

CHAPTER 104

Utility Coordination

Design Memorandum	Revision Date	Sections Affected
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CHAPTER 104

UTILITY COORDINATION

104-1.0 GENERAL INFORMATION

104-1.01 Introduction

This Chapter provides guidance regarding utility coordination and accommodation. Coordination with utilities begins as soon as a project scope has been developed and continues throughout construction until the project, including utility work, has been completed. The design of a project should occur simultaneously with the utility coordination process and integration of utility accommodation. This Chapter includes explanations of the utility-coordination procedure, reimbursable costs, agreements, accommodation, and how the designer can be an integral part of these activities.

It should be understood that the INDOT Project Manager is the primary person responsible to deliver all aspects of a project including the utility relocations. For the project manager to be successful in that task the designer and utility coordinator must provide accurate reporting of the options, status, and action plans of the utility coordination efforts. This reporting will allow the project manager to make appropriate business decisions to keep a project on schedule and under budget.

The designer of the project plans may or may not be the same person or company who performs the utility coordination. Familiarity with all aspects of the utility coordination process and how it relates to the design can make a difference in the successful completion of a project on time and within budget. A designer that is actively involved with utility companies and the utility coordinator throughout the design of a project can avoid utility-relocation issues that can occur during construction.

A goal of the designer throughout the utility-coordination process must be to minimize the number of conflicts with utility facilities, yet still accomplish the design goals of the highway-improvement project. The designer must consider safety, project budget, and the project schedule while attempting to achieve this goal. The designer must provide a summary of why any utility that is deemed in conflict must be relocated. This summary must be approved by the INDOT Project Manager.

Highway safety is important in accommodating utility facilities within highway right of way. The designer and utility coordinator must consider this in reviewing the existing and proposed

locations of the utility facilities. The design and location of the utilities' use and occupancy of highway right of way should be in accordance with the Utility Accommodation Policy (UAP) and the policies of the highway agency to provide and maintain an adequate roadside clear zone. Other factors including constructability, operations, and maintenance are also important in accommodating utility facilities safely within the right of way.

The expense to relocate a utility facility, if it is reimbursable under IC 8-23-2-6(a)(15), will affect the budget for the project. If a utility company is eligible for reimbursement due to compensable property interests or due to the fact its facilities are on an Interstate-route project, the costs to relocate in kind are the responsibility of the Department. When total project costs are being developed and evaluated, utility-relocation or adjustment costs must be reviewed and considered, regardless of who is responsible for the cost and must be reported accurately to the project manager.

The project manager and designer should factor into the project schedule the time that utility companies will need to accomplish relocation design and construction. The time needed to accomplish the utility's design and relocation can take many months or years. The time needed for a utility company to design and relocate its facilities will affect the desired project schedule and must be reported accurately to the project manager.

104-1.03 Responsibilities

Utility coordination is accomplished with multiple participants, each of which is performing a different role during the coordination process. Some participants are the designer, surveyor, utility coordinator, utility-oversight agent, utility company's authorized representative, project manager, and the Manager of Utilities. The responsibilities of these participants based on their roles are defined below. For the purposes of this chapter the project manager and utility oversight agent are always INDOT staff.

104-1.03(01) Designer

The designer is responsible for all work related to the design of a highway improvement project including but not limited to the following tasks.

1. Since the cost and schedule to relocate a Utility's facilities is critical to a successful project, the designer must make reasonable efforts to avoid existing utility facilities during the design of the highway improvement project. This effort must be documented and approved by the project manager.

2. List and maintain on the plans for the project the name and contact information for each utility with facilities in the area of the project, 105 IAC 13-3-1(f).
3. Record and maintain on the plans for the project the measurements and locations of all utility facilities in the area of the project, 105 IAC 13-3-1(f), 105 IAC 13-3-2(b)(3)]
4. Record and maintain the results of subsurface utility engineering investigations on the plan and profile sheets and cross-sections sheets.
5. Notify the utility coordinator when the verification plans, preliminary plans and preliminary final plans are available, 105 IAC 13-3-1(f), 13-3-3(a), 13-3-3(b).
6. Review any conflicts and consider all recommended design changes to minimize utility costs or delays and implement the changes where appropriate, 105 IAC 13-3-3(a)(3)(B).
7. Notify the utility coordinator of the recommended changes that were and were not implemented and the reasons why they were not implemented, 105 IAC 13-3-3(a).
8. Identify the specific areas of revisions to the plans to the utility coordinator that can affect the relocation of utility facilities, 105 IAC 13-3-5.
9. Send the plans with a cover letter to the utility companies in a manner acceptable to them when requested by the utility coordinator.
10. Assist the utility coordinator in the review of utility relocation work plans to determine if they are compatible with the design plans when requested by the utility coordinator.
11. Attend utility coordination meetings and utility conflict-resolution meetings when requested by the utility coordinator, 105 IAC 13-3-3(b).
12. Perform all of the surveyor's responsibilities if the design consultant has not selected a sub-consultant to perform such responsibilities.
13. Perform all of the utility coordinator's responsibilities if the design consultant has not selected a sub-consultant to perform such responsibilities.
14. Coordinate with the signal designer and the utility coordinator: in identifying the utility that is providing power to existing and new signals, in determining the service connector and location of service lines feeding new signals.

15. Make sure that an agenda is set up regarding existing and new signals, during field check meetings.
16. With the assistance of the signal designer make sure that signal plans are completed early and are uploaded into ERMS in tandem with other project drawings.

104-1.03(02) Surveyor

The surveyor is responsible for all work relating to measuring and recording the locations of existing utility facilities including but not limited to the following tasks.

1. Submit requests to Indiana 811 for utility companies to locate and mark their facilities within the project limits, 105 IAC 13-3-1(e).
2. Measure and record the locations of all utility facilities that are apparent within the project limits.
3. Measure and record the locations of all field markings made by the utility companies regarding their facilities, 105 IAC 13-3-1(f).
4. Provide to the designer all utility facility measurements, locations, and other field information, including pulling lids and recording all pipe elevations.
5. Make recommendations to the project manager for the necessity of SUE work.

104-1.03(03) Utility Coordinator

While reporting to the oversight agent, the utility coordinator is responsible for all work relating to coordinating with utilities including but not limited to the following tasks.

1. Proactively engage all partners involved in utility coordination to facilitate the execution of all utility facility relocation work.
2. Contact the project manager and obtain the necessary information such as the project Des#, work type, project description, project limit, classification of project as major or minor, ready-for-contract date, and proposed letting date to plan and perform the work of Utility Coordinator.

3. Contact the project manager and obtain the necessary information such as the project Des#, work type, project description, project limit, classification of project as major or minor, ready-for-contract date, and proposed letting date to plan and perform the work of Utility Coordinator.
4. Contact the project manager and enter the name and phone number of the utility coordinator in SPMS. Obtain the copy of SPMS and verify the name is entered accurately.
5. Contact the project manager periodically during the progress of utility coordination and review the project budget for the potential cost of reimbursable utility work.
6. Determine the name and contact information of each utility with facilities in the area of the project by researching permit files, reviewing plan files, investigating field conditions, reviewing information from IUPPS, by contacting local government agencies, and researching the providers of power communications services for signals, lightings and ITS systems.
7. Provide the name and contact information for each utility to the designer and the oversight agent, 105 IAC 13-3-1(b).
8. Prepare, sign and send an initial notice to the authorized representative of each utility with facilities in the area of the project, 105 IAC 13-3-1(c).
9. Follow up with the utilities until the responses to the initial notices are received.
10. Ensure the following information is provided by each utility in response to the initial notice: if they have facilities in the area; contact information for the designated representative; whether or not they are reimbursable; and the format the utility want to receive project plans.
11. Inform the designer and surveyor of the general location of utility facilities identified in the responses to the initial notices.
12. Update the utility oversight agent and the project manager with the information obtained as the response to the initial notice.
13. Notify owner of signals to have buried wires marked in the field and, notify IUPPS to have utility facilities marked in the field.

14. Follow up with the surveyor and the designer to verify facilities of the utilities are properly shown on INDOT plans.
15. Prepare, sign, and send to each utility a letter requesting verification of their facility information as shown on the plans, 105 IAC 13-3-2(a), Send copies of verification request to the oversight agent.
16. Follow up with the utilities until response to the verification request with the following information is obtained:
 - a. yes, their facilities are located accurately on INDOT plans; or
 - b. no, their facilities are not located properly, and a marked up drawing showing corrected locations is provided.
17. Notify the designer of all inaccuracies in the utility facility information shown on the plans per the response obtained from utilities, 105 IAC 13-3-2(b) (3).
18. Follow up with the designer to validate utility information is updated on INDOT plans per verification responses from each utility, send the revised plans to each utility, and get their confirmation.
19. Schedule a meeting with district construction, the designer, the oversight agent and the project manager to conduct a Stage 1 constructability review.
20. Attend preliminary field check meeting and obtain inputs such as design considerations, constructability issues, right-of-way needs, relocation schedules, and ball park estimates from utilities involved in the project.
21. Recommend to the designer, the right-of-way (ROW) buyer, and the project manager the extent of right of way that may reasonably accommodate potential utility facility relocations.
22. Provide to the ROW buyer and the project managers, a ROW acquisition plan that identifies the critical path necessary to facilitate the timely acquisition of parcels in support of utility relocations.
23. Contact the project manager to determine whether a separate clearing contract is needed; and schedule a reasonable letting date.

24. Provide to each utility a copy of the geotechnical report for the proposed highway improvement project.
25. Advise the pavement designer and the geotechnical engineer to consider alteration of sub-grade treatment types and pavement thickness in order to avoid or minimize the relocation of high expense utilities.
26. Prepare, sign, and send to each utility a letter requesting they identify the conflicts between their facilities and the highway improvement project, 105 IAC 13-3-3(a).
27. Follow up with utilities until response to the conflict analysis letter with the following information is obtained:
 - a. they have no conflicts with the project; or
 - b. a list of critical locations of conflicts and recommended design changes to avoid or minimize relocation of their facilities.
28. Notify the designer of all conflicts between the utility facilities and the highway improvement project, 105 IAC 13-3-3(a), and assist the designer in revising the design to avoid or minimize the relocation of utilities.
29. Send letter to each utility with comments on recommended changes to the design with a copy to the oversight agent.
30. Schedule a meeting with district construction, the designer, the oversight agent and the project manager to conduct a Stage 2 constructability review.
31. Send preliminary final plans to utilities in the format they requested earlier.
32. Prepare, sign, and send to each utility a letter requesting they prepare and submit their utility relocation work plan mapped on INDOT drawings, 105 IAC 13-3-3(b).
33. Follow up with each utility until work plans with the following information are received:
 - a. work plan narrative;
 - b. relocation drawing having station, offsets and elevations;
 - c. cost estimate; and

- d. easement documents (if reimbursable).
34. Review and discuss with the project manager when exceptions to INDOT UAP, such as utilities seeking to use the LARW, might make good business sense.
35. Review each utility relocation work plan to ensure that it is compatible and reasonable, 105 IAC 13-3-3(e).
36. If necessary, prepare, sign, and send to the utility a letter notifying the utility that their relocation work plan is not acceptable and the reasons why not, 105 IAC 13-3-3(f).
37. If necessary, review each revised utility relocation work plan to ensure that it is compatible and reasonable, 105 IAC 13-3-3(f).
38. If necessary, prepare and provide to the utility an alternative utility relocation work plan that is compatible and reasonable, 105 IAC 13-3-3(f).
39. If necessary, review all requested changes to the alternative utility relocation-work plan, 105 IAC 13-3-3(f).
40. Provide a copy of each final work plan to the utility oversight agent for review and to the project manager to review and sign.
41. Prepare a letter to each utility that their final relocation work plan is approved and provide the letter to the utility oversight agent to sign, 105 IAC 13-3-3(f).
42. Send the approved work plan and permit letter to each utility to implement their final relocation work plan, 105 IAC 13-3-4(a).
43. Obtain easement documents from reimbursable utilities and ensure authenticity by a right-of-way engineer.
44. Obtain cost estimates from reimbursable utilities and validate reasonableness.
45. Prepare an agreement for reimbursable work, or for work that is to be included in the contract and send it to the utility oversight agent to review, 105 IAC 13-3-3(h).
46. Prepare a transmittal letter to send the utility agreement to the utility and provide it to the utility oversight agent to review and sign.
47. Send the signed transmittal letter and the utility agreement to the utility for signature.

48. Receive signed agreements from the utilities, review for completeness and accuracy; and forward for review and signature of INDOT signatories.
49. Send a copy of the fully executed agreement including a sample of a good invoice to the Utility.
50. Coordinate and attend utility coordination meetings and utility conflict resolution meetings as required, 105 IAC 13-3-3(b).
51. Prepare the utility coordination special provision and the utility coordination certificate and provide it to the utility oversight agent and project manager for review.
52. Upload into ERMS a copy of each signed and approved utility relocation work plan prior to the ready-for-contracts date.
53. Receive and review all letters from each utility and inform the designer, utility oversight agent and project manager of relevant information.
54. Send copies of all letters and the responses to all letters to the utility oversight agent.
55. Attend the preliminary field check meeting, final field check meeting and the pre-construction meeting and discuss relevant utility facility relocation issues.
56. Perform constructability reviews at stage 1, stage 2, stage 3, mid-construction and post construction in accordance with the Constructability Manual.
57. Prepare a consolidated drawing (master relocation plan) on project plans that shows the location of all existing and proposed utility facilities.
58. Prepare a Gantt chart for all utility relocation work that reflects the start time, finish time and duration for each independent section of the utility facility relocation work. Ensure the chart has information regarding the geographical direction (east to west) the utilities are operating.
59. Distribute the “master” relocation plan and the Gantt chart to the utilities.
60. Periodically check the status of right-of-way acquisition stages and provide utilities the right-of-way certificate issued by INDOT.

61. Contact the right-of-way buyers and prioritize parcels needed for utility relocation and for the clearing contract. Try to obtain right-of-entry permit from the property owners for those parcels that won't be acquired in time for utility relocation.
62. Provide a notice to proceed to each utility to execute their approved work plan after the work plan has been reviewed, approved and a permit issued.
63. Review modified work plans of utilities (if any), and send with letter of amendment to the review and signature of the oversight agent, and the project manager. send signed letter of amendment to the Utility.
64. Review shop drawings by the INDOT contractor and validate compliance with utility relocation plans. Provide comments to the contractor and the designer, if there will be a conflict between the shop drawing and utility relocation plans.
65. Issue a notice-to-proceed letter to utilities when the right of way is physically cleared and staked, and when all preliminary works are done, indicating that the utilities can commence their relocation work.
66. In consultation with the construction engineer, the project manager, the designer, the contractor, the utility contact person, and the oversight agent; resolve any utility-related issues that may impact construction schedule or budget.
67. Review all utility-related change orders, all utility-related delay claims, and potential liquidated damages with the construction engineer.
68. Review documents that are the basis for selection of a utility consultant or contractors to ensure costs are reasonable and that the selection complies with FHWA requirements.
69. Prepare the letter that approves the consultant or contractor and provide the letter and the documents that are the basis for selection to the Utility oversight agent.
70. Manage the schedule for utility relocation work, attend weekly construction meetings and report the weekly progress of utility relocation work to the utility oversight agent, construction engineer, and project manager.
71. Prepare, sign, and send the letter acknowledging the utility facility relocation work is complete. This letter must also be signed by an INDOT construction engineer or oversight agent.

72. Prepare, sign, and send the letter requesting final invoices for reimbursable utility facility relocation work to meet the reimbursable agreement time frame.
73. With the assistance of the signal designer, the district traffic engineer shall identify the utility that is providing power service feeding existing and new signals.
74. Follow up with the signal designer to make sure that designs for new signals are completed at the early stage of the project and will be ready to be sent to all utilities together with the main project plan.
75. Send copies of new signal plans and plans of existing signals to remain in service to all utilities involved in the project.
76. Ensure that location information of new and existing service lines is shared with other utilities having facilities in the area.
77. Ensure that locations of service lines are included as an integral part of the relocation plans from the Utility that provides services to the new signals.
78. Ensure that work plans from the Utility providing service to the signal includes the schedules and other relevant information regarding the signal service lines.
79. Ensure that relocation plans from the Utility providing power service to signals indicate that the service lines feeding removed or relocated signals will either be removed or abandoned in place.
80. Ensure that the highway contractor and the construction engineer are aware of the details of the service lines feeding the new and existing signals.
81. Ensure that the utility special provision in the Contract Information Book (CIB) contains information regarding service lines for new and existing signals to remain active.

104-1.03(04) Utility Oversight Agent

While reporting the activities of the project to the project manager, the utility oversight agent is responsible for the delivery of all the utility coordination of the project including the following tasks.

1. Review and approve or deny each request for an extension of the allotted time to prepare a relocation-work plan, 105 IAC 13-3-3(b).

2. Review each final utility relocation work plan to ensure that it is compatible and reasonable.
3. Review, sign, scan, and return a copy of the letter that approves each relocation work plan, and provide a permit for the work, 105 IAC 13-3-3(f).
4. Obtain letter of project commitments from the INDOT website and attach it to the approved work plans of relevant utilities.
5. Review and sign permit letter for addendum to work plan.
6. Review the transmittal letter and utility agreement. If acceptable, sign the letter and return both items to the utility coordinator, 105 IAC 13-3-3(h).
7. Review the documents for selection of a consultant or a contractor. If the selection is acceptable, sign and return the letter approving the selection.
8. Review each utility agreement for accuracy and completeness, and forward it for signature by the obligating authority.
9. Continually update the utility relocation cost estimate data base.
10. Prepare an Executive Document Summary (EDS) for extraordinary cost, unnecessary cost and work-in-contract agreements and attach it to the fully-executed agreements.
11. Send the copy of fully-executed agreements to the utility coordinator after signed by the obligating authority and the state Attorney General.
12. Review and approve invoices from reimbursable utilities.
13. Return unacceptable invoices to the utilities and follow up with them until corrected invoices are received.
14. Review justification for cost overrun requests and provide recommendation to the project manager and the utility manager. Ensure availability of funds for cost overruns once the request is approved.
15. Ensure release of retainage on utility contractors while approving the final invoice.

16. Continually update un-liquidated purchase order application in the Management Information Portal (MIP). Submit recommendation to get the purchase order closed immediately after the final payment is completed.
17. Verify availability of utility money for the correct fiscal year and request funding for reimbursable utility facility relocations. Submit funds request using e-Request.
18. Continually provide accurate status reports to the project manager for funding needs, coordination efforts, construction status, exceptions to the UAP etc. Review and resolve all issues.
19. Update the Utility Railroad (UR) Log with all information regarding utilities at various stages of utility coordination process until relocation work is completed and funding to all the reimbursable utilities is secured.
20. Review utility construction progress updates and ensure all utility-related issues are resolved with minimal or no impact to construction schedule or budget.

104-1.03(05) Utility Company Authorized Representative

The utility company authorized representative is responsible for the following tasks.

1. Yearly, but not later than January of each year, submit to the Department its authorized representative's name and contact information, 105 IAC 13-3-1(a).
2. Provide the name and contact information for a designated representative in the response to the initial notice.
3. Identify the location of underground facilities by either marking the facilities in the field or by another mutually acceptable method, 105 IAC 13-3-1(e).
4. Respond to the initial notice, request for verification, request for conflict analysis, and request for relocation-work plan in the time specified in 105 IAC 13.
5. Coordinate the utility facility relocation work plan with all other utilities that may be impacted by proposed work.
6. Ensure that the utility executes the approved utility relocation work plan on time, on budget, and in the right location.

104-1.03(06) Project Manager

While the project manager is responsible for all aspects of the project, the specific technical components of each task which must be delivered by the INDOT task group assigned to the project. This is often done by overseeing consultants. In regard to Utility coordination, the project manager is responsible for the following tasks.

1. Keep SMPS and other required databases accurately updated in regard to appropriate estimates, funding, the responsible persons, and schedule.
2. Determine if the project is a major project or a minor project for the requirements of utility coordination, 105 IAC 13-3-1(c)(7).
3. Determine the geographical limits of the improvement project for the requirements of utility coordination, 105 IAC 13-3-1(c)(2).
4. Coordinate regular team meetings with all of the project team.
5. Secure the required funds for reimbursable utility-relocation work as projected by the utility oversight agent.
6. The project manager must facilitate the development and communication of a critical path schedule including utility coordination and ROW acquisition.
7. Notify the entire project team if the project schedule or scope changes. The project manager must account for utility and ROW schedules when adjusting the overall project schedule.
8. Coordinate and ensure field checks and constructability reviews are held appropriately for the project timeline and complexity.
9. Review, sign, and forward for utility manager approval all work plans, special provisions, and reimbursable agreements, 105 IAC 13-3-3(f).

104-1.04 Utility Rule 105 IAC 13

Title 105 IAC 13 went into effect on May 15, 2008. Utilities-related work for each project as defined in 105 IAC 13-2-10 is to follow the procedures described in the rule once the

Department begins the work described in 105 IAC 13-3-1(b) after June 20, 2008. This section provides guidance related to 105 IAC 13.

104-1.04(01) Determination of Project as Major or Minor

A project is classified as major or minor based on the duration of the design process, 105 IAC 13-2-14 and 105 IAC 13-2-15. A design process of 12 months or longer constitutes a major project. A design process of less than 12 months constitutes a minor project. The classification of a project as major or minor for utility coordination is independent of the project designation in the project-development process. The Department can classify a project as major or minor based on criteria other than duration of the design process. The level of effort required by utility companies to provide all necessary information and documents should be considered in the determination. The project manager makes the final decision on the classification of a project as major or minor for utility coordination with input from the utility coordinator. The designation of the project as major or minor for utility coordination affects the time allowed for the various stages of the utility-coordination process.

104-1.04(02) Determination of Geographical Limits

The geographical limits of the improvement project define the limits of expected utility company involvement. Utility companies with facilities within the geographical limits are considered to be in the area of the project. The geographical limits are used in the utility-research stage to determine the utility facilities that can potentially be affected by the project. Contact the project manager to obtain the project limits. At a minimum, the project limits will include the survey limits. Areas adjacent to the project should be considered to allow for connections and alterations to existing utility facilities.

104-1.04(03) Authorized Representative

The authorized representative is the individual designated by the utility company to be its official first point of contact, 105 IAC 13-2-2 and 105 IAC 13-3-1(a). The initial notice for each project should be sent to the authorized representative. After receiving the initial notice or a subsequent letter, the authorized representative may, in response, assign a designated contact person as the point of contact for a specific project. Future utility coordination will occur with the designated contact person. The authorized representative will provide written notice for all changes to the designated contact person.

The authorized representative information for each utility may be found at <http://www.in.gov/indot/2389.htm>. If a utility company is identified that is not in the database, contact the Office of Utilities and Railroads to receive assistance with identifying the correct authorized representative's information. All such information that is errant should be forwarded to the Office of Utilities and Railroads so that the contact information may be updated.

104-1.04(04) Waiver of Utility-Coordination Process [Rev. Feb. 2015]

Effective with July 2015 lettings, a utility coordination waiver will no longer be issued for routine maintenance projects. The Utility Coordination Certification form should be used.

104-1.05 Utility Coordination Certification [Rev. Feb. 2015]

The purpose of utility coordination certification is to affirm that all utility coordination on a project is complete or to list items that remain to be completed. This document should be used for projects without utility impacts, i.e. projects that would have previously been issued a utility waiver, as well as projects that require significant utility coordination.

The utility coordinator prepares the utility coordination certification form. By signing the certificate the utility coordinator affirms that they have completed all the requirements for utility coordination. If all aspects of utility coordination are not complete, then items that are not complete must be listed and the utility certificate must be countersigned by the Senior Utility Engineer. The Senior Utility Engineer's signature indicates the exceptions should not hinder the letting and are unlikely to delay the project.

The signed certification form should be uploaded into ERMS and is required as part of the Final Tracings package. As any exceptions are resolved, the utility coordination certificate should be revised. The revised certificate must be submitted to contracts not later than three weeks prior to the letting date. The utility coordination certificate should be updated and distributed at the pre-construction meeting.

An editable utility coordination certificate is available from the Utility Coordination - Standard Documents web page <http://www.in.gov/indot/3269.htm>.

104-1.06 Utilities Special Provision

The utility coordinator will complete the appropriate recurring special provision. It should be submitted to the Contract Administration Division with the other contract documents not later

than the ready-for-contract date. Changes to the special provision will be submitted to the Contract Administration Division not later than 3 weeks before the letting date. The special provisions must be reviewed by the oversight agent and approved by the project manager before submission to Contracts Division.

The utility special provisions may contain information that is of a general nature for the project and specific information that pertains to each utility in the area of the project.

The specific information that pertains to each utility in the area of the project shall include:

- a. The name of the Utility.
- b. A statement indicating that the Utility is or is not in conflict with the project.
- c. The name and telephone number of the designated representative.
- d. Activities that must happen before the Utility can begin construction, and the number of days following that action before the Utility will commence construction activities
- e. The expected duration of their relocation work in calendar days.
- f. The general location of their existing facilities.
- g. The general scope of their required relocation work.

104-1.07 Utility Coordination References

The purpose of this Section is to provide the designer with a list of references for utility coordination.

104-1.07(01) Code of Federal Regulations

Code of Federal Regulations 23 CFR 645 includes requirements regarding utility relocation and accommodation based on 23 USC.

104-1.07(02) Indiana Code

A synopsis of Indiana Codes relevant to utility relocation is listed below. They also appear on www.in.gov/legislative/ic/code/.

1. IC 8-1-9-2 defines utility, cost of relocation, and highway.
2. IC 8-1-26-7 defines facility.

3. IC 8-1-26-15 requires the operators of underground facilities to record the location of such facilities with the appropriate county recorder.
4. IC 8-1-26-15.5 requires an association of underground-facility operators to record the locations of association-member facilities.
5. IC 8-1-26-16 requires contacting Indiana 811 prior to excavation or demolition.
6. IC 8-1-26-18 identifies the information that Indiana 811 must provide once it receives a notice of intent to excavate or demolish.
7. IC 8-1-26-18(c) establishes the color coding of utility-locate markings.
8. IC 8-1-26-20 establishes the duties of persons responsible for excavation or demolition with respect to underground facilities.
9. IC 8-1-26-21 determines what persons must do if they damage an underground facility.
10. IC 8-23-1-22.5 defines extraordinary cost.
11. IC 8-23-2-5 mandates that the Department adopt rules to manage the right of way of the State highway system.
12. IC 8-23-2-6(15) empowers the Department to reimburse a utility company for: extraordinary cost or unnecessary relocation, to the extent that a relocation is a taking of property without just compensation.
13. IC 8-23-7-2 allows INDOT to acquire real property to relocate a utility facility within State right of way due to interference with a project.
14. IC 8-23-7-31 requires INDOT to record utility companies' subordination agreements with the appropriate county recorder's office.
15. IC 8-23-26-2 authorizes the Commissioner to order a utility company to move its facilities if the Department determines that the location of such facilities will interfere with a planned project.
16. IC 8-23-26-5 allows the Department to negotiate an agreement with a utility company to reimburse it for extraordinary cost of facilities relocation caused by a project.

17. IC 8-23-26-7 establishes the conditions under which the Department may reimburse a utility company for the cost of unnecessary relocation.
18. IC 8-23-26-10, 11, 12, 13, 14 assign responsibility for planning, cost, and implementation of the work for the relocation of customer-service facilities.
19. IC 8-23-26-15(b) states that if a utility company locates new facilities on a highway included in the National System of Interstate Highways after June 30, 1991, the company shall bear the cost of all future relocations and adjustments of its facilities caused by the highway or bridge construction.

104-1.07(03) Indiana Administrative Code

105 IAC 13-3 provides the rules to manage the State highway-system right of way as required by IC 8-23-2-5, and defines the utility relocation coordination process. The information appears on www.in.gov/indot/div/public/utilities/pubs/105-IAC-13.pdf.

104-1.07(04) INDOT Standard Specifications

These provide the standard requirements for the performance of work on the State's highways and within its right of way.

104-1.07(05) *Program Guide: Utility Relocation and Accommodation on Federal-Aid Highway Projects*

This is the Sixth Edition, dated January 2003, from FHWA Office of Program Administration, publication No. FHWA-IF-03014. This document provides guidance for the relocation of utility facilities. It appears on www.fhwa.dot.gov/reports/utilguid/if03014.pdf.

104-1.07(06) *Standard Guideline for the Collection and Depiction of Existing Subsurface Utility Data*

This is American Society of Civil Engineers publication No. ASCE 38-02. This document provides guidance on subsurface-utility engineering. It appears on www.asce.org.

104-1.08 Definitions and Acronyms

This section contains the definitions and acronyms that are used for utility-relocation coordination. The majority of definitions relevant to utility relocation appear in 105 IAC 13-2. The definitions shown in this section supplement those which appear in 105 IAC 13. Symbols and line styles used on plans appear in Chapter 103.

Approved work plan: documentation that INDOT and the Utility have agreed upon the terms of the work plan and exhibits, and the utility should commence ordering materials, completing all engineering, and planning for the scheduling of crews to meet the project schedule.

B. Symbol used to indicate a buried, or underground, facility.

Betterment. An upgrade to a utility facility that is not attributable to highway construction and is made solely for the benefit of and at the election of the utility company.

CFR. Code of Federal Regulations.

E. A symbol used to indicate an electric facility.

FH. A symbol used to indicate a fire hydrant.

G. A symbol used to indicate a natural-gas facility.

Highway-Utility Agreement. A document which provides the terms for compensating a utility company for relocating its facilities in support of a highway-construction or -maintenance project.

HP. A symbol used to indicate a high-pressure facility, usually in reference to natural gas or petroleum.

IAC. Indiana Administrative Code.

IC. Indiana Code.

Indiana 811. The agency that receives and distributes requests to locate underground utility facilities, formerly known as Indiana Underground Plant Protection Service, or IUPPS.

LP. A symbol used to indicate a low-pressure facility, usually in reference to natural gas or petroleum.

LPA. Local public agency.

Notice to Proceed. The official written notice from INDOT or its representative that all items in the utility's work plan required to be completed prior to the utilities construction have taken place and the utility should mobilize their prescheduled crews and begin construction. This document is issued by the utility coordinator.

OH. A symbol used to indicate an overhead facility, usually in reference to electric or communications.

P. A symbol used to indicate a petroleum facility.

S. A symbol used to indicate a storm sewer.

SPMS. Scheduling Project Management System.

SS. A symbol used to indicate a sanitary sewer.

Subsurface Utility Engineering, or SUE. The engineering process that identifies, characterizes, and maps an underground utility facility to various quality levels.

UG. A symbol used to indicate an underground facility, usually in reference to electric or communications.

USC. United States Code.

Utility-Accommodation Policy. The Department policy that describes the requirements for the permitting and placement of utility facilities within public-highway right of way.

Utility Coordinator. A person designated to complete the utility-coordination responsibilities.

Utility-Oversight Agent. An INDOT employee designated with responsibility to deliver the utility tasks of the project by overseeing consultants who complete the utility-coordination responsibilities.

Utility-Relocation Permit. The required document including the permit number allowing a utility to place facilities within public ROW. This document is issued by an INDOT Utility Oversight Agent or INDOT Utility Coordinator when a work plan is approved.

Utility-Relocation Permit Addendum. A letter that notifies a utility company that a change to its work plan is approved, assigns a permit addendum number, and notifies the company to start implementation of the change to the work plan.

W. A symbol used to indicate a water facility.

WM. A symbol used to indicate a water meter.

104-2.0 UTILITY-COORDINATION PROCESS

104-2.01 Utility Research [Rev. Feb. 2015]

The intent of utility research is to determine the names of the utility companies that have facilities located within the project limits, as described in 105 IAC 13-3-1(b)(1). Utility research accomplished prior to the survey phase will allow the surveyor to efficiently and effectively coordinate for facility locates, and measure and record the locations of the facilities. The utility research steps may be done in any order. However, all steps should be taken for each project.

Start the utility research process by obtaining the information as follows.

1. County.
2. Congressional township and range, and civil township.
3. Route number, or road or street name.
4. For a project on a new alignment, the beginning and ending points in reference to the tie-in points with existing roads.
5. For a State highway project, the beginning and ending roadway reference post numbers.
6. For an LPA project, the beginning and ending points in reference to the nearest crossroad.
7. For a project designated as Park, the parks manager should be contacted for beginning and ending locations.

This information can be obtained from the project manager, SPMS schedule, field review, or historical plans. Reference post information appears on <https://secure.in.gov/indot/3049.htm>.

Record the information after each step in the utility research process as follows:

1. The utility companies' names and other pertinent data, or an indication that no information was available;
2. The name of the person recording the information;
3. The date when the information was obtained; and
4. The person that supplied the information.

At the conclusion of all research, summarize the utility companies' names in one final document. Provide a copy of this list to the designer and the utility oversight agent.

This step is PDP Task 6.01 for a major project, or Task 5.01 for a minor project.

104-2.01(01) Researching Permit Files

Review the INDOT and LPA permit files and if appropriate contact the parks manager to determine the names of utility companies that have facilities within the project limits, 105 IAC 13-3-1(b)(1)(A). To check INDOT permit files, contact the district Office of Permits. To check LPA permit files, contact the county, city, or town office. The most appropriate contacts are the LPA's engineer, surveyor, street commissioner, or street superintendent.

104-2.01(02) Reviewing Map Files Maintained by the Department

Review plans from previous projects to determine the names of utility companies that have facilities within the vicinity of the project, 105 IAC 13-3-1(b)(1)(B).

For a State-highway project, historical plans are available on <http://www.in.gov/indot/2345.htm>, or from the district Office of Real Estate. Request the sheet which shows the list of utility companies.

For an LPA project, contact the project sponsor as indicated on the SPMS schedule to obtain information on previous improvement projects and plans. If they do not have plans from past projects, copies can also be requested as is done for a State-highway project.

For a Park project, contact the project sponsor as indicated on the SPMS schedule to obtain information on historical records and plans.

104-2.01(03) Investigation of Field Conditions

Visit the site to determine the names of utility companies that have facilities within the vicinity, 105 IAC 13-3-1(b)(1)(C). Look for all utility facilities in the area to discern the names of the utility companies. The names can appear on placards, stickers, warning signs, property signs, castings, etc.

At the project site, look for indications of facility types as follows.

1. Communications. Pedestals, manholes, vaults, overhead cables, cell phone towers.
2. Electric. Poles, transformer boxes, overhead cables, meters, substations.
3. Natural Gas. Markers, vents, meters, valves, pump transfer stations.
4. Petroleum Products. Markers, vents, pump transfer stations.
5. Sanitary Sewer. Manholes, lift stations, cleanouts.
6. Water. Fire hydrants, meters, valves, water towers.

Also, identify buildings adjacent to the project area such as hospitals, schools, fire stations, governmental buildings, or industrial buildings. These entities may have private facilities within the highway right of way. The utility coordinator will contact these entities as indicated in Section 104-2.01(05) to determine if they have facilities that will be impacted by the project.

104-2.01(04) Reviewing Information Provided by Indiana 811

Contact Indiana 811 to determine the names of utility companies with facilities within the project limits, 105 IAC 13-3-1(b)(1)(D).

Contact Indiana 811 to receive training on the use of their website for design tickets. then receive a username and password. To determine the utility companies' names use www.designticket.org. The program will bring up a map, upon which a polygon can be placed around the project limits. The program will provide a list of names of utility companies that have facilities in the area. The contact name for the utility provided by this program may not be the authorized representative.

104-2.01(05) Contacting Local Government Offices

Contact the local government of the county and nearby cities, towns, or parks to identify the names of utility companies within the project limits, 105 IAC 13-3-1(b)(1)(E). Good contacts are the engineer, surveyor, street commissioner, street superintendent, or parks manager.

A source of contact names and telephone numbers of local government offices is Indiana LTAP. The LTAP *Directory of Indiana State, County, City and Town Officials* appears at <http://rebar.ecn.purdue.edu/LTAPI/Resources/Publications.aspx>

Contact hospitals, schools, fire departments, governmental offices, or industries that are adjacent to the project area. These entities may have private facilities within the right of way that can be impacted by the project.

104-2.02 Initial Notice

The initial notice is a letter used by the Department to inform a utility company of a proposed improvement project, 105 IAC 13-3-1(c). The utility company responds in writing to the initial notice with specific information, 105 IAC 13-3-1(d).

The utility coordinator will prepare and send to each utility company identified in the research phase, as described in Section [104-2.01](#), an initial notice of the proposed improvement project. Use the standard initial notice letter which appears on <http://www.in.gov/indot/3269.htm>. The format for the standard initial notice letter is titled Initial Notice of Proposed Improvement. Address the letter to the authorized representative of the utility company, Section 104-1.04(03). Complete the required project information using information from the SPMS project schedule and the information provided by the project manager. Enter the utility coordinator's name and contact information in the last paragraph.

The utility coordinator will sign the letter, place a copy in the project file, send a copy via e-mail to the utility-oversight agent, and send the original to the utility company's authorized representative. Contact the authorized representative approximately two weeks after the mailing to verify the utility company received the initial notice letter and to obtain the date of receipt. Alternatively, the utility coordinator can send the letter by registered mail return receipt requested or by e-mail return receipt requested. The return receipt can be used to verify that the utility company received the initial notice letter and to obtain the date of receipt. Record that the utility company received the initial notice and place a copy of the obtained information in the project file.

The authorized representative shall respond in writing within 30 days after receiving the initial notice, with the information as follows:

1. a declaration that the utility company does have facilities in the project area, with a description of the type and location of its facilities; or
2. a statement that the utility company has no facilities in the project area of the project; and
3. the name of the designated contact person for future communication regarding the project.

For the type of facility, the utility company can provide information on the size, material, service, or commodity supplied. For the location of the facility, the utility company should provide enough information so that all of its facilities in the project area can be located during the project survey.

The utility coordinator will review the response to the initial notice from each utility company to verify that the required information is provided. Contact the authorized representative if all of the required information is not provided, or if a response is not received within 30 days from the date the utility company received the initial notice. Report to the project manager and the designer all utility facilities which can have a significant impact on the project cost, right of way, or construction. Place copies of all responses in the project file. Provide the information from the responses to the surveyor and the utility oversight agent.

104-2.03 Survey and Depiction of Findings on Plans

The PDP Task is 6.01.08 for a major project, or 5.01.10 for a minor project. See 105 IAC 13.

The survey is used to determine, measure, and record the locations of all utility facilities. The surveyor can request through Indiana 811 to have utility facilities located within the project limits, 105 IAC 13-3-1(e) and IC 8-1-26. The surveyor will refer to the information included in the responses to the initial notices to ensure that buried facilities are located and marked for the survey. The surveyor will measure and record the horizontal location of the buried facilities once the locations are marked in the field.

The IAC rule states that the Department and the utility may agree on another mutually-acceptable format or schedule for the exchange of location information. Frequently, as-built plans are provided as an alternate acceptable format.

The designer will show all of the utility facilities on the plans. The designer will use the survey information, as-built-plans information, or SUE information as discussed in Section 104-2.04 to accomplish this task. At a minimum, the utility facilities will be shown on the plan and profile sheets.

104-2.04 Subsurface-Utility Engineering (SUE)

Subsurface-utility engineering is the practice of investigating the location and condition of subsurface utility facilities. The primary source document is ASCE 38-02, *Standard Guidelines for the Collection and Depiction of Existing Subsurface Utility Data*. Additional references are

23 CFR 645 and the FHWA website www.fhwa.dot.gov/programadmin/sueindex.cfm The FHWA encourages SUE for each federal-aid project, and considers it an integral part of preliminary engineering.

Subsurface-utility engineering is divided into recognized levels of quality, from the lowest level D to highest level A, as follows:

1. Quality Level D (QL-D). The most basic level of information for utility locations originates solely from existing utility records or verbal recollections. It can provide an overall assessment for the congestion of utilities, but is often limited in terms of comprehensiveness and accuracy.
2. Quality Level C (QL-C). 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.
3. Quality Level B (QL-B). This involves the application of appropriate surface geophysical methods to determine, or designate, the existence and horizontal position of virtually all utility facilities 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.
4. Quality Level A (QL-A). This involves the use of non-destructive digging equipment at critical points to expose, or locate, an underground utility facility so as to determine its precise horizontal and vertical position, 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 subsurface-utility engineering services. Critical points can include locations where existing utility facilities will cross, or will be adjacent to, areas of excavation for ditches, retaining walls, footings, drainage structures, piling, etc. Areas of increased fill over a utility facility can also be a critical point.

104-2.04(01) Determination to Use Subsurface-Utility Engineering

Research shows that the use of subsurface-utility engineering can reduce the cost, time, and impact of utility facility relocations. One such study done by Purdue University can be viewed at www.fhwa.dot.gov/programadmin/sueindex.cfm.

The project manager takes the first step to address subsurface-utility engineering by including it as a part of the design contract. The determination to use subsurface-utility engineering is a risk-management decision. The project manager will have evaluated the cost of subsurface-utility engineering against the potential cost of project delays due to unknown or unexpected locations of utility facilities during construction. The availability of funds within a contract does not imply a need for using full subsurface-utility engineering. Also, the absence of funds does not imply that subsurface-utility engineering is not needed. The designer and utility coordinator will further evaluate the quality levels necessary using subsurface-utility engineering during the development of the project. If SUE was not a part of the original RFP and the designer and utility coordinator determine that there is a need, they should work with the project manager to determine a method to include SUE in the project. FHWA will not participate in the cost of claims for construction delays due to utility relocation when SUE is not used.

Considerations in evaluating the need to obtain Quality Level B and Quality Level A information using SUE are as follows.

1. Is the project in an urban or suburban area with dense development?
2. Will the project have excavation that can impact underground utility facilities?
3. How much right of way is available to accommodate utility-facility relocation?
4. Will there be areas where one utility facility should be relocated near another utility facility that may remain?
5. Are there utility facilities that can have major impact on the project schedule or budget?
Are there substations or indications of transmission pipe lines?
6. How sensitive is the project to cost increases or time schedule?
7. How much confidence is there in the identified location of the utility facilities using utility records as compared to surveyed information?
8. Are there locations where knowing the exact elevation of a utility facility is critical?

104-2.04(02) Obtaining Subsurface-Utility Information

Subsurface-utility information is gathered throughout the development of a project to help determine the impact of utility facilities. To gain the greatest benefit, SUE up to Quality Level A should be performed early in the design process. By utilizing the SUE information, the designer

can make reasonable adjustments to the proposed design which can eliminate the need to relocate utility facilities. This process can help reduce total project costs by avoiding costly delays due to conflicts with utilities, eliminating costs of reimbursable utilities, and streamlining the construction process because the contractor has precise information on critical utility locations.

Quality Level D information is collected during the utility-research phase as required by 105 IAC 13-1-1. Also, Quality Level D information can be provided by the utility company in response to the initial notice letter. Obtaining Quality Level D information is addressed in Section 104-2.04.

Quality Level C information is gathered during the project survey when all visible utility facilities are measured and recorded. Obtaining Quality Level C information is addressed in Section 104-2.04.

Quality Level B information is obtained during the project survey. Facilities are located through Indiana 811 or by a SUE consultant. Facilities located through Indiana 811 have a hand-dig zone of ± 2 ft from where the actual locate is marked. See Indiana Code 8-1-26 for further information concerning Indiana 811 and the accuracy of survey information. Facilities located by a SUE consultant are expected to be within ± 3 in. of the mark.

Quality Level A information can be collected during the design process by a SUE consultant where more-exact data is required at critical-conflict locations. Once preliminary drainage, structure locations, and right of way have been defined, the designer can determine the locations necessary to help with the evaluation of designing around utility conflicts.

104-2.04(03) Showing SUE information on Plans

The information obtained from subsurface-utility engineering test holes will be shown on the plans. On the plan and profile sheets' plan portion, each test hole will be numbered and the test-hole symbol will be placed at the location where the test hole was made. On the plan and profile sheets' profile portion, each test hole will be numbered and the test-hole symbol will be placed at the location where the facility appears. On the cross-sections sheets, the horizontal and vertical location of each utility facility will be marked and labeled with the utility name. On the utility-matrix sheets, the specific information from each test hole will be reported including the test-hole number, size and type of facility, northing, easting, existing top elevation, existing cut, reference elevation, and comments.

104-2.05 Verification

The PDP Task is 6.15 for a major project, or 5.15 for a minor project.

A verification letter is used to request a utility company to verify that its facilities are shown correctly on the plans, 105 IAC 13-3-2(a). In response to the letter, the utility company is required to respond with specific information, 105 IAC 13-3-2(b).

The utility coordinator will send a verification letter and plans to each utility company with facilities in the project area. Also, the utility coordinator will send a verification letter and plans to each company that did not respond to the initial notice. The Utility Coordinator will use the standard verification-letter format which appears on <http://www.in.gov/indot/3269.htm> and is titled Verification of Existing Facilities. The Utility Coordinator will address the letter to the Authorized Representative or the designated contact person if appointed in the response to the initial notice.

The Utility Coordinator will sign the letter, place a copy in the project file, send a digital copy via e-mail to the utility oversight agent, and send the original to the utility company. The Utility Coordinator will contact the utility company within two weeks to verify that it received the verification letter and indicate the date of receipt. Alternatively, the utility coordinator may send the letter by registered mail return receipt requested or by e-mail return receipt requested. The return receipt can be used to verify that the utility company received the verification letter and plans. The utility coordinator will record that the utility company received the verification letter and plans and place a copy of that document in the project file.

The utility company will review the accuracy of the plans as to the location of its existing facilities and respond within 30 days after receipt of the verification letter and plans with the information as follows:

1. a written statement that the utility facilities are shown accurately or are not shown accurately; and
2. if shown inaccurately, a detailed written description or identification on the plans.

The utility coordinator will review the response to the verification letter from each utility to determine if the required information is provided. If all of the required information is not provided, or if a response is not received within 30 days from the date the utility company received the verification letter, the utility coordinator will contact the utility company. If the utility company identifies inaccuracies in the information shown on the plans, the utility coordinator will work with the utility company and the designer to resolve the inaccuracies. The utility coordinator will place a copy of all responses and final resolutions in the project file. The utility coordinator will provide the information from the verification responses and resolutions to the designer. The designer will show the corrected information on the plans. The utility

coordinator will provide the date that each utility company verifies that its facilities are shown correctly on the plans to the utility oversight agent.

104-2.06 Conflict Review

The PDP Task is 7.06 for a major project, or 6.06 for a minor project.

The Conflict Review Letter is used to request that a Utility determine if there are conflicts between its facilities and the project, 105 IAC 13-3-3(a). In response to the letter, the utility company is required to respond with specific information, 105 IAC 13-3-3(a). This stage is not the time for a utility company to prepare a relocation work plan or a relocation drawing.

The conflict review provides the Utility with an opportunity to identify locations where the proposed highway construction is likely to require the relocation of its facility. The utility company and designer can find alternatives to minimize impacts to the proposed construction, utility facilities, and project schedule.

The Conflict Review Letter may be sent to the Utility at the same time as the verification letter. The utility coordinator will determine if this is a prudent action based on available time, and the status of plan development. The utility coordinator will send a fully-verified set of plans to each utility if there were corrections to the plans during the verification stage. If the verification letter and Conflict Review Letter are sent at the same time, the time allotted under 105 IAC 13 for each letter will run concurrently not sequentially.

The utility coordinator will send each utility with facilities in the project area and those that did not respond to the verification letter a Conflict Review Letter and a copy of the preliminary plans. Use the standard Conflict Review Letter which appears at <http://www.in.gov/indot/3269.htm> and is titled Conflict Review Letter. Address the letter to the authorized representative or the designated contact person.

The utility coordinator will sign the letter, place a copy in the project file, send a digital copy via e-mail to the utility-oversight agent, and send the letter to the utility company. Contact the utility company within two weeks to verify that it received the Conflict Review Letter and indicate the date of receipt. Alternatively, send the letter by registered mail return receipt requested or by e mail return receipt requested. The return receipt can be used to verify that the utility company received the conflict-review letter and preliminary plans. Record that the utility company received the Conflict Review Letter and plans and place a copy of that document in the project file.

The Utility will review the preliminary plans as to potential conflicts of its existing facilities with the project limits. The Utility will respond within 30 days for a minor project, or within 60 days for a major project, after receipt of the Conflict Review Letter and preliminary plans with the information as follows:

1. a written statement that there are no conflicts between its facilities and the proposed project, or that there are conflicts between its facilities and the proposed project; and
2. if shown inaccurately, a detailed written description or identification on the plans.

The utility coordinator will review the response to the conflict-review letter from each utility to determine if the required information is provided. Contact the Utility if all of the required information is not provided or if a response is not received within 30 days for a minor project, or 60 days for a major project, from the date the utility company received the Conflict Review Letter and preliminary plans. Provide the information from the conflict review responses to the designer and the project manager. The designer and project manager will review the conflict review responses and determine if cost-effective design changes can be made to the project. The utility coordinator will place copies of all responses and final resolutions in the project file. Identify each utility company that fails to respond to the Conflict Review Letter. Provide the information from the resolutions to the utility company and the project manager. The designer will show the revised information on the plans. Provide to the Utility oversight agent the date that each utility company responded to the Conflict Review Letter.

104-2.07 Work Plan

The work plan is the document that unites the utility facility's proposed relocation work to the project. The work plan is a plan for the Utility to carry out facility relocation to accommodate the project. A Utility with facilities in the project area will provide a work plan as required by 105 IAC 13-3-3(b). A work plan can include up to four components; the narrative, the relocation drawing, a cost estimate, and easement documents.

The utility coordinator will send a letter requesting a work plan to each utility with facilities in the project area and to each utility that has not responded to previous inquiries. The utility coordinator will use the standard letter titled Request Work Plan, which appears at <http://www.in.gov/indot/3269.htm>. The utility coordinator will send preliminary final plans to the Utility or coordinate with the designer to send preliminary final plans to the Utility. The letter and plans will be sent to the utility's authorized representative or designated representative person if previously identified. The utility coordinator will send a letter requesting a work plan and the preliminary final plans to the Utility preferably one year prior to the ready-for-contract date.

The utility coordinator will sign the letter, place a copy in the project file, send a digital copy via e-mail to the utility oversight agent, and send the original to the utility company. Contact the utility company within two weeks to verify that it received the letter requesting a work plan and indicate the date of receipt. Alternatively, send the letter by registered mail return receipt requested or by e-mail return receipt requested. The return receipt can be used to verify that the utility company received the letter requesting a work plan and the plans. Record that the utility company received the letter requesting a work plan and place a copy of that document in the project file.

The utility coordinator may hold utility coordination meetings to synchronize the relocation of all utility facilities. The utility coordinator may develop a plan to reserve certain areas for certain utility work to more effectively manage the highway right of way. The utility coordinator may assemble a master plan showing all existing and proposed utility facilities within the project area. The utility coordinator will contact the authorized representative if the designated representative is non-responsive regarding the development of a work plan. The utility coordinator will then contact the project manager and the utility oversight agent if the utility company is non-responsive regarding the development of a work plan. A Utility that has no proposed facility relocation may omit the relocation drawing from its work plan if the project plans correctly depict its facilities.

The utility company will prepare the work plan for the relocation of its facilities and submit a signed copy to the utility coordinator for review. The utility coordinator will review the work plan for each utility for conformance with 105 IAC 13, the Utility Accommodation Policy, and other INDOT standards. Refer to the sample work plan for additional standards to aid in the review of a work plan on <http://www.in.gov/indot/3269.htm>. The utility coordinator will cross reference all utility work plans to ensure that there are no conflicts in proposed facility locations or relocation schedules. Evaluate the relocation drawing to determine if the existing or proposed facilities will impact construction of the project.

The utility coordinator will review and sign the work plan and forward it to the project manager for signature. The utility coordinator will send the work plan to the utility oversight agent for review. The utility coordinator will send a copy of the fully-signed work plan to the utility oversight agent. The utility coordinator will prepare and send the permit letter to the utility oversight agent for review and signature. The utility coordinator will send the signed permit letter and work plan to the utility company. The utility coordinator will send the signed permit letter and work plan to the designer to be included with the contract documents.

104-2.08 Changes to Approved Work Plan

A change to an approved work plan may be required. The Utility will provide, as appropriate; a revised drawing, a revised cost estimate, a description of the change, and the reason for the change. The utility coordinator will evaluate the requested change and determine the impacts to the project and the existing and proposed utility facilities. The utility coordinator will obtain a concurrence from those parties that may be impacted by the proposed change. The utility coordinator will then prepare a permit addendum letter for the revision to the work plan. The permit addendum letter will be sent to the utility oversight agent for signature. All revisions to the approved work plan will be attached to the permit letter. The utility coordinator will distribute copies of the permit letter with all revisions to all the parties that can be impacted.

104-2.09 Contract Documents

Prior to the ready for contracts date, the utility coordinator will provide to the designer digital copies of; the utility coordination certificate, the utility special provisions, the approved work plan narratives and relocation drawings. The documents will be named in accordance with the naming conventions established by INDOT.

The designer will include the documents with the final tracings submission to the Contract Administration Division. Revisions to these documents will be in accordance with the Division's requirements.

104-3.0 DESIGN CONSIDERATIONS

The designer will consider the impact of the project on utility facilities and the impact of such facilities on the project during design development. The impacts of concern are cost and time. The designer will mitigate the impacts to the project and to the utility facilities. The earlier in the development process that the mitigation is addressed, the more likely that it will have a larger impact on reducing the number and cost of utility facility relocations. The designer may consider alternatives that require additional construction cost if they significantly reduce the cost or time required for utility facility relocations.

As project development and utility coordination progress, potential utility facility conflicts will become more apparent. After the responses to the initial notice, the designer will know which utility facilities are in the project area. After the verification step, the designer will have an understanding of the utility facilities' locations, extent, dimensions, and material types. After the conflict-review step, the designer will have an understanding of the potential locations for conflict, the type of conflict, and possible recommendations to avoid the conflict.

The designer will receive feedback directly from the utility companies on how the design impacts their facilities after the conflict-review stage. The designer will investigate each identified conflict and consider design changes to mitigate those impacts. The designer will assess the impacts of the design changes to the project and the utility facilities. The designer may implement the design changes that maintain the project scope and budget. The designer will coordinate with the project manager for design changes that are outside the project scope and budget.

The benefits of design changes to lessen the impact of the project on utility facilities must be balanced against the costs of such changes. The design changes can include those to the design of right of way determination, traffic maintenance, traffic-signal installation, bridges, drainage, and sub-grade treatment and pavement.

104-3.01 Right of Way

The cumulative cost and impact of INDOT's project and the relocation of utilities within easements must be accounted for. The design team must meet with all utilities prior to the establishment of INDOT's ROW to determine and account for placement of all utilities in the area. Designers can make adjustments to decrease or increase ROW as directed by the project manager to address impacts to land owners and environmental constraints. INDOT has the authority to procure additional right of way to accommodate the relocation of utility facilities, IC 8-23-7-2. The procurement of right of way occurs early in the design process. The purchase of additional right of way as part of the design process can offset the potential impacts from a utility company to procure additional right of way at a later stage of project development.

In developing right-of-way requirements the designer will consider the following:

1. Provide right of way or account for easement space so that above ground utility facilities and their appurtenances will be outside the clear zone.
2. Provide right of way or account for easement space at each horizontal curve to accommodate the placement of utility facilities, including guy wires, overhead lines, etc.
3. Provide right of way or account for easement space to accommodate utility facilities at each signalized intersection.
4. Avoid abrupt changes in right of way that will disrupt the continuity of linear utility facilities.

In setting the lines for access-control right of way, the designer will consider the following:

1. Perpendicular crossings of utility facilities are allowed on a limited-access highway.
2. INDOT policy excludes the longitudinal run of a utility facility within limited-access right of way.
3. INDOT can move the limited-access right of way line in from the actual edge of the property, thus allowing such actual edge to be designated as standard right of way. This allows a utility company to place its facility parallel to and outside the limited-access right of way.

104-3.02 Traffic Maintenance

In developing a traffic-maintenance plan, the designer will consider the following:

1. Utility-facility locations are to be considered in determining which side of the road a temporary runaround will be placed.
2. The designer can limit the use of temporary pavement widening to reduce the number of utility-facility relocations required due to such temporary widening.
3. The designer can stage construction schedules to either avoid utility relocation or to accommodate utility-relocation construction schedules.

104-3.03 Other Considerations

104-3.03(01) Bridge

Select the bridge type and substructure elements to minimize impacts to underground utility facilities. Substructure type and placement can conflict with underground facilities. Pile driving can conflict with both overhead and underground facilities. The setting of beams can conflict with overhead electric facilities. Grading, ditching, and the use of an MSE wall around a bridge and approaches can impact underground facilities. The schedule and costs for temporary relocations, temporary outages, OSHA requirements, and other such safety measures during bridge construction must be discussed and accounted for in utility work plans.

104-3.03(02) Drainage

Select the location, shape, and grade of each ditch to minimize impacts to utility facilities. Select the location, size, and grade of storm-sewer elements to minimize impacts to utility facilities. A storm-drain system should be located at least 10 ft from a parallel potable-water line. A storm-drain system should be located at least 1'-6" from a crossing potable-water line.

104-3.03(03) Pavement Section and Sub-Grade Treatments

The relocation of a utility may be avoided by changing the pavement section or the sub-grade treatment. Also, the utility may ask for some limitations on the methods of construction of the pavement section or sub-grade treatment to avoid relocation. To coordinate changes to or limitations on the construction of the pavement section, contact the Pavement Engineering Section of INDOT. To coordinate changes to or limitations on the construction of the sub-grade treatment, contact the Geo-Tech Section of INDOT. To communicate the limitations on the construction of the pavement section or the sub-grade such information will be placed in the utility special provision. These cost saving opportunities must be discussed with the project manager.

104-3.03(04) Traffic Signals, Signs, and Lighting

The locations of signals, signs, or lighting can impact utility facilities by a direct conflict or by a conflict caused by a lack of separation between the two. Consider the impact on utility facilities when selecting the location of traffic signal supports, signs, or lighting fixtures to minimize impacts to utility facilities.

104-3.03(05) Erosion Control

Determine the types and location of erosion-control measures so as to minimize impacts to utility facilities. A sediment-control basin can require a spot lowering of an underground facility.

104-3.03(06) Noise Abatement Walls

Installation of a noise abatement wall can affect overhead and underground facilities. The designer needs to consider the impact of the location and construction of the noise abatement wall on overhead and underground facilities. Due consideration needs to be given to the safety offset requirements for electrical lines based on distance and voltage in accordance with OSHA standards. Support posts can be positioned to avoid impact on underground facilities.

104-4.0 REIMBURSEMENT

The Department is authorized to reimburse a utility for the relocation of its facilities as allowed under IC 8-23-2-6(a)(15), which appears on www.state.in.us/legislative/ic/code. A utility may be reimbursed for the relocation of its facilities based on the following:

1. property interests;
2. unnecessary relocation;
3. customer service line;
4. interstate project; and
5. extraordinary costs.

A utility is eligible for reimbursement of the cost to functionally restore its facilities so that it can continue to provide service to its customers as they were able to do so prior to relocation. A utility is eligible for reimbursement of the cost to install new facilities to satisfy current industry standards.

The policies, procedures, and reimbursement requirements for adjustment and relocation of a utility facility on a federal-aid project is addressed in 23 CFR 645. INDOT follows 23 CFR 645 and the corresponding program guide as normal practice regardless of the source of funding.

104-4.01 Reimbursement for Extraordinary Costs

INDOT may assist a utility with relocation expenses that are determined to be extraordinary, as allowed in IC 8-23-26-5 and IC 8-23-1-22.5. Extraordinary costs are the costs to a utility to relocate existing facilities that are either more than 10% of the total operating revenue received by the utility during the its most recent full fiscal year; or more than 50% of the total estimated cost of the project.

A utility that desires reimbursement for extraordinary cost must request approval for reimbursement. INDOT may consider that the portion paid by the utility company can be applied to more than one project if the scheduled letting dates are within one year of each other.

The utility will submit a letter to INDOT at the earliest opportunity, on its letterhead, requesting reimbursement for extraordinary costs. The letter will be accompanied by the following:

1. a financial statement for the most recent full fiscal year, which indicates the total annual operating revenue;

2. a cost estimate for the proposed relocation; and
3. a sketch or description of the proposed relocation.

The utility coordinator will review the letter for sufficiency and forward the request and attachments to the utility oversight agent. The utility oversight agent will review the request and prepare the internal memo requesting approval for extraordinary cost and attach a copy of the SPMS full project listing. The Commissioner has the authority to approve a request for reimbursement of extraordinary costs. If INDOT approves the request, an agreement will be generated under which INDOT will reimburse the utility company for its eligible expenses.

104-4.02 Reimbursement for Unnecessary Relocation

INDOT will reimburse a utility for expenses incurred due to an unnecessary relocation of facilities as allowed in IC 8-23-26-7. The more common case for unnecessary cost occurs when INDOT changes the project work and requires the utility to move the facilities a second time to accommodate the improvement project. The less common case for unnecessary cost occurs when INDOT fails to construct an improvement project within two years of the relocation work being performed.

A utility that desires reimbursement for unnecessary cost will submit a request to INDOT with an explanation for the basis of the claim. For both cases the utility will provide documents that demonstrate that the utility had a relocation plan, was directed by INDOT to execute the plan, the relocation work was completed, and a detailed itemized cost for the facility relocation. Additionally, for the case where INDOT changed the project work the utility will provide documentation that substantiates that claim.

If INDOT approves the request, an agreement will be prepared to reimburse the utility for their eligible expenses.

104-4.03 Reimbursement for Customer Service Lines

INDOT will reimburse a utility for the relocation of customer service lines as allowed by IC 8-23-26-11 and IC 8-23-26-12. The possibilities for such reimbursement are as follows.

1. Line that is located where INDOT purchases new right of way for a project. A facility which is within the newly-acquired right of way is fully reimbursable regardless of ownership.

2. Line that is located where INDOT owns the existing right of way. A facility which is within the existing right of way is fully reimbursable if the utility does not own the line. A facility which is within the existing right of way is not reimbursable if the utility company owns the line.

The utility company should submit a request to the Department for reimbursement if possible. The request will be accompanied by documents showing the ownership of line, a drawing showing the location of the lines, and a detailed cost estimate for relocation of the line.

104-4.04 Reimbursement for Interstate Project

INDOT will reimburse a utility for expenses due to the relocation of facilities for an improvement project on the National System of Interstate and Defense Highways as allowed by IC 8-1-9-1. New facilities that were located on the National System of Interstate and Defense Highways after June 30, 1991, not for the sole purpose of crossing the highway, are not eligible for reimbursement as allowed by IC 8-23-26-15(b).

A utility that desires reimbursement for the cost of relocation for facilities on the National System of Interstate and Defense Highways will submit a request for reimbursement to INDOT. The request will include a drawing showing the proposed relocation and a detailed cost estimate to relocate the facilities.

104-4.05 Reimbursement for Property Interests

INDOT will reimburse a utility for the expense of relocation of facilities based upon the property interest held by the utility as verified by INDOT. A utility that is directed by INDOT to relocate facilities that are situated within an existing easement or comparable property interest previously acquired by the utility for such purpose is eligible for reimbursement. This is true regardless of whether the facilities are relocated within or outside of the proposed right of way. A utility company that is eligible for reimbursement for any such verified property interest remains eligible for reimbursement for subsequent projects in the same location.

Indiana law provides utilities with only a “qualified” right to be situated within INDOT right of way. As a result of this “qualified” right, utilities bear the financial burden to relocate their facilities unless they hold property interests which preempt (or have priority over) INDOT’s right of way. Utilities have the burden to prove to INDOT the existence and sufficiency of the property interests held, at least for relocation and reimbursement purposes. The determination of whether the particular property interest held by the utilities qualifies for relocation and reimbursement will be made by INDOT on a case-by-case basis.

Property interests commonly held by utilities and submitted to INDOT for relocation and reimbursement expenses include, but are not limited to, fee simple interest, express easement, implied easement (as a matter of law), permit, license, or franchise. As a threshold matter, any such property interest would have to be shown to pre-date and preempt INDOT's right of way to be eligible for reimbursement by INDOT.

The most common types of property interests found to be eligible for reimbursement include fee simple interest and express (written) recorded easements. Fee simple interest is where the utility holds actual title to the real estate underlying INDOT's right of way and is often times sufficient for reimbursement as the utility has previously acquired (at its own expense) all rights, title, and interests in the underlying real estate. Express (or written) recorded easements are often times sufficient for reimbursement as the utility has previously acquired (at its own expense) a separate and distinct right to maintain its facilities within the easement area.

Common examples of property interests found not to be eligible for reimbursement include implied (as a matter of law) easements and permits, licenses or franchise rights. A so-called "prescriptive" easement is an easement that may be implied as a matter of law based upon the long-term established use of the underlying real estate for utility purposes. "Prescriptive" easements are typically not sufficient for reimbursement because, as a matter of law, prescriptive easements cannot be established against property rights held by the State and utilities have difficulty satisfying the statutory requirements for a "prescriptive easement" as the utilities use of the underlying real estate are not typically adverse, open, and notorious to the adjacent property owner. To be eligible for reimbursement, the utility must provide INDOT with a court order establishing prescriptive easement rights in favor of the utility.

Interests in property created via permits, licenses, and franchises are generally not sufficient for reimbursement as the rights granted therein are qualified, conditioned, or otherwise limited by their explicit terms or applicable law. For example, INDOT allows utilities to occupy its right of way via a permit issued in favor of the utility for such purpose. However, such permit explicitly reserves INDOT's rights to relocate the utility's facilities at its election and at the sole cost and expense of the utility. Utilities often times cannot demonstrate that they expended much, if any, consideration in securing these types of limited rights and interests. In light of the de-feasible (i.e. easily extinguishable) nature of these types of property interests, non-reimbursement is supported as there is typically no underlying cost and expense to the utility for INDOT to reimburse.

The utility that desires reimbursement for the cost of relocation for facilities due to property interests will submit a request for reimbursement to INDOT. The request will be accompanied by a drawing showing the proposed relocation, a detailed cost estimate to relocate the facilities, and documents that support their claim of property interests. If the utility is located in their own

easements then a copy of the easement documents will be provided. If the utility is located in ~~on~~ another utility's easement property then an affidavit affirming that they have the express permission of that utility to be located thereon will be provided. If INDOT is reimbursing the utility, the utility will also be required to subordinate or release their underlying property interest in INDOT's right of way upon relocation as provided in Section 104-5.0(5) below.

104-5.0 HIGHWAY UTILITY AGREEMENT

A highway utility agreement is a document signed by the utility and INDOT that provides the terms of reimbursement for reimbursable utility facility relocations. A utility that desires to enter into a highway utility agreement will submit a request to INDOT prior to any work being performed. The agreement identifies the work to be performed, the estimated cost for the work, and the administrative process to make payments for the work. The types of agreements are listed below. Additionally, the agreements are further subdivided based on who is performing the work either, work by utility or work by state (a.k.a. work in contract). For example an agreement may be identified as an Extraordinary Cost – Work In Contract agreement.

1. Preliminary-Engineering Agreement. This is used if a utility company desires reimbursement for eligible preliminary engineering or design expenses incurred while developing the finalized plan and cost estimate for a standard agreement. This is also used for a utility company that is eligible for reimbursement for property rights, interstate route project work, or customer service lines. The agreement will have an attached preliminary engineering cost estimate provided by the utility.
2. Standard Agreement. This is used if a utility company desires reimbursement for utility relocation construction expenses. It can include preliminary engineering expenses in lieu of a preliminary engineering agreement. It is also used for a utility company that is eligible for reimbursement for property rights, interstate or defense highway work, or customer service lines. It can be used for either work by the utility company, or work in a state contract. The agreement will have an attached a relocation drawing, provided by the utility
3. Extraordinary Cost Agreement. If the relocation expense is greater than 10% of the utility's total operating revenue or greater than 50% of the anticipated highway-improvement cost, the Department may also bear the cost of the relocation work. The utility will request and receive approval from INDOT for the use of extraordinary cost before the agreement is prepared. This can be used for either work by the utility company, or work in a state contract. The agreement will have attached a relocation drawing, a preliminary engineering cost estimate, if applicable, construction cost

estimate, and verification of available utility funds, when required, all provided by the utility.

4. Unnecessary Relocation Agreement. This is used if a utility company desires reimbursement for unnecessary utility-relocation expenses. The agreement will have an attached original relocation drawing, a drawing of the proposed relocation, a preliminary engineering cost estimate, if applicable, and construction cost estimate of the proposed relocation.
5. Subordination Agreement. This is used if a utility company has property rights related to an existing easement regardless of the type of agreement used as the basis for reimbursement. It is used to subordinate the rights of the utility to its easement to the rights of INDOT within the right of way INDOT purchased for the project. The agreement will have attached copies of all easement documents, or a letter of affidavit for each property crossed by the utility facility.

104-5.01 Preparing a Highway Utility Agreement

The utility coordinator will select an agreement based on the particular circumstances of reimbursement for the utility company. Fill in the blanks on the agreement as shown below.

For Agreement Amount, enter the estimated cost burden to INDOT as identified in the cost estimate.

For Payment Method, enter Standard or Lump Sum. Standard is the most common payment method. The Lump Sum payment method is used only if there is a theoretical cost estimate developed, or to analyze the eligible reimbursable expenses.

For Work Description, enter the facility type and a short description of the work to be performed by the utility company.

For Des. No., enter the lead Des. number.

For Project No., enter the federal aid project number for the construction phase specified on the full project listing available from SPMS for the lead Des. number. This also applies to a preliminary-engineering agreement.

For Road, enter the route number or road name as listed under Route Number as specified on the full project listing available from SPMS for the lead Des. number.

For County, enter the county names as listed under County as specified on the full project listing from SPMS.

For date the agreement was entered into, leave blank, as this will be completed by INDOT.

The next three lines are used for the utility company's name and address the information for which can be found in the list of authorized representatives.

For a standard agreement, in the section of recitals, provide a description of the proposed scope of work for the proposed improvement project. This explanation can be drawn from the SPMS full project listing for the lead Des. No. using the information in the fields for 'Work Type', 'Route Number' and 'Location'.

For a standard agreement in section 1, provide an explanation for the proposed work stating what will happen to existing facilities and what will installed as new facilities. The explanation needs to include numerical details for dimensions of the facilities and quantities.

For a standard agreement, in section 1, select either option 1 for a regular construction crew, option 2 for approved contractor, or both, if applicable. This identifies whether or not a contractor will be used for the relocation work. A letter of approval is required if a contractor will be used.

For a standard agreement, in section 3, select either Are or Are Not located on public right of way. This identifies whether or not a subordination agreement is required.

For a standard agreement, in section 4, enter the utility oversight agent's name and their mailing address. This provides the utility company with a contact to whom it can submit notice of changes to its relocation work or relocations costs.

Contact the utility oversight agent for assistance in completing another type of highway utility agreement.

Each agreement will be accompanied by exhibits. The required exhibits are defined in the agreement. Label each page as appropriate, such as Exhibit A. Identify each exhibit's page as appropriate, such as, p 1 of 5 p.

104-5.02 Processing a Highway Utility Agreement

Once the agreement is ready, the utility coordinator will prepare a cover letter for transmitting the agreement to the utility. Address the cover letter to the utility authorized representative with a copy to the designated representative, if applicable. The cover letter will be on INDOT

letterhead and will be signed by the utility oversight agent. Transmit the cover letter, the prepared agreement, and all exhibits to the utility oversight agent for review and signature. After receipt of the signed letter, transmit the letter, agreement, and the attachments to the utility.

The utility coordinator will check with the utility company on the status of the agreement if a signed copy of the agreement is not returned within 30 days. The utility coordinator will periodically follow up with the utility company until the signed agreement is returned. If the designated representative is non-responsive after 60 days, contact the authorized representative. If the agreement is delayed contact the utility oversight agent and notify him or her of the circumstances.

Once the signed agreement is returned, the utility coordinator will review the agreement to ensure that the signature page is properly completed. If the agreement is properly completed, forward the signed agreement and the attachments to the utility oversight agent for further processing. If the agreement is not properly completed, return it to the utility for correction.

104-6.0 COST ESTIMATE FOR REIMBURSABLE WORK

The purpose of this section is to provide guidance to the designer, the utility coordinator and utilities regarding a cost estimate. A cost estimate is a prediction of the most probable cost to relocate certain utility facilities. The estimate will include the cost to replace the facilities and provide the same level of service which existed prior to the undertaking of the project. The utility coordinator and project manager will use a planning cost estimate to establish a reasonable budget for reimbursable utility relocations. The utility coordinator will use a detailed cost estimate to prepare the reimbursable utility agreement. Additional guidance regarding cost estimates appears in 23 CFR 645.117 and the FHWA's *Program Guide: Utility Relocation and Accommodation on Federal Aid Highway Projects*.

104-6.01 Planning Cost Estimates

Planning cost estimates are the best guess of an expected cost to relocate certain facilities. At the start of the project the information on which planning costs estimates are based is relatively undefined and so the cost may be very inaccurate. As the design and utility coordination progresses the information on which planning costs estimate are based becomes more defined and the costs estimate may become more accurate.

104-6.01(01) Parametric Cost Estimate

At the start of a project the project manager needs to provide funding in the project budget for reimbursable utility facility relocations. The budget cost estimate is based on a percentage of the estimated construction budget for the project. The following factors may be used to calculate the budget cost estimate based on the type of work and the location of the project. The factors presented are based on experience rather than a statistical analysis of historical data. A utility coordinator will review the budget cost estimate to ensure that the required funds have been allocated in the project budget.

Project Type	Rural Area	Urban Area
Non-Interstate Route	5%	10%
Interstate Route	10%	15%

104-6.01(02) Ballpark Estimate

The ballpark estimate is the best guess of the cost to relocate utility facilities *provided by the utility* prior to the conflict analysis being assessed. After the utility coordinator reviews the response to the initial notice the utilities that are in the area of the project may be identified. The utility coordinator will contact those utilities and identify if they are reimbursable, the basis for reimbursement and ballpark estimate of the cost to relocate their facilities to accommodate the highway improvement project.

104-6.02 Detailed Cost Estimates

The utility company will prepare and submit the detailed cost estimate to the utility coordinator. A utility will provide a detailed cost estimate when submitting their relocation work plan and when requesting a reimbursement agreement for its planned facility relocation. A detailed cost estimate will be comprehensive and will provide sufficient detail to understand the scope of the proposed relocation work. The detailed cost estimate will identify reimbursable and non-reimbursable work. If the utility relocation work is not fully reimbursable, a cost summary will be included to define how much cost will be borne by each party.

A detailed cost estimate includes the major cost categories for each of the relevant items of work. These include the following:

1. labor for engineering and construction;
2. labor surcharges;
3. materials and supplies by type and price;
4. equipment by type, size, and rate;
5. transportation;

6. indirect costs;
7. overhead, general and administrative;
8. credits for salvage;
9. credits for betterment; and
10. accrued depreciation.

Expenses which are not reimbursable and are not to be included in the detailed cost estimates includes, but are not limited to, costs associated with the following:

1. commercial advertising;
2. sale promotion;
3. interest on borrowing;
4. the issuance of stock;
5. bad debts;
6. uncollected accounts receivable;
7. contributions;
8. donations;
9. entertainment;
10. fines;
11. penalties;
12. lobbying;
13. tools or other durable items;
14. training;
15. luxuries; and
16. research.

104-6.02(01) Preliminary Engineering Cost Estimate

A utility which is eligible for reimbursement may desire to be reimbursed for preliminary engineering costs. The preliminary engineering cost estimate will itemize those expenses anticipated to be incurred prior to the implementation of the relocation work plan. The detailed cost estimate for labor will include personnel hours by class and rate for both the utility company and the consultant. The major work items may include but are not limited to the following:

1. researching existing easements;
2. conducting preliminary studies;
3. conducting surveys;
4. reviewing plans;
5. preparing work plans;
6. preparing relocation drawings;

7. developing cost estimates;
8. reviewing agreements;
9. appraising and acquiring easements;
10. acquiring permits;
11. preparation of bid documents; and
12. evaluation of bids received.

104-6.03(02) Construction Cost Estimate

A utility which is eligible for reimbursement may desire to be reimbursed for construction costs. The construction cost estimate will include an itemized list of those expenses expected to be incurred during the implementation of the relocation work plan. The major work items may include but are not limited to the following:

1. mobilization and demobilization;
2. construction engineering;
3. removal of existing facilities;
4. inactivate existing facilities;
5. installation of new facilities;
6. erosion control and site restoration; and
7. traffic maintenance.

104-6.04 Credits for Betterment, Salvage and Accrued Depreciation

The credits in a cost estimate are those for betterment, salvage and accrued depreciation.

Betterment is a credit on the detailed cost estimate. Betterment is an upgrading of the facility being relocated that is not attributable to the project or required to meet current standards. It includes increased number or size of facilities, improved quality of facilities, or acquisition of real property rights where none previously existed. A utility company that desires reimbursement that involves betterment should submit two cost estimates, one for a functionally equivalent replacement and one with betterment. The value of betterment is the difference between the two cost estimates.

Salvage is a credit on the detailed cost estimate. Salvage is facility components that are removed from the existing location that have continued value from resale or reuse. The utility company will estimate the value of salvage items based on current market prices.

Accrued depreciation is a credit on the detailed cost estimate. Accrued depreciation only applies to major operational utility facilities like plants, stations or buildings that are being replaced. Accrued depreciation will be determined based on the straight line depreciation of the original cost of the facility and the expected service life.

104-6.05 Theoretical Cost Estimate

A utility company which is eligible for reimbursement that desires to relocate facilities with other than a direct replacement in kind will submit a theoretical-cost estimate. It is based on the most economical means to replace the existing facilities and provide service to the same customers. The utility coordinator will obtain and review the prices for other similar facility work to determine if the theoretical-cost estimate is reasonable. The theoretical-cost estimate is used to determine the amount of reimbursement to the utility company as a lump-sum payment. The theoretical-cost estimate is developed in the same manner as a construction cost estimate.

104-6.06 Reimbursement Review

Some work by a utility company may not be reimbursable. The utility coordinator will review the work proposed by the utility company and determine the cost of work that is reimbursable and the cost of work that is not reimbursable. The utility coordinator will tabulate lists of reimbursable work and non-reimbursable work. The tabulation will include location; description including length, size, quantity, and materials; cost; reimbursable amount; and non-reimbursable amount.

104-6.07 Cost Estimate Summary

The utility coordinator will prepare the cost-estimate summary that identifies the cost burdens to the utility and those to the Department. It includes summaries of the cost basis, the cost assignment, and the cost apportionment. The cost basis tabulates the cost of work on easement, cost of work not on easement, extraordinary cost, betterment, and salvage value. The cost assignment is a declaration of the estimated total cost burden of each participant of the agreement. The cost apportionment provides the method to determine costs to be paid based on invoices submitted. An example of a cost estimate summary appears on www.state.in.us/legislative/ic/code.

104-7.0 CONSULTANT AND CONTRACTOR APPROVAL

A utility may perform the relocation work with their forces, also known as force account work, or with a consultant or contractor. INDOT will review the selection of the consultant or contractor hired by a utility if the work is reimbursable. INDOT performs this review by examining supporting documents provided by the utility company. The intent of the review is to determine that appropriate selection procedures were followed and that costs are reasonable and to ensure that the contract will be awarded to the lowest qualified bidder according to state and federal laws.

A utility may elect to hire a consultant to perform preliminary engineering services or construction engineering services in support of the utility facility relocation. The utility coordinator will inform all utility companies with facilities in the project area that INDOT will review their selection of a consultant if the work is anticipated to be reimbursable. The utility will submit a request to the utility coordinator asking for concurrence in use of the consultant that it desires to hire. The request will be provided on company letterhead, and will include the name of the recommended consultant, the reason it was selected, a description of the proposed scope of work, and the schedule of rates. The utility coordinator will review the documents to ensure that they are complete. The utility coordinator will prepare a letter to approve or deny the selection of the consultant and send the letter, the supporting documents and their recommendation to the utility oversight agent. The utility oversight agent will review the documents, sign the letter and return it to the utility coordinator for distribution.

A utility may elect to use a contractor to perform construction services in support of the utility-facility relocation. The utility coordinator will inform all utilities companies in the project area that INDOT will review their selection of a contractor if the work is reimbursable. The utility company will submit a request to the utility coordinator asking for concurrence in use of the contractor that it desires to hire. The request will be provided in writing on company letterhead, and will include the name of the recommended contractor, the reason it was selected, a description of the proposed scope of work, and the schedule of rates or bid tabulations. The utility coordinator will review the documents to ensure that they are complete. The utility coordinator will prepare a letter to approve or deny the selection of the consultant and send the letter, the supporting documents and their recommendation to the utility oversight agent. The utility oversight agent will review the documents, sign the letter and return it to the utility coordinator for distribution.

A utility may perform the relocation work using an existing continuing contractor. The utility has to provide the rate sheets from their continuing contractor for the review of the utility coordinator or the oversight agent prior to commencement of construction. The utility coordinator or the oversight agent shall notify the utility if the costs are reasonable. If the rates from their continuing contractor are not reasonable, the utility coordinator or the oversight agent shall notify the utility to hire another contractor through a competitive bidding procedure.

If the utility is not willing to share documents with the utility coordinator for confidential or privacy reasons, the utility coordinator shall provide the contract address of the oversight agent to the utility in order for them to communicate directly.

104-8.0 UTILITY RELOCATION WORK IN HIGHWAY CONTRACT

INDOT prefers to include utility facility relocation work as part of the highway contract. INDOT encourages utility facility relocation work to be part of the highway contract if the work is eligible for reimbursement, or will require extensive coordination with the INDOT contractor. The project manager will make the final decision to include utility facility relocation work as part of the highway contract.

A utility that desires its facility relocation work to be part of the highway contract will notify the utility coordinator. The utility company will provide a planning cost estimate to the utility coordinator. The utility coordinator will forward the information to the project manager. The project manager will request a Des. No. specifically for the utility relocation work and provide it to the utility coordinator. The utility coordinator will provide the number to the utility company. The Des. No. will be shown on the work plan and all documents to be included with the highway contract. The agreement will show the lead Des. No. and the Des. No. for the utility relocation work when available.

The utility will provide to the utility coordinator, for their proposed work, a work plan, final stamped plans, specifications, engineer's estimate, list of quantities, and the signed agreement. The utility coordinator will review the documents for compatibility with other utility work plans and the project work. The utility coordinator will provide the work plan to the project manager for review and approval. The utility coordinator will provide the documents to the utility oversight agent for review and approval. The utility coordinator will provide a copy of the approved work plan to the utility company.

After approval, the utility coordinator will provide to the designer the final stamped plans, specifications, engineer's estimate, and list of quantities. The utility coordinator or the designer will upload the documents to the specified ERMS site for inclusion in the highway contract.

104-9.0 UTILITY COORDINATION RECORDS

The utility coordinator will maintain detailed records of their work utility coordination work. The utility coordinator will maintain a separate file for each utility for each type of facility where all relevant documents are retained for that entity. The file for a utility will be submitted to the

utility oversight agent upon request. The documents that will be retained in the file, in their final approved version, are as follows:

1. letter of initial notice;
2. responses to letter of initial notice;
3. letter of verification;
4. responses to letter of verification;
5. letter of conflict review;
6. responses to letter of conflict review;
7. letter requesting work plan;
8. utility relocation work plan;
9. utility relocation cost estimate;
10. utility relocation drawing;
11. utility land-rights documents for easements, or affidavit;
12. utility agreement(s);
13. subordination agreement(s);
14. letter requesting extraordinary cost approval;
15. letter requesting exception to utility accommodation policy;
16. consultant-approval letters;
17. contractor approval-letters;
18. acknowledge completion of work plan; and
19. reminder of final invoice letter,

Other documents may be included.