utility conflict matrix summary sheet includes the following:

• The general location of a facility, typically indicated by station and offset from the roadway alignment shown on the plans
• The utility company
• The size and type of facility (include descriptive terms for critical facilities such as high-voltage power, large conduit systems, large petroleum pipelines, high pressure gas, etc.)
• Identification of additional utility companies, besides the owner, for joint use situations such as shared conduit systems or shared poles

The utility conflict matrix summary sheets include each noted conflict. The Utility Designer uses one of the notes in the following table to describe preliminary resolution to each of these conflicts. Completion of the SUE Quality Level A work often is necessary to facilitate positive conflict determination. Further coordination with utility companies will also facilitate completion of the utility conflict matrix summary.

<table>
<thead>
<tr>
<th>NOTE</th>
<th>DESCRIPTION</th>
</tr>
</thead>
<tbody>
<tr>
<td>Leave As-Is</td>
<td>No action is required.</td>
</tr>
<tr>
<td>Adjust</td>
<td>Perform minor modifications or protective measures smaller than a total relocation including in-place the raising or lowering of a facility.</td>
</tr>
<tr>
<td>Protect</td>
<td>Include any requirements that the contractor must complete to avoid damage to an existing facility as part of a contract. Also include these in the contract documents as noted in Section 4.B.8 (4U3 Complete Utility and Railroad Plans and Documents).</td>
</tr>
<tr>
<td>Relocate</td>
<td>Install a facility at a new location to replace existing facility and remove existing facility. Install temporary facilities as necessary to facilitate permanent relocation.</td>
</tr>
<tr>
<td>Remove</td>
<td>Remove existing facilities but do not replace them within UDOT Right of Way.</td>
</tr>
<tr>
<td>Leave In-Place/Out-Of-Service</td>
<td>Take the facility out of service and make it benign, but do not remove it. The utility company retains ownership of this facility. Removal of a facility is generally preferred over this option, unless circumstances exist that either make removal impractical or where removal offers no resulting benefits.</td>
</tr>
</tbody>
</table>
Hold Utility Design Meeting – Region Utility and Railroad Leader or Coordinator

The Utility Design Meeting brings together involved parties to focus on finding solutions to resolve utility conflicts within a project while maintaining a good, economic design. This meeting is to discuss each utility conflict and determine the resolution for each. The goal of this meeting is to resolve all impacts with each utility company, knowing what they will need to do to accommodate the project.

This meeting should be scheduled near the time that the Plan-in-Hand meeting is held. Schedule the meeting through the Agreement Tracker along with the appropriate project design plans/files and the utility conflict matrix summary. Provide notice at least 30 days in advance for this meeting. Project design plans are typically sent electronically in PDF format. Alternatively, when desired by utility companies, provide design files in CADD format. The letter states the meeting time and place and requests the utility companies attend and come prepared to discuss mitigation of conflicts with their facilities, relocations, schedules and any relevant issues.

Provide an agenda prior to the meeting. Prepare for the meeting by reviewing the project plans, utility conflict matrix summary and previous meeting summaries. Reminder phone calls, emails or electronic calendar appointments facilitate greater utility company attendance. Prepare a sign-in sheet prior to the meeting.

Hold the meeting at a location that best addresses attendee’s needs. The meeting may be at an office or at the project site, or a combination of both, depending on specific needs.

Refer to 2U1-Utility & Railroad Identification for UDOT staff invited to this meeting.

In addition to the agenda items from previous meetings, discuss the following items at the meeting:

- Utility conflicts, resolutions and related issues - using the utility conflict matrix summary, address each utility conflict for each utility company and potential mitigation and any related issues, limitations or restrictions
- Constructability issues
- Maintenance issues
- Minor design changes that avoid or minimize conflicts
- Locations where utility depths may need to be identified
- Inclusion of utility relocation work, or other utility work, in the UDOT contract. This is typical for municipal water and sewer work and adjusting appurtenances such as manhole structures to grade, but it might be appropriate to include other work that is part of utility relocations, such as trenching for utility installations and pipe and conduit placement. Inclusion of other types of utility relocation work is possible, but not common as there are complexities from both the utility company and UDOT perspectives to include such work
- Follow-up on needs of utility owners to comply with environmental and regulatory requirements, and the associated costs, limitations, and duration
Roadway construction and the relocation of utilities can be so closely related that they should be thought of as one element, especially with respect to scheduling, maintaining workflow and providing for the safety of the traveling public workers. The utility relocation schedules must be coordinated with the highway construction schedule and any proposed phasing and/or anticipated phasing.

When reviewing conflicts, it may be beneficial to begin with the placement of overhead facilities, because clear zone and clearance-to-obstruction requirements control above-ground utility facilities, and they cannot be moved laterally as freely as most underground facilities can be. Following the review of overhead facilities, it may be beneficial to review underground facilities in order of significance with regards to size, type or other relevant parameters.

Review of conflicts may also be done by utility or by location, depending on the specific parameters of the project. Prior to the meeting decide on the order conflicts will be reviewed and number conflicts in the utility conflict matrix accordingly.

Following the meeting, provide meeting notes to all attendees of all decisions and important discussions and highlight action items to be completed and note the responsible party for each action item. Request that attendees respond with any comments on the meeting notes within 10 days.

Follow-up on all action items for completion.

**Joint Meetings**

While it is common for utility company representatives to leave once that company’s conflicts and issues have been discussed, it is recommended that all company representatives remain in attendance for the entire meeting as one utility’s impacts and relocations may impact others.

**Typical Follow-Up Activities**

- As appropriate, initiate minor modifications to design to eliminate or minimize utility relocations
- If SUE is part of the project, obtain further Quality Level A information as needed. If SUE is not part of the project, utility companies may be able to provide some information
- Additional meetings for a complex project to ensure proper utility coordination or if a utility company(s) is unfamiliar with the UDOT process
- Maintain active follow-up for design coordination; maintain the communication between UDOT and the utilities
- Document all correspondence with utility companies
Request Utility Plans, Schedules, and Cost Estimates – Region Utility and Railroad Leader or Coordinator

Send requests in a timely manner and set deadlines to allow for all notices to proceed and agreements to be completed prior to the advertisement of the project contract and to allow for relocations to occur in advance of construction, where possible.

In most cases, send this request to all utility companies on a project at the same time, using the one with the longest relocation lead time to determine earliest required date to send the requests. Sending the requests at the same time generally results in receiving information from all utility companies within the same timeframe, facilitating the review of relocation plans from all utility companies concurrently so there will not be any conflicts among the utility relocations. Ideally, no significant plan revisions that affect utilities will occur following this transmittal.

In some cases, relocation of a utility facility may require a much longer timeframe than other utility facilities or may take priority over other utility relocations. As a result, the request to the utility company owning that facility may be sent in advance of the rest.

Some utility relocations have longer timeframes than the project schedule typically allows. For those projects, the request to the utility company may need to be sent before the Utility Design Meeting to allow that utility company time to relocate its facilities and avoid conflicts with construction. Send the request for relocation plans as early as reasonably possible in those situations.

Also at this time, and as appropriate, coordinate with the Project Manager to consider separate early contracts for clearing and grubbing that may facilitate advance utility relocation, particularly in wooded areas and in situations where utility companies are not able to perform this work.

Send each utility company a set of preliminary project plans and a relocation plan request.

- The request letter should include the following:
  - Request relocation plan utilizing the project plan sheets
  - Request a detailed schedule
  - Request an itemized cost estimate for utility relocations
  - Request contact information for the utility representative who will manage the relocation
  - Request information to be incorporated into UDOT contract documents, such as outage windows, any contingencies and tasks that the contractor or another utility must perform before relocation can occur, such as staking or clearing of

Document Commitments

Thorough documentation of all conversations and meetings with utility companies makes it much easier to resolve issues and understand utility design decisions during construction. Record discussions, both verbal and electronic.

Follow-up on the progress being made to prepare utility relocation plans.
the Right of Way and restrictions for in-place facilities such as working around pipelines

- Set a specific deadline for utility companies to submit requested information. The deadline for utility companies to send requested information in the letter is based on a timeframe that allows for subsequent agreements to be executed and notices to proceed to be issued prior to the time of utility certification and the completion of utility relocations in a manner consistent with the project construction. Master agreements sometimes dictate length of time to give a utility company to respond. Otherwise, setting a specific deadline within 30 to 90 days is a good general range based on the complexity of the project and utility involvement

The utility relocation plans should be complete and include the following:

- Location, type, size, material and class of all existing facilities
- Relevant information such as voltage, operating pressure, number of strands/conductors
- Temporary relocations/adjustments to facilities
- Permanent relocations/adjustments to facilities (horizontal and vertical)
- Facilities that will be left in place or removed and not replaced
- Construction stages or relocations
- Dimensions from critical project features such as Right of Way, highway centerline, ramps, bridges, etc.
- Regulated clearances such as NESC and OSHA working clearances around UDOT facilities
- Replacement easement / rights of way

At a minimum, the utility relocation plan view shows proposed temporary and permanent utility facilities. If necessary to complete a thorough review of the relocation plans, the Region Utility and Railroad Leader or Coordinator may request the utility company provide this information in profile and cross-sectional views.

For instance, if an underground utility is to be placed outside of the construction limits at a five-foot offset parallel to the Right of Way on a rural project, it likely will be sufficient for the utility company to only indicate the depth of cover. However, if an underground utility is to be placed within the construction limits in the areas of drainage structure placements, a more detailed vertical depiction of the proposed utility facility is needed.

The plans must include profiles for aerial structures where power or communication lines cross highways and for pipelines and other underground utility crossings. In general, elevations are preferred over depths for most profiles/vertical relocation information. For underground crossings, the method of crossing (directional bore, jack and bore or other form) must be specified along with relevant details such as location of bore pits and receiving pits.

To meet deadlines, follow up with utilities as necessary by telephone, e-mail, letters or field meetings and keep a record of all conversations and correspondence.
Initiate QC Review – Region Utility and Railroad Leader or Coordinator

Initiate the QC Review in accordance with UDOT Quality Control/Quality Assurance (QC/QA) Procedures – Utility Design QC Checklist before distribution.

- Provide checker with a check print of each deliverable and supporting documentation
- Provide the checker applicable cover sheets
- Complete revisions based upon QC comments

Deliverables

The end product of this step is:

- A revised utility conflict matrix summary
- Utility company plans, schedules and cost estimate request
- QC Documentation

3U3- Identify Utility Depth (SUE Quality Level A)

Overview

Use the utility conflict matrix summary to determine specific locations where verified horizontal and vertical location information could be used to avoid existing utility facility conflicts, positively identify whether facilities are in conflict or not and avoid unnecessary utility relocations or assist utility companies with design relocation plans.

The end product of this step is the depiction and tabulation of data of all Quality Level A information gathered that adds to the complete horizontal depiction of utility facilities within the project limits completed in activities included in 2U1-Utility & Railroad Identification.

The Region Utility and Railroad Leader or Coordinator is the activity leader and is directly responsible for some tasks while ensuring that other tasks have been completed by the directly responsible party.

Tasks

The directly responsible party for completing each task is noted following the title of each task.

Coordinate with SUE Consultant for SUE Quality Level A Exploration of Existing Utilities – Utility Designer
This task involves the following components:

- Provide SUE consultant with locations identified in 3U1 and 3U2 (utility conflict matrix summary) to conduct Quality Level A exploration

This task is facilitated by using non-destructive digging equipment at critical points to determine the precise horizontal and vertical position of underground utilities as well as the type, size, condition, material and other characteristics. Quality Level A is the highest level of SUE accuracy currently available and requires the full use of the subsurface engineering services. Critical points may include locations where existing utilities will cross or will be adjacent to, areas of excavation for ditches, retaining walls, footings, drainage structures, pilings, cut/fill areas, etc.

**Review SUE Quality Level A MicroStation File – Utility Designer**

This task involves the following components:

- Verify SUE Quality Level A MicroStation file (provided by SUE consultant) is in the project coordinate system with all requested test hole locations displayed and identified completely
- Verify SUE consultant’s SUE Mapping File Certification was uploaded onto ProjectWise

**Initiate QC Review – Region Utility and Railroad Leader or Coordinator**

Initiate the QC review in accordance with *UDOT Quality Control/Quality Assurance (QC/QA) Procedures – Utility Design QC Checklist* before distribution.

- Provide checker with a check print of each deliverable and supporting documentation
- Provide the checker applicable cover sheets
- Complete revisions based upon QC comments

**Deliverables**

The end products are:

- SUE Quality Level A file
- SUE Mapping File Certification
- QC Documentation
3U4 - Complete Utility Designs

Tasks included in this subsection relate to Design Network Node 3U4 - Complete Utility and Railroad Designs, but for utilities only. Please refer to the Railroad Manual of Instruction for information on railroad design tasks.

Overview

Begin this activity once utility conflicts on the project have been defined. Complete design for all utility relocations that will be included in UDOT’s contract to be completed by UDOT’s contractor. Develop preliminary utility plan sheets and cost estimates.

Typically, water and sanitary sewer relocation work is often included in UDOT’s contract. It might also be appropriate to include other work that is part of utility relocations, such as trenching for utility installations and conduit placement.

Depending on the specifics of the project, it might be UDOT or the utility company that is responsible for the design of the utility work to be included in the UDOT contract. If it is the utility company’s responsibility they may choose to do the design with their own staff or with an approved engineering consultant of their own. See 2U1-Utility & Railroad Identification for further information on approving an engineering consultant.

If it is UDOT’s responsibility to do the design, there are three general scenarios that may be chosen based on the specifics of the project:

- The design is performed by UDOT staff directly.
- The design is included as part of the project design scope of work and performed by the consultant (or a subconsultant) responsible for the project design.
- The design is performed by a consultant under a contract that is separate from the project design contract.

The Region Utility and Railroad Leader or Coordinator is the activity leader and is directly responsible for some tasks while ensuring that other tasks have been completed by the directly responsible party.

Tasks

The directly responsible party for completing each task is noted following the title of each task.

Coordinate with Project Team Members – Utility Designer

Continually coordinate with project team members, particularly the Region Utility and Railroad Leader or Coordinator. Determine the extent and scope of utility conflicts to be mitigated by using the utility conflict matrix, SUE Quality Level A information and the minutes from previous utility coordination meetings, most notably the Utility Design Meeting and make sure this information is communicated to the party that is doing the
design. Previous utility coordination meeting minutes and/or other correspondence between the Region Utility and Railroad Leader or Coordinator and the utility companies will also indicate which utility companies want to have relocation work included in the UDOT contract.

The Region Utility and Railroad Leader or Coordinator will also have obtained or be in the process of obtaining the appropriate standards and specifications from the affected utility companies who want work included in the UDOT contract.

Discuss aspects of the utility relocation models and designs with appropriate disciplines to ensure compliance with standards, with other designs and address fatal flaws.

**Complete Utility Relocation Design** – Utility Designer

Prior to commencing with designing utility relocations, assist other disciplines in evaluating possible design modifications to avoid and/or minimize utility impacts. Unnecessary utility relocations are to be avoided. Coordinate relocation designs with other disciplines to ensure that all conflicts are being mitigated and that the proposed relocation design is compatible with all aspects of the project.

Complete a basic design or layout of the utility relocation work to be included in the UDOT contract. This design is to include horizontal and vertical alignments and ties of the utility facilities. The design shall conform to all requirements including depth of bury, utility separation, clear zone and Right of Way as required by *Utah Administrative Rule R930-7, Utility Accommodation* and *Supplemental Drawing DD-18, Utility Location Requirements*.

Refer to the utility company’s standards and specifications to complete the utility relocation design. The design is also to conform to *UDOT Standard and Supplemental Drawings* and to *UDOT CADD Standards*.

Include utility betterment design when applicable. Utility betterments can be an improvement in the utility facility that is being relocated or an entirely new installation that is separate from relocation work. Utility companies are generally responsible for the cost of any betterments. See Appendix F for further discussion on betterments.

**Develop Preliminary Utility Plan Sheets** – Utility Designer

Follow the current *UDOT CADD Standards* and *UDOT Plan Sheet Development Standards* to develop preliminary utility plan sheets for review. These sheets are to provide a review of the utility relocation design. It is recommended that only the information required for final utility design review be placed on the sheets. Verify with the project manager the expected level of effort for the review submittal. QC review is required before distribution for all labels, callouts, notes and information found on the plan sheets.

Topography and Utility sheets (UT Sheets) depict existing topography, existing utility facilities, existing contours and contain callouts for removal items of work. Utility Relocation sheets (UR Sheets) depict existing utility facilities and contain callouts for the removal, reconstruction or relocation of these utility facilities. UR sheets should be
combined with UT sheets when possible on smaller projects or where a project contains only minor utility work.

Where a utility company is supplying the plan sheets or where significant detail is required for the utility work, in addition to UR sheets depicting all utility relocations, more detailed utility relocation plan sheets may be developed for an individual utility company or facility/type. For example, specific sheets may be developed depicting a municipality’s water and sanitary sewer relocation work either on the same or separate utility relocation plan sheets.

On the UR sheets (or UT sheets as may be appropriate) both utility work included in UDOT’s contract and utility work to be done by the utility companies (or their contractor) is depicted. Follow the UT and UR sheet requirements for depicting this work including:

- provide all information needed for review (i.e. size, type, material, etc.)
- label all streets and important existing features
- ensure all existing features are displayed in proper grayscale
- provide all callouts and labels necessary to review the relocation design

When more detailed UR sheets are required that depict individual relocations, also use applicable requirements from Roadway Plan & Profile Sheet Requirements.

Coordinate with Utility Company – Region Utility and Railroad Leader or Coordinator

Coordinate with the utility company to obtain the appropriate standards and specifications related to the utility work to be included in the UDOT contract. Discuss with the utility company if their desired current practices are accurately represented in their standards and specifications. If it is not in their standards and specifications, the utility company needs to provide information showing proof that their desired practice is their standard. A current practice can only be accommodated if it is in writing and included as part of the contract documents.

As the utility design is being developed, coordinate any questions or issues with the utility company and other appropriate parties.

Coordinate a review of any utility relocation design and plans developed by UDOT (or a consultant working for UDOT) with the utility company. Address review comments and make necessary revisions. Likewise, coordinate a review of utility relocation design and plans developed by the utility company with the appropriate project team members.

Develop Utility Relocation Cost Estimate – Utility Designer

The party responsible for the design of the utility relocation also prepares an itemized cost estimate. Cost estimates prepared by the utility company or their consultant are to be reviewed by UDOT. Cost estimates prepared by UDOT are to be prepared in conjunction with input from and review by the utility company.
Develop itemized cost estimates for the utility relocation work to be included in the UDOT contract. Refer to 4U1-Final Design Utility Coordination for cost estimates needed for work that is to be done by the utility company or their contractor.

Utility companies are generally responsible for the cost of any betterments. See Appendix F for further discussion on betterments.

Develop unit costs for each item in accordance with the standards and specifications for the utility work. Use appropriate resources for developing these unit costs, such as the utility company’s database, continuing contracts or recent bid records, local contractors or PDBS. Document how unit costs were developed and the assumptions that were made in their development. Account for project specific factors as noted in the table below.

Consider the use of lump sum pricing only when appropriate. A significant benefit of using lump sum pricing is that it can reduce administrative and record-keeping costs associated with documenting payment for completed work. However, there may be risk to UDOT, contractor and utility company with lump sum pricing and these potential savings may be offset by inaccuracies in the cost estimating process.

Lump sum pricing should only be used when:

- the utility work can be clearly and concisely defined
- an itemized cost estimate can be developed that is accurate, comprehensive, verifiable and in sufficient detail to provide a clear picture of the work involved and the cost of the individual items

Among the items to be evaluated when considering lump sum pricing are:

- contractor risk due to unknown quantities or field conditions
- difficulty in pricing per unit
- all materials and labor identified and included

Initiate QC Review – Region Utility and Railroad Leader or Coordinator and Utility Designer

Initiate the QC review in accordance with UDOT Quality Control/Quality Assurance (QC/QA) Procedures – Utility Design QC Checklist before distribution.

- Provide checker with a check print of each deliverable and supporting documentation
- Provide the checker applicable cover sheets
- Complete revisions based upon QC comments
Deliverables

The end products are:

- Preliminary UR and/or UT plan sheets
- Utility relocation cost estimates
- QC Documentation

4U1 - Final Design Utility Coordination

Overview

Tasks to be completed involve final coordination with utility companies and providing guidance and information to complete utility relocation plans. The Final Utility Design meeting facilitates resolving any remaining conflicts and prepares for the construction stage. Review of utility relocation plans, schedules and estimates facilitates successful and timely utility relocations.

Note: This activity occurs concurrently with Activity 4J1 Identify Right of Way – Identify utility easement and property replacements, transfers or acquisitions.

The activity leader is the Region Utility and Railroad Leader or Coordinator.

Tasks

Hold Final Utility Design Meeting(s) – Region Utility and Railroad Leader or Coordinator

This meeting facilitates coordination of any final issues as both the development of project plans and utility relocation plans, schedules and estimates are being finalized. This meeting also assists in providing a clean handoff from design to construction and allows the opportunity to communicate any changes to the design that have been made since the Utility Design Meeting or last correspondence with the utility companies.

To schedule the meeting, send utility companies a Final Utility Design Meeting notification letter through the Agreement Tracker along with the appropriate project design plans/files and the utility conflict matrix summary. Provide notice at least 30 days in advance for this meeting. Project design plans are typically sent electronically in PDF format. Alternately, where desired by utility companies, provide design files in CADD format. The letter states the meeting time and place and requests the utility companies attend the Final Utility Design Meeting and to come prepared to discuss the details of their relocations and schedules and any remaining issues to be resolved.

Provide an agenda prior to the meeting. Prepare for the meeting by reviewing the project plans, utility conflict matrix summary, previous meeting summaries and any submitted utility relocation plans, schedules and estimates. Reminder phone calls, emails or electronic calendar appointments facilitate greater utility company attendance. Prepare a sign-in sheet prior to the meeting.
Hold the meeting at a location that best addresses attendee’s needs. The meeting may be at an office or at the project site, or a combination of both, depending on specific needs.

Refer to 2U1-Utility & Railroad Identification for UDOT staff invited to this meeting.

In addition to the agenda items from previous meetings, discuss the following items at the meeting:

- Any changes in the design and corresponding utility impacts
- Project schedule - PS&E complete, advertisement and construction
- Remaining utility conflicts and related issues - using the utility conflict matrix summary address the status of each utility conflict for each utility company
- Utility specifications / limitations / restrictions
- Review plans and specifications for utility work that has been included within UDOT’s contract
- Final items to be addressed on any utility betterments - for further discussion on utility betterments, see 4U2-Prepare and Obtain Utility and Railroad Agreements and Permits and Appendix F in this manual
- Right of Way coordination
- Follow-up on needs of utility owners to comply with environmental and regulatory requirements, and the associated costs, limitations, and duration
- Schedule for completing remaining items to complete utility coordination in the design phase

Following the meeting, provide meeting notes to all attendees of all decisions and important discussions and highlight action items to be completed and the responsible party for each action item. Request that attendees respond with any comments on the meeting notes within 10 days.

Review of Utility Companies Plans, Schedules, and Cost Estimates – Region Utility and Railroad Leader or Coordinator

A review of utility relocation plans, estimates and schedules facilitates successful utility relocations. The utility company furnishes (a) detailed relocation plans; (b) schedule; (c) itemized estimate; and (d) information to be included in the UDOT contract documents.

Review utility relocation plans and schedules in relation to the utility conflict matrix to make sure that all conflicts have been properly addressed and the relocation is compatible with the project construction and schedule. Review utility relocation plans and schedules at the same time, verifying that all conflicts between the utilities and the proposed road construction have been eliminated and that the information in the relocation plan is consistent with that of the schedule.

The relocation plan should depict in-detail facilities that are to be removed, to remain, to be adjusted or to be relocated to fully accommodate the construction of a project. Utility relocation plans are to contain sufficient detail to allow for a complete review of all issues.
Review utility relocations plans for compatibility with *Administrative Rule R930-7, Utility Accommodation*. Utility relocations not only need to accommodate the construction of the project but must follow the requirements of Administrative Rule R930-7, which prescribes conditions under which utility facilities may be accommodated on all public Right of Way under the jurisdiction of the UDOT.

Other items to consider when reviewing utility relocation plans are:

- Other future UDOT projects
- Potential maintenance issues
- Environmental requirements as noted in Administrative Rule R930-7-8-2 Environmental Compliance and R930-7-8-3 Installation of Utilities in Scenic Areas
- Routes used for the movement of oversize and/or overweight vehicles and loads, combinations of vehicles, and mobile/modular homes

**Construction and Utility Relocations**

Roadway construction and the relocation of utilities can be so closely related that they should be thought of as one element, especially with respect to scheduling, maintaining workflow and providing for the safety of the traveling public and the workers. The utility relocation schedules must be coordinated with the anticipated highway construction schedule and any proposed phasing and/or anticipated phasing. Coordinate review of relocation plans and schedules with Resident Engineer for constructability issues. Include utility relocation scope and schedule information in a Special Provision to 00555 Limitation of Operations. Check the relocation schedule for compatibility with project requirements and compare to each of the utility company’s plans and schedules to ensure that no conflicts exist among the utilities.

The utility relocation schedule is to show the number of consecutive calendar days for each relocation activity, as well as a listing of any contingencies or restrictions and any tasks that the contractor or another utility company must perform before relocation work can occur, such as staking or clearing of Right of Way. Approved and appropriate information is included in the UDOT contract documents as described in 4U3-Complete Utility Plans and Documents.

Review the basis of eligibility of utility claims for reimbursement and confirm that the claim meets the requirements of *Utah Code Section 72-6-116* and *Utah Administrative Rule R930-8*. Review the utility’s cost estimate and confirm that it is prepared in accordance with UDOT reimbursement policies and *Utah Administrative Rule R930-8* and is consistent with the relocation plans. See 4U2 Prepare and Obtain Utility Agreements and Permits for details on these matters.

Return plans, estimates and schedules that require corrections to utility companies, making recommendations about corrections to be made and as applicable utilize previous meeting minutes for items that were agreed to. For minor corrections, markups to the appropriate
documents might be made with correspondence indicating that UDOT and the utility company have agreed to the markups.

Review and require documentation from utility companies when no conflict with a utility company’s facilities and a project exists. UDOT is responsible for understanding and explaining the project scope to the utility company. The utility company is responsible for knowing where their facilities are located. A no conflict decision is arrived at mutually between UDOT and the utility company based upon the sharing and discussion of this information.

Initiate QC Review – Region Utility and Railroad Leader or Coordinator

Initiate the QC review in accordance with UDOT Quality Control/Quality Assurance (QC/QA) Procedures – Utility Design QC Checklist before distribution.
- Provide checker with a check print of each deliverable and supporting documentation
- Provide the checker applicable cover sheets
- Complete revisions based upon QC comments

Deliverables

The end products are:

- Approved utility company plans, schedules and cost estimate(s)

4U2 - Prepare and Obtain Utility Agreements and Permits

Tasks included in this subsection relate to Design Network Node 4U2- Prepare and Obtain Utility and Railroad Agreements and Permits, but for utilities only. Please refer to the Railroad Coordination Manual of Instruction for information for railroad tasks.

Note: This activity occurs concurrently with Activity 4J2 Develop Right of Way Plans and Documents for utility related easements or property rights.

Overview

Tasks included in this subsection involve preparing and obtaining Individual Utility Agreements, Cooperative Agreements and Permits required for project advertisement and construction. As discussed in this section, permits are only for UDOT utility facilities on railroad Right of Way. Encroachment permits may be required for utility relocations on UDOT Right of Way when relocations are completed under a project agreement. Permits must be issued for relocations on UDOT projects when relocations are completed before the project starts and when any work is completed by the utility owner that is not part of the relocation for the project.

The activity leader is the Region Utility and Railroad Leader or Coordinator.
UDOT’s Policies, Procedures and Agreement format for the administration of utilities and utility issues are based on the requirements and authority of Utah Administrative Rule R930-8. FHWA Program Guide for Utility Relocation and Accommodation on Federal Aid Highway Projects further explains and describes the requirements of the Code/Reimbursement - Cost Sharing

In accordance with Utah Code Title 72-6-116, UDOT is responsible for 100 percent of the cost of the relocation of affected utility facilities on a state highway if:

- the utility company is owned by a political subdivision of the State, such as a city, county, or locals district or
- the utility company owns the easement or fee title to the property in which the utility is located
- the utility is located in a Public Utility Easement as defined by Utah Code Section 53-3-27

Other special circumstances including leases, utilities on railroad Right of Way, unrecorded easements/prescriptive rights and unnecessary multiple relocations are considered on a case by case basis.

The 100 percent reimbursement requirement may also apply to the cost for a replacement easement or fee title when UDOT purchases new property and the utility company has an easement on it. If the existing utility property rights are absorbed within the highway Right of Way, then an agreement is entered into wherein the utility company is compensated for their property rights and allowed to occupy UDOT’s Right of Way by permit. In some cases, replacement Right of Way is acquired outside of the highway Right of Way. The Region Right of Way and Survey Manager verifies existing utility company fee title and easement documents for determination of reimbursement and replacement eligibility and prepares utility related Right of Way documents as necessary.

Typically, utilities owned and operated by cities, counties, and local districts are culinary water lines, sanitary sewer systems, storm drain systems, and irrigation facilities, but a few cities operate their own power companies. For these utilities, UDOT usually pays 100 percent of the cost of the relocation by doing or providing reimbursement for the design and doing the construction of the facility relocations as part of the project. During construction, the utility companies owning those facilities are granted limited inspection rights, but must work through the Resident Engineers and cannot direct UDOT’s Contractor.
Examples of eligibility for 100 percent reimbursement for relocations of utility companies’ facilities are:

- Power poles located on/in a pole line easement
- Relocation or impact to a facility on property owned by the utility company, such as a natural gas regulator station, a communication hub building, or a power substation
- Facilities located on private property or within a dedicated utility easement

UDOT is responsible for 50 percent of the cost of the relocation for all other affected utility facilities located on state highways by License Agreement and encroachment permit, and the utility company pays the remainder of the cost. The relocation of facilities belonging to utility companies such as Rocky Mountain Power, Questar Gas Company, CenturyLink, Comcast and many other utility companies whose facilities are in UDOT’s Right of Way by permit are 50 percent reimbursable.

Usually, the utility companies complete the required relocation of their facilities with their own forces or contractors, but some utility companies will allow UDOT’s contractor to perform the relocations, or portions of the relocation work. In some cases, the contractor must be approved from an approved list of contractors. UDOT coordinates with the utility companies during the design of the project and enters into formal agreements with the utility companies to establish the responsibility for the work and cost sharing and reimbursement terms.

Reimbursement - Costs and Betterments

The cost of relocation is the entire amount paid by the utility company properly attributable to the relocation of the utility after deducting any increase in value or betterment of the new utility and any salvage value derived from the old utility.

Occasionally, a utility company will propose to construct a betterment to their system in conjunction with the forced relocation of a facility required by a construction project.

UDOT is only responsible to participate in the cost of the minimum relocation work required to make the utility systems functionally equivalent, but UDOT is required to restore them at their current safety standards, however, in accordance with state and federal guidelines. UDOT recognizes that it is in the best long-term and life cycle interest of the roadway to replace aging and inadequate utility facilities prior to or during construction.

Since UDOT is only responsible to functionally restore the Utility’s operation facilities (and up to all current specifications and safety standards), betterments may include increased capacity, such as larger sized pipes or conductors, or future use conduits, ducts, or vaults. Because the completion of the betterment portion of the work is often indistinguishable from the required work, such as installing a larger sized pipe, for documentation’s sake, the value of the betterment is usually accounted for in the
reimbursement agreement by adjusting the participation ratio applied to final cost of the work based on the estimated cost of the work. See Appendix F for more on betterments and credits.

Cost Development and Reimbursement - Utah Administrative Rule R930-8

Acceptable methods for developing relocation costs include:

- actual direct and related indirect costs accumulated in accordance with a work order accounting procedure prescribed by the applicable Federal or State regulatory body
- actual direct and indirect costs accumulated in accordance with an established procedure developed by the utility and which the utility uses in its regular operations
- an agreed fixed amount (lump sum) payment
- other acceptable costing methods, such as unit costs

Documenting actual costs is often very time consuming and expensive for both states and utilities. Often, there are disputes over the type of documentation or support needed to obtain full reimbursement. A significant benefit in lump sum payment and units cost methods is that it can reduce administrative and record-keeping costs associated with documenting payment for completed work.

Consider the use of lump sum method only when appropriate. There may be risk to UDOT and the utility company with lump sum pricing and these potential administrative and record-keeping savings may be offset by inaccuracies in the cost estimating process.

Use of Lump Sums
The lump sum payment method should only be used where the end product, in this case the utility relocation, can be clearly and concisely defined. The cost estimate in support of the lump sum agreement must be accurate, comprehensive, verifiable and in sufficient detail to give a clear picture of the work involved and the cost of the individual items.

UDOT allows Lump Sum Letter Agreements to be used for amounts up to $25,000. Lump Sum payments over $25,000 require a full Reimbursement Agreement including signatures by the parties. See Appendix J for a Letter Agreement.

Among the items to be evaluated when considering lump sum pricing are:

- Contractor risk due to unknown quantities or field conditions
- Difficulty in pricing per unit
- All materials and labor identified and included

23 CFR 645.117(a)(3) allows States, in cooperation with utility companies, to develop unit costs to estimate utility relocation costs and reimburse expenditures. At this writing,
UDOT has not pursued this option. If utilized, unit costs should be developed periodically and supported annually by a maintained database of relocation expenses. FHWA Division Office concurrence is required for unit costs, and for any costing method used other than actual cost.

**Agreements**

Federal regulations require that UDOT and utility companies agree in writing on their separate responsibilities for financing and accomplishing relocation work. When Federal participation is requested, the agreement shall incorporate 23 CFR 645 by reference and designate the method to be used for performing the work and for developing relocation costs. The preferred method for the development of relocation costs by a utility is based on actual direct and related indirect costs accumulated on a work order accounting procedure prescribed by the applicable State.

Agreements provide a clear, written understanding of the responsibilities of UDOT and the utility company and define the terms and conditions under which the two parties shall work together accordingly. The agreements will include specific information about the project, the relocation requirements, who will perform the work, the cost and cost sharing terms.

The terms, eligibility, agreement content and authorization, and construction cost development and reimbursement contained in UDOT’s agreements with the utility companies are based on the authority and requirements of 23 CFR 645.

Most of the body of the agreements, including Reimbursement Agreements, Master Agreements and Betterment Agreements are constructed using standard paragraphs that address the common requirements of utility relocations. These paragraphs have been reviewed and approved for use by UDOT’s Counsel representing the Attorney General’s Office.

**Tasks**

**Complete Utility Agreements** – Region Utility and Railroad Leader or Coordinator

The basic types of agreements are:

- **Statewide Utility Agreement**: Outlines the terms and conditions applicable to the utility work to be performed and eliminates the need for renegotiating or including standard terms and conditions in each supplemental agreement during each project relocation. Supplemental project agreements are written from the Statewide Agreement detailing project specific relocation plans, quantities, cost estimates, schedules and any project specific constraints or special conditions. See Appendix H for an example of a Statewide Utility Agreement.

- **Utility Relocation Agreement**: An individual relocation agreement is written for specific project relocations. The agreement includes all the standard terms and conditions plus detailed relocation plans, quantities, cost estimates, schedules and
any project specific constraints or special conditions. See Appendix I for an example of a Utility Relocation Agreement.

- **Utility Relocations by UDOT’s Contractor:** This type of agreement may be used when utility work is completed by UDOT’s Contractor such as a relocation of a local government utility that is 100 percent reimbursable. It may include utility work performed on behalf of a utility company, work that involves cost sharing, or utility betterments.

- **Letter Agreements:** Letter Agreements can be used for lump sum amounts for appropriate work that is less than $25,000 (UDOT’s cost). They are frequently used to pay miscellaneous project costs such as a power service connection fee for a new traffic signal. They are quicker and easier to execute because they do not require signatures or an audit. While a beneficial tool, in addition to the associated risks with regards to lump sums, there are also risks in the use of letter agreements where a full agreement would be more appropriate. Letter Agreements are still processed through the Comptroller’s Office and assigned a Finance Number under which the payment will be made. See Appendix J for an example of a Letter Agreement.

Agreements (or supplements to master agreements) include the utility company’s approved relocation plan and itemized cost estimate as attachments.

Buy America language must be included in agreements on Federal Aid Projects and all contracts within the scope of a NEPA determination.

There are instances where the utility company may be allowed to retain certain land rights. Typical circumstances are privately-owned utility companies with transmission pipelines for gas or petroleum products and electric transmission lines relinquishing their surface rights, but retaining either air rights or subsurface rights by elevation. These rights will then assure that if future relocations are required, the utility company will receive reimbursement. In such cases the Right of Way team takes the lead, working with UDOT’s Legal Counsel as needed, to secure an agreement (or agreement language) with the utility company to address this.

In those instances where UDOT requires the taking or modification of a utility company’s real property rights there are three options available at UDOT’s discretion. First, the utility company’s real property rights are acquired at no cost, the property is incorporated into the public Right of Way and all utility modifications and relocations required as a part of future UDOT work are reimbursed at 100 percent. Second, UDOT acquires equivalent replacement property rights and provides them to the utility company. Where feasible, locate equivalent replacement property rights outside the public Right of Way. Third, UDOT implements a combination of the first two options. The Utility Designer provides information about project driven changes to the utility company's real property to the Region Right of Way Engineer or Region Land Surveyor for document preparation. The Region Utility Coordinator coordinates between the utility company and the region Right of Way team to ensure the utility company's property requirements (forms, legal language) are used when UDOT acquires property in the utility company's name.
The Region Utility and Railroad Leader or Coordinator prepares Reimbursement, Betterment and Cooperative Agreements and an agreement transmittal for submittal. Alternately, if approved to do so by the Region Utility and Railroad Leader or Coordinator, the consultant Utility Coordinators may prepare Reimbursement, Betterment and Cooperative Agreements for submittal and review by the UDOT Project Manager and Region Utility and Railroad Leader or Coordinator. UDOT review of Agreements prepared by a Consultant Utility Coordinator is essential in making sure the proper agreement and terminology is used. Agreements prepared by consultant Utility Coordinators should never be transmitted to the utility company until approved by the Region Utility and Railroad Leader or Coordinator.

The processing of a utility agreement is typically as follows:

- Agreements are submitted to the Project Manager for approval
- Agreements are sent to utility companies and they are signed by the utility companies and attested to or notarized and returned to UDOT
- The Agreements are signed by the Region Utility and Railroad Leader or Coordinator indicating a recommendation for approval
- The Region Director signs the agreement thus approving the Agreement on behalf of UDOT
- The Comptroller’s Office verifies that the agreement is funded, assigns a Finance Number under which the reimbursement payment is made through a payment request by the Contracts and Compliance Specialist (once reviewed) and keeps a record of the agreement by party, independent of the project records

Copies of all executed agreements are provided to the Resident Engineers by the Region Utility and Railroad Leader or Coordinators. The Resident Engineers and the project inspectors should review and be familiar with the required relocation on their projects and the terms of the agreements. Save the fully-executed agreement in ProjectWise.

The Region Utility and Railroad Leader or Coordinator prepares and submits the R-709, Request for Federal Aid Project Approval, Authorization and/or Agreement form, for funding approval to Program Development and the FHWA. See Appendix K for a copy of an R-709.

**Complete Cooperative Agreements** – Region Utility and Railroad Leader or Coordinator

Coordinate with the local municipalities to develop Cooperative Agreements as needed. When a project has commitments from UDOT or the local government that extend beyond the construction of a project, UDOT memorializes those in a cooperative agreement. The cooperative agreement does not contain project construction commitments or financing details. The cooperative agreement often contains commitments unrelated to utilities such as access and maintenance responsibilities that survive after the completion of the project.

If a cooperative agreement will be entered into between UDOT and a local government, items regarding utilities can be included in the cooperative agreement.
Prepare Wireline, Pipeline, and Encroachment Permits for UDOT Utilities in Railroad ROW – Region Utility and Railroad Leader or Coordinator

In the state of Utah, most railroad utility encroachments involve either Union Pacific Railroad or Utah Transit Authority. Each railroad has specific processes, procedures and regulations for obtaining encroachment licenses and/or permits.

Union Pacific Railroad Company (UPRR)

Any time a new UDOT facility such as a storm drain, ATMS system, etc. is to be permanently installed or relocated across UPRR Property, an application for wireline or pipeline crossing must be prepared and submitted to UPRR for review and approval in UDOT’s name. The proposed installation must meet all applicable UPRR specifications. UPRR prepares the wireline or pipeline agreement for execution by UDOT. Since contractor right-of-entry agreements are no longer required by UPRR for most wireline and pipeline installations, payment of the applicable fees and proof of insurance must be provided by the owner of the facility for UPRR to execute the agreement.

Complete instructions for making application for encroachments, wireline or pipeline crossings of UPRR ROW are available on their website. UPRR Real Estate and Utility Specifications - Pipeline Installation

Utah Transit Authority (UTA)

UTA’s License procedure is intended for the individual or business entity that needs to install and maintain facilities (utility lines, minor general property uses, etc.) across, over or under UTA property or track corridors. Anytime a utility is to be installed across UTA property or relocated as part of a highway project, a Category I Application must be submitted. The customary time for UTA staff to review, approve, create and execute a minor property use or ROW “crossing” license agreement is approximately eight weeks (from the day that an acceptable drawing is received).

Utility Relocations involving Railroad Property

While UDOT is not directly responsible, it should be noted that third-party utility companies are responsible for obtaining a License from the railroad owner in their own name for any permanent installations or relocations required by highway improvement projects involving railroad ROW.

By agreement, UDOT and UTA waive real estate usages charges and administrative fees for UDOT facilities.

Complete instructions for making application for encroachments, wireline or pipeline crossings of UTA ROW are available on their website through the following link: Doing Business – Property Management
Chapter 7, *Utility Encroachments in Railroad Rights-of-Way*, of the *UDOT Railroad Coordination Manual of Instruction* provides further detailed information necessary to identify varying types of encroachments, and each railroad’s policies and procedures.

**Provide Authorization to Proceed with Work for Utility Companies – Region Utility and Railroad Leader or Coordinator**

Upon final execution of the agreement transmit agreement to utility company with authorization to proceed with work. If the Right of Way needed for the utility relocation has not been secured by UDOT, this must be noted to the utility company and updates provided as Right of Way is secured. See Appendix L for an example Authorization to Proceed with Utility Work letter.

Encroachment permits are required for utility relocations on UDOT Right of Way even when relocations are covered by project agreement. Permits must be issued for relocations on UDOT projects when relocations are completed before the project starts and when any work is completed by the utility owner that is not part of the relocation for the project.

The goal is to have fully-executed agreements in-place prior to the utility certification date and to facilitate relocations occurring prior to construction to the extent practical.

**Initiate QC Review – Region Utility and Railroad Leader or Coordinator**

Initiate the QC review in accordance with *UDOT Quality Control/Quality Assurance (QC/QA) Procedures – Utility Design QC Checklist* before distribution.

- Provide checker with a check print of each deliverable and supporting documentation
- Provide the checker applicable cover sheets
- Complete revisions based upon QC comments

**Deliverables**

The end products are:

- Executed Individual Utility Agreements
- Executed Cooperative Agreements with Municipalities and Service Districts
- Wireline, Pipeline and Encroachment Permits
- Authorizations to Proceed with Work for utility companies
- QC Documentation

**4U3- Complete Utility Plans and Documents**

Tasks included in this subsection relate to Design Network Node 4U3- Complete Utility and Railroad Plans and Documents, but for utilities only. Please refer to the *Railroad Manual of Instruction* for information on railroad related tasks.
Overview

Finalize utility relocation design and complete utility plans and documents for all utility relocations and utility work that will be included in UDOT’s contract to be completed by UDOT’s contractor. Finalize utility relocation pay items and unit prices and enter this into PDBS or Masterworks.

Include information that has been gathered regarding existing utility locations and relocations to be performed by utility companies (or their subcontractors) into the appropriate locations in the plans and project documents.

The Region Utility and Railroad Leader or Coordinator is the activity leader and is directly responsible for some tasks while ensuring that other tasks have been completed by the directly responsible party.

Tasks

The directly responsible party for completing each task is noted following the title of each task.

Address Utility Relocation Review Comments – Utility Designer

Address comments that resulted from a review of the utility design completed and preliminary plan sheets developed during activity 3U4 Complete Utility and Railroad Designs. See UDOT Quality Control/Quality Assurance (QC/QA) Procedures and the Utility Design QC Checklist for more information about completing comment resolutions. As appropriate revise the design based on the comment resolutions.

Finalize Utility Relocation Design – Utility Designer

Finalize the utility relocation design based on review comments and coordination with team members and utility companies. Review any changes to the project design for revised impacts to utility facilities. Review plans submitted by utility companies for relocations they will complete for compatibility with the utility relocation work included in UDOT’s contract.

Complete Utility Relocation Plan and Profile Sheets – Utility Designer

Add details to finalize utility plan sheets and revise and update plan sheets as necessary based on resolution of comments on the preliminary design and plan sheets and any changes to the overall project design. All revisions and updates must follow UDOT and utility company standards. Verify all labels, callouts, notes and information found on the plan sheets. Include all quantities and start/end stations.

When SUE was utilized, include appropriate information from the SUE investigation. See 2U1-Utility & Railroad Identification and 3U4-Complete Utility and Railroad Designs for more on SUE deliverables.
Complete Utility Relocation Plan Summary Sheets – Utility Designer

Prepare summary sheets in accordance with **UDOT Plan Sheet Development Standards** and **Summary Sheet CADD Standards**

- General Plan Sheet Requirements (Department or Region)
- Summary Sheet Requirements

The purpose of summary sheets is to summarize all pay items called out in the plan sheets. Summary sheets are used to obtain quantities for the Engineer’s Estimate. Summary sheets should be customized for each project. See Appendix M for plan detail and summary sheet examples.

Excel spreadsheets are used to create the summary tables that are then exported into MicroStation for inclusion on the summary sheets. Include all utility relocation pay items and necessary non-pay items. Include names, alignment designations, stations, offsets, units and quantities. Show enough detail to support calculations.

Finalize Utility Relocation Cost Estimate – Utility Designer

Prepare an itemized cost estimate. Cost estimates prepared by the utility company or their consultant are to be reviewed by UDOT. Cost estimates prepared by UDOT are to be prepared in conjunction with input from and review by the utility company.

Finalize itemized cost estimates for the utility relocation work to be included in the UDOT contract by updating the preliminary cost estimate completed in tasks described in 3U4-Complete Utility and Railroad Designs as necessary based on any changes to the design.

Include utility betterment design when applicable. Utility betterments can be an improvement in the utility facility that is being relocated or an entirely new installation that is separate from relocation work. Utility companies are generally responsible for the cost of any betterments. See Appendix F for further discussion on betterments.

As appropriate, update unit costs for each item and in accordance with the standards and specifications for the utility work. Use appropriate resources for updating these unit costs, such as the utility company’s database, continuing contracts or recent bid records, local contractors or PDBS. Document how unit costs were developed and the assumptions that were made in their development. Account for project specific factors as noted in the table below.

**PROJECT SPECIFIC UNIT PRICE FACTORS**

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<td>Location</td>
<td>Current bidding environment</td>
<td>Risk to contractor</td>
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<td>Time of year</td>
<td>Availability of materials</td>
<td>Inflation</td>
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<tr>
<td>Limitations of operations</td>
<td>Familiarity of process</td>
<td>Construction Schedule</td>
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<tr>
<td>Quantity of item</td>
<td>Specialty equipment</td>
<td>Constructability</td>
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</table>
Use the UDOT Project Development Group as a resource for utilizing PDBS as needed. Consider the use of lump sum pricing only when appropriate. See 3U4-Complete Utility and Railroad Designs for more information on when lump sum pricing may be appropriate.

Enter Utility Relocation Cost Estimate into PDBS – Utility Designer

Enter the utility relocation cost estimate into PDBS. Exporting data into PDBS is done from Excel. Make sure named ranges are defined properly. The named ranges are:

- ItemNumberRow
- ItemDescriptionRow
- TopDataRow
- BottomDataRow
- AlignmentColumn
- FromStationColumn
- FromOffsetColumn
- ToStationColumn
- ToOffsetColumn
- RemarksColumn

A named range can be created, edited or viewed by going to Insert>Name>Define. Named rows are defined as the entire row. Named columns are defined as only that portion of the column from the TopDataRow to the BottomDataRow.

When totals from other summary sheets are included in a summary, make sure they appear below the BottomDataRow so that the quantities are not counted twice.

Save the file. The macro alters the file to export data. Run the macro by clicking on the “Export Quantities to PDBS” button in the upper left corner of the spreadsheet. Save the text files in the project directory under the Quantities\Summary_Sheets\PDBS_Export_Data folder.

Develop Utility Relocation Project Documents – Utility Designer

Incorporate utility information into the project Special Provisions and Limitations of Operations.

Include appropriate utility information that has been gathered into the project documents to inform the proposers of the expected utility conditions for the project. This information addresses all existing utilities and outlines all adjustments and relocations required for the project for both utility work that is included in the UDOT contract and utility work that is being performed by the utility companies or their subcontractor(s). Information that is included in the project documents must be consistent with what is on the project plans.

For utility work that is being performed by utility companies or their subcontractors, include the following information in the project special provisions:
• utility contact information - name of utility, contact person, phone, fax and e-mail for all utility companies that have facilities located within the project limits, including those whose facilities are not impacted
• a description of utility relocations and adjustments along with a schedule that includes the number of working days or the specific calendar completion date, as appropriate, for individual relocations and adjustments
• an expected construction date when utility relocation work is dependent upon the completion of work that another utility company must perform first. For example, in the instance of the relocation of power poles with joint users, the utility company owning the poles typically would have to install new poles and relocate their facilities before the joint owners can relocate. Power poles cannot be removed until all the tenants are relocated

And include the following information in the limitations of operations:
• any tasks that the contractor must perform before relocation can occur, such as staking or clearing of the Right of Way, grading, staking of structures, etc.
• any contingencies, such as timing of outages
• restrictions for in-place facilities such as special conditions for working around pipelines

See Appendices N and O for example Utility Coordination and Limitation of Operation Special Provisions.

**Utility Related Special Provisions**

Inclusion of detailed utility relocation information in the project Special Provisions including 00555 Limitations of Operations makes the proposers aware of activities that will occur within the project limits during the life of the project requiring schedule and work coordination between the utility company and the UDOT contractor. This information assists bidders with preparing more accurate bid proposals and the selected contractor with preparing their project construction schedules accordingly for operational efficiency and to avoid damage and disruption to utility facilities.

For utility work that is included in the UDOT contract to be performed by UDOT’s contractor, provide all special provisions required for project construction.

• General Special Provisions
• Project Specific Special Provisions

Use UDOT’s *Specification Writers’ and Drawing Developers’ Guide* when developing Special Provisions. Have the Resident Engineers review the utility special provisions and limitations of operations.

Use the current *Acceptance and Documentation Guide* to generate Acceptance and Documentation for all standard pay items. Coordinate with the Resident Engineers to develop Acceptance and Documentation for non-standard items.

**Submit PS&E Plans to Utility Companies – Region Utility and Railroad Leader or Coordinator**

Transmit PS&E Plans to utility companies so they have a set of the same plans that will be used for construction. This facilitates clear communications during construction.

**Complete Right of Way Documents for Utility Right of Way – Region Right of Way Engineer or Region Land Surveyor**

Complete Right of Way documents, using correct forms, for those instances where UDOT requires the taking or modification of a utility company’s real property rights as discussed in 4.U.2 Prepare and Obtain Utility Agreements and Permits.

**Perform QC Review – Utility Designer**

Initiate the QC review in accordance with *UDOT Quality Control/Quality Assurance (QC/QA) Procedures – Utility Design QC Checklist*

- Provide checker with a check print of each deliverable and supporting documentation
- Provide the checker applicable cover sheets
- Complete revisions based upon QC comments

**Deliverables**

The end products are:

- Utility relocation comment resolutions
- Utility relocation plan sheets
- Utility relocation project documents
- Utility relocation cost estimate
- Right of Way documents for utility Right of Way needs
- QC Documentation
5U1- Deliver Utility Certification

Overview

A Utility Certification is required on every project regardless of whether utility facilities are affected or relocations are eligible for reimbursement by the project. The Utility Certification verifies that:

- All impacted utility companies have been notified of the project, allowed to participate in the planning and design, and that all necessary relocation arrangements and agreements have been made
- Appropriate notification has been included in the bid proposal to notify prospective bidders of any utility relocation work that will occur concurrently with the highway project
- Buy America requirements have been addressed

The activity leader is the Region Utility and Railroad Leader or Coordinator.

Tasks

Issue Utility Certification – Region Utility and Railroad Leader or Coordinator

The Region Utility and Railroad Leader or Coordinator creates, signs, and issues the utility certification.

See Appendix T for a Utility Certification example.

Deliverables

- Signed Utility Certification

6U1- Utility Construction Services

Overview

The intent of this activity is to ensure a smooth and informed transfer of utility coordination information and management of relocation activities and schedules from the design phase to the construction phase of the project. The Region Utility and Railroad Leader provides ongoing support and assistance to the Resident Engineer in understanding and enforcing the requirements of federal and state codes, utility related contract special provisions and agreements prepared for the project.

The activity leader is the UDOT Resident Engineer
Tasks

The following are the tasks included in 6U1 Utility Construction Services:
Advance Relocations of Utilities

- Utility Relocations During Project Construction

<table>
<thead>
<tr>
<th>Utility and Railroad Coordination and Certification Guidance</th>
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</thead>
<tbody>
<tr>
<td>FHWA has provided websites with information and videos explaining Utility Certification and Railroad Certification requirements. The websites were developed to assist Local Agencies in understanding and complying with Federal Aid requirements but the information also applies to UDOT projects.</td>
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  Utility Coordination and Certification Requirements

  Railroad Coordination and Certification Requirements

Additional information concerning Utility Certification and requirements specifically for Local Government Projects is provided in Section 8 of this Manual.

- Attend Pre-Bid Meeting
- Attend Preconstruction Meeting
- Attend Partnering Meetings
- Attend Construction Team Meetings as required by the work schedule

These tasks are described in the following Construction Phase section. Other than a preconstruction meeting, not all tasks occur or would necessarily involve utility companies, on all projects. Undertake these activities as appropriate, and with the appropriate UDOT and utility company staff, as well as other communication activities between design and construction staff. Keep in mind the regularly recurring restrictions also noted in the Construction Phase section.

C. Construction Phase

Overview

The thorough identification and resolution of utility conflicts and incorporation of utility related information into the design plans and contract documents contribute to an efficient and successful construction project. It is important that a smooth transition take place from design to construction with regards to the status of utilities and management of relocation schedules and reimbursement. Effective coordination continues throughout construction to facilitate efficient field operations, timely utility relocations, billing and closeout. As construction commences, coordination of the more specific details for utility relocation and construction scheduling occur between UDOT, the UDOT Contractor and the utility companies.
Some of the most important aspects of administering utility relocations during construction are:

- Schedule coordination, management and delay documentation
- Daily force account record keeping
- Ensuring that the UDOT Contractor is providing accurate and timely survey information for utility company use in completing relocation work
- Timely billing and payment of utility invoices

### Construction Management Training for Utility Work

UDOT requires a [Construction Engineering Management Training (CEMT)](#) course for consultants. An Introduction to Utility Relocation Administration and Documentation during Construction provides instruction on utility relocations. This course is also highly recommended for UDOT personnel.

*The UDOT Construction Inspection Guide, Chapter 10, Utility and Railroad* also provides guidance for managing utility relocations during construction.

### Utility Construction Management

Utility Construction activities are managed by the Resident Engineers. Resident Engineers and their crews should review and understand all Utility Agreements, utility relocation requirements and utility related contract documents. The Region Utility and Railroad Leader or Coordinator is a resource for the Resident Engineer and performs some specific tasks as noted.

### Pre-Bid Meetings

On projects that involve complex utility relocations and coordination during construction, consider holding or including utilities in the pre-bid meeting. Invite plan holders, as well as local government agencies, if involved, and utility companies to address relocation/adjustment requirements, issues/problems and construction scheduling. Stress the importance of attendance to all participants and provide adequate notice of the meeting in the advertisement for the bidding of the project.

### Advance Utility Relocations

Facilitate advance utility relocations where appropriate. Utility companies will require staking of Right of Way and other pertinent project features or other pre-work activities to successfully relocate their facilities. A utility company may desire to move before UDOT has approved a construction contractor. In cases where an early relocation would be beneficial, consider means to provide staking of Right of Way and project features or other pre-work activities to facilitate relocations prior to project construction.
Several UDOT Standard Specifications include requirements related to contractor’s responsibilities with regards to utility coordination and utility relocations. Following is a summary of the applicable specifications.

**00555 Prosecution and Progress**

Information about project specific utility relocation details, schedule and service interruption requirements and commitments will be included in a Special Provision to 00555 1.9 Limitation of Operations.

Within 14 calendar days of receiving the Notice of Award and a minimum of 7 calendar days prior to work commencing, the selected UDOT contractor contacts the Resident Engineer to schedule the preconstruction conference. Using the utility contact information provided in the contract documents; invite all utility company representatives to the Preconstruction Meeting.

At the Preconstruction Meeting, the UDOT contractor, with UDOT oversight, works with the utility companies to review and discuss the proposed sequence of operations and to set a more exact schedule for relocation of the utility facilities in the field and coordinate the timing of the relocation of utilities with the project construction activities considering the utility information in the Limitations of Operations, utility Special Provisions and the approved relocation plans. This discussion should include addressing any pre-work items from the UDOT contract documents that the contractor may need to do before completing utility relocations.

It is highly recommended that key utility, local government and special service district representatives be included in the Partnering process especially if the project has high risk or complex utility relocations and schedule coordination requirements.

**00570 Definitions**

This section includes the definition of Delay. Third party utility work suspensions caused by conditions beyond the control of the contractor are typically considered compensable, excusable delays unless the delay was within the contractor’s control, was the fault or responsibility of the contractor or could have reasonably been foreseen by the Contractor in which case the delay could be considered non-excusable and non-compensable.

Additional information about delay management and documentation is included in 00777 Change Management

**00700 Schedule and Narrative**

The UDOT contractor is required to submit a Preliminary Schedule and Narrative or Baseline Schedule and Narrative 14 calendar days of Notice to Proceed. The Baseline Construction Schedule must account for the utility information included in the Contract Documents including Limitations of Operations and other utility related Special
Provisions. The Baseline Construction Schedule is required to address certain items including the following:

- Utility work by others
- Define significant interactions with the Department and other entities including utilities, local governments and local districts.
- Include milestones to define significant contractual events including outside entities such as utilities and local districts

Schedule Updates and Narratives are required to provide status on pending items applicable to the schedule including third party utilities if not on the schedule

Potential delays, current and potential issues, including utility related issues should be discussed at the Monthly Progress Meetings with the intent of finding the most effective solutions to problems.

Utility service interruptions are subject to regulatory restrictions based on the needs of their customers. It is important that the UDOT contractor coordinate work schedules with the utility companies to account for seasonal and regulatory limitations and not assume that work can be completed by the utility companies at any given time.

### Regularly Occurring Utility Service Restrictions
- Questar Gas Company cannot interrupt IHP lines between November and March and HP lines between October 1 and April 1 without written permission
- Rocky Mountain Power cannot schedule line outages on transmission lines between May 1 and September 1
- Most telecommunication companies cannot schedule line splicing between Thanksgiving and New Year’s Day, and Mother’s Day
- Irrigation lines cannot be taken out of service between April 1 and October 15
- All utility companies have strict regulations for notifying customers in advance of service interruptions
00727 Control of Work

1.12 Utilities directs the Contractor to

- relocate or adjust utilities when specified
- use work procedures that consider potentially inaccurate utility locations
- cooperate with utility owners to remove and rearrange utility facilities to avoid service interruptions or duplicate work by utility owners
- cooperate with utility owners to adjust utility fixtures
- use work procedures that protect utilities not being relocated
- notify utility authorities of service interruptions resulting from breakage within the construction limits, cooperate with owners until service is restored
- obtain approval from local fire authority to make provisions for continued service before working adjacent to fire hydrants
- Adjust or relocate utility facilities found but not noted in the contract documents when directed by the Engineer

Chapter 54-8a of the Utah Code - Damage to Underground Utility Facilities

is commonly known as the “Blue Stakes” Law this Code establishes practices to prevent damages to underground utility facilities. UDOT contractors and utility companies or their contractors that are performing excavations must contact the Blue Stakes of Utah Utility Notification Center at least 48 hours but not more than 14 days, excluding emergencies, prior to excavation. “48 hours” means a 48-hour period occurring during business days which includes any day except Saturday, Sunday or a legal holiday. Blue Stakes notifies the potentially affected utility facility operators and the facility operators will mark their facilities in accordance with the following color code identifiers:

- Red - electric power lines, cables, conduit and lighting cables
- Yellow - gas, oil, steam, petroleum or gaseous materials
- Orange - communication, alarm or signal lines, cable or conduit
- Blue - potable water
- Purple - reclaimed water, irrigation and slurry lines
- Green - sewers and drain lines

Know what's below. Call 811 before you dig.

BLUE STAKES OF UTAH UTILIT Y NOTIFICATION CENTER, INC.

www.bluestakes.org

1-800-662-4111
At all times, the utility company must comply with safety regulations. Utility companies and their contractors performing relocations and installations must do their work in accordance with the UDOT approved traffic control plan and the application of traffic control devices shall conform to the standards set forth in the “Manual on Uniform Traffic Control Devices” and 23 CFR, Part 630, Subpart J, “Traffic Safety in Highway and Street Work Zones”. All flagging personnel shall be certified.

**00777 Change Management**

1.12 Excusable Delay defines the process for determining contract time extensions and associated delay costs for excusable delays. The contractor is required to follow this process for all potential excusable events including utility related issues to justify a request for time extension and compensation.

Provide written notification to the Engineer within ten calendar days of the excusable event:

- Take reasonable steps to minimize the impact of the delay
- Delays incurred during the ten days prior to notification may be compensable or excusable
- Maintain daily records of labor, materials costs, station location and equipment expenses for affected operations. Obtain the Engineer’s acceptance on these records daily
- Prepare and submit weekly written reports to the Resident Engineers including:
  - Number of delay days
  - Summary of delayed operations and the cause
  - Itemized costs with support documentation
- Meet weekly with the Resident Engineers to compare daily records with those maintained by the Engineer. Resolve any disagreement over weekly delay costs with the Engineer
- Provide written notice within ten calendar days documenting the disagreement between Department’s calculations of weekly delay costs. Failure to provide notification is interpreted as acceptance that Department records are accurate

Time will be added to the contract based on a mutually agreed to schedule impact analysis showing lost time attributable to the delay-causing event.

Excusable Delay costs will be determined using:

- Direct Costs
- Field Indirect Costs
- Home Office Overhead

Please refer to 00777 Change Management for detailed information on determining Excusable Delay costs.

In addition to establishing an expectation that utility companies will coordinate and cooperate with the Department for the planning and accomplishment of utility facility relocations required by highway projects, this Rule provides the department with the
authority to issue Administrative Orders and pursue remedies against Utility companies who fail to timely coordinate or cooperate and any point in the relocation process including during the design phase. Administrative Orders are issued by the Department’s Statewide Utilities and Railroads Engineer upon evidence that the Department’s contractor and representatives have fully complied with the requirements of the Rule, the Standard Specifications and contract documents and that the utility company failed to meet its acknowledged work plan and schedule.

When an event occurs involving non-compliance or non-responsiveness by a utility company on a project, the Resident Engineer should notify the utility company’s project representative that the issue is being escalated and confers with the Region Utility Leader. The Region Utility Leader will then confer with the utility company and escalates the issue to the Statewide Utilities and Railroads Engineer along with all pertinent information and documentation. The Statewide Utilities and Railroad Engineer will decide whether to issue an Administrative Order based on the evidence presented.

A first Administrative Order explains the event or situation and includes a reasonable time frame for the utility company to rectify the situation or complete the relocation work. This puts the utility company on notice that the Department may act against the utility company if they fail to comply.

If the utility company fails to comply with the first order and the failure is not caused by a third party who the utility has no control over, the Department may issue a second Administrative Order to remedy non-compliance. The Department may order any or all of the following remedies:
- Recover increased costs caused by the utility’s unreasonable or unjustified delays
- Deny further Encroachment Permits for utility installations until the non-compliance is resolved
- Perform design or construction work on behalf of the utility except for fiber for telecommunication, electricity and natural gas facility construction

In addition, the Department may pursue additional remedies or claims against a utility in a district court in Utah.

A utility aggrieved by an Administrative Order issued under this Rule may file a request for agency review with the Department pursuant to the Administrative Procedures Act. The Presiding office for the agency review will be the Department’s Director of Operations who will issue the Departments Final Order. The Administrative proceedings shall be informal.

The Construction Division has prepared a Flow Chart and Procedures to assist Resident Engineers in utilizing and complying with Administrative Rule R930-8 on their projects.
Deciding to Issue an Administrative Order

The authority and decision to issue an Administrative Order and pursue remedies against a utility company will not be taken lightly by the Statewide Utilities and Railroads Director. The decision by a Resident Engineer to escalate an issue to the Region Utility Leader should be accompanied by thorough documentation of the communication between the Department, the contractor and the utility company; the impacted design, work plan and schedule; written acknowledgment by the utility company and any other pertinent information.

Keep in mind that the Rule addresses the rights and responsibilities of the Department and the utility companies, not the Contractor. The Department is responsible for the contractor’s performance and compliance with the Rule, the Standard Specifications and contract documents with respect to utility cooperation, schedule coordination, acknowledgment and other utility related requirements.

If the objective of issuing an Administrative Order is for the Department to recover costs from a utility on behalf of the contractor, the contractor will need to strictly follow the steps and documentation requirements of Section 00777-1.12 Excusable Delay including maintaining daily records of labor, station locations and equipment costs for operations affected by the utility work as with any other type of potential delay on the project.

Field Inspection and Documentation

Oversight and documentation of utility relocation work and schedule coordination by the contractor as specified in the contract and Standard Specifications plays an important role in successful completion of utility relocations, early resolution of issues and evaluation of delays.

Utility facility relocations and installations performed by private utility companies such as CenturyLink, Questar Gas, and Rocky Mountain Power with their own forces or contractors are administered differently than public or private utility relocation performed by UDOT’s contractor.

Utility Installations by Utility Companies and their Contractors

Private utility companies are not a party to the construction contract and their installations are not subject to the requirements of the contract or UDOT’s Minimum Sampling and Testing Program. UDOT’s project personnel do not inspect the installation of private utility facilities with respect to issues such as material quality certifications, workmanship, backfill classification or compaction. UDOT monitors any pavement replacement that is performed.

Private utility facility installations are subject to their respective company and industry standards and all quality control functions are the responsibility of the utility companies. From UDOT’s perspective, the installations are subject to the terms of the individual
companies’ Encroachment Permits, Statewide License Agreements (including UDOT’s Standard Specifications) and Administrative Rule R930-7 (clear zone, depth of bury, vertical clearance, etc.) and any specific requirements contained in their Reimbursement Agreements.

Utility companies, with their regular engineering and construction forces at their standard schedule of wages and working hours, or through qualified contractors appearing on utility company’s pre-approved list with whom they have continuing contracts, shall perform the necessary field and office engineering and the construction work covered in the respective utility agreements. In the event a utility company elects to use an outside contractor not appearing on the company’s pre-approved list the utility company will solicit bids from contractors in accordance with 23 CFR, Part 645, Subpart A, Utility Relocations, Adjustments and Reimbursement, and will submit at least the three lowest bids to UDOT and will gain written approval from UDOT to award said contract. The Region Utility and Railroad Leader or Coordinator processes bids and contractor approvals.

Utility companies shall not perform any construction until authorized in writing by UDOT.

The FHWA Program Guide: Utility Adjustments and Accommodations on Federal-Aid Highway Projects (23 CFR 645.115 Construction, Inspection) states:

- It is essential that State inspectors verify all reimbursable utility work that has been accomplished
- When the utility is to be reimbursed based upon the actual cost incurred under the force account payment method, the State needs to have a daily inspection record that can be used to verify billings for labor, materials and major items of equipment used by the utility to complete the work

UDOT’s project personnel:

- Monitor and document the schedule coordination between the Contractor and utility companies as required by Standard Specifications
- Ensure the Contractor provides all surveying required by the utility companies and collects survey grade coordinate data for exposed, relocated and new utilities during construction in accordance with the requirements of Section 01721, Survey, Part 3.16, Utilities
- Maintain daily Force Account Records for all work performed by the private utility companies who are entitled to reimbursement by the project. It is preferred that the daily records are kept using Masterworks or UDOT’s forms. See UDOT’s Construction Forms Webpage daily and weekly Force Account Record forms. Alternately, UDOT can sign off on the utility’s daily records. The type of form shall be approved by UDOT’s Contracts, Estimates and Agreements Office

The utility company will notify the Resident Engineer, in writing, at least one week in advance of beginning any work to arrange for daily record keeping. Failure on the part of the utility company to give proper notification to the Resident Engineers may result in disallowance of reimbursement for that portion of the utility company’s work performed while not under the surveillance of the Resident Engineers or his/her authorized representative.
Utility Installations by UDOT’s Contractor

Public utility installations such as water lines, sanitary sewers and storm drains are often performed by the UDOT contractor as part of the project. Other types of utility work may also occasionally be performed by the UDOT contractor. Utility work that is performed by the UDOT contractor is tested, inspected, documented and paid for by UDOT personnel like any other contract item. Consequently, the installations are subject to the requirements of the Contract, UDOT’s Standard Specifications and the Minimum Sampling and Testing Requirements.

If the relocation of a utility facility is to be completed as part of UDOT’s contract, a Utility or Cooperative Agreement will be executed with the utility company owning the facilities to set the terms and responsibilities for the design and construction work to be accomplished by the UDOT contractor. In anticipation of administering these agreements, the utility company’s standard specifications, or industry standards such as the American Public Works Association (APWA) standards, will be incorporated into the contract, either physically or by reference. These agreements may include provisions for betterments, and in that case, cost sharing; documentation and repayment terms will also be included in the agreement.

Work performed by the contractor as a betterment will be identified in PDBS or Masterworks as a Non-Participating Item, which indicates that the cost of the work is not a project cost, and will be recovered from another party.

According to the terms of the individual agreements with utility companies as owners of the facilities, they are required and/or entitled to:

- At no cost to the project, perform inspection of the work, correct or clarify issues during construction on their facilities which will be performed by UDOT's contractor. The utility company’s engineer and/or inspector shall work with and through UDOT's Resident Engineers and shall give no orders directly to UDOT's contractor unless authorized in writing to do so. UDOT's contractor will accomplish the work covered within the UDOT contract and respective utility agreements on the utility company’s facilities in accordance with approved plans and specifications. The utility company, through their inspection of the work performed will provide UDOT's Resident Engineers with information covering any problem or concerns the utility company may have with acceptance of facilities upon completion of construction.

- The utility company’s personnel shall notify UDOT’s Resident Engineers or other designated UDOT representative upon arriving and leaving the project site

In summary, all responsibility with regards to the quality and payment for utility installation work performed by the UDOT contractor is the sole responsibility of UDOT’s project personnel just like any other bid item, although the utility companies who own the facilities may inspect and must inform UDOT if problems or concerns are identified during construction. The utility company will take responsibility for the acceptability of the work while it is being done and not be allowed to reject and suggest correction after completion.
Note on contractor doing work for third parties within UDOT Right of Way: No third-party work will be allowed in UDOT Right of Way unless coordination has been done with UDOT and approval received by UDOT.

Change Orders

In the event there are changes in the scope of the work, extra work or changes in the planned work covered by a utility agreement, a modification to an agreement in the form of a Change Order is prepared by the Resident Engineers, signed by representatives of the parties hereto is required prior to the start of work on said changes or additions.

The instruction for completing a contractor and utility change orders can be found in the Construction Manual of Instruction.

Temporary Facilities

Utilities typically install a new facility before removing the existing facility to maintain service. In some cases, the project may require a temporary installation, or one that will be in service only for a short time. Temporary facilities require the same care in construction as permanent facilities. In accordance with Administrative Rule R930-8 Reimbursement of Relocation Costs, temporary utility facility relocations required by the highway project will be included as part of the utility relocation costs.

Resolution of Field Issues – UDOT’s Resident Engineer or contractor

The UDOT contractor’s responsibilities, with regards to coordination with utility companies and providing notification of delays to UDOT, was described earlier in this section, under UDOT Standard Specifications, 00700 Schedule and Narrative and 00777 Change Management. The UDOT contractor, in their coordination with the utility companies and reporting to UDOT, and UDOT, document what is occurring on the project site, identifying potential delays before they become actual delays.

It is often difficult to determine the true cause(s) of a delay. UDOT must analyze claims of a utility caused delay versus what is contained in the limitations of operations and utility special provisions included in the contract, the contractor’s baseline schedule, utility company schedule acknowledgements as well as minutes of meetings that have occurred during construction and what has occurred on the project site to determine if a utility company is not following what has been agreed to.

In cases where the utility company is not adhering to its agreed upon responsibilities, the Statewide Utilities and Railroads Director participates in the resolution of issues escalated from the project or region level. Thorough documentation at the Region level assists the Statewide Utilities and Railroads Director in issue resolution.
Utility Markers and GPS Requirements for Underground Facilities

Administrative Rule R930-7-11, Utility Construction and Inspection requires utility companies to mark all underground facilities with approved markers and to keep on file certified reproducible plans electronic files of all their relocations and installations including overhead facilities and crossing points. For new facility installations, the utility company must use survey grade Global Positioning System (GPS) to survey their facility and submit an electronic file to UDOT. Refer to Part 5 Utility Markers and Part 6 GPS Requirements for complete information.

Maintenance

Once construction is complete, the utility company must maintain the facilities at its own expense as provided by Administrative Rule R930-7-12 Maintenance Responsibility. The utility company must obtain an Encroachment Permit when it performs any maintenance work.

D. Invoicing and Closeout Phase

Overview

Track utility invoices within the Department’s alongside associated construction project, when applicable. Process for payment all progressive and finalized utility invoices per each agreement.

It is important to have thorough communication and proper completed documentation for smooth processing. Follow this wheel for communication and paper-flow.
The following is a list of required documents for reimbursable utility work from initial agreement to closing:

- **R-709** – Funding of the utility agreement through UDOT Program Development
- **Utility Agreement** – Contract agreement between UDOT & utility company/entity
- **Authorization to Proceed Letter** – Authorization for the utility company/entity to proceed with the utility work
- **Utility Contract Overrun Funding Need (UCOFN)** – This form is required so controllers can allocate additional funding when the funding amount exceeds the original agreement amount
- **Change Orders** – When the newly anticipated amount exceeds the agreement amount due to scope of work change
- **Letter of Explanation (10 percent)** – When the final invoice payment exceeds the authorized amount by more than 10 percent. At a minimum, needs to be explained on the C-193
- **C-193 & C-193A (Utility Fiscal Review Report and the Salvage Credit Report for Utilities/Railroads)** – These final forms show the comparison between initial estimated agreement amount and the actual billed amount broken out between labor, materials and if salvage material was involved with any additional comments
- **C-104 Daily / Weekly Force Account Cost Report** – All project documentation records which include a C-104 form, known as a cost report that contains all the actual labor and material hours generated under the contract. It is at the Resident Engineers’ direction and calculated as specified in Section 01282 of UDOT’s Standard Specifications

Forms are derived from:

- **R709** – Form requested from region office through Program Development
- **Utility Agreement, Authorization to Proceed Letter, UCOFN, Change Order, Letter of Explanation and C-193’s** are forms from the Region Engineer or Region Utility and Railroad Leader or Coordinator

These documents are all required to be sent in to the Contracts and Compliance Specialist to process utility payments, prepare the file for audit and to ensure the flow of utility payments move smoothly with complete communication. It also ensures that everyone involved with the utility payment process is provided with complete documentation necessary for each division involved.

You can find the required documents at the UDOT [Construction Forms Website](#).

**Activities/Tasks**

**09R Utility Closeout Paperwork**

This activity, 09R Utility Closeout Paperwork, correlates to the Project Closeout Network. The Resident Engineer is the activity leader and is directly responsible for some tasks while ensuring that other tasks have been completed by the directly responsible party.
Utility companies are to send their invoices, preferably electronically, to the Contracts and Compliance Specialist. Agreements and invoices are entered into PDBS by the Contracts and Compliance Specialist as they are received from the UDOT Region Offices and Utility Companies respectively. The Contracts and Compliance Specialist initiates Utility Fiscal Review Report, Form C-193, Page 1, on all utility agreements where payment is to be made to the utility company under the terms of the agreement. The Contracts and Compliance Specialist reviews invoices (both partial and final) from utility companies for work accomplished and electronically forwards to the appropriate Resident Engineers for verification.

*Approve Utility Progressive Invoicing - Resident Engineers*

Receive and review daily force account records and completes physical inspection for all work accomplished by utility company forces.

Upon receipt of invoicing reflecting a partial payment of the work required, verify completion of the work being invoiced, based on the daily records and the in-place agreement and returns verified invoicing to the Contracts and Compliance Specialist. Progressive invoicing is allowable on both actual-cost and lump sum agreements, but daily records are not kept for lump sums. Differences between work completed in the field and what is being invoiced should be resolved with the utility company. Invoices for actual-cost agreements are to be itemized so these noted items may be verified. Items listed on the invoices should match the items in the estimate for the work as well as following the requirements of 23 CFR 645A. The following summarizes what is allowed per the requirements of 23 CFR 645A:

**Direct Labor** - Salaries and wages, at actual or average rates and related expenses paid by the utility company to individuals for the time worked on the project are reimbursable when supported by adequate records. This includes labor associated with preliminary engineering, construction engineering, right-of-way and force account construction. This may include individuals who are engaged in the direct work and immediate supervision of the work at the site of the project and in the actual preparation of the plans and estimate of the relocation/adjustment. The following direct labor additives may be included in direct labor expenses:

- Social security
- Holiday pay
- Vacation
- Sick leave
- Retirement and pension
- Unemployment taxes
- Compensation
- Hospitalization and liability insurance

**Overhead Costs** - Under U.S.C. 123, the term “cost of relocation” is defined as the entire amount paid by the utility company that is properly attributable to the relocation. Federal-aid reimbursement is therefore limited to utility relocation work necessitated by the
construction of a Federal-aid highway project. The mere fact that a utility may incur legitimate costs as a function of doing business in general is not sufficient reason to warrant reimbursement unless such costs can be shown to be essential for the performance of the actual and necessary relocation work at hand. For example, advertising may be necessary to promote a utility’s product; however, it is not related to either directly or indirectly with the physical work of relocating the utility company’s facilities.

Materials (and salvage credits) - Materials and supplies, if available, are to be furnished from company stock, except that they may be obtained from other sources near the project site when available at a lower cost. When not available from company stock, they may be purchased either under competitive bids or existing continuing contracts under which the lowest available prices are developed. Minor quantities of materials and supplies and proprietary products routinely used in the utility’s operation and essential for the maintenance of system compatibility may be excluded from these requirements.

Materials and supplies furnished from company stock shall be billed at the current stock prices for such new or used materials at time of issue. Materials and supplies not furnished from company stock shall be billed at actual costs to the utility delivered to the project site. The cost of rehabilitating rather than replacing existing facilities to meet the requirements of a project is reimbursable provided this cost does not exceed replacement costs.

Buy America language is included in agreements. Buy America provisions apply whenever federal dollars are used to directly reimburse a utility relocation, including force account work. Buy America provisions also apply to utility work included in a project that has federal dollars in it, regardless of whether the utility work includes federal funding or not. Utility companies are to submit Buy America certifications to the Resident Engineer.

Materials recovered from temporary use and accepted for reuse by the utility company shall be credited to the project at prices charged to the project, less a consideration for loss in service life at 10 percent. Materials recovered from the permanent facility of the utility company that are accepted by the utility company for return to stock shall be credited to the project at the current stock prices of such used materials. Materials recovered and not accepted for reuse by the utility company, if determined to have a net sale value, shall be credited to the project (salvage value). The Resident Engineers records salvage value of material removed and not incorporated in the new work (C-193A) and obtains FHWA approval of salvage value.

Equipment Costs - The average or actual costs of operation, minor maintenance and depreciation of equipment owned by the utility company may be reimbursed. Reimbursement of vehicles owned by the utility company may be made at average or actual costs. When equipment owned by the utility company is not available, reimbursement will be limited to the amount of rental paid (1) to the lowest qualifying bidder, (2) under existing continuing contracts at reasonable costs, or (3) as an exception by negotiation when the other noted methods are impractical due to project location or schedule.

Transportation Costs - The utility company’s costs, consistent with its overall policy, of necessary employee transportation and subsistence directly attributable to the project is reimbursable. Reasonable cost for the movement of materials, supplies and equipment to
the project and necessary return to storage including the associated cost of loading and unloading equipment is reimbursable.

Other credits - In addition to the credits related to material, there are other credits, such as expired service life credits which apply to facilities such as buildings, pump stations, substations and power plants.

Betterments - As documented in the agreements (if applicable), invoices are to be reviewed with respect to betterments and to confirm that UDOT is not being invoiced for non-reimbursable betterments. See Appendix F for more information on betterments.


In those instances where additional work not covered by the original agreement is found necessary to complete the relocation as planned, the Resident Engineers prepares an amendment to the agreement or Change Order to obtain approval from FHWA for the additional work.

Change Orders involve a change in the scope of the work, extra work or changes in the planned work covered by a utility agreement. A UCOFN must be prepared for any increase in cost over the agreement amount, whether due to a change or otherwise. If the increase will result in a final amount exceeding the original agreement amount by more than 10 percent, then an explanation letter, memo or email is required from the utility company. The utility company must notify the Resident Engineers in writing immediately upon discovery that additional costs beyond the agreement amount will be incurred prior to these costs being incurred. If the utility incurs additional costs over the agreement amount prior to receiving authorization, UDOT is not obligated to pay for the work.

Depending upon the terms of the individual Reimbursement Agreement, utility companies have up to one year from the time the work is completed to submit final billings. Upon receipt of invoicing reflecting final payment, the Resident Engineer completes Form C-193, Page 2, and C-193A, and ensures all documentation to support the payment is complete and forwards the complete package (including daily records, change orders, pertinent notes, etc.) to the Region Contracts Specialist.

The Region Contracts Specialist ensures complete review of the final invoicing against the in-place agreement and verifies adequacy of documentation to support the final payment requested by signing Form C-193, Page 2. The Region Contracts Specialist obtains the District Engineer’s signature of approval on Form C-193 and forwards the complete package to the Contracts and Compliance Specialist.
Process Progressive & Final Utility Invoicing Payment Request - Contracts and Compliance Specialist

Upon receipt of verified partial invoicing from the Resident Engineers, the Contracts and Compliance Specialist determines that all work is verified as invoiced and forwards to the Comptroller for payment.

For processing of final utility invoicing see content below under 10E Close Utility Agreements.

Release Utility Payment to Utility Company - Comptroller

The Comptroller releases payment to the utility company in accordance with the verified invoiced amount provided by the Contracts and Compliance Specialist.

10E Close Utility Agreements

This activity, 10E Close Utility Agreements, correlates to the Project Closeout Network. The Contracts and Compliance Specialist is the activity leader and is directly responsible for some tasks while ensuring that other tasks have been completed by the directly responsible party.

Upon completion of utility final payment, process audit request for agreement closures - Contracts and Compliance Specialist

Request an audit for all actual-cost agreements. The Contracts and Compliance Specialist processes the final approval for payment. The Contracts and Compliance Specialist closes the utility agreement within PDBS and generates a Request for Audit based on receiving the closing utility forms from the Resident Engineers. Distribute Final Payment and Request for Audit Memorandums. The Contracts and Compliance Specialist processes final invoicing for payment as follows:

- Reviews Form C-193 and related documentation against the invoicing and ensures documentation will meet FHWA requirements for federal participants, when applicable, and meets the Construction Manual of Instruction requirements
- When differences between the invoicing and the documentation appear to exist, other than costs which were incurred off the site of work such as engineering overhead, that cannot be corrected by the Resident Engineers to be verified by the utility company, forwards final invoicing and related documentation to the Internal Auditor with a letter of transmittal setting forth those differences which cannot be reconciled and requests that the Internal Auditor review the utility company documents which support the invoicing
- Where the Resident Engineer’s documentation supports the invoicing forwards the invoicing to the Comptroller for payment. At the same time, forwards a copy of invoicing and related documentation to the Internal Auditor requesting an audit of the utility company records to support the final payment. Note: In those instances where the agreement between UDOT and the utility company does not provide for
the return of overpayment disclosed because of an audit, final invoicing and related documentation must be routed through the Internal Audit prior to payment

- For those agreements where the amount to be paid to the utility company is a lump sum amount set forth in the executed agreement, the final invoicing approved by the Resident Engineers may be forwarded directly to the Comptroller for payment without a request for audit. Include an email or letter from the Resident Engineers stating that the work has been completed

The audit package sent to the Internal Auditor by the Estimates & Agreements Specialist will contain the following items:

- R-709
- copies of the approved invoicing
- completed Fiscal Review Report, Form C-193 & C-193A (if applicable)
- copy of the executed agreement
- copy of the authorization to proceed
- signed copies of any Change Orders or Supplemental Agreements including all exhibits; daily records
- reports on salvaged material when credit for salvage is due
- any pertinent correspondence

FHWA approval will be reflected on all applicable agreements and change orders.

An audit of a utility contract is more efficient if the C-193’s and Force Account/daily records are submitted with the final approved invoice. All previous documents should have already been sent to the Contracts and Compliance Specialist by the Resident Engineers.

Audit Report is processed and completed for money owed / due by utility company - Internal Audit

When a final invoicing has previously been paid, the Internal Auditor reviews final invoicing as necessary to Issue Certificate of Audit and when necessary, reviews the utility company records to support charges listed on invoicing. For out-of-state companies, the Internal Auditor arranges for audit to be performed by another State when appropriate. Where advance payment has resulted in either an overpayment or underpayment, the Internal Auditor recommends actions to be taken by the Comptroller to adjust the final payment amount.

Where final payment has not yet been made, the Internal Auditor reviews final invoicing as necessary to issue a Certificate of Audit and forwards it to the Comptroller for payment. When necessary, the Internal Auditor reviews the utility company records to support charges listed on the invoicing. When review of an out-of-state utility company records is required, the Internal Auditor requests review be made by an auditing agency of the State where the records are located.
Audit Report payment / invoicing processed for Agreement Closure based upon audit report - Comptrollers

When the Certificate of Audit supports amounts previously paid and no added payment is necessary, the Comptroller processes invoicing to the FHWA for federal reimbursement when applicable.

When the Certificate of Audit indicates additional payment is due to the utility company, the Comptroller prepares Road Cost Distribution to effect payment to the Utility Company. Invoicing is then processed to the FHWA for federal reimbursement when applicable.

When the Certificate of Audit indicates the advance payment made to the utility company resulted in an overpayment, the Comptroller invoices the utility company for the amount of the overpayment and maintains follow-up until the amount of overpayment is received.

Insert comment into ePM screen 745 if closeout is delayed due to utility agreement closure.

A project cannot be closed out until all final utility invoices are received and processed.
SECTION 5
UTILITY COORDINATION FOR
PAVEMENT REHABILITATION (PURPLE BOOK) AND
PAVEMENT PRESERVATION (ORANGE BOOK) PROJECTS

A. General

The objective of the Pavement Preservation Program is to provide cost effective treatments that will preserve the pavement system at its current condition and is limited to preventive maintenance and minor responsive maintenance. Projects under the Pavement Preservation Program do not include either minor or major rehabilitation or reconstruction. In accordance with the Department’s Guidelines for Pavement Preservation Projects the scope of the project must involve no utility work other than incidental work such as the adjustment of existing features affected by the resurfacing such as monuments, catch basins and manhole covers.

The goal of the Pavement Rehabilitation Program is to repair damage to extend overall pavement life. Projects are limited to pavement surface treatments only and do not typically include drainage, roadway realignment, curb, gutter, sidewalk or signal work. The Guidelines for Pavement Rehabilitation Projects specify that the scope of work must not include utility involvement except for incidental work such as raising of manholes.

B. Required Utility Coordination Activities and Tasks during Design

Utility companies with facilities, specifically manholes or other structures in the pavement section impacted by rehabilitation or preservation treatments should be notified of the scope and schedule of the project.

C. Utility Certification

A Utility Certification is required prior advertising every project regardless of whether utility facilities are affected or eligible for reimbursement on a project. The Utility Certification should state the following as they apply:

• No utility facilities will be affected by the project
• All utility work will be completed prior to start of construction
• Arrangements and all agreements are made to have utility work undertaken during construction including that appropriate notification will be included in the bid proposal notifying all prospective bidders of any utility work that will occur concurrently with the highway project
A. General

Construction Manager/General Contractor (CMGC) is a successful and innovative contracting method that allows for, among other benefits, accelerated project delivery. CMGC is typically used for projects that are technically complex, have challenging schedules or where a high level of construction phasing may be appropriate (e.g., long corridor). The CMGC method blends different aspects of the design-bid-build and design-build project delivery and contracting methods. Like design-bid-build, UDOT maintains separate contracts with the designer and the contractor; and the design and construction process generally is closer to that of design-bid-build. Like design-build, a contractor is involved during the design phase and there is greater flexibility in the project parameters including the potential of scheduling construction prior to the design being 100 percent complete.

Advantages of the CMGC delivery method that allow for a quicker project delivery include:

- Agreement on a construction price earlier in the process minimizes time between the completion of design and beginning of construction.
- Flexibility of scheduling where construction can be phased or begun prior to the completion of the design.
- Contractor participation facilitates the design of a project that can be more efficiently constructed. Addressing constructability issues, including utility impacts with regards to critical path scheduling, occurs during design instead of construction, minimizing or eliminating the learning curve a contractor typically has at the beginning of construction. This allows for more effective construction sequencing and scheduling.

There is generally less overall project risk involved with CMGC delivery versus design-bid-build and design-build, although UDOT incurs more of the risk than with design-bid-build. But the risk is managed and mitigated by UDOT in the collaborative process of the CMGC environment versus by the Design-Builder in the design-build environment.

At the completion of design, UDOT negotiates with the contractor to secure a contract for construction. If negotiations are not successful, UDOT can decide to publicly advertise and bid the project.

For more information about the CMGC project delivery method, visit the following UDOT Website: Construction Manager/General Contractor (CMGC) Information
B. Project Delivery Network CMGC Activities

CMGC Activities including Deliverables, Tasks and Responsible Parties are now included in the Project Delivery Network. Beginning with the selection of a CMGC contractor, the process to deliver a CMGC project includes extensive constructability, risk and cost analysis and management at the Geometry, Plan-in-Hand and Plan, Specification and Estimate (PS&E) Stages of the project.

1F1 Obtain CMGC Contractor

2F1 CMGC Geometry Constructability Review

Overview

Review proposed geometry for potential construction issues. Identify and eliminate potential obstacles that could lead to errors, delays and/or overruns in key areas including utility conflicts.

2F2 CMGC Geometry Risk Workshop

Overview

Conduct a risk analysis workshop with the entire project team. Develop Risk Register and mitigation strategies.

2F3 CMGC Geometry OPCC Estimate

Overview


3F1 CMGC Plan in Hand Constructability Review

Overview

Review Plan-in-hand Package for potential issues in key areas including utility conflicts.
3F2 CMGC Plan in Hand Risk Workshop

Overview

Conduct a risk analysis workshop with the entire project team. Update Risk Register and mitigation strategies. Retire risks that have been eliminated.

3F3 CMGC Plan in Hand OPCC Estimate

Overview

Produce a project cost estimate based on the Plan-in-hand Review Package

4F1 CMGC PS&E Constructability Review

Overview

Perform constructability review of the PS&E Package. Review key areas including utility conflict resolution.

4F2 CMGC PS&E Risk Workshop

Overview

Conduct a risk analysis workshop with the entire project team. Update Risk Register and mitigation strategies. Retire risks that have been eliminated.

4F3 CMGC PS&E Estimate

Overview

Produce a project cost estimate based on the Plan-in-hand Review Package

5F1 CMGC Issue for Bid Pricing

Overview

Compile final project pricing from all discipline deliverables into one final design package. Input pricing into the Electronic Bid System.

C. Key Utility Coordination Advantages and Challenges for CMGC Projects

Utility coordination on CMGC projects generally follows the Utilities process outlined in the Project Delivery Network for design bid build projects as discussed in Section 4 of this manual. The selection of a CMGC contractor during the Geometry phase and the comprehensive constructability, risk and cost analysis inherent to the CMGC delivery
process makes it advantageous on large or multi-year projects or when extensive or complicated utility issues have been identified.

Key utility coordination advantages include having the contractor participate in the identification and planning of utility relocations. Utility work can be considered during constructability reviews, allowing the contractor to anticipate work sequencing or other schedule related impacts.

Having the contractor involved in the identification of risk and development of mitigation strategies to minimize or expedite utility relocation work promotes communication and cooperation between the contractor and the utility companies, and provides UDOT with insight into how utility involvement will impact the schedule and cost of the project.

Key utility coordination challenges identified on previous CMGC projects include:

There are typically more design iterations using the CMGC delivery method. The challenge is to engage the utility company to obtain needed information without the utility company fully completing their design while design is in the iterative mode, and addressing their design needs (more cost and longer duration).

CMGC projects facilitate tailoring the project scope to fit existing funding. If more funding becomes available, there are often opportunities to expand the overall project scope. Managing the expectations of utility companies and educating them on the more positive outcomes can be critical for successful utility coordination. Utility companies need to understand that additional scope may be added and that when the scope increases, that it doesn’t result in rework, but new work. Keep utility companies engaged and establish new deadlines for the new work.

CMGC projects may be separated into more than one construction contract or package to facilitate quicker project delivery. A lengthy project may be separated into individual segments or a project may be separated into sequential operations such as grading, major structures, minor structures and paving. Likewise, utility coordination needs to be flexible to incorporate these types of schedules while still being mindful of the overall final product so utility relocations and solutions for the first contract(s) in construction also are consistent with the needs of the following contract(s) still in design.

The buffer time between the end of design and the beginning of construction is minimal if not altogether eliminated at times with the CMGC delivery method. In some cases, (and in addition to the separation of a project into multiple contracts as noted above), construction may begin before the design is 100 percent complete. Contractors will generally want to proceed as soon as possible with construction, which may be prior to utility design, estimates, and agreements being completed. This may put schedule pressure on the utility coordinator and the utility companies to expedite the completion of the agreements and mobilize to begin relocations. However, having been involved in the design process both the contractor and utility companies are also aware of utility issues, relocations, schedules and the critical path. Also, following the utility coordination activities and tasks for design-bid-build projects, utility information is incorporated into
utility special provisions and limitations of operations to inform the contractor (contractually) of the expected utility conditions for the project.

Utility Certification is required to verify:

- All impacted utility companies have been notified of the project, allowed to participate in the planning and design, and all necessary relocation arrangements and agreements have been made
- Appropriate notification has been included in the bid proposal to notify prospective bidders of any utility relocation work that will occur concurrently with the highway project
- Buy America requirements have been addressed.

Given the conditions noted above, for CMGC projects, there may be times when all needed utility agreements are not completed at the time utility certification is expected. In such cases, at a minimum, all utility impacts are to have been coordinated and a plan in place to mitigate these impacts in a manner consistent with the construction schedule and as documented in the project contract in the utility related Special Provisions and Limitations of Operations. In such cases, if an agreement has been sent to a utility company and the appropriate funds have been authorized (R-709), then a notice to proceed can be given to the utility company at UDOT’s discretion. See Appendix T for the Utility Certification example.

Successful utility coordination is not only achieved by following proven processes and technical expertise, but also through having and maintaining positive working relationships with the utility companies. These positive working relationships can be of great benefit in meeting the challenges within the CMGC working environment. When done well, the experiences on a CMGC project can strengthen the relationships between UDOT and utility companies.
A. General

Design-Build (DB) is a successful and innovative contracting method that allows for, among other benefits, accelerated project delivery. In the DB process, UDOT solicits proposals based on a design that is approximately 30 percent complete. Proposals may be low-bid or best value. The phrase “best value” includes projects with technical and price components; whether the project is split by percentages or assigned a fixed price with variable scope. The selected Design-Build is responsible for completing the design and construction of the project. Construction begins as soon as the initial design packages are completed, and subsequent construction phases begin as other design packages are completed.

The utility coordination process in this section assumes that a project was chosen to be a DB project before project development began. Because not all DB projects may be planned to be DB from the beginning (i.e., a project could start out as a Design Bid Build (DBB) project when the design is at the 30 percent completion stage), the project manager will need to consider what level of utility coordination occurred under the DBB process before pursuing steps in the DB approach.

The DB project process consists of two phases:

- The DB Procurement Phase where the 30 percent design is completed and request for proposals (RFPs) are developed in the procurement of a Design-Builder
- The Design-Build Implementation Phase where the design and construction are completed by the Design-Builder

Utility coordination on a DB project differs from that of DBB projects in two major areas: Design-Builder’s roles and UDOT’s roles (during the Design-Build Implementation Phase). A Design-Builder has more roles and responsibilities with DB projects and they have greater freedom and control to mitigate utility issues. While a Design-Builder must follow the provisions of the contract and the project utility agreements, they may also use innovative methods to coordinate work with utility companies. The Design-Builder’s ability to coordinate utility concerns will influence the success of all parties involved. By mitigating risk and taking a proactive approach, the Design-Builder can avoid unexpected utility issues and expedite the utility relocation process.

During the Design-Build Procurement Phase, UDOT performs activities and tasks to provide the proposers with appropriate utility information so the proposers can assess the utility impacts. Among these activities and tasks is the collection of enough utility information to provide to proposers, resulting in lower risk to the contractor and subsequently lower and more accurate bid prices. This may warrant obtaining Subsurface Utility Engineering (SUE) Level A information. The process for utility coordination on DB projects is built on the proven concept of coordination, cooperation, and communication (CCC), early and often.
UDOT’s responsibilities during the Design-Build Procurement Phase are:

- Identify utility companies and request utility records
- Issue Authorization for Design Expenditures
- Depict utilities/SUE QL D, C, B, and A (if necessary)
- Hold utility information meetings
- Prepare and execute Master Utility, Betterment, Aesthetic and Landscape, and Railroad Agreements
- Update RFP sections related to utilities, railroads, and third-party agreements

UDOT’s responsibilities during the Design-Build Implementation Phase are:

- Oversight of the DB’s activities to ensure compliance with the contract and the utility coordination process
- Final approval of supplemental/project agreements for utility relocations
- Providing reimbursement to utility companies for relocations
- Audit and closeout of DB and utility contracts and agreements

Per *Utah Code Section 54-3-29, Removal, Relocation or Alteration of Utility Facility in Public Highway Construction or Reconstruction*, notice of not less than 30 days must be provided to utility companies before preliminary design or project development meeting, issuance of an RFP, and after a change in scope of a DB project with the opportunity for utility companies to actively participate in a meeting to coordinate impacts to their facilities. A change in scope is most likely to occur if the selected DB proposes an alternative design (that is approved), but could also occur at other points in the project.

**Supplemental Information**

While this section provides the basic details to perform utility coordination on DB projects, the intent is to supplement and not completely duplicate information that is found elsewhere in this MOI. In this section, you will find specific references to Section 4, Design Bid Build projects, to provide more detail for particular topics.

**B. Procurement Phase**

This section details the utility coordination process and associated activities and tasks to be completed during the DB Procurement Phase. The process is separated into steps. While sequential, some steps in the process occur concurrently or in a slightly different order. Step 2 can be started while the information in Step 1 is being processed. Step 9 (Pre-bid Utility Meeting) may coincide with an earlier step depending on scheduling.

Other than the Pre-bid Utility Meeting, all meetings and workshops during the Procurement Phase are between UDOT and the utility companies; (bidding or selected) contractors would not attend.
Communication between UDOT, Utility Companies, and Proposers

The basic utility coordination process for DB projects involves the gathering of detailed information by UDOT, without going so far as identifying potential utility conflicts and relocation schedules, except for high-risk utility and railroad commitments or long lead utility materials. Information that is gathered, be it the basic information or more detailed, is provided to the proposers in the RFP document. UDOT may elect to hold a Pre-bid Utility Meeting that offers further opportunity for information exchange between the utility companies and proposers prior to the final RFP.

Inclusion of utilities and related incentives into the best value evaluation obligates Proposers to gather further utility information, including costs, beyond that just needed to understand the utility impacts on their own construction scheduling.

Utility companies can often be inundated with questions and requests for information from Proposers as they prepare their bids. Proposers may contact utility companies independently to gather further information individually, beyond the information provided in the RFP and at the optional Pre-Bid Utility Meeting, unless UDOT places conditions or limitations on communications or utilizes other methods to neutralize communications.

One method of limiting communications is to not allow Proposers to contact utility companies directly with questions. Instead, Proposers submit the questions to UDOT through the Request for Clarification (RFC) process. This ensures all Proposers receive and bid on the same information.

Another method to consider, which neutralizes communications when Proposers need to provide utility costs, is to provide estimated unit prices for relocating the types of facilities present on the project. This method would provide the Proposers with neutral information about utility relocation scheduling issues and costs without preconception. It would also allow them to judge the value of designing around high cost or problematic relocations. The utility companies do not have the time or resources to engineer and estimate costs for speculative relocations, but they may take the time to provide typical prices. This way all the Proposers and UDOT are making the same assumptions.

When deciding if, and what conditions, or limitations to place on communications between Proposers and utility companies, consideration should be given to balancing the number of requests that utility companies may be receiving as Proposers investigate their own unique approaches (without risk of other Proposers gaining knowledge of such approaches) and the information that a Proposer will need to obtain to prepare an accurate bid that can be reviewed consistently against the other bidders.

Note on DBs doing work for Third-Parties within UDOT Right of Way: No Third-Party deals within UDOT Right of Way will be allowed without prior approval from UDOT. If the work with the Third-Party can be considered a project innovation, then the Proposer should include these in the innovations section to avoid risk of not having it be approved. Preapproval may be granted in such cases with proper UDOT approval documentation.
Step 1: Utility Identification

Overview

Begin this activity as soon as possible. Work with the SUE firm along with the Program Management’s utility coordinator to identify all utility companies and complete an accurate depiction of existing utility facilities within the project limits.

Early utility identification of existing utilities and coordination support the development of accurate plans and are critical to the success of the project. Complete and detailed information about the location of utility facilities within the limits of the proposed project allows for the development of more accurate plans, which facilitates early decisions regarding design and Right of Way requirements during the DB Procurement Phase and avoidance of potential issues later in the DB Implementation Phase.

The Region Utility and Railroad Leader or Coordinator is the leader of this step and is directly responsible for some tasks while ensuring that other tasks have been completed by the directly responsible party. The Statewide Railroad and Utilities Director participates in the resolution of issues escalated from the project or Region level. Thorough documentation at the Region level assists the Statewide Railroad and Utilities Director in issue resolution.

Tasks

The directly responsible party for completing each task is noted following the title of each task.

Identify Utility Companies within Project Limits and Request Utility Records/Plans – SUE Firm & Project Utility Designer (consultants)

This task involves the following components:

- Identify all utility companies within the project limits
- Identify a point of contact for each utility company for project design coordination
- Develop a Utility Company Contacts List, which includes name, address, phone number(s), and email addresses

Request information in shapefile or CADD format from capable utility companies for greater efficiency and eliminating interpretation issues.

Notify Utility Companies of Project and Issue Authorization for Design Expenditures - Region Utility and Railroad Leader or Coordinator

This task involves notifying each utility company within the project limits through the Interchange Agreement Tracking System. Provide each utility company with the project description, project limits mapping, and begin and end schedule dates. If a utility company has not previously provided records of their existing facilities, request they do so along
with documentation of any easement or other land rights their existing utility facilities occupy.

Prepare and issue Authorization for Design Engineering Expenditure letters to each utility company using the Interchange Agreement Tracking System. These letters cover the approval of utility in-house non-construction expenditures, but does not authorize an expenditure budget. A Reimbursement Agreement must be executed if expenditures will be charged to the project prior to utility company beginning any billable work. This official letter will often address the next task of notifying utility companies of the project and requesting utility records/plans A consultant may prepare the letters in Interchange, but they must be signed and issued by the Region Utility and Railroad Leader. This letter will accompany (be attached) to the Notification described below.

UDOT utility facilities also need to be accounted for. Coordinate with the Fiber Operations Manager to identify these facilities and request Telecommunication Agreements covering specific locations for third-parties who have fiber in UDOT’s system. Include these agreements in Part 6 of the RFP as they will govern the DB work within the ATMS for each specific third-party who has fiber within the UDOT’s system.

Coordinate with Subsurface Utility Engineering & Survey Team – Project Utility Designer (consultant)

Coordinate with the SUE and Survey Teams to gather overhead and surface facilities within the project limits. Subsurface utility location information is not available from Blue Stakes during planning and design (Blue Stakes will only provide utility company contact information). Good communication with the SUE and Survey Teams is extremely important to ensure repeat visits are not required. Clearly identify all utility facilities that are needed, including the inverts to be collected from underground facilities and vertical clearance for overhead lines. Vertical clearance of RMP lines should be verified by the company to account for temperature and sag. Non-conforming lines may have relocation requirements that could impact the project or RFP language. Ensure the Design Team is updating the SUE and Survey Teams as appropriate to assist their efforts in locating facilities and understanding what is required for the current design.

Develop Subsurface Utility Engineering (SUE) Quality Levels A, B, C and D – Consultant SUE Firm

UDOT requires the use of SUE at appropriate quality levels on all projects. Use utility company records, field observations, and collected survey information to develop a depiction of underground utility facilities within the project limits. The SUE consultant will collect Quality Level B, C, and D information. Provide a complete depiction of the utility facilities within the project limits. Follow UDOT CADD standards and provide the information in the appropriate project CADD file format.

Quality Level A may be required at varying locations. Coordinate with the Region Utility and Railroad Leader or Coordinator before beginning work.

For additional information about SUE and project applications, see Appendix A.
Deliverables

The end products are:

- a complete depiction of utility facilities within the project limits (including SUE deliverables with defined quality levels)
- a list of potentially affected utility companies
- issuance of Design Engineering Expenditure letters that provide authorization to all utility companies identified within the project limits

Step 2: Utility Information Meeting/Master Utility Agreement

Overview

This step typically occurs when design has reached a point where a preliminary project layout (preliminary basic design and typical cross-sections) are available to send to the utility companies. This meeting allows UDOT and the utility companies to explore significant project impacts and learn as much as possible from each other about how the project may affect utility facilities. Provide information to the utility companies on processes involved for DB projects, including those regarding SUE, betterments, and to clarify roles, responsibilities and expectations of all parties to be involved and how they depend on one another for a successful project. Utility companies must submit any relevant utility easement, or other land rights, documentation that would be a basis for reimbursement claims if they have not already done so in the previous step. Review the draft Master Utility, state wide, and telecommunication agreements and collect utility design, relocation, protection, schedule, and betterment requirements. The Master Utility and Project Agreements must be executed prior to UDOT advertising the RFP and is described in Step 7.

The Region Utility and Railroad Leader or Coordinator is the leader of this step and is directly responsible for some tasks while ensuring that other tasks have been completed by the directly responsible party. The Statewide Railroad and Utilities Director participates in the resolution of issues escalated from the project or Region level. Thorough documentation at the Region level assists the Statewide Railroad and Utilities Director in issue resolution.

Tasks

The directly responsible party for completing each task is noted following the title of each task.

Hold Separate Utility Information Meetings with Each Potentially Impacted Company – Region Utility and Railroad Leader or Coordinator

Send utility companies a meeting request using the Interchange Agreement Tracking System along with the appropriate project layout and utility depiction if not already provided with the Design Authorization notification. Provide utility companies at least 30 days’ notice for this meeting. In some cases, advance notices of 30 days, may not be ideal
for DB projects. In such cases, contact major utility companies (preferably by phone) for scheduling availability to insure utility companies have the opportunity to participate and coordinate per the provisions *Utah Code Section 54-3-29*. This notice is also to be sent at least 30 days prior to the issuance of a RFP. Include a request for utility companies to submit any relevant utility easement, or other land rights documentation that would be a basis for reimbursement claims if they have not already done so.

Send an electronic meeting appointment and attach an agenda prior to the meeting. Prepare for the meeting by reviewing the project scope and known utility information. Reminder phone calls and emails facilitate greater utility company attendance. Prepare a sign-in sheet prior to the meeting.

Hold the meeting at a location that best addresses attendees’ needs. The meeting may be at an office or at the project site, or a combination of both, depending on specific needs. Have project layouts available.

The following UDOT and Consultant staff should also be invited to this meeting:

- Region Utility and Railroad Leader (if this meeting is scheduled by a consultant coordinator)
- UDOT Project Manager
- Consultant Project Manager (if applicable)
- Roadway Design Team (including hydraulics)
- Resident Engineers
- Fiber Operations Manager (if applicable)
- Bridge / Structures Designer (if applicable)

Discuss the following items at the meeting:

- Project scope and schedule
- Coordination/communication plan
- Location, size, type, and significance (as relates to customers served and time to relocate, if needed) of utility facilities
- Existing utility easements, prescriptive rights and real property interests that would be a basis for reimbursement claims
- New property needs to facilitate potential utility relocations
- Permits such as, irrigation or canal, UTA, UPRR wireline, etc.
- Master Utility, Statewide, and Telecommunication Agreement requirements
- Utility relocation partnering between utilities, (e.g., joint facilities, joint trenches, using a common contractor, etc.)
- Facilities on bridges and whether utility companies will want to retain their facilities on the bridge and if there are any issues such as asbestos
- Utility facility information or work requirements in the UDOT RFP contract that are not stated in permits, Master Utility, Statewide, or Telecommunication Agreements.
- Potential utility betterments. For further discussion on utility betterments see PDN Task 4U2 Prepare and Obtain Utility and Railroad Agreements and Appendix F
- UDOT-owned utility facilities such as ATMS
• Related impacts and items to be included in the UDOT contract
• Future utility company improvement plans and schedules and its relationship to the project. Any permitted utility improvement activity prior to the project needs to be reviewed and included with the procurement survey documents
• Schedule for utility meetings (if applicable)
• Other utility companies that may be involved that are not on the current potentially affected list. Often local utility company personnel will be able to identify utility companies on site as they work together with each other on a regular basis
• If SUE Level A is being utilized, this meeting may be used to kick-off or exchange information for that service

* In cases where UDOT has determined that structure installations will be allowed, structure installations shall be at locations and of a design subject to review and approval by UDOT’s Structures Department. Utility installations on structures shall not be considered unless the structure is of a design that is adequate to support the additional load and can accommodate the utility without compromising highway features. See Administrative Rule R930-7-9 Utilities on Highway Structures for further details on requirements for allowing utility structure installations

Following the meeting, provide meeting minutes to all attendees and include decisions, important discussions, and action items to be completed and the responsible party for each action item. Request that attendees respond with any comments on the meeting minutes within business 10 days.

**Right of Way Considerations**

- Review easements or other ownership documentation such as utility-marked plans to ensure the information is complete and incorporated into UDOT’s project plans and files. Notify utility companies of any errors, omissions, or questions on the submittal. The Region Right of Way Engineer verifies utility company fee title and easement documents for determination of reimbursement eligibility and prepares utility related Right of Way documents as necessary.
- Follow the requirements of Utah Administrative Code R930-8-7, Replacement of Property Rights, and work closely with the UDOT Right of Way Lead when addressing utility related property rights.

Complete Master Utility Agreements – Region Utility and Railroad Leader or Coordinator with assistance from Project Utility Designer

Transmit either a draft Master Utility Agreement or Project Agreement (for Statewide Master Agreements) using the Interchange Agreement Tracker System each utility company and request review and signature within a pre-determined timeframe (use the Tracker to set these deadlines). Upon receipt of the signed agreement, obtain UDOT signatures and process for full execution. Fully-executed Master Utility Agreements should be in place prior to the release of the DB RFP but no less than the last Addendum to the RFP. Include all draft and executed agreements in Part 6 of the RFP. See Appendix P for an example of a DB project Master Utility Agreement.

Follow-up on all action items to see that they are completed.
Step 3: Utility Follow-up Meetings (as needed)

Overview

Additional meetings are conducted with specific utility companies who may have major impacts during the project to review the project and potentially affected utility facilities in more detail. During these meetings, the preliminary design, the depiction of utility facilities and potential utility involvement are reviewed.

These meetings are intended to facilitate the gathering of information regarding existing and planned utility facilities that are within the project limits, including betterments. This may also warrant obtaining SUE Level A information. They are also an opportunity to develop positive working relationships between UDOT and utility companies. Having positive working relationships with utility companies is often critical to the ultimate success of a DB project. UDOT and the utility company can evaluate where unavoidable utility relocations may occur and prepare plans and schedules that reflect these known conditions.

Depending on the extent of utility company involvement, additional meetings may be needed to facilitate further coordination with utility companies. When applicable, consider combining these meetings with other utility companies who may want to share facility resources.

The Region Utility and Railroad Leader or Coordinator is the leader of this step and is directly responsible for some tasks while ensuring that other tasks have been completed by the directly responsible party. The Statewide Railroad and Utilities Director participates in the resolution of issues escalated from the project or Region level. Thorough documentation at the Region level assists the Statewide Railroad and Utilities Director in issue resolution.

Tasks

The directly responsible party for completing each task is noted following the title of each task.

Hold Utility Meetings – Region Utility and Railroad Leader or Coordinator (with consultant help)

Follow the steps outlined in Step 2.

Shotgun Estimate

During Step 2 develop a Utility Shotgun Estimate and submit to Program Finance for R-709 funding. For each supplemental agreement executed, coordinate with Program Finance to update the original Shotgun with the accurate estimates.
Discussion Topics

- Unavoidable utility relocations
- Status of Master Utility Agreement review and signature
- Future utility company improvement plans and schedules and their relationship to the project. Any permitted utility improvement activity prior to the project needs to be reviewed versus the proposed project to eliminate any conflict.
- Potential Quality Level A locations
- Reasonable deadlines for utility companies to submit requested information pertaining to the above items

Following the meeting, provide meeting minutes to all attendees and include decisions, important discussions, and action items to be completed and the responsible party for each action item. Request that attendees respond with any comments on the meeting minutes within business 10 days.

**Step 4: Identify Utility Depth (SUE Quality Level A)**

**Overview**

From the discussions that occurred at the utility meetings, determine specific locations where verified horizontal and vertical location information (SUE Quality Level A) could be used by the DB to avoid existing utility facility conflicts, positively identify whether facilities are in conflict or not, and avoid unnecessary utility relocations or assist utility companies with designing relocation plans. While other than the unavoidable relocations, conflicts are not being formally identified, the utility conflict matrix or a similar tool may be used to help prioritize Quality Level A locations.

The end product of this step is the depiction and tabulation of data of all Quality Level A information gathered that adds to the complete horizontal depiction of utility facilities within the project limits that was completed in Step 1.

The Region Utility and Railroad Leader or Coordinator is the leader of this step and is directly responsible for some tasks while ensuring that other tasks have been completed by the directly responsible party.

**Tasks**

The directly responsible party for completing each task is noted following the title of each task.

Coordinate with SUE Consultant for SUE Quality Level A (Exploration of Existing Utilities) – Project Utility Designer (consultant)

This task involves the following component:

- Provide SUE Consultant with locations identified in 3U1 and 3U2 (Utility Conflict Matrix Summary) to conduct SUE Quality Level A, Exploration.
This task is facilitated by using non-destructive digging equipment at critical points to determine the precise horizontal and vertical position of underground utilities as well as the type, size, condition, material and other characteristics. Quality Level A is the highest level of SUE accuracy currently available and requires the full use of the subsurface engineering services. Critical points may include locations where existing utilities will cross, or will be adjacent to, areas of excavation for ditches, retaining walls, footings, drainage structures, pilings, cut/fill areas, etc.

Review SUE Quality Level A, MicroStation File – Project Utility Designer (consultant)

This task involves the following components:
- Verify SUE Quality Level A, MicroStation file (provided by SUE Consultant) is in the project coordinate system with all requested pothole locations displayed and identified completely
- Verify SUE Consultant’s SUE Mapping File Certification was uploaded onto ProjectWise

Deliverables
- SUE Quality Level A File
- SUE Mapping File Certification

Step 5: Advanced Utility Relocations

Overview

Typically, utility relocations do not take place during the DB Procurement Phase. With the nature of DB, conflicts often cannot be completely assessed at this stage. Also, where some facilities are thought to be in conflict during the DB Procurement Phase, relocations can sometimes be avoided during the DB Implementation Phase. However, where a relocation is deemed unavoidable and if waiting to relocate that facility until the DB Implementation Phase will likely interfere with the construction schedule for the project, UDOT has the option to work with the utility company to have the facility relocated during the DB Procurement Phase. Depending on the specifics of the project, UDOT may also choose to work with utility companies to have other unavoidable relocations completed during the DB Procurement Phase regardless of relocation schedule.

The Region Utility and Railroad Leader or Coordinator is the leader of this step and is directly responsible for some tasks while ensuring that other tasks have been completed by the directly responsible party.
Tasks

The directly responsible party for completing each task is noted following the title of each task.

Identify Advance Utility Relocations – Project Utility Designer (consultant)

Using utility information obtained from the utility companies during the meetings in Step 3 (and any subsequent requested information received from utility companies and/or SUE Quality Level A information), assess and identify what utility relocations should proceed in advance of the DB Implementation Phase.

Request Utility Plans, Schedules, and Cost Estimates – Region Utility and Railroad Leader or Coordinator

For identified advanced utility relocations, send requests through the Interchange Agreement Tracking System and set reasonable, specific deadlines for submittal of requested information to allow for all notices to proceed and agreements to be completed prior to the advertisement of the RFP and to allow for relocations to occur so as not to impede construction.

The utility relocation plans should be complete and include the following:

- Location, type, size, material, and class of all existing facilities
- Relevant information such as voltage, operating pressure, etc.
- Temporary relocations/adjustments to facilities
- Permanent relocations/adjustments to facilities (horizontal and vertical)
- Facilities that will be left in place or removed and not replaced
- Construction stages or relocations
- Dimensions from critical project features such as Right of Way, highway centerline, ramps, bridges, etc.

At a minimum, the utility relocation plan view shows proposed temporary and permanent utility facilities. If necessary to complete a thorough review of the relocation plans, the Region Utility and Railroad Leader or Coordinator may request that the utility company provide this information in profile and cross-sectional views.

For instance, if an underground utility is to be placed outside of the construction limits at a five-foot offset parallel to the Right of Way on a rural project, it likely will be sufficient for the utility company to only indicate the depth of cover. However, if an underground utility is to be placed within the construction limits in the areas of drainage structure placements, a more detailed vertical depiction of the proposed utility facility is needed. The plans must include profiles for aerial structures where power or communication lines cross trunk highways and for pipelines and other underground utility crossings. In general, elevations are preferred over depths for most profiles/vertical relocation information. For underground crossings, the method of crossing (directional bore, jack and bore, microtunneling or other form) must be specified along with relevant details such as location of bore pits and receiving pits.
Step 6: Review of Utility Information

Overview

Review the submitted utility information and track that everything requested has been submitted. Typical information submitted:

- Existing utility facilities
- Planned utility facilities
- Betterments
- Utility work to be included into UDOT’s contract
- Unavoidable relocations that will occur during the DB Procurement Phase

Review of utility information received both facilitates tasks in the next steps as well as allowing for an overall review of any further information that might be needed.

The Region Utility and Railroad Leader or Coordinator is the leader of this step and is directly responsible for some tasks while ensuring that other tasks have been completed by the directly responsible party.

Tasks

The directly responsible party for completing each task is noted following the title of each task.

Review of Utility Information for Existing and Planned Utility Facilities - Region Utility and Railroad Leader or Coordinator along with Project Utility Designer (Consultant)

Review the utility information that is submitted by the utility companies to see that all requested information has been submitted, is complete, and appears accurate. Review for applicability of inclusion into the RFP documents and prepare for such inclusion (Step 8).

Review of Utility Information for Utility Work to be included in UDOT Contract – Project Utility Designer (Consultant)

Review standards and specifications, scope of work and estimated costs for utility work to be included into the UDOT Contract. Review that standards and specifications are consistent with UDOT Standards and Specifications (or if not how to resolve any differences).
Refer to equivalent tasks noted in Section 4, 3U4 Complete Utility Designs and 4U3 Complete Utility Plans and Documents for further information on details to complete this work. Note that for DB projects, like the highway design the utility design is also not completed so tasks involving the completion of plans do not pertain to DB projects.

Review of Utility Companies’ Plans, Schedules, and Cost Estimates for Advanced Relocations – Region Utility and Railroad Leader or Coordinator along with Project Utility Designer (Consultant)

A Review of utility relocation plans, estimates, and schedules facilitates successful utility relocations. The utility company furnishes (a) detailed relocation plans; (b) schedule; (c) itemized cost estimate; and (d) information to be included in the UDOT Contract documents.

Review utility relocation plans and schedules to make sure all conflicts have been properly addressed and the relocation is compatible with the project construction and schedule. Review utility relocation plans and schedules at the same time, verifying all conflicts between the utilities and the proposed road construction have been eliminated and the information in the relocation plan is consistent with the schedule.

The relocation plan should depict in detail facilities that are to be removed, to remain, to be adjusted or to be relocated to fully accommodate the construction of the project. Utility relocation plans are to contain sufficient detail to allow for a complete review of all issues.

Review utility relocations plans for compatibility with Administrative Rule R930-7 Utility Accommodation. Utility relocations not only need to accommodate the construction of the project but must follow the requirements of Administrative Rule R930-7, which prescribes conditions under which utility facilities may be accommodated on all public Right of Way under the jurisdiction of UDOT.

Other items to consider when reviewing utility relocation plans are:

- Other future UDOT projects
- Potential maintenance issues
- Environmental and installation requirements as noted in Administrative Rule R930-7-8 Definitive Design Requirements, Part 2 Environmental Compliance, and Part 3 Installation of Utilities in Scenic Areas
- Routes used for the movement of oversize and/or overweight vehicles and loads, combinations of vehicles, and mobile/modular homes

Review the basis of eligibility of utility claims for reimbursement and that the claim meets the requirements of Administrative Rule R930-8 (which incorporates 23 C.F.R. 645). See 4U2 - Prepare and Obtain Utility and Railroad Agreements and Permits for details on these matters.

Return plans, estimates, and schedules that require corrections to utility companies, making recommendations about corrections to be made and as applicable utilize previous meeting correspondence for items that were agreed to. For minor corrections, markups to the
appropriate documents might be made with correspondence indicating that UDOT and the utility company have agreed to the markups.

**Deliverables**

- Approved Utility Company Plans, Schedules, and Cost Estimate(s) for advances utility relocations
- Utility information that is ready for incorporation into the RFP documents

**Step 7: Prepare and Obtain Other Utility Agreements**

**Overview**

Master Utility Agreements between UDOT and each utility company are used for DB projects to establish the terms and conditions applicable to the utility work to be performed. Supplemental agreements are written off the Master Utility Agreements (during the DB Implementation Phase) to complete the utility work.

When applicable, Betterment Agreements between UDOT and a utility company provide for utility system upgrades or other improvements negotiated with utility companies prior to award of the DB contract. Include a description of each betterment in the Betterment section of the Master Utility Agreement with preliminary design and payment schedule. Betterment work that directs the DB to complete the design and construction at lump sum cost must include an additional betterment agreement with a lump sum cost schedule and preliminary design. Lump Sum work final design and schedule must be further approved through a Supplemental Agreement. Memorialize Betterment work that requires the DB to negotiate the design and construction of the Betterment work through a Supplemental Agreement, include final design, schedule, and budget.

Aesthetic and Landscape, MOU, Cooperation may be written during the Procurement phase to memorialize items such as baseline and aesthetic choices, drainage co-mingling, ratios, and schedule commitments for high-risk facilities among others. Letter agreements may be written for appropriate work that is less than $25,000 (see 4U2 Prepare and Obtain Utility Agreements for more information on the type of work that is appropriate for a letter agreement and Appendix J for the Letter Agreement example).

The Region Utility and Railroad Leader or Coordinator is the leader of this step and is directly responsible for some tasks while ensuring that other tasks have been completed by the directly responsible party. The Statewide Railroad and Utilities Director participates in the resolution of issues escalated from the project or Region level. Thorough documentation at the Region level assists the Statewide Railroad and Utilities Director in issue resolution.
Tasks

The directly responsible party for completing each task is noted following the title of each task.

**Complete Agreements for Advanced Utility Relocations** – Region Utility and Railroad Leader or Coordinator

Depending on the project specifics, a project master utility agreement and a supplemental may be written at the same time or a separate individual agreement (or statewide master with work order), may be used to process advance utility relocations. Generally, if the relocation work will be completed before a contractor is procured then a separate agreement is preferable. If the relocation work will continue past the time a contractor is procured, then doing it under a master agreement (with a supplemental for the relocation) that will be used for the whole project is generally preferred. Once fully executed, send copy of the agreement with an authorization to proceed with work to the utility company.

Permits are not required for utility relocations on UDOT ROW- these relocations are covered by agreement. Permits may be issued for relocations on UDOT projects when relocations are completed before the project starts and when any work is completed by the utility owner that is not part of the relocation for the project.

**Complete R-709s** – Region Utility and Railroad Leader or Coordinator

The Region Utility and Railroad Leader or Coordinator prepares and submits the R-709, Request for Federal Aid Project Approval, Authorization and/or Agreement form, for funding approval to Program Development and the FHWA for any advance utility relocations and utility work that is included in the UDOT Contract.

For more general information on reimbursement and agreements and their processing, see 4U2 Prepare and Obtain Utility Agreements.

**Deliverables**

The end products are:
- Executed Master Utility Agreements
- Executed Agreements and Authorizations to Proceed with Work for Utility Companies for advance relocations

**Step 8: Complete Utility Plans, Contract & For Information Only Documents**

**Overview**

Appropriate utility information that has been gathered through the utility coordination process is included in the contract documents to inform the proposers of the expected potential utility conditions for the project.
The Region Utility and Railroad Leader or Coordinator is the leader of this step and is directly responsible for some tasks while ensuring that other tasks have been completed by the directly responsible party.

Tasks

The directly responsible party for completing each task is noted following the title of each task.

Inclusion of Utility Information for Existing and Planned Utility Facilities – Region Utility and Railroad Leader or Coordinator

Review that proper utility depiction and information is included in the project layout/concept drawings/30 percent design. Include appropriate information from the SUE investigation.

Include appropriate utility information in the UDOT contract documents. This information typically includes (a) utility contact information -- name of utility, contact person, phone, and email for all utility companies that have facilities located within the project limits, including those whose facilities are not affected; (b) information regarding existing and planned utility facilities within the project limits including composition, condition, adequacy, redundancy, outage windows, outage scheduling, seasonal constraints on relocations, potential betterment requests, cable/wire details, special conditions (FAA, emergency service involvement, etc.), protect in place requirements and any other relevant restrictions for conditions involving working around or relocating the facilities. Note any utility relocations that have taken place or are underway. Inclusion of this information into the contract documents makes the proposers aware of conditions that may require mutual coordination between the utility company and the UDOT contractor. This information assists bidders with preparing more accurate bid proposals, finding the best design alternative and preparing their proposed project construction schedules accordingly. This information may also act to provide proposers incentives to find ways to avoid lengthy utility relocations.

Inclusion of Utility Information for Utility Work to be included in UDOT Contract – Utility Designer

Include standards and specifications and plans/concept design indicating scope for utility work to be included into Section 6A-Utilities of the UDOT RFP/contract documents. Ensure that standards and specifications are consistent with UDOT Standards and Specifications (or if not how to resolve any differences).

Deliverables

The end products are:

- Utility Relocation Plan Sheets/Concept Design
- Utility Relocation Project Documents
- Utility Relocation Cost Estimate
Step 9: Pre-bid Utility Meetings

Overview

If requested by the project team and utility companies, schedule a pre-bid utility meeting tailored to meet the needs of the project team and the utility companies. A pre-bid utility meeting is not required but allows for the proposers to ask questions of the utility companies to have a better understanding of what utility conditions to expect. This meeting provides a vehicle for sharing of additional utility information to all bidders above and beyond what is provided in the contract documents. This also helps minimize multiple proposers contacting utility companies with the same questions. For projects having a short-list selection, hold the meeting once the short-list selection has been completed. For projects that don’t have a short-list selection, hold this meeting at the appropriate time in the selection process for proposers. Limit attendance from proposers to three people per team or two people per team when there are many proposing teams.

Pre-bid Utility Meetings that are conducted in a group setting often do not add value as DB proposers consider design innovations proprietary and thereby will not disclose questions and concerns in a group setting.

The Region Utility and Railroad Leader or Coordinator is the leader of this step and is directly responsible for some tasks while ensuring that other tasks have been completed by the directly responsible party.

Tasks

The directly responsible party for completing each task is noted following the title of each task.

Schedule and Conduct Pre-Bid Utility Meeting –Region Utility Leader or Coordinator

Send utility companies a pre-bid utility invitation through the online Agreement Tracker. As appropriate, depending on the completion of the above steps or any changes that may have occurred since the last transmittal, include a project layout or equivalent preliminary design information with the notification. The notification (a) invites utility companies to the meeting and, (b) requests that they come prepared to discuss their existing and planned facilities as related to the project. The Project Manager or the Program Management team will invite the proposers using the appropriate notification system.

Conduct the pre-bid utility meeting with the utility companies and proposers who attend. UDOT should not be in the meeting but should remind each utility company to be consistent in the exchange of information with each proposer. Ensure each proposer has equal time with each utility company by monitoring the time.
Step 10: Utility Consent

Overview

UDOT must enter into a formal Master Utility Agreement with all utility companies whose facilities may be impacted by the project. On Design Bid Build projects, a Utility Certification is needed to verify all agreements are in place for affected utilities. On DB projects, while desired, due to timing, not all agreements may be in place at the time Utility Consent is expected.

In such cases, at a minimum:
- coordination with all potentially impacted utility companies is complete and needed information is included in the RFP documents
- agreements for advance relocations are in place
- other agreements are in process with the expectation that all will be signed and executed prior to the DB’s NTP

The Region Utility and Railroad Leader or Coordinator is the leader of this step and is directly responsible for some tasks while ensuring that other tasks have been completed by the directly responsible party.

Tasks

The directly responsible party for completing each task is noted following the title of each task.

Issue Utility Consent – Region Utility and Railroad Leader or Coordinator

The Region Utility and Railroad Leader or Coordinator creates, signs, and issues through ProjectWise the Utility Consent. See Appendix Q for example Utility Consent letter.

Deliverables
- Signed Utility Consent in ProjectWise

Design-Build Implementation Phase

Upon award of the contract, the design-build contractor initiates the utility coordination in the design-build implementation phase. As DB projects often involve the creation of multiple design packages, all or portions of this process may be repeated throughout the life of a project. Note that while sequential, some steps in the process occur concurrently or in a slightly different order.

In general, the design-build contractor takes the lead on the utility coordination steps with oversight from UDOT. There are some steps and activities, most specifically those that pertain to determining cost responsibility and payment to utility companies, that UDOT is directly responsible for and are noted as such.
Oversight responsibilities fall into three major categories:

- Quality Control (QC) - this is typically the design-build contractor’s responsibility
- Quality Assurance (QA) - this if often negotiable
- Oversight Audit - this is typically UDOT’s responsibility

UDOT may hire a consultant to be responsible for some of its tasks.

**Step 1: Utility Work Plan**

The design-build contractor prepares a utility work plan that provides the framework for coordination of utility relocations and issues. The work plan is to be consistent with and provide more detail on the information in the RFP/contract documents on what the design-build contractor’s utility coordination structure and responsibility should be. The work plan is submitted to UDOT for approval. Review a current DB RFP, part 4 section 19 for a list of utility work plan requirements.

**Step 2: Design-Build Utility Kickoff Meeting**

The DB schedules and conducts a Design-Build Utility Kickoff Meeting with UDOT and the utility companies. The purpose of this meeting is to:

- Introduce the design-build contract team to the utility companies so the parties become acquainted and to exchange contact and logistical information
- Review the scope and schedule of design and construction
- Review any initial action items needed. While noted later in Step 4, a design-build contractor may have already performed an initial utility conflict analysis and facilitation of utility relocations may be a relevant action item
- Review the Utility Work Plan, contract documents, RFP and Master Utility Agreements to facilitate future coordination activities
- Blue Stake/damage prevention coordination

Depending on the specifics of the project one or more kickoff meetings may be held. The DB takes and distributes minutes of the meeting.

**Step 3: Utility Identification**

The design-build contractor reviews the depiction of the existing utility facilities from the plans and contract documents provided during the procurement phase. The design-build contractor identifies the existence of any utility facilities not depicted and confirms the exact location, size, and type for any that are impacted by the project. The design-build contractor must notify UDOT immediately, upon discovery of an unidentified or misidentified utility facility. Any inaccuracies in, or omissions from, the depiction of the existing utility facilities in the plans and contract documents do not relieve the design-build contractor from responsibilities pertaining to coordination and resulting utility work. Depending on the nature of the situation, the design-build contractor may, or may not, be entitled to a change order to be approved by UDOT.
The DB should at a minimum complete the following activities to research utility locations to confirm utility depiction:

- Calls Blue Stakes for a planning and design ticket to obtain a list of utility companies
- Contacts utility companies
- Reviews utility records, previous plans or other UDOT/public records
- Conducts a field review
- Performs SUE investigations, if needed

**Step 4: Utility Conflict Analysis**

The design-build contractor completes a utility conflict analysis using updated design and/or utility location information. As design of a project progresses, some previously identified potential utility conflicts may be avoided while new conflicts may arise. For each utility conflict, existing utility conditions and a proposed resolution are noted on a utility conflict matrix or similarly organized document to coordinate all utility conflicts with utility companies. Over-the-Shoulder (OTS) reviews can facilitate UDOT’s review of the utility conflict matrix produced by the design-build contractor.

**Step 5: Utility Adjustment/Relocation Plan**

Following the completion of the utility conflict analysis, the DB prepares a Utility Adjustment/Relocation Plan graphically showing the location of each existing utility facility and the DB’s recommendation on whether each facility may be protected in place or require relocation or adjustment. The plan shall be color-coded and utilize a scale that clearly depicts the required information needed for coordination. Utility relocation or other utility work being completed as part of the DB contract is shown. As meetings with utilities are conducted, proposed relocation alignments and more detail is added to the plan as this becomes a living document that is routinely updated as the project progresses to facilitate coordination of utility relocations and issues with utility companies and UDOT. The DB shall coordinate with the affected utility companies to obtain their respective concurrence with the plan as initially submitted to UDOT and as there are subsequent updates and revisions. See Appendix R for an example of a Utility Adjustment / Relocation Plan.

**Step 6: Utility Coordination**

The DB coordinates with utility companies to address all utility conflicts, resolutions and relocations in a timeframe consistent with each individual MUA that facilitates efficient operations for both the design-build contractor and the utility companies on the project site. The design-build contractor uses best efforts to avoid relocations and minimize overall project costs. The design-build contractor conducts meetings with each utility company as each design package is completed and regularly per the utility work plan to address all utility conflicts and track the status and progress to resolution of each. UDOT or the Independent Quality Firm (IQF), if applicable, should attend scheduling meetings and monitor commitments in the event of schedule problems and delay issues. The design-build contractor prepares and distributes minutes of all meetings.
The DB creates and, on a weekly basis, maintains a Utility Tracking Report (UTR) that tracks the status and progress towards resolution for each utility conflict.

All utility conflicts that result in a utility relocation or adjustment require the completion of a supplemental utility agreement coordinated by the DB. Supplemental utility agreements describe the nature and basics of the utility work to be completed. An approved supplemental utility agreement must be in place before any work begins.

The DB coordinates with the utility company as needed to facilitate the utility company’s preparation of relocation plans, schedule and estimate to submit for the supplemental agreement. In addition to relocation plans meeting the needs of the projects, utility work must follow *Administrative Rule R930-7 Utility Accommodation*. An OTS review facilitates the expediting of UDOT’s review and approval process. The utility company submits the related relocation plans, schedule, and estimate to UDOT. UDOT facilitates the signing of supplemental agreements by all three parties- the utility company, the contractor and UDOT.

Supplemental utility agreements address:

- The scope of the utility work
- The party who will perform the utility work (design and construction)
- The work schedule
- Property rights
- Costs of the utility work and how those costs are distributed
- Parties responsible for payment
- Parties who will receive payment
- Other relevant specifications or details

See Appendix S for an example DB Project Supplemental Agreement.

DBs are required to provide estimated and actual price information for any work they are performing for third parties.

**Step 7: Performing the Utility Work**

Consistent with the approved supplemental utility agreements completed in the previous step, the parties responsible for the design and construction of utility work commence with the utility work. With UDOT participating and providing oversight, the DB and utility companies must work together and cooperate to complete the utility work. The DB coordinates project construction and utility relocation schedules with the utility companies. The DB involves the utility companies in discussions and decisions about their facilities to enable the utility companies to provide uninterrupted (or as minimal interruption as possible) service to their customers.

Any utility work the DB performs must follow the utility company’s written specifications and standards of practice included in the RFP/contract documents and applicable supplemental utility agreement requirements.
No third-party deals within UDOT ROW will be allowed without prior approval.

**Step 8: Inspection**

As with other work performed, the DB is responsible for the quality management of any utility work it performs (or subcontracts). Utility companies are to perform the necessary inspection for the utility work installed by the DB. According to the terms of the individual supplemental agreements with utility companies as owners of the facilities, they are required and/or entitled to:

- At no cost to the project, perform inspection of the utility work, correct or clarify issues during construction on their facilities which will be performed by the DB. The utility company’s engineer and/or inspector shall work with and through UDOT's Resident Engineers and shall give no orders directly to the DB unless authorized in writing to do so. The DB will accomplish the utility work covered within the UDOT RFP/contract and respective supplemental utility agreements on the utility company’s facilities in accordance with approved plans and specifications. The utility company, through their inspection of the work performed will provide UDOT's Resident Engineers with information covering any problem or concerns the utility company may have with acceptance of facilities upon completion of construction.
- The utility company’s personnel shall notify UDOT’s Resident Engineers or other designated UDOT representative upon arriving and leaving the project site.

**Responsibility for Quality and Payment**

Responsibility with regards to the quality and payment for utility installation work performed by the UDOT DB is the sole responsibility of UDOT's project personnel just like any other bid item, although the utility companies who own the facilities may inspect and shall inform UDOT if problems or concerns are identified during construction. The utility company will take responsibility for the acceptability of the utility work while it’s being constructed and shall own and maintain the utility facilities upon final acceptance.

When the utility company performs the utility work, the design-build contractor will inspect any utility work that affects the design-build project. The design-build contractor’s inspection is only with regards to the placement of the relocated facilities in the agreed upon location. The design-build contractor shall notify UDOT of any problems or concerns they may have with the facilities promptly following such discovery.

UDOT or the Independent Quality Firm (IQF) monitors utility relocations to verify that they are being done according to the approved supplemental utility agreements, and accounting for documentation of work that is eligible for reimbursement. Monitoring and documentation of utility work plays an important role in successful utility relocation, early resolution of issues, decisions about claims, and reimbursement.

UDOT or the IQF (if applicable) maintains daily Force Account Records for all utility work performed by the private utility companies who are entitled to reimbursement by the
It is preferred that the daily records are kept using UDOT’s forms. There are daily and weekly Force Account Record forms. You can find the required documents at the UDOT Construction Forms Website. Alternately, UDOT can sign off on the utility’s daily records. The type of form shall be approved by UDOT’s Contracts, Estimates and Agreements Office.

For further detailed information on inspection activities see Section 4C, Construction.

**Step 9: Recurring Utility Meetings**

The DB conducts recurring utility meetings according to the RFP/Contract and Master Utility Agreements to facilitate successful utility coordination and project completion per the terms of the utility work plan. Meetings at a regular frequency are typically scheduled during construction. The frequency of meetings depends on various factors, such as the complexity of the design-build project, the complexity of the utility relocations, the project schedule, and the project’s critical path. UDOT and the IQF (if applicable) should attend scheduling meetings and monitor commitments in the event of schedule problems and delay issues. This also includes partnering meetings.

Meeting agendas and attendees vary according to the specific needs of the project at the time. Typical topics of discussion include:

- Scope and schedule of current design and construction work
- Supplemental utility agreement negotiations
- Utility work schedule
- Cost of utility relocation work
- New utility installations and betterments
- Coordination with and between other utility companies or agencies
- Right of Way issues
- Design changes
- Release for construction review and approval
- Unforeseen items
- Disputes
- Coordination of inspection

**Step 10: Invoicing and Close Out**

UDOT makes reimbursement payments or invoices the utility companies for work completed according to the terms of the master and supplemental utility agreements (any non-reimbursable betterment work included as part of the UDOT contract is paid for by the utility company through UDOT).

A project cannot be closed out until all final utility invoices are received and processed.

See Section 4D- Invoicing and Closeout for further details regarding financial forms and processing.
D. Alternative Measures

Background

Unlike best practices for utility coordination on design-bid-build projects, best practices utilized for design-build projects vary considerably between state departments of transportation (DOTs), and are still evolving with this relatively new method of delivering projects. State DOTs have varied the amount of effort and corresponding assigned risk they put into utility investigation and coordination during the procurement phase based on factors such as schedule, project/utility complexity, incentives/disincentives, and other requirements of the RFP. For instance, on projects that have minimal or no incentives/disincentives, state DOTs might opt to do more utility investigation and coordination during the procurement phase. Likewise, on more complex projects, schedule permitting, state DOTs might also opt to do more utility investigation and coordination during the procurement phase.

Some state DOTs often (but not always) opt to do very little with regards to utility coordination during the procurement phase of the project. The thought behind this is to shift the ownership of the project risk to the DB. Further, it is believed (by those state DOTs) that if design-builders are provided a package of information on expected impacts and relocations, then this becomes the basis from which they will work (or what is the expected or given conditions) as opposed to being responsible to find more efficient ways to build a project and avoid and minimize utility relocations.

Other state DOTs go through extensive utility coordination efforts during the procurement phase that typically include activities such as the following:

- Performing SUE; a full Quality Level B mapping is provided within the project footprint as well as Quality Level A for critical facilities and locations.
- Performing a utility conflict analysis identifying, within reason, every potential utility conflict on the project.
- For each potential utility conflict, a two-page document called a Utility Information Sheet (UIS) is completed. This document provides information on the existing utility facility, the proposed resolution to mitigate the potential utility conflict (should it turn out to be an actual conflict), and conditions regarding the resolution such as scheduling and costs.
- All the compiled information is included in the RFP package provided to the proposers.

The UDOT process is based on what has proven successful in Utah and involves a thorough coordination effort during the procurement phase without going so far as identifying potential conflicts or relocation timeframes. However, recognizing the uniqueness of design-build projects and the managing of the associated risks, this section discusses alternative measures available for consideration to tailor the process to the needs of specific projects where appropriate.
Alternative Measures

Some of the more routine alternative measures to be considered to perform during the procurement phase are as follows:

- Preliminary utility conflict analysis – Once the project layout and footprint are sufficiently ready, a preliminary utility conflict analysis is completed by comparing the utility information gathered in Step 1 against the preliminary design. The preliminary conflict analysis is completed by reviewing this information and making reasonable assumptions to identify potential utility conflicts. See Appendix E for a list of items to consider when evaluating potential utility conflicts. The end result of this analysis is a preliminary Utility Conflict Matrix (see Appendix D). Utility relocation information is included in the Utilities Section of the UDOT RFP/contract documents.

- Utility Information Sheets – Using the potential utility conflicts developed in a preliminary utility conflict analysis as a vehicle to initiate completion of Utility Information Sheets (UISs). One UIS is completed for each potential utility conflict. UISs typically consist of existing conditions, conflict description, resolution conditions and final decision sections. UDOT, or their consultant, fills out the existing conditions and conflict description section of the UISs prior to the utility workshops. Following the utility workshops, revisions to the UISs are made as appropriate and then transmitted to the utility companies to fill out the resolution conditions section. The information the utility company fills in is then reviewed with UDOT having the final approval. As a variation on this, UISs might only be done for those utility facilities that are considered to be significant or present a high risk. The UIS sheets are included the Utilities Section of the UDOT RFP/contract documents.

Providing this additional information does not necessarily inhibit the incentives for design builders to find ways to avoid utility relocations. Information highlighting potentially lengthy relocations should cause design builders to find ways to avoid relocating those facilities if possible.

There are other more involved measures for consideration on very large design-build projects that could be completed during the procurement phase. Some of the measures that could be completed are as follows:

- Utility Information Database – Develop a utility information database in conjunction with creating the utility base map and utility sheets. The database is designed to store and summarize attributes of all existing utility facilities identified. Utility identification tags shown on the utility sheets form the basis for the utility information data stored in the database.

- Geographic information system (GIS) based right-of-way and utility management system (RUIMS) – Develop a GIS and RUIMS system for the project. A modified version of the utility base map can be attached to aerial mapping to graphically show utility features in the RUIMS application. Much of the extraneous topographic and textual information can be removed from the utility base map and the limits of the mapping carefully trimmed so the information available in RUIMS would match exactly what was shown on the utility sheets. Utility identification
numbers along with the specific utility characteristics available in the utility information database can be linked to the appropriate utility lines shown graphically in RUIMS

- **3D Depiction of Underground Utility Facilities** – Create a three-dimensional model of the conceptual roadway design and present it to each of the design-build proposers to assist in their assessment of the corridor that includes utility information. Each facility for which a test hole is excavated is shown in the model at the depth recorded on the corresponding test hole data sheet. Utility facilities for which test hole information is not available are also shown, but are typically portrayed directly on the virtual surface

**Incentives**

Various incentives are available for use in the design-build delivery method to obtain a best value and best project product and delivery possible. When deciding on incentives, take into account whether the project is budget driven (where cost sharing may be a good option) or schedule driven (where risk/lump may be a good option). Incentives will be specific to each project and included in the contract. A risk analysis should be completed to see when incentives might be beneficial. Coordinate with the Statewide Utilities and Railroads Coordinator and the Innovative Contracting Engineer for assistance on incentives.

If the contract offers a performance incentive greater than $50,000 or a Community Coordinating Team (CCT) incentive, consider adding a category for utility coordination. The Statewide Utilities and Railroads Coordinator will be responsible for approving anything that occurs differently than normal. Implementation of incentives should not change the practice of UDOT paying the bills to utility companies.

Some of the incentives that have been used with success with regards to utilities are as follows.

**High Risk Utilities**

During procurement, identify high risk utility facilities, such as high pressure gas lines and high voltage power transmission lines. Require the proposers to develop their proposed high risk utility relocations consistent with their proposed design and to obtain a utility relocation estimate for those impacted facilities on utility company letterhead. If committed to during procurement, UDOT then reduces the contract amount with the design-builder and reserves those monies to apply toward actual utility relocation costs. This approach fairly shares the risk for those specific utilities and encourages the design-build teams to identify innovative ways to avoid impacting those utilities.

**Coordination/Cooperation**

With this incentive, the contractor is evaluated in the following areas:

- Accommodating utility companies’ schedules
- Coordinating utility work to minimize impacts to public
• Cooperating with utility companies
• Minimizing utility and railroad delays

A maximum fixed dollar amount is established for both the whole incentive and for each area of evaluation.

**Assessment and Accrual of Utility Relocation Charges**

Utility relocation charges are assessed against the design-builder’s proposal price for utility relocations for all utilities that are listed in the contract documents. A tally of cumulative utility relocation charges is kept throughout the life of the project, and subtracted each month from the original lump sum bid for this item.

Payments/deductions to the design-builder are based on the difference between the Utility Relocation Proposal amount and the actual Utility Relocation charges assessed. If the accrued Utility Relocation charges exceed the amount of utility relocation proposed by the design-builder, then UDOT deducts 40 percent of the difference from the monies due the design-builder. If the actual utility relocation charges accrued after completion of the project are less than the Utility Relocation Proposal amount, UDOT pays the design-builder 60 percent of the difference.
A. General

The *Stewardship and Oversight Agreement* between FHWA and UDOT provides that UDOT may permit local public agencies to carry out UDOT’s assumed responsibilities on locally administered projects. UDOT is responsible and accountable for local agency compliance with all applicable federal laws and requirements including utility and railroad related requirements.

B. Local Government Guide Overview

Local governments have unique responsibilities when accommodating and reimbursing utilities as part of Federal Aid projects. These requirements are included in the *Federal Aid Agreement for Local Agency Project* entered into by the local government. The UDOT *Local Public Agency Guide* provides processes for UDOT to ensure Local Government Projects are completed in compliance with all applicable federal and state laws and requirements.
Notification and Cooperation

Local agencies are required to notify and coordinate with utility companies as provided by Utah Code 54-3-29 Removal, relocation or alteration of utility facility in public highway construction or reconstruction – Notice – Cooperation. Notice must be made before preliminary design or project development meeting and must include at least:

- Information concerning the proposed project design
- Proposed date of required removal, relocation or alteration of utility facilities
- Federal Aid project number
- Qualification for aid for utility company expenses

Not less than 30 days after providing notice, the local government must provide the utility companies with the opportunity to:

- Review the project plans
- Understand the objectives and funding sources for the proposed project
- Provide and discuss recommendations to reasonably eliminate or minimize utility removal, relocation, or alteration
- Limit the disruption of utility company services
- Eliminate or reduce the need for present or future removal, relocation or alteration
- Provide reasonable schedules to enable coordination with the construction project

Utility companies so notified will coordinate with the local government concerning required utility facility removals, relocations or alterations.

Public agencies and utility companies may address the removal, relocation or alteration of utility facilities in relation to construction or reconstruction on public highways in franchise agreements.

Review Franchise Agreements and Utility Accommodation Policy

With respect to reimbursement for utility relocation costs Utah Code 76-6-116 only applies to state highway rights of way. Eligibility for reimbursement for relocation costs on local government roads and highways is based on the terms of ordinances or franchise agreements with individual utility companies. Local agencies must review and be familiar with current franchise agreements and ordinances to determine if utility relocation costs are eligible for reimbursement by the project. If utility costs are not reimbursable, the local government must inform the impacted utility company as part of the notification and coordination process and submit a written statement to UDOT that the government is “legally unable to reimburse the utility” for relocation or protection work as part of the project. Refer to 23 CFR 645.107 Eligibility for more detailed information.

As provided in 23 CFR 645.209g the local government is further responsible to ensure and certify that its utility accommodation policies offer protection of the right of way that is equal to or greater than the protection provided by Utah Administrative Code R-930-7, Utility Accommodation.
Prepare and Execute Utility Reimbursement Agreements

Utility relocations deemed to be reimbursable must be performed in accordance with 23 CFR 645 Utilities and are subject to 23 CFR 635.410, Buy America Requirements. Use UDOT reimbursement agreement formats and Form R-709 Request for Federal Aid Project Approval, Authorization and/or Agreement, to allocate project funds for the work. No utility work is eligible for federal participation prior to the execution of the R-709.

C. Utility Certification

Issue Utility Certification

A Utility Certification is required on every project regardless of whether utility facilities are affected or relocations are eligible for reimbursement by the project. The Utility Certification verifies that all impacted utility companies have been notified of the project, allowed to participate in the planning and design, and that all relocation and Buy America requirements have been addressed. The Utility Certification is issued by the local government on its letterhead. See Appendix T for an example of a Utility Certification.

FHWA has provided information and videos explaining Utility Certification and Railroad Certification requirements. The websites were developed to assist Local Agencies in understanding and complying with Federal Aid requirements.

*Utility Coordination and Certification Requirements*

*Railroad Coordination and Certification Requirements*
A. General

**23 CFR 645 Utilities, Subpart B Accommodation of Utilities**, Section 645.215 Approvals, requires each state that receives federal funding for highways to develop and submit its own statement on the authority of utility companies to use and occupy right of way of State highways, the State transportation department’s power to regulate such use, and the policies the State transportation department employs or proposes to employ for accommodating utility facilities within the right of way of Federal-aid highways under its jurisdiction. Once the statement is approved by the FHWA, any utility installations to be installed on federal-aid highways in accordance with the approved state statement may be approved by the state without referral to the FHWA.

In accordance with 23 CFR 645, **Utah Administrative Rule R930-7 Utility Accommodation** sets forth the legal authority UDOT employs for accommodating utility facilities within the Right of Way. **R930-7-3 Definitions** provides a complete list of terms and definitions used in the Rule.

Utility companies using the right of way under the jurisdiction of UDOT for the installation or maintenance of utility facilities must enter into a Statewide Utility License Agreement by which UDOT licenses the use and occupancy, with conditions, of highway rights of way. The License Agreement sets forth the procedures and conditions for the issuance of Encroachment Permits for installations and maintenance activities by utility companies. License Agreements are administered by the Statewide Utilities and Railroads Coordinator at the Central Project Development level. See Appendix U for an example of a Statewide Utility License Agreement. For information about obtaining a Statewide Utility License Agreement, visit UDOT’s **Statewide Utility License Agreements** website. See Appendix U for an example of a Statewide Utility License Agreement.

Utility companies must obtain an Encroachment Permit (Permit) before beginning any construction, maintenance, repair, operation or use of any pole line, surface or subsurface line or other facility in UDOT Right of Way Permits are administered by the Region Right of Way Control Coordinator or Permits Engineer at the Region level. Utility companies can apply for Permits online through UDOT’s **Online Permit System** or by contacting the **Region Permits Contacts**.

For complete information visit UDOT’s **Statewide Encroachment Permitting Program** website.
B. Encroachment Permit Requirements

930-7-6 General Installation Requirements details specific requirements for encroachment permit application and use. Below are highlights of the requirements:

- Permit application must be submitted by the utility company, approved and authorization to proceed given in writing before any work begins on the Right of Way
- Fees are assessed to cover related costs incurred by UDOT
- Utility companies may authorize their contractor to obtain permits on their behalf, provided all terms and conditions set forth in the license agreement are met
- Encroachment permit applicants are required to post bonds and maintain liability insurance as outlined in the Rule
- Permit holders shall, at all times, indemnify and hold harmless UDOT, its employees and the State of Utah from responsibility for any damage or liability arising from their construction, maintenance, repair or any other related operation during work or as a result of such work on the Right of Way
- Permits can be cancelled for causes outlined in the Rule. When the permit is canceled, UDOT also may remove the facilities and restore the highway and right of way at the sole expense of the utility company. Prior to any cancellation, UDOT shall notify the utility company in writing, setting forth the violations, and will provide the utility company a reasonable time to correct the violations to the satisfaction of UDOT. UDOT may also not issue any further permits to utility companies that do not comply with this rule, permit requirements, or the License Agreement

C. Permit Preparation

Encroachment Permit
The utility company or its contractor completes the permit application for encroachment on the online Statewide Encroachment Permitting Program website or to the Region Permits Officer and submits the following:

- Utility companies shall submit two sets of plans depicting the proposed installation. The plans shall be sized as required by UDOT and include utility company identification, work location, utility type and size, type of construction, vertical and horizontal location of facilities relative to the centerline of road, location of all appurtenances, trench details, and right of way limits
- Traffic control plans conforming to the Utah Manual on Uniform Traffic Control Devices (MUTCD) as outlined in Section R930-7-7(1)(d), are mandatory for each instance of utility construction or maintenance
- Roadway protection and right of way restoration details
- Performance and Warranty or Maintenance Bond
- Liability Insurance
Manhole Access Permit

This type of permit is a low impact encroachment permit. Typically, the requirement for this permit is four hours or less of lane restrictions for one manhole. The utility company or its contractor completes the permit application for manhole access on the online permit system at Statewide Encroachment Permitting Program or to the Region Permits Officer and submits the following:

- Scope of Work
- Traffic control plans in conformance with the Utah MUTCD
- Performance and Warranty or Maintenance Bond
- Liability Insurance

D. Permit Review

UDOT reviews permit applications to ensure conformity with Administrative Rule R930-7 including:

- General Installation Requirements
- General Design Requirements
- Definitive Design Requirements
- Requirements for Utilities on Highway Structures
- Requirements for Utilities within Interstate, Freeway and Access Controlled Right of Way

Any limitations to be followed will be included. The UDOT Region Right of Way Coordinator or Engineer coordinates with the Region Utility and Railroad Leader or Coordinator, Preconstruction Engineer, Program Manager, Traffic Control Engineer and other staff as necessary before issuing a permit to avoid conflicts with upcoming projects.

E. Permit Distribution

A copy of the approved permit is issued through the online permit system. The utility companies’ construction forces or the utility contractor shall carry a copy of the approved permit always while working on the Right of Way. Any changes necessary once the project has begun must be approved by the Region Right of Way Control Coordinator or Engineer.

F. Construction and Inspection

Detailed requirements are provided in R930-7-11 Utility Construction and Inspection. UDOT performs routine inspection of utility construction work to monitor compliance with the utility company’s License Agreement, Encroachment Permit and state and federal Regulations. Costs associated with inspection are the responsibility of the utility.

Utility companies are required to mark all underground facilities with approved markers and to keep on file certified reproducible plans electronic files of all their relocations and installations including overhead facilities and crossing points. For new facility installations, the utility company must use survey grade Global Positioning System (GPS)
to survey their facility and submit an electronic file to UDOT. Refer to Part 5 Utility Markers and Part 6 GPS Requirements for complete information.

G. Maintenance Responsibility

Once construction is complete, the utility company must maintain the facilities at its own expense as provided in R930-7-12 Maintenance Responsibility. The utility company is responsible for maintenance and liability of its utility facilities and appurtenances on UDOT right of way or on UDOT property including facilities installed without a Statewide Utility License Agreement or permit, whether operational, out of service, or abandoned. The utility company must obtain an Encroachment Permit when it performs any maintenance work.

H. Deviations

Deviations to cited requirements may be allowed under strict conditions. Refer to R930-7-13 Deviations for complete information. See Appendix V for the Deviation from Administrative Rule R930-7 Form.
APPENDICES

Appendix A  Subsurface Utility Engineering
Appendix B  Authorization to Make Design Engineering Expenditures Letter
Appendix C  Utility Company Engineering Consultant Authorization Letter
Appendix D  Utility Conflict Matrix
Appendix E  Utility Conflict Evaluation/Analysis – Items to Consider
Appendix F  Betterments / Credits
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Appendix H  Statewide Utility Relocation Agreement
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Appendix K  Form R-709 - Request for Federal Aid Project Approval, Authorization and/or Agreement
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Appendix M  Utility Summary Sheets / Utility Relocation Typical Cross Section Detail Sheets
Appendix N  Utility Coordination Special Provisions
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Appendix V  Deviation from Administrative Rule R930-7, Utility Accommodation Form
Appendix A

Subsurface Utility Engineering (SUE)

As defined in the ASCE 38-02 *Standard Guideline for the Collection and Depiction of Existing Subsurface Utility Data*, Subsurface Utility Engineering (SUE) is a branch of engineering practice that involves managing certain risks associated with the following:

- Utility mapping at appropriate quality levels
- Utility coordination
- Utility relocation design and coordination
- Utility condition assessment
- Communication of utility data to concerned parties
- Utility relocation cost estimates
- Implementation of utility accommodation policies
- Utility design

**Why SUE?**

Studies commissioned by FHWA show reductions in costs, time and utility facility relocations when SUE is used properly. Purdue University conducted an independent study for the Federal Highway Administration (FHWA) in 2000. Researchers evaluated data from 71 projects that involved SUE in four states. The study quantified savings of $4.62 for every $1 spent for SUE. The study can be viewed at:  [http://www.fhwa.dot.gov/programadmin/sueindex.cfm](http://www.fhwa.dot.gov/programadmin/sueindex.cfm)

The researchers who conducted the study also concluded that non-quantifiable savings could be even higher and that the proper use of SUE in a systematic manner would result in minimum national savings of approximately $1 billion per year. [Cost Savings on Highway Projects Utilizing Subsurface Utility Engineering, Publication No. FHWA-IF-00-014].

States may receive reimbursement for SUE from federal-aid highway funds. The FHWA does not earmark special funds for SUE, but encourages the use of regular funds for SUE reimbursement, such as those available from the National Highway System, Surface Transportation Program, Interstate Maintenance, and possibly other federal-aid highway programs.

Consistent with federal-aid procedures, states must first pay for SUE with their own funds and then request federal reimbursement at the normal pro rata share for the project or projects that used SUE. The federal pro rata share will be either 80 percent for non-interstate or 90 percent for interstate projects. When using federal-aid highway funds, state contracts with SUE providers must follow Brooks Bill procedures, which require states to select SUE providers based on their qualifications to perform the requested work.

SUE technology minimizes and often eliminates the wasteful activities of relocating underground utilities unnecessarily or encountering them unexpectedly on federal-aid highway projects. The Federal Program Guide for the Relocation and Accommodation of Utilities also states “The FHWA should not participate in any construction delay claims caused by conflicts with
Appendix A

underground utilities that would have been avoided if subsurface utility engineering had been used.” Subsurface Utility Engineering should be performed on all UDOT projects at appropriate quality levels to prevent this from happening.

Experience using SUE at UDOT has shown significant savings on several projects, but the key is obtaining the SUE information at the proper time during the design process.

**Use**

In this manual, SUE generally appears in the context that relates to managing the risks associated with utility mapping at appropriate quality levels, or, put more simply, the depiction of utilities on project plans and the accuracy of that depiction.

Many states use the SUE process to identify the quality of subsurface utility information needed for highway plans, and to acquire and manage that level of information during the development of highway projects. The FHWA encourages such use on federal-aid projects and considers SUE an integral part of preliminary engineering.

Proper use of this cost-effective professional engineering service minimizes many utility problems that typically occur on highway projects, including:

- Delays to projects caused by waiting for completion of necessary utility relocation work before highway construction can begin
- Delays to projects caused by redesign when construction cannot follow the original design because of unexpected utility conflicts
- Delays to contractors caused by cutting, damaging, or discovering utility lines during highway construction
- Claims by contractors for delays resulting from unexpected encounters with utilities
- Deaths, injuries, property damage, and releases of product into the environment caused by cutting utility lines that were not previously identified

Accurate and comprehensive knowledge of the horizontal and vertical location of existing utilities early in the development of a project makes it possible to:

- Design around many existing utilities, thus avoiding costly and time-consuming relocations, and/or
- Accurately depict utilities on construction plans so utility owners, project owners, and contractors will know more accurately the location of utilities and any mitigation needs before any excavation

**Quality Levels**

ASCE 38-02 *Standard Guideline for the Collection and Depiction of Existing Subsurface Utility Data* provides a system for classifying quality levels of existing underground utility data that appear on plans. These classifications of quality levels may be thought of as degrees of risk, provided by a SUE professional, of the quality and reliability of the utility. Application of the
quality levels involves making decisions on how much information is needed or how accurate the information really needs to be to adequately design and construct a highway project. Such classifications allow the project owner, the engineer, and the contractor to develop strategies to reduce risk to the project and the existing utilities in a defined manner.

The four recognized quality levels of utility information range from Quality Level D (the lowest level) to Quality Level A (the highest level). The highest level of accuracy and comprehensiveness is generally not needed or practical at every point along a utility's path, but only where conflicts with highway design features are most likely to occur. The lesser levels of information may be appropriate at points where fewer conflicts or no conflicts are expected.

Explanations of the four utility quality levels follow:

- **Quality Level D (QL-D).** The most basic level of information for utility locations. QL-D comes solely from existing utility records or verbal recollections. It may provide an overall "feel" for the congestion of utilities, but is often highly limited in terms of comprehensiveness and accuracy.

- **Quality Level C (QL-C).** Probably the most commonly used level of information which involves surveying visible utility facilities, such as manholes and valve boxes, and correlating this information with QL-D information.

- **Quality Level B (QL-B).** This involves the application of appropriate surface geophysical methods to determine, or designate, the existence and horizontal position of utilities within the project limits. The information obtained in this manner is surveyed to project control. QL-B addresses problems caused by inaccurate utility records, abandoned or unrecorded facilities, and lost references.

- **Quality Level A (QL-A).** This involves the use of non-destructive digging equipment at critical points to expose, or locate, the utility to determine the precise horizontal and vertical position, of underground utilities, as well as the type, size, condition, material, and other characteristics. It offers the highest level of accuracy currently available and requires the full use of the subsurface utility engineering services. Critical points may include locations where existing utilities will cross, or will be adjacent to, areas of excavation for ditches or sub-grade cuts, retaining walls, footings, drainage structures, piling, etc. Areas of increased fill over a utility may also be a critical point.

Quality Levels D and C represent “traditional” efforts of underground utility investigation on projects. Because education and experience is necessary to perform SUE services, UDOT requires that SUE firms be qualified in the General Engineering Services and Local Government Pool.

**Project Applications**

Every project is unique and ultimately a risk management decision decided by the Project Manager consulting with the Region Utility Coordinator and the Utility Designer. The Project Manager assesses the potential impacts of a project on underground utility facilities and
Appendix A

determines the necessary accuracy of utility information (utility quality levels) to coordinate these impacts.

Some questions to consider when determining accuracy of utility information needed are:

- Will the project involve any excavation or will there be potential impact on utility facilities?
- How reliable are the utility as-builts? Are there any discrepancies between utility depictions on as-builts and field observations?
- If utility facilities are not exactly in the location as shown in the records, will there be an adverse affect on the project?
- Is it possible that additional unidentified utility facilities are present?
- Are there any utility facilities that could have a major impact on the project?
- Are there locations where knowing the elevation of a utility facility is critical?
- Is there a possibility that utility facilities could be shallower or deeper than anticipated?
- What is the overall importance of the project? How will an unexpected utility issue that increases costs and/or delays the project completion be perceived?
- What are the potential safety risks involved with the project?

There are many ways to apply SUE to a project. Below are four examples of different project applications. These examples are only for general guidance and do not represent a comprehensive list of applications. The decision of how to apply SUE is project specific.

**Full SUE Investigation**
The first application is a major road reconstruction widening or realignment in a congested area. In this example, full use of SUE may be appropriate. Utility facilities would be typically depicted at quality level B. The quality level A investigation should be performed at potential conflict points and/or where exact utility locations both horizontal and vertical, are needed. (QL-A exists only at the point of excavation.)

The next three applications identify how different quality levels can be applied based on project characteristics.

**Project Scope**
The second application is a project where one section of the project involves mill and resurface work and installation of new traffic signals. For this element of the project, it may be appropriate to depict utilities at quality levels C and D within the general limits of this section and a quality level B depiction near the locations of the traffic signal installations. A quality level A investigation would be performed at the locations of traffic signal installations. The other section involves full reconstruction. For this element of the project, a full SUE investigation may be appropriate.

**Significant Utility Facility**
The third application is a reconstruction project with a trunkline fiber facility and a high-pressure gas main running the length of the project within the construction limits. Other underground utility facilities present are more minor in nature and will not present significant issues to the project. In this case, the trunkline fiber facility and the high-pressure gas main necessitate a quality level B investigation with a quality level A investigation performed at potential conflict.
Appendix A

points. For the more minor utility facilities, quality levels C and D may be appropriate, with limited quality level B or quality level A investigation at specific locations.

**Isolated Elevation Conflicts**
The fourth application is a project where a new storm sewer is being installed parallel to the roadway. Underground utility facilities paralleling the road are on the opposite side of the road from the storm sewer installation. However, there are critical underground utilities that cross the sewer installation perpendicularly. In this case, a quality level A investigation at the conflict points with the perpendicular crossings may be appropriate, but would not be warranted for the other underground utility facilities.

**Timing**

Full use of SUE involves quality levels B, C and D information for utilities and quality level A information at potential conflict points. Timing of SUE investigations does make a difference:

- Plan to complete a quality levels B, C and D during Scoping (Stage 1) as outlined in the Project Delivery Network under 2U1.
- Plan to complete a quality level A investigation at points of potential conflict during Geometry (Stage 2) and Plan-in-Hand (Stage 3) as outlined in the Project Delivery Network under 3U1.

While the greatest benefits come by applying SUE early in the project development, it is never too late in the design of a project to use SUE if it becomes critical to obtain more accurate utility information. A qualified SUE provider can customize the use of SUE to fit the scope of the project.
DEPARTMENT OF TRANSPORTATION
CARLOS M. BRACERAS, P.E.
Executive Director

SHANE M. MARSHALL, P.E.
Deputy Director

[EntityName]
[EntityAddress]
[EntityCity, EntityState Entity Zip]

Attention: [Entity Contact #1 Name]
Subject: [Project Number] ; [County] [Project Name]
CID [CID #] PIN [PIN]

Regarding: Authorization to Make Design Engineering Expenditures

Dear [Entity Contact #1]:

The Utah Department of Transportation (UDOT) is planning to <manual entry of project description> with an approximate construction date of <manual date entry>. Preliminary designs indicate there may be a potential conflict with your facilities.

This letter serves as your authorization to make design engineering expenditures for the above referenced project with your own forces. The use of consultant engineers shall be based upon a written contract, a copy of which shall be provided to UDOT prior to initiating the design work. Do not perform any relocation work until an agreement covering your work for this project is in place. In addition, please furnish UDOT with documentation regarding your company’s right-of-way and copies of the right-of-way instruments on private property for facilities that may be affected by the project.

The project is <manual entry of state or federally funded> and <manual entry of is / is not> subject to the Buy America provisions outlined in 23 C.F.R. §635.410. Relocation work and reimbursement for a company’s facilities will be in conformance with the requirements of Utah Administrative Code R930-8.

Please be aware, and follow UDOT’s legal requirements for overhead utility facilities and depth of bury described in Utah Administrative Code R930-7(8)(1) and Design Drawing 16.

If a company’s facilities are determined to be out of compliance, UDOT may require them to be removed or relocated at the company’s sole expense in order to bring the facilities into compliance. If the company was issued a UDOT encroachment permit that waived any code requirements, please provide UDOT with a copy of the permit authorizing the waiver. For aerial installations, if a company’s facilities are out of compliance and installed on a pole owned by another company, please provide documentation that the pole owner provided prior approval of the installation.

Your cooperation, participation, and attendance in any scheduled project utility coordination meetings is greatly appreciated. Should you require any additional information, please contact me at, <manual entry of phone and email>.

Sincerely,

[Region Leader]
UDOT [Region #]
Utility and Railroad Leader

cc: <manual entry of anyone else who needs to receive a copy>
Project File

Commented [AS1]: This sentence should be used for local government/districts. “This letter serves as your authorization to make design engineering expenditures for the above referenced project using pre-approved consultant design engineers.”

Commented [AS2]: This is specifically for political subdivisions and could be removed for other company letters.
ATTENTION: (Utility Company Contact)

SUBJECT: Project No. __________________
Project Name__________________________
CID No. _______          PIN ______

Authorization to Use Consultant Engineering Services

In accordance with 23 CFR 645.109 Preliminary Engineering, this letter is your authorization to use the consultant engineering services of _____________ to perform the preliminary engineering work required on the above referenced project. Work performed by consultant engineers shall be based upon a written contract, a copy of which shall be provided to UDOT prior to beginning the work.

This project is located in our Region ___ with office headquarters at ______________________.

The UDOT Project Manager for the project is ______________, Telephone No. __________, email ______________________.

The Project Utility Design Engineer is __________________, Telephone No. __________, email __________________should you need more information about this project.

Sincerely,

Name
Region Utility and Railroad Leader

Attachment
**Project Identified Utilities**

<table>
<thead>
<tr>
<th>Utility Company</th>
<th>Utility Type</th>
<th>Utility Contact</th>
<th>Phone #</th>
<th>Email</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>Questar Gas</td>
<td>Gas</td>
<td>Kyle Secretan</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Rocky Mountain Power</td>
<td>Power (Buried)</td>
<td>Mark Lewis</td>
<td>435-865-3343</td>
<td><a href="mailto:mark.lewis@pacificorp.com">mark.lewis@pacificorp.com</a></td>
<td></td>
</tr>
<tr>
<td>Cedar City Water</td>
<td></td>
<td>Kit Wareham</td>
<td>435-865-3343</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Cedar City Sewer</td>
<td></td>
<td>Kit Wareham</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Interlink Fiber Optic (Buried)</td>
<td>Gene Morris</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Century Link Fiber Optic (Buried)</td>
<td>Dennis Johnson</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Century Link Telephone (Buried)</td>
<td>Dennis Johnson</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>UDOT</td>
<td>Lighting</td>
<td>Gernice White</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Additional Utilities Identified**

<table>
<thead>
<tr>
<th>Utility Company</th>
<th>Utility Type</th>
<th>Utility Contact</th>
<th>Phone #</th>
<th>Email</th>
<th>Notes</th>
</tr>
</thead>
</table>

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**Appendix D**
| Utility Company | Conflict # | Date Identified | Aligned From | Plan Sheet # | Station | Offset | To | Plan Sheet # | Station | Offset | Utility Type | Size & Material | Conflict Description | Level of SUE Investigation Needed | Test Hole or Survey Shot # | Conflict Verified | Recommended Action | Assigned to | Estimated Resolution Date | Resolution Status | Final Resolution | Notes |
|-----------------|------------|----------------|--------------|--------------|----------|-------|----|--------------|----------|-------|--------------|----------------|-----------------------|------------------------|------------------|-------------------|-------------|--------------------------|-----------------|---------------|-------|
| Questar Gas     | 1014       | 7-Jun-14       | "B" Line     | 34           | 32+50    | 30' R   | 43+00| 30' R        | 35' Rt    | IHP Gas | 4" Plastic | Buried         | Proposed drainage trunk line is in same location as gas line | A                     | 1                | Yes              | Clark Kent     | 1-Jul-13                  | Active          |               | Resolved         |
Utility Conflict Evaluation/Analysis – Items to Consider

Roadway design and construction features to consider when evaluating potential utility conflicts may include the following. Other project-specific conditions may exist beyond what is listed here.

- Grade changes
  - Grade cuts for roads and ditches conflicting with subsurface utilities, utility poles and appurtenances.
  - Grade raises causing possible issues with load and/or access to subsurface utilities and clearance issues with aerial utilities
- Pavement depth including subgrade, subgrade treatment, and underdrains
- Widening- existing longitudinal and transverse subsurface utilities including lengths of encasements under pavement
- Drainage structures
- Clear Zone/Safety Requirements, temporary and permanent
- Adverse soil conditions
- Site environmental considerations
- Right of way needs.
- Benching
- Signal, lighting and sign foundations and aerial clearances
- Noise walls- foundations and aerial clearances
- Utilities on or near bridges and structures
- Access Changes- Roadway access management and utility maintenance access including manhole/vault placement.
- Guard rail and end treatments
- Channel clearing and placement of riprap
- Landscaping, root depth, tree heights, etc.
- Traffic control- temporary runaround, temporary pavement, signals, etc.
- Constructability – consider existing and proposed locations-horizontal and vertical, installation phasing, trench depths/widths. Radial clearances from power lines, shielding, out of service requirements.
- Reduced cover and/or protection during construction
- Pile driving, vibration impacts and mitigation
- Beam setting, aerial clearances, installation and permanent
Betterments and Credits

Utah Code Title 72-6-116 Regulation of Utilities – Relocation of Utilities provides that the cost of relocation is the entire amount paid by the utility company properly attributable to the relocation of the utility after deducting any increase in value (betterment) of the new utility and any salvage value derived from the old utility. This appendix offers greater detail on determining reimbursement for utility relocations involving betterment and salvage credit, depreciation and other functional replacement issues. Some language contained in this appendix is taken directly from FHWA Program Guide for Utility Relocation and Accommodation for 23 CFR 645.117. Refer to the Program Guide for further detail.

A. Betterments

Utility companies may propose to improve or update their system in conjunction with the forced relocation of a facility required by a construction project. UDOT recognizes that it is in the best long term and life cycle interest of the roadway to replace aging and inadequate utility facilities prior to or during construction. When the utility company opts to upgrade its facility during the relocation, UDOT typically allows betterments to be performed as long as it does not result in any additional costs or delay to UDOT’s project.

UDOT is only responsible to participate in the cost of the minimum relocation work required to make the utility systems whole in their existing configuration. However, in accordance with state and federal guidelines, new facilities will be restored at current specifications and safety standards. Betterments may include increased capacity, such as larger sized pipes or conductors, or future use conduits, ducts or vaults. In most cases, UDOT receives credit for the difference between the cost of the functional replacement of the original facility and the cost of the facility as constructed.

Some exceptions exist to the general rule. UDOT may reimburse for the following types of betterment:

No betterment credit is required for the replacement of utility devices or materials that are:

- Required by the highway project;
- Of equivalent standards although not identical;
- Of the next highest grade or size when the existing devices or materials are no longer regularly manufactured;
- Required by law pursuant to governmental and appropriate regulatory commission code; or
- Required by current design practices regularly followed by the Utility in its own work, and there is a resulting direct benefit to the highway project.
Examples of devices or materials of a type different than those being replaced might involve the substitution of aluminum clad steel reinforced conductors for copper conductors, underground cables for aerial lines or fiber optics cable for conventional cable.

Evidence of a direct benefit to the highway project may include, but is not limited to, economy, time savings, aesthetics, safety, environmental and future use considerations. The most basic Federal premise regarding utility relocation is that a utility's service should be restored so that it may continue to provide its product to its users in a fashion similar to that which existed prior to its relocation as a result of the highway project. The idea of making the utility "whole" in many cases means that various facilities will have to be functionally restored. A few examples of this concept are as follows:

- Replacement facilities that maintain the overall functional capacity, even including those that may rearrange this capacity to a more efficient operation as a result of present day design or operation needs, are eligible for Federal participation.

- Features required to meet present standards, or required by current design practices regularly followed by utilities in their own work, are considered to be an essential part of the functional replacement and are eligible for Federal participation.

- If a utility elects to install, or if it is a utility's current practice in its own operations to install facilities of a type different that the facilities being replaced, the cost of providing the most economical such replacement facility or restoration of service is eligible for Federal participation.

It is considered to be in the best interest of the highway project and a direct benefit to the highway project when any of the above criteria are applied.

Specific examples of betterments include:

- Change in capacity, such as increase in pipe size or number of cables or conductors.

- Change in the class and/or height of the pole.

- Change from brackets to cross arms, or from wood cross arm pins to steel cross arm pins.

- Change from iron wire to copper weld or high-strength conductor and an increase in the number of circuits

A situation that may warrant betterment consideration could include:

Relocating an aerial crossing usually requires re-spacing and replacing existing poles with taller poles. Greater pole height and increased strength components when required by highway construction are not considered betterments.
• The utility company may opt to change the line capacity by increasing the number of phases of the conductor size. This change would likely increase costs. Because the benefit accrues to the utility company, UDOT should receive credit for increased material costs associated with the increased capacity.

• If the project requires a larger size conductor and/or higher pole than existing to obtain proper grade of construction at a highway crossing, the increased size and strength is not considered a betterment requiring a credit be given to UDOT.

• If the conductor on the existing line is copper or copper weld and the utility requires additional capacity, the utility company will use the current practice of installing ACSR conductor. The utility company uses the equivalent current carrying capacity of ACSR as the basis for determining the increase in capacity: #6A copper weld is the equivalent of #4 ACSR in current carrying capacity. If #1/0 ACSR is installed to replace #6A, the betterment would be determined by subtracting the cost of the #4 ACSR conductor from the cost of the #1/0 ACSR conductor. Calculate the number of pounds of each conductor size and the difference in the costs becomes the betterment. This formula also applies for multi-phase lines that use a reduced size neutral conductor.

• The utility company may stock certain pipe, conductor or pole sizes and may show that it is more economical to use the next closest size from its stock than to order special sizes. In that case, any resulting increased strength and/or capacity would not be considered as betterment.

Sometimes betterment identification and calculations are obvious; other times they may require a great deal of study, careful judgment, or input from a subject matter expert familiar with specific utility facility design and operation. There are general questions to be asked: Is a betterment included in the work? How much betterment credit needs to be applied to the reimbursement cost and how will it be determined? The Region Utility and Railroad Engineering Coordinator should document the factors that influence the determination in writing and include the documentation as support for the agreement. Such documentation helps the agreement review and execution process move more smoothly and quickly.

Because the completion of the betterment portion of the work is often indistinguishable from the required work, such as installing a larger sized pipe, for ease of administration, the value of the betterment work is usually accounted for by adjusting the participation ratio based on the estimated cost of the work, to be applied to final cost of the work.

The Region Utility and Railroad Engineering Coordinator should evaluate the overall scope of the betterment and audit verifies the owner’s calculation. The betterment credit would be the cost of the proposed materials and the increased costs of engineering and installing the betterment facilities, such as additional engineering, special construction methods and increased overhead, less the cost of the minimum construction necessary to make the utility facility whole and its service functionally restored.
A simple participation ratio calculation for third party performed, 50% reimbursable work with betterment would be:

<table>
<thead>
<tr>
<th>Company Proposed Work including Betterment</th>
<th>UDOT Share</th>
<th>Company Share</th>
</tr>
</thead>
<tbody>
<tr>
<td>Minimum Work Required @ 50%</td>
<td>$200,000</td>
<td>$100,000</td>
</tr>
<tr>
<td>Value of Betterment</td>
<td>$100,000</td>
<td>$100,000</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>$300,000</strong></td>
<td><strong>$200,000</strong></td>
</tr>
</tbody>
</table>

**Participation Ratio**

<table>
<thead>
<tr>
<th>Company</th>
<th>UDOT</th>
</tr>
</thead>
<tbody>
<tr>
<td>$200,000 = 67%</td>
<td>$100,000 = 33%</td>
</tr>
<tr>
<td>$300,000</td>
<td>$300,000</td>
</tr>
</tbody>
</table>

**Total Estimated Cost to Company is $200,000**

**Total Estimated Cost to UDOT is $100,000**

The above are estimates only. Total payment to the **Company** by **UDOT** would be based on 33% of the actual costs incurred as determined after completion of construction.

Participation ratio calculations may be based on increased price or capacity. A simple cost-based participation ratio calculation for 100% reimbursable relocation work with betterment included in UDOT’s contract would be:

<table>
<thead>
<tr>
<th>Estimated Cost of Proposed 24” RCP Pipe (Betterment)</th>
<th>100’ @ $250.00 = $25,000.00</th>
</tr>
</thead>
<tbody>
<tr>
<td>Estimated Cost to Relocate Existing 18” RCP in Kind</td>
<td>100’ @ $200.00 = $20,000.00</td>
</tr>
<tr>
<td>Value of Betterment</td>
<td>$5,000.00</td>
</tr>
</tbody>
</table>

**Participation Ratio**

<table>
<thead>
<tr>
<th>City</th>
<th>UDOT</th>
</tr>
</thead>
<tbody>
<tr>
<td>$5,000 = 20%</td>
<td>$20,000 = 80%</td>
</tr>
<tr>
<td>$25,000</td>
<td>$25,000</td>
</tr>
</tbody>
</table>

**Total Estimated Cost to City is $5,000**

**Total Estimated Cost to UDOT is $20,000**

Note: The above is an estimate only. The **City** shall pay 20% of **UDOT**’s actual costs incurred for the placement of 24” RCP Pipe based on the Contract Unit Bid Price and quantity placed as determined upon completion of construction.
An example of a capacity based calculation would be:

The City has requested that UDOT upsize a proposed detention basin to accommodate drainage from the City’s storm water system. The total estimated cost to construct a 3.00 acre-ft detention basin to include the City’s requested capacity is $35,000 based on the attached cost estimate labeled Exhibit A, attached hereto.

Minimum capacity required by UDOT 0.50 acre-ft
Additional capacity requested by City 2.50 acre-ft
Total capacity including Betterment 3.00 acre-ft

<table>
<thead>
<tr>
<th>Participation Ratio</th>
</tr>
</thead>
<tbody>
<tr>
<td>City</td>
</tr>
<tr>
<td>2.50 acre-ft = 83%</td>
</tr>
<tr>
<td>3.00 acre-ft</td>
</tr>
<tr>
<td>UDOT</td>
</tr>
<tr>
<td>0.50 acre-ft = 17%</td>
</tr>
<tr>
<td>3.00 acre-ft</td>
</tr>
</tbody>
</table>

**UDOT’s Share of Cost** 17% of $35,000 = $5,950.00
**City’s Share of Cost** 83% of $35,000 = $29,050.00

The City’s total cost to upsize the detention basin will be the Lump Sum* amount of $29,050.00

*If the effort required to document the cost, quantity of materials and labor required for the betterment component of the work is substantial and the parties agree, a calculated lump sum amount may be used to represent the value of the betterment without further accumulation and examination of actual costs.

With respect to Local Agency betterments performed as part of UDOT’s construction contracts, UDOT prefers that the total estimated cost of the betterment work be advanced/deposited with UDOT prior to advertising the project. Guidelines issued by the UDOT Comptroller’s Office should be followed as closely as possible. Betterment Guidelines and Agreement Form are on UDOT’s Local Government Assistance website.

**B. Salvage Credits**

Materials recovered from the permanent facility of the utility company, that are accepted for return to stock shall be credited to the project at the current stock prices of such used materials. Materials recovered and not accepted for reuse by the utility company, if determined to have a net sale or salvage value, shall be credited to the project at the sale or salvage value.

Materials recovered from temporary use and accepted for reuse by the utility company shall be credited to the project at prices originally charged to the project.

In cases of relocation, UDOT receives credit from the utility company for the value of any materials from the old facility that the utility company removes from the construction project and retains. The
The utility company may recondition and return materials to stock or sell them as scrap. The utility company and UDOT determine the credit for each item of material that it returns to stock or sells.

UDOT should not participate in the cost of removing a facility if the removal cost is greater than its salvage value, unless it has to be removed for safety or aesthetic reasons. The utility company must remove old facilities that contain hazardous materials at its own expense.

The Resident Engineer is required to examine all materials suitable for salvage and verify the credit was received on Form C-193A. Obtain FHWA approval of salvage value if applicable.

C. Accrued Depreciation Credits (Expired Service Life)

Accrued depreciation credit is only required for major operational utility facility replacements such as plants, stations or buildings. Credit for accrued depreciation is not required on any segment of a utility’s service, distribution or transmissions lines, regardless of the length of line involved. Credit for accrued depreciation of a facility represents the value a utility has derived from an asset at the time it is replaced by a project. It is based on the original cost of constructing the facility, times the years served divided by the expected service life. The utility company may express the credit as a percentage of the new installation cost.

While developing the agreement, UDOT and the utility company should discuss whether accrued depreciation credit is appropriate in the case of replacement of old facilities with new facilities. Sometimes the credit for accrued depreciation is so small that the cost of researching the installation date and original cost, negotiating with the utility, processing the paperwork and doing whatever else may be necessary, and the time required to determine the credit value, is not worth the return. Engineering judgment should be applied when deciding whether to pursue the credit. Refer to the FHWA Program Guide for further discussion of this topic.

D. Miscellaneous

- UDOT may reimburse the utility company for a reroute in cases where the utility company can eliminate a highway crossing by constructing a new portion of the line to maintain the same load—even though the cost may be slightly in excess of the normal crossing.
- UDOT will reimburse the utility company in cases where the utility company replaces an overhead facility with an underground facility, if the increased cost of the underground facility is nominal and if crossing hazards are reduced or eliminated. UDOT shall receive credit for any increase in value.
- UDOT can pay for crop damage only in those cases where the utility company is required to reimburse the owner for such damage.
ATTENTION: (Utility Company Contact)

SUBJECT: Project No. ____________________

CID No. _______          PIN ______

(THESE ARE SPECIFIC EXAMPLE; INSERT SIMILAR APPLICABLE PROJECT SPECIFIC LANGUAGE)

Authorization for Acquisition of Steel Power Poles and Other Long Lead Time Equipment

Dear ______,

Due to the lengthy lead time required to obtain the necessary quantity of steel transmission poles and other necessary equipment for the above referenced project, this letter is written to authorize you to order 50 steel transmission poles. These poles need to be on an average of 90 feet tall and direct bury application. This authorization letter is also given to order accompanying Switch Gear, Transformer, Transrupter, Capacitor Bank and other necessary equipment for the relocation of the substation adjacent to the project.

The future agreement dealing with this power line relocation, pole installation and substation relocation will state that the poles will be fifty percent (50%) reimbursable except for facilities located on private right-of-way, which are 100% reimbursable. The future agreement will also state that UDOT will be billed for the actual amount of poles used in this relocation effort.

Sincerely,

Name
Region Utility and Railroad Leader
STATEWIDE UTILITY RELOCATION AGREEMENT

THIS STATEWIDE UTILITY RELOCATION AGREEMENT, (Agreement) is made and entered into this 19th day of July, 2016, by and between the UTAH DEPARTMENT OF TRANSPORTATION, hereinafter referred to as “UDOT” and QUESTAR GAS COMPANY, a Registered Corporation in the State of Utah, hereinafter referred to as the “COMPANY.” The Utah Department of Transportation and Questar Gas Company are referred to herein individually as a “Party” or collectively as the “Parties.”

RECITALS:

WHEREAS, UDOT has jurisdiction over State Highway Rights of Way and administers the programming, development and completion of State and Federal-aid eligible projects (referred to herein as Project or collectively as Projects); and

WHEREAS, COMPANY is a natural gas utility and owns natural gas facilities (Facilities), that are located within State Highway Rights of Way under a Statewide Utility License Agreement and within COMPANY owned easements or fee title property; and

WHEREAS, certain Projects will require the relocation, adjustment, or protection of COMPANY Facilities, and the COMPANY is required by State Law to perform this work (Utility Work) when necessary to accommodate a Project; and

WHEREAS, to expedite the Utility Work and reimbursement of Utility Work on Projects, it is the desire of the Parties to enter into this Agreement with the understanding that the Parties will enter into future Project Agreements, which are supplemental to this Agreement, to address the scope of work, schedule, reimbursement amounts, and other requirements for each Project; and

WHEREAS, this Agreement, along with the Project Agreements shall govern the terms and conditions for each Project;

NOW, THEREFORE, for good and valuable consideration, the receipt and sufficiency of which hereby acknowledged, the Parties agree to the following terms and conditions.

TERMS AND CONDITIONS

1. PROJECT IDENTIFICATION AND DEVELOPMENT

A. For each Project the Parties agree to enter into a Project Agreement. UDOT will prepare a Project Agreement in substantially the same form as the agreement attached hereto as Exhibit A. All terms in the Project Agreements shall be supplemental to the terms of this Agreement. In the case of an inconsistency between the terms of this Agreement and the terms of a Project Agreement, the terms of the Project Agreement shall control.

B. In some cases, particularly when UDOT engages a Design Builder or a Construction Manager General Contractor, the Parties may enter into Supplemental Agreements to the Project
Statewide Agreement Covering the Coordination and Reimbursement for COMPANY’s Facility Adjustments and Relocations Throughout the State of Utah

QUESTAR GAS COMPANY

Agreement. In this case, the Project Agreement may be limited to contact information and a description of anticipated work. The Supplemental Agreements will address Utility Work for specific Project locations and include a description of the work, the Party to perform the work, the location of the work, the estimated duration of the work, an estimate of the cost to each Party, any proposed betterments, a plan showing the existing and proposed location of the Facilities, and any necessary right-of-way documents. The estimates contained in the Project Agreement and Supplemental Agreements will be based upon material and labor prices as of the date of the estimate and do not account for increases due to unforeseen circumstances in accomplishing the Utility Work.

2. PROJECT COORDINATION

A. During the request for proposal phase of any Design Build Project, UDOT shall schedule a meeting with COMPANY and UDOT’s prospective contractors. The purpose of the meeting will be to determine if conflicts with the COMPANY’s Facilities can be avoided and to provide prospective contractors with parameters within which COMPANY’s Facilities can be relocated. COMPANY and UDOT will also meet one (1) time individually with each prospective contractor for the same purpose.

B. During the design phase of any Project, UDOT and COMPANY will work in good faith to identify the extent of any conflicts and propose and provide a mutually agreeable location to which the Facilities can be relocated. UDOT will provide the COMPANY with Project design plans as early as possible, and will schedule and meet with the COMPANY to review the right-of-way and environmental requirements, design, construction, cost estimates, and scheduling for the COMPANY’s Utility Work at specific locations on the Project to ensure maximum lead time for advance order of materials and scheduling of work force.

C. COMPANY shall provide UDOT with an estimated time for completion of the Utility Work and any potential limitations including permit and regulatory approvals, dependency upon work of other parties, lead times for acquiring materials, outage windows, and scheduling work crews. UDOT will, by its standard specifications and/or special provisions, make its contractor aware of the coordination and cooperation required for timely completion of the Utility Work and will advise the contractor of the approximate schedule for completion of the Utility Work during Project advertisement. After UDOT awards the Project to its contractor, UDOT will schedule a meeting with the COMPANY and the COMPANY shall meet with UDOT’s representative and UDOT’s contractor to develop a detailed work plan and schedule for Utility Work. The COMPANY shall submit to UDOT written acknowledgement of the approved schedule. The COMPANY shall diligently pursue its work so that completion can be accomplished according to the approved schedule after receiving written authorization to proceed.

D. The COMPANY shall notify UDOT, or its contractor if so designated by UDOT, as soon as practicable but no later than two (2) working days of its discovery of any occurrence or unforeseen circumstances that would prevent the COMPANY from completing the Utility Work according to the time schedule established in the Project Agreement.

E. After the Project Agreement is executed by the Parties, any change in the scope of the work, extra work, or change in the planned work covered by this Agreement or the Project Agreement will be noted in the daily records and is valid only if made by written authorization and Change Order executed by both Parties prior to the start of the revised work. The COMPANY will provide to UDOT detailed estimates for the Change Order work. If the change of work is significant, UDOT may require a Supplemental Agreement.
3. COMPANY REQUIREMENTS

A. After design work is complete and the Project Agreement has been executed, COMPANY may require up to six (6) months for the acquisition of materials for high pressure (HP) Facilities and seven (7) weeks for acquisition of materials for intermediate high pressure (IHP) Facilities.

B. The Parties shall develop a Project schedule for the relocation of COMPANY's Facilities. Utility Work on COMPANY Facilities from October 1 through April 15 will be avoided, unless otherwise agreed to in writing. Utility Work between April 16 and September 30 may be performed depending upon the COMPANY's system requirements.

C. The Parties may agree to abandon retired lines in place in accordance with UDOT and COMPANY procedures. Abandoned lines remain the property of COMPANY. If abandoned lines are removed, COMPANY will perform the work and the cost of removal will be included in the Project costs and shared by UDOT and COMPANY under the terms of the Project Agreement.

4. UDOT PROJECT RESPONSIBILITIES

A. UDOT, through its contractors, will provide surveying and staking of roadway facilities as required by the COMPANY, in accordance with UDOT's Standard Specifications, Section 01721, Survey, 3.16. Utilities. The cost of the surveying and staking will be at UDOT's sole expense and the COMPANY will have no obligation for surveying. Any of UDOT's survey control stakes or bench markers which are removed or damaged by the COMPANY shall be reestablished by UDOT at COMPANY's expense.

B. UDOT will adjust any existing schedule to allow for any reasonable time that may be required for the COMPANY to redesign or modify its plans and relocate its Facilities if UDOT requires the redesign. If UDOT substantially changes the Project design after the COMPANY has completed or is in the process of completing its relocation design; or if the COMPANY has completed the relocation of its Facilities based on previously approved design plans, the cost of the second design and/or relocation is to be paid in full by UDOT.

C. In accordance with current policies and directives, UDOT may perform Subsurface Utility Engineering, Quality Levels A and B, within the limits of a Project. Additional work required to determine the vertical location of underground Facilities at specific, critical locations will be reviewed with the COMPANY. A summary of the costs will be provided to the COMPANY, and the COMPANY's proportional share of the actual cost will be withheld from the COMPANY's relocation reimbursement.

5. COMPANY TO DESIGN AND CONSTRUCT UTILITY WORK

A. COMPANY, with its regular engineering and construction forces at its standard schedule of wages and working hours, or through its qualified contractors with whom it has continuing contracts or has obtained contracts upon appropriate solicitation, shall perform the necessary design work, field and office engineering, and shall furnish all materials and perform the construction work on its Facilities, necessitated by the Project.

The need for overtime or other additional costs necessary to meet UDOT's schedule, allowable outage windows or available lane closures for the completion of the Utility Work will be evaluated and agreed upon in advance by the Parties. In performance of the Utility Work, the COMPANY
and its contractors will adhere to the requirements of Utah Administrative Codes R930-7 and R930-8.

B. COMPANY, while engaged in the adjustment or relocation of its Facilities, will comply with any applicable requirements of 23 C.F.R. § 635.410, Buy America Requirements. Buy America Certification forms, if required, shall be included in Project Agreements. COMPANY may require additional time for the acquisition of materials due to the Buy America requirements.

C. COMPANY shall include within its design of the relocated Facilities the clear zone requirements as defined in AASHTO's "Roadside Design Guide" and minimum vertical and horizontal clearances as defined in R930-7.

D. COMPANY, while engaged in the relocation of its Facilities shall comply with UDOT’s Standard Specification for Road and Bridge Construction Section 01356, Subpart 1.13, Discovery of Historical, Archeological or Paleontological Objects if performing work within UDOT’s right-of-way.

E. COMPANY provided traffic control devices shall conform to the standards set forth in the Manual on Uniform Traffic Control Devices (MUTCD) as adopted by UDOT. All flagging personnel shall be certified.

F. COMPANY employees and contractors working in the highway right-of-way shall comply with current requirements of MUTCD Section 6D.03. concerning high-visibility safety apparel.

6. COMPANY TO NOTIFY UDOT AND ITS CONTRACTOR BEFORE BEGINNING CONSTRUCTION WORK

Parties agree to cooperatively work together during construction, communicate frequently and coordinate the Utility Work. The COMPANY will notify UDOT’s Project Representative as identified in the Project Agreement at least forty-eight (48) hours in advance of beginning any work. Such notification can be by telephone, email, in person or in writing. Subsequent notification of when and where the COMPANY will be performing work will be given by the COMPANY to UDOT’s Project Representative on a day-to-day basis. In the event COMPANY fails to provide notice of work, which results in conflicts with other contractors on the Project site, COMPANY will demobilize its personnel and contractor at its own cost. Any work performed without proper notification to UDOT’s Project Representative must be made available at COMPANY’s expense for inspection by UDOT upon request or verified in another acceptable manner to UDOT. Failure on the part of the COMPANY to give proper notification to UDOT may result in UDOT’s disallowance of reimbursement for that portion of the COMPANY’s work performed while not under the surveillance of the UDOT’s Project Representative.

7. DAILY RECORD KEEPING

UDOT, through its Project Representative, will keep a daily record of the Utility Work performed by the COMPANY for each Project, in a form acceptable to both Parties. The daily record shall be signed by UDOT’s Project Representative and the COMPANY, or its authorized representatives, as required and a copy shall be retained by the Parties to this Agreement. If emergencies occur requiring the COMPANY’s work forces to leave the job, record keeping shall be resumed upon return to the Project.
8. **EMERGENCY WORK**

When the COMPANY experiences an emergency unrelated to its work on the Project, it will take care of said emergency, after which it will again notify UDOT as to when work will be resumed on the Project.

9. **REIMBURSEMENT FOR COMPANY’S UTILITY WORK**

A. Reimbursement eligibility will be determined in accordance with Utah Code Section 72-6-116 and Utah Administrative Code R930-8.

B. Reimbursable costs for the Utility Work will be developed in accordance with 23 C.F.R. § 645, Subpart A. The COMPANY will submit itemized bills covering its actual costs incurred for performing the work covered by the Project Agreements hereto, bearing the Project number together with supporting sheets on a monthly or quarterly basis.

C. COMPANY will send one (1) final and complete billing of all actual costs incurred within six (6) months following completion of Utility Work by the COMPANY on the Project to:

UDOT Contracts and Compliance Specialist
4501 South 2700 West, Box 148220
Salt Lake City, Utah 84114-8220

In the event COMPANY fails to send a final bill to UDOT within six (6) months of completion of its work, UDOT may send notice to COMPANY requesting a final bill. COMPANY will have forty-five (45) days to respond with a final bill or will forfeit payment for the unbilled portion of the work. Both Parties agree to cooperatively work together in good faith to resolve any disputes on the final billing within sixty (60) days after UDOT receives the final bill from COMPANY. UDOT will reimburse the COMPANY within sixty (60) days after receipt of said billings or after disputes on final bill are resolved. Reimbursement will be limited to items complying fully with the provisions of 23 C.F.R. § 645, Subpart A.

10. **BETTERMENT WORK**

Betterment work is defined as set forth in 23 C.F.R. § 645, Section 645.105, Definitions. Specifically, betterment is "any upgrading of the facility being relocated that is not attributable to the highway construction and is made solely for the benefit of and at the election of the utility." If the COMPANY desires to include betterment in the Utility Work at any specific location, UDOT will allow betterment work to be performed, provided the Parties can reasonably coordinate the Project schedule to accommodate the betterment work without delaying the Project. The difference in costs between the minimum construction required as a result of the Project and the COMPANY’s desired construction shall be made at the sole expense of COMPANY.

11. **SALVAGE CREDIT**

All materials from the existing Facilities, which are recovered in suitable condition for reuse by the COMPANY and not reused on the Project, shall be credited to the cost of the Project at current stock prices in accordance with 23 C.F.R. § 645.117. If the recovered materials are not suitable for reuse, they shall be credited at salvage prices, if any, or such other prices as agreed upon between the COMPANY and UDOT following inspection of the recovered material.
12. **COSTS DIFFER BY MORE THAN TEN PERCENT**

The COMPANY's final billings of completed Utility Work should follow as closely as possible the order of the items in the detailed estimates contained in the Project Agreements or Supplemental Agreements, and will be provided in a format that allows comparisons to be made with the approved plans and estimates. If the COMPANY's actual costs incurred for its force account work differs more than ten percent (10%) plus or minus per cost category from the estimated amount contained in the Project Agreements or Supplemental Agreements, the COMPANY is required to submit a letter of explanation with its billings indicating how and why the difference in costs occurred.

13. **AUDIT**

UDOT and the Federal Highway Administration shall have the right to audit all cost records and accounts of the COMPANY pertaining to the Project in accordance with 23 C.F.R. § 645, Subpart A. Should this audit disclose that the COMPANY has been underpaid, the COMPANY will be reimbursed by UDOT upon submission of additional billing to cover the underpayment. Should this audit disclose that the COMPANY has been overpaid, the COMPANY will reimburse UDOT in the amount of the overpayment. For the purpose of audit the COMPANY is required to keep and maintain its records of Utility Work covered herein for a minimum of three (3) years after final payment is received by the COMPANY from UDOT.

14. **RIGHT-OF-WAY ACQUISITION**

COMPANY owns rights-of-way, easements and fee property (collectively the Existing Property) from which Facilities are relocated to accommodate Projects. For all Existing Property COMPANY relinquishes to accommodate a Project, UDOT will replace the property with new property (collectively, the New Property). The New Property will be at a location agreeable to both Parties, with dimensions comparable to the Existing Property, and the terms of the conveyance documents shall be acceptable to COMPANY. For New Property that UDOT may acquire through eminent domain, COMPANY may elect to have UDOT acquire such New Property on behalf of COMPANY. In the event COMPANY elects to have New Property with dimensions greater than the dimensions of the Existing Property, COMPANY shall be responsible for the incremental costs due to the increased dimensions of the New Property unless the increased dimensions are required by law or regulation.

15. **FORCE MAJEURE**

An event of force majeure is an unforeseeable event or circumstance which is beyond the control and without the fault or negligence of the party affected and which by the exercise of reasonable diligence the party affected was unable to prevent, including without limitation strikes, riots, earthquakes, epidemics, sabotage, terrorist actions, wars, fires, floods, weather, materials shortage, power failure, telecommunications outage, acts of God, governmental restrictions, regulations or controls, judicial orders, or other failures, interruptions or errors not directly caused by the parties.
Neither party is responsible for any failure to perform its obligations under this Agreement if it is prevented or delayed in performing those obligations by an event of force majeure. Only those obligations directly affected by an event of force majeure are excused.

Where there is an event of force majeure, the party prevented from or delayed in performing its obligations in this Agreement must immediately notify the other party giving full particulars of the event of force majeure preventing that party from, or delaying that party in performing its obligations in this Agreement and that party must use its reasonable efforts to mitigate the effect of the event of force majeure upon its performance of the contract and to fulfill its obligations.

Upon completion of the event of force majeure, the party affected must as soon as reasonably practicable recommence the performance of its obligations in this agreement. If the affected party is the Company, the Company must provide a revised schedule to minimize the effects of the prevention or delay caused by the event of force majeure.

An event of force majeure does not relieve a party from liability for an obligation to perform according to the Agreement. Neither party shall be responsible to the other for any costs or losses caused by the event of force majeure.

16. **CONFIDENTIAL INFORMATION**

UDOT is subject to the requirements of the Government Records Access Management Act ("GRAMA") or other applicable law. If Company provides a record that it believes should be protected pursuant to Utah Code Section 63G-2-305(1) or (2), the Company shall comply with Utah Code Section 63G-2-309 and mark the documents as confidential.

17. **TERM AND TERMINATION**

A. This Agreement expires five (5) years from the date of execution. Upon expiration of this Agreement, the parties will negotiate in good faith the terms of renewal. The terms and conditions of this Agreement will remain in effect until the new agreement between the parties becomes effective, but in no event shall such renewal period exceed twelve (12) months following expiration of this Agreement unless otherwise agreed to by the Parties.

B. This Agreement may be terminated by either party by providing sixty (60) day written notice of termination. Any such termination shall not affect the validity of any previously executed Project Agreement or Supplemental Agreement. Notice shall be given as follows:

<table>
<thead>
<tr>
<th>UDOT:</th>
<th>Questar Gas Company:</th>
</tr>
</thead>
<tbody>
<tr>
<td>UDOT Legal Counsel</td>
<td>Questar Gas Company</td>
</tr>
<tr>
<td>4501 South 2700 West</td>
<td>General Counsel</td>
</tr>
<tr>
<td>P.O. Box 148455</td>
<td>P.O. Box 45360</td>
</tr>
<tr>
<td>Salt Lake City, UT 84144</td>
<td>Salt Lake City, UT 84145</td>
</tr>
</tbody>
</table>

18. **ASSIGNMENT:**

COMPANY may assign or transfer its rights and obligations under this Agreement to any parent, affiliate, or subsidiary of COMPANY, to any entity having fifty percent (50%) or more direct or indirect common ownership with COMPANY, or to any successor-in-interest, provided the assignee or transferee
agrees to be bound by all terms and conditions of this Agreement. Otherwise, COMPANY shall not transfer, assign or delegate its rights or obligations under this Agreement without the prior written consent of UDOT. This Agreement shall be binding upon and inure to the benefit of the Parties' permitted successors and assigns.

19. **MISCELLANEOUS**

A. In the event of any dispute relating to this Agreement, resulting in litigation, the prevailing Party shall be entitled to recover all costs, including reasonable attorney fees.

B. The provisions of this Agreement are severable, and should any provision be deemed void, unenforceable or invalid, such provision shall not affect the remainder of this Agreement.

C. This Agreement shall be governed by the laws of the State of Utah.

D. This Agreement supersedes the previously executed STATEWIDE UTILITY RELOCATION AGREEMENT between the Parties dated November 4th, 2009.
IN WITNESS WHEREOF, the Parties hereto have caused this Agreement to be executed by their duly authorized officers as of the day and year first above written.

ATTEST:  

By: ____________________________  
Name  

Date: ____________________________  

QUESTAR GAS COMPANY, a Registered Corporation of the State of Utah  

By: ____________________________  
Vaughn W. Shosted  
Title: Vice President Operations  

Date: ____________________________  

APPROVED AS TO FORM:  

By: ____________________________  
Counsel for COMPANY  

******UTAH DEPARTMENT OF TRANSPORTATION******

RECOMMENDED FOR APPROVAL:  

By: ____________________________  
Title: Statewide Utilities & Railroads Engineer  

Date: ____________________________  

APPROVED:  

By: ____________________________  
Title: Project Development Director  

Date: ____________________________  

APPROVED AS TO FORM:  

By: ____________________________  
Title: Assistant Attorney General  

Date: ____________________________  

COMPTROLLER'S OFFICE  

By: ____________________________  
Title: Contract Administrator  

Date: ____________________________
Statewide Agreement Covering the Coordination and Reimbursement for COMPANY's Facility Adjustments and Relocations Throughout the State of Utah

QUESTAR GAS COMPANY

Exhibit A

PROJECT AGREEMENT
PROJECT AGREEMENT

Supplement to Statewide Utility Relocation Agreement, Finance No. 160000

THIS PROJECT AGREEMENT, made and entered into this ______ day of ______, 20____, by and between the UTAH DEPARTMENT OF TRANSPORTATION, hereinafter referred to as “UDOT” and QUESTAR GAS COMPANY, a Registered Corporation in the State of Utah, hereinafter referred to as the “Company.”

This Project Agreement is part of and subject to the terms and conditions of the STATEWIDE UTILITY RELOCATION AGREEMENT dated _______ UDOT Finance No. 160000, hereinafter referred to as “Statewide Agreement”. All the terms of the Statewide Agreement remain in full force and effect unless otherwise specified herein.

The parties hereto agree as follows:

1. Company’s contact person for the Project is, [insert name], telephone number (XXX) XXX-XXXX and email, XXXX@XXXX.com.

2. UDOT’s Project Representative is [insert name and title], telephone number (XXX) XXX-XXXX and email XXXX@utah.gov.

3. UDOT’s Resident Engineer is [insert name], telephone number (XXX) XXX-XXXX and email XXXX@utah.gov.

4. The Company will perform the following described Utility Work in accordance with the terms and conditions of the Statewide Agreement:

   Location of Utility Work:

   Description of Utility Work to be performed, including proposed location:

   (Plan Sheets and Right of Way Documents attached as “EXHIBIT A”, that is incorporated by reference.)

   Party performing the Utility Work:

   Anticipated duration of Utility Work:

   Estimated dates of Utility Work:
   (Includes allowable outage windows)

   Estimated Total Cost of Utility Work:
   (Detailed Estimate attached)

02 Jun 2016
Betterments Included:

[UDOT and Company will discuss and include these items in Project Agreement if applicable:
- Party responsible for and timing of removal of pavement, other hard surface, trees, fencing, signs, buildings etc.
- Party responsible for backfill, material and compaction requirements for backfill.
- Party responsible for final grading and hard surface restoration.
- Party responsible for traffic control, including safety barriers, plates, and restrictions/requirements for lane closures.]

3. Utility Work to be completed under this Project Agreement is subject to the following:

Special Provisions:
- Buy America. [List specific Buy America requirements applicable to this Project.] Specific certification requirements are marked “EXHIBIT C” that is incorporated by reference.

- Other limitations to the Project:

[UDOT and Company will discuss and include these items in Project Agreement if applicable:
- Limits of loading over pipes, including cover/equipment restrictions
- High pressure inspection
- Night Work.]

4. The Company shall be reimbursed by UDOT for XXX% of the actual costs incurred by the Company for performing the Utility Work covered herein. An estimate of the total cost of said Utility Work was furnished by the Company to UDOT in the total amount of $__________. A copy of the details of the estimate are marked “EXHIBIT B” that is incorporated by reference.

TOTAL ESTIMATED COST TO UDOT IS $__________

TOTAL ESTIMATED COST TO THE COMPANY IS $__________

NOTE: The above are estimates only. Total payment to the Company by UDOT will be based on the actual costs incurred as determined after completion of construction.

5. Upon signature and return of this Project Agreement to UDOT, the Company is authorized to proceed with the Utility Work covered herein.
IN WITNESS WHEREOF, the parties hereto have caused these presents to be executed by their duly authorized officers as of the day and year first written above.

ATTEST:

By: ____________________________
Title: ____________________________
Date: ____________________________

QUESTAR GAS COMPANY (IHP),
a Registered Corporation of the State of Utah

By: ____________________________
Title: ____________________________
Date: ____________________________

IMPRESS SEAL

******************************************************************************

RECOMMENDED FOR APPROVAL:

By: ____________________________
   Region Utility and Railroad Leader
Date: ____________________________

UTAH DEPARTMENT OF TRANSPORTATION

By: ____________________________
   Region Director
Date: ____________________________

APPROVED AS TO FORM:

The Utah State Attorney General’s Office has previously approved all paragraphs in this Agreement as to form.

UDOT COMPTROLLER’S OFFICE:

__________________________
Contract Administrator
Date: ________________________
UTILITY REIMBURSEMENT AGREEMENT

This Agreement, made and entered into this ___ day of ___________________ , 20___, by and between the Utah Department of Transportation ("UDOT"), an agency of the State of Utah, and Company ("Company"), a Registered Corporation in the State of XXXXX.

RECITALS

UDOT is engaged in preparing plans, specifications and estimates of costs toward constructing [Enter type of Project; e.g., roadway widening…], known as [Enter Project number and name], in XXXXX County, Utah. Project construction necessitates relocating the Company’s utility facilities. Utility Work includes the protection in place, adjustment of the facilities, and relocation of the Company’s facilities.

This Agreement is made to set out the terms and conditions where under the Utility Work shall be performed.

AGREEMENT

Now therefore, it is agreed by and between the parties as follows:

1. **Scope of Utility Work**

   [Enter description of the specific relocation e.g., Relocate existing communication facilities from behind the UDOT guardrail, currently attached to the existing structure.] A copy of the detailed work plans and specifications of Utility Work is included in Exhibit A that is incorporated by reference.

2. **Project Specific Special Provisions**

   1. Add examples such as scheduling timeframes
   2. Project or UDOT contractor requirements/restrictions

3. **Company to Perform Utility Work**

   The Company, with its regular engineering and construction forces at its standard schedule of wages and working hours, or through its qualified contractors with whom it has continuing contracts, and in accordance with 23 C.F.R. §645, subpart A, shall perform the necessary field and office engineering, furnish all materials, and perform the Utility Work covered herein, except as noted above. The Company shall not perform any Utility Work until authorized in writing by UDOT.
4. Conformance with Utah Administrative Code R930-7

The design and construction of the Utility Work, access for future maintenance and servicing of Company’s property located on the right of way of the Project, will be in conformance with Utah Administrative Code R930-7, and any supplements or amendments.

5. UDOT to Inform its Contractor

UDOT will, by its standard specifications and/or special provisions, inform its contractor of the coordination and cooperation required for timely completion of Utility Work. UDOT will also inform its contractor of the approximate schedule for completion of the Utility Work and the Company shall diligently pursue its Utility Work so that completion can be accomplished as soon as possible after having been authorized to proceed.

6. Company to Notify UDOT Before Beginning Utility Work

The Company will notify UDOT’s Resident Engineer, [ENTER NAME], [ENTER PHONE NUMBER], [ENTER EMAIL], and [ENTER MAILING ADDRESS] at least 1 week in advance of beginning any Utility Work. Notification shall be by email with confirmation receipt. When the Company experiences emergency work of its own during Utility Work on the Project, it will take care of the emergency, after which it will again informally notify the Resident Engineer’s office as to when Utility Work will be resumed on the Project. Failure on the part of the Company to give proper notification to UDOT’s Resident Engineer’s office will result in UDOT’s disallowance of reimbursement for that portion of the Company’s Utility Work performed while not under the surveillance of UDOT’s Resident Engineer or its authorized representative. In the event the Resident Engineer cannot be contacted, Company shall notify the Region Utility and Railroad Leader [ENTER LEADER’S NAME, PHONE NUMBER, EMAIL, AND ADDRESS].

7. Buy America Requirements (if applicable)

The Company, while engaged in the adjustment or relocation of its facilities on this Project, will comply with the requirements of 23 C.F.R §635.410, Buy America Requirements. Company will provide UDOT’s Resident Engineer with signed Buy America Certifications prior to or at the time subject materials are delivered to the Project site, according to the specific instructions and format set forth in the attached Exhibit B that is incorporated by reference.

8. Traffic Control and Flagging

UDOT will provide MOT and traffic control for Utility Work at no cost to the Company for Utility Work that is scheduled and occurs during active construction of the Project. Except in the case of emergencies, Utility Work will be scheduled and comply with the requirements of the Limitation of Operations contained in UDOT’s contract with respect to lane closures, peak hour work restrictions, holiday and special event limitations, etc. If UDOT’s contractor is not
providing traffic control for the Company then the Company shall use UDOT approved traffic control devices and conform to the standards set forth in the Manual on Uniform Traffic Control Devices and 23 C.F.R. §630, Subpart J.

All flagging personnel shall be certified.

9. **UDOT to Provide Survey Control**

Surveying and staking of roadway facilities will be provided in accordance with UDOT’s Standard Specifications. The cost of the surveying and staking will be at UDOT’s expense and the Company will have no obligation for the cost of surveying. Any of UDOT’s survey control stakes or bench markers, which are removed or damaged by the Company, shall be reestablished by UDOT at the Company’s expense.

10. **Discovery of Historical Objects**

The Company, while engaged in the relocation of its facilities, shall comply with UDOT’s Standard Specifications, Section 01355, Subpart 3.8, Discovery of Historical, Archeological or Paleontological Objects, Features, Sites, or Human Remains.

11. **Daily Record Keeping**

UDOT, through its Resident Engineer, will keep daily record of the Utility Work performed by the Company; such daily record to be in duplicate on a form to be prepared by the Company and/or UDOT. The type of form to be used shall be approved by UDOT’s Contracts, Estimates and Agreements Office. The daily record shall be signed by UDOT’s Resident Engineer and Company’s authorized representatives in the space provided for on the record form. Copies of the record forms shall be retained by all parties to this Agreement. When emergencies occur, requiring the Company’s work forces to leave the job, the record keeping shall be resumed upon return to the Project.

12. **Reimbursement for Company’s Utility Work**

The Company shall be reimbursed by UDOT for XX% of the actual costs incurred by the Company for performing the Utility Work located within State right of way as required by Utah Code §72-6-116. An estimate of the cost of Utility Work was furnished by the Company to UDOT in the amount of $XXX,XXX.XX. The estimate is based upon the prices of materials and labor current as of the date of the estimate. The estimate does not account for increases due to unknown and unforeseen hardships in accomplishing the Utility Work. A copy of the details of the estimate is marked **Exhibit C** that is incorporated by reference.

<table>
<thead>
<tr>
<th>Total Estimated Cost</th>
<th>$______________________</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total Estimated Cost to UDOT</td>
<td>$______________________</td>
</tr>
<tr>
<td>Total Estimated Cost to Company</td>
<td>$______________________</td>
</tr>
</tbody>
</table>
Note: The above are estimates only. Total payment to the Company by UDOT will be based on the actual costs incurred as determined after completion of construction.

13. Salvage Credit for Recovered Materials

All materials from the existing facilities, which are recovered in suitable condition for reuse by the Company and not reused on the Project, shall be credited to the cost of the Project at current stock prices in accordance with 23 C.F.R. §645.117. If the recovered materials are not suitable for reuse, they shall be credited at salvage prices or such other prices as agreed upon between the Company and UDOT following inspection of the recovered material.

14. Changes in the Utility Work

In the event there are changes in the scope of the Utility Work, extra Utility Work, or changes in the planned Utility Work covered by this Agreement, a modification to this Agreement signed by the parties is required prior to the start of Utility Work on the changes or additions.

15. Company to Mark Facilities

Company is required to mark all underground facilities with approved markers and to keep on file “as constructed plans” of all its Utility Work for future reference.

16. Billing and Payment

The Company shall submit itemized bills covering its actual costs incurred for performing the Utility Work bearing the Project number together with supporting documentation. The Company shall submit one final and complete bill incorporating previous billing details within 6 months following completion of the Utility Work by the Company on UDOT’s Project to UDOT’s Construction Division, 4501 South 2700 West, Salt Lake City, Utah 84114-8405, Attention: Contracts, Estimates and Agreements Specialist. UDOT’s Resident Engineer will review the billings, give verification of the Utility Work performed and forward the billings to UDOT’s Construction Office for processing. UDOT will reimburse the Company within 60 days after receipt of the billings, but only for those items complying fully with the provisions of 23 C.F.R. §645, subpart A. Failure on the part of the Company to submit the billings within 6 months’ time limit may result in UDOT’s disallowance of that portion of Utility Work performed by the Company, except as agreed to between the parties in advance. Any Utility Work performed without proper notification to UDOT’s Resident Engineer’s office will be cited to the Company and may be deducted from the reimbursement.

17. Costs Differ by More than 10%

If Company’s actual costs incurred for its force account Utility Work differs more than 10% plus or minus per line item from its detailed estimates shown in Exhibit B then the Company
is required to submit a letter of explanation with its billings indicating why and how the difference in costs occurred. The Company is required to match its billings of completed Utility Work with its detailed estimates.

18. Right to Audit

UDOT and/or the Federal Highway Administration shall have the right to audit all cost records and accounts of the Company pertaining to this Project in accordance with the auditing procedure of the Federal Highway Administration and 23 C.F.R. §645, subpart A. Should this audit disclose that the Company has been underpaid, the Company will be reimbursed by UDOT upon submission of additional billing to cover the underpayment. Should this audit disclose that the Company has been overpaid, the Company will reimburse UDOT in the amount of the overpayment. For purpose of audit the Company is required to keep and maintain its records of Utility Work covered herein for a minimum of 3 years after final payment is received by the Company from UDOT.

19. Miscellaneous

a. Each party agrees to undertake and perform all further acts that are reasonably necessary to carry out the intent and purpose of the Agreement at the request of the other party.

b. This Agreement in no way creates any type of agency relationship, joint venture, or partnership between UDOT and Company.

c. This Agreement shall be deemed to be made under and shall be governed by the laws of the State of Utah in all respects. Each person signing this Agreement warrants that the person has full legal capacity, power and authority to execute this Agreement for and on behalf of the respective party and to bind such party.

d. This Agreement may be executed in one or more counterparts, each of which shall be an original, with the same effect as if the signatures were made upon the same instrument. This Agreement may be delivered by facsimile or electronic mail.
IN WITNESS WHEREOF, the parties hereto have caused these presents to be executed by their duly authorized officers as of the day and year first above written.

Attest

________________________ Company,

________________________

Title: ______________________ Title: ______________________

Date: ______________________ Date: ______________________

(IMPRESS SEAL)

............... .................................................................

Recommended for Approval

Utah Department of Transportation

Title: Utility and Railroad Leader

Title: Region Director

Date: ______________________

Date: ______________________

Approved as to Form

UDOT Comptroller Office

The Utah State Attorney General’s Office has previously approved all paragraphs in this Agreement as to form

Title: Contract Administrator

Date: ______________________

Page 6 of 9
Exhibit A
Utility Work Plans and Specifications
Exhibit B
Detailed Cost Estimate of Utility Work
Exhibit C
Buy America
DEPARTMENT OF TRANSPORTATION
CARLOS M. BRACERAS, P.E.
Executive Director
SHANE M. MARSHALL, P.E.
Deputy Director

April 15, 2017

Company
Address
City, Utah Zip

Attention: Name
Subject: Project No. XXX; XXXX County
Project Name XXXX
CID XXXXX PIN XXXX
Regarding: Letter Agreement – 50% Reimbursement for

Dear Name:

UDOT’s Comptroller’s Office does not require a formal agreement for utility work on projects with a total cost in this price range. This utility work, however, is eligible for 50% reimbursement. The cost of your utility work is a lump sum amount of $xxxxxx, as shown on the attached cost breakdown.

**Total Lump Sum Reimbursement to Company by UDOT is $xxxxxx.**

Your proceeding with the utility work covered by this Agreement shall be indication of your acceptance of this Letter Agreement. Two business days before beginning the utility work, it shall be your responsibility to contact UDOT’s Resident Engineer, [Enter name] at [Enter phone], to coordinate inspection and record keeping. Upon completion of the utility work, please submit your billing in the above lump sum amount to: UDOT Contracts, Estimates and Agreements Manager, 4501 South 2700 West, Box 148220, Salt Lake City, Utah 84114-8220.

Company, while engaged in the adjustment relocation of its facilities covered by this Letter Agreement, will comply with the requirements of 23 C.F.R. § 635.410, Buy America Requirements, a copy of which is attached.

Sincerely,

[Region Leader]
UDOT Region <#>
Utility and Railroad Leader

C (electronic): , PM
, RE
Amber Routson, Construction
Shauna Sisneros, Comptrollers
Program Finance

Commented [AS1]: Describe the specifics of the agreement.

Commented [AS2]: This only applies to projects that need to meet Buy America. If state-funded, this paragraph can be removed. Remember, you’ll need to also attach the BA spec if this paragraph is included.

Appendix J
# UTAH DEPARTMENT OF TRANSPORTATION REQUEST FOR FEDERAL AID PROJECT APPROVAL, AUTHORIZATION and/or AGREEMENT

## Section

**FMIS Number**

**STIP Ref. No.**

**Year**

### PIN No.

<table>
<thead>
<tr>
<th>Project Number</th>
<th>Route</th>
<th>Authority</th>
<th>County No</th>
<th>County</th>
<th>Region</th>
</tr>
</thead>
</table>

### General Location

**NBIS Inventory No**

### General Description of Proposed Work

### Authorization is requested in accordance with the procedure checked below

- Regular Federal Procedures
- Stewardship (Non NHS/Low Cost NHS)
- Other: Stewardship (NHS 3R Project)

Authorization is required to proceed with the work checked below

### Preliminary Engineering

- Environmental
- Preliminary Design
- Preparation of plans, Specifications and Estimates
- Other:

### Right of Way

- Appraisals
- Acquisition
- Relocation Assistance
- Type

### Construction

- Utilities (see remarks)
- Advertise for bids
- Force Account
- Unit Price
- Actual Cost

### See attached work sheet for break down of Prorata, Appr Code, Improvement Type Amounts.

### REMARKS:

- Action is Eligible for Federal Aid

### Programming Clearance (Amounts for this Authorization)

<table>
<thead>
<tr>
<th>Planned Fund</th>
<th>PRORATA</th>
<th>Appr Code</th>
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### SEE ATTACHED 710 SCREEN

### For Federal Highway Administration Use

You are authorized to proceed with the above requested work

### Authorization for Expenditure and/or Project Agreement

### Remarks

- FHWA Representative

- Date
To: Division Administration  
Federal Highway Administration  
Salt Lake City, Utah

From: Office Policy & Systems Planning  
07-PS  
Utah Department of Transportation

Prepared For: 

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General Location

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NBIS Inventory No

0

General Description of Proposed Work

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FUNDING PRIORITY

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0.00 0.00 0.00 0.00
Authorization to Proceed with Utility Work

Dear [Entity Contact 1]:

[Company]’s signed agreement for the subject project has been received and accepted by UDOT.

As of <manual entry date>, [Company] has Notice to Proceed with the utility work covered by this agreement.

Please be aware, it is imperative that your crews/contractor follow the specifications for minimum depth of bury found in Utah Administrative Code R930-7(8)(c).

Prior to [Company] beginning the utility work, it is your responsibility to contact UDOT’s Resident Engineer to arrange for inspection and daily record keeping. The Resident Engineer, [Resident Engineer], may be reached at <manual entry phone and email>.

Sincerely,

[Region Leader]
UDOT [Region #]
Utility and Railroad Leader

CC: [Project Manager], PM
[Resident Engineer],RE
Amber Routsen, Construction
Shauna Sisneros, Comptroller
ProjectWise
TYPICAL SECTION WEST OF VIADUCT
### Utility Reconstruction Summary

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*For Information Only*

### Utility Removal Summary

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*For Information Only*

### Utility Relocation Summary

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*For Information Only*
### Utility Summary

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*For information only*

### Seed Schedule

<table>
<thead>
<tr>
<th>Seed No.</th>
<th>Botanical Name</th>
<th>Common Name</th>
<th>Number of Seeds per Pound</th>
<th>Pounds of Pure Live Seed per Acre</th>
<th>Drill Seed</th>
<th>Broadcast Seed</th>
<th>Pounds of Pure Live Seed per Acre</th>
<th>Drill Seed</th>
<th>Broadcast Seed</th>
<th>Pounds of Pure Live Seed per Acre</th>
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<tbody>
<tr>
<td>1</td>
<td>Achillea millefolium</td>
<td>Yarrow</td>
<td>141,000</td>
<td>6.00</td>
<td>5.32%</td>
<td>17.85</td>
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<td>5.55%</td>
<td>17.58</td>
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<tr>
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<td>3</td>
<td>Poa pratensis</td>
<td>Blue Grass</td>
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<td>10.00</td>
<td>5.55%</td>
<td>17.58</td>
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<td>Potentilla x ramosa</td>
<td>Silene</td>
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<td>17.85</td>
<td>0.00</td>
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<td>17.58</td>
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<tr>
<td>5</td>
<td>Bromus ramosus</td>
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<td>200,000</td>
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<td>5.55%</td>
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<td>Thymus vulgaris</td>
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<td>17.58</td>
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<tr>
<td>9</td>
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<tr>
<td>12</td>
<td>Festuca ovina</td>
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<td>17.58</td>
<td>0.00</td>
<td>5.55%</td>
<td>17.58</td>
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TOTAL 10,766 100.00% 247.35 200.00 100.00% 351.00
SPECIAL PROVISION

PROJECT # S-0193(6)0
PIN # 8021

SECTION 00727M

CONTROL OF WORK

Add the following to Article 1.11:

H. Pothole all utilities in advance of crossing the utility. Locating utilities, potholing, excavating or any other method is incidental to construction, unless specified otherwise. Notify the Engineer immediately if conflicts exist. The Contractor is responsible for damage caused by construction activities to existing utilities.

I. Notify the utility contacts identified in the contract documents 10 days prior to working around utilities. Notify Blue Stakes before excavating as required State Code.

J. Hold weekly utility schedule coordination meetings with utility company representatives. Invite a UDOT representative to schedule coordination meetings.

K. Include the utility relocation and railroad schedules in the Baseline Construction Schedule as specified in Standard Specification 00555, Section 1.9.

L. UDOT has as-built survey information for select utilities that can be provided throughout construction to assist the contractor in avoiding utility conflicts. This information can be provided without guarantee, upon request with one week advance notice.

M. Questar IHP will make the connection to the existing gas line in State Street once work has been started in State Street. Give Questar 14 days notice prior to work being done. Questar’s work will take 1 day to complete the connection.

N. Provide a utility/railroad coordinator for the project.
O. The utility relocation/adjustment summary provided herein is for assistance in scheduling work with the utility companies. Additional utility conflicts and adjustments may be encountered during construction. Existing utilities within the new SR-193 roadway section and side street roadway sections that are not relocated or adjusted to accommodate the project will be protected in place.

P. The utility companies have been informed that the project phasing provided in the Limitation of Operations anticipates that utility relocation and installation work should be accomplished according to the following general schedule. The contractor is responsible to coordinate the scheduling of specific utility relocation work with the utility companies based on the Baseline Construction Schedule to avoid delays. Delays caused by third party utility work will be excusable but non-compensable.

### H Street – State Street

<table>
<thead>
<tr>
<th>Utility Company</th>
<th>Expected Schedule to Relocate Install Utilities</th>
</tr>
</thead>
<tbody>
<tr>
<td>Clearfield City</td>
<td>December 1, 2011 – August 1, 2012</td>
</tr>
<tr>
<td>Comcast</td>
<td>April 1, 2012 – September 1, 2012</td>
</tr>
<tr>
<td>Electric Lightwave</td>
<td>August 1, 2012 - September 1, 2012</td>
</tr>
<tr>
<td>XO Communication</td>
<td>August 1, 2012 - September 1, 2012</td>
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<tr>
<td>Level 3 Communications</td>
<td>April 1, 2012 – August 1, 2012</td>
</tr>
<tr>
<td>Questar Gas IHP</td>
<td>May 1, 2012 – October 1, 2012</td>
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<tr>
<td>Questar Gas HP</td>
<td>May 1, 2012 – September 1, 2012</td>
</tr>
<tr>
<td>Century Link</td>
<td>August 1, 2012 – November 1, 2012</td>
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<tr>
<td>Rocky Mountain Power</td>
<td>March 1, 2012 – September 1, 2012</td>
</tr>
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### 2000 West - H Street

<table>
<thead>
<tr>
<th>Utility Company</th>
<th>Expected Schedule to Relocate Install Utilities</th>
</tr>
</thead>
<tbody>
<tr>
<td>Comcast</td>
<td>April 1, 2012 – September 1, 2012</td>
</tr>
<tr>
<td>Questar Gas IHP</td>
<td>May 1, 2012 – September 1, 2012</td>
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<tr>
<td>Century Link</td>
<td>August 1, 2012 – November 1, 2012</td>
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<tr>
<td>Syracuse City</td>
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<tr>
<td>Rocky Mountain Power</td>
<td>March 1, 2012 – June 1, 2012 (Completed)</td>
</tr>
<tr>
<td>Rocky Mountain Power (High Voltage)</td>
<td>March 1, 2013 – August 1, 2013</td>
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</table>

1. Clearfield City
   a. Clearfield City will abandon their water line along 700 South starting at Main Street and ending 300 feet east of Depot Street. Clearfield City has installed 2 new 8" water lines one on the north and one on south side of SR-193 between Main Street and east of Depot Street. Clearfield City also has installed a water line starting at Main Street that runs west along H Street 350’ to a new fire hydrant.
b. Clearfield City will abandon their sewer line along 700 South starting at Main Street and ending 200 feet east of Depot Street. Clearfield City will install 2 new 12" sewer lines one on the north and one on the south side of SR-193 between Main Street and east of Depot Street. Clearfield City will also install a sewer line starting at Main Street that runs west along H Street approximately 200' and then will dead end their pipe.

c. Clearfield City has installed two storm drain lines one on the north side and one on the south side of SR-193 starting at H Street and ending near State Street.

2. Comcast
   a. Comcast will relocate an overhead coaxial cable at the intersection of H Street and Main Street.
   b. Comcast will install a box along 1000 West and will loop the line under the future storm drain line if a loop is needed. They will install a line from the box in 1000 West to
   c. Comcast will install a line from State Street to Industrial Parkway.
   d. Comcast will relocate an overhead line crossing 700 South at State Street.

3. Level 3 Communications
   a. Level 3 will lower their fiber under H Street to go under a storm drain. The lowering of the fiber will occur from Sta. 207+63.02 LT 73.87 to Sta. 209+13.46 LT 83.88.

4. Questar Gas IHP
   a. Questar will loop a 2" line around the future storm drain on 200 South near 1300 West at Sta. 136+38.18 LT 132.08.
   b. Questar will install a gas line crossing 1000 West on the north side of SR-193 from Sta. 154+10.95 LT 64.05 to Sta. 156+13.00 LT 66.66 as a betterment.
   c. Questar will loop a 4" line around the future storm drain on the south side of SR-193 & 775 West at Sta. 166+80.17 LT 46.45.
   d. Questar will loop a 6" line around the storm drain along Main Street at Sta. 218+65.21 LT 70.63.
   e. Questar will loop 2 gas lines at the end of the new Industrial Parkway located at the following; Sta. 81+22.81 RT 17.58 & Sta. 67+92.33 RT 17.66.
   f. Questar will abandon their line in 700 South running from Main Street to State Street. Questar will install a new 6" line on the south side of SR-193 starting at Sta. 219+55.10 RT 62.12 near Main Street and tie into the line at Sta. 223+44.99 RT 488.76 on the old Industrial Parkway. There will also be a line that crosses SR-193 near Main Street and runs along the north of SR-193 starting at Sta. 220+16.63 RT 72.76 and ends at Sta. 248+06.53 LT 35.94 at State Street.
g. Questar has installed a new gas line along the south side of SR-193 between the Masonic Lodge and State Street from Sta. 242+35.91 LT 54.17 to Sta. 248+06.53 RT 35.94 as a betterment.

5. Questar Gas HP
   a. Questar will abandon their line in 700 South running from Main Street to east of Depot Street. Questar will install a new 12" line on the south side of SR-193 from Sta. 219+13.80 RT 107.34 to Sta. 242+29.82 RT 5.80.

6. Century Link
   a. Century Link will relocate an air core valve on the southeast corner of SR-193 and 2000 West behind the future sidewalk from Sta. 101+51.11 RT 68.44 to Sta. 101+65.58 RT 81.50.
   b. Century Link will lower 2-4" conduits to go under the future storm drain at Sta. 154+28.76 RT 43.55.
   c. Century Link will abandon their lines and boxes along the east side of 1000 West from Sta. 154+36.06 RT 150.17 to Sta. 154+36.61 LT 153.95. Century Link will install new lines and boxes along the east side of 1000 West to replace the abandon lines.
   d. Century Link will remove the telephone pedestal on SR-193 at Sta. 180+76.54 LT 52.64.
   e. Century Link will relocate the telephone pedestals within the Freeport Center Sta 208+00 RT 250.
   f. Century Link will relocate the telephone box in the cul-de-sac of Main Street from Sta. 219+11.39 LT 126.40 to Sta. 219+61.08 LT 134.81.
   g. Century Link will loop the telephone on the south side of SR-193 around the storm drain at Sta. 215+67.69 RT 51.22.
   h. Century Link will install a larger box in place of an existing box on the south side of SR-193 at Sta. 219+97.84 RT 71.08.
   i. Century Link will abandon their line along 700 South starting at Main Street and ending at State Street. Century Link will install new conduits on the south side of SR-193 starting at 700 South and ending at State Street.
   j. Century Link will install 2 telephone boxes on the south side of SR-193 along 700 South at Sta. 222+82.28 RT 57.00 & Sta. 223+71.01 RT 66.41.
   k. Century Link will remove the existing telephone box at Sta. 223+71.01 RT 66.41 on the south side of SR-193.
   l. Century Link will install 2 manholes along the south side of SR-193 along 700 South at the following; Sta. 229+94.27 RT 60.00 & Sta. 238+60.27 RT 60.00.
   m. Century Link will relocate the telephone box on the south side of SR-193 near State Street from Sta. 245+66.62 RT 43.69 to Sta. 245+66.55 RT 57.52.
7. Syracuse City
   a. Syracuse City will install a 12" water line from Sta. 154+13.03 RT 110.07 to 101+52.18 RT 51.91 which is from 1000 West to 2000 West along the south side of SR-193.
   b. Syracuse City will lower the existing manhole and irrigation pipe to go under the future storm drain in 1000 West.

8. Weber Basin
   a. Weber Basin has installed a 12" water line from Sta. 27+11.99 LT 11.56 to 24+27.74 LT 51.25 which is along the west side 1000 West.
   b. Weber Basin will install a PRV vault at Sta. 24+15.74 LT 51.23 which is on the southwest corner of SR-193.

9. Rocky Mountain Power
   a. Rocky Mountain Power will hold up a pole at Sta. 155+02.08 LT 117.78 during the installation of the catch basin.
   b. Rocky Mountain Power will relocate the power pole out of the fill area on Center Street from Sta. 41+04.56 RT 43.92 to Sta. 41+01.61 RT 57.76.
   c. Rocky Mountain Power will remove the power pole in Center Street at Sta. 41+72.68 LT 13.51.
   d. Rocky Mountain Power will remove the power pole in SR-193 at Sta. 194+90.04 LT 1.95.
   e. Rocky Mountain Power will remove 6 power poles in the UTA corridor between H Street and Main Street. The stationing of the poles are; Sta. 210+43.05 LT 88.13, Sta. 212+01.66 LT 101.81, Sta. 214+12.69 LT 104.69, Sta. 215+95.98 LT 67.33, Sta. 217+35.46 LT 9.93, & Sta. 217+45.79 RT 24.95.
   f. Rocky Mountain Power will remove a power pole in SR-193 near H Street at Sta. 212+90.96 RT 29.29.
   g. Rocky Mountain Power has installed an underground buried electric line between H Street and Main Street on the west side of SR-193 from Sta. 207+79.11 RT 114.00 to 215+53.84 RT 66.91.
h. Rocky Mountain Power will remove 24 power poles along 700 South. The stationing of the poles are; Sta. 218+84.46 LT 17.08, Sta. 221+36.11 LT 20.73, Sta. 221+95.98 RT 52.19, Sta. 222+24.17 LT 22.90, Sta. 223+74.80 LT 26.60, Sta. 225+15.08 LT 28.93, Sta. 226+69.84 LT 36.62, Sta. 227+41.62 RT 49.41, Sta. 228+81.08 LT 37.38, Sta. 230+65.45 LT 41.49, Sta. 232+61.09 LT 45.46, Sta. 232+65.67 LT 45.63, Sta. 233+51.61 RT 55.35, Sta. 234+11.64 LT 67.58, Sta. 234+14.86 LT 48.38, Sta. 234+97.28 LT 49.48, Sta. 235+62.19 RT 22.67, Sta. 236+99.01 RT 22.51, Sta. 238+29.91 RT 56.98, Sta. 238+32.41 RT 27.76, Sta. 238+40.05 LT 48.94, Sta. 241+31.98 RT 31.96, Sta. 242+22.75 LT 47.54, Sta. 243+16.52 RT 30.07.

i. Rocky Mountain Power has relocated a power pole located on the southwest corner of State Street from Sta. 248+36.56 RT 45.59 to 248+56.02 RT 67.53.

j. Rocky Mountain Power has installed a new underground power line starting at the old Industrial Parkway and will run east to UPRR tracks at which point it will cross under SR-193 and head back west along SR-193 to the driveway just west of the UPRR tracks.

k. Rocky Mountain Power will install a new line starting west of Depot Street on the South side of SR-193 and will run this line east until it reaches the Masonic Lodge. The stationing of this line is from Sta. 236+99.36 RT 60.00 to Sta. 243+99.43 RT 55.20.

l. Rocky Mountain Power will install a new line starting east of the UTA tracks and run east until Depot Street on the east side of SR-193. The stationing of this line is from Sta. 234+21.29 LT 70.99 to Sta. 240+00.96 LT 99.08.

10. Rocky Mountain Power (High Voltage)

a. Rocky Mountain Power will install a transmission line along the west side of 1000 West starting at Sta. 153+85.87 RT 1940.47 and ending at 154+02.21 RT 322.00. Rocky Mountain Power will tee off of this line at Sta. 153+62.26 RT 68.22 and run along the south side of SR-193 until it reaches the transmission corridor where the line will cross SR-193 to the north side of SR-193. The power line will then continue to run on the north side of SR-193 and extend past our project limits by crossing 2000 West.
SPECIAL PROVISION

PROJECT # S-0252(7)0
PIN # 9413

SECTION 00727M

CONTROL OF WORK

Delete Article 1.11, Paragraph G, and replace with the following:

G. The Contractor should be aware that undocumented utilities will be exposed during construction and will require mitigation. These facilities include irrigation and underdrain lines. Unique service lateral conditions may be present that will require mitigation such as sanitary sewer lateral conflicts with storm drain/cross culverts. Efforts have been made to identify existing utilities via a subsurface utility exploration (SUE) exercise. Pothole data obtained during SUE activities has been provided for information only on the project plans. This data is not all-inclusive. Standard blue staking procedures should be followed and consistent coordination with affected utility owners should be utilized to mitigate undocumented underground utilities. Adjust or relocate these undocumented utility facilities or appurtenances found but not noted in contract documents when directed by the Engineer.

Add the following to Article 1.11

H. Provide top back of curb, back of sidewalk, right-of-way, or running line staking, as well as conflict staking for all utility companies as specified in Specification 01721. Provide staking for utility company junction boxes, vaults and pedestals to avoid conflicts with sidewalk horizontal and vertical grades.

I. Logan City Water and Sewer Utilities:

1. Replacement of existing water facilities is included in the project from 200 North to SR-252 (2500 North). Dual water mains will be installed within the roadway on either side of the SR-252 (1000 West) alignment as shown in the project plans. This work includes crossing tie-ins and water service laterals/meter relocations. This work is included in this contract, but is included here for emphasis due to the comprehensive nature of the work.
2. Replacement of existing Logan City sanitary sewer facilities is included in the project from 200 North to 1700 North. The proposed sanitary sewer main will typically be located on the west side of the SR-252 (1000 West) alignment. The work includes crossing tie-ins and sewer lateral reconstruction. Included in the sanitary sewer work is a sewer vault located at the northwest corner of 600 North. The sewer vault will require, among other activities, construction around existing sanitary sewer facilities and bypass pumping. The construction of sanitary sewer main throughout the project may include activities such as bypass pumping. This work is included in this contract, but is included here for emphasis due to the nature of the work.

J. Logan City Light and Power:

1. Aerial and underground power facilities will be affected throughout the project corridor. Extensive power relocation is planned to be performed by the Logan City Light and Power Department between 200 North to just north of 1400 North, including relocation of power poles east along 1400 North. In general, impacted power poles on the east side of SR-252 (1000 West) will be relocated laterally. The work will require the Contractor to place conduit for Logan Light and Power. Logan Light and Power will provide all other construction related activities for their facilities including pad mounted transformers, junction boxes, pole risers, guying poles/wire/anchors, and conductor/wire/cable.

K. Rocky Mountain Power:

1. Rocky Mountain Power (RMP) facilities cross SR-252 (1000 West) at approximately 1800 North. It is anticipated by RMP that this line will not be impacted by project improvements. Protect RMP facilities in place and coordinate undocumented impacts if any with RMP representatives.

L. Questar:

1. Extensive impacts are anticipated throughout the project corridor that will require looping, relocation and installation by Questar's contractor. The Questar contractor will relocate/install gas line in the SR-252 (1000 West) right of way from 400 North to 1700 North, and in SR-252 (2500 North) from a location west of SR-252 (1000 West) to approximately 600 West. Questar
facilities will generally be placed under the sidewalk on the east side of SR-252 (1000 West) and on the south side of SR-252 (2500 North). Storm drain impacts have been identified for the proposed gas main and provided to Questar designers. The Contractor should expect to stake all locations where proposed gas facilities and storm drain conflict/intersect. Protect in place the existing gas main from 200 North to the north side of the 400 North intersection. Coordinate timing of gas line adjustments that are planned to be made if they are conducted during roadway construction activities.

M. CenturyLink (Qwest):

1. Extensive impacts are anticipated throughout the project corridor that will require looping, relocation and installation by CenturyLink’s contractor. The CenturyLink contractor will relocate/install telephone facilities in the SR-252 (1000 West) right of way from just north of 200 North to SR-252 (2500 North), and in SR-252 (2500 North) from SR-252 (10th West) to 600 West. These include impacts to buried telephone cable at various locations as well as impacts to telephone vaults and junction boxes at various locations along the project corridor. Protect in place the existing fiber optic line located on the east side of SR-252 (1000 West) from 200 North to 1000 North. Coordinate timing of adjustments that are planned to be made, if they are conducted during roadway construction activities.

N. Comcast:

1. Comcast facilities run from the northwest corner of 1000 North along the west side of SR-252 (1000 West) to the southwest corner of 1400 North, and through the 1400 North intersection to the west and east along 1400 North. Two vaults along this alignment will be reconstructed/relocated by the Comcast contractor. With the exception of these two vault reconstructs/relocates, all Comcast facilities on the west side of SR-252 (1000 West) and in the 1400 North intersection should be protected in place. It is the understanding of the project that Comcast has no existing aerial facilities within the project boundaries. The Contractor should confirm this with Comcast representatives. Coordinate timing of adjustments that are planned to be made, if they are conducted during roadway construction activities.

O. Benson Canal Company:
1. Discharge of project storm drainage into the Benson Canal from SR-252 (2500 North) is included as part of this contract.

2. Notify the Irrigation Company ditch master 14 days prior to commencement of the work to ensure that there will be no interruption of service. Contact Rick Reese, 435-757-8745. Include the cost in related items of work for any temporary crossings, ditches, diversions, or pumping as necessary, to allow water users access to scheduled water. The Contractor is responsible for any costs incurred to the water users as a result of any disruption to service caused by the construction.

3. Do not interfere with irrigation watering schedules. When necessary, to remove irrigation system improvements, provide a means whereby all water users will be able to access water on schedule. This includes constructing temporary crossings, ditches, diversions, or pumping. The Contractor is responsible for the cost of all temporary irrigation facilities and all damages to crops or landscaping resulting from the disruption of watering schedules.

P. North West Field Irrigation Company:

1. The Northwest Field Irrigation Company has several irrigation/drainage crossings of SR-252 (1000 West) from 600 North to SR-252 (2500 North). These systems are typically shared between irrigation, spring, and storm flows. Local runoff from this project into irrigation systems are included as part of this contract.

2. Notify the Irrigation Company ditch master 14 days prior to commencement of the work to ensure that there will be no interruption of service. Contact Dan Weber, 435-757-7048. Include the cost in related items of work for any temporary crossings, ditches, diversions, or pumping as necessary to allow water users access to scheduled water. The Contractor is responsible for any costs incurred to the water users as a result of any disruption to service caused by the construction.

3. Do not interfere with irrigation watering schedules. When necessary to remove irrigation system improvements, provide a means whereby all water users will be able to access water on schedule. This includes constructing temporary crossings, ditches, diversions, or pumping. The Contractor is responsible for the cost of all temporary irrigation facilities and all damages to crops or landscaping resulting from the disruption of watering schedules.

Add the following to Article 1.19:

Control of Work
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D. Maintain utility, storm drain, irrigation trench sections, and all construction areas that allow for vehicular traffic using temporary asphalt or appropriate methods until the final paving section is installed. Temporary surfacing of trench sections must match the elevation of existing grade at trench edges to avoid vertical grade differences along trench edges. Maintain temporary surfacing of trenches on a continuous basis to avoid potholing or other damage that may cause damage to or endanger the travelling public.

E. Maintain two-way traffic on all roads at all times during construction unless otherwise approved. Prepare and implement an accepted traffic control plan. Prior to construction, obtain any necessary and required permits from local municipalities to work within their rights-of-way.

F. Provide temporary fencing for private property at no additional cost to the Department. Specific attention should be provided to those properties that contain livestock or pose a serious safety issue to children/pedestrians. Temporary fencing shall be maintained throughout the life of the project until permanent fencing is installed per the project plans.
1.12 LIMITATIONS OF OPERATIONS

A. At time of bid, the entirety of the ROW may not have been acquired, necessary permits may not have been acquired, and the utility, railroad and other third party agreements may not have been executed. Listed below are descriptions of appendices to this document and their associated limitations. The limitations in these appendices will be updated and submitted to the Contractor weekly before and during construction.

1. Do not perform any Work affecting utilities until the agreements pertaining to these Work elements have been executed. Comply with the terms of these agreements provided at the time of bid preparation. See Appendix 00555M-3 for Utility Agreement Schedule.

B. Incorporate the limitations outlined in this Section into the Baseline Schedule.

C. Irrigation:

1. Complete work on any irrigation facilities between October 15th and April 1st or in a manner that does not interrupt service unless otherwise allowed in these specifications.

D. Utilities:

1. **Old Bingham Hwy**
   a. Rocky Mountain Power – Transmission Line for RMP3047 and COM3017 must be switched to the relocated facilities before the existing can be disconnected and poles removed. Allow eight (8) weeks for RMP to complete their work. RMP is scheduled to complete this work between March 2011 and May 2011.
   b. Comcast – Service for COM3017 must be switched to the relocated poles before the existing can be disconnected. Coordinate with and notify Comcast to accommodate their
procurement of materials (30 days advance notice) and scheduling of their inspectors, splicers and field personnel (3 weeks advance notice). Allow four (4) weeks for Comcast to complete their work after RMP has relocated their poles. Kern River Gas – KRG3007 and KRG3008 obtain and provide to Engineer written approval from KRG prior to working over or driving across their facilities. Meet the conditions of KRG’s encroachment permit. KRG protect-in-place construction activities are scheduled to be completed prior to NTP.

2. **9790 South**
   a. Rocky Mountain Power – Service Line for RMP3050 conflict with proposed Cul-de-Sac. Service for RMP3050 must be switched to the relocated facilities before the existing can be disconnected and poles removed. Allow eight (8) weeks for RMP to complete their work.
   b. Qwest – Service Line for QW3032 conflict with proposed Cul-de-Sac. Allow 3 weeks for Qwest to complete relocation work after conduits are installed. Coordinate scheduling with Qwest to accommodate their resource availability.

3. **Wells Park Road**
   a. Rocky Mountain Power – Service for RMP4051 and RMP4052 must be switched to the relocated facilities before the existing can be disconnected and poles and conduit removed. Also, SME Steel’s transformer must be reconnected. Allow six (6) weeks for RMP to complete their work after conduits, pads, vaults and grading work is complete.
   b. Qwest – Service Line for QW4033 must be in service before existing conduit or cable can be removed. Allow 3 weeks for Qwest to complete relocation work after conduits are installed. Coordinate scheduling with Qwest to accommodate their resource availability.

4. **Dannon Way**
   a. Rocky Mountain Power – Service for RMP4053, RMP4105, and RMP4106 must be switched to the relocated facilities before the existing can be disconnected and poles and conduit removed. Allow six (6) weeks for RMP to complete their work after conduits, pads, vaults and grading work is complete.
      Transmission Line for RMP4055 must be raised in the same alignment. Allow twelve (12) weeks for RMP to complete their work after grading work is complete. RMP is scheduled...
to complete this work by May 16, 2011. Coordinate with Rocky Mountain Power to find out the outage schedule. RMP requires that the outages be done in the spring or fall. Transmission Line for RMP4056 and L3 4007 must be switched to the relocated facilities before the existing can be disconnected and poles removed. Allow twelve (12) weeks for RMP and Level 3 to complete their work after grading work is complete. RMP is scheduled to complete this work by May 16, 2011. Coordinate with Rocky Mountain Power to find out the outage schedule. RMP requires that the outages be done in the spring or fall.

b. Level 3 - Service for L3 4007 must be switched to the relocated poles (RMP 4056) before the existing can be disconnected. Coordinate with and notify Level 3 to accommodate their procurement of materials (30 days advance notice) and scheduling of their inspectors, splicers and field personnel (3 weeks advance notice). Allow four (4) weeks for Level 3 to complete their work after RMP has relocated their poles.

c. Qwest – Service for QW4035 telephone pedestal must be switched to the relocated facilities before the existing can be disconnected and telephone pedestal removed. Allow 3 weeks for Qwest to complete relocation work after conduits are installed. Coordinate scheduling with Qwest to accommodate their resource availability.

d. Questar – High Pressure gas line QG4025 can only be taken out of service between April to October in the summer. Allow eight weeks for Questar Gas to complete their work. The relocation with Questar Gas is yet to be determined but assume a minimum of eight (8) weeks for Questar Gas to complete their work. Questar Gas has yet to schedule MVC relocations for HP gas and has not committed to doing all HP relocations in the same season. Contractor must coordinate priorities for Questar to determine schedule of HP relocations. Contractor cannot build grade on existing gas lines.

e. Kern River Gas – KRG4011 and KRG4012 obtain and provide to Engineer written approval from KRG prior to working over or driving across their facilities. Meet the conditions of KRG’s encroachment permit. The relocation with KRG is yet to be determined but assume a minimum of eight (8) weeks for KRG to complete their work. Phase relocation with Questar Gas(QG4025). KRG is capable of relocating by March 25, 2011, however, due to KRG dependency on QG4025 this relocation is scheduled to be completed by October, 31 2001.
5. **9000 South**
   a. Rocky Mountain Power – Service for RMP4058 and RMP4121 must be switched to the relocated facilities before the existing can be disconnected and poles and conduit removed. Allow six (6) weeks for RMP to complete their work after conduits, pads, vaults and grading work is complete.
   b. Kern River Gas – KRG4013 and KRG4014 obtain and provide to Engineer written approval from KRG prior to working over or driving across their facilities. Meet the conditions of KRG’s encroachment permit. KRG protect-in-place construction activities are scheduled to be completed January 21, 2011.
   c. Questar – High Pressure gas line QG4027 can only be taken out of service between April to October in the summer. Allow eight weeks for Questar Gas to complete their work. The relocation with Questar Gas is yet to be determined but assume a minimum of eight (8) weeks for Questar Gas to complete their work. Questar Gas has yet to schedule MVC relocations for HP gas and has not committed to doing all HP relocations in the same season. Contractor must coordinate priorities for Questar to determine schedule of HP relocations. Contractor cannot build grade on existing gas lines.
   d. Relocated West Jordan City Well – Contractor must coordinate with West Jordan City for scheduling of storm drain and water tie-ins. Contractor cannot work over existing well until city has abandoned it.

6. **New Bingham Hwy**
   a. Rocky Mountain Power – Service for RMP4059 must be switched to the relocated facilities before the existing can be disconnected and poles and conduit removed. Allow six (6) weeks for RMP to complete their work after conduits, pads, vaults and grading work is complete.
   b. Questar – Service QG4033 must be switched to the relocated facilities before the existing can be disconnected. Allow 6 weeks for Questar to complete their work on these facilities.
   Questar – High Pressure gas line QG4027 can only be taken out of service between April to October in the summer. Allow eight weeks for Questar Gas to complete their work. The relocation with Questar Gas is yet to be determined but assume a minimum of eight (8) weeks for Questar Gas to complete their work. Questar Gas has yet to schedule MVC
relocations for HP gas and has not committed to doing all HP relocations in the same season. Contractor must coordinate priorities for Questar to determine schedule of HP relocations. Contractor cannot build grade on existing gas lines.

c. Kern River Gas – KRG4013 and KRG4014 obtain and provide to Engineer written approval from KRG prior to working over or driving across their facilities. Meet the conditions of KRG’s encroachment permit. KRG protect-in-place/replace-in-place construction activities must occur prior to WJC4027(18 inch sewer) relocation.

7. 8200 South
   a. Rocky Mountain Power – Service for RMP4061 must be switched to the relocated facilities before the existing can be disconnected and poles and conduit removed. Allow six (6) weeks for RMP to complete their work after conduits, pads, vaults and grading work is complete. Transmission Line for RMP4064 must be raised in the same alignment. Allow twelve (12) weeks for RMP to complete their work after grading work is complete. RMP is scheduled to complete this work by May 16, 2011. Coordinate with Rocky Mountain Power to find out the outage schedule. RMP requires that the outage be done in the spring or fall. Transmission Line for RMP4063 and L3 4008 must be switched to the relocated facilities before the existing can be disconnected and poles removed. Allow twelve (12) weeks for RMP and Level 3 to complete their work after grading work is complete. RMP is scheduled to complete this work by May 16, 2011. Coordinate with Rocky Mountain Power to find out the outage schedule. RMP requires that the outages be done in the spring or fall.

   b. Level 3 - Service for L3 4008 must be switched to the relocated poles (RMP 4063) before the existing can be disconnected. Coordinate with and notify Level 3 to accommodate their procurement of materials (30 days advance notice) and scheduling of their inspectors, splicers and field personnel (3 weeks advance notice). Allow four (4) weeks for Level 3 to complete their work after RMP has relocated their poles.

   c. Comcast – Service for COM4005 must be switched to the relocated location before the existing can be disconnected. Coordinate with and notify Comcast to accommodate their procurement of materials (30 days advance notice) and scheduling of their inspectors, splicers and field personnel (3 weeks advance notice). Allow four (4) weeks for Comcast to
complete their work after conduits have been installed and inspected.

d. Qwest – Service Line for QW4042 and QW4044 must be in service before existing conduit or cable can be removed. Allow 4 weeks for Qwest to complete relocation work after conduits are installed. Coordinate scheduling with Qwest to accommodate their resource availability.

e. Questar – Service Line for QG4034 must be in service before existing gas line can be removed. Allow 3 weeks for Questar Gas to complete relocation work.

f. Kern River Gas – KRG4015 and KRG4016 obtain and provide to Engineer written approval from KRG prior to working over or driving across their facilities. Meet the conditions of KRG’s encroachment permit. KRG protect-in-place construction activities are scheduled to be completed March 25, 2011.

8. Clay Hollow

a. Rocky Mountain Power – Transmission Line for RMP4064 must be switched to the relocated facilities before the existing can be disconnected and poles removed. Allow eight (8) weeks for RMP to complete their work after grading work is complete. Coordinate with Rocky Mountain Power to find out the outage schedule. RMP would prefer that the outage be done in the spring or fall.

Transmission Line for RMP4063 and L3 4008 must be switched to the relocated facilities before the existing can be disconnected and poles removed. Allow eight (8) weeks for RMP to complete their work after grading work is complete. Coordinate with Rocky Mountain Power to find out the outage schedule. RMP would prefer that the outage be done in the spring or fall.

b. Questar – High Pressure gas line QG4035 can only be taken out of service between April to October in the summer. Allow eight weeks for Questar Gas to complete their work. The relocation with Questar Gas is yet to be determined but assume a minimum of eight (8) weeks for Questar Gas to complete their work. Questar Gas has yet to schedule MVC relocations for HP gas and has not committed to doing all HP relocations in the same season. Contractor must coordinate priorities for Questar to determine schedule of HP relocations. Contractor cannot build grade on existing gas lines.

c. Kern River Gas – KRG4015 and KRG4016 obtain and provide to Engineer written approval from KRG prior to
working over or driving across their facilities. Meet the conditions of KRG’s encroachment permit. The protect-in-place with KRG is yet to be determined but assume a minimum of eight (8) weeks for KRG to complete their work.

Phase relocation with Questar Gas

9. **7800 South**
   a. Rocky Mountain Power – Rocky Mountain Power – Service Line for RMP4065, COM4015 and QW4061 must be switched to the relocated facilities before the existing can be disconnected and poles removed. Allow eight (6) weeks for RMP to complete their work.
   b. Comcast – Service for COM4015 must be switched to the relocated poles before the existing can be disconnected. Coordinate with and notify Comcast to accommodate their procurement of materials (30 days advance notice) and scheduling of their inspectors, splicers and field personnel (3 weeks advance notice). Allow four (4) weeks for Comcast to complete their work after RMP has relocated their poles.
   c. Qwest – Service for QW4061 must be switched to the relocated poles before the existing can be disconnected. Allow four (4) weeks for Qwest to complete their work after RMP has relocated their poles. Coordinate scheduling with Qwest to accommodate their resource availability.
   d. Kern River Gas – KRG4015 and KRG4016 obtain and provide to Engineer written approval from KRG prior to working over or driving across their facilities. Meet the conditions of KRG’s encroachment permit. The protect-in-placer with KRG is yet to be determined but assume a minimum of eight (8) weeks for KRG to complete their work.

Phase relocation with Questar Gas

10. **6200 South**
   a. Rocky Mountain Power – Service for RMP5101 and QW5085 must be switched to the relocated facilities before the existing can be disconnected and poles removed. Allow eight (8) weeks for RMP to complete their work.
   b. Qwest – Service for QW5085, QW5050 must be switched to the relocated facilities before the existing can be disconnected. Allow 3 weeks for Qwest to complete relocation work after conduits or poles are installed. Coordinate with and notify Qwest to accommodate their procurement of materials (allow 2 weeks for copper and 6 weeks for fiber) and scheduling of their inspectors, splicers and field personnel. Coordinate scheduling with Qwest to accommodate their resource availability.
11. **5400 South**
   a. Rocky Mountain Power – Service for RMP5076 must be switched to the relocated facilities before the existing can be disconnected and poles removed. Allow eight (8) weeks for RMP to complete their work. RMP is scheduled to complete this work by June 3, 2011. Coordinate with Rocky Mountain Power to find out the outage schedule. RMP requires that the outages be done in the spring or fall.
   b. Qwest – Service must be switched to the relocated facilities before the existing can be disconnected. Allow 3 weeks for Qwest to complete relocation work after conduits are installed. Coordinate with and notify Qwest to accommodate their procurement of materials (allow 2 weeks for copper and 6 weeks for fiber) and scheduling of their inspectors, splicers and field personnel. Coordinate scheduling with Qwest to accommodate their resource availability.
   c. Questar – Switching service from QG5045 to the relocated high pressure facilities can only occur between April and October. Allow 6 weeks for Questar to complete their work on these facilities. Allow 6 weeks for Questar to complete their work on QG5044, QG5076, QG5077.

12. **MVC Mainline**
   a. **STA. 1451+00 to STA. 1463+00**
      Questar – High Pressure gas line QG4035 can only be taken out of service between April to October in the summer. Allow eight weeks for Questar Gas to complete their work. The relocation with Questar Gas is yet to be determined but assume a minimum of eight (8) weeks for Questar Gas to complete their work.
   b. **STA. 1451+00 to STA. 1463+00**
      Kern River Gas – KRG4015 and KRG4016 obtain and provide to Engineer written approval from KRG prior to working over or driving across their facilities. Meet the conditions of KRG’s encroachment permit. The relocation with KRG is yet to be determined but assume a minimum of eight (8) weeks for KRG to complete their work. Phase relocation with Questar Gas.
   c. **STA. 1393+00 to 1412+00**
      Questar – High Pressure gas line QG4027 can only be taken out of service between April to October in the summer. Allow eight weeks for Questar Gas to complete their work. The relocation with Questar Gas is yet to be determined but assume a minimum of eight (8) weeks for Questar Gas to complete their work.
d. **STA. 1393+00 to 1412+00**  
Kern River Gas – KRG4013 and KRG4014 obtain and provide to Engineer written approval from KRG prior to working over or driving across their facilities. Meet the conditions of KRG’s encroachment permit. The relocation with KRG is yet to be determined but assume a minimum of eight (8) weeks for KRG to complete their work. Phase relocation with Questar Gas.

e. **STA. 1370+00 to 1378+00**  
Questar – High Pressure gas line QG4025 can only be taken out of service between April to October in the summer. Allow eight weeks for Questar Gas to complete their work. The relocation with Questar Gas is yet to be determined but assume a minimum of eight (8) weeks for Questar Gas to complete their work.

f. **STA. 1370+00 to 1378+00**  
Kern River Gas – KRG4011 and KRG4012 obtain and provide to Engineer written approval from KRG prior to working over or driving across their facilities. Meet the conditions of KRG’s encroachment permit. The relocation with KRG is yet to be determined but assume a minimum of eight (8) weeks for KRG to complete their work. Phase relocation with Questar Gas.

**END OF SECTION**
UTILITY COMPANY NAME
MASTER UTILITY AGREEMENT

THIS MASTER UTILITY AGREEMENT, made and entered into this ____________ day of ____________, 20______, by and between the Utah Department of Transportation, (“UDOT”) and Company Name, doing business as Name, a Registered Corporation in the State of XXXXX, (“Company”) (each as “Party” and jointly as “Parties”).

RECITALS

WHEREAS, UDOT is preparing to request proposals for and award a design-build contract for the highway project identified as Project Number, Project Name in XX County, Utah, (“Project”); and

WHEREAS, UDOT’s design-build contractor (“Design-Builder”) will complete the design and administer construction of the Project; and

WHEREAS, UDOT has identified Company utility facilities within the limits of the Project which may necessitate the relocation, protection, or adjustment of the facilities, (“Utility Work”); and

WHEREAS, the Company desires for the Design-Builder to design and construct the Company’s Utility Work necessitated by the Project; and

WHEREAS, the Company will perform the necessary design review, inspection, cable and splicing to accommodate the Project; and

WHEREAS, for the purpose of expediting any required Utility Work and reimbursement the Parties are entering into this Project Master Utility Agreement with the understanding that future supplemental agreements to this Agreement will be entered into covering Utility Work to be accomplished by the Company and UDOT at specific Project locations.

THIS AGREEMENT is made to set out the terms and conditions where under the Utility Work shall be performed.

AGREEMENT

NOW THEREFORE, the Parties agree as follows:
1. CONTACT INFORMATION

UDOT’s Project Representative is Name, Title, telephone number (801) xxx-xxxx, and e-mail xxx@utah.gov.

UDOT’s Resident Engineer is Name, telephone number (801) xxx-xxxx, and e-mail xxx@utah.gov, or their designated representative, as assigned.

UDOT’s Field Representative contact person will be identified in subsequent supplemental agreements.

Company’s contact person is Name, telephone number (801) XXX-XXXX, and e-mail ___.

After awarding the Project, UDOT will provide the Company with the Design-Builder contact information, hereinafter referred to as “Design-Builder Project Representative.”

2. AUTHORIZATION FOR DESIGN WORK

In order to facilitate coordination and obtain technical information about the Company’s facilities and requirements for inclusion in this Agreement and the request for proposals, UDOT gave the Company authorization for preliminary design engineering on __________, 20XX.

3. SUBSURFACE UTILITY ENGINEERING

UDOT has performed Subsurface Utility Engineering (SUE) within the limits of the Project. Additional SUE work to determine the precise location of underground facilities at specific, critical locations on the Project will be reviewed with the Company. (Optional additional language: The Company agrees to reimburse UDOT for 50% of the cost of the SUE that is directly attributable to identifying and determining the location of its facilities located within UDOT’s right-of-way. A summary of the cost shall be provided to the Company, and the amount will be withheld from the Company’s relocation reimbursement.)

4. PROJECT COORDINATION

Company and UDOT agree to have the Design-Builder include in the Project, items of Utility Work for the Company’s facilities.

During the development of the Project design, the Company and UDOT, along with its Design-Builder, shall consult as necessary in an effort to determine if conflicts with the Company’s facilities can be avoided. If Utility Work is required, UDOT will be responsible to propose and provide a location for the facilities. UDOT will provide the Company with Project design plans as early as possible, and will schedule and meet with the Company to review the design, construction, estimates of cost, and scheduling for the Company’s Utility Work at specific locations on the Project to ensure maximum lead time for advance order of materials and work force scheduling.

The Company shall advise UDOT’s Project Representative of the approximate time required for completion of the Utility Work and shall diligently pursue its Utility Work so that
completion can be accomplished according to the pre-determined time schedule negotiated by the Company and UDOT in the supplemental agreement issued hereto for a specific Project location. The Company shall immediately notify UDOT’s Project Representative by phone call or email, of its discovery of any occurrence or unforeseen circumstances that would prevent the Company from completing its Utility Work according to the time schedule provided. In addition, the Company shall describe the circumstances in writing within 24-hours of the discovery to UDOT’s Project Representative.

5. **COMPANY REQUIREMENTS**

   UDOT will comply with the following Company Utility Work requirements:
   
   a. The Company will require...
   b. In general, the Company cannot have...
   c. The Company will require...
   d. The Company shall secure permits required for its Utility Work.
   e. The Company will require a 2 week review and approval period for proposed designs, estimate review, and internal approvals after design plans and estimates are delivered to the Company.

6. **UDOT TO DESIGN AND CONSTRUCT A PORTION OF UTILITY WORK**

   UDOT, with qualified consultants and contractors appearing on the Company’s Approved Contractor List, shall perform the necessary design work, cost estimating, field and office engineering, furnish all materials (except cables and pedestals), and perform the Utility Work (except splicing), necessitated by the Project. A Company Approved Contractor List is marked Exhibit “A” that is incorporated by reference.

   UDOT will design the Utility Work in accordance with Company’s standards regularly followed by the Company in its own work and not considered a betterment. In the event of a conflict between UDOT and Company standards, the higher standard will be applied. A copy of the Company’s standards is marked Exhibit “B” that is incorporated by reference.

   UDOT will secure permits required for Utility Work for Company’s facilities.

   UDOT will supply as-constructed plans for the Utility Work it performs, in a format specified by the Company, upon completion of any required Utility Work.

7. **COMPANY TO PERFORM INSPECTION AND CONSTRUCT A PORTION OF THE UTILITY WORK**

   The Company will perform inspection of the Utility Work for the Company’s facilities that will be performed by UDOT. UDOT will accomplish the Utility Work on the Company’s facilities in accordance with the plans and specifications approved by the Company. Changes or additions to the plans and specifications shall be approved by the Company and UDOT through a supplemental agreement.

   The Company will provide all splicing, cables and pedestals necessary to accommodate the Utility Work of its facilities on the Project. The Company requires 30 days’ notice to schedule splicing and fiber pulls and will determine the splicing window based on the circuit.
8. **STANDARD SPECIFICATIONS AND REGULATIONS**

   The Company, while engaged in the preliminary design and Utility Work of its facilities, shall comply with UDOT’s 2012 Standard Specifications for Road and Bridge Construction and Utah Administrative Code R930-7.

9. **BUY AMERICA REQUIREMENTS**

   The Company and UDOT, while engaged in Utility Work on this Project, will comply with the requirements of 23 C.F.R. §635.410 and as specifically required in Exhibit “C” that is incorporated by reference.

10. **UNDERBUILT AND FACILITY REMOVAL REQUIREMENTS**

    The Company is responsible to see to the removal of all Company-owned underbuilt facilities from utility poles that will be relocated or removed due to the Project.

11. **RIGHT-OF-WAY**

    Any easements or replacement right-of-way required in conjunction with the Utility Work of Company’s facilities will be acquired by UDOT in accordance with the requirements of Utah Administrative Code R930-8-7.

12. **MAINTENANCE OF TRAFFIC (MOT), TRAFFIC CONTROL, CLEAR/GRUB, AND SURVEYING**

    UDOT will provide MOT and traffic control for Utility Work at no cost to the Company. The Company is responsible to coordinate Utility Work schedules and traffic control needs with UDOT to facilitate the Project schedule and minimize impacts to the public. Except in the case of emergencies, Company’s Utility Work on the Project will be scheduled in compliance with the requirements of the Limitation of Operations contained in UDOT’s Design-Builder contract with respect to lane closures, peak hour Utility Work restrictions, holiday and special event limitations, etc.

    UDOT will provide, at no cost to the Company, clearing and grubbing for the Utility Work as required by the Company and in accordance with UDOT’s Standard Specifications.

    Surveying and staking of roadway facilities as required by the Company will be provided by UDOT in accordance with UDOT’s Standard Specifications. The cost of the surveying and staking will be at UDOT’s expense and the Company will have no obligation for the cost of surveying. Any of UDOT’s survey control stakes or bench markers, which are removed or damaged by the Company, shall be reestablished by UDOT at Company’s expense.

13. **BETTERMENT WORK**

    **Option A:** If the Company desires to include betterment work in the Project at any specific location, UDOT may agree to the betterment work providing the difference in costs between the functionally equivalent required Utility Work and the Company’s desired betterment work, that is not required by the Project, shall be at the sole cost of the Company and the
betterment work can reasonably be accommodated without delaying UDOT’s Project. The betterment work will be addressed by a separate supplemental agreement between UDOT and the Company.

Once a Design-Builder has been selected by UDOT, any betterment work request will be negotiated directly with the Design-Builder. However, UDOT’s has the sole discretion to determine whether the betterment work will be included in the Project.

**Option B:** The Company has requested betterment work be added to the Project and is described in attached Exhibit XXX. Details for accommodating the betterment work will be addressed by a separate supplemental agreement.

14. **SUPPLEMENTAL AGREEMENTS**

UDOT and the Company shall enter into individual supplemental agreements to cover Utility Work at specific Project locations. Each supplemental agreement will include a description and location of the Utility Work to be performed, design drawings showing the original and proposed locations of the Company’s facilities, Utility Work schedules, cost estimates from all Parties, participation shares for UDOT and the Company, any proposed betterment work, and any necessary right-of-way documents. The estimates do not account for increases due to unknown and unforeseen hardships in accomplishing the Utility Work. A copy of the format of the proposed supplemental agreement is marked Exhibit “D” that is incorporated by reference.

The Company will require a 2 week review and approval period for any final supplemental agreement submitted to the Company by UDOT.

In the event there are changes in the scope of the Utility Work, extra Utility Work, or changes in the planned Utility Work covered by a supplemental agreement, a modification to the supplemental agreement approved in writing by the Parties is required prior to the start of Utility Work on the changes or additions.

15. **UDOT AUTHORIZATION TO PROCEED WITH UTILITY WORK**

The Company shall not perform any Utility Work until the supplemental agreement for the Utility Work is signed by the Company and received by UDOT.

16. **UDOT TO NOTIFY THE COMPANY BEFORE BEGINNING UTILITY WORK**

UDOT will notify the Company at least 2 business days in advance of beginning any Utility Work covered by any supplemental agreements hereto, to allow the Company time to schedule an inspector to be present during the Utility Work. Subsequent notification of when and where Utility Work will be performed will be given on a day-to-day basis. Should UDOT fail to give advance notification and Utility Work is performed without the presence of a Company inspector, UDOT will, at no cost to the Company, facilitate inspection of the Utility Work including, if necessary, uncovering the Utility Work.
17. **COMPANY TO NOTIFY UDOT AND THE DESIGN-BUILDER BEFORE BEGINNING UTILITY WORK**

The Company will notify UDOT’s Project Representative as well as the Design-Builder Project Representative at least 2 business days in advance of beginning any Utility Work covered by any supplemental agreements hereto. The Company will give subsequent notifications of when and where the Company will be performing Utility Work to UDOT’s Field Representative and the Design-Builder Project Representative on a day-to-day basis. Such subsequent notifications can be informal. Failure on the part of the Company to give proper notification to UDOT’s Field Representative and the Design-Builder Project Representative will be cited to the Company and that portion of the Company’s Utility Work performed while not under the surveillance of the UDOT Field Representative may be deducted from the reimbursement at UDOT’s discretion for.

18. **INSPECTION**

The Company shall provide on-call engineering support by the Company's engineer or appropriate representative for design review, schedule coordination, or to correct or clarify issues during the Utility Work, and to perform the necessary inspection for the Company’s Utility Work installed by UDOT.

   a. The Company engineer and/or inspector shall work with and through UDOT’s Project Representative and shall give no orders directly to UDOT’s Design-Builder unless authorized in writing to do so. UDOT will accomplish the Utility Work covered herein on Company’s facilities in accordance with the plans and specifications provided and/or approved by the Company, including changes or additions to the plans and specifications, which are approved by the Parties hereto.

   b. The Company shall immediately notify UDOT's Project Representative and the Design-Builder Project Representative of any deficiencies in the Utility Work on the Company’s facilities. The Company shall follow up with written detail to UDOT’s Project Representative and the Design-Builder Project Representative of its findings within 24-hours of making its initial notification.

   c. UDOT will respond to the Company’s concerns within 24-hours of written notification.

   d. The Company, through its inspection of the Utility Work, will provide UDOT’s Project Representative with information covering any problems or concerns the Company may have with acceptance of the facilities upon completion of the Utility Work.

   e. Any periodic plan and specification review or construction inspection performed by UDOT arising out of the performance of the Company’s Utility Work does not relieve the Company of its duty in the performance of the Utility Work or to ensure compliance with acceptable standards.

19. **DAILY RECORDKEEPING**

UDOT’s Field Representative, will keep daily records of the inspection and Utility Work performed by the Company forces. Daily records will be in duplicate on a form to be prepared by the Company or UDOT. The type of form to be used shall be preapproved by UDOT's Contracts, Compliance, and Certification Manager. The daily records shall be signed by UDOT’s Field Representative, the Company or its authorized representatives.
20. **REIMBURSEMENT FOR COMPANY’S UTILITY WORK**

In accordance with Utah Code §72-6-116(3)(a)(ii), UDOT will reimburse the Company 50% of the cost of Utility Work of its facilities on state highways and the Company shall pay the remainder of the cost of the Utility Work. UDOT will reimburse the Company 100% of the cost of Utility Work of its facilities located on a public utility easement, on a Company-owned private easement or fee property. The Company shall provide UDOT with a copy of the public utility easement or subdivision plat, private easement or fee title. The Utility Work and reimbursement for Company’s facilities required by the Project will be in conformance with the requirements of Utah Administrative Code R930-8.

The Company shall submit itemized bills covering its actual costs incurred for performing the Utility Work covered by supplemental agreements to UDOT’s Contracts and Compliance Specialist:

UDOT Contracts and Compliance Specialist
4501 South 2700 West
Construction Office, Box 148220
Salt Lake City, Utah 84114-8220

Itemized bills shall bear the Project and supplemental agreement numbers, supporting sheets, and a complete billing statement of all actual costs incurred, following the order of the items in the detailed estimates contained in the supplemental agreement, and be submitted to UDOT within 60 days following completion of the Utility Work by the Company on the Project. Otherwise, previous payments to the Company may be considered final, except as agreed to between the Parties in advance. UDOT will reimburse the Company within 60 days after receipt of the billings, but only for those items complying fully with the provisions of Utah Administrative Code R930-8. Failure on the part of the Company to submit final billings within 6 months of the completion of the Utility Work will result in UDOT’s disallowance of that portion of Utility Work reimbursement.

If the Company owes a balance to UDOT, the Company will reimburse UDOT within 60 days after receipt of billing from UDOT.

21. **SALVAGE CREDIT**

In accordance with 23 C.F.R. §645.117 all materials from Company’s existing facilities which are recovered by UDOT while performing the Utility Work and not reused on this Project shall become the property of the Design-Builder unless otherwise agreed to in advance by the Parties hereto.

In accordance with 23 C.F.R. §645.117, all materials from the existing facilities, which are recovered in suitable condition for reuse by the Company and not reused on the Project, shall be credited to the cost of the Project at current stock prices. If the materials are not suitable for reuse, they shall be credited at such other prices as agreed upon between the Company and UDOT following inspection of the recovered material.

22. **PROJECT DESIGN CHANGES**
If UDOT changes the Project design after the Company has completed its design review; or if the Company has completed its portion of the Utility Work of its facilities based on previously approved design plans; the cost of the second design review and/or Utility Work is to be paid in full by UDOT. UDOT will make adjustments for any additional time that may be required for the Company to perform Utility Work on its facilities when required.

23. COMPANY’S COSTS DIFFER BY MORE THAN 10%

If the Company’s actual costs incurred for its force account work differs more than 10% plus or minus per line item from the amount contained in the supplemental agreements, the Company is required to submit a letter of explanation with its billings indicating how and why the difference in costs occurred.

24. RIGHT TO AUDIT

UDOT and FHWA shall have the right to audit all cost records and accounts of the Company pertaining to this Project in accordance with the auditing procedure of the Federal Highway Administration and 23 C.F.R. §645, subpart A. Should this audit disclose that the Company has been underpaid, UDOT will reimburse the Company within 60 days upon submission of additional billing to cover the underpayment. Should this audit disclose that the Company has been overpaid, the Company will reimburse UDOT within 60 days of notification of audit findings in the amount of the overpayment. For the purpose of audit the Company is required to keep and maintain its records of Utility Work covered herein for a minimum of 3 years after final payment is received by the Company from UDOT.

The Company shall have the right to review UDOT’s cost documentation for the Utility Work performed on behalf of the Company.

25. ACCEPTANCE

UDOT will provide notification to the Company for acceptance of the Utility Work upon completion of the final inspection. Company will have 60 days to respond in writing to UDOT with any additional comments in regards to the Utility Work. In the event that UDOT does not receive a written response within 60 days, UDOT will designate the Utility Work accepted by the Company. Upon acceptance of the Utility Work, the Company will accept, own and maintain its facilities. To the extent it may lawfully do so, Company further agrees to relieve UDOT from any responsibility or liability that may result for its new facilities or the operation thereof.

26. ACCESS & MAINTENANCE

Access for maintenance and servicing of Company’s facilities located on the Project right-of-way will be allowed only by permit issued by UDOT. Company will obtain the permit and abide by conditions thereof for policing and other controls in conformance with Utah Administrative Code R930-7.

27. MISCELLANEOUS
a. Each Party agrees to undertake and perform all further acts that are reasonably necessary to carry out the intent and purpose of this Agreement at the request of the other Party.

b. This Agreement in no way creates any type of agency relationship, joint venture, or partnership between UDOT and Company.

c. The failure of either Party to insist upon strict compliance of any of the terms and conditions, or failure or delay by either Party to exercise any rights or remedies provided in this Agreement, or by law, will not release either Party from any obligations arising under this Agreement.

d. This Agreement shall be deemed to be made under and shall be governed by the laws of the State of Utah in all respects. Each person signing this Agreement warrants that the person has full legal capacity, power, and authority to execute this Agreement for and on behalf of the respective Party and to bind such Party. This Agreement may be executed in one or more counterparts, each of which shall be an original, with the same effect as if the signatures were made upon the same instrument. This Agreement may be delivered by facsimile or electronic mail.
IN WITNESS WHEREOF, the Parties hereto have caused these presents to be executed by their duly authorized officers as of the day and year first above written.

Company,

________________________________________

Title: ___________________________________

Date: ___________________________________

Recommended For Approval: Utah Department of Transportation

Title: Utility and Railroad Leader

Date: ________________________________

Title: Region Director

Date: ________________________________

Approved as to Form

UDOT Comptroller Office Contract Administrator

Title: Assistant Attorney General

Date: ________________________________

Title: ___________________________________

Date: ________________________________
EXHIBIT A
COMPANY APPROVED CONTRACTOR LIST
EXHIBIT B
COMPANY SPECIFICATIONS
EXHIBIT C
BUY AMERICA REQUIREMENTS
EXHIBIT D
COMPANY NAME
SUPPLEMENTAL AGREEMENT NO. ___

Supplement to UDOT Finance No. ____________

THIS SUPPLEMENTAL AGREEMENT, made and entered into this ____________ day of ____________, 20__, Utah Department of Transportation, (“UDOT”), and Company, a Registered Corporation of the State of Utah, (“Company”) each as (“Party”) and jointly as (“Parties”).

The Parties hereto entered into a Master Utility Agreement (MUA) dated ____________, UDOT Finance No. ____________. All the terms of the MUA remain in full force and effect unless otherwise specified herein.

The Parties agree as follows:

1. UDOT will perform the following described Utility Work in accordance with the terms and conditions of the MUA:
   a. Description of Utility Work to be performed, including proposed location, described in Exhibit “A” that is incorporated by reference: (Plan Sheets Attached)
   b. The Company requirements as shown in Paragraph 5 of the MUA – Company Requirements, are modified as follows:
   c. Anticipated duration of Utility Work as shown on Exhibit “B” that is incorporated by reference:
   d. Betterments included:

   TOTAL ESTIMATED COST OF SUPPLEMENTAL AGREEMENT _____ $0.00

   TOTAL ESTIMATED COST OF COMPANY PERFORMED UTILITY WORK $0.00
   TOTAL ESTIMATED COST OF UDOT PERFORMED UTILITY WORK $0.00
   COMBINED TOTAL ESTIMATED COST OF UTILITY WORK $0.00

   TOTAL ESTIMATED AMOUNT OF COMPANY PARTICIPATION @ 50% $0.00
   TOTAL ESTIMATED AMOUNT OF UDOT PARTICIPATION @ 50% $0.00

2. UDOT will notify the Company’s contact person, ________________, Telephone No. ________________, email ________________ at least 48 hours in advance of beginning the Utility Work covered herein, or in accordance with the specific terms of the MUA, as applicable.
IN WITNESS WHEREOF, the Parties hereto have caused these presents to be executed by their duly authorized officers as of the day and year first written above.

Company, a Registered Corporation in the State of XXX

Title: ____________________________

Date: ____________________________

Recommended For Approval:

Utah Department of Transportation

Title: Utility and Railroad Leader

Date: ____________________________

Title: Region Director

Date: ____________________________

UDOT Comptroller Office Contract Administrator

Title: ____________________________

Date: ____________________________
Memo

Date: April 15, 2017
To: Matt Zundel and [Project Manager]
From: [Region Utility and Railroad Leader]
RE: Utility Consent for the [DB Project Name] [PIN XXXXX]

In conformance with the provisions of 23 C.F.R. §645.113 and §645.309 the following is a statement regarding the status of utility adjustments and railroad work for the subject project:

All known third-party utility owners and railroads have been contacted and appropriate agreements are in process with the following:

- List all utilities, railroads and municipalities

We have reviewed the utility and railroad provisions in the Request for Proposals and find them to be in compliance with the applicable federal, state, and third-party agreement requirements; therefore we consent to advertising the Project.

Region Utility and Railroad Leader
Date: April 15, 2017

[Region or Project Director]
STATE OF TEXAS
DEPARTMENT OF TRANSPORTATION

PLANS OF PROPOSED STATE HIGHWAY
SH 130, SEGMENT 5.2

LOCATION MAP

INDEX OF SHEETS
SEE SHEET 2 FOR THE INDEX OF SHEETS

LIMITS: FROM 0.83 MILES NORTH OF LAWS RD. TO 0.11 MILES SOUTH OF FM 1185.
FOR THE CONSTRUCTION OF A TOLL ROAD FACILITY CONSISTING OF GRADING,
CONCRETE PAVEMENT, FLEX BASE, ASPHALT, CULVERT STRUCTURES, BRIDGES, RETAINING WALLS, SWMP,
SIGNING, PAVEMENT MARKINGS, TRAFFIC SIGNALS, RETAINING WALLS, ILLUMINATION, ETC.

EQUATIONS: SH130 (SEGMENT 5.2) STA 3375+23.32 (BK)
        = SH130 (SEGMENT 6.1) STA 3376+00.00 (AH)

EXCEPTIONS: NONE
RAILROAD CROSSINGS: NONE

NET LENGTH OF ROADWAY = 41,975.32 FT. = 7.950 MI.
NET LENGTH OF BRIDGE = 1,748.00 FT. = 0.331 MI.
NET LENGTH OF PROJECT = 43,723.32 FT. = 8.281 MI.

TRAVIS & CALDWELL COUNTIES

SPECIFICATIONS ADOPTED BY THE TEXAS DEPARTMENT OF TRANSPORTATION,
JUNE 1, 2004 AND SPECIFICATION ITEMS LISTED AND DATED AS FOLLOWS,
SHALL GOVERN ON THIS PROJECT: REQUIRED CONTRACT PROVISIONS FOR ALL FEDERAL AID CONSTRUCTION CONTRACTS (FORM FHWA 273, DECEMBER, 1993).
THIS PROJECT HAS BEEN DESIGNED USING THE FACILITY CONCESSION AGREEMENT DOCUMENTS, INCLUDING ALL THE TECHNICAL DOCUMENTS AND THE TECHNICAL REQUIREMENTS.
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**UTILITY STANDARDS**

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UTILITY SHEETS GENERAL NOTES:

1.) THESE DRAWINGS MEET WITH PREVAILING TXDOT UTILITY ACCOMMODATION LAWS.
2.) THE TXDOT UTILITY DESIGN MANUAL STANDARDS WERE USED IN THE DEVELOPMENT OF THE UTILITY COORDINATION DRAWINGS.
3.) THE TXDOT ILLUMINATION GUIDE MANUAL WAS USED AS A REFERENCE IN THE DEVELOPMENT OF THE UTILITY COORDINATION DRAWINGS.
Supplement to State Utility Relocation Agreement, Finance No. 108354

THIS PROJECT AGREEMENT, made and entered into this ___ day of Aug., 2016, by and between the UTAH DEPARTMENT OF TRANSPORTATION, hereinafter referred to as “UDOT” and QUESTAR GAS COMPANY, a Registered Corporation in the State of Utah, hereinafter referred to as the “Company.”

This Project Agreement is part of and subject to the terms and conditions of the STATEWIDE UTILITY RELocation AGREEMENT, dated November 4, 2009, UDOT Finance No. 108354 (“STATEWIDE AGREEMENT”). All of the terms of the STATEWIDE AGREEMENT remain in full force and effect unless otherwise specified herein.

NOW THEREFORE, it is agreed by and between the parties hereto as follows:

1. The Company will perform the following described Utility Work in accordance with the terms and conditions of the STATEWIDE AGREEMENT.

   Description of the Utility Work to be performed, including location: Described below and shown on EXHIBIT “A” that is incorporated by reference.

   13490 South at 200 West
   - Retire approximately 100 feet of existing 4-inch gas distribution line along the northwest corner of 13490 South and 200 West.
   - Install approximately 100 feet of new 4-inch gas distribution line along the northwest corner of 13490 South and 200 West at the UDOT specified depth of at least 4 feet below the finished, paved surface and 5 feet below unpaved surfaces.
   - Lower the existing 8-inch gas distribution line approximately 280 feet to the west from the existing tee at 13490 South and 200 West at the UDOT specified depth of at least 4 feet below the finished, paved surface and 5 feet below unpaved surfaces.

   Party performing the Utility Work: Company

   Anticipated duration of the Utility Work: Start June 13, 2016 and end June 30, 2016. See attached schedule marked EXHIBIT “B” that is incorporated by reference.

2. Special Provisions: None

3. The Company shall be reimbursed for 50% of the actual costs incurred by the Company for performing the Utility Work covered herein. The estimate of the total cost of the Utility Work was furnished by the Company to UDOT for W.O. #1044411 in the total amount of $44,781.00, a copy of which is marked EXHIBIT “C” that is incorporated by reference.
TOTAL ESTIMATED COST TO COMPANY IS $22,390.50
TOTAL ESTIMATED COST TO UDOT IS $22,390.50

NOTE: The above are estimates only. Total payment to the Company by UDOT will be based on the actual costs incurred as determined after completion of construction.
IN WITNESS WHEREOF, the parties hereto have caused these presents to be executed by their duly authorized officers as of the day and year first written above.

QUESTAR GAS COMPANY,
A Registered Corporation of the State of Utah

Vaughn W. Shosted
Title: Vice President of Operations
Date: 8-9-16

______________________________
RECOMMENDED FOR APPROVAL:

Carl Johnson
Regional Utility and Railroad Leader
Date: 17 Aug 2016

______________________________
Approved as to Form

Nenea Aspnes
Title: Assistant Attorney General
Date: 6 Sept 2016

______________________________
UDOT Controller Office Contract Administrator

Chery Young
Title:
Date: 8-7-16

______________________________
Project Director

Boone Carpenter
Date: 8-17-16

______________________________
UTAH DEPARTMENT OF TRANSPORTATION

Page 3 of 3
EXHIBIT A

UTAH
DEPARTMENT OF TRANSPORTATION

PLANS OF PROPOSED STATE ROAD
STATE FUNDED PROJECT

S-0154(70)1 PIN: 10603
SR-154; BANGERTER HWY. & 600 W. DESIGN
QUESTAR GAS EXHIBIT
SALT LAKE COUNTY
LENGTH 1.492 MILES
<table>
<thead>
<tr>
<th>ID</th>
<th>Task Name</th>
<th>Duration</th>
<th>Start</th>
<th>Finish</th>
<th>March</th>
<th>April</th>
<th>May</th>
<th>June</th>
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<tbody>
<tr>
<td>1</td>
<td>Questar Relocation and Adjustment at 33490 South/200 West</td>
<td>34 days</td>
<td>Mon</td>
<td>Thu 6/30/16</td>
<td>6/13/16</td>
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# EXHIBIT C

## Questar Gas Cost Estimate

**IHP Main & Service Line Replacement**

**Project:** UDOT 13490 S Widening, Proj. No. S-0154(70)1; SL County  
**Descr.:** Drop 280-ft of 8" and Install 100-ft of 4"  
**Ref.:** QGC Ref# Salt Lake 1087-15, QGC Project Number 1044411

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<tr>
<th>Item</th>
<th>Description</th>
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<th>Unit</th>
<th>Unit Rate</th>
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**TOTAL ESTIMATED PROJECT COST** **$44,781**
MEMORANDUM

April 15, 2017

TO: (Insert UDOT Project Manager)

FROM: (Insert Leader Name), Region Utility and Railroad Leader

SUBJECT: Project No. _________; ______ County
        (Insert Project Name)
        Authority No. _______; Pin No. ______

UTILITY and RAILROAD CERTIFICATION

In conformance with the provisions of 23 C.F.R. §645.113 and §645.309 the following is a statement regarding the status of utility adjustments and railroad work for the subject project:

- All necessary arrangements have been made for utility and railroad work to be completed as required for proper coordination with the physical construction schedule. Appropriate notification is provided in the bid advertising documents identifying the utility and railroad work which is to be underway concurrently with the highway construction.

(Include appropriate statements listed below)

(Include one of the following statements.)

Attached (you can also list the companies here without attaching a list) is a list of utilities which have indicated they have facilities in the project area. All anticipated utility impacts are covered by agreement.

(or)

Attached (you can also list the companies here without attaching a list) is a list of utilities which have indicated they have facilities in the project area. Coordination arrangements, if necessary, have been made and are noted in the plans and contract documents. All anticipated utility impacts (are/will be) covered by agreements that are in process.

(or)

Attached (you can also list the companies here without attaching a list) is a list of utilities which have indicated they have facilities in the project area. There are no known utility adjustments required by this project.

(or)

There are utilities within the project area. However based upon the project’s limited scope of work, no utility impacts are anticipated. Utility information has not been
solicited for this project and does not need to be listed.

(If there is no railroad involvement, include the following statement)

There are no railroad activities or involvement within the limits of this project.

(If there is railroad involvement, include one of the following statements)

Attached (you can also list the railroads here without attaching a list) is a list of railroad companies which have indicated they have facilities in the project area. All anticipated railroad impacts are covered by agreement.

(or)

Attached (you can also list the railroads here without attaching a list) is a list of railroad companies which have indicated they have facilities in the project area. Coordination arrangements, if necessary, have been made and are noted in the plans and contract documents. All anticipated railroad impacts (are/will be) covered by agreements that are in process.

(or)

Attached (you can also list the railroads here without attaching a list) is a list of railroads which have indicated they have facilities in the project area. There are no known railroad adjustments or flagging required by this project.

(or)

There are railroad facilities within the project area. However based upon the project’s limited scope of work, no railroad impacts are anticipated. Railroad information has not been solicited for this project and does not need to be listed.
Buy America Statements
For Use in Utility and Railroad Certifications
(Projects with Federal NEPA Action or Federal Funds)

Option 1
Third party railroads and utility owners doing relocation or protection work under individual agreements (contracts) have agreed to meet 23 C.F.R. §635.410 - Buy America requirements.

Option 2 (none of the materials contain iron or steel)
Third party railroads and utility owners doing relocation or protection work under individual agreements do not include iron or steel materials subject to 23 C.F.R. §635.410 - Buy America requirements.

Option 3 (value of iron and steel is under the $2500 minimal use threshold for each agreement)
Third party railroads and utility owners doing relocation or protection work under individual agreements (contracts) are in compliance with 23 C.F.R. §635.410 – Buy America requirements because the value of iron and steel materials per agreement is less than the allowable $2500 minimal use threshold for their work.

Option 4 (no third party work eligible for reimbursement)
There are no third party railroads and utility owners doing reimbursable relocation or protection work subject to 23 C.F.R. §635.410 - Buy America requirements.

Guidance
Make sure Buy America is addressed for each utility/railroad impacted by the project. It is acceptable to use a general statement if it covers all utilities/railroads. Otherwise substitute the names of individual owners in place of “third party railroads and utility owners” in the above statements if the project has multiple utility/railroad owners with different conditions applying to their respective work. For example:

1) “CenturyLink has agreed to meet 23 CFR 635.410 – Buy America requirements”;
2) “Questar Gas utility work does not include iron or steel materials subject to 23 CFR 635.410 – Buy America requirements.”;
3) The value of iron and steel materials required for Rocky Mountain Power relocation work is less than the allowable $2500 minimal use threshold and is therefore in compliance with 23 CFR 635.410 – Buy America requirements;
4) City’s betterment installation of water line is being done by the City at no cost to the project and is therefore not subject to 23 CFR 635.410 – Buy America requirements.

If you have questions, please contact Alana Spendlove, Statewide Railroad and Utilities Director @ 801.910.2095, or aspendlove@utah.gov.
STATEWIDE UTILITY LICENSE AGREEMENT
NONINTERSTATE

THIS AGREEMENT made and entered into this 16th day of May, 2016, by and between the UTAH DEPARTMENT OF TRANSPORTATION, hereinafter referred to as “UDOT” and PACIFICORP, an Oregon corporation, hereinafter referred to as the “COMPANY”.

RECITALS:

WHEREAS, the parties desire to assist in expediting the approval of UDOT permits for operating, constructing and maintaining utility lines and related facilities (“facilities”) within state highway rights of way; and excluding longitudinal installations within the interstate highway rights of way; and

WHEREAS, the terms of this agreement shall apply to all permits issued to allow access onto state highway rights of way; and

WHEREAS, this agreement shall apply to approved location and construction permits on state highway rights of way in the State of Utah which are within the responsibility and jurisdiction of UDOT; and

WHEREAS, the parties desire that this agreement supersedes all previous utility license agreements executed between the two parties

NOW THEREFORE, In consideration of the promises and mutual covenants and agreements contained herein, said parties hereby covenant and agree as follows:

(1) **UDOT AGREEMENT TO REVIEW APPLICATIONS:** This agreement is not a permit or a guarantee of a permit. However, UDOT agrees to promptly review any application for a permit that COMPANY files pursuant to the procedures established in this agreement and Utah Administrative Code R930-7. COMPANY and UDOT agree to work together in good faith to reach a mutually beneficial decision on any permit application.
(2) **APPROVAL:** Unless otherwise stated herein, or in any particular permit or agreement, all permits executed pursuant hereto will be deemed to be governed by the provisions of this agreement. Permit applications shall be presented to the appropriate UDOT Region/District Permits Office which shall have the authority to issue. All previous and future permits are subject to the requirements of R930-7 in effect at the time the encroachment permit was issued. UDOT may apply special limitations or requirements, including timing constraints, for any work within the right of way. The issuance and approval of a permit enables the COMPANY to proceed with the work and permitted use in accordance with the terms of the permit.

(3) **RESERVATION AND SPECIAL PROVISIONS:** UDOT reserves the right to require an agreement or specific permit for any particular location and construction. Special provisions, as particular circumstances may dictate and as required by UDOT may be incorporated into any permit issued after this agreement is executed.

(4) **INSPECTION:** UDOT may perform routine inspection of utility construction work to monitor compliance with the license agreement, encroachment permit and with state and federal regulations. UDOT’s inspection does not relieve the COMPANY of its responsibilities in meeting the permit conditions and UDOT’s specifications. The COMPANY is responsible for UDOT’s inspection costs.

(5) **COSTS:** The COMPANY shall pay the entire cost of the facilities installation unless UDOT’s highway project causes the relocation of the utility facilities.

(6) **BEGINNING CONSTRUCTION:** The COMPANY shall not begin any work on UDOT right of way until UDOT issues the permit. Once the COMPANY receives a permit from UDOT, the COMPANY shall complete construction in accordance with the permit requirements.

(7) **TRAFFIC CONTROL:** On heavily traveled highways, utility operations interfering with traffic shall not be conducted during periods of peak traffic flow. This work shall be performed to minimize closures of intersecting streets, road approaches, or other access points. The COMPANY shall submit in advance traffic control plans showing detours and signing operations to allow UDOT reasonable time to review the plans. The COMPANY shall not perform full or partial lane closure without prior approval of UDOT Region/District Director or authorized representative. The COMPANY shall conform to UDOT approved traffic control plans and permit conditions.

(8) **EXCAVATION, BACKFILL, COMPACTION, AND SITE RESTORATION:** The COMPANY shall perform all work on UDOT right-of-way in compliance with R930-7, current UDOT Standard Specifications for Highway and Bridge Construction, UDOT Permit Excavation Handbook, and all applicable state and federal environmental laws and regulations.

(9) **EMERGENCY WORK:** Emergency work may be done without prior permit if imminent danger of loss of life or significant damage to property exists. In emergency work situations where traffic lanes will be partially or fully blocked, the COMPANY or its representative will contact the UDOT Traffic Operations Center (801) 887-3700 prior to establishing traffic control, and on the first business day after the emergency complete a formal permit application. Failure to contact UDOT for an emergency work situation and obtain an encroachment permit within the stated time period may
be considered to be a violation of the terms and conditions of this agreement and R930-7. At the discretion of the COMPANY, emergency work may be performed by a bonded contractor, public agency, or a utility company. In all cases the COMPANY shall comply with the State Law requiring notification of all utility owners prior to excavation. None of the provisions of this agreement are waived for emergency work except for the requirement of a prior permit.

(10) **RESTORATION OF TRAFFIC SIGNAL EQUIPMENT:** Any traffic signal equipment or facilities which are disturbed or relocated as a result of the COMPANY's work must be restored in accordance with plans approved by UDOT. Restoration of traffic signal equipment must be done at the COMPANY's expense by a qualified electrical contractor experienced in signal installation, retained by the COMPANY and approved in advance by UDOT. Work shall be scheduled to ensure that disruption of any traffic signal operation is kept to a minimum.

(11) **MAINTENANCE:** The facilities shall at all times be maintained, repaired, constructed and operated by and at the expense of the COMPANY. The facilities will be serviced without access from any interstate highway or ramp. If the COMPANY fails to maintain the facilities, UDOT may notify the COMPANY of any maintenance needs. If the COMPANY receives notification of any maintenance requirements, the COMPANY shall perform the needed maintenance.

(12) **LIABILITY:** Pursuant to R930-7-6(2)(b), the COMPANY is required to post a continuous bond in the amount of $100,000 to guarantee satisfactory performance under this agreement. UDOT may proceed against said bond to recover all actual expenses incurred by UDOT, its employees or contractors in repairing the sections of roadway damaged by the COMPANY, including the failure to restore the right of way to UDOT standards. The liability of the COMPANY shall not be limited to the amount of the bond. In the event claims exceed the amount of the bond, UDOT may only claim the $100,000 maximum amount against the bond; however, the COMPANY shall be liable for any amounts exceeding the limits of the bond, but only to the extent the COMPANY may be liable for such claims under this agreement. The COMPANY shall notify UDOT immediately in writing at the following address if this bond is planned to be terminated or is terminated:

Statewide Utilities Engineer
Utah Department of Transportation
4501 South 2700 West
PO Box 148380
Salt Lake City, Utah 84114-8380

Failure to maintain the required bond is cause for termination of this agreement and cancellation of any permits.

Pursuant to R930-7-6(6)(b) UDOT may require a performance and warranty bond from the COMPANY for permits issued under this agreement. The amount of the bond, not less than $10,000, will be set according to the permitted scope of work. If a bond is required, UDOT may proceed against the bond to recover all expenses incurred by UDOT, its employees or contractors to restore to UDOT standards the sections of roadway not completed or damaged by the COMPANY. The liability of the COMPANY shall not be limited to the amount of the bond.
The COMPANY will indemnify, defend, and hold harmless UDOT, its employees, and the State of Utah from responsibility for any damage or liability arising from COMPANY’s construction, maintenance, repair, or any other related operation during the work or as a result of the work pursuant to permits issued under this agreement except for the extent of UDOT’s or its agents’ or contractors’ negligence.

(13) CANCELLATION OF PERMITS: Any failure on the part of COMPANY to comply with the terms and conditions set forth in the license agreement or the encroachment permit may result in cancellation of the encroachment permit and license agreement. The failure of the COMPANY to pay any sum of money for actual costs incurred by UDOT in association with its review or inspection of the utility facilities may also result in cancellation of the encroachment permit. Prior to any cancellation, UDOT shall notify the COMPANY in writing, setting forth the violations, and will provide the COMPANY a reasonable time to correct the violations to the satisfaction of UDOT. If the encroachment permit is cancelled because of the COMPANY’s noncompliance with the permit, then the COMPANY shall remove its utility facility that was allowed to be installed by the permit.

(14) ASSIGNMENT: The license agreement shall not be assigned. Any new entity is required to sign a license agreement. The permits maybe assigned with the prior written consent of UDOT, which shall not be unreasonably withheld.

(15) SUCCESSORS AND ASSIGNS: All covenants and agreements herein contained shall be binding upon the parties, their successors and assigns.

(16) UDOT MAINTENANCE OPERATIONS: Pursuant to R930-7-8, Underground facilities must be buried to the proper depth as required by the rule in effect at the time the underground facilities were installed to avoid conflict with UDOT’s normal and routine maintenance activities. In entering into this agreement with UDOT and obtaining a permit for the work, the COMPANY agrees to avoid such conflicts by placing its facilities in compliance with the required horizontal clearance, vertical clearance and minimum depth of bury. Normal maintenance operations are those not requiring excavations in excess of the minimum horizontal clearance and depth of bury. In all cases the COMPANY shall protect, indemnify and hold harmless UDOT, its employees, and the State of Utah for damages because of the failure of the facilities to meet the horizontal or vertical clearances. Any noncompliance to the above requirements may result in cancellation of the COMPANY’s permit. If the noncompliant facilities need to be moved due to a UDOT project, the COMPANY must pay 100% of the relocation costs if the facilities were installed in violation of UDOT’s required clearances. If the COMPANY is found to be in violation of its permit with respect to vertical or horizontal location, such violation may also result in cancellation of its permit.

(17) TERMINATION OF LICENSE AGREEMENT: This agreement may be terminated at any time by either party upon 30 days advance written notice to the other. Active permits previously issued and approved under a terminated agreement are not affected and remain in effect on the same terms and conditions set forth in the agreement, permits and R930-7. The obligation to maintain the continuous bond as described in paragraph (12) above continues until COMPANY’s facilities are removed from UDOT’s right-of-way. The indemnification obligations in this agreement shall survive termination of the agreement.
(18) MISCELLANEOUS:
A. Any changes to this agreement must be in writing and signed by both parties.

B. The failure of either party to insist upon strict compliance of any of the terms and conditions, or failure or delay by either party to exercise any rights or remedies provided in this agreement, or by law, will not release either party from any obligations arising under this agreement.

C. Each party represents that it has the authority to enter into this agreement.

D. This agreement shall be governed by and construed in accordance with the laws of Utah. In the event of a dispute, the venue shall be the Third District Court, Salt Lake County, Utah.

E. If any provision or part of a provision of this agreement is held invalid, illegal or unenforceable in any respect, such invalidity, illegality or unenforceability shall not affect any other provision. Each provision shall be deemed to be enforceable to the fullest extent under applicable law.

F. To the fullest extent permitted by law, each of the parties waives any right to a trial by jury in respect of litigation directly or indirectly arising out of, under, or in connection to this agreement. Each party further waives any right to consolidate any action in which a jury trial has been waived with other action in which a jury trial cannot be or has not been waived.
Approved by PACIFICORP, an Oregon corporation

By: Paul Radakovich
Signature

Paul Radakovich
Name (printed)

5-12-16
Date

VP, OPERATIONS
Title

FOR THE UTAH DEPARTMENT OF TRANSPORTATION

By: Richard Manser, P.E.
Richard Manser, P.E.
UDOT Statewide Utilities Engineer

17 May 2016
Date

APPROVED AS TO FORM: This Form Agreement has been previously approved as to form by the office of the Legal Counsel for the Utah Department of Transportation.
CONTINUOUS STATEWIDE UTILITY LICENSE AGREEMENT BOND
TO COVER THE PLACEMENT AND MAINTENANCE OF UTILITIES ON UTAH DEPARTMENT OF TRANSPORTATION’S PROPERTY AND RIGHT-OF-WAY

KNOW ALL MEN BY THESE PRESENTS:

That we PacifiCorp
Mailing Address: 1407 West North Temple, Salt Lake City, UT 84116 Phone: 801-220-2996 as Principal, and Travelers Casualty and Surety Company of America as Surety, being duly authorized to transact business in the State of Utah, are held and firmly bound unto the UTAH DEPARTMENT OF TRANSPORTATION, as Obligee, the full sum of $100,000. For the payment of which, well and truly to be made, we bind ourselves, our heirs, executors, administrators, successors and assign, jointly and severally, firmly by these presents.

The Principal has entered into a utility license agreement with the Utah Department of Transportation for the purpose of constructing, locating and maintaining overhead and/or underground facilities and related appurtenances within the state highway rights-of-way in Utah, excluding the interstate highway rights-of-way as stated in the Statewide Utility License Agreement executed on the 18 day of May, 2011.

The Principal is required to maintain this surety bond in perpetuity to guarantee the completion of the proper restoration and replacement of the state right-of-way to the extent the Principal or its utility facility causes any damage to the right-of-way, including but not limited to, roads, ditches, bridges, culverts and other appurtenances that the Principal utilizes or impacts.

The Principal has agreed to comply with the rules, regulations, condition and restrictions stated in the permit(s) issued by the Utah Department of Transportation.

If the Principal fails to complete the required work described in the permit(s), damages state right-of-way, including appurtenances and/or fails to perform the permitted work according to the applicable standards and specifications, including the conditions and limitations in the permit(s), it will be the responsibility of the Surety to arrange for the timely completion of all necessary work as required by the permit(s) and the Utah Department of Transportation.

As a part of the obligation secured hereby and in addition to the face amount specified, costs and reasonable expenses and fees including enforcing such obligation, shall be taxed as costs and included in any judgment rendered.
This bond shall be enforced for a continuous period. The Surety may terminate this bond upon giving the Utah Department of Transportation written notice by certified mail to the following address:

Utah Department of Transportation  
Right-of-Way, Permits  
4501 South 2700 West  
PO Box 148420  
Salt Lake City, Utah 84114-8420

The termination shall be effective ninety (90) days after the receipt of the notice by the Utah Department of Transportation.

IN WITNESS WHEREOF, the parties hereto have set their hands and seals the day and year first above written.

PacifiCorp  
Principal  

By:  

[Signature]

Principal Seal

Title:  
VP, OPERATIONS

Date:  
5-16-16

Surety Seal  
Travelers Casualty and Surety Company of America  
Surety  

By:  

[Signature]

Christina L. Sandoval  
PRINT NAME

Title:  
Attorney-in-Fact

Date:  
May 13, 2016
STATE OF:  Illinois

COUNTY OF: Will

Christina L. Sandoval  Being first duly sworn, an oath, DEPOSES AND
SAYS: That he/she is Attorney-in-Fact of  Travelers Casualty and Surety Company of America
the Surety of the foregoing bond, and that he/she is authorized to execute and deliver the foregoing obligation;
that said Company is authorized to execute the same, and has complied in all respects with the laws of Utah in
reference to begin sole surety upon bonds, undertakings and obligations.

One Tower Square, Bond/SPB, Hartford, CT 06183
MAILING ADDRESS OF SURETY COMPANY

Phone: (203) 277-0111
PHONE OF SURETY COMPANY

Signed
Aaron D. Griffin
PRINT NAME

Subscribed and sworn to me before this 13th day of May, 2016.
POWER OF ATTORNEY

Farmington Casualty Company
Fidelity and Guaranty Insurance Company
Fidelity and Guaranty Insurance Underwriters, Inc.
St. Paul Fire and Marine Insurance Company
St. Paul Guardian Insurance Company

St. Paul Mercury Insurance Company
Travelers Casualty and Surety Company
Travelers Casualty and Surety Company of America
United States Fidelity and Guaranty Company

Attorney-In-Fact No. 229936
Certificate No. 006441378

KNOW ALL MEN BY THESE PRESENTS: That Farmington Casualty Company, St. Paul Fire and Marine Insurance Company, St. Paul Guardian Insurance Company, St. Paul Mercury Insurance Company, Travelers Casualty and Surety Company, Travelers Casualty and Surety Company of America, and United States Fidelity and Guaranty Company are corporations duly organized under the laws of the State of Connecticut, that Fidelity and Guaranty Insurance Company is a corporation duly organized under the laws of the State of Iowa, and that Fidelity and Guaranty Insurance Underwriters, Inc., is a corporation duly organized under the laws of the State of Wisconsin (herein collectively called the "Companies"), and that the Companies do hereby make, constitute and appoint

Debra J. Doyle, Diane M. O'Leary, James B. McTaggart, Jennifer L. Jakaitis, Judith A. Lucky-Eftimov, Sandra M. Winsted, Sandra M. Nowak, Susan A. Welsh, and Christina L. Sandoval

of the City of Chicago, State of Illinois, their true and lawful Attorney(s)-in-Fact, each in their separate capacity if more than one is named above, to sign, execute, seal and acknowledge any and all bonds, recognizances, conditional undertakings and other writings obligatory in the nature thereof on behalf of the Companies in their business of guaranteeing the fidelity of persons, guaranteeing the performance of contracts and executing or guaranteeing bonds and undertakings required or permitted in any actions or proceedings allowed by law.

IN WITNESS WHEREOF, the Companies have caused this instrument to be signed and their corporate seals to be hereto affixed, this 17th day of September, 2015.

Farmington Casualty Company
Fidelity and Guaranty Insurance Company
Fidelity and Guaranty Insurance Underwriters, Inc.
St. Paul Fire and Marine Insurance Company
St. Paul Guardian Insurance Company

St. Paul Mercury Insurance Company
Travelers Casualty and Surety Company
Travelers Casualty and Surety Company of America
United States Fidelity and Guaranty Company

State of Connecticut
City of Hartford ss.

By: Robert L. Raney, Senior Vice President

On this the 17th day of September, 2015, before me personally appeared Robert L. Raney, who acknowledged himself to be the Senior Vice President of Farmington Casualty Company, Fidelity and Guaranty Insurance Company, Fidelity and Guaranty Insurance Underwriters, Inc., St. Paul Fire and Marine Insurance Company, St. Paul Guardian Insurance Company, St. Paul Mercury Insurance Company, Travelers Casualty and Surety Company, Travelers Casualty and Surety Company of America, and United States Fidelity and Guaranty Company, and that he, as such, being authorized so to do, executed the foregoing instrument for the purposes therein contained by signing on behalf of the corporations by himself as a duly authorized officer.

In Witness Whereof, I hereunto set my hand and official seal.
My Commission expires the 30th day of June, 2016.

Marie C. Tetreault, Notary Public

58440-8-12 Printed in U.S.A.
Deviation from Administrative Rule 930-7, Utility Accommodation

Project Information:
Project No: ____________________________ PIN: ____________________________
Location: ____________________________
Description: ____________________________

Does the proposed deviation violate any state or federal statutes, laws or regulations? (e.g. National Electrical Code, U.S. Department of Transportation rules & regulations governing transmission of hazardous materials and pipeline safety regulations contained in 49 CFR 192, 193 and 195)

No ☐
Yes ☐ Please explain: __________________________________________________________

Describe how the proposed deviation supports use of the right of way for the public good:
________________________________________________________________________

What are the impacts of the proposed deviation?

<table>
<thead>
<tr>
<th>Limited (Region Review only)</th>
<th>☐</th>
<th>(e.g. overhead clearance, depth of bury, clear zone encroachment, manholes in pavement, proximity to structures, open trench construction)</th>
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</thead>
<tbody>
<tr>
<td>Significant (Full Review)</td>
<td>☐</td>
<td>(e.g. utility access points inside of freeway &amp; expressway N/A boundaries, median installations of overhead facilities such as poles, negatively impact Scenic Area, uncased pipelines carrying high volume or pressurized liquids)</td>
</tr>
</tbody>
</table>

Explain the circumstances, unusual conditions and hardships of meeting the requirements of R930-7:
________________________________________________________________________

Describe the mitigation measures that will be specified and implemented to fulfill the intent of meeting R930-7:
________________________________________________________________________

☐ Utility Company’s formal request for a deviation is attached.
<table>
<thead>
<tr>
<th>Explanation of direct and indirect impacts associated with the deviation:</th>
</tr>
</thead>
<tbody>
<tr>
<td>Design:</td>
</tr>
<tr>
<td>Safety:</td>
</tr>
<tr>
<td>Environmental:</td>
</tr>
<tr>
<td>Economic: (include utility/project costs/benefits, highway user costs/benefits, and other indirect economic (including community) costs/benefits):</td>
</tr>
</tbody>
</table>
Deviation from Administrative Rule 930-7, Utility Accommodation - Signature Page

Approval / Signatures:

Prepared By

UDOT Project Manager

Region Pre-construction Engineer

Region Director

Statewide Utilities & Railroad Engineer

FHWA Concurrence*

*FHWA signature of concurrence is required when UDOT determines the request is a Significant Deviation from R930-7 and the proposed utility would be located within a Federal-aid highway right of way.