

SECTION 14 – UTILITY RELOCATION INSPECTION PROCEDURES

14.1 INTRODUCTION *(Rev. 01-21-14)*

On most highway improvement projects there will be utility facilities located in the project limits or adjacent to the project limits. Some of the facilities within the limits of the project may be in conflict with the proposed construction, some may be in the process of relocating out of conflict with the project and some facilities may not be in conflict with the project. INDOT is required by FHWA to minimize or avoid impacts to utility facilities whenever feasible. The constructability reviews during project development are critical to successful construction projects. These reviews are the most opportune time for developing the correct utility work plans and subsequent project bid documents. The Area Engineer should view these reviews as a primary responsibility of the assigned PE/S. Contractors will be required to schedule their work with utility schedules as presented in special provisions, work around existing utilities as shown on plans, and prepare areas for utility relocations as written in special provisions. The PE/S will bring critical field experience and input into the development of utility work plans, contract bid documents, and design plans.

INDOT manages these utility facilities by coordinating with the utilities prior to construction and developing utility relocation work plans. These work plans coordinate the location, schedule, and work of the utility with the project. A letter ‘Work Plan Approved’ is issued for all relocation work plans that are acceptable to INDOT. A permit number is issued with this letter. Also, in this letter the utility is provided a notice to proceed with their preconstruction activities. A letter “Notice to Proceed with Construction” will be issued by the Utility Coordinator once all work required by INDOT or the INDOT contractor is completed. The utility work plans are accurately reflected in the special provisions and the locations are in the utility relocation drawings uploaded to the bid documents for the contractor to consider. The goal of the Utility section is to address all utility related concerns and inform the project team. The idea is to deliver complete information in sufficient detail that the team has no surprises regarding utility coordination. The Utility coordinator is to be the point person for all utility related concerns from project inception to conclusion.

14.2 AUTHORIZATION *(Rev. 01-21-14)*

Authorization for a utility to start pre-construction activities is provided in the letter “Work Plan Approved”. Authorization for a utility to start construction activities is provide in the letter “Notice to Proceed”. These letters are issued by the utility coordinator.

One role of the PE/S is to verify that a utility planning to do work or actually doing work within the highway right of way has a notice to proceed issued by the utility coordinator. Also, the PE/S will ensure the work of the utility is appropriate to the special provisions and coordinated with the work of the INDOT contractor to ensure progress of work in accordance with the identified schedule.

14.3 PRE-CONSTRUCTION CONFERENCE *(Rev. 01-21-14)*

When utilities are involved in a project, it is essential that they be called together, with the prime contractors and subcontractors, to discuss a workable schedule that will be coordinated with the contractor's schedule and the Utility Special Provisions. These Special Provisions are drafted by the Utility Coordinator in coordination with each impacted utility. The provisions are derived from Utility work plans that were negotiated to be in compliance with the project. Any post work plan changes or new expectations of the utilities must be coordinated through the utility coordinator and may result in additional costs to INDOT or the contractor. The utility conference should be held in conjunction with the usual pre-construction conference. The PE/S should prepare minutes of the utility conference and include them in the pre-construction conference minutes. The proposed scheduled starting dates, anticipated completion dates and any applicable or intermediate date, should be noted. On projects where there are major utility concerns, additional utility meetings, such as weekly meetings may be appropriate. A good time for information exchange is during weekly scheduling meeting and monthly partnering meetings. However, the need for attendance by the utilities should be measured by 1) the complexity of the utility relocation needed, and 2) the availability of the utility coordinator who is required to be actively coordinating all utility schedules with construction progress and schedule.

As part of the utility conference, the PE/S should request a list of contact names from each utility involved in the project from the Utility coordinator. Although the contract may include some contact information, it should be verified and updated at the conference. The Utility coordinator is and should be seen as the primary contact person for all utility related concerns which should free the PE/S to manage the project. The PE/S will have this information for the contractor's required notification to utilities.

Special emphasis must be given to the review of the existing and proposed new locations of aerial lines. The contractor must consider the utilities in their work plan and their bidding of the project. Possible conflicts with the contractor's construction equipment, such as cranes, backhoes, pile driving equipment, etc, may not have been known at the time of the utility plans formulation or the Department's review of the plans. The utility relocation drawings in the contract documents should be considered in the contractors bidding of the project and are not a basis for requiring changes in the utilities' permitted locations. If the contractor chooses a means or method of constructing that requires a change in the utility's permitted location, the PE/S should inform the contractor that they will have to negotiate the cost of that move with the utility and seek a permit addendum from the utility coordinator.

The date the area necessary for each utility to relocate was staked, the date any obstruction was cleared for the utility, the date each utility was contacted regarding starting their work, the date the utility actually started work, and any adverse conditions causing delay in the sequence of operations should be recorded in the Engineer's Diary. The PE/S should note specific items of assistance that are provided to the utility such as locating the centerline of the road, establishing grade stakes in advance of normal staking, etc. A comprehensive review of the work to be performed should be made at the start of the utility relocation work, unless covered at a recent pre-construction conference.

14.4 INSPECTION *(Rev. 01-21-14)*

The degree of inspection of utility construction will vary considerably with the nature and location of the work and the type of contract involved. Judgment must be exercised regarding the manner and regularity of inspections. It will vary from spot checks on minor overhead installations to detailed inspections of underground facilities.

The following items should be noted:

- a. Be observant of proposed grade and alignment and check that the utility plans are compatible with the road structures, and construction features, etc.
- b. Ensure that proper backfill methods and materials are used where proposed and future road surfaces and berms are involved.
- c. Be observant for any substantial change in methods and materials from those approved, such as the use of sheeting, special backfill, etc. The PE/S should immediately contact the Utility Coordinator to discuss with the utility. For reimbursable utilities, there can be no payment for any work in addition to the approved work; therefore such approval must be obtained prior to starting the procedure change.
- d. Be sure that the utility foreman is familiar with symbols furnished on the construction stakes, such as cut and fill information and that both the utility and contractor use the same data.
- e. Spot checks should be made to ensure that trench depths are compatible with highway surface plans, vertical clearance of overhead utility installations are sufficient to insure minimum clearance above highway structures and horizontal alignment is compatible with construction limits, access lines, etc.

Utilities are authorized, after obtaining the notice to proceed, to do all necessary work involving minor changes in quantities or additions of minor items, which are deemed necessary to accomplish the intent of the approved agreements. However, no reimbursement can be made without prior approval. Contact the Utility Coordinator to issue that approval.

Approval must be secured from the Utility Section for substantial changes in the scope of work. Examples of possible substantial changes are changing a planned aerial road crossing to a buried crossing or changing method of installation from trenching to directional bore, and any change to a permitted location. In non-emergency situations, the proposal for such a change must be submitted in writing by the utility to the Utility Coordinator. As much detailed information, sketches, estimates (if work is being performed by contract, the engineer's estimate should be made prior to contractor's proposal), costs and other documentation as practical must be provided by the utility.

The Utility Section will inform the utility of the approval of design changes. If timing is of essence, the necessary communication can be accomplished by phone, fax or e-mail and confirmed in writing as soon as practical.

It is recognized that it is essentially impossible to define or otherwise describe the limits of “substantial change” due to variations in cost of work, its complexity, the variable situations, and terrain encountered. It is also undesirable to request approval for every recognizable change. In case of doubt and definitely where the change will increase the utility agreement amount the utility should request approval for the change from the Utility Section.

14.5 RECORDS *(Rev. 01-21-14)*

The PE/S’s record for utility relocation work should be kept in sufficient detail to identify the conformance with the relocation plans and schedule. These records can become very important when analyzing a utility delay claim by the contractor or a claim for additional compensation by a utility. In general, more detailed records should be kept for utility work that is reimbursable as opposed to non-reimbursable work. The different methods of payment for the utility relocation work determine the type of records that need to be kept at the project level. These are described below:

- a. For reimbursable work performed entirely by the utility with utility forces only, the PE/S’s record should include the number and class of employee, major equipment on site, principal materials used and materials removed from the site. Also pertinent data such as weather conditions, ground conditions, breakdown of equipment, delays due to conflicts with other utility forces or general contractor’s operations, should be noted. Any conversations with the utility, District, or the Utility Section should be noted.
- b. For reimbursable work where part or all of the work is being done by a contractor having a continuing contract with the utility, the same records are required as in (a) above. Unless the agreement clearly establishes that the work being done under a continuing contract is on a unit of work basis, rather than a manpower and equipment basis. If it is clearly on a unit of work basis, only the units of work completed per day by the contractor need be recorded. Records on any work performed by the utility’s own forces in conjunction with a continuing contract should follow (a) above.
- c. For reimbursable work being performed in part or completely by outside contractors on a unit of work basis, the record should cover the units of work performed on a daily basis. On projects being done in part or completely by an outside contractor on a firm bid basis, the items of recording labor and equipment used by the contractor can be deleted from the record; except in those instances when extra work is performed by the contractor on a per hour or per diem basis. The units of work completed should be recorded daily to form a basis for checking payment to the

utility for their contractor's work. This should include such things as the number of poles installed, amount of wire strung, the lineal footage of pipe or casing installed, the length of line removed, and the amount of trenching or any other work unit.

- d. On lump sum agreements, between the Department and the utility where the construction work is being done either by utility forces, under a continuing contract or a contractor selected by competitive bid, the daily checks on manpower, equipment, and material can be omitted. A detailed review should be made at the final utility inspection to ensure conformance with the agreement. In these instances the utility will be paid the exact amount of the original or modified agreement regardless of the actual cost incurred by the utility, as long as they have satisfactorily performed all work covered by the approved plan. When utilities use inspection personnel to observe the work being done, records should be kept showing the hours and rate for the utility's inspection personnel, with particular emphasis on those not on the utility payroll. Such outside inspection services will usually be covered by a contract between the utility and an engineering firm, and a copy of the agreement should be requested to determine the questionable features of and compliance with the agreement.

14.6 SALVAGE MATERIAL *(Rev. 01-21-14)*

Salvage is the reclamation of materials from a project site that have some continued value. Salvage value is the monetary value of these reclaimed materials either through reusing the materials or recycling the materials. There are three types of salvage involving utility materials as follows.

1. For utilities that are reimbursable, the utility must reclaim all materials for which the salvage value exceeds the cost of removal unless otherwise coordinated with INDOT. The salvage value is a credit to INDOT on the cost estimate of the agreement. The utility will include the actual salvage value as a credit to the invoiced cost of the agreement. For utilities that are not reimbursable, the salvage value is a credit to the utility who owns and reclaims the materials.
2. For utility materials that are retired in place and left on the project site, they remain the responsibility of the utility until removed by either INDOT or the INDOT contractor. The contractor must reclaim all materials for which the salvage value exceeds the cost of removal. All materials that are required to be removed as part of the contract must be salvaged. The contractor must give a credit to the contract for all materials that are salvage. The salvage value is a credit to INDOT on the cost of the contract. The PE/S will track the status of these salvageable items.

The Utility Coordinator will work with each utility to determine what if any materials will be "retired in place". This will be reflected in the utility work plans and in the

estimates. We have eliminated the use of “abandoned” for the following reasons: the utility will remain accountable for the costs of addressing asbestos materials and any environmental concerns that arise out of leaving the material on INDOT property. If the utility chooses to retire in place a facility it is understood that INDOT can perform any construction activity necessary to complete the project without regard for the impact to the utilities retired in place facility including removal for disposal, salvage, or reuse.

These decisions will be made during project development in constructability reviews then placed in utility work plans and in the project bid documents as appropriate. However if during project construction additional issues arise the Utility Coordinator will be the point person to work with the PE/S and the utility to bring resolution. The State will determine whether it is desirable or economical to recover or leave in place those materials that need not be removed because of construction requirements. Therefore, the Engineer must review the agreement with the utility representative to determine whether the facility was proposed and is approved to be removed. If the agreement called for removal, a determination shall be made that removal is still necessary due to the construction itself. If it is found that the material need not be removed because of construction, then a decision must be made to determine the economical and liability justification for removing such facilities. The utility agreement will normally reflect the fact that if the material is to be salvaged by the utility, the expected salvage credit will exceed the removal, transporting, refurbishing and stores return costs. Otherwise the agreement will call for retirement in place, unless it was presumed at the time of approval that retirement of the material would create a potential liability to the State or the utility or would be detrimental to the present construction or the future use and safety of the road. If the facility is removed as a result of a decision in the field, and the utility is desirous of salvaging the materials for future use, a determination must be made to establish that the credit given the State for such material will exceed the cost of recovery, transporting, refurbishing, and stores return cost. If the credit proposed by the utility does not exceed these costs, the material will be disposed of. This should be discussed with the District Utility Engineer. If the agreement calls for removal and salvage of items that could be retired in place, but unusual field conditions are encountered at the time of removal operations, the utility representative should be questioned about the salvage credit. It should be considered whether the credit will equal or exceed the cost of removal and salvage under these changed conditions. If the utility cannot confirm the salvage credit, cost of salvage and cost of removal, the PE/S should classify this as a substantial change in scope of work and act accordingly.

When the agreement calls for retirement of parts or all of the facility, but such retirement will, in the opinion of the Engineer, constitute a hazard or liability to the State or the prime contractor or in the opinion of the Engineer adversely affects the work of the prime contractor, it shall be treated as a substantial change and approval to remove the facility will be requested through the Utility Section. After approval, the utility should be instructed to remove the facility and the project record should be noted as to the reason for the change. It is the opinion of the Utility Section, and the FHWA, that in general all pipe 12 in. or less in diameter can be retirement in place. The final decision to abandon is the responsibility of the District and the utility concerned.

14.7 FINAL INSPECTION OF UTILITY *(Rev. 01-21-14)*

The final inspection of utilities varies based on whether the utility relocation work was done by the utility or done by the state highway contractor as part of the highway contract. There is little difference between reimbursable and non-reimbursable utility inspections.

For relocation work done by the utility, the PE/S has no specific duties to ensure accurate placement. However, the PE/S is required to ensure the contractor staff and utility staff are coordinating the execution of the work if such coordination is necessary for the project to proceed on time.

For relocation work done by the state highway contractor, the PE/S has the same requirements for the supervision, inspection and record keeping for the work as any other work in the contract.

At the conclusion of the utility work a final inspection should be made in the presence of the utility representative and the contractor, to determine conformity with the approved original or modified plan. The issue of who needs to attend the inspection will need to be discussed with the Utility Coordinator. A report should be written to the file, with a copy going to the DO, which states the date the final inspection occurred, who was in attendance, and the outcome of the final inspection. The coordinator will issue a letter; "Acknowledgement of completion" to each approved utility and is copied to the file.

In the event that a change to the utility's plans becomes necessary, the change may be authorized in the field if the PE/S approves of it and keeps written documentation of the changes approved except for the permitted location. The Utility Section will assist as needed with any decision on changes. The primary concerns are that the utilities do not interfere with the construction or safety at the project site and that their placement follows the Department's Utility Accommodation Policy and to the permitted location. It is preferred that all changes to a utility's work plan are approved by the Utility Coordinator.

14.8 TRANSMITTING RECORDS *(Rev. 01-21-14)*

The PE/S will partner with the Utility Coordinator to create and maintain adequate records. These records will be copied to the Utility Coordinator for use in reimbursement of the utility work and in final audit.

14.9 ASSISTANCE TO THE UTILITY *(Rev. 01-21-14)*

The utility may require assistance in completing their relocation, such as staking of right-of-way, interpreting plans, etc. While it is up to the utility to do their relocation, it is in everyone's best interest that the Department and the contractor provide the utility with proper assistance so that the utility relocates their facilities to the proper location. If you observe a utility placing their facilities in a location that will cause a conflict, advise them of the problem immediately.

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