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CHAPTER TEN

UTILITIES

This Chapter includes step-by-step procedures for utility agreements and coordinating with utility companies. The Chapter also provides the INDOT policies, procedures, and criteria for the accommodation of utilities within highway right of way.

10-1.0 UTILITY PROCEDURES

10-1.01 Joint Occupancy

Transportation and utility networks are growing in number and complexity. As a result, the frequency of two or more networks occupying a common right of way or intersecting one another has increased. Therefore, problems may arise due to the construction, maintenance, and operation of one network as it affects another. Each transportation agency has the responsibility to maintain the highway right of way under its jurisdiction and to preserve the operation, safety, integrity, and function of the highway facility. Generally, utilities have a qualified right to install their lines and facilities on the right of way of most public roads and streets. Because the manner in which utilities cross or otherwise occupy highway right of way can materially affect the safe operation, maintenance, and appearance of the highway, it is necessary that such use and occupancy be authorized and reasonably regulated. Likewise, it is important that utilities are not unnecessarily impacted by a highway construction project, because it is generally in the public interest to accommodate utility facilities on highway right of way when such use and occupancy do not adversely affect highway safety, construction, maintenance, or operations.

Generally, utilities have a qualified right to free occupancy of the public right of way. Utilities are allowed to occupy the right of way, assuming they do not unreasonably restrict the highway agency's ability to construct, maintain, modify, improve, or otherwise operate its highway network. Additional restrictions and limitations apply to a limited-access facility. Because utility companies do not pay for a right to occupy the public right of way, they usually have to pay the costs of any relocations/adjustments. When total project costs are being considered, utility relocation/adjustment costs should also be included, regardless of who is responsible for the cost. Like roadways, utilities are important to public health, safety, and welfare. Therefore, they should not be unnecessarily impacted by a construction project. The utility-service needs of current and future customers adjacent to the project area should be considered by the designer.

Highway and utility facilities frequently co-exist within or along the same corridor. Therefore, it is essential that these public-service facilities be compatibly designed and operated. Joint highway and

utility planning and development efforts should be encouraged. Highway safety is important when accommodating utility facilities within highway right of way. The design and location of the utilities' use and occupancy of highway right-of-way must conform to the policies of the highway agency to provide and maintain an adequate roadside clear zone. However, safety should be balanced with other factors such as constructability, operations, and maintenance.

10-1.02 Adjustment/Relocation Plan

The utility owner is responsible for the design of its facility including depth, clearance, and separation between lines. Its work must meet the highway agency's utility-accommodation policy (see Section 10-3.0 for INDOT's Policy). The utility owner must ensure that its proposal is properly designed, installed, operated, and maintained.

10-1.02(01) Survey

A utility adjustment/relocation plan should be developed using the INDOT survey stationing and offsets. This will allow for ease in reviewing the proposed utility work. All utility facilities within the proposed right-of-way should be addressed, especially facilities located within the proposed construction limits.

10-1.02(02) Review

Developing the utility adjustment/relocation plan on the highway agency's construction plans will aid in reviewing the proposed adjustment/relocation work relative to the proposed construction activities. The adjustment/relocation plan should show the alignment and profile of the proposed relocation work.

The adjustment/relocation plan will be reviewed to determine if reasonable efforts are being made to resolve potential conflicts with the proposed construction project. The timing of the proposed work will also be reviewed to determine if there will be a potential impact to the contractor's work phasing and schedule.

Material acquisition time frames, budgetary constraints, utility seasonal demands, and proposed utility construction time frames all must be identified to properly coordinate the utility adjustment/relocation work with the proposed construction project.

Although a utility adjustment/relocation is generally performed by the utility-company forces or a contractor hired by the utility company, it may sometimes be in the best interest of all involved parties to allow the highway contractor to perform some of the utility work. Where it can be

demonstrated that total project costs can be reduced and the inclusion of additional work will not unduly interfere with the contractor's scheduling of work, utility adjustment/relocation work may be added to the contract. This will not affect the responsibility for paying for the work.

10-1.03 Reimbursement

Generally, a utility company is eligible for reimbursement if the utility facility is located on land for which the utility company has a properly-recorded property right, such as an easement. Utility companies involved within an Interstate-route project may also be eligible for reimbursement. Relocation of service facilities which are customer-owned may be eligible for reimbursement. In addition, for an INDOT project, where it can be shown that a utility company will incur an extraordinary cost to relocate, the utility company may be eligible for partial reimbursement. Reimbursement of extraordinary costs is subject to approval by the INDOT Chief Engineer.

The utility company is entitled to reimbursement for costs incurred for the adjustment/relocation of the facility within the documented property right of way. Eligible costs are those associated with replacement in kind for the affected facility. Costs which can be accredited to betterment or for relocation which goes beyond what is reasonable to accommodate the project are not eligible for reimbursement. The utility company must enter into an agreement with the Department prior to incurring costs to be eligible for reimbursement.

On a local-public-agency project, eligibility for reimbursement is the same with the addition that a municipal utility company may also qualify for reimbursement. However, a reimbursement agreement must be executed before incurring costs.

To enter into an agreement with the Department, the utility company must present a plan and cost estimate to INDOT. This information is attached to a Utility Agreement and, therefore, must be developed to clearly identify proposed work and associated costs. Costs should be identified on a unit basis which can be readily verified in the field and which can be audited. Because costs incurred prior to entering into the Agreement are not eligible for reimbursement and because it can require considerable time to execute the Agreement, it is important to initiate utility coordination early in the project cycle to avoid unnecessary delay. Documentation of the property right must also be submitted.

Expenses eligible for reimbursement need to be clearly identified as the following:

1. labor;
2. material;
3. overhead;
4. transportation;
5. contract engineering;

6. contract construction;
7. property acquisition; or
8. other costs.

Identified rates must be supported and able to withstand an audit by the Department.

Where affected utility facilities are located on both land for which the utility company holds a recorded property right and land for which the utility company does not have a recorded property right, such as public right of way, a reimbursement ratio will be established to identify the portion of work eligible for reimbursement. This ratio should reflect the extent of work eligible for reimbursement to total adjustment/relocation work.

Eligibility for reimbursement is determined based on where the anticipated construction conflict is located. If a conflict point is in public right of way, the adjustment/relocation work is not eligible for reimbursement. If a conflict point is outside public right of way, such work is eligible for reimbursement. If the conflict is an area, as opposed to a point, eligibility is determined by the area in conflict outside of the public right-of-way to the total area of conflict.

If Federal-aid funds will be used to reimburse a utility, such funds must be obligated prior to the utility company's incurring of expenses.

Where the utility company has a documented property right to property which the Department has acquired as public right of way, the utility company must subordinate its property right to the State through a Subordination Agreement. The Subordination Agreement identifies which rights have been subordinated and which rights have been retained by the utility company.

10-1.04 Subsurface-Utility Engineering

Subsurface-utility engineering represents a more-thorough investigation of the horizontal and vertical alignment of an underground utility facility. This information can be used to eliminate unnecessary utility adjustments/relocations and, therefore, minimize total project costs.

Subsurface-utility engineering is especially useful where the right of way is limited, and it is expected that the underground may be congested by a variety of different facilities, such as in a high-density urban area. Benefits are usually gained in construction phases by the utility company and by the project contractor.

However, to gain the greatest benefit, the subsurface-utility engineering needs to be done very early in the project design cycle. By utilizing the information from the subsurface-utility engineering report, the designer can make reasonable adjustments to the proposed design which may eliminate the need to relocate/adjust the utility. Potentially, this process can help reduce total project costs and

streamline some of the construction process because the contractor should have more definitive information on utility location.

Subsurface-utility engineering usually involves the process as follows.

1. Utility records are reviewed to determine the extent and type of utilities that should be encountered during the designating phase.

2. Utility facilities are designated in the field. This involves a relatively precise location of the utility facility regardless of the materials or products used by the utility company. These designations are then field surveyed so that the locations can be added to the construction plans.

3. At certain points identified on the construction plans as potential conflict points, the utility facility is exposed so that the vertical alignment can be determined. From this information, determinations can be made on the necessary extent of utility adjustments/relocations and/or what, if any, design changes can be made to lessen the impact of the project on the utility facility.

10-1.05 Utility Coordination

Section 10-2.0 provides the Department's guidelines for coordination with a utility company.

10-2.0 UTILITY COORDINATION

10-2.01 Introduction

There are many factors that dictate the level of effort required to coordinate a specific utility relocation. These include the type and condition of utility facility, potential impact to the project, and knowledge of the location.

Because of the many factors involved, the uniqueness of each project, and its impact on utilities, it is not practical to provide exact definitions of the level of effort required for each project. The intent of the coordination process is to resolve all utility issues during the design phase and, therefore, provide a better product for the contractor.

Responsiveness received from utility companies with respect to a highway project varies considerably. Most utility companies respond in a timely manner. However, utility companies have their own priorities and, unfortunately, sometimes it becomes necessary to contact a company several times to receive the required response. Part of the intent of these guidelines is to establish

benchmarks on what is reasonably expected when the designer is faced with an unresponsive utility company.

10-2.02 Utility Coordination Factors

When coordinating with a utility company, the designer should consider the following.

1. Utility Type. The type of utility facility encountered includes electric, water, sanitary sewer, gas and petroleum (or other product lines), or communication (e.g., telephone, cable TV). Each utility type can present unique situations or conflicts.

2. Impacts. There are many types of potential utility impacts due to poor coordination. These may include the following:

    a. the impact to the project schedule if a utility is in conflict with construction and the project is delayed because of this;

    b. the impact to construction workers who might strike a buried utility line;

    c. the impact to the users of the utility if a line is struck; or

    d. environmental consequences and disruption to essential (e.g., national defense, airport) communication links.

3. Location. The exact location of an underground utility has a direct correlation on the potential impact of that facility on the project. Utility-relocation problems may delay the contract work if the right of way is set so tight that there is inadequate room for all the utilities. The designer should make sure that all utilities are shown on the plans as correctly as possible.

The type of facility, potential impact, and knowledge of location are closely interrelated, and the combination of these factors is an indication of the level of effort is required to properly coordinate utilities.

10-2.03 Utilities Coordinator

The utilities coordinator for each type of work will be as follows:

1. The Production Management Division's Utilities Team is responsible for State-route projects developed in-house and by consultants.

2. The district Office of Design is responsible for a district-developed project.

3. The designer is responsible for State-route traffic work in a separate contract from road or bridge work.

4. The design consultant is responsible for a local-agency Federal-aid project.

When completing the utility-coordination-status questionnaire on the Memorandum to Office of Contracting form, if the designer does not have responsibility for utility coordination, he or she should contact the person who is responsible in the Production Management Division's Utilities Team. The designer should not contact a utility company for this information if he or she is not responsible for the coordination.

10-2.04 Certification

The utilities coordinator must complete a Utility Coordination Certification. The Certification must be transmitted with the final tracings, special provisions, estimates, and other final documents. The Certification ultimately becomes the property of the Contract Administration Division's Office of Contracting, which retains it in its contract file. A contract will not be advertised for letting without a fully executed Utility Coordination Certification form.

10-2.05 Utility Coordination Process, Design Timeframe of 12 Months or Longer - Design Phase

The following coordination process should be used, unless a waiver is approved to use the process for a short-term project as described in Sections 10-2.06 and 10-2.07, or a complete waiver of process is approved as described in Section 10-2.08.

10-2.05(01) Responsibilities

For a State-route project, the typical assignment of responsibility for the steps in Section 10-2.05(02) is as follows:

1. Step 1: Party preparing project scope.

2. Step 2: Surveyor.

3. Steps 3 - 6: Designer. The Utilities Team will participate in meetings and assist with follow-up.

4. Steps 7 - 11: Utilities Team.

For a local-agency Federal-aid project, the design consultant is responsible for all steps. The Utilities Team will be available for advice.

10-2.05(02) Process Steps

The steps for a long-term-design project are as follows:

1. Identify and include a complete list of all affected utilities in the preliminary project reports (e.g., Engineers' Report). The locations of the utilities and all significant impacts should be included in the report. If the owner of the utility is evident from a field investigation, also include this information in the report.

2. Prior to conducting a field survey, prepare a list of all existing utilities including names, addresses, and telephone numbers. Contact each utility company and request that they field-locate their facilities. The field-located facilities will be shown on the survey and ultimately shown on the plans. Ensure that each utility company has actually field-located its facilities.

3. Send approved Grade Review Plans to each utility company for the purpose of requesting verification that its facilities are accurately shown. All utility locations, types, and sizes should be shown and verified.

4. Set-up a coordination meeting with each utility company early in the design phase (approximately 25% complete). This will allow the designer to work the utility company to develop alternatives where there are conflicts and to find the most cost-effective solution for all parties.

5. Distribute Preliminary Field Check plans to the utility companies and invite them to the field check.

6. Conduct the field check with the utility companies participating. Discuss any right-of-way needs.

7. After design approval, distribute plans with a tentative project schedule to each utility company. Also, request submittal of the relocation plan with an estimated relocation schedule. All revisions affecting utilities must be sent to the affected utility companies.

8. Written documentation is required for all utilities whether relocations are required or not.

9. Review each relocation plan and schedule to verify that all conflicts are resolved. At the appropriate time, INDOT or the local agency will provide written notice for the utility to proceed. Hold a meeting, if necessary, to resolve location or constructability issues.

10. Distribute two copies of the utility company's written notice to proceed with the approved utility-relocation plan to the appropriate district office.

11. Provide each utility company, along with contract documents, not later than 90 days prior to the contract letting, the items as follows:

    a. utility contact with telephone number;

    b. utility-relocation plan and/or verbal description of relocation if relocation is necessary;

    c. total schedule for relocation, if relocation is necessary, including material delivery, weather restraints, pre-work requirements, coordination issues, need for right-of-way staking, and construction time; and

    d. Utility Coordination Certification.

The Utility Coordination Certification, signed by the designer or other person responsible for utility coordination, should state that all utility companies have been contacted and that the included relocation plans address the relocation of all facilities known to be in conflict with the project. Figure 10-2A provides a Sample Utility Special Provision. Figure 10-2B provides a Utility Coordination Certification. An editable version of this form may also be found on the Department's website at www.in.gov/dot/div/contracts/design/dmforms/.

10-2.06 Utility Coordination Process, Design Timeframe of Shorter than 12 Months (Short-Term Project) - Design Phase

This process may only be used for a project which is granted a waiver by the district development engineer, the Production Management Division's Design Team leader, or the Utilities Team leader. Figure 10-2C provides a Utility Coordination Certification for Short-Term Project which includes the waiver request. An editable version of this form may also be found on the Department's website at www.in.gov/dot/div/contracts/design/dmforms/.

10-2.06(01) Responsibilities

The typical assignment of responsibility for the steps in Section 1-2.06(02) is as follows:

1. Step 1: Party preparing project scope.
2. Step 2: Surveyor or designer.
3. Steps 3 - 8: Designer. The Production Management Division's Utilities Team will be available for advice.

The Utilities Team is responsible for Steps 3-8 for a bridge-rehabilitation project.

10-2.06(02) Process Steps

The steps for a short-term-design project are as follows:

1. The district office will identify and include a complete listing of all affected utilities in the project data sheets and preliminary project reports. The locations of the utilities and all significant impacts should be included in the report. If the owner of the utility is evident from field investigation, this should also be included in the report.

2. At the time the field survey is being conducted, prepare a list of all existing utilities including names, addresses, and telephone numbers. Contact each utility company and request that it field-locate its facilities. The field-located facilities should be shown on the survey and ultimately shown in the contract documents. Ensure that each utility company has actually field-located its facilities. If a field survey is not conducted, utility locations should be discussed and verified during the field check (Step 4.) Add verified locations to the plans as appropriate. Calling the Indiana Underground Plant Protection Service and local utilities for locations prior to the field check may also be desirable if no field survey is conducted.

3. Distribute field check plans to the utility companies and invite them to the field check(s). See Section 10-2.06(03) for the procedure for a bridge-rehabilitation project.

4. Conduct field check with the participating utility companies. At this time discuss possible conflicts, relocation, and any right-of-way needs. See Section 10-2.06(03) for the procedure for a bridge-rehabilitation project.

5. Distribute plans, after design approval, with tentative project schedule to each utility company, requesting submittal of the relocation plan with estimated relocation schedule. See Section 10-2.06(03) for the procedure for a bridge-rehabilitation project. All revisions affecting utilities must be sent to the affected utility companies.

6. Written documentation is required for all utilities whether relocations are required or not.

7. Review the relocation plan and issue notice for the utility company to proceed.

8. Provide each utility company, along with contract documents prior to the contract letting, the items as follows:

   a. utility contact with telephone number;

   b. utility relocation plan, or verbal description of relocation if relocation is necessary;

   c. total schedule for relocation, if relocation is necessary, including material delivery, weather restraints, pre-work requirements, coordination issues, need for right-of-way staking, and construction time; and

   d. Utility Coordination Certification.

   The Utility Coordination Certification, signed by the designer or other responsible person responsible for utility coordination, should state that all utility companies have been contacted and that the included relocation plan addresses the relocation of all facilities known to be in conflict with the project. Figure 10-2C provides a Utility Coordination Certification for Short-Term Project.

10-2.06(03) Bridge-Rehabilitation Project

A bridge-rehabilitation project has unique qualities and benchmarks that prevent it from exactly conforming to the sequence of steps for this process. A field check held for the purpose of preparing an inspection report, and a field check is held near the end of the plan development process. Neither of these meetings are appropriate times to perform the utility coordination outlined in Section 10-2.06(02), Steps 3 and 4. Once preliminary plans are developed, transmit these plans to the Production Management Division's Utilities Team. The number of copies of plans sent for utility coordination must equal the number of utilities plus one copy for the Utilities Team. The Utilities Team will then set up a field check to be attended by the utility companies, the designer, and a representative from the Utilities Team. The preliminary plans distributed for the field check are also to be used by the utility companies for development of relocation plans and schedule as outlined in Step 5. A second distribution of plans to the utility companies as is indicated in Step 5 will not be required.

10-2.07 Utility Coordination Process, Design Timeframe of Shorter than 12 Months

(Short-Term Project) - Traffic Signal Project Design Phase

A traffic signal project has unique qualities and benchmarks that prevent it from exactly conforming to the sequence of steps for the Utility Coordination Process for Short Term Project outlined in Section 10-2.06. Figure 10-2C, Utility Coordination Certification for Short Term Project, will be used for such a project. The Traffic Engineering office manager will sign the waiver.

The steps for a traffic signal project are as follows:

1. The district office will identify and include a complete list of all affected utilities and the owners of the utilities in the project data sheets and preliminary project reports. The location of the utilities and all significant impacts should be included in the report.

2. The designer will contact the Indiana Underground Plant Protection Service and the utility companies at least once before the preliminary field inspection for locating utilities prior to the field inspection. Each utility company is responsible for field-locating its existing facilities. The designer is responsible for ensuring that this happens. Show all utilities on the preliminary field inspection plans. If, in the preliminary field inspection, a utility company does not locate its facilities, location of said facilities should be discussed and verified at the final field inspection.

3. The designer will invite each utility company to attend the final field inspection. Send the invitation at least two, and preferably three, weeks before the final field inspection. Provide the design plans to each utility company before or at the final field inspection.

4. Conduct final field inspection with the utility companies participating. At this time, discuss possible conflicts and relocations and verify locations of utilities. Each utility company must verify the location of its facilities and submit revisions to the designer no later than three weeks after the final field inspection.

5. The designer should request that each utility company needing to relocate its facilities submit a utility-relocation plan and estimated relocation schedule. The utility company should be given at least 30 days to do this. All revisions affecting utilities will be sent to the affected utility companies.

6. Written documentation is required for all utilities whether relocations are required or not.

7. Review the relocation plan and issue notice for the utility company to proceed.

8. Provide each utility company, along with contract documents prior to the contract letting, the items as follows:

a. utility contact with telephone number;

b. utility relocation plan, or verbal description of relocation if relocation is necessary;

c total schedule for relocation, if relocation is necessary including material delivery, weather restraints, pre-work requirements, coordination issues, need for right-of-way staking, and construction time; and

d. Utility Coordination Certification.

The Utility Coordination Certification, signed by the designer, should state that the utility company has been contacted and that the included relocation plan addresses the relocation of all facilities known to be in conflict with the project. Figure 10-2A provides a Utility Coordination Certification for Short Term Project.

10-2.08 Complete Waiver of Process

Work such as herbicide treatment, mowing, raised pavement markers, traffic striping, sweeping, etc., which normally have no utility involvement may be granted a complete waiver from the utility coordination process. The waiver must be signed for approval by the district development engineer, the Production Management Division's Design Team leader, or the Utilities Team leader. See Figure 10-2D, Utility Coordination Certification Waiver form. An editable version of this form may also be found on the Department's website at www.in.gov/dot/div/contracts/design/dmforms/.

10-2.09 Level of Effort

10-2.09(01) Process Steps

The listed step number corresponds to the step number of the Utility Coordination Process for a long-term-design project as described in Section 10-2.05. The discussion can also be applied to Sections 10-2.06 and 10-2.07 for a short-term project. The level of effort required for each step is described below.

1. Step 1. Provide a general description of the locations of all visible utilities in the report. If the owner of the utility facility is evident in the field, include this information in the report. Also, it may be obvious that there are other utilities in an area but there might not be visible appurtenances. Therefore, contact the applicable local government unit, the appropriate district office, or the Production Management Division's Utilities Team to obtain the name of the utility company so that a description of the location of the facilities can be given in the report. All significant impacts or concerns involving utilities must be described. Research

required, beyond what can de done in the field to obtain utility locations and utility-company names, should be kept to a reasonable minimum. The intent of this step is not to have the writer of the report spend a significant amount of time doing utility research.

2. Step 2. All utility facilities must be located and shown on the plans. Compile a list of all existing utility companies including names, addresses, and telephone numbers. Use the list of utility owners supplied in the preliminary project report as a starting point for this step. Contact the Underground Plant Protection Service for a list of underground utilities in the area. Not all utility companies subscribe to this service, so the records at the county courthouse also must be checked. All underground utilities are listed with the county recorder. This listing is arranged by civil townships.

   All identified utility companies must be contacted to field locate their facilities in order that they may be located by the survey crew. If, upon arrival at the site, it is discovered that a utility company has not responded to the request, contact it immediately to provide this service at least one more time. If the utility company marks its facilities prior to the survey crew leaving the site, the survey crew should note the markings. If the utility company does not mark its facilities prior to the survey crew leaving the site, there is nothing else the survey crew must do. Each unresponsive or uncooperative utility company should be documented.

3. Steps 3 and 4. All utility companies must be sent plans and be invited to the coordination meeting. It is up to the utility company to attend or not. It is recommended, however, to contact by telephone and advise each utility company that will have significant involvement in the project to attend the meeting.

4. Steps 5 and 6. All utility companies should be sent plans and be invited to the preliminary field check. It is up to the utility company to attend or not. It is recommended to contact by telephone and advise each utility company that will have significant involvement.

5. Steps 7-10. A response from each utility company is required. The effort required for these steps are the hardest to define in terms of what is required to comply with the intent of the coordination process if there is an unresponsive utility company. The level of effort required for coordination depends upon the factors listed earlier. Because each situation can be unique, no specific guidelines have been established. However, Section 10-2.09(02) provides examples which show what levels of effort should be used to obtain a response from the utility company.

   If an unresponsive utility company is encountered, it will be up to the utility coordinator to assess the situation and determine what level of effort and what steps should be taken to meet the intent of these guidelines. The utility coordinator should also note the following:

a. If unable to make contact with a utility company, ensure that the proper person is being contacted and that the telephone number is correct.

b. If at least one other individual is known at the utility company, consider contacting that individual to determine how to get cooperation from the unresponsive individual.

c. Provide reasonable time frames for relocation-plan return dates. For a large road project or other project with major utility involvement, each utility company should be sent plans to develop its relocation plan at least a year in advance of the ready-for-letting date. For another project type (excluding a short-term project), plans should be sent at least six months in advance of the ready-for-letting date when asking for a relocation plan. For a short-term project, because it is not possible to give each utility company a long advance notice, make every effort to provide the utility company with a reasonable amount of time to respond to the request.

6. Step 11. The information to complete this step should have been obtained in the previous steps. Therefore, supply this information to the proper personnel.

10-2.09(02) Examples

The following examples are provided to show what level of effort should be used to address an unresponsive utility company.

Example 10-2.1 Several power poles are located within the project limits. From field observations it is apparent that neither the poles nor the lines attached to them should conflict with the project. All facilities are visible and a reasonably accurate decision may be made that no conflict exists. Thus, if the utility company does not respond to the letter sent, it would not be productive to try to contact it more than two or three times to elicit a reply. If no response is ever received from the utility company, a letter should be sent notifying it that the assumption is being made that there is no conflict with its facilities and that it will be liable for any delay to the project if there is a conflict. Or, at a minimum, documentation of the attempted communication should be kept if a problem later develops.

Example 10-2.2 A cable-TV line is attached to poles owned by an electric company. The electric company will be moving its poles to accommodate construction of the project. The cable TV company has not provided a relocation plan even though it has been contacted twice after the letter requesting a relocation plan was sent. It appears fairly obvious that the cable company will have to move

with the electric company, but it just will not respond to the request to submit a letter that this is what it intends to do. A notice to proceed with relocation should be sent to the utility company. This notice should include a statement that the utility company will be liable for any delay to the project if it does not relocate in a timely manner.

Example 10-2.3

An overhead telephone line is present within the project limits. It is apparent that the poles will be in conflict with the project. The utility company has not submitted its relocation plan by the date requested. The utility company has been called twice since that date and has not responded back with a relocation plan or a reason on why its submission is late.

Because a conflict is evident, make every effort to contact the utility company by telephone or other means. If after trying to contact the utility company up to four or five more times over a period of a month, and a response has still not been received, a letter from the project owner should be sent notifying the utility company that its facilities are in conflict with the project and that action will be taken against it if it does not proceed with developing its relocation plan and relocating its facilities.

If no response is received after this, the matter should be turned over to the project owner to pursue with its attorneys or however it deems necessary. At this point, the utility coordinator has fulfilled his/her obligations in this matter. The only further obligation would be if the utility company does respond and submits a relocation plan. The coordinator would have to resume his/her coordination per normal procedures. The Production Management Division's Utilities Team may also be contacted for advice in such a matter.

Example 10-2.4

A water main exists within the limits of a road project. The line is known to run the length of the project either under or near where new pavement will be placed. No other details of location of the main or service lines are known. It is not known if there is a conflict or not. Whether there is a conflict or not would depend on the location and condition of the main and the service lines.

The utility company has not submitted its relocation plan by the date requested. The utility coordinator has contacted the utility company and was told that the utility company would get right on it and have plans submitted within two weeks. Three weeks have passed and a relocation plan has still not been received. During the next three weeks, five telephone messages have been left with the utility company, but none of the calls has been returned.

It is necessary to obtain a response from the utility company due to the possible consequences if a conflict exists. A letter from the project owner must be sent notifying the utility company that its facilities are likely in conflict with the project and action will be taken against it if it does not proceed with developing its relocation plan and relocating its facilities. If no response is received, the utility coordinator has fulfilled his/her obligation and the matter should be turned over to the project owner to pursue.

Example 10-2.5

A high-pressure gas transmission line crosses under the road at one location within the limits of a road project. It appears that there might not be a conflict because only minimal work is being done above the pipeline. However, there will be a need for heavy construction machinery to traverse over top of the area where the lines are located during construction.

The utility company has been contacted but has indicated that it is too busy to spend the time to review the project plans and make an assessment of the situation. The utility company has indicated that it will be at least 6 months before it will have a chance to do a review. Unfortunately, this is not in accordance with the schedule for the highway project.

Even though the utility is present only at a spot location, due to the type of utility facility involved, a response would be necessary from the utility company. Also, gas transmission and other pipeline utilities have stringent regulations that sometimes result in relocations where it might not be readily apparent that there would need to be one. Pipeline relocations can also tend to be costly, take a considerable amount of time and be subject to seasonal constraints. Thus, it would be beneficial to receive an early response from the utility company.

The utility company is communicating, but it is not willing to meet the highway project schedule due to its own priorities. It would be best to inform the utility company why it is to its advantage to spend some time to at least perform an analysis to see if a conflict exists or not. For instance, if a conflict is identified early enough, the project plans or special provisions could be altered to accommodate the utility without the utility having to make any adjustment to its facilities. If the utility company waits until the last minute, there will be much less flexibility to make changes. Therefore, a short amount of time spent now could save a large amount of time later. It is always best to try to demonstrate to the utility company the advantages of coordinating in a timely manner.

If the incentive method doesn't work, then more forceful methods would need to be pursued as listed in the Examples 10-2.3 and 10-2.4.

10-3.0 UTILITY ACCOMMODATION POLICY

10-3.01 Introduction

10-3.01(01) Purpose

The policies and principles in this Section should be used to control the utility occupancy of public-highway right of way, including easements, under INDOT's jurisdiction. This includes local-public-agency work which uses Federal-aid funds administered by INDOT.

INDOT has the responsibility to maintain highway right of way under its jurisdiction as necessary to preserve the integrity, operational safety, and function of the highway facility. Because the manner in which utilities cross or otherwise occupy highway right of way can materially affect the appearance, safe operation, and maintenance of the highway, it is necessary that this use and occupancy be authorized and reasonably regulated.

This policy is provided to develop and preserve a safe roadside and to minimize possible interference and impairment to the highway, its structures, appearance, safe operation, construction, and maintenance.

10-3.01(02) Application

This policy applies to all public and private utilities including electric power, telephone, telegraph, cable television, water, gas, oil, petroleum products, steam, chemicals, sewage, drainage, irrigation, and similar lines that will be located, adjusted, or relocated within the right of way under the jurisdiction of INDOT. The utilities may involve underground, surface, or overhead facilities, either singularly or in combination.

10-3.01(03) Scope

This policy is provided by INDOT for use in regulating the location, design, and methods for installing, adjusting, accommodating, and maintaining utilities on highway right-of-way. It is limited to matters which are the responsibility of highway authorities for preserving the integrity of the highway and its safe operation.

Where laws or orders of public authority (such as the Indiana Utility Regulatory Commission, the Indiana State Board of Health, or the requirements of the Federal Natural Gas Pipeline Safety Act of 1968), industry or governmental codes prescribe a higher degree of protection or standards than those described herein, the higher degree will prevail.

10-3.01(04) Other Requirements

All utility installations and construction must comply with the requirements contained herein, the INDOT *Standard Specifications*, the *Manual on Uniform Traffic Control Devices*, and the clear-zone requirements described in Chapter Forty-nine.

10-3.01(05) Exceptions

Throughout this policy, there are several instances where the phrase "exceptions may be permitted in accordance with Section 10-3.01(05)" is used. These denote where INDOT tends to receive the most requests for exceptions to this policy. However, exceptions not only to these provisions, but any provision contained in this section may be authorized by the INDOT Chief Engineer, where it is demonstrated that extreme hardship or unusual conditions provide justification and where alternative measures can be prescribed to fulfill the intent of this policy. All requests for exceptions must include an evaluation of the direct and indirect design, environmental and economic effects, including impacts on agricultural lands, which would result if the installation is permitted and a comparison to the results if it is not permitted, plus any other pertinent information.

10-3.01(06) Prior Instructions

This policy supersedes and replaces all policies or portions of policies pertaining to the accommodation, location and methods of utility installations, adjustments and maintenance which are in conflict.

10-3.02 Definitions

The following definitions apply to utility accommodation.

1. Utility. This term applies to all publicly-, privately-, or cooperatively-owned lines and/or their accessories within the highway right of way except those used for highway-oriented needs. Such utilities may involve underground, surface, or overhead facilities either singularly or in combination. The term Utility, when capitalized, means the utility company, including any wholly-owned or -controlled subsidiary. Public utilities are generally

considered those which convey a product, power, or communication from the Utility to a customer. Private lines are generally considered those which are devoted exclusively to private use.

2. Low-Volume Highway. Any non-limited-access highway which carries a traffic volume of not more than 750 vehicles per day, and, if known, upon which the projected traffic volume at the design year is not anticipated to exceed 1300 vehicles per day.

3. Utilities Team. The team in the Production Management Division responsible for identifying potential utility conflicts in a highway project and coordinating with those utility companies to make adjustments or relocations as needed.

4. Permits Team. The team in the Contract Administration Division responsible for issuing a permit to a Utility for the construction, rebuilding ,or repair of utility lines and facilities on highway right of way.

5. Relocation Permit. The written permission provided to a Utility by the Utilities Team and/or district office which allows the Utility to relocate existing facilities to accommodate highway construction or maintenance.

6. Right-of-Way Permit. The written permission by INDOT which allows the use and occupancy of highway right of way for utility lines and/or facilities.

7. High- or Low-Pressure Gas Line. A high-pressure gas line is that which is generally operated at a pressure in excess of 415 kPa. A low-pressure gas line is that which operate at 415 kPa or lower.

8. Pavement Structure. The combination of the surface, intermediate, and base courses, subbase, and up to 200 mm of stabilized subgrade material which supports the traffic load and distributes it to the roadbed. A maximum of 200 mm of subgrade stabilization will be considered a part of the pavement structure.

9. Highway, Street, or Road. A general term denoting a public way for purposes of vehicular travel, including the entire area within the right of way.

10. Roadway. The portion of a highway, street, or road, including shoulders, intended for vehicular use. A divided highway has two or more roadways.

10-3.03 General

10-3.03(01) Permits

Each public utility company has a qualified right to occupy public right of way, subject to the control of INDOT or other agencies with jurisdiction of the right of way. This control is exercised by requiring a right-of-way permit for each point or area of use by a utility facility. This will ensure compliance with the standards, policies, and methods promulgated by INDOT and will make possible the safe control of traffic movement, safety, and coordination of work with other utilities and highway maintenance or construction work.

A utility company's occupancy request may be initiated as follows.

1. Utility-Company-Initiated. A utility company initiates the request if it wants to install new facilities or adjust existing facilities within highway right of way. The utility company must obtain a permit through the appropriate district or subdistrict office. A fee is charged for the permit.

2. INDOT-Initiated. INDOT initiates the request if a utility must be relocated or adjusted to accommodate proposed highway construction, reconstruction, or maintenance. This work is coordinated by the Utilities Team or the appropriate district office.

All utility facilities within the existing or proposed right of way are identified while the project is in the design stage. All affected utility companies receive plans of the proposed highway construction and are notified if relocation is necessary. Each utility company must coordinate relocations with, and obtain a relocation permit from, the Utilities Team or the appropriate district office. No fee is charged for the permit.

If the utility company does not complete its adjustments or relocations in a timely manner, INDOT may claim damages from the utility company for delay of highway work. In the event of delay, INDOT may also perform the necessary work itself or through a contractor and bill the utility company for all costs associated with this work.

The utility company must identify and obtain any other necessary permits or authorizations for the installation, which may be required from the U.S. Army Corps of Engineers, the Indiana Department of Natural Resources, railroad companies, or others. INDOT may require the utility company to produce satisfactory evidence that these permits and authorizations have been obtained.

10-3.03(02) Driveway Conflict

Construction, reconstruction, modification, or relocation of a private drive on highway right of way may also require adjustment or relocation of utility facilities. Where the work on the drive is

initiated by is or incidental to a highway project, the adjustment or relocation of the utility will be treated like any other highway-initiated work.

Where the work on the drive is initiated by a private owner, subject to INDOT approval, INDOT is not responsible for identifying or resolving any conflicts between the drive and utilities. If a conflict exists and there is no other practical location for the drive, the utility must be adjusted or relocated. The division of costs, if any, for this work will be resolved between the utility company and the owner of the drive.

10-3.03(03) Private Line

Because a private line serves only its owner, it is not in the public interest for it to be located within highway right of way. A longitudinal installation of a private line is not permitted. Exceptions may be made in accordance with Section 10-3.01(05) where public interest can be demonstrated. A crossing of highway right-of-way by a private line may be permitted subject to INDOT control. A private-line installation must be in accordance with all other applicable requirements included herein.

10-3.03(04) Service Line

A service line is a special class of private line. Whether the public-utility facility is on or off highway right-of-way, the sole reason for a service line to be on highway right-of-way is to facilitate its connection with a public utility. Because it is in the interest of both the customer and utility company to have these connections, a service line is permitted on highway right-of-way whenever practical.

There is a wide variation among utility companies on the division of ownership, costs, and responsibility between them and their customers for the portion of the service line on highway right-of-way. INDOT neither seeks nor desires to regulate this relationship. However, the utility company clearly benefits from the service line. As a practical consequence of effectively regulating utility occupancy of highway right-of-way, the utility company must at a minimum co-sign any service line permit. Each utility company must determine the proper division of costs, if any, with each customer.

10-3.03(05) Access Control

INDOT has the authority to control and regulate access to each highway under its jurisdiction. A large public investment has been made to construct and maintain a safe and efficient highway

system. A major objective is to limit interference with vehicles or pedestrians which are entering, exiting, or crossing the highway. Access control includes the categories as follows.

1. Non-Limited Access. INDOT has the authority to regulate the location and details of access which affect the safe operation of the highway. However, it has not purchased access control rights from adjoining properties. This level is typical of a highway with frequent drives or intersections.

2. Partial Limited Access. INDOT has declared or purchased access control from adjoining properties. Access is controlled to give preference to through traffic, but there may still be some intersecting streets at grade and some driveway connections. This level is typical of a divided highway with some intersections or drives.

3. Full Limited Access. INDOT has purchased access control rights from adjoining properties. Access is controlled to give priority to through traffic by providing access only from selected public roads, by prohibiting crossings at grade, and by prohibiting driveway connections. This level is typical of an Interstate highway or a divided highway.

The type of access control is not always apparent from visual inspection. The appropriate district office should be contacted to confirm the type of control in effect for a specific location. This determines the type and extent of utility installations which may be permitted. The access-control line is the limit at which access is physically controlled for limited-access right of way. The access-control line is normally but not always in the same location as the right-of-way line.

10-3.03(06) Location

The following applies to the location of utility lines.

1. Utility lines must be located to avoid or minimize the need for adjustment for future highway improvements and to permit access to the utility lines for their maintenance with minimum interference to highway traffic. Full consideration must be given to the measures necessary to preserve and protect the maintenance, operation, safety, and aesthetic characteristics of the highway.

2. Utility installations on an urban street with closely abutting improvements must be resolved consistent with the prevailing limitations and conditions.

3. Utilities should cross a roadway at right angles or as nearly as practical to right angles. Reasonable latitude may be exercised for existing utilities which are otherwise qualified to remain in place.

4. Underground utility crossings which are encased should be constructed to allow for replacement of the lines within the existing encasement if the existing line ruptures.

5. For utility crossings on a limited-access highway, all supporting structures and above-ground appurtenances should be located outside the access-control line and, preferably, outside the right-of-way line. Installation and maintenance must be from non-limited access frontage roads, crossroads, or streets where practical or otherwise from outside the access-control line and, preferably, outside the right-of-way line of the through-traffic roadway. Exceptions may be allowed in accordance with Section 10-3.01(05) for an unusually wide right of way or median.

6. Longitudinal installations must be located on uniform alignment as near as practical to the right-of-way line to provide space for future highway construction and for possible future utility installations. Where irregularly shaped portions of the right of way extend beyond the normal right-of-way limits, variances in the location from the right-of-way line may be allowed as necessary to maintain a reasonably uniform alignment for longitudinal utility installations. Above-ground longitudinal installations are not permitted in a highway median.

7. Longitudinal installations on a highway with partial access control are generally discouraged. Installations may be allowed in accordance with Section 10-3.01(05) and the following conditions.

    a. Individual service connections will be permitted only if no other reasonable alternative exists. Factors to be considered include distance between distribution points, terrain, cost, and prior existence.

    b. Utility maintenance points, such as manholes, must be installed outside of the right of way wherever practical.

8. Longitudinal installations on a highway with full access control are not permitted. Exceptions may be allowed in accordance with Section 10-3.01(05) and the following conditions:

    a. individual service connections may not be permitted;

    b. the utility must not be installed or serviced by direct access from the limited-access roadway or connecting ramps; and

    c. the utility must not interfere with or impair the safety, design, construction, operation, maintenance, stability, or future expansion of the highway.

2. Wireless telecommunication towers may be permitted in highway right-of-way with partial- or full-access control in accordance with Section 10-3.06.

10-3.03(07) Design

The following applies to the design of a utility installation.

1. The utility company is responsible for the design of the utility facility to be installed within the highway right-of-way or attached to a highway structure. Full consideration must be provided to the measures necessary to preserve and protect the maintenance, operation, safety, and aesthetic characteristics of the highway.

2. Utility installations on, over, or under the highway right of way must, at a minimum, be in accordance with the following:

    a. electric power and communication facilities must be in accordance with the National Electric Safety Code;

    b. water lines must be in accordance with the applicable specifications of the American Water Works Association;

    c. pressure pipelines must be in accordance with the applicable sections of the American National Standards Institute (ANSI) Code for Pressure Piping; 49 CFR Parts 192, 193 and 195; and any applicable industry codes;

    d. liquid petroleum pipelines must be in accordance with the applicable recommended practice of the American Petroleum Institute for pipeline crossings under a railroad or highway; and

    e. any pipeline carrying hazardous materials must be in accordance with the rules and regulations of the U. S. Department of Transportation governing the transportation of such materials.

3. Each utility installation on, over, or under highway right of way, or attachment to a highway structure should be of durable materials designed for a long service life expectancy, and be relatively free from routine servicing and maintenance.

4. On a new installation or adjustment of an existing utility line, provisions should be made for known or planned expansion of the utility facilities, particularly those located underground or attached to a bridge. They should be planned to minimize hazards and interference with highway traffic if additional overhead or underground lines are installed at some future date.

5. Utility lines which are attached to a highway bridge or separation structure must have shut-off valves, automatic where practical, installed at or near the ends of the structure, unless segments of the lines can be isolated by other devices within a reasonable distance.

10-3.04 Structure

10-3.04(01) Utility Structure

Where it would be more economical to carry one or several utility lines across a highway in a tunnel or on a bridge rather than in separately trenched and encased crossings, consideration should be given to using a separate structure specifically for the utility crossing. Such a structure may serve a joint purpose as a utility and pedestrian facility and/or sign support structure.

Each utility company must agree that any maintenance, servicing, or repair of its utility lines will be its responsibility. Further, the cost of designing, constructing, and maintaining the utility tunnel or bridge must be divided among the utility companies in an agreed, equitable manner. INDOT will participate in these costs only to the extent that the utility company would otherwise normally be reimbursable for such work or to the extent that the structure is also used for highway purposes.

10-3.04(02) Highway Structure

The following applies to the attachment of utility lines to a highway structure.

1. The attachment of utility lines to a highway bridge or separation structure is discouraged. Such attachments can materially affect the durability and load capacity of the structure, the safe operation of traffic, the ease of maintenance, and the overall appearance.

2. Exceptions are permitted in accordance with Section 10-3.01(05) and the following criteria. Each attachment will be considered individually and must not be considered a precedent for granting of any subsequent requests for attachment.

    a. Communication Line. Where it is impractical to carry a communication line across a stream or other obstruction, INDOT may permit attachment of the line to its bridge. On an existing bridge, the line must generally be carried in conduit and located so as not to interfere with stream flow, traffic, or routine maintenance operations. If a request is made prior to construction of a bridge, suitable conduit will be provided in the structure if the utility company bears the cost of all additional work and materials involved and all other applicable requirements have been met.

b. Gas or Petroleum Line. A line carrying these or other hazardous, explosive, or highly pressurized or heated materials must not be attached to a structure except in extreme hardship. It cannot be installed where it can be impacted by traffic on or under the bridge, nor where a leak could flood a roadway on or under the bridge.

c. Power Line. A high-voltage power line must not be attached to a structure except in extreme hardship. A low-voltage line may be attached where the cost of other solutions is prohibitive. A power line will not be installed where it can be impacted by traffic on or under the bridge.

d. Water or Sewer Line. This line must not be installed where it can be impacted by traffic on or under the bridge, nor where a leak could flood a roadway on or under the bridge.

e. Structural Analysis. Each request to attach a pipeline to an existing bridge must be accompanied by sufficient information to determine the effect of the added load on the structure. If the bridge does not have sufficient strength to carry the load with an adequate margin of safety, the request will be denied. Where the request is to attach a line within or to a new structure, the utility company will be responsible for any increase in the cost of the structure to support the extra load of the pipeline, including any increase in the size or thickness of members necessary to contain lines or conduits installed within the structure.

f. Attachment Details. All requests for attachments must be accompanied by sufficient details of the manner and type of attachment to allow for adequate review and approval by INDOT.

g. Asbestos Materials. Materials contain asbestos should not be used on a utility line attached to a highway structure. Where a utility is located on a highway structure, the utility company shall submit to INDOT on its letterhead, a signed, dated copy of the statement as follows:

> *We hereby certify that no asbestos-containing material was specified as a building material in any construction document for this project.*

In addition, the Contractor's contract should include the statement as follows:

> *Before final payment of the contract price, the Engineer will sign and submit to INDOT, on the Contractor's letterhead, a dated copy of the following statement:*

I hereby certify that to the best of my knowledge that no asbestos-containing material was used as a building material during this project.

3. If an attachment to a structure must be relocated to accommodate highway work or safety, the utility company must apply for a new attachment. Prior existence will not be a basis for reattachment.

10-3.05 Pipeline

10-3.05(01) General

1. Methods of Protection.

   a. General. Each pipeline must provide sufficient strength to withstand internal design pressures and must be of satisfactory durability under the conditions to which it may be subjected and must meet any other applicable codes or industry standards for the type of pipeline and material being transmitted.

   b. Encased. Encasement must consist of a pipe or other separate structure around and outside the carrier line and should be designed to support the superimposed loads of roadway, traffic, and construction equipment. Casing strength must meet or exceed the structural requirements for a drainage culvert. Casing materials must be of satisfactory durability under the conditions to which they may be subjected. A highway crossing must be encased in the interest of safety, protection of the highway and utility, and access to the utility.

      Where casing is used, it must be provided under a median, from top of backslope to top of backslope for a cut section, 1.5 m beyond the toe of slope under a fill section, 1.5 m beyond face of curb in an urban section, or 1.5 m beyond any structure which the line passes under or through. Encasement may be omitted under a median which is substantially wider than standard for such a roadway.

   c. Non-Encased. A non-encased pipeline must provide sufficient strength to withstand internal design pressures and the superimposed loads of the roadway and traffic, including that of construction equipment. A non-encased pipeline crossing a highway must comply with the requirements herein for each type of utility.

2. Manhole, Vault, or Pit. This type of access must be limited to that necessary for installation and maintenance of an underground line. Each must be directly in line with the utility facility, must be of the minimum width and length to accomplish its intended function, and

must comply with any other necessary codes or requirements. It must not be placed or permitted to remain in place in the pavement or shoulders of a high-volume roadway. Exceptions in accordance with Section 10-3.01(05) may be permitted for extreme hardship for a roadway in an urban area. It may also be placed or permitted to remain in place under traffic lanes of a low-volume roadway in an urban area provided steps are taken to minimize such installation and to avoid its location at an intersection. It must be installed flush with the roadway or ground surface and must be of sufficient strength to withstand the superimposed loads of the roadway, traffic, and construction equipment.

3. Depth. As used herein, depth of cover must be to the top of the pipe if non-encased or otherwise to the top of the casing. The depth of an underground line must be as specified herein for each type of utility. Where placement at such depth is impractical or where unusual conditions exist, exceptions to permit other types of protection may be approved as appropriate.

4. Methods of Installation. An underground line to be installed across an existing roadway must be installed by boring, tunneling, or jacking in accordance with INDOT specifications. Where installed by jacking or boring, encasement may be required. A bore pit should be located at least 9.0 m from the edge of the nearest through traffic lane and not less than 6.0 m from the edge of pavement on ramps. On a low-traffic roadway or a frontage road, a bore pit should not be less than 3.0 m from the edge of pavement or 1.5 m from face of curb. Adequate warning devices, barricades, or protective devices must be used to prevent traffic hazards. Where circumstances necessitate the excavation of a bore pit closer to the edge of pavement than established above, concrete barrier rail or another approved device must be installed for protection of traffic in accordance with INDOT criteria (see Chapter Eighty-two). A bore pit must be located and constructed so as to not interfere with highway structural footings. Shoring must be used if necessary.

5. Location. An unsuitable or undesirable location must be avoided. This includes the following:

   a. deep cut;

   b. near footing of bridge or other highway structure;

   c. across at-grade intersection or ramp terminal;

   d. at cross-drain where flow of water, drift, or stream bedload may be obstructed;

   e. within basin or an underpass drained by a pump if the pipeline carries a liquid or liquefied gas; or

f. in wet or rocky terrain where minimum depth of cover would be difficult to attain.

6. Clearance. Vertical and horizontal clearance between a pipeline and a structure or other highway or utility facility should be sufficient to permit maintenance of the pipeline and the other facility.

7. Materials. Each pipeline or casing must provide sufficient strength to withstand the internal design pressure and the dead and live loads of the backfill, pavement structure, and traffic, including construction equipment.

10-3.05(02) High-Pressure Gas or Liquid Petroleum Line

1. Depth of Cover. Each line that is not under the roadway and not within 1.5 m of it must have a minimum depth of cover of 0.75 m if encased, or 0.9 m if not encased.

   Each line that is under the roadway or within 1.5 m of it must have a minimum depth of cover under the pavement surface of 0.75 m if encased, or 1.2 m if not encased. Further, each line must be a minimum of 450 mm or one-half the diameter of the pipe or casing beneath the pavement structure, whichever is greater.

   Each line must have a minimum depth of cover of 1.2 m under a ditch.

   An exception may be authorized for an existing line to remain in place with a reduction of 0.15 m in the depth of cover specified above. A further reduction may be permitted if the pipeline is protected by a reinforced-concrete slab which meets the following requirements.

   a. Width. Three times the pipe diameter but not less than 1200 mm.
   b. Thickness. Minimum of 150 mm.
   c. Reinforcing. Minimum of #13 bars on 300-mm centers, or equivalent.
   d. Cover. Minimum of 150 mm between the slab and top of pipe.

2. Crossing Line. This may be encased or non-encased. However, only a welded-steel line with adequate corrosion protection may be used for a non-encased highway crossing.

3. Vents. One or more vents must be provided for each casing or series of casings. For a casing longer than 45 m, vents should be provided at both ends. For a shorter casing, a vent should be located at the high end with a marker placed at the low end. Vents must be placed at the right-of-way line immediately above the pipeline and situated so as to not interfere with highway maintenance and to not be concealed by vegetation. Ownership of the line must be shown on the vents.

4. Marker. The utility company must place a readily-identifiable and suitable marker immediately above any high-pressure gas or liquid petroleum line where it crosses the right-of-way line, except where marked by a vent.

10-3.05(03) Low-Pressure Gas Line

1. Depth of Cover. Each line that is not under the roadway and not within 1.5 m of it must have a minimum depth of cover of 0.75 m if encased, or 0.9 m if not encased.

   Each line that is under the roadway or within 1.5 m of it must have a minimum depth of cover under the pavement surface of 0.75 m if encased, or 1.2 m if not encased. Further, each line must be a minimum of 450 mm or one-half the diameter of the pipe or casing beneath the pavement structure, whichever is greater.

   Each line must have a minimum depth of cover of 1.2 m under a ditch.

   An exception may be authorized for an existing line to remain in place with a reduction of 0.15 m in depth of cover specified above.

2. Crossing Line. This may be encased or non-encased. A non-encased crossing must be of welded-steel construction with adequate corrosion protection or a plastic line with no joints under or within 1.5 m of the roadway.

3. Vents. One or more vents must be provided for each casing or series of casings. For a casing longer than 45 m, vents should be provided at both ends. For a shorter casing, a vent should be located at the high end with a marker placed at the low end. Vents must be placed at the right-of-way line immediately above the pipeline and situated so as to not interfere with highway maintenance and to not be concealed by vegetation. Ownership of the line must be shown on the vents.

4. Marker. The utility company must place a readily identifiable and suitable marker immediately above any low-pressure gas line where it crosses the right-of-way line, except where marked by a vent.

5. Plastic Line. The maximum size must not exceed industry standards, which is 150 mm to 200 mm. Where plastic pipe is installed without a metallic casing, a metal wire must be installed concurrently or other means must be provided for detection purposes.

6. Location Exception. In an urban area, an existing longitudinal line which can be maintained without violating access control and which is not under the pavement or shoulder of any existing roadway or potential future improvement may remain in place provided that all

other requirements are met, and provided that measures are taken to minimize any future need for cutting the pavement to make service connections on a high-traffic roadway.

10-3.05(04) Water Line

1. Depth of Cover. Each line that is not under the roadway and not within 1.5 m of it must have a minimum depth of cover of 0.75 m.

   Each line that is under the roadway or within 1.5 m of it must have a minimum depth of cover under the pavement surface of 1.2 m. Further, each line must be a minimum of 450 mm or one-half the diameter of the pipe or casing beneath the pavement structure, whichever is greater.

   Each line must have a minimum depth of cover of 0.9 m under a ditch.

   An exception may be authorized for an existing line to remain in place with a reduction of 0.15 m in depth of cover specified above.

2. Crossing Line. Each crossing line must be encased, except for a service line of 50 mm diameter or less. Encasement under an entrance may be omitted in consideration of the type and amount of traffic and the depth, condition, and maintenance responsibility.

3. Plastic Line. Where plastic pipe is installed without a metal casing, a metal wire must be installed concurrently or other means should be provided for detection purposes.

4. Location Exception. In an urban area, an existing longitudinal line which can be maintained without violating access control and which is not under the pavement or shoulder of any existing roadway or potential future improvement may remain in place provided that all other requirements are met, and provided that measures are taken to minimize any future need for cutting the pavement to make service connections on a high-traffic roadway.

5. Appurtenances. Meter pits, sprinkler pits, regulator pits, or other such features must not be located within highway right of way. An exception may be allowed for an existing facility if it does not interfere with proposed highway construction, maintenance, operation, or safety.

6. Drain. One or more drains must be provided for each casing or series of casings. The drain should outlet outside of the roadway area to a natural drainage feature or roadway ditch.

7. Marker. The utility company must place a readily identifiable and suitable marker immediately above any water line where it crosses the right-of-way line.

10-3.05(05) Sanitary Sewer Line

1. Depth of Cover. Each line that is not under the roadway and not within 1.5 m of it must have a minimum depth of cover of 0.75 m.

   Each line that is under the roadway or within 1.5 m of it must have a minimum depth of cover under the pavement surface of 1.2 m. Further, each line must be a minimum of 450 mm or one-half the diameter of the pipe or casing beneath the pavement structure, whichever is greater.

   Each line must have a minimum depth of cover of 0.9 m under a ditch.

   An exception may be authorized for an existing line to remain in place with a reduction of 0.15 m in depth of cover specified above.

2. Crossing Line. A line to be operated under pressure or which does not conform to the material, strength, or cover depths described herein must be encased. Encasement under an entrance may be omitted in consideration of the type and amount of traffic, depth, condition and maintenance, responsibility.

3. Material. New or relocated sewer lines may be of any material which has been proven to be of satisfactory strength and durability in local use, provided all other requirements are met.

4. Non-Metallic Line. Where a non-metallic line is installed without a metallic casing, a durable metal wire must be installed concurrently or other means should be provided for detection purposes.

5. Location Exception. Except where relocation is necessary to clear an existing line from a structure or other highway appurtenance or for other specific reasons, INDOT may permit an existing line to remain in place at any location except longitudinally under through-traffic lanes or ramps of a limited-access highway, provided the line is of satisfactory quality and depth, manholes are adjusted as needed, and provisions are made to ensure that any future service lines will not violate access-control limits or disturb the roadway.

10-3.06 Overhead Power or Communication Line

10-3.06(01) General

1. Type of Construction. A longitudinal line should be limited to single-pole construction. A transverse line should be limited to single-pole construction where practicable, but may also

be approved to use the same type of support as used on the portion of the line immediately adjacent to the highway right of way provided all other requirements herein are met.

2. Vertical Clearance. Except as noted in Item 3.c. below, the minimum vertical clearance for an overhead communication or power line above the highway shall be not less than 5.50 m, and should be greater if required by the National Electric Safety Code or other law or regulation.

3. Location.

   a. In a rural area or at an uncurbed section in an urban area, poles supporting a longitudinal line should be located on a uniform alignment as far from the roadway as possible. Guy wires placed within the right of way should be held to a minimum and should normally be in line with the pole line. Other locations may be permitted for guy poles or wires, but they should not be located within the specified clear zone. At a curbed section in an urban area, poles shall be located as far as practical behind the outer curbs and preferably adjacent to the right-of-way line, but should provide at least 450 mm clearance behind the face of an existing curb or 600 mm behind the face of a proposed curb.

   b. At a crossing, poles will not be permitted in the median or more than 900 mm inside the right-of-way line where practical. An exception may be allowed where the cost of spanning an extreme width is excessive and where poles can be located in accordance with these requirements.

   c. The horizontal or vertical location of an overhead power and communication line relative to a highway bridge or other structure should provide adequate clearance for construction and maintenance activities, where practical.

4. Clear Roadside. Each new utility-pole installation or other above-ground obstruction should be located outside of the appropriate clear zone (see Chapter Forty-nine). If the clear-zone width extends to the right-of-way line, an installation will not be permitted unless approved in accordance with Section 10-3.01(05). An existing installation must be relocated to outside of the clear zone (see Chapter Forty-nine) or obstruction-free zone (see Chapter Fifty-five), whichever is applicable, where they are found within the project limits.

   Guy wires to ground anchors or stub poles should not be placed between a pole and the traveled way where they encroach upon the clear zone.

10-3.06(02) Telecommunication Tower

1. Applicability. These requirements apply specifically to a telecommunication tower placed within highway right-of-way as part of a resource-sharing project. Such tower will typically occupy space within Interstate-route limited-access right of way. A telecommunication tower that is not a part of a resource-sharing project will not be permitted to occupy Interstate-route limited-access right of way. A resource-sharing project is defined as a project undertaken by the State and a telecommunications provider to achieve a common goal of meeting each other's communication needs.

2. Location. Each location site must be in accordance with the following:

   a. adequate sight distance for safe ingress to and egress from the tower site;

   b. the tower should be located outside the clear zone and where it is unlikely to be struck unless shielding already exists. The desirable distance is 25 m; and

   c. there is an adequate pull-off area beyond the shoulder for construction and maintenance of the tower.

   Listed below, in descending order of preference, are the site locations that INDOT will consider.

   a. Priority 1. Vehicle access to the tower site can be obtained from outside the limited-access control roadway. This would include access from a frontage or local road. This also would include access from a ramp to a rest area, weigh station, etc. Where fencing exists, gates should be placed at appropriate locations to provide controlled access to the tower. Gates should be sized to accommodate the type of traffic-maintenance equipment that will access the tower. All gates shall be secured with locks, with keys being distributed to appropriate personnel. A locked-gate access requires an FHWA approval. See Figure 10-3A, Priority 1 Access.

   b. Priority 2. Within an interchange, vehicle access can be obtained from the right-hand side of a diagonal ramp. See Figure 10-3B, Priority 2 Access.

   c. Priority 3. Within an interchange, vehicle access can be obtained from the left-hand side of a diagonal ramp. See Figure 10-3C, Priority 3 Access.

   An installation within Interstate-route limited-access right of way that is not in accordance with the criteria described above may be approved only through joint INDOT/FHWA concurrence.

3. Multiple Providers. Multiple telecommunication providers will be permitted on a tower. However, only one provider will maintain the tower structure and all attachments. The

provider who will maintain the tower will be chosen through standard INDOT selection procedures.

10-3.07 Underground Power Line

1. Depth of Cover. Each line that is not under the roadway and not within 1.5 m of it must have a minimum depth of cover of 0.75 m if encased, or 0.9 m if not encased.

   Each line that is under the roadway or within 1.5 m of it must have a minimum depth of cover under the pavement surface of 0.75 m if encased, or 1.2 m if not encased. Further, each line must be a minimum of 450 mm or one-half the diameter of the pipe or casing beneath the pavement structure, whichever is greater.

   Each line must have a minimum depth of cover of 1.2 m under a ditch.

   An exception may be authorized for an existing line to remain in place with a reduction of 0.15 m in the depth of cover specified above. A further reduction may be permitted if the pipeline is protected by a reinforced-concrete slab which meets the following requirements.

   a. Width. Three times the pipe diameter but not less than 1200 mm.
   b. Thickness. Minimum of 150 mm.
   c. Reinforcing. Minimum of #13 bars on 300-mm centers, or equivalent.
   d. Cover. Minimum of 150 mm between the slab and top of pipe.

   An exception may be authorized for an existing line to remain in place with a reduction of 0.15 m in depth of cover specified above.

2. Crossing Line. An underground power line operating at 600 V or less may be encased or non-encased provided the installation complies with the depths of cover specified herein. A line operating at above 600 V must be encased. Consideration should be given to encasement or other suitable protection for a power line near a bridge footing or other highway structure, or near other locations where there may be hazards.

   Encasement, where used, may be metallic or nonmetallic. Such encasement must be designed to support the load of the highway and superimposed loads thereon, including that of construction equipment. The strength of the encasement must equal or exceed structural requirements for a drainage culvert. It must be composed of materials of satisfactory durability under conditions to which it may be subjected. Where used, encasement must be provided under a median, from top of backslope to top of backslope for a cut section, 1.5 m beyond toe of slope and under a fill section, 1.5 m beyond face of curb in an urban section including all side streets, and 1.5 m beyond any structure which the line passes under or

through. Encasement may be omitted under a median which is substantially wider than standard for such a roadway.

3. Marker. The utility company must place a readily identifiable and suitable marker immediately above any underground power line where it crosses the right-of-way line.

4. Location and Installation. A longitudinal line may be placed by plowing or open-trench method. It must be located on uniform alignment as near as practical to the right-of-way line to provide space for possible future highway construction or utility installations. Distance from the right-of-way line will depend upon the terrain involved and obstructions such as trees or other existing underground or aerial utility lines. On a highway with a frontage road, such installation will be located between the frontage road and the right-of-way line. An underground power line must not be placed longitudinally beneath the median or beneath a through-traffic roadway including shoulders. An underground power line placed longitudinally along a connecting roadway must not be placed under the median or beneath a through-traffic roadway, including shoulders, where that roadway connects with a State highway.

   An underground line to be installed across an existing roadway must be installed by means of boring, tunneling, or jacking in accordance with INDOT specifications. If installed by means of jacking or boring, encasement may be required. A bore pit should be located at least 9.0 m from the edge of the nearest through traffic lane and not less than 6.0 m from the edge of pavement on a ramp. On a low-traffic roadway or frontage road, a bore pit should not be less than 3.0 m from the edge of pavement or 1.5 m from face of curb. Adequate warning devices, barricades, or protective devices must be used to prevent traffic hazards. Where circumstances necessitate the excavation of a bore pit closer to the edge of pavement than established above, concrete barrier rail or another approved device must be installed for protection of traffic in accordance with Chapter Eighty-two. A bore pit must be located and constructed so as to not interfere with the highway's structural footings. Shoring must be used if necessary.

5. Appurtenances. Above-ground pedestals or other appurtenances must be located at or near the right-of-way line, well outside the highway maintenance operation area.

6. Manhole, Vault, or Pit. This type of access point must be limited to that necessary to install and service the line. It must be directly in line with the utility facility and of the minimum width to accomplish its intended function and comply with any other necessary codes or requirements. It must be installed flush with the roadway or ground surface and must be of sufficient strength to withstand the superimposed loads of the roadway and traffic, including that of construction equipment. It should not be placed or permitted to remain in the pavement or shoulders of a high-volume roadway. An exception in accordance with Section 10-3.01(05) may be permitted on a roadway in an urban area of extreme hardship. A

manhole may be placed or permitted to remain in place under traffic lanes of a low-volume roadway in an urban area provided measures are taken to minimize such installations and to avoid such locations at an intersection.

10-3.08 Underground Communication Line

1. Depth of Cover. Each line that is not under the roadway and not within 1.5 m of it must have a minimum depth of cover of 0.75 m.

   Each line that is under the roadway or within 1.5 m of it must have a minimum depth of cover under the pavement surface of 0.75 m if encased, or 1.2 m if not encased. Further, each line must be a minimum of 450 mm or one-half the diameter of the pipe or casing beneath the pavement structure, whichever is greater.

   Each line must have a minimum depth of cover of 0.9 m under a ditch.

   An exception may be authorized for an existing line to remain in place with a reduction of 0.15 m in depth of cover specified above.

2. Crossing. A line crossing a highway does not require encasement except where in the judgment of INDOT it is necessary for the protection of the highway or utility facility. Where encasement is not used, the utility company must specifically agree that the pavement will not be cut for repairs at any time in the future. Consideration should be given to encasement or other suitable protection for any communication facilities near bridge footings or other highway structures or near other locations where there may be hazards.

   Encasement, where used, may be metallic or nonmetallic. Such encasement must be designed to support the load of the highway and superimposed loads thereon, including that of construction equipment. The strength of the encasement must equal or exceed structural requirements for a drainage culvert. It must be composed of materials of satisfactory durability under conditions to which it may be subjected. Where used, encasement must be provided under a median, from top of backslope to top of backslope for a cut section, 1.5 m beyond toe or slope and under a fill section, 1.5 m beyond face of curb in an urban section and all side streets, and 1.5 m beyond any structure which the line passes under or through. Encasement may be omitted under a median which is substantially wider than standard for such a roadway.

3. Marker. The utility company must place a readily identifiable and suitable marker immediately above any underground communication line where it crosses the right-of-way line.

4. Non-Metallic Line. Where a non-metallic line is installed without a metallic casing, a durable metal wire must be installed concurrently or other means must be provided for detection purposes.

4. Location and Installation. A longitudinal line may be placed by plowing or open-trench method. It must be located on uniform alignment as near as practical to the right-of-way line to provide space for possible future highway construction or utility installations. Distance from the right-of-way line will depend upon the terrain involved and obstructions such as trees or other existing underground or aerial utility lines. On a highway with a frontage road, such installation will be located between the frontage road and the right-of-way line. An underground power line must not be placed beneath the median or beneath a through-traffic roadway including shoulders ways or connecting roadways, including shoulders.

   An underground line to be installed across an existing roadway must be installed by means of boring, tunneling, or jacking in accordance with INDOT specifications. If installed by means of jacking or boring, encasement may be required. A bore pit should be located at least 9.0 m from the edge of the nearest through traffic lane and not less than 6.0 m from the edge of pavement on a ramp. On a low-traffic roadway or frontage road, a bore pit should not be less than 3.0 m from the edge of pavement or 1.5 m from face of curb. Adequate warning devices, barricades, or protective devices must be used to prevent traffic hazards. Where circumstances necessitate the excavation of a bore pit closer to the edge of pavement than established above, concrete barrier rail or another approved device must be installed for protection of traffic in accordance with Chapter Eighty-two. A bore pit must be located and constructed so as to not interfere with the highway's structural footings. Shoring must be used if necessary.

5. Appurtenances. Above-ground pedestals or other appurtenances must be located at or near the right-of-way line, well outside the highway maintenance operation area.

6. Manhole, Vault, or Pit. This type of access point must be limited to that necessary to install and service the line. It must be directly in line with the utility facility and of the minimum width to accomplish its intended function and comply with any other necessary codes or requirements. It must be installed flush with the roadway or ground surface and must be of sufficient strength to withstand the superimposed loads of the roadway and traffic, including that of construction equipment. It should not be placed or permitted to remain in the pavement or shoulders of a high-volume roadway. An exception in accordance with Section 10-3.01(05) may be permitted on a roadway in an urban area of extreme hardship. A manhole may be placed or permitted to remain in place under traffic lanes of a low-volume roadway in an urban area provided measures are taken to minimize such installations and to avoid such locations at an intersection.

10-3.09 Irrigation or Drainage Pipe, Ditch, or Canal

1. An irrigation or drainage facility installed across highway right of way must be designed and constructed in accordance with INDOT standards for a culvert or a bridge.

2. A longitudinal ditch or canal which would closely parallel the highway must not be permitted nor will any appurtenances be permitted within the clear zone which would constitute a hazard to traffic. See Chapter Forty-nine.

10-3.10 Miscellaneous

10-3.10(01) General

Various types of utility lines not specifically described herein must be considered based on the nature of the line. Each line carrying caustic, flammable or explosive, heated, or otherwise hazardous materials must be considered in the requirements for high-pressure gas or liquid-petroleum line.

1. Preservation, Restoration, and Cleanup.

   a. Disturbed Area. The area disturbed by a utility installation or relocation should be minimized. Restoration methods must be in accordance with INDOT specifications or special provisions included in the utility use and occupancy agreements.

   b. Spraying, Cutting, or Trimming of Tree. The utility company should be prohibited from such activities unless written permission is provided by INDOT. Where permission is granted, only light trimming should be permitted. If the removal of a tree is permitted, the stump must either be cut to the ground or be removed and the hole properly backfilled as specified by INDOT. All debris, refuse, and waste must be removed from the site. It is common that a tree must be removed where a utility company is doing relocation work to accommodate an INDOT project. If the utility company wishes to do the removal, it must contact INDOT regarding trees that must not be disturbed.

   c. Drainage. An existing drainage facility should not be disturbed. An underground utility facility must be backfilled with pervious material and outlets must be provided for entrapped water. Underdrains must be provided where necessary. Jetting or puddling will not be permitted under the roadway.

2. Safety and Convenience.

a. Control of Traffic. Traffic controls for utility construction and maintenance operations must be in accordance with the *Manual on Uniform Traffic Control Devices*. All construction and maintenance operations must be planned with full regard to safety and to minimize traffic interference. On a heavily-traveled highway, construction operations interfering with traffic should not be permitted during periods of peak traffic flow. Such work must be planned so that closure of intersecting streets, road approaches, or other access points is minimized.

b. Servicing, Maintenance, or Repairs. Each utility facility must be maintained in good repair both structurally and aesthetically. The utility use and occupancy agreement will identify the maintenance operations which are permitted and will indicate situations where prior notification to INDOT is required.

3. Records. The utility company must maintain records that describe the utility usage, size, configuration, material, location, height or depth, and any special features such as encasement, manholes, and valves. Such records must include all service lines which enter or cross the highway right-of-way. The information must be in a reproducible form which is available to other utility companies or highway agencies.

4. Construction Identification of Utilities. If it is likely that construction or maintenance activities could involve existing utilities, it is often desirable to locate and identify these facilities well in advance of the initiation of the work as an aid to both design and construction. The location of each underground utility should be identified by the utility company with stakes, paint, or other temporary surface markings color coded by utility type. The recommended uniform color code system is as follows.

a. Red: Electric power line or conduit.
b. Orange: Communication line.
b. Yellow: Gas, petroleum, steam, or other hazardous material.
d. Green: Storm or sanitary sewers.
e. Blue: Water system or slurry pipeline.
f. Purple: Radioactive material.

10-3.10(02) Trenching and Backfill

The essential features for trench and backfill construction are as follows:

1. restoration of the structural integrity of entrenched roadbed;
2. security of the pipe against deformation likely to cause leakage; and
3. assurance against the trench becoming a drainage channel.

The integrity of the pavement structure, shoulders, and embankment are of primary concern.

Trenched construction, bedding, and backfill must be in accordance with the INDOT *Standard Specifications*. Other controls are as follows.

1. A trench must be cut with vertical faces, where soil and depth conditions permit, with a maximum width of outside diameter of pipe plus 600 mm. It must be shored where necessary.

2. Bedding must be provided to a depth of 150 mm or half the diameter of the pipe, whichever is less. For ducts not encased in concrete, not less than 75 mm of bedding must be placed under the lower duct. Bedding must consist of pit-run sand and gravel mixture or other suitable material approved by the permit inspector. The bottom of the trench must be prepared to provide the pipe with uniform bedding support throughout the length of the installation.

3. Backfill for a trench in the roadway, or within 1.5 m of pavement, paved shoulders, sidewalks, curbs, gutters, or similar structures, must consist of B borrow or other suitable material approved by the regulatory investigator and compacted in accordance with the INDOT *Standard Specifications*.

4. Backfill for a trench outside the roadway may consist of the excavated material or other suitable material as approved by the permit inspector and compacted to a density comparable to that of the surrounding soil. The top 300 mm of fill must be topsoil.

10-3.10(03) Underground Plant Protection

Each underground-utility company should subscribe to the Underground Plant Protection (UPP) Service. This ensures protection of the utility company's facilities, as it is required by law that the UPP is called at least two days prior to any excavation work. This allows the utility company to mark its underground facilities before excavation work is started.

Once a survey is completed for a proposed highway project, the surveyor should also contact UPP. While utility companies are not required by law to locate their facilities for survey work, this should still be done. If the facilities are marked for the survey, this information should be shown on the project plans. This will allow the designer to design around these facilities, if possible, and will allow the utility company to be notified in advance of an upcoming project and any potential impact to its facilities. The utility company also will have a chance to meet with the designer and discuss possible alternatives that might lessen any impact. Therefore, it is beneficial to all parties involved that each utility company subscribes to this service.

10-3.10(04) Pavement Cut

Open cutting of the pavement to install a utility facility is discouraged as it adversely affects the structural integrity of the roadway. If it is not possible to install a facility without disturbing the pavement, the utility company will be required to provide written documentation and justification for an open cut. Where a longitudinal open cut is proposed or where several cuts are proposed to cross the pavement in the same area, the district office will inspect the roadway to determine the extent of road repair that will be required.

The utility company will be required to use patch materials of at least equal quality and thickness as the originally constructed material and place it in accordance with INDOT specifications. The limits of the pavement patch must extend at least 600 mm outside the limits of the trench. The edges of the trench must be beveled at least 150 mm. The limits of the patch must have vertical faces and must be sawcut for a clean break. The restored surface must be flush with and sloped at the same rate as the existing surface.

Rev. 7-1-95

STATEMENTS ABOUT EXISTING CONDITIONS OF UTILITIES, ADDITIONAL RIGHT-OF-WAY, AND ENCROACHMENTS

The Standard Specifications are revised as follows:

SECTION 107, AFTER LINE 597, INSERT AS FOLLOWS:

107.25 Existing Conditions of Utilities, Additional Right-of-Way, and Encroachments. *Such existing conditions are as described below.*

(a) Utilities. *The status of all utility companies and organizations potentially involved with the work to be performed are described below.*

The facilities of Spartan Water Co. exist within the project limits, but are not expected to be affected by the proposed construction. The utility has a 150 mm water line crossing under SR 1001 at Station 2+000. If questions arise, Dan Tanna of the utility shall be contacted at 800-111-1111.

The facilities of Hawkeye Pipeline Co. exist within the project limits. Their facilities have been adjusted to accommodate construction. The utility has a 300 mm product pipeline crossing SR 1001 at Station 3+000 which has been lowered in place to eliminate any conflict with the construction of the underdrains. If questions arise, Thurston Howell III of the utility shall be contacted at 800-222-2222.

The facilities of Golden Gopher Sewer Co. exist within the project limits. The utility has a 300 mm sewer main running parallel to SR 1001 on the North side of the road for the entire length of the project. This sewer main will be relocated to within 2 m of the new North right-of-way line for the entire length of the project. It is anticipated that they will adjust their facilities for construction on or before March 31, 1999. This date is dependent on the utility receiving their environmental permit prior to March 1, 1999. If questions arise, Jamie Sommers of the utility shall be contacted at 800-333-3333.

The facilities of Boilermaker Electric Co. exist within the project limits. The utility has power poles along the existing North right-of-way line for the entire length of the project. The utility will relocate its facilities to the new North right-of-way line for the entire length of the project except from Station 45+000 to Station 50+000 where the poles will remain in place. Where the poles will remain in place the utility will support these poles when the Contractor places the storm sewer in this area. It is anticipated that the utility will take approximately 20 work days to adjust its facilities once the Contractor has staked and cleared the right-of-way along the north side of SR 1001. If questions arise, Norm Petersen of the utility shall be contacted at 800-444-4444.

Rev. 7-1-95

The facilities of Nittany Lion Gas Co. exist within the project limits. The utility has a 400 mm gas line outside of the existing right-of-way on the South side of SR 1001 for the entire length of the project. The gas line will be relocated as follows:

- *From Station 1+000 to Station 10+000 the line will remain in place.*
- *From Station 10+000 to Station 40+000 the line will be relocated to within 1 m of the new South right-of-way line.*
- *From Station 40+000 to Station 50+000 the line will remain in place. In the areas where drainage structures shall be placed, the utility will locate and expose their main. The gas main shall not be disturbed during the placement of these structures.*

Once the contractor has staked and cleared the right-of-way between Station 10+000 and Station 40+000 along the south side of SR 1001 and placed Structure No. 10, the utility will take approximately 30 work days to adjust its facilities. This line cannot be worked on until after May 1 and anytime the temperature is below freezing. The utility's schedule is also dependent on the availability of 400 mm steel gas line. Supply of this is scarce and may not be able to be delivered to the site until May 15. If questions arise, Mary Richards of WJM Contract Services shall be contacted at 800-555-5555.

The facilities of Bearcat Communications exist within the project limits. The utility has two fiber optic cables on poles owned by Boilermaker Electric Co. The utility will be relocating their facilities on the new power poles to be placed by Boilermaker Electric Co. The utility cannot begin their relocation until Boilermaker Electric Co. has completed the majority of their work. It is anticipated that the utility will take approximately 10 work days to complete their relocation. Once the utility relocates, they will work with Boilermaker Electric Co. to remove the existing poles. This will take approximately an additional 3 work days. If questions arise, Herb Tarlick of the utility shall be contacted at 800-777-7777.

107-R-169

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SAMPLE UTILITY SPECIAL PROVISION
Figure 10-2A

UTILITY COORDINATION CERTIFICATION

Contract No. Des No.

Project Description:

The undersigned certifies they have made a diligent effort, consistent with INDOT guidelines, to identify and show all known utilities within the limits of this contract. All known utility companies have been provided with plans or other information that clearly identifies the scope of this contract. Utility relocation plans and schedules, where provided, for all utilities expected to be in the way of construction in this contract have been reviewed, coordinated, and approved or forwarded to the Owner for approval. The "Existing Conditions of Utilities" statements included in this contract include utility names, contact persons' names and telephone numbers, and relocation descriptions and schedules, where provided, for all utilities found to be within the limits of this right-of-way.

The Utility Coordinator is not responsible for utility companies who have failed to cooperate, respond, and/or provide information needed. Further, the Utility Coordinator does not guarantee or warrant in any way the accuracy of information supplied by utility companies.

UTILITY COORDINATOR

_____ Date:
Signed

_____
Printed

The facilities of the _____ (utility) (utilities) exist within the project limits, but are not expected to be affected by the proposed construction.

The _____ utility is involved in this contract as a (non-reimbursable) (reimbursable) utility The relocation (plan) (agreement) was approved on _____. [Copy the sentence for each utility, then complete it. Delete this instruction when finished.]

Utility Coordination Certification
for Short-Term Project

Contract No. _____ Des No. _____

Project Description: _____
_____

The undersigned certifies they have made a diligent effort, consistent with INDOT guidelines for coordination of short-term projects, to identify and show all known utilities within the limits of this contract. All known utility companies have been provided with plans or other information that clearly identifies the scope of this contract. Utility relocation plans and schedules, where provided, for all utilities expected to be in the way of construction in this contract have been reviewed, coordinated, and approved or forwarded to the Owner for approval. The "Existing Conditions of Utilities" statements included in this contract include utility names, contact persons' names and telephone numbers, and relocation descriptions and schedules, where provided, for all utilities found to be within the limits of this right-of-way.

The Utility Coordinator is not responsible for utility companies who have failed to cooperate, respond, and/or provide information needed. Further, the Utility Coordinator does not guarantee or warrant in any way the accuracy of information supplied by utility companies.

UTILITY COORDINATOR

_____ Date: _____
Signed

_____
Printed

This project was in the _____ phase when this process was implemented in June 1998, therefore, the coordination process was started at Step No.___.

Reason for Waiver: _____
_____

The undersigned approves of the use of the Utility Coordination Process for Short-Term Project for this contract.

DISTRICT DEVELOPMENT ENGINEER, SPECIALITY PROJECTS GROUP MANAGER, or HIGHWAY-UTILITY MANAGER

_____ Date: _____
Signed

_____
Printed

Click When Done Clear Data

UTILITY COORDINATION CERTIFICATION WAIVER

Contract No. Des No.

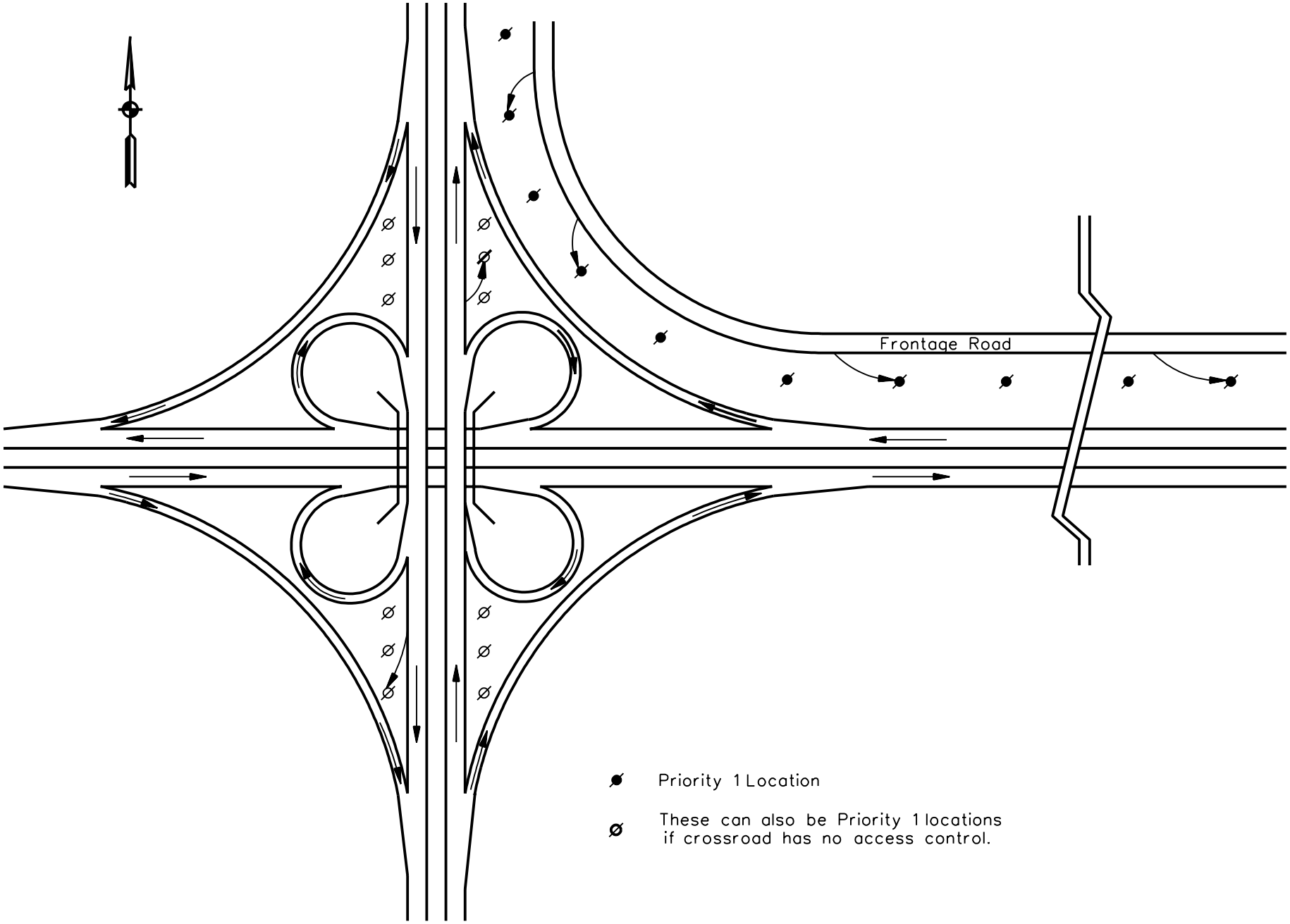
Project Description:

The facilities of the _____ (utility) (utilities) exist within the project limits, but are not expected to be affected by the proposed construction.

The undersigned agrees that the type of work included in this contract does not normally affect utility facilities and hereby approves this contract for a waiver from the need to follow utility coordination guidelines.

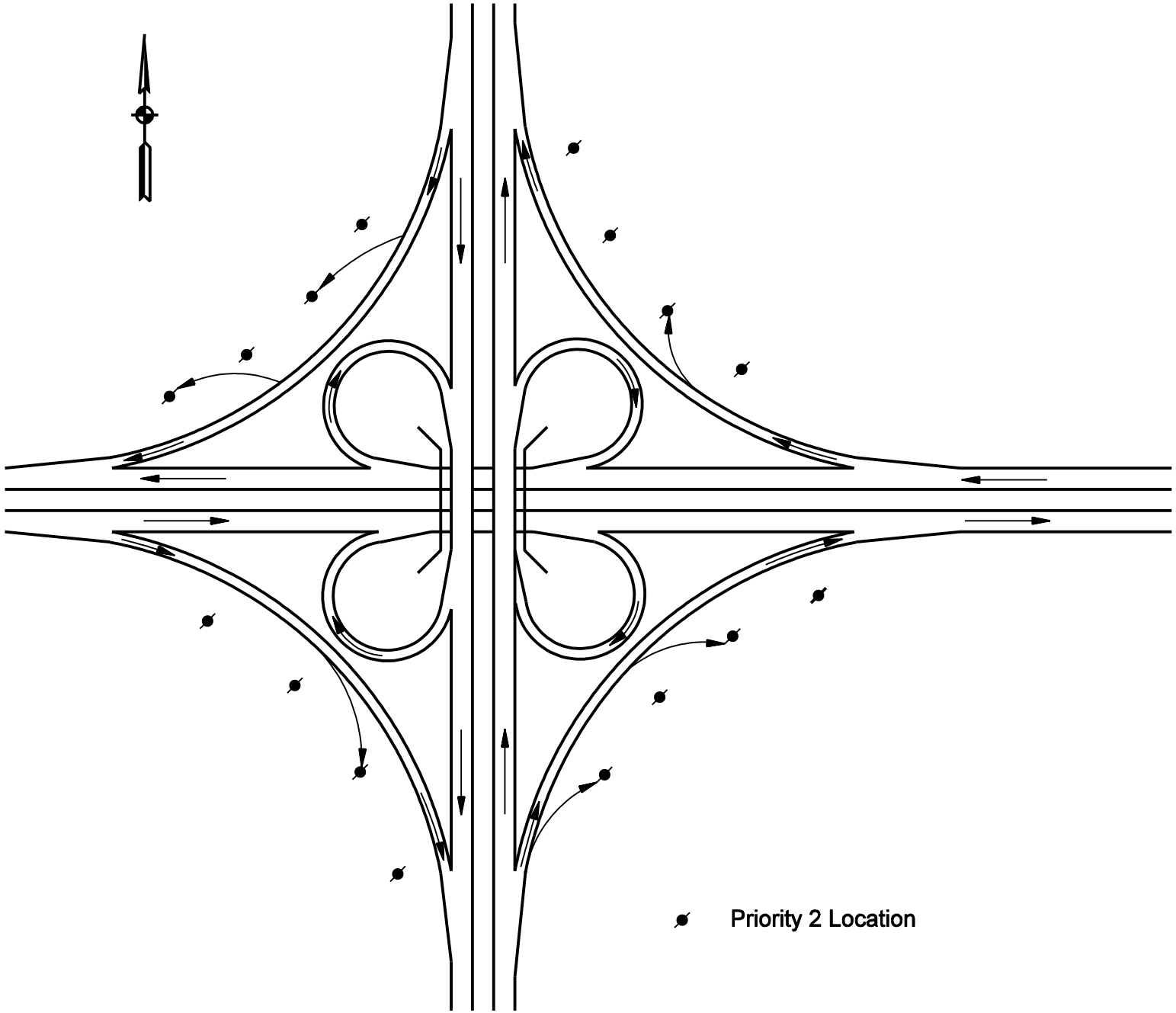
(signed) _____ Date:

(printed) _____
District Real Estate and Right-of-Way Program Director, or
Production Management Division Highway-Utility Manager



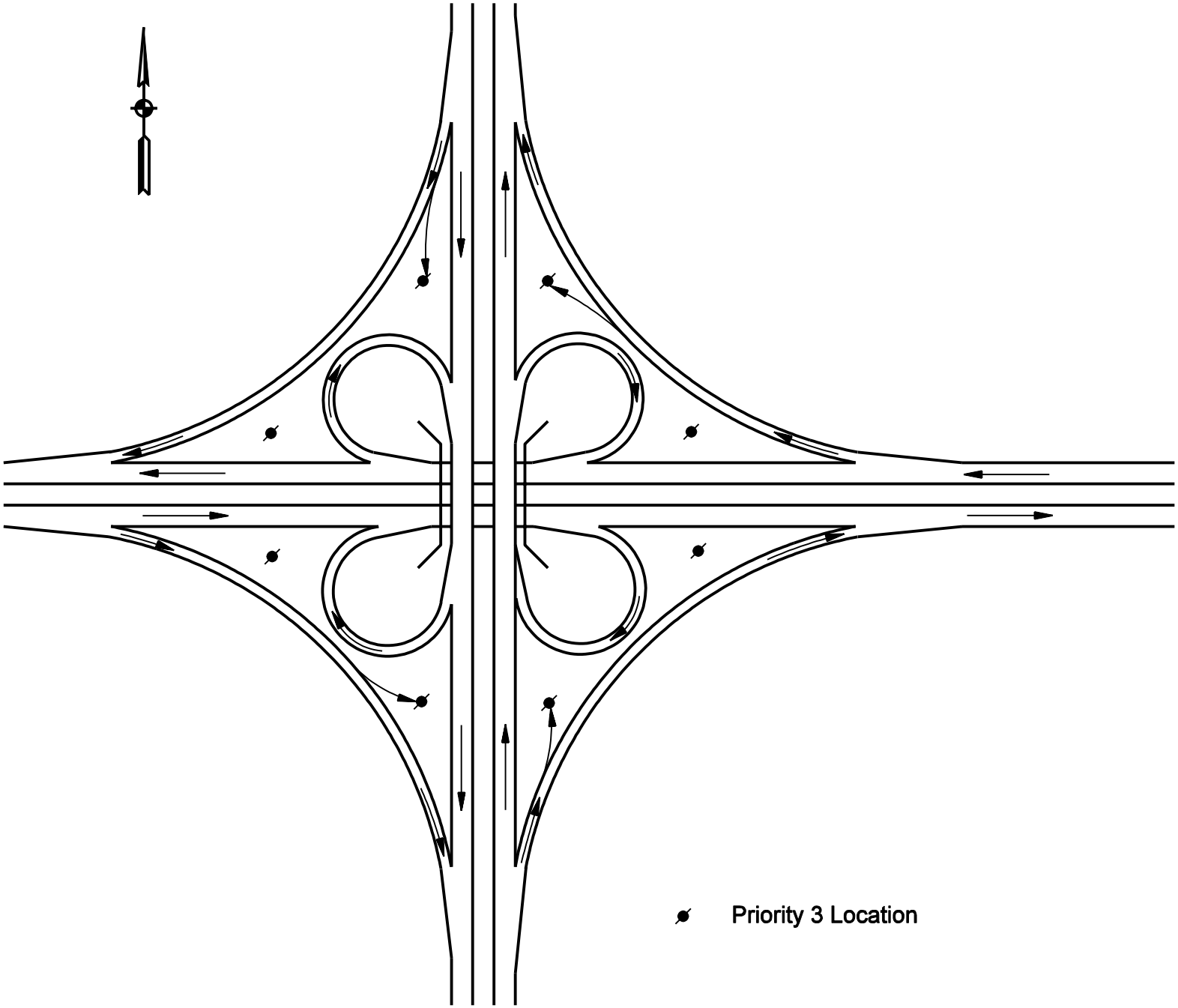
PRIORITY 1 ACCESS

Figure 10-3A



PRIORITY 2 ACCESS

Figure 10-3B



PRIORITY 3 ACCESS

Figure 10-3 C