



## Chapter 22

# PROJECT DEVELOPMENT

BUREAU OF LOCAL ROADS AND STREETS MANUAL

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**Chapter 22**  
**PROJECT DEVELOPMENT - Federal Funds**

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## Chapter 22

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### 22-1 COORDINATION

#### 22-1.01 Airports/Railroads/Utilities

##### 22-1.01(a) Airport Coordination

Highway and bridge improvements within 2 miles (3.2 km) of publicly owned airports, within 1 mile (1.6 km) of privately owned airports open to the public, and within 0.5 miles (0.8 km) of restricted-landing areas require coordination with the Illinois Department of Transportation (IDOT) Bureau of Aeronautics in the Office of Intermodal Project Implementation. These coordination requirements concerning distance to an airport are in conjunction with height obstructions of 15 ft (4.6 m) or more above the roadway. Additionally, the local public agency (LPA) must coordinate with the Bureau of Aeronautics for all realignments and construction improvements on new location regardless of the height of obstruction. [Section 10-2.01\(e\)](#) further discusses coordination requirements near airports.

##### 22-1.01(b) Railroad Coordination

When a project is involved with an at-grade railroad grade crossing or grade separation, coordination with the affected railroad should take place at an early stage to determine if any improvement is necessary to the railroad facility and to determine funding responsibilities for the improvement. When a railroad crossing is within or near the terminus of a project, the crossing shall be evaluated per [Chapter 40](#). Improvements determined from the evaluation to the railroad crossing will be scheduled to be completed prior to or at the same time as the project. [Section 10-2.01\(f\)](#) discusses coordination requirements with railroads.

##### 22-1.01(c) Procedure for Joint State-LPA Railroad Improvements

Where IDOT will be responsible for letting a roadway project with a railroad crossing, the LPA must coordinate with the district during the project's initiation. The railroad crossing portion of the project generally should be programmed as separate project. These projects must be identified and included in the district's annual program when the original program is developed. Crossing projects will generally be authorized much earlier than the roadway project due to the time required for the railroad to process the agreement and for the railroad to perform the work in a timely manner. IDOT will be responsible for the following:

1. Districts. The district will conduct the following:
  - Identify the need for railroads to adjust or alter their facilities when preparing original program submissions.
  - Submit the railroad work as a separate project in the program submission. It may be necessary to program the railroad work in the year preceding the roadway project.

- As soon as the work is identified, prepare a railroad agreement and forward it to the railroad and the appropriate LPA with a copy to the Central Bureau of Local Roads and Streets (CBLRS). Correspondence with the railroad should indicate the proposed letting schedule. If questions occur during the preparation of the agreement, contact the CBLRS.
  - Submit a project status sheet requesting authorization of the railroad work.
  - Cross-reference the roadway and railroad projects in the data base so that both projects can be coordinated and tracked.
  - Obtain signed railroad agreements from the railroad and LPA along with a copy of a detailed estimates and general layout plan and forward them to the CBLRS for execution.
  - Upon execution of the agreement, the CBLRS will notify the railroad to proceed with the ordering of materials and scheduling of the work.
2. **CBLRS**. The CBLRS will conduct the following:
- Upon approval of the Project Development Report (PDR) for the roadway work, remind the district that the railroad work must be coordinated early.
  - Review each district's annual program to ensure all roadway projects with railroad involvement that the railroad portion is programmed as a separate project.
  - If not already prepared, request the district to prepare a railroad agreement.
  - Check the project status sheets to ensure all necessary railroad agreements have been executed and the programming and authorization have been accomplished. Projects involving railroad crossing work will not be advanced to letting without a fully executed railroad agreement.

Occasionally a signal/circuitry project may require a nearby crossing to also be upgraded. The district and Bureau of Program Development (BDE) will be responsible for coordinating the designs between the crossings.

Where an IDOT project will affect a local railroad crossing, the district should contact the CBLRS to determine if Grade Crossing Protection Funds (GCPF) may be eligible for the local crossing; see [Section 10-2.01\(f\)](#). Where a local project affects a State highway crossing, federal safety funds set aside for local improvements or GCPF may be eligible for work on the State highway crossing.

### **22-1.02 District Coordination Meetings**

The district conducts periodic coordination meetings, which involve personnel from the CBLRS, BDE, Federal Highway Administration (FHWA), and may involve personnel from other bureaus or agencies, as appropriate. The goal is to coordinate planning; identify social, economic, and environmental impacts; minimize these impacts through mitigation; and develop the best overall solution to satisfy the transportation needs. FHWA will usually concur with the processing of projects as Categorical Exclusions. The coordination meetings may also result in field approvals of design exceptions and PDRs.

**22-1.02(a) Scheduling Coordination Meetings**

Coordination meetings are regularly scheduled on a monthly basis in District's One and Eight and bi-monthly in the other districts. BDE will develop an annual coordination meeting schedule in cooperation with the districts, CBLRS, and FHWA to eliminate meeting conflicts and to allow appropriate central office personnel to be available. Additionally, the district may schedule special coordination meetings on an as needed basis. The LPA should complete reports eligible for field approval prior to coordination meetings to minimize project delays and transmittals to the CBLRS. The LPA should contact the district to schedule a project for discussion at a coordination meeting. A tentative agenda should be distributed at least 2 weeks in advance of each coordination meeting along with the initial coordination meeting data sheet (form [BLR 22410](#)).

**22-1.02(b) Appropriate Representation**

The LPA and/or their consultant must be present at the coordination meeting. Ensure the individuals having a role in project development and decision making (e.g., BDE environmental specialists, district environmental, geometric, or land acquisition specialists) are invited to the meeting.

If projects will significantly affect other agencies or require special expertise or coordination, the district should invite all affected agencies to the coordination meeting. Discuss this need with the appropriate Project Development Engineer in the CBLRS. Highlight the projects and issues requiring the expertise of other agencies in the invitations and agendas. State agencies (e.g., Illinois Department of Natural Resources (IDNR), Illinois Historic Preservation Agency (IHPA), Illinois Department of Agriculture (IDOA), Illinois Environmental Protection Agency (IEPA)) and federal agencies (e.g., Department of the Interior, Army Corps of Engineers) may be involved.

**22-1.02(c) Topics for Discussion**

Coordination meetings should address all necessary topics such as logical termini, environmental reports, special reports, commitments, public involvement requirements, typical sections, need for additional rights-of-way, design exceptions, and the environmental processing. The scoping of environmental issues is an appropriate topic for coordination meetings. When other agencies are present, the coordination meeting may serve as the scoping meeting.

The LPA should complete form [BLR 22410](#) for each scheduled project and send it to the district. The district should transmit an agenda, with a completed form [BLR 22410](#) attached for each project, to the intended participants at least 2 weeks prior to the meeting. Include all necessary documentation with the agenda to support the desired action for specific projects.

**22-1.02(d) Information Presented**

The information presented at a coordination meeting usually depends on the following issues:

- the scope of the project,
- the project development stage, and
- coverage at previous coordination meetings.

A major project or a project on new alignment may involve many topics and presentations at numerous meetings over the duration of the study. If a minor project requires discussion, a brief presentation may be sufficient.

If a project has been discussed at a previous coordination meeting, information that has been previously presented and discussed need not be repeated. However, the meeting should include a brief summary of important points previously discussed and any decisions reached on each project. Attach copies of the minutes from previous coordination meetings to the agenda.

If design exceptions are requested, include form [BLR 22120](#) and provide supporting documentation/justification. The supporting documentation/justification for design exceptions ultimately will be included in the PDR.

The LPA/consultant should also make available appropriate information on the mitigation of impacts, effects on sensitive areas, detours, and stream crossings.

#### **22-1.02(e) Documentation**

At all coordination meetings, the LPA or their consultant must maintain a record of who attended and what transpired. Although a verbatim transcript is not necessary for coordination meetings, a recording on tape may be useful if questions arise on the accuracy of typed minutes. The LPA or their consultant should promptly prepare minutes after the meeting and send them to the district. The district will submit the minutes to the CBLRS for review. FHWA will also be required to review the minutes. After the corrections are made, the LPA will send the minutes to all agencies and individuals that were in attendance.

The suggested format for the coordination meeting minutes is shown in Figure 22-1A. Identify each project discussed in the minutes, and provide special attention to any scoping actions because documentation may be required later. Each project should be covered on a separate page. Attach form [BLR 22410](#) and/or form [BLR 22120](#) to the minutes.

#### **22-1.02(f) Recommended Practices**

The following practices are recommended for coordination meetings to improve their effectiveness:

- Provide to FHWA and CBLRS an agenda with a completed form [BLR 22410](#) for each project at least two weeks in advance of the meeting.
- Use video-teleconference for meetings with minor discussion items.
- Allow time for projects eligible for field approval prior to or after the regular meeting. Indicate the schedule in the agenda and provide appropriate information for action in advance.
- Schedule separate meetings for large or complex project issues, including the review of report comments.
- Resolve minor issues over the phone or between the district and the LPA.
- Keep the discussion focused on the desired action.
- Use slides, photographs, aerial photos, and other visual exhibits to clarify issues.



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- Provide appropriate handouts (e.g., location maps, ADT/DHV schematics, typical section drawings, crash history information, synopsis of environmental issues, critical path items).
- Provide draft meeting minutes to the districts within five working days of the meeting and the final minutes to participants within two weeks after receipt of comments on the draft.

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MINUTES OF COORDINATION MEETING  
*(separate sheet for each project)*

DISTRICT #

*(date)*LOCAL PUBLIC AGENCYSECTION NUMBERATTENDANCE

- Federal Agencies
- State Agencies
- Local Agencies
- FHWA
- IDOT Central Office
- BLRS Central Office
- District Office

TOPICS

- Information presented (e.g., environmental surveys, impacts, mitigation).
- Comments and input received, including scoping actions/information (see [Section 18-5.01\(b\)](#)).
- Design exceptions presented and action taken.
- Environmental processing.
- Required public involvement.
- Attach forms [BLR 22410](#) and [BLR 22120](#), as applicable.

## EXAMPLE COORDINATION MEETING MINUTES

Figure 22-1A

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## 22-2 PROJECT STUDIES/REPORTS

Section 22-2 provides guidance for the preparation of various project studies and reports for Federal-aid LPA projects. The various reports and studies discussed in this Section are written summaries of design issues concerning a highway improvement. This Section pertains to procedural aspects involved in the completion of these studies and reports up to and including design approval. [Chapters 11](#) and [12](#) of the *BDE Manual* provide additional guidance on studies and reports required for federal projects.

### 22-2.01 General

The development of a federal project requires the preparation of various studies and reports. This necessitates an integrated engineering analysis to determine highway improvement needs. The scope and depth of the engineering analyses for preliminary studies will vary depending on the project scope of work. These studies may be less than that required for final plans, but they should be sufficiently accurate to preclude significant design or major cost estimate revisions during final construction plan preparation. When determining the scope, extent, and accuracy needed for a specific engineering study, the effects on adjacent property owners are often a good indicator.

To properly conduct engineering analyses and to develop a functional design, diverse sources of information must be used. Data for engineering analyses may be obtained from various sources. It is important that the designer be familiar with data available from outside sources and understands how to use it correctly in engineering analyses. Also, the designer must ensure that the scope, extent, and accuracy of the data requested from other sources are commensurate with the intended use of the engineering analysis being performed.

### 22-2.02 Information Sources

Engineering investigations determine if the proposed highway improvement satisfies the need for safe, economical, and efficient transportation and provides other relevant benefits (e.g., traffic benefits, public services, reduction of crashes, pedestrian facilities, transit considerations). The following Sections identify informational sources that are important in establishing the need for the highway improvement.

#### 22-2.02(a) **Functional Classification**

The Office of Planning and Programming (OPP) is responsible for coordinating functional classification of all roads and streets with LPAs and FHWA. For additional information on functional classification contact the Bureau of Statewide Planning and Programming in OPP or see FHWA publication *Highway Functional Classification Concepts, Criteria and Procedures*. [Five Year Functional Classification Maps](#) for counties and urban areas can be found on the department's website or an interactive map is available at [Getting Around Illinois](#).

**22-2.02(b) Highway Data Bank**

OPP is responsible for maintaining the Illinois Roadway Information System (IRIS) and Illinois Structure Inventory System (ISIS). OPP can provide computer generated route log listings for State routes and local roads and streets. The available data is dependent on the highway system. The following major items may be available:

- administrative classification,
- physical dimensions,
- roadway characteristics,
- traffic data,
- geometric data,
- pavement cross sections, surface type, drainage, and shoulder conditions, and
- bridge inspection and appraisal data.

A complete listing of items is shown in the indices of the [IDOT Roadway Information and Procedure Manual](#) and the [IDOT Structure Inventory and Procedure Manual](#).

**22-2.02(c) Urban Transportation Planning**

The urban transportation planning process discussed in [Chapter 17](#) provides information on local governmental functions in urbanized areas of over 50,000 inhabitants. The Metropolitan Planning Organizations (MPO) administer a continuing, cooperative, and comprehensive transportation planning process that results in transportation improvement plans and programs consistent with the planned development of the urbanized areas. This process determines the transportation modal choice. In urbanized areas, the project must be consistent with local transportation planning. Major urban improvements must meet joint FHWA/FTA regulations for major highway improvements in urban areas. The urban transportation planning process also can provide other social, economic, environmental, and engineering information for preliminary studies.

**22-2.02(d) Current and Projected Traffic Volumes**

Under the general guidance of OPP, the districts count and classify existing traffic volumes on the State highway system and some local roads and streets. OPP also maintains data used to project future traffic volumes (e.g., annual traffic growth factors). The following traffic data may be available from the district:

- current hourly and daily traffic volumes,
- current turning movement volumes,
- traffic projections and assignments for new facilities, and
- traffic projections for future design years on existing facilities.

Similar data, developed in conjunction with the Urban Transportation Planning Process, also may be available from the MPOs. Because the design of a project greatly depends upon the projected design hourly volumes, these figures must be carefully examined and questioned before using for design purposes. Improper traffic projections can result in the construction of unnecessary or inadequate highway improvements.

### **22-2.02(e) Crash and Skid Reduction Analyses**

During the preliminary study, identify High Accident Locations (HAL), rates, and all crash patterns (e.g., fixed objects) at various sites throughout the project. The Division of Traffic Safety regularly furnishes the district with crash information and provides crash information upon request. The following is a partial listing of available crash information:

- collision diagram printouts for roads and streets on the local system when the LPA is part of the Local Accident Reference System and for intersections with State highways. Collision diagram computer plots may also be requested for intersections;
- individual crash reports for above locations, upon request from a microfilm or imaging retrieval system;
- State highway HAL maps and computer generated listings that report supplemental data for high crash spots and roadway sections;
- wet pavement crash cluster sites for State highways (computer generated listings);
- county crash summaries;
- municipal crash summaries;
- statewide average crash rates, distributed annually, for comparison with existing project crash rates for proposed improvement justification; and/or
- summaries of Motor Vehicle Traffic Crashes and statewide average percentages by type of collision, light condition, and road surface. These percentages may be compared with project percentages from collision diagram summary sheets to help identify over-represented crash patterns.

### **22-2.03 Geometric Design Criteria**

Part IV, Project Design, of this *Manual* presents the recommended geometric design criteria for the different types of highways. This is an important element for all preliminary studies. The following briefly summarizes the information provided in Part IV:

1. Basic Design Controls. [Chapter 27](#) discusses the design controls that have an overall impact on the geometric design of a highway facility. As discussed in [Chapter 27](#) and, as appropriate, the designer should evaluate the following:

- a. Project Scope of Work. The project scope of work will determine the type of design criteria to be used. [Section 27-2](#) defines the project scope of work for new construction, reconstruction, and 3R type projects. [Chapter 32](#) presents the design criteria that apply to new construction/reconstruction projects. For these projects, the designer often has the liberty of designing the highway to meet the most desirable criteria. However, available finances do not always permit the reconstruction of existing highways to this level. The geometric design of projects on existing highways must be viewed from a different perspective. These projects are often initiated for reasons other than geometric design deficiencies (e.g., pavement deterioration, crashes), and they often must be designed within existing right-of-way, financial limitations, and/or environmental constraints. As a result, the design criteria for new construction and reconstruction are often not attainable without major cost and, frequently, adverse impacts. At the same time, the LPA must make cost effective and practical improvements to existing highways and streets. For these reasons, the separate geometric design guidelines for 3R projects on existing highways are provided in [Chapter 33](#).
  - b. Functional Classification. [Section 27-3](#) discusses the application of the functional classification system in Illinois for geometric design applications. All highway improvements must be compatible with the functional classification of the highway under design. A highway's functional classification is an important factor in determining which design policies and criteria to use.
  - c. Design Speed. This is a critical highway design element and is therefore selected before initiating any studies. [Section 27-5.02](#) discusses the overall philosophy in design speed selection. [Chapters 32](#) and [33](#) present specific numerical criteria for project design speed based on functional classification, highway type, urban/rural location, and project scope of work.
  - d. Traffic Volume Analysis. [Section 27-6](#) provides definitions for highway capacity terms, selection of the design year, and design hourly volume for highway capacity analyses. It references the *Highway Capacity Manual* for detailed highway capacity techniques.
2. Sight Distances. [Chapter 28](#) presents the criteria for sight distances based on design speed. Stopping sight distance (SSD) is a determining factor in an acceptable highway design, especially for vertical alignment. Other sight distances which may be applicable include intersection sight distance and passing sight distance.
  3. Horizontal Alignment. [Chapter 29](#) discusses horizontal alignment for new construction/reconstruction projects (e.g., minimum radii, superelevation, horizontal sight distance).
  4. Vertical Alignment. [Chapter 30](#) discusses maximum and minimum grades, vertical alignment, and vertical clearances for new construction/ reconstruction projects.
  5. Cross Section Elements. [Chapter 31](#) presents the general criteria for cross section elements, and [Chapters 32](#) and [33](#) present specific numerical criteria for cross sections based on the highway type, design speed, traffic volumes, urban/rural location, and project scope of work. The designer must review the cross section criteria in these Chapters and determine the most appropriate design for the given conditions. The selected roadway cross section should be based on the type of operations and maximum allowable design speed, and will be a factor in determining the right-of-way needs of a highway facility. The proposed typical section should identify:
    - the number and width of travel lanes,

- the selection of an urban (curbed) or rural section,
  - the shoulder width, if applicable,
  - the gutter width, if applicable,
  - cross slopes,
  - the type and width of median,
  - parking lanes, if applicable,
  - sidewalks and bike lanes/paths, if applicable,
  - side slope configuration (i.e., fill slopes, cut slopes, roadside ditches), and
  - type of pavement.
6. Intersections. [Chapter 34](#) presents IDOT's criteria for the design of intersections.
7. Roadside Safety. [Chapter 35](#) presents the criteria for roadside safety, including clear zones, barrier warrants, barrier design and layout, impact attenuators, and glare screens. Most of the information in [Chapter 35](#) is applicable to the detailed design completed during the development of the final plans.

#### **22-2.04 Environmental Issues**

During project development, it is important for the designer to understand the environmental issues that may impact the project. Environmental reviews can be a significant portion of project development and project schedules can be greatly affected. For detailed information on environmental procedures, see [Chapters 10, 18, 19, and 20](#).

#### **22-2.05 Highway Capacity Studies**

##### **22-2.05(a) General**

The desired level of service (LOS) (e.g., mobility and freedom from delay and congestion) for a highway is determined by its functional classification and urban/rural location. The tables of geometric design criteria in [Chapter 32](#) present the recommended minimum LOS criteria for each functional class.

##### **22-2.05(b) Responsibility**

For LPA projects, the LPA or their consultant is responsible for conducting the capacity analysis. The District Geometric Engineer may be available as a resource to the LPA to assist in capacity analyses. The results are reviewed by the district before submission to the CBLRS.

##### **22-2.05(c) Roadway Mainline Analysis**

The following presents the simplified procedure for conducting a capacity analysis for the roadway mainline:

1. Select the design year; see [Section 27-6.02](#).
2. Determine the DHV; see [Section 27-6.03](#).
3. Select the level of service; see [Chapter 32](#) or [Chapter 33](#).

4. Document the proposed roadway geometric design (e.g., lane width, number and width of approach lanes at intersections).
5. Using the *Highway Capacity Manual*, analyze the capacity of the roadway element for the proposed design:
  - determine the maximum flow rate under ideal conditions,
  - adjust the maximum flow rate for prevailing roadway, traffic, and traffic conditions, and
  - calculate the service flow rate for the selected level of service.
6. Compare the calculated service flow rate to DHV. If DHV is less than or equal to the service flow rate, the proposed design will meet the objectives of the capacity analysis. If DHV exceeds the service flow rate, the proposed design may need further evaluation. The designer should either adjust the roadway design or adjust one of the capacity elements (e.g., the selected design year, level of service goal).

#### **22-2.05(d) Intersection Design Studies**

An intersection design study (IDS) is a graphic representation of a proposed treatment for the development or improvement of an intersection facility. It is based on an analysis of traffic needs and an evaluation of physical and economic elements at the intersection site. [Section 10-2.02](#) provides guidelines for when IDS should be prepared. [Chapter 14](#) of the *BDE Manual* provides guidelines for the preparation of IDS and the data that is required to be documented. [Chapter 34](#) provides the design criteria for intersections.

IDS's for federally funded projects will be submitted to the district for review. For intersections with State highways, the District Geometric Engineer will review the design to the extent appropriate and, if necessary, will obtain any approvals of exceptions to the geometric policies affecting the State highway from BDE before concurring with the design. The district may also submit a preliminary copy of IDS to the CBLRS.

#### **22-2.06 Bridge Condition/Hydraulic Reports**

##### **22-2.06(a) Bridge Condition Report**

The Bridge Condition Report (BCR) summarizes the findings of the investigation of a bridge and its components. It is used to establish the scope of work on the extent of repair, replacement (partial or total), widening or other improvements. BCR allows the LPA and IDOT to determine the most cost effective method of correcting the reported structural, geometric, or hydraulic deficiencies, and for restoring a bridge to a structurally adequate and functionally serviceable condition.

An abbreviated BCR may be used for structure replacements.

An in-depth BCR is required for all structures that are to remain. This report must include color photos. The following items are necessary in an in-depth report:

1. Introduction. The introduction should provide the reason for the report.



2. Administrative and Geographical Information. The report should include detailed administrative and geographical information (e.g., facility carried, feature crossed, age of bridge).
3. Inspection Information. Include what type of inspection was performed (e.g., visual, testing type, equipment), results of inspection, degree of impairment to structure, and any structural deficiencies. Precast prestressed deck beams should be sounded and scaled as part of the inspection.
4. Description. The report should include a description of the physical condition of the bridge and the deficiencies that require correction.
5. Verification. The ability and capacity of the existing structure for reuse should be verified and documented. This should at least include a statement that the structure is adequate for the required and stated design load. In addition, for structures to remain over waterways, BCR should verify the adequacy of the structure for scour.
6. Recommendations. Note all recommended repairs and any methods of repair.
7. Justification. Provide justification for any proposed work.
8. Photos. Include color photos of deficient areas.
9. Master Structure Report (S-107). This report is output from the Structure Information Management System (SIMS). The current Report S-107 should also be included with BCR.

For structures on 3R and resurfacing only projects that do not require any rehabilitation, provide a description of the structures as described in the Master Structure Report. These structures should be in good condition. A formal BCR then will not be required for these structures.

When the scope of the anticipated rehabilitation work is limited to bridge deck and minor structural repairs without need for a widening or replacement, only the preparation of a BCR for Deck Repair is required. Because the geometrics of the structure will not be altered, this type of work usually will not require a Type, Size, and Location (TS&L) submittal as discussed in [Section 10-2.03\(b\)](#).

Submit the BCR to the district. The district will forward the BCR to the Local Bridge Unit in the Bureau of Bridges and Structures for review and approval. BCR must be approved prior to or with the approval of the Preliminary Bridge Design and Hydraulic Report (PBDHR).

#### **22-2.06(b) Preliminary Bridge Design and Hydraulic Report**

The PBDHR contain the necessary information for use by IDOT personnel in reviewing the preliminary bridge design and processing the hydraulic reports for LPA bridge and culvert construction projects. [See Section 10-2.03\(b\)](#) for guidance on preparing PBDHR.

**22-2.07 Hydraulic (Drainage) Studies**

The roadway alignment is dependent on the interrelationships of several variables, including suitable stream crossing locations. The gradeline is directly influenced by high water elevations at stream crossings, and the depth of roadway ditch flow for surface drainage. Hydraulic structure sizes and storm sewer systems may significantly affect project cost estimates. For these and other reasons associated with drainage controls, a drainage study containing preliminary hydrologic and hydraulic analyses should be prepared where highway drainage and/or structures will significantly affect the design or cost of a project.

Where hydraulic structure sizes can affect the selection of alignments or grades, the LPA should perform a detailed hydraulic analysis. Rehabilitations that have no history of flooding or high water problems may be handled with detailed hydraulic computations to be completed in the design phase. Rehabilitations that have experienced hydraulic problems (e.g., severe scour, inundation, debris) will require a detailed hydraulic analysis during the preliminary study phase, as results may influence the scope of work.

Assessment of flood damage potential during location studies will include inspection of IDNR Office of Water Resources Regulatory Flood Plain Maps, Federal Insurance Administration Flood Hazard Boundary Maps, and/or Flood Insurance Rate Maps to determine if a proposed flood plain encroachment or hydraulic modification is within a special flood hazard area. Section 20-7 discusses the requirements that apply to federally funded and regulated projects when the project will involve a flood plain encroachment. Compliance with LPA flood regulations should also be discussed. Proposals to mitigate adverse effects and to resolve conflicts may also be described.

In addition to recommended improvements to hydraulic structures, the LPA should analyze and describe other proposed hydraulic improvements or modifications (e.g., unavoidable channel changes; the conversion of open ditches to storm sewer systems, including suitability of outfalls; pumping stations; detention facilities; highway embankments, including those parallel to stream flow; other flood plain encroachments). Analyses should include planning for future land use changes and development that could influence runoff rates and rural/urban cross section selections. Discuss the effects of restricted outlets, existing storm sewer capacities, and drainage constrictions (upstream or downstream) on highway drainage systems, particularly in rapidly developing urban areas.

A summary of the hydraulic design for each project will be prepared and submitted to the district for review. See [Chapter 36](#) for culvert designs and [Chapter 38](#) for storm sewer designs. The hydraulic design summary should include the following:

- the set of plans or a sketch showing the outline of the proposed drainage system for storm sewers, culverts, ditches, etc., and
- design computations that include criteria and procedures used, assumptions made with verification of those assumptions, and a listing of design exceptions.

For additional guidance on hydraulic and drainage design issues, see [Chapter 38](#) of this *Manual* and the [IDOT Drainage Manual](#).

**22-2.08 Geotechnical Reports/Pavement Design**

The purpose for a Geotechnical Report is to provide insight into area geology, pedology, and other engineering factors to be used by the designer. If soil stability problems are anticipated, a preliminary Geotechnical Report should be prepared during the preliminary study phase. Information on the geotechnical reports can be found in [IDOT Geotechnical Manual](#). While a final pavement design is usually not needed until plan preparation, a determination of pavement type and approximate thickness may be needed during the preliminary study phase. [Chapter 44](#) discusses pavement design procedures and when a Geotechnical Report is required.

**22-2.09 Commitments****22-2.09(a) Definitions**

The following definitions apply:

1. **Commitment**. A commitment is a documented obligation or promise made by a properly authorized representative of the LPA for carrying out a specific action or actions affecting the planning, design, land acquisition, construction, or operation of a highway project that involves special consideration and action. Note that statements in the PDR and/or environmental reports to the effect that adverse impacts to wetlands or other sensitive resources will be avoided, minimized, or mitigated, will create an obligation to take specific actions (e.g., to follow-up on avoiding, minimizing, and mitigating impact) and should therefore be treated as commitments.
2. **Commitment List**. This is a cumulative list of commitments that states the date, a brief description of the commitment, who made the commitment, and when it was completed. This list is initiated during the Phase I study, included in the plan submittal, discussed at the pre-construction meeting, and checked during the final inspection of the project.
3. **Commitment File**. This is a file created by the LPA and maintained by both the LPA and district for each project. The file should include a commitment list, information on the nature of each commitment, the date when the commitment was made, the parties affected, permits or environmental clearances, and documentation showing that the commitment has been fulfilled. A commitment file must be kept for all Federal and State-funded local projects. These commitments may include:
  - funding arrangements between FHWA, IDOT, LPAs, and/or developers, which may include construction costs, signal maintenance, lighting agreements, etc.;
  - notification requirements to IDOT, public agencies, owners, local officials, etc., prior to construction;
  - requests for verification of the area to be disturbed by the project;
  - commitments to owners, IDOT, and/or other public agencies for plant replacement, removal, or retainage (e.g., trees, shrubs, wetland plants);
  - environmental commitments to IDOT, other public agencies, and/or other groups (e.g., wetland replacement, tree clearing restrictions, hazardous material removal);
  - relocation, removal, or replacement agreements/requests for existing buildings;
  - drainage agreements, including detention areas, culvert locations, ditch construction, etc.;

- relocation, rebuilding, addition, or removal agreements/requests for private and commercial entrances;
- special construction requests (e.g., timing of construction, type of construction, limits of construction);
- existing sign removal and replacement; and/or
- any other special agreements made between the LPA and land owners during right-of-way negotiations.

### **22-2.09(b) Procedures**

The LPA is responsible for maintaining the commitment file and ensuring that these commitments are incorporated into the final plans and agreements. The following procedures will apply:

1. Recording Commitments. Commitments can occur early in the design (e.g., Environmental Survey Request (ESR), PDR) through construction. The designer will need to carefully review all minutes of meetings, transcripts of public hearings, and the project study files to ensure all commitments have been listed. If there are any questions, the designer should contact the author of the PDR. During plan development, the designer will also add to the file any commitments made to property owners or others affected by the project.

When applicable, note the commitments in the project agreements and contract documents. The LPA is responsible for providing the district with a copy of their commitment file at the same time as the rest of the project file is submitted.

2. Discussion of Commitment Information. On federal projects, commitments should be discussed at the bi-monthly coordination meeting with FHWA (see Section 22-1.02), to ensure that all affected parties are aware of the nature and scope of the commitments.

When a preconstruction conference is held, commitments should be discussed to ensure awareness and understanding of any special considerations affecting construction, and to emphasize the importance of follow through as construction proceeds. Other parties affected by the commitments may be invited to attend the preconstruction conference.

3. Commitment Change. If it is discovered during project development, implementation, or maintenance that a change is required to a previous commitment or a commitment cannot be met, the designer must immediately notify the district and/or CBLRS so that appropriate action can be taken. Failure to provide the appropriate notification and review may result in project delays. All affected parties should be considered prior to making the final decision on the previous commitment.

The designer is responsible for updating the commitment file and providing documentation on the coordination with the affected parties and the ultimate decision on the proposed change.

4. Closeout. It is the LPA's responsibility to ensure and document that all commitments have been fulfilled. The LPA will provide the district with a copy of the commitment list at the final inspection after the project is completed. The district will forward a copy of the finalized commitment list to the CBLRS.

### **22-2.10 Design Exceptions**

In general, the designer is responsible for making a reasonable effort to meet the design criteria presented in this *Manual*. However, recognizing that this will not always be practical or cost effective, [Section 27-7](#) discusses the process to evaluate and approve exceptions to the geometric design criteria. The process described in [Section 27-7](#) applies to all LPA new construction, reconstruction, and 3R type projects using federal funds.

Form [BLR 22120](#) is used to document the justification and approval of exceptions that are necessary for the completion of the project. Complete the form in its entirety for all LPA federal projects.

The information in the form may be presented at district project coordination meetings. Coordination meetings are discussed in Section 22-1.02. The minutes of the coordination meeting would serve as the documentation of the approval. Requests for exceptions may also be submitted in writing to the district on form [BLR 22120](#). A written response to the request will then be sent to the LPA.

## **22-2.11 Project Development Report (PDR)**

### **22-2.11(a) General**

A PDR is prepared to ensure environmental issues and design features are consistent with federal, State, and local goals and objectives. PDR is required for all projects that qualify for a Federal Approved Categorical Exclusion (CE) and for certain projects classified as State Approved CE; see [Chapter 19](#). Use form [BLR 22210](#) for CE PDRs.

### **22-2.11(b) Contents**

The following information should be included in PDR, when applicable:

1. Location. Include a narrative description of the project location along with a location map.
2. Description of Existing Conditions. Describe the existing facility (e.g., alignment, typical sections, bridges, railroad crossings, utilities) within the improvement. For existing railroad crossings, PDR should document the number of trains per day, the existing warning devices, and the geometrics at the crossing. Also, describe the contiguous sections.
3. Design Traffic Data. Include current ADT, design ADT, DHV when applicable, and the percent trucks.
4. Purpose/Need for Project. Discuss the purpose and need for the project.
5. Design Guidelines. Indicate whether the project is being designed using urban or rural design guidelines for new construction/reconstruction or the 3R guidelines. Include the functional classification, the design speed, and the regulatory speed.
6. Description of Proposed Improvement. Include the following in the description of the proposed improvement:
  - a. Roadway. The description should include a discussion of side slopes and the widths of through lanes, turning lanes, traffic control, non-motorized user facilities, parking lanes, and shoulders. Discuss any alignment changes and intersection improvements. Attach typical sections, plan and profile sheets, and intersection design studies, when appropriate.

- b. Structures. The degree of proposed bridge descriptions contained in PDR will depend on the type of improvement. A bridge rehabilitation project will need to discuss more individual bridge elements needing improvement and possible alternatives for widening under traffic, but not specifics (e.g., beam types). A structure on new location might only require enough details necessary to set approximate roadway profiles, assess hydraulic impacts including streambed environment, and develop a cost estimate. The recommended scope of work should address the approximate dimensions of the replacement structure envisioned, but not so precisely that configuration refinements resulting from subsequent hydraulic, soils, or structural-economic studies are restricted. This is necessary to determine approximate right-of-way requirements, assess environmental impacts, consider necessary hydraulic and flood plain effects, and to make a reasonable cost estimate. [Chapter 36](#) provides guidance on the design of bridges and structures.
- c. Hydraulics (Drainage). PDR should contain a summary of the preliminary hydrologic and hydraulic analyses where highway drainage and/or structures will significantly affect the design or cost of a project. Rehabilitations that have no history of flooding or high water problems may be handled with brief statements of past performance in PDR with detailed hydraulic computations to be completed in the design phase. Discuss the effects of restricted outlets, existing storm sewer capacities, and drainage constrictions (upstream or downstream) on highway drainage systems, particularly in rapidly developing urban areas. For additional guidance on hydraulic and drainage design issues, see [Chapter 38](#) of this *Manual* and the [IDOT Drainage Manual](#).
- d. Miscellaneous Highway Features. PDR should reflect, as appropriate, other elements as follows:
- i. Utilities. Describe any proposed modifications, changes, or multiple uses of right-of-way. Prior to beginning of work, a written agreement must be made between the LPA and each utility, defining the work responsibilities and estimate of cost. See [Section 5-8](#) for guidance on preparing utility agreements and [Section 10-4](#) for guidance on utility coordination.
  - ii. Railroads. PDR must determine if crossings will be at-grade or grade-separated. This will be a collaborative effort between the LPA, IDOT, the affected railroad, and the Illinois Commerce Commission. In most cases for at-grade crossings, it will be appropriate in the preliminary stage to specifically determine the type and proposed location of warning devices at the crossing (e.g., automatic gates, flashing signals) and width of crossing surface. The CBLRS will review and approve the plans, specifications, and estimates without prices for all railroad crossing improvements. [Section 10-2.01\(f\)](#) provides additional information on the coordination with railroads. [Section 22-1.01\(d\)](#) and [Chapter 40](#) provide guidelines on the design of highway/railroad crossings.
  - iii. Lighting. [Section 41-7](#) provides guidelines for highway lighting and illumination. In PDR, describe proposed illumination levels including uniformity ratios and glare levels.

- iv. Erosion and Sediment Control. Evaluate the need for erosion and sediment control measures. This may require additional right-of-way to accommodate erosion and sediment control implementation. See [Section 41-10](#) for guidelines on the design and implementation of erosion and sediment control.
- v. Hazardous Mailbox Supports. During the preparation of PDR, the LPA should address the problem of hazardous mailbox supports. Document the existence of potentially hazardous mailbox supports and their locations in PDR. Removal and replacement of mailboxes can be a sensitive issue and should be reviewed with the local postal authorities and the postal patron. The following evaluation process is required on federal projects and may be used on other projects:
- Survey. Conduct an onsite survey to determine whether there are any hazardous mailbox supports within the clear zone of the project. Document these locations in PDR. If there are no hazardous supports on the project, note this in PDR.
  - Notification. If a mailbox box support is determined to be hazardous, the LPA is responsible for notifying the postal patron by certified mail that their mailbox may be potential hazard. The letter should discuss the following issues:
    - o type of hazard and the potential adverse safety effects,
    - o potential personal liability to the property owner,
    - o statement of the appropriate mailbox design issues (see [Section 41-8](#)),
    - o the recommended appropriate safety design,
    - o LPA's request to change the support to an acceptable design, and
    - o LPA's request to meet with the owner to ascertain the property's owner's decision.
  - Documentation. Ensure the following is documented in the project files:
    - o copies of all certified letters,
    - o meeting results,
    - o any subsequent verbal or written responses, and
    - o documentation of the LPA's effort to remove the hazardous mailbox.
- Summarize all decisions relative to the owner's decision, either agreeing or disagreeing to remove the hazardous support, in PDR.

- Notification by Postmaster. If no response is received from a postal patron who has a hazardous mailbox support, or if the owner indicates that he/she does not wish to change the support, the LPA may contact the local postmaster and ask for the postmaster's help in getting the mailbox support removed. If the local postmaster is agreeable, the local postmaster has the authority to notify the patron in writing of the safety hazard of an existing support. Postal regulations require that box supports must bend or break away when struck by a vehicle and that supports are now readily available for purchase. The local postmaster can give the owner 30 days notice, and if compliance is not achieved, the postmaster has the authority to suspend mail delivery to the box.
  - Project Field Reviews/Construction Phase. If a hazardous mailbox support is constructed or discovered after design approval, use the above procedures and add the appropriate documentation to the files and reports.  
Section 41-8 contains additional information concerning hazardous mailbox supports.
- vi. Truck and Parking Restrictions. List any truck or parking restrictions or parking removal in PDR.
- vii. Mail Delivery. Indicate any mail delivery from a traffic lane.
- viii. Airports. PDR must indicate that the project will have no effect on airport operations. Section 10-6 discusses airport coordination.
- ix. Traffic Control. Many traffic engineering elements are addressed during detailed design in the final plans (e.g., selection and location of traffic signs and pavement markings). However, as appropriate for the project scope of work, PDR should discuss proposed traffic control, especially at intersections, and include justification of those traffic engineering elements (e.g., traffic signal and multi-way stop warrants). Chapter 39 provides guidance on several traffic engineering issues.
- x. Sidewalks and Pedestrians. Describe the reasons for providing, or not providing sidewalks, and the coordination needed with local governmental units. See Section 41-6 for a discussion on sidewalks and ADA compliance. PDR must contain a discussion on satisfying ADA requirements including, if applicable, the selection of accessible routes for disabled individuals.
- xi. Bicycle Facilities. Identify the travel needs of bicyclists in PDR. Chapter 42 provides guidelines for the placement and design of bicycle facilities.
- xii. ADA. Section 41-6 discusses implementation of the *Americans with Disabilities Act* (ADA). PDR must contain a discussion on satisfying ADA requirements including, if applicable, the selection of accessible routes for disabled individuals. Any intersection design study (see Section 10-2.02) prepared during the preliminary study must indicate the location of the curb-cut ramps to be provided. PDR must discuss any request for a design exception from policies on accommodating disabled individuals and the justification for the request. The request must discuss the impact on the access route.



- xiii. Geotechnical Considerations. Conduct preliminary studies in cooperation with soils specialists and geologists when these elements influence the location and/or design of a proposed improvement. Additionally, the location of foundations for structures or high embankments may be an important item in the highway location. See the *IDOT Geotechnical Manual* for information on geotechnical considerations.
  - xiv. Agreements. PDR should document the need for any agreements with the State, other LPAs, consultants, railroads, and/or utility companies. [Chapter 5](#) provides guidance on the preparation of these agreements.
  - xv. Maintenance Considerations. The designer should develop PDR in cooperation with bridge and highway maintenance personnel who are responsible for the highway section under design. [Section 25-2](#) provides additional guidance on maintenance issues.
7. Design Exceptions. List all design exceptions along with any approvals. Include form [BLR 22120](#). See [Section 27-7](#) for additional information.
  8. Cost Estimate. Prepare a cost estimate for the project including construction, utility adjustment, land acquisition, and engineering costs. For major projects requiring more than one construction contract, provide cost estimates for individual usable segments. [Section 11-6](#) discusses the required information needed to document project costs.
  9. Crash Analyses. PDR should include, as appropriate, the following crash analyses to assist in demonstrating the need for a highway improvement:
    - a. Spot Map. Provide a crash spot map as basic crash information in PDR. As applicable, include a comparison of the calculated project crash rates with the statewide average crash rates for the same class of highway. Collision diagram summary sheet percentages also may be compared with statewide averages.
    - b. High-Crash/Crash Pattern Analyses. During the preliminary study, identify High Accident Locations (HAL), rates, and all crash patterns (e.g., fixed objects) at various sites throughout the project. Additionally, include schematic collision diagrams, results of field checks, crash analyses, and recommended countermeasures for these items, or provide a statement that no high crash locations or other crash patterns that exist along the proposed improvement.
    - c. Wet-Pavement Crashes. Identify and analyze any wet pavement crash clusters in accordance with the *Procedures for Identifying, Analyzing, and Improving Wet Pavement Accident Locations Within Rehabilitation/Resurfacing Projects*. These procedures are discussed in the [Illinois Highway Safety Improvement Program](#) available online coordinated through the Bureau of Safety Programs and Engineering (BSPE). Include friction numbers, if available, in the analysis of critical wet pavement crash locations combined with the recommended traffic, existing geometric features, grooving, reprofiling, and/or high friction resurfacing countermeasure alternative. Specify a high-friction resurfacing type and mix design to be used during the development of the final plans.
    - d. Time Period. Analyze the traffic crash data available for the most recent five years and update the data accordingly.
  10. Right-of-Way Requirements. Describe the right-of-way acquisition including the existing land use, the total area required for permanent right-of-way, permanent easements, and temporary easements, the number of property owners affected, and anticipated effects on the remaining properties. Discuss any displacements to persons, businesses, and farms.

11. Environmental Issues. Discuss any involvement with environmental issues. Include the results of any environmental surveys. Include any signoffs and copies of other pertinent coordination. Discuss proposed mitigation measures and indicate any permit requirements.
12. Traffic Control and Alternative Routes During Construction. Include in PDR a discussion on the development of a conceptual plan to accommodate traffic during construction. If the highway is to be kept open to traffic during construction or if detours or runarounds are involved, indicate this in PDR. Discuss all feasible alternatives for handling traffic during construction and methods to provide pedestrian accommodations. For additional guidance on traffic control devices during construction, see [Chapter 39](#).  
  
When deciding on alternative routes during a road closure, several factors should be considered. Some of these factors include the type of pavement and ability for the alternative route to handle the additional load, the impact that the additional ADT would have on the traffic control at intersections and railroad crossings, the effect of larger vehicles have on the turning radii at intersections, and the coordination with the agencies having jurisdiction of the alternative routes. If a marked detour is provided during a road closure, all agencies having jurisdiction of the detour route must approve the detour signing.  
  
Before closing a road during construction, any affected emergency services, school districts, and post offices should be notified. It is recommended that these agencies be contacted prior to submitting the PDR, and documentation of the contacts be included in the report.
13. Public Involvement. Summarize public involvement activities. Discuss any opposition to the project and how public hearing requirements are being fulfilled. Attach any property owner comments or signoffs.
14. Other Coordination. Attach minutes of the early involvement coordination meetings and applicable coordination letter with other agencies, utility companies, and railroads, as appropriate.

#### **22-2.11(c) Project Development Report Review**

Typically, the LPA will send the draft PDR (form [BLR 22210](#)) to the District for review. After District review, the PDR may need to be sent to CBLRS for review and comment. Once the District and CBLRS comments have been addressed, the final PDR (form [BLR 22210](#)) may be submitted for approval.

#### **22-2.12 Design Reports**

A design report will be required for all projects that require a separate environmental document for which an EA or EIS was prepared. The purpose of a design study is to investigate all plausible alignments within the approved corridor. Public involvement activities and environmental studies are conducted concurrently with the design study.

The report shall discuss the alternatives considered, but not studied, with an in depth explanation of why these alternatives were eliminated. For the final alternatives under consideration, include major design details and discuss the social, economic, and environmental advantages and disadvantages of these alternatives. The environmental impacts do not need to be discussed in detail in the design report, but should be summarized. Additionally, summarize the result of public involvement activities. The report shall identify the recommended design alternative and the reason for its selection.

Additional guidance concerning design studies and reports are provided in [Chapters 11](#) and [12](#) of the *BDE Manual*.

### **22-2.13 Approvals**

#### **22-2.13(a) Categorical Exclusion Approval**

The following approval process is required:

1. State Approved Categorical Exclusion Projects. For State Approved CE projects, CE Approval is given by the district after the environmental coordination and any public involvement activity have been completed and the project has been determined to have no unusual circumstances. This is accomplished by the approval of form BLR 19110 indicating the project does qualify as a State Approved CE. Projects including an existing structure or proposed structure, requiring inclusion in the NBIS will require the district to consult with CBLRS to determine CE approval. Approval of form BLR 19110 must occur prior to the approval of either form [BLR 19100](#) or [BLR 22210](#).
2. Federal Approved Categorical Exclusion Projects. For Federal Approved CE projects, CE Approval is required by the FHWA. After the final PDR has been reviewed, environmental coordination and public involvement activities have determined there are no unusual circumstances, and there is an agreement on any mitigation measures, the CBLRS will contact the FHWA with a request for CE Approval. The request for CE Approval to the FHWA may be made at a coordination meeting, through email, or other method of contact. Documentation of the CE Approval will be included in the PDR.

#### **22-2.13(b) Design Approval**

All projects that require the preparation of a PDR (form [BLR 22210](#)) or a design report will require design approval.

For all State Approved CE projects, design approval by the district will be required. For all Federal Approved CE projects, design approval will be given by the CBLRS after environmental and public involvement requirements have been completed and the project has been determined to have no unusual circumstances.

#### **22-2.13(c) Direct Approval**

The CBLRS Project Development Engineers have the authority to conduct some official actions in the districts and at coordination meetings. Specifically, these actions will consist of evaluating and approving, when satisfactory, requests for CE determinations and design approvals for certain projects. Direct approvals are means of expediting the processing phases.

Consider the following before requesting direct approval:

- The LPA has submitted a PDR (form [BLR 22210](#)) or other design report.
- Projects that involve other than minor geometric revisions are not normally eligible for direct approval. Some projects with design deviations may still qualify for direct approval if prior concurrence for design deviations has been obtained from the CBLRS.

#### **22-2.14 Addenda to Project Development and Design Reports**

All changes during the preparation of final plans that affect the original PDR such as revised scope of work, significant alignment revisions, additional right of way or major design features of an approved project must be submitted in the same manner as the first approval.

Some examples of work that would cause a PDR addendum include the following:

- Acquiring more ROW or easements than the original PDR proposed;
- Switching from a widening and resurfacing project to reconstruction project;
- Revising the type of a stream crossing structure, i.e. from a box culvert to a bridge;
- Proposing a new stream crossing;
- Adding auxiliary lanes or traffic signals at an intersection;
- Changing the typical section in the PDR;
- Changing layout, function or access to roadway.

Some examples of work that would not require a PDR addendum include the following:

- Altering the skew of a stream crossing structure to better fit the channel alignment;
- Revising the work zone traffic control scheme from a more restrictive arrangement, such as a road closure, to a more liberal plan, such as maintaining through traffic in some manner;
- Acquiring less ROW or easements than original PDR proposed;

The addenda can often be handled with a memo, submitted by the LPA, detailing the changes to the approved PDR. The memo should discuss the revised proposed scope of work and justification for the revision. Similar to the original PDR, the appropriate exhibits should be attached to the memo.

The environmental processing of the PDR Addenda will be similar to the original PDR. In all cases, an ESR addendum will be required to provide the necessary environmental clearances.

#### **22-2.15 Reports for LPA Projects Involving a State Highway**

The following procedures for processing and approval of Design Reports, PDRs, and other related documents will apply for LPA projects involving a State highway.

##### **22-2.15(a) State Highway System**

The following applies with regard to jurisdictional transfers:

1. No Jurisdictional Transfer. Discuss all projects at district coordination meetings before finalizing and submitting any reports. Reports prepared by the LPA or their consultant should be submitted to the CBLRS for review, approval, or information. When the need for a design exception is discovered at the local coordination meeting on routes under State jurisdiction, the CBLRS will coordinate and discuss this information with BDE prior to approval action. If a LPA is preparing the report for a State highway on the National Highway System (NHS), BDE will review the highway geometrics and cross section design during the development of preliminary alternatives. Once the geometrics and cross section designs are agreed to, the CBLRS will review the report and process it accordingly.
2. Jurisdictional Transfer to a LPA. Submit PDR to the CBLRS for review and approval. When the State is providing matching funds, the CBLRS will coordinate the design requirements with BDE prior to approval. It is imperative that these projects be discussed at the district coordination meetings. This will allow BDE and the CBLRS to become aware of proposed design features and costs and to determine if the project is still the same as originally discussed during programming meetings.

#### **22-2.15(b) Combined Systems**

For projects that have substantial work on both highway systems, and the LPAs and their consultants prepare reports, process the PDR through the district to the CBLRS. The CBLRS will coordinate any design requirements with BDE.

#### **22-2.15(c) Modified Procedures**

Where special or unusual situations arise during project development, modified review and processing procedures may be necessary. In such cases, the LPA, district, CBLRS, and BDE should agree on the modified procedures to use.

#### **22-2.16 Interstate Access Studies**

BDE and FHWA must approve all proposed new access points to the Interstate system and all proposed changes in interchange configurations, even if the number of access points does not change. Any changes to access for non-Interstate fully access controlled facilities, must be approved by BDE. This applies to any change regardless of the funding source.

FHWA revised access approval constitutes a federal action and, as such, National Environmental Policy Act (NEPA) procedures must be followed. Compliance with NEPA procedures should proceed concurrently with the analyses to determine engineering acceptability and feasibility.

An Access Justification Report (AJR) must be prepared to confirm the future safety and traffic operations along the Interstate corridor. The required contents of this document can be found in [Chapter 37](#) of the *BDE Manual*. The report is submitted to BDE for review and approval by IDOT and, when required, by FHWA.

#### **22-2.17 Work Zone Transportation Management Plans for Impact on State Highways**

**22-2.17(a) General**

A well-planned method for maintaining traffic flow is critical for meeting the Department's mobility goals, minimizing complaints from the traveling public, residents, and businesses, and reducing unnecessary capital costs. Therefore, when a LPA project impacts a State highway (owned or maintained), [Chapter 13](#) of the *BDE Manual* will apply to any work on the State highway.

While a majority of local highways are considered non-Significant Routes, there are a few local highways in urban areas that may be considered Significant Routes. Therefore, for federally funded projects, [Chapter 13](#) of the *BDE Manual* will apply as well.

The LPA is responsible for making a request to the District for a determination if a highway is considered a Significant Route.

**22-2.17(b) Significant Route**

A Significant Route is a roadway segment where a lane closure on the roadway is expected to cause sustained work impacts that are not considered tolerable based on work zone mobility goals or public opinion (see IDOT's website under [Work Zones](#) for Significant Route Location Maps).

If work is going to be performed on any Significant Route, the LPA project should be taken to a FHWA/IDOT coordination meeting.

**22-2.17(c) Requirements**

[Figure 13.1-A](#) of the *BDE Manual* shows the Work Zone Safety and Mobility Process Flow Chart in order to determine the level of significance of a project along a State highway.

For a Significant Project – Short Term (work less than three days on a Significant Route), the LPA will be responsible for preparing a Permitted Lane Closure Map (PLCM) based on the Significant Route Location Map and the District's knowledge. See [Section 13-1.03\(c\)](#) of the *BDE Manual* for details.

For a Significant Project – Long Term (work more than three days on a Significant Route), the LPA will be responsible for an Impact Analysis (an analysis of the safety and mobility impacts of a road construction or maintenance project). A full Traffic Management Plan (TMP) will be prepared by the LPA and submitted to the District. The District will review the TMP and coordinate the Department's review and approval. See [Section 13-1.03\(c\)](#) of the *BDE Manual* for details.

For a Non-Significant Project (work on a non-Significant Route), an Impact Analysis is not required. The final design may proceed with a TMP that consists of only a Traffic Control Plan (TCP).

**22-2.17(d) Exceptions**

If the TMP strategies have been evaluated and incorporated into the project and the mobility and/or queue goals are not met, the LPA will prepare an exception to compliance. The Request for Exception to Compliance must include:

- all strategies including those in the TMP;
- justification why it is not feasible to meet the goals of the policy; and
- the proposed strategies to mitigate work zone impacts.

The request must be sent to the District Department and FHWA review and approval. See Section 13-7 of the *BDE Manual* for the Request for Exception to Compliance form.

#### **22-2.17(e) Funding for Work Zone Traffic Management Plans**

The LPA will be responsible for the cost of any required Work Zone Traffic Management Plans along a State highway when included on a LPA project.

#### **22-2.18 Complete Streets for Impact on State Highways**

For federally funded projects that impact State highways, the LPA shall follow procedures contained in [Section 10-2.09](#) except the LPA:

- should address any issues regarding Complete Streets at FHWA/IDOT coordination meetings; and
- shall include signed documentation of the Secretary's concurrence of exception to Complete Streets in the PDR.

## 22-3 RIGHT-OF-WAY

### 22-3.01 General

The LPA develops preliminary right-of-way cost estimates and relocation assistance plans as necessary and in accordance with the [IDOT Land Acquisition Policies and Procedures Manual](#).

Preliminary right-of-way costs are determined on a per acre (hectare) basis, or on a parcel-by-parcel basis, and include costs for persons displaced as a result of a proposed highway improvement (e.g., relocation, replacement housing). For major projects, a preliminary relocation plan is developed to estimate housing needs and available resources for persons displaced by a highway project. The steps in the land acquisition process are shown in the [IDOT Land Acquisition Policy and Procedures Manual](#).

When publicly owned facilities will be acquired, a decision should be made at the completion of PDR to either pay the market value for the property or to functionally replace it. Guidance on this issue is in the [IDOT Land Acquisition Policy and Procedures Manual](#).

In addition to securing cost estimates and relocation plans through the Land Acquisition Section, the designer should seek their assistance when determining special alignment and design features to avoid adverse property severance, undesirable access features, unnecessary damages, and odd-shaped takings. Additionally, consider existing property lines and the value of property to avoid excessive right-of-way costs. Often, alternative locations and designs can be selected with lower right-of-way costs.

When right-of-way is acquired for Federal-aid projects, full compliance with Title II and III of the *Uniform Relocation Assistance and Real Property Acquisition Policies Act of 1970* is mandatory. There must be full compliance with the requirements of Title II and III on Federal-aid LPA projects whether or not Federal funds are used to pay a part of the right-of-way costs.

### 22-3.02 Definitions

The following definitions apply:

1. Right-of-Way. Land acquired for permanent ownership by the LPA for activities that are the responsibility of the LPA for an indefinite period of time. The LPA obtains the fee simple title to the property. Right-of-way is typically acquired for roadways, roadsides, etc.
2. Permanent Easements. Easements acquired with the perpetual right to construct and maintain a public highway and incidental facilities over and across the surface of lands. Types of permanent easements include:
  - utility easements,
  - storm sewer easements, and
  - scenic easements.
3. Channel Easements. Easements acquired specifically for stream channel construction and maintenance, which provides the LPA with a permanent right of ingress and egress. The property owner relinquishes the right to modify the channel dimensions (e.g., slopes).



4. Temporary Construction Easement. Easements acquired for the legal right of usage by the LPA to serve a specific purpose for a limited period of time (e.g., construction, maintenance and protection of traffic during construction). Once the activity is completed, the LPA yields its legal right of usage. Although located outside or beyond the proposed highway right-of-way lines, all temporary construction easements or permits are considered as right-of-way parcels and must be reported as right-of-way required for construction of a project for purposes of obtaining authorization to advertise the project for letting.

Acquisition of temporary construction easements should be accomplished in the same manner as the appraisal and acquisition of a fee-taking or a permanent easement with respect to appraisal and acquisition requirements. Temporary easements should always be obtained for detour roads, borrow pits, removal of remainders of buildings situation partially on acquired right-of-way, channel changes (requiring infrequent or no future maintenance), etc., where the specified use is essential to completion of construction of the proposed improvement.

5. Temporary Use Permit. The temporary use permit is used to describe a license acquired by a LPA to do a particular act or series of acts on the land of another without possessing any estate or interest in the land. A property owner may terminate the permit at any time.

Acquisition of temporary use permits should be confined to those areas of construction such as for sloping of lawns, extending back slopes beyond the proposed highway right-of-way lines, reconstruction of driveways, where a nominal amount of money is involved, the probability of termination is minimal and the effect of termination would not jeopardize completion of the highway improvement. When acquired as the only parcel from a property owner, it is not necessary for the appraiser to offer the owner, or designated representative, the opportunity to accompany the appraiser on the inspection of the property, nor is it necessary to furnish the owner with a written Summary of Right of Way Acquisition and Offer Purchase.

Although located outside or beyond the proposed highway right-of-way lines, all temporary construction easements or permits are considered as right-of-way parcels and must be reported as right-of-way required for construction of a project for purposes of obtaining authorization to advertise the project for letting.

### **22-3.03 Title II – Uniform Relocation Assistance**

The purpose of this Title is to establish a uniform policy for fair and equitable treatment of persons displaced as a result of federal and federally assisted programs to prevent disproportionate injuries as a result of programs designed for the benefit of the public as a whole.

Wherever the acquisition of real property for a project will result in the displacement of any person, the LPA is responsible for providing a relocation assistance advisory program. The LPA's relocation assistance advisory program must be in accordance with requirements of the [IDOT Land Acquisition Policies and Procedures Manual](#). If the Relocation Assistance and Payments Program is administered by the LPA, the program must be approved prior to the public hearing or commencing negotiations for the property.

### **22-3.04 Title III – Uniform Real Property Acquisition Policy**

In order to encourage and expedite the acquisition of real property by agreements with owners, to avoid litigation, relieve congestion in the courts, to ensure consistent treatment for owners, and to promote public confidence in land acquisition practices, a LPA should follow the policy requirements contained in the [IDOT Land Acquisition Policy and Procedure Manual](#).

### **22-3.05 Certified Appraisers**

Where federal funding is used in any phase of the project and a detailed appraisal is required, the appraiser must be certified in accordance with the *Financial Institution Reform Recovery and Enforcement Act*. LPA staff appraisers and reviewers will not require certification to prepare or review detailed appraisals, but their qualifications must be consistent with the level of difficulty of the assignment. If a fee appraiser or fee reviewer is required for a detailed appraisal, their selection must meet the following classifications:

1. State Certified Residential Real Estate Appraiser. The appraiser is limited to appraising residential property containing one to four units and vacant single family land zoned residential that will accommodate no more than one unit.
2. State Certified General Real Estate Appraiser. The appraiser is allowed to appraise any type of real estate.

A detailed appraisal is defined as a complex appraisal problem that requires thorough documentation to support the values and conclusions contained in the report. An appraisal is considered detailed under the following circumstances:

- Where damages to the remainder, excluding non-complex cost to cure items (e.g., fence relocations, sign relocations) exceed \$10,000.
- The acquisition involves the acquisition of a principle building.
- On acquisitions involving only land or land with minor improvements, a staff reviewing appraiser will determine if the appraisal problem is complex. Examples of complex appraisal problems include:
  - the highest and best use is different than present use,
  - a complex specialty report is required,
  - market data is inadequate and consideration must be given to the cost and/or income approaches as appropriate, and/or
  - there is a complicated valuation problem involved.

### **22-3.06 Early Acquisitions**

In general, no new right-of-way can be acquired for a project prior to completion of the environmental process and design approval. However, under some circumstances this requirement may be waived and will not jeopardize Federal-aid participation in future project costs. Early acquisition may be acceptable if it is shown that the acquisition is necessary to:

- alleviate particular hardship to a property owner, on their request, in contrast to others because of an inability to sell the property (hardship acquisitions); and/or
- prevent imminent development and increased costs of a parcel that would tend to limit the choice of highway alternatives (protective buying acquisitions).

Additionally, the following requirements must be met:

- The acquired property must not influence the need to construct the project or the selection of the location of the project.
- The acquisition must comply with the *Uniform Relocation Assistance and Real Property Acquisition Policies Act of 1970*, as amended, 42 U.S.C. 4601-4655 and 49 C.F.R. 24.
- The acquisition must comply with Title VI of the *Civil Rights Act of 1964*.
- The acquisition must not include lands protected by Section 4(f) of the *Department of Transportation Act*.
- The final project must meet all requirements for a normal Federal-aid project (e.g., compliance with the *National Environmental Policy Act*, the *Historical Preservation Act*, the *Endangered Species Act*, the *Wetlands Executive Order*).
- Advance acquisition must not be used to circumvent federal laws or regulations.

Because acquiring large quantities of right-of-way in advance of environmental and design approvals could likely influence project location or need, the LPA should be aware that any full scale acquisition is done at its own risk.

#### **22-3.07 Land Acquisition Donations**

A donation of right-of-way can be accepted after an owner has been fully informed of their right to receive just compensation. The LPA is not required to appraise the property or to offer compensation. Process donations only after the environmental study of the project is completed and design approval received.

#### **22-3.08 Documentation and Certification**

All property within limits of the proposed highway improvement must be cleared either by acquisition, easement, or permit, before receiving authorization to proceed to letting. Any deviation in this policy will require submittal of a written statement by the LPA to the district indicating the location and reasons for the deviation before authorization will be issued by FHWA.

The LPA is responsible for documenting and maintaining their files to provide the necessary evidence that they have complied with the provisions of the *Uniform Relocation Assistance and Real Property Acquisition Policies Act of 1970*, as outlined in Section 22-3. The LPA's file must be available and open to inspection by IDOT and FHWA for a period of three years after the FHWA's payment of the final voucher on the project.

The district must certify prior to the State's advertising for bids that the LPA has acquired the necessary right-of-way and has provided relocation assistance, if applicable, in accordance with the requirements in Section 22-3.

#### **22-3.09 Closing Right-of-Way Project**

The LPA, upon completing the final transaction on a right-of-way project, will ensure that the proper certification forms have been completed and sent to IDOT for certification and acceptance.

Consider the following when closing right-of-way projects:

1. Final Invoice. Within 90 days after certification, submit a final invoice for the right-of-way cost to the district.  
  
Statement of Cost of Right-of-Way. Include a Statement of Cost of Right-of-Way, see Figure 22-3A, with a copy of the appropriate cancelled checks with the submission of any progress or final invoice to provide documentation for the cost shown. Include the following in the Statement of Cost of Right-of-Way:
  - parcel number,
  - cost of parcel,
  - cost of excess land, if any, acquired from same ownership,
  - credits by parcel or project, and
  - incidental expense by parcel or project.
2. State Job Completion Notice - Form BFM-336. Upon receipt of the final invoice, the district will prepare form [BFM-336](#) to notify the appropriate offices of the project completion. Retain copies of all invoices and supporting documentation for auditing purposes for a period of three years after payment of the final voucher. Additional support documentation that is to remain on file includes:
  - right-of-way maps or plans showing the right-of-way authorized and the actual area acquired, including parcel identification numbers,
  - property lines of area actually acquired, and
  - any other pertinent data affecting cost (e.g., structures, improvements, fences).
3. Audits. IDOT will audit invoices in accordance with FHWA approved auditing procedures. Upon completion of the audit and resolution of any findings, IDOT will close out the Contract Obligation Document and submit a final voucher to FHWA.
4. Form BLR 13510. When MFT or TBP funds are used to pay a portion of the cost, the LPA is required to submit form [BLR 13510](#) upon completion of the project. This will close out the MFT or TBP portion of the project.

COLUMBUS DRIVE EXTENSION

River to Huron Street  
 F.A.P. Route 525  
 Federal Project M5000(55)  
 City Section 80-B9003-00-RP  
 State Job No. R-88-003-77  
 Cook County

22-3-6

BUREAU OF LOCAL ROADS & STREETS  
 PROJECT DEVELOPMENT - Federal Funds

May 2016

COST OF RIGHT OF WAY					
Parcel	Parcel Cost		Incidental Expenses		Total
<u>Parcel 1</u> — North side of Grand Avenue South side of Ohio Street and West side of Fairbanks Court Purchased from the American National Bank and Trust Company of Chicago Trust No. 39369	\$282,000.00		Appraisals and Title Costs	\$6,910.46	
	Interest on Judgment Order	4,172.05			
	Court Costs	17.00			
	TOTAL	\$286,189.05	TOTAL	\$6,910.46	\$293,099.51
<u>Parcel 2</u> — 541 N. Fairbanks Court Purchased from 541 Fairbanks Corporation	\$250,000.00		Appraisals and Title Costs	\$8,663.45	
	Interest on Judgment Order	2,095.89			
	Court Costs	13.00			
	TOTAL	\$252,108.89	TOTAL	\$8,663.45	\$260,772.34

SAMPLE STATEMENT OF COST OF RIGHT-OF-WAY

HARD COPIES UNCONTROLLED Figure 22-3A

**22-4 ACRONYMS**

This is a summary of the acronyms used within this chapter.

AJR	Access Justification Report
BBS	Bureau of Bridges and Structures
BCR	Bridge Condition Report
BDE	Bureau of Design and Environment
BLA	Bureau of Land Acquisition
BMPR	Bureau of Materials and Physical Research
BSPE	Bureau of Safety Programs and Engineering
CBLRS	Central Bureau of Local Roads and Streets
CE	Categorical Exclusion
EA	Environmental Assessment
EIS	Environmental Impact Statement
ESR	Environmental Survey Request
FHWA	Federal Highway Administration
GCPF	Grade Crossing Protection Funds
HAL	High Accident Location
IDNR	Illinois Department of Natural Resources
IDOA	Illinois Department of Agriculture
IDOT	Illinois Department of Transportation
IEPA	Illinois Environmental Protection Agency
IHPA	Illinois Historic Preservation Agency
ISIS	Illinois Structure Inventory System
LOS	Level of Service
LPA	Local Public Agency
MPO	Metropolitan Planning Organization
NEPA	<i>National Environmental Policy Act</i>
OPP	Office of Planning and Programming
PBDHR	Preliminary Bridge Design and Hydraulic Report
PDR	Project Development Report
PESA	Preliminary Environmental Site Assessment
ROW	Right of Way
SIMS	Structure Information Management System
TS&L	Type, Size, and Location

**22-5 REFERENCES**

1. [Chapter 11](#) "Phase I Studies", *BDE Manual*, IDOT
2. [Chapter 12](#) "Phase I Engineering Reports", *BDE Manual*, IDOT
3. [Chapter 13](#) "Work Zone Transportation Management Plans", *BDE Manual*, IDOT
4. [Chapter 37](#) "Interchanges", *BDE Manual*, IDOT
5. Highway Functional Classification Concepts, Criteria and Procedures, FHWA, 2013
6. [Roadway Information and Procedure Manual](#), OPP, IDOT
7. [Structure Inventory and Procedure Manual](#), OPP, IDOT
8. [Drainage Manual](#), BBS, IDOT
9. [Geotechnical Manual](#), BMPR, IDOT
10. [Land Acquisition Policies and Procedures Manual](#), BLA, IDOT
11. *Financial Institution Reform Recovery and Enforcement Act*
12. *Uniform Relocation Assistance and Real Property Acquisition Policies Act of 1970*
13. *Civil Rights Act of 1964*
14. *Department of Transportation Act*
15. *National Environmental Policy Act*
16. *Historical Preservation Act*
17. *Endangered Species Act*
18. *Wetlands Executive Order*