

# **Project Delivery**

## **PMO and CIP Utility Coordination & Inspection Services**

Utility Relocation Manual  
February 5, 2010

## FOREWORD

The public interest is served through the accommodation of utility facilities when such installations are properly regulated, do not impair the free and safe flow of traffic and do not interfere with the maintenance or future expansion of the highway. Per 23 CFR 645.211, utilities must be accommodated and maintained in a manner which will not impair the highway or adversely affect highway or traffic safety. Consideration shall be given to the effect of utility installations in regard to safety, aesthetic quality, and the costs or difficulty of highway and utility construction and maintenance. It is not the intent of the Authority that such highway shall create a barrier across which the facilities of utilities may not pass. Uniform procedures controlling the manner, nature and extent of such utility use shall be established.

The purpose of this document is to establish a utility accommodation process by providing a document to be followed by those working with the public utilities, as well as the utility agents, in assisting all entities to understand the utility accommodation process.

The policies referred herein regarding the adjustment, installation, relocation, or removal of utilities are covered by directives developed by the Authority's Utility Coordination Department and approved by the Authority's Board of Directors.

## GENERAL POLICY

**Right-of-Way Occupancy:** Any occupancy of the Toll Road right-of-way by a public or private Utility facility must be authorized by the Authority. Where such facilities are constructed or relocated on Toll Road right-of-way, they shall be installed in a manner so as to comply with the Authority's regulations, and the requirements of any other body having legal jurisdiction. Construction work shall not be performed on any portion of the Toll Road right-of-way until approval has been granted by the Authority in writing.

**Relocations:** Removal, relocation or adjustment of a Utility's facilities shall be made on the basis of the best engineering solution as mutually agreed upon after thorough study. In the event there exists a difference of opinion between the Authority and the Utility as to the necessity for removing, relocating, or changing facilities or providing temporary facilities at any location, the final decision shall rest with the Authority. The use of temporary facilities is optional and shall be determined on reasonable practices with respect to the need pertaining to the individual installation. A Utility will not be required to suspend or curtail service to its customers except for necessary interruptions.

**Reimbursements:** Based on Texas Transportation Code §366.171, and all other applicable regulations or requirements, the Authority will reimburse the Utility for the costs of removals, adjustments, and/or relocations to facilities existing prior to construction of the Toll Road. Reimbursement shall include costs for planning and

engineering made necessary by construction or improvement of the Toll Road. The Utility shall provide all documentation required by the Authority to verify the Utility's reimbursement request and process payment to the Utility.

Adjustment costs eligible for reimbursement are those that are:

- Performed in conformity with an approved utility agreement between NTTA and the utility;
- Necessary to restore, in the most economical manner, the utility's functional operations to a level similar to that existing before the adjustment;
- Necessary to comply with laws and ordinances; or
- Direct benefit (i.e., safety and aesthetics) to the Tollway facility.

Betterments that are constructed at the election of the utility and not attributable to highway projects, such as increased service capacity or service improvements, are non-reimbursable.

The Utility will not begin the work without first obtaining a formal written Notice to Proceed from the Authority.

**Inspection:** All relocations or alterations of a Utility facility necessitated by Toll Road construction and subject to reimbursement under this policy must be inspected by the Authority's Utility Inspection or Construction Management personnel to assure that all construction is in accordance with requirements as specified in documents accompanying the Agreement for Adjustment of Utility (AAU). The Authority shall decide all matters in dispute which affect the Toll Road. The Authority's decision shall be final, and the Utility shall so notify its personnel, representatives and its contractors. Non-compliance may be cause for the Authority stopping the work until the Utility complies with the Authority's decision. Inspection by the Authority does not relieve the Utility from responsibility for assuring that the work is completed as specified.

## **UTILITY ACCOMMODATION ROLES & RESPONSIBILITIES**

**The Design Section Engineer (DSE) is responsible for the following items:**

- Provide Subsurface Utility Engineering (SUE) documentation to the Utility Coordination Consultant;
- Document and include on the design plans all known existing utility facilities within the limits of the roadway project;
- Assist the Utility Coordination Consultant in evaluating utility relocation engineering proposals and determining the most cost effective best practice resolution for all utility conflicts within the project limits;
- Review all utility relocation plans prepared by others to verify existing conflicts are eliminated, no new conflicts with roadway or other design elements are

created, and that the proposed installation is compatible with the relocation plans by other utilities;

- Attend meetings with the Authority's ROW and utility personnel, project stakeholders and Utility Owners as requested;
- Determine new utility service requirements for the tollway and submit utility service applications to providers on behalf of the Authority.
- Municipal utilities within the design section which are to be installed or relocated in the roadway contract shall be designed by the DSE in accordance with the requirements of the municipality, and all applicable regulations as directed by the Authority.

**The Utility Coordination Consultant is responsible for the following items:**

- Conduct field investigations and review SUE files to ensure information received from the utility companies and the DSE is accurate and complete;
- Document and coordinate resolution of all utility conflicts within the project limits;
- Identify conflicts that require an extended time period for relocation , permitting, and/or material procurement which may adversely affect the project schedule, and initiate proactive scheduling adjustments;
- Prepare and regularly update cost estimates, cash flow analysis, and schedules for all utility relocation activities in the corridor;
- Assist utilities with preparation of necessary documentation or forms required by any permitting agency;
- Monitor outside agency utility agreements requirements and property right restrictions governing performance of the utility relocation work;
- Review Utility submitted engineering (plans, specifications, and estimates) for compliance with all applicable industry standards, codes, regulations, and governmental agency requirements;
- Review Utility submitted engineering (plans, specifications, and estimates) to verify resolution of existing conflicts with the roadway design plans, confirm that no new conflicts with the roadway or other design elements have been created, and ensure compatibility with the relocation plans of other utilities;
- Prepare the NTTA Agreement for Adjustment of Utility (AAU) that contractually obligates the NTTA to reimburse the Utility for actual costs of facility adjustment;
- Provide field inspection of utility construction to ensure installations are in compliance with the approved plans and specifications, that work areas are kept clean and safe at all times, and that inconveniences to directly affected parties and the general public are minimized;
- Verify accuracy of Utility submitted invoices, and approve payments for work completed;
- Collect surface coordinates of installed facilities for use in preparing NTTA records, a GIS deliverable of utility installations;

- Forward all information related to existing or relocated facilities, including as-builts and GPS data collected during the relocation construction, to the Construction Management team and the DSE for inclusion in the project's Record Drawings.

**The Utility Owner is responsible for the following items:**

- Provide plans or schematics of existing utility facilities within the corridor;
- Coordinate with the Utility Coordination Consultant to address all utility conflicts within the corridor;
- Review the "Existing Utility" sheets within the roadway design plans to determine the accuracy and completeness of their facilities as shown;
- Attend monthly Utility Coordination meetings, and any other meetings deemed necessary throughout the duration of the project;
- Prepare engineering plans for relocation of facilities which meet the requirements of the NTTA, in compliance with the TxDOT Utility Accommodation Rules (UAR), 43TAC §21.31 through 21.56, and all other applicable Utilities Codes, and adhere to any local regulations and restrictions;
- Provide a Statement of Work that includes a complete narrative of the scope of the work, and an estimate of all costs in a format that allows direct comparison to the billing statements;
- Submit justification for adjustments that do not comply with the NTTA or UAR specifications, and for any betterment or change in type of facilities
- Enter into a contract for reimbursement of actual costs, the Agreement for Adjustment of Utility (AAU), and provide the requisite forms and signature by an authorized agent of the Utility;
- Upon approval of the AAU the Utility Owner shall prepare and submit a schedule of work based on the timeline within the agreement and relocate facilities per the approved plans;
- Coordinate with the Authority's inspectors to allow for proper inspection and assist with change orders;
- Alert the inspector of any deviations in plans, costs or schedule prior to performing said work, and initiate Change Orders as outlined in the AAU;
- Submit invoices to the Utility Coordination Consultant in a format that allows direct comparison with the estimate, and provide justification and supporting documentation to address any costs that are not included as line items on the estimate;
- Cooperate with the Authority on a formally requested audit of the billing to verify that the work has been completed in accordance with the approved plans;
- Prepare and submit Plans of Record with the same degree of detail and accuracy as the approved plans, the actual as-built locations and elevation of the newly constructed facilities, as well as all approved revisions to the plans.

**The Authority or Project Management Staff is responsible for the following items:**

- Initial notification explaining future project;
- Archived permit information from the NTTA utility database related to the project;
- Project schematics and other pertinent documents and plans;
- Environmental and Right-of-Way status reports;
- Contact information for all PMO and NTTA personnel associated with the project.

**The following is a list of responsibilities in each project phase to assist in efficient Utility Coordination. (See attached table 1 of 1)**

## **1. Planning Phase.**

As part of the planning phase the Utility Coordination Consultant (UCC) is responsible for the following items:

- 1.1. Perform preliminary route reviews;
- 1.2. Prepare a preliminary Utility Relocation Estimate;
- 1.3. Create a preliminary CPM Utility Adjustment Schedule;
- 1.4. Provide a list of long lead time and cost prohibitive items;
- 1.5. Determine additional permit and agreement requirements;
- 1.6. Identify ROW and existing easement issues that may affect utilities;
- 1.7. Notify Utility Owners of new NTTA project;
- 1.8. List the appropriate Utility Owner contacts;
- 1.9. Coordinate with additional agencies that may be involved with the project.

## **2. Final Schematic and Initial Design Phase.**

Upon official project notification the Utility Coordination Consultant will:

- 2.1 Perform an extensive field review utilizing updated information;
- 2.2 Obtain Utility Owner records for existing and planned facilities and overlay onto project schematics;
- 2.3 Create a detailed existing utility conflict spreadsheet by project section;
- 2.4 Hold engineering workshops with Design Section Engineers focusing on utility and ROW issues;
- 2.5 Refine and detail the utility estimates and schedule incorporating seasonal constraints and material fabrication time frames;

- 2.6 Establish recurring Utility Coordination meetings schedule with Utility Owners, Design Section Engineers, and Project Management personnel;
- 2.7 Update and distribute a Utility Coordination contact list as needed;
- 2.8 Issue formal requests to Utility Owners for design and cost estimates for all utility adjustments required for the Tollway project;
- 2.9 Assist Utility Owners with utility adjustment engineering design.

Information to be provided to the UCC by the DSE or Project Management Staff:

- a) Contact information for design staff including any sub consultants;
- b) Project design schedule;
- c) Subsurface Utility Engineering (SUE) files (if available);
- d) Participate in UCC scheduled engineering workshops;
- e) Attend Utility Coordination meetings.

### **3. 30% Design Phase**

As design reaches the 30% submittal, the UCC will:

- 3.1. Provide the approved 30% PS&E plans to Utility Owners;
- 3.2. Assure long lead items and permits are prioritized;
- 3.3. Continue working with utility engineers on relocation plans;
- 3.4. Evaluate existing SUE, and determine appropriate level of additional required SUE;
- 3.5. Assess the need for additional utility easements outside the ROW limits;
- 3.6. Create composite utility overview maps by design section for tracking purposes;
- 3.7. Provide survey support for utility engineering;
- 3.8. Attend design production meetings, provide input on utility issues and progress;
- 3.9. Continuously update utility schedules and estimates in coordination with Environmental and ROW;
- 3.10. Prioritize ROW acquisition to accommodate lengthy utility relocations and construction phasing;
- 3.11. Prepare cash flow projections for utility construction.

Information to be provided to the UCC by the Design Section Engineer (DSE) or Project Management Staff:

- a) The approved 30% PS&E for delivery to Utility Owners;
- b) Information on major design changes;
- c) Schedule for all production meetings;
- d) Review of utility engineering proposals with feedback on proposed routings;

- e) ROW and Environmental status and schedule updates;
- f) Engineering support on roadway design changes and adjustments for utilities where able to benefit project schedule or budget.

#### **4. 60% Design Phase**

As design reaches the 60% submittal, the UCC will:

- 4.1. Schedule and chair monthly utility coordination meetings;
- 4.2. Provide the approved 60% PS&E to Utility Owners;
- 4.3. Track and update all conflicts utilizing the CPM utility schedule;
- 4.4. Prioritize utility relocations per roadway construction phasing;
- 4.5. Review and comment on utility relocation engineering submittals;
- 4.6. Forward utility engineering plans to DSE for conflict resolution review and comment;
- 4.7. Provide review comments to Utility Owners, and request alternate design submittals or re-engineering as necessary;
- 4.8. Update the utility overview maps with proposed utility locations, assigning placement corridors for parallel installations;
- 4.9. Submit utility project status reports and estimates monthly; and project overview maps, schedules and other information as requested to the project management team;
- 4.10. Prepare *Agreement for Adjustment of Utility (AAU)* reimbursement contracts for each approved utility relocation engineering submittals;
- 4.11. Draft cover letters to Utility Owners requesting signature on enclosed Agreements;
- 4.12. Forward completed AAU assemblies to the Corridor or Project Manager with supporting documentation and funding approval recommendations;
- 4.13. Assist with preparing presentations for the NTTA Board of Directors meetings;
- 4.14. Complete appropriate TxDOT forms for relocations where applicable.

Information to be provided to the UCC by the Design Section Engineer (DSE) or Project Management Staff:

- a) Notate on the 60% PS&E Existing Utility Plan sheets all utilities that require relocation as "TO BE RELOCATED BY OTHERS";
- b) Approved 60% PS&E plans;
- c) Attend monthly Utility Coordination meetings;
- d) Review utility engineering proposals to verify all existing conflicts have been eliminated and no new conflicts are created by the utility design;
- e) Construction phasing exhibits and schedules;

- f) A record of approved utility engineering\_and notifications of possible new conflicts resulting from roadway engineering design changes;
- g) ROW and Environmental status and schedule updates.

## **5. 90% Design Phase thru Beginning Roadway Construction**

At 90% design and Final submittal continuing into construction, the UCC will:

- 5.1. Schedule and conduct monthly utility coordination meetings;
- 5.2. Provide updated plans and communicate changes to the Utility Owners;
- 5.3. Update and distribute the existing utility conflict spreadsheet, cash flow, schedules, and utility adjustment status reports;
- 5.4. Create an AAU tracking spreadsheet for the corridor;
- 5.5. Forward finalized utility reimbursement Agreements to NTTA PMO for approval and distribution to Utility Owners;
- 5.6. Process a Notice to Proceed on fully executed Agreements for PMO approval and delivery to the Utility Owner;
- 5.7. Communicate with the Utility Owner to schedule a preconstruction meeting;
- 5.8. Inspect Utility relocation construction for compliance with estimates, plans, and TxDOT's latest Utility Accommodation Rules (UAR);
- 5.9. Complete daily field progress reports;
- 5.10. Update the composite Utility overview maps and provide to the Construction Management team;
- 5.11. Review utility submitted invoices; compare with the estimates, plans, inspection reports and as-built documents, checking for accuracy, completeness, and exclusion of any betterments;
- 5.12. Provide payment recommendations to the Authority.

Information to be provided to the UCC by the Design Section Engineer (DSE) or Project Management Staff:

- a) Approved 90% PS&E plans and subsequent final plans;
- b) Attend monthly Utility Coordination meetings, and any other utility or ROW issue specific meetings;
- c) Assist with utility design revisions and construction field changes necessitated by roadway design changes/updates or unforeseen site conditions;
- d) Assist with prioritizing and coordinating utility construction to accommodate roadway construction phasing;
- e) Authorize payment to utility for relocation services.

**Following these guidelines along with continued communication and maintenance of the project schedules will provide for successful Utility Coordination and play an important role in a successful project. These guidelines are a framework on which to base the responsibilities of the involved parties. They may not include all activities on every project, and there may be additional tasks or roles on larger projects.**

**For additional information concerning utilities please see the following links:**

TxDOT Utility Accommodation Rules

[http://info.sos.state.tx.us/pls/pub/readtac\\$ext.ViewTAC?tac\\_view=5&ti=43&pt=1&ch=21&sch=C&rl=Y](http://info.sos.state.tx.us/pls/pub/readtac$ext.ViewTAC?tac_view=5&ti=43&pt=1&ch=21&sch=C&rl=Y)

Texas Transportation Code

<http://www.legis.state.tx.us/>

[UC-01](#) Utility Relocation Process

## Agreement for Adjustment of Utility (AAU) Processing Instructions

1. Request for Proposal (RFP) covering required adjustments is sent to Utility Owner. Copies of 60% PS&E roadway design forwarded to utility engineer as well, if available.
2. Utility Owner returns the proposed relocation plans and estimates to the NTTA Utility Coordinator (UC), the UC reviews for errors and redlines accordingly; after review the UC forwards to the Design Section Engineer (DSE) for a conflict analysis review.
3. The Utility Coordinator requests an AAU number from the contract specialist at NTTA.
4. Upon DSE approval a draft AAU is prepared incorporating the plans and estimate from the Utility Owner.
5. A cover letter on NTTA letterhead requesting utility signature on the Agreement and the TxDOT JUA (if applicable), is prepared with Contract Manager as signatory.
6. A “**quality control tracking stamp**” (QCTS) is attached to the draft AAU package and routed to the UC for review. The UC signs the QCTS and routes the package to the QC reviewer.
7. The QC reviewer reviews the package and returns it to the Utility Coordinator.
8. The package is re-routed to the Utility Coordinator and QC reviewer for final approval.
9. Two copies of the AAU (along with 2 copies of the JUA, if applicable) with cover letter are submitted to NTTA.
10. If the Utility Estimate is \$300,000 or more an Executive Summary is prepared and a Board Resolution drafted.
11. The Board documents are routed to the Corridor Manager for approval.
12. The package is re-routed to the UC for final adjustments. Upon completion, the Executive Summary and Board Resolutions are provided to the PMO, the Corridor Manager and the PMO ROW Manager for the upcoming NTTA SPOC and Board Meetings.
13. After the AAU is reviewed and approved according to current PMO procedures, the NTTA Contract Manager signs the letter and sends the package to the Utility Owner with directions for the signed agreement to be returned to NTTA. NTTA notifies the UC when the AAU’s are sent to the Utility Owner.
14. The Utility Owner signs the Agreement (and the JUA, if applicable) and returns it to NTTA as instructed in the cover letter. NTTA sends both agreements to the Utility Coordinator for a Notice to Proceed (NTP) to be prepared and routed back to NTTA for final execution.

15. After receipt of an Agreement signed by the Utility Owner, UC prepares a new cover letter to the utility on NTTA letterhead stating that one fully executed copy is attached and this is letter is to be considered as formal Notice to Proceed (NTP), or that a meeting is requested to establish NTP.
16. A QC reviewer reviews the package and returns it to the Utility Coordinator for revisions.
17. If applicable the signed JUA is sent or taken to TxDOT with one set of plans.
18. If applicable **TxDOT** returns one copy of the fully executed JUA to the UC.
19. The NTTA notifies the UC when the Agreement has been executed and the cover letter is signed for pickup and delivery to the Utility Owner.
20. A preconstruction meeting is scheduled and attended by the UC, the NTTA Utility Inspector, an NTTA Right-of-Way representative, the Utility Owner, and their consultants and construction contractors.
21. Throughout construction the NTTA inspectors will supply daily notes and GPS coordinates on placement of the utility and provide this information to the UC for his oversight duties. This information will be placed on a Utility map and supplied to the NTTA and their construction management team for the corridor.
22. Upon completion of construction the Utility Owner will prepare an invoice and submit it to the UC for review of costs and betterment, verification of compliance with the plans and estimates, and submittal to the NTTA for payment.

## UTILITY RESPONSIBILITY MATRIX

STEP #	DESCRIPTION	UCC	UO	DSE/C M	PMO	NTTA	PHASES				
							PRELIM	30	60	90	100
1	Produce Project Schematic					X	X				
2	Identify Utilities (Field Verification)	X					X				
3	Develop Schedule & Estimates	X					X				
4	Prepare Conflict spreadsheet, contacts...	X					X				
5	Prepare SUE Package			X				X			
6	Issue NTP for Utility Design	X				X		X			
7	Develop Utility Design Plans & Estimate		X					X	X		
8	Review Utility Design	X		X				X	X		
9	Prepare Utility Agreement	X	X					X	X		
12	Resolve Agreement Issues	X	X			X		X	X		
13	Execute Agreements		X			X			X	X	
14	Issue NTP for Utility Construction					X			X	X	
15	Hold Preconstruction Meeting	X							X	X	
16	Relocate Facilities		X							X	X
17	Prepare As-Built documentation	X	X							X	X
18	Invoice for Payment		X								X
19	Review Invoices	X									X
20	Project Closeout	X			X	X					X