

*Local Public Agency Manual*

*Engineering*

*(Project Design & Delivery:  
Developing an LPA Project for Bidding)*

**Engineering**

*Table of Contents*

Overview .....3

General Responsible Charge Duties.....4

DOTD Phases & Stages .....5

Time Requirements .....5

Project Set-up meeting .....5

Project Reporting .....6

Consultant Selection for Design Services .....7

Invoices .....10

Pre-design Meeting .....12

Environmental NEPA (Stage 1) .....13

Actions Worked Concurrently with Plan Development .....18

Right-of-way Maps, Joint Plan Review Meeting .....20

Railroad Permits .....29

Utility Relocation Procedures for LPA Projects .....31

Engineering Design and Plan Development .....37

Scope Changes .....44

Traffic Counts .....44

Geotechnical Investigation .....44

Typical Section Design .....46

Formatting Plan Sheets .....48

***Local Public Agency Manual***

*Engineering*

*(Project Design & Delivery:*

*Developing an LPA Project for Bidding)*

Example How to Begin a Sidewalk Project.....49

Design Submittals to DOTD .....50

Plan-in-Hand Inspection (Field Inspection) .....51

Design Exception/Design Waiver .....52

Final Plans .....54

Lighting .....55

Landscaping .....56

Transportation Management Plan (TMP) .....57

Project Proposal Preparation .....61

Construction Contract Time .....62

Cost estimate (Project Estimate) .....62

PS&E Package .....65

Requirements for Bidding .....66

Falcon .....67

Revisions, Postponements, Withdrawals .....68

Bidding .....69

Steps from Bidding to Notice to Proceed (NTP) .....71

Notice of Contract Execution and Notice to Proceed .....72

Links .....73

# *Local Public Agency Manual*

## *Engineering*

*(Project Design & Delivery:*

*Developing an LPA Project for Bidding)*

★ - Symbol designates information that is higher level and applicable to the Responsible Charge

### **Overview**

- ★ The goals of the project delivery process are:
- To get a project delivered so it can be bid through DOTD with Federal Funds and
  - To produce good plans that will be on schedule or completed faster and avoid revisions and/or withdrawals

- ★ To successfully reach the goals, the LPAs & their consultants must:
- Understand and comply with the DOTD project delivery process to complete the bid package
  - Plan for and allocate sufficient local resources to oversee the project in plan development
  - Plan for and allocate sufficient local resources to complete the plan delivery process
  - Produce and submit good/complete plans
  - Minimize plan delays and avoid revisions and/or withdrawals
  - Reduce change orders and project delays

Direction from the DOTD Chief Engineer to the designers

- Plans are to be
  - Clear
  - Concise
  - Correct
  - Complete
  - Consistent
  - Constructable

## *Local Public Agency Manual*

### *Engineering*

*(Project Design & Delivery:*

*Developing an LPA Project for Bidding)*

## **★ General Responsible Charge Project Design & Delivery Duties**

The Responsible Charge functions as the project manager for the LPA and has to work with DOTD to get the project completed. For engineering and plan development, the responsible charge must ensure there is a plan and allocation of sufficient local resources to oversee the project delivery process for bidding. Their objective is to oversee the production and submission of good, complete plans at each stage which will minimize plan delays, avoid revisions and/or withdrawals, and reduce change orders and project delays. Delays to a project reduce the buying power of the funds. Detailed duties are referenced in the tables in the *LPA Manual, "Project Administration Overview"*.

### *General Responsibilities*

- Keeps the project moving
- Ensure any right-of-way acquisition and relocation is performed according to Uniform Act
- Ensure utility agreements are acquired prior to construction
- Acknowledge and plan for the LPA accepting maintenance and liability for sidewalks/bike paths
- Ensure the LPA has an operation & maintenance plan for landscaping
- Acknowledge and plan for the LPA accepting operating expenses for lighting
- Ensure all environmental permits are acquired and commitments are executed during construction.
- Ensure communication about the project is provided to the public during construction

### *Specific Responsibilities*

- Submit status reports to DOTD
- Attend all decision meetings
- Distribute plans internally within the LPA
- Transmit letters and plans to DOTD
- Confirm comments are addressed

## *Local Public Agency Manual*

### *Engineering*

*(Project Design & Delivery:*

*Developing an LPA Project for Bidding)*

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## **DOTD Design Phases & Stages**

The Design Phases and Stages and their relationships are defined in the *LPA Manual*, “*Project Administration Overview*”. *Engineering* will focus on:

- A. Preliminary Engineering for Project Development and Environmental Studies – Stage 1, (Phase 2)
  - B. Right of Way Acquisition – Stage 3, (Phase 3)
  - C. Utility Relocation – Stage 3, (Phase 4)
  - D. Design – Stage 3, (Phase 5)
  - E. Bidding – Stage 4
- 

## **Time Requirements**

★ Each project must be processed through the required milestone submittals. Suggested times are found in the *Appendix “C”: Schedule Planner Worksheet*. During the design process, the DOTD reviews and provides comments on the submittals. For an LPA to expedite the processing time during design it is recommended that a response be provided to each comment in writing.

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## **★ Project Set-up Meeting**

★ This meeting is STRONGLY encouraged prior to beginning the design phase of the project. This meeting is set with the DOTD project manager and the LPA responsible charge and will allow the DOTD PM and the LPA responsible charge to meet and discuss the project. The agenda includes the following:

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## *Local Public Agency Manual*

### *Engineering*

*(Project Design & Delivery:*

*Developing an LPA Project for Bidding)*

1. A discussion on the scope of services, schedule, budget and expectations that would be required if the DOTD selects their consultant.
2. If the LPA selects the consultant, help and guidance on what is needed selecting a consultant for DOTD plan development
3. Full size plans vs. letter size plans
4. The requirements for survey
5. Other plan development related issues
6. The project manager and the LPA meet and formulate a plan of action for succinctly getting the project to bidding
7. Project Reporting

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### **Project Reporting**

In order to improve communication between DOTD and the LPAs, DOTD has created a project reporting form. This electronic form is located on the DOTD LPA website. The purpose of the form is to improve communication between all parties of the status of the project and document any problems.

The Urban System program requests the form be sent monthly. The other programs request quarterly submissions.

The first page of the form has checkboxes for applicable actions. Each category enumerates various action items that require completion.

The second page requests a written status, identification of delays, and future actions. We encourage the LPA to inform DOTD of any problems on this sheet.

The completed form is sent electronically to the DOTD Project Manager, DOTD District Administrator and the MPO (if applicable).

Though there is no penalty if they forms are not submitted, the Project Managers are more responsive to the LPAs that send in reports.

# *Local Public Agency Manual*

## *Engineering*

*(Project Design & Delivery:*

*Developing an LPA Project for Bidding)*

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### **Consultant Selection for Design Services**

If **100% Local Funds** are used for Preliminary Engineering (Design Engineering) on a local route, the LPA may choose one of the following:

- LPA performs work in-house
- LPA selects and pays for their own consultant to help with work using state procurement laws. (Exception: The consultant cannot be on the DOTD disqualified or debarred list)

**TIPS:** When negotiating a contract that only uses local money:

**Questions to ask:**

- Is the consultant familiar with the requirements of DOTD?
- Has the consultant done work for DOTD before in DOTD format? (All work will be performed in accordance with the DOTD's Standards and Procedures (not local policies))
  - Has the consultant designed a project in conformance with the formatting required in Chapter 8 of the Road Design Manual?
- What is the consultant's Quality Control/Quality Assurance (QC/QA) process? Have them describe it.
- Who is the consultant's project manager?
- Is the consultant in good standing with Louisiana Professional Engineers and Land Surveyors Board (LAPELS)?
- Is the consultant on the DOTD disqualified list?
- Did the consultant prepare the project application with the idea that they would get the work?
- Has the consultant had LPA training?
- Is the consultant familiar with the DOTD pay items?
- Is the consultant familiar with the DOTD invoice process?

**Other information:**

- DOTD bids all construction projects; therefore, DOTD requirements (policies, procedures, schedules, milestone submittals, and deliverables) required to bid the project must be considered when developing the consultant contract scope and fee. This includes reasonable review time by DOTD which is dependent on the size and complexity of the project.

## *Local Public Agency Manual*

### *Engineering*

*(Project Design & Delivery:*

*Developing an LPA Project for Bidding)*

- For Construction Engineering & Inspection Contracts:
  - Inspectors may only inspect activities in which they hold an active DOTD certification. The major activities below require certified inspectors.
    - a) Asphaltic Concrete Plant
    - b) Asphaltic Concrete Paving
    - c) Embankment and Base Course
    - d) Portland Cement Concrete Paving
    - e) Structural Concrete
  - The Consultant Office Manager must satisfy the following minimum requirements:
    - a. Training in Site Manager
    - b. Training in DOTD Construction Contract Administration
  - WORK ZONE TRAINING REQUIREMENTS

All project personnel (engineers, engineer interns, and field personnel, \*excluding Asphalt Plant Inspector and Office Manager) listed in the staffing plan for the project shall have completed the appropriate work zone training courses at the time of submittal. Specific requirements are:

    - Engineers (field and office):
      - Flagger
      - Traffic Control Technician
      - Traffic Control Supervisor
    - Engineer Interns:
      - Flagger
      - Traffic Control Technician
      - Traffic Control Supervisor
    - Field Inspectors:
      - Flagger
      - Traffic Control Technician
    - Field Senior Technicians:
      - Flagger
      - Traffic Control Technician
      - Traffic Control Supervisor
  - Approved courses are offered by ATSSA and AGC. Substitutes for these courses must be approved by the DOTD Work Zone Task Force. The “DOTD Maintenance Basic Flagging Procedures Workshop” is not an acceptable substitute for the ATSSA and AGC flagging courses.



## *Local Public Agency Manual*

### *Engineering*

*(Project Design & Delivery:*

*Developing an LPA Project for Bidding)*

If **Federal Funds** are used for Preliminary Engineering (with Local and/or State match)

- FHWA requires DOTD to **facilitate** the consultant selection, advertising and bidding for LPAs to use Federal funds as stated in the Entity-State Agreement
- DOTD advertises and selects a consultant for the LPA. DOTD's procedures for both of these activities have been previously approved by FHWA; meeting all Federal requirements. The Federal guidelines require following the Brooks Act.
  - *The Brooks Act – USC 40 Ch. 11* - The federal Brooks Act requires agencies to promote open competition by advertising, ranking, selecting, and negotiating contracts based on demonstrated **competence and qualifications** for the type of engineering and design services being procured, and at a fair and reasonable price.
  - LA State Law procurement requirements for professional services do NOT meet the Brooks Act

**NOTE:** The LPA signs the formal contracts with the consulting engineer and the contractor. DOTD is not a party to the contract.

**If the project is on a state route, DOTD will hold the contracts. The LPA will provide all money to completely fund or match the Federal funds for engineering or construction.**

#### **LPA Responsibilities if Federal funds are used for pre-construction**

- Works with the DOTD PM to develop the project scope of services & man-hours per program requirements for DOTD
- Provides the project schedule & budget (must be realistic) (may have help from a consultant).
- Executes the consultant contract prepared by DOTD. (The DOTD PM has less ability to rush a project if the LPA does not execute the project quickly. The Responsible Charge should let the PM know if they are being delayed i.e. if the council meeting is not imminent.)
- Reviews, approves & transmits invoices to the DOTD
- Monitors the contract time & notifies DOTD of any extensions / suspensions

#### **DOTD Responsibilities if Federal funds are used for pre-construction**

## *Local Public Agency Manual*

### *Engineering*

*(Project Design & Delivery:*

*Developing an LPA Project for Bidding)*

- Works with the LPA Responsible Charge to develop the project scope of services & man-hours per program requirements
- Reviews schedule and budget
- Prepares & advertises the contract
- Selects the consultant with input from the LPA (depending on the program)
- Prepares the consultant contract for execution by the LPA with the consultant
- Processes & pays invoices

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### **Invoices**

Invoices submitted to DOTD for reimbursement or disbursement for an engineering contract must be in format found on the DOTD Consultant Contract Services website. Invoices should be submitted to the project manager monthly.

The Entity-State Agreement should be consulted to determine if the project is compensated by the reimbursement method or the disbursement method. (See LPA Manual "*Project Administration Overview*" - Entity-State Agreement Section II Funding)

The reimbursement method steps are following

- The LPA pays the contractor
- The LPA submits a copy of the cancelled check (shows the front and back of the check) or a copy of the electronic transaction
- The LPA is then reimbursed by DOTD for the agreed percentage in the Entity-State Agreement

The disbursement method steps are following.

- The LPA submits a copy of the invoice and the Cost Disbursement Form to DOTD
- DOTD sends the LPA the funds for the percentage in the Entity-State Agreement
- The LPA pays the contractor
- The LPA provides proof of payment to the contractor within 60 days to DOTD or with the next invoice for engineering contracts.

## *Local Public Agency Manual*

### *Engineering*

*(Project Design & Delivery:*

*Developing an LPA Project for Bidding)*

#### Example of Information Required for a Cost Disbursement Form

<b>Date:</b> November 26, 2012	<b>Entity:</b> <u>Anytown, LA</u>	<b>Estimate No:</b> 4
<b>Project No:</b> H.001234	<b>Contract:</b> Nothing is required here	<b>Amount:</b> \$2,454.56 (Total amount of invoice/ partial estimate)
<b>Project Name:</b> Streetscaping for Any Town		<b>Phone No:</b> 225-987-5432

### ★ Common Reasons for Invoice Rejection

- Dates worked “From” and “To” are not listed.
- Work was performed prior to the Notice to Proceed date. (Work done prior to this date is not eligible for compensation.)
- The expiration date has passed without an extension or justification letter to the DOTD Project Manager.
- The certification statement and/or the principal’s signature are not included.
- No Cost Disbursement Form is included if the disbursement method is chosen in the Entity-State Agreement.
- The sub-consultant’s invoice is not provided.
- The employee’s classification on the hour/rate breakdown of labor charges is not shown.
- The standard invoice format is not used.
- The previous amounts are not correct on current invoice.
- If there is a missing invoice(s) or skipped number(s).

## *Local Public Agency Manual*

### *Engineering*

*(Project Design & Delivery:*

*Developing an LPA Project for Bidding)*

- Math errors
- State Project Number is incorrect on the invoice.
- If project related material, receipts, etc., were not included.
- If direct expense calculations are not included.

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## **Pre-design Meeting**

★ **The Responsible Charge is required to attend this meeting.** This meeting identifies the components, issues, and concerns of the project prior to beginning design. This form is located on DOTD's internet (reference [http://wwwsp.dotd.la.gov/Inside\\_LaDOTD/Divisions/Engineering/Road\\_Design/Pages/Standard-Forms.aspx](http://wwwsp.dotd.la.gov/Inside_LaDOTD/Divisions/Engineering/Road_Design/Pages/Standard-Forms.aspx)).

The invitee list could include: the DOTD PM, DOTD representative from the Real Estate Section, Environmental Section Traffic Engineering Section, Road Design Section, Bridge Design Section, Railroad Section, Utility Relocation Section, the District representation, and the LPA Responsible Charge with their designer or consultant. Topics discussed at the meeting include:

**Right-of-way information** – minimal amount required, relocations, who will perform property surveys and right-of-way maps, funding

**Environmental** – Type of process, known issues, types of permits, and types of agreements

**Traffic** – Detours, sequence of construction, night construction

**Road Design** – Design speed, posted speed, existing pavement condition/width, design section/lanes/width/type of shoulder etc., sidewalks, bike paths, anticipated design exceptions, landscaping

**Bridge Design** – Design speed, design highwater, navigable stream, navigation clearance, fenders, navigational lights, hydraulic frequency & study, controlling grade, vertical clearance, horizontal clearance, type of bridge, channel changes, sidewalks, roadway lighting, bridge borings

**Signalization** – New, modification, or temporary, who will provide plans

## *Local Public Agency Manual*

### *Engineering*

*(Project Design & Delivery:*

*Developing an LPA Project for Bidding)*

**Railroad** – Crossing within 200 ft., highway over or under RR is reconstructed or modified, drainage structure under RR modified, RR agreement required

**Utility Relocation** – Affected utilities, major utilities affected, sewer line affected (gravity or force), sewer effluent dumped into ditches, major pipeline crossings

A sample agenda would include:

1. Discussion of Scope, Schedule and Budget
2. Consultant requirements
3. Project Milestones
4. Plan development expectations (reviews)
5. Environmental (NEPA) requirements
6. Right-of-Way
7. Reporting

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### **Environmental NEPA (Stage 1)**

★ The National Environmental Policy Act (NEPA) is federal legislation passed by Congress in 1969 that calls for the examination and consideration of the proposed action on sensitive resources for all federally-funded actions. Environmental clearance is required for **ALL** Federally funded projects

“The National Environmental Policy Act (NEPA) is the basic national charter for protection of the environment” 40 CFR 1500.1(a)

“NEPA procedures must insure that environmental information is available to public officials and citizens before decisions are made and before actions are taken.” 40 CFR 1500.1(b)

Basic NEPA Process (Stage 1) - See *DOTD Stage 1 Manual of Standard Practice* (Reference

[http://www.sps.dotd.la.gov/Inside\\_LaDOTD/Divisions/Engineering/Environmental/Pages/Stage\\_1.aspx](http://www.sps.dotd.la.gov/Inside_LaDOTD/Divisions/Engineering/Environmental/Pages/Stage_1.aspx)).

1. Identify the Problem and Need for a project
2. Develop Alternatives that solve the problem and meet the needs

## *Local Public Agency Manual*

### *Engineering*

*(Project Design & Delivery:*

*Developing an LPA Project for Bidding)*

3. Evaluate the effects of the alternatives on the natural and human environments with input from agencies and communities
4. Make a decision on the preferred alternative
5. Document the process

The type of document is dependent on the project complexity and impacts.

**Programmatic Categorical Exclusion (PCE)** is an action that based on past experience has shown to never or almost never cause significant environmental impacts and can "programmatically" be classified as a Categorical Exclusion.

- Estimated time for clearance – 2-4 weeks (typical from start to finish)
- No complexity (wetlands, historic, coordination)
- Otherwise like CE

**Categorical Exclusion (CE)** is a NEPA classification given to federal-aid projects for a category of actions that do not have a significant effect on the human environment, either individually or cumulatively. NEPA requirements are satisfied once a categorical exclusion is approved for a project

- Estimated time for clearance – 3-6 months (typical from start to finish)
- Longer if there are issues

A typical CE has the following components.

#### Body:

- Cover Sheet (This is stamped by the approving agency (FHWA) when accepted)
- A summary of the required commitments, mitigation and permits
- The environmental checklist
- Project Description
- Purpose and Need statement
- Alternatives (For most CE this is the build and no-build, but could have multiple builds)
- Impacts/Effects
- Comments and Coordination

#### Appendices:

- SOV and responses
- Mailing list for SOV
- Exhibits (e.g. layouts, typical sections, plan sheets, etc.)
- Technical reports (e.g. wetland finding)
- Landowner Coordination (Evidence that property owners are given a chance to comment if right-of-way is being taken is required.)

## *Local Public Agency Manual*

### *Engineering*

*(Project Design & Delivery:*

*Developing an LPA Project for Bidding)*

**Environmental Assessment (EA)** is a document prepared in compliance with NEPA for projects in which the significance of the environmental impact is not clearly established or are anticipated to be significant. The estimated time for clearance for an EA is 12 to 18 months.

**Environmental Impact Statement (EIS)** is a document prepared in compliance with NEPA when impacts from a project are anticipated to be significant. The estimated time for clearance for an EIS is 3 or more years to complete.

Working with DOTD through the environmental process:

- DOTD determines type of document required
- DOTD determines who will prepare document and acquire environmental permits
- Document preparation, includes Solicitation of Views (SOVs)
- DOTD processes and submits document to FHWA (non – PCEs)
- Applicant obtains required environmental permits (time sensitive) and submits to PM

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## **Solicitation of Views (SOV)**

**Purpose:** To inform interested agencies, officials, and public of the proposed project and allow 30 days for comment.

**Background -** Early coordination with appropriate local, state, and federal agencies is accomplished by solicitation of views to assist in the identification of reasonable alternatives and the evaluation of the social, economic, and environmental impacts of any proposed action and measures to mitigate adverse impacts which result from that action.

SOVs are done as early as possible in the environmental process for projects other than for minor federally-funded and state-funded projects such as overlays, turn lanes, signage, etc. Recipients are asked to provide comments within 30 days.

Views are solicited for Federally-funded: Categorical Exclusions upon receipt of preliminary plans or comparable project information (except for some minor projects such as scour repairs, ferry boat repairs, etc.); Environmental Assessments (EA) upon receipt of approved Feasibility Study and initiation of environmental process; and Environmental Impact Statements (EIS) after publication of Notice of Intent in the Federal Register.

## *Local Public Agency Manual*

### *Engineering*

*(Project Design & Delivery:*

*Developing an LPA Project for Bidding)*

Solicitation of Views (SOV) should include:

- Cover letter explaining why views are being solicited and a date for recipients' comments
- Preliminary project description
- Vicinity map showing the location of the proposed project


SOV mailing lists are comprised of lists of various federal, state, and local agencies and officials which are maintained by DOTD Environmental Section. The state list of federal and state agencies and officials includes those with jurisdiction statewide. The parish lists of federal, state, and local agencies and officials include those with jurisdiction within the applicable parish. Upon request, any group or individual can be included on a list. SOVs should be sent to all contacts on the State list as well as Parish(es) in which the proposed project is located.

Responses are required from

- US Army Corps of Engineers
- US Fish and Wildlife Services
- State Historic Preservation Officer (SHPO)
- Parish Floodplain Administrator (designated by FEMA)

### Environmental Clearance Facts

- Environmental clearance must be updated after 3 years and may require a re-evaluation if changes are made to the project.
- NEPA documents should identify which permits will be required for a project
- Do not send NEPA documents directly to FHWA without going through DOTD
- Native American Tribe coordination – Tribal consultation may be needed as part of NEPA documentation. Some tribes insist on government to government contact (Federal government only – not state or local)
- State Historic Preservation Office (SHPO), US Fish and Wildlife Services (USFWS) and National Marine Fisheries Services (NMFS) are resources agencies and coordination may be needed for the NEPA documentation and obtaining permits

 Federal Aid Essentials Videos for Environment - Agencies are required to consider the environmental effects of their proposals and actions in Federal-aid project delivery. The FHWA has developed general videos to help an LPA understand the environmental process. Five videos on the environmental process are available. They are: the



## *Local Public Agency Manual*

### *Engineering*

*(Project Design & Delivery:*

*Developing an LPA Project for Bidding)*

“Overview of NEPA as Applied to Transportation Projects”, “Documentation and the Environmental Process”, “NEPA Compliance and Class of Actions”, “Categorical Exclusion”, and the “Environmental Impact Statement”.

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### **Environmental Clearance/Permit Facts**



- Imperative to have most current and accurate information for permitting
- Permit expiration dates vary. Look for “Commence by”
- One extension, then reapply if project not started
- Expiration date(s) vary by agency/permit - 2 - 5 years typical
- NEPA documents should identify which permits will be required for a project

Cultural resources permit is only done through the Federal Agency or their delegate (DOTD). The LPA should NOT send anything directly to State Historic Preservation Office (SHPO). Section 106 applies to all Federal projects. There is a 30 day processing time. The LPA should not correspond directly to SHPO. Information should be sent to the lead state agency (DOTD or another state agency if they are Federal-Aid pass through agency).

COE Nationwide permit typically requires 45 to 90 days. It includes Water Quality Certification. A few are already issued and don't need a letter. It often requires mitigation.

COE individual permit (404) requires 30 day or longer for public notice by USACE. Water Quality Certification (WQC) typically has a fee of \$33/LPA. It requires adjacent property owner addresses. The typical time to receive the permit is 4 - 8 months. Mitigation costs may be required.

Coastal Zone – The Coastal Use Permit (CUP) has an on-line application. (DNR) It requires a 30 day public notice and the addresses of adjacent property owners. The quantities for excavation and embankment are needed. There is typically a \$100 fee plus 5¢ per CY excavation/fill except native material. The USACE will not issue a permit without an approved CUP.

Navigable Waterway permit is issued by the United States Coast Guard (USCG). It requires property owner addresses within a half mile radius. It requires a 30 day public notice and takes approximately 2 - 6 months process time. The USCG will not be issued until all other required permits have been issued.

## *Local Public Agency Manual*

### *Engineering*

*(Project Design & Delivery:  
Developing an LPA Project for Bidding)*

National Pollutant Discharge Elimination System (NPDES) or Louisiana Pollution Discharge Elimination Systems (LPDES) Construction Permits

Levee District permits are required within 1500' of levee. The Levee District Permit timeline varies. They require 30 days or longer for public notice. The USACE will not issue other permits until Levee permit obtained

Coordination with US Fish and Wildlife Services or National Marine Fisheries (NMF) – They are the Federal Agency that is responsible for Threatened and Endangered Species coordination and must delegate that responsibility to the LPA. The LPA can contact these agencies and keep DOTD informed, but formal coordination needs to be handled by DOTD

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### **Actions Worked Concurrently with Plan Development**

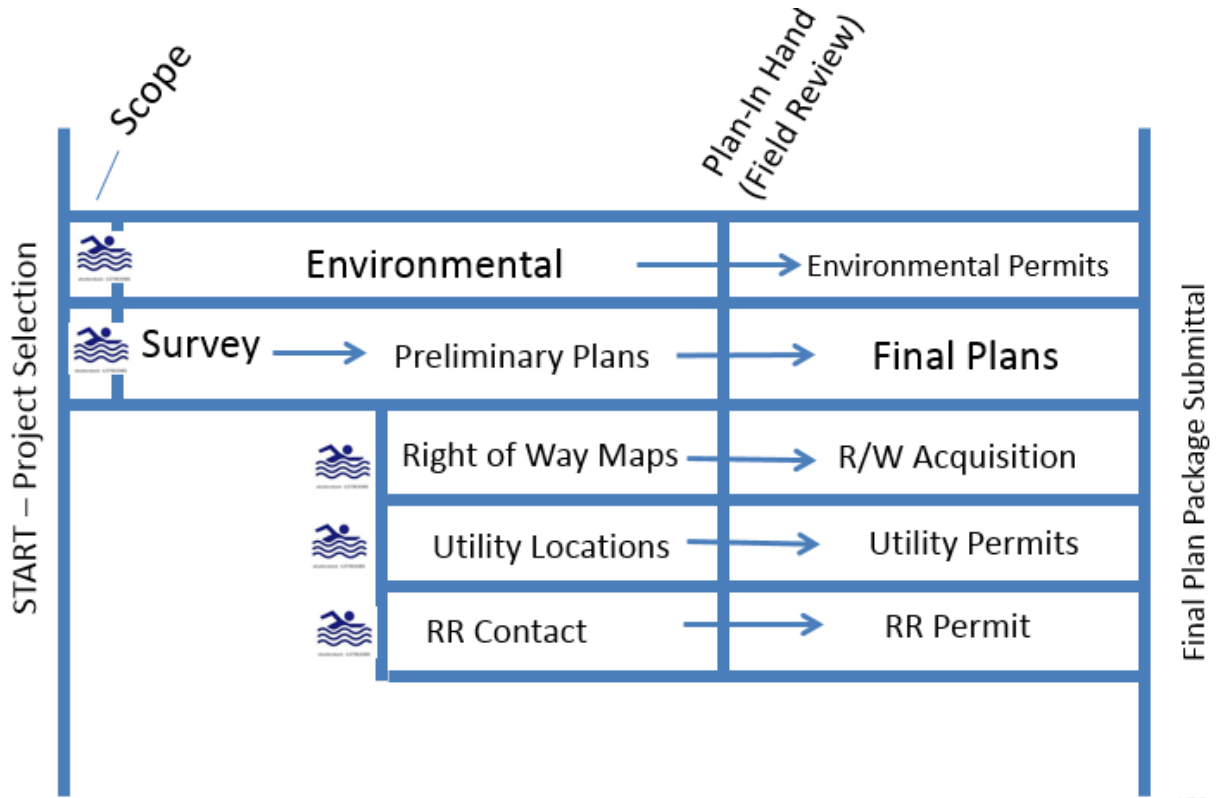
★ While the design plans are being developed, there are other actions which are time consuming, that can be worked concurrently with plan development. Some of these actions include acquiring any railroad agreements, right-of-way and/or utility agreements. Other actions are securing environmental permits, creating Non-Standard (NS) pay items including specification submittals for unique items, and working for approval of design waiver/design exception requests.

# Local Public Agency Manual

## Engineering

(Project Design & Delivery:

Developing an LPA Project for Bidding)



The PMs must complete the “Federal Authorization Funding Request” form before the PS&E package can be submitted to the DOTD Chief Engineer for signature. They are required to provide the status for each permit and agreement listed below. This could include: not applicable (N/A), no information (NI), required (REQ), submitted (SUB) or approved (APP).

If a permit is required (REQ) and not approved (APP), then the project cannot be submitted for federal authorization:

- RR (Railroad)
- COE (Corps of Engineers)
- CG (Coast Guard)
- CGN (Coast Guard Navigable)
- WQC (Water Quality Cert.)
- CUP (Coastal Use Permit)
- SSP (Scenic Stream Permit)
- LEV (Levee District Permit)

*Local Public Agency Manual*

*Engineering*

*(Project Design & Delivery:*

*Developing an LPA Project for Bidding)*

**Right-of-Way Maps, Joint  
Plan Review Meeting**

**Right-of-Way Maps**

***Issues***

1. ★ No property should be acquired prior to Right-of-Way (R/W) Maps being reviewed. **Problem:** Right-of-Way Maps are sent after the property has been acquired for review by DOTD
2. ★ No property should be acquired prior to Right-of-Way Map approval. **Problem:** Purchase of property with incomplete maps. LPAs cannot acquire property until maps are accepted as complete by DOTD. LPAs must wait for letter from DOTD to proceed with acquisition.
3. **All** R/W maps need to be submitted to DOTD at 60% preliminary plans for Joint Plan Review (JPR) whether or not federal reimbursement is sought for acquisition.
4. Every project that requires right-of-way must have a Joint Plan Review.
5. The Location and Survey Section notifies the DOTD Project Manager when the JPR can be scheduled
6. Right-of-way maps must match the design plans. If changes are made to the design plans they **must** be reflected on the right-of-way maps.
7. Limits of construction **must** be within required right-of-way or servitude.
8. Revisions to the R/W maps must be made according to the standards. See Location and Survey Manual – Addendum “A”. For questions contact the DOTD Location and Survey Section.
9. There can only be one original set of right-of-way maps. When right-of-way maps are revised, a complete revision history is required on the sheet. Multiple originals are **not** permitted.

## *Local Public Agency Manual*

### *Engineering*

*(Project Design & Delivery:*

*Developing an LPA Project for Bidding)*

10. Apparent Right-of-Way is not acceptable. Existing Right-of-Way must be verified through documentation or survey.
11. Separate clearing and grubbing project procedure – Original right-of-way maps are placed in the clearing and grubbing plans. A duplicate copy shall be inserted in the construction plans and labeled “For Information Purposes Only”. The right-of-way taking lines in the construction plans will remain labeled as “Required Right-of-Way”.
12. Legal descriptions and a CogoWin “.IN” file are required for all state route parcels located on the DOTD Location & Survey website under manuals and forms.

## **COMMON MISTAKES ON RIGHT OF WAY MAPS**

- A. Project Information (beginning and ending stations, State Project and F.A.P. numbers)
  - a. Not in concurrence with Construction Plans.
  - b. Not in concurrence on Title Sheet, body of map or Residual Sheets.
  - c. Not shown in standard manner and with left margin.
- B. Control Section alignments (centerlines) not in concurrence with Construction Plans.
- C. Failure to show Equations on the R/W map that are given on the construction plans or equations shown on map that are not in concurrence with Construction plans.
- D. Ties
  - a. Failure to show station offsets at all breaks in Req'd R/W or Station offset data of required R/W that is not in concurrence with Construction data.
  - b. Parcel ties not in correct form. Parcels must be tied on an extension of their bearings, using dashed lines with dimension arrows.
  - c. Existing R/W ties of intersecting streets not in correct form. These also must be tied on a skew as above.
  - d. Insufficient ties where Existing R/W intersects the Centerline (CL). In addition, the following must be shown:
    1. A station at the intersection of Existing and CL
    2. A Station offset at the next or preceding bearing break.
    3. A distance and bearing between those two.

## *Local Public Agency Manual*

### *Engineering*

*(Project Design & Delivery:*

*Developing an LPA Project for Bidding)*

- E. Title information (Job Name, Route, Parish, State Project numbers) on Title Sheet and Title Blocks that is not in concurrence.
- F. Failure to show Y and X coordinates at the beginning and end of the job, at critical curve data coordinates (point of curvatures (PC's), point of intersections (PI's), point of tangent (PT's)) and at beginning and end of each sheet.
- G. Acquisition Block:
  - a. Parcel numbers not in ascending order.
  - b. Acquisition data not in tabular form.
- H. Failure to match owners' names throughout entirety of map. Frequent spelling errors, parts of names omitted, etc.
- I. Failure to indicate continuous ownership with Land Hooks on lot lines and on Section lines where relevant.
- J. Failure to dimension from CL to required R/W (at ends of sheets) if they are parallel.
- K. Section Lines:
  - a. Using Section Line symbology alone to show a property boundary between diverse owners. (A property line consistent with other property lines must be shown. Heavy weight section lines can be indicated over a portion of the property line)
  - b. Failure to differentiate Section Line symbology from lot lines. (Section lines should be extended heavyweight dashes as opposed to lot line's short lightweight dashes.)
- L. Scale of residual maps too large to accommodate complete outline of properties.
- M. Omissions in residual maps such as incomplete centerline and project information, owners' names and R.A.'s
- N. Maps congested with unnecessary lines that obstruct text and arrows.
- O. Leader lines are overlapping and confusing.
- P. Lettering through lines.

## *Local Public Agency Manual*

### *Engineering*

*(Project Design & Delivery:*

*Developing an LPA Project for Bidding)*

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## **Joint Plan Review (JPR)**

★ The Responsible Charge MUST attend this meeting.

A set of preliminary right-of-way plans is required to be submitted before the plan-in-hand inspection. After the plan-in-hand inspection, the project manager schedules a Joint Plan Review meeting.

Prior to the Joint Plan Review meeting the project must be examined for contamination issues. The following items need to be completed and sent to the project manager.

- Prepare the process and necessary contamination reports
- Develop the inventory of all major improvements and structures
- Identify the presence of underground storage tanks (UST's) and any other possibly hazardous materials on the project.

★ After the Plan-in-Hand inspection, the Joint Plan Review meeting will review and discuss the right-of-way taking lines. It will discuss all potential right-of-way problems and identify any extreme impacts that could affect the costs.

★ This review could also reveal permits that could be avoided in final plan development.

An example is the impact to a parking lot that 2-3 feet could have. It may impact the parking spaces where they would not meet the required standards. If they do not meet requirements, it would eliminate of the parking spaces which impacts the business. After discussion of the impacts, it may be decided that the limits of construction could be reduced and the parking lot not impacted. Another example could be a small sliver of land that could be eliminated.

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## ★ **Right-of-Way Acquisition**

The LPA shall acquire all real property and property rights required for the project in accordance with all applicable State and Federal laws and regulations. *This applies*

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## *Local Public Agency Manual*

### *Engineering*

*(Project Design & Delivery:*

*Developing an LPA Project for Bidding)*

even if the project has not begun the state/federal process. If an LPA begins a project thinking they will not use Federal funds, then adds Federal funds, previous land acquisitions or donations may jeopardize their federal eligibility

**The LPA must contact the DOTD Real Estate Section FIRST to ensure they understand the Federal requirements! The DOTD's Real Estate Section will discuss the project and procedures. If real estate is not procured properly, it could jeopardize the whole project.**

***NOTE: The Federal Relocation Assistance and Real Property Acquisition Policies (The Uniform Act) has different requirements than state law. The LPA must contact the DOTD Real Estate Section FIRST to make sure they know the federal requirements!***

- LPA Assurance Letter – The Entity shall sign and submit the *LPA Assurance Letter* to the DOTD Real Estate Section annually. As soon as it is known that the acquisition of right-of-way is required for a Project, the LPA shall contact the DOTD Real Estate Section for guidance
- All Acquisition - All acquisition MUST BE in accordance with the Federal Uniform Relocation Act. The “*LPA Real Estate Manual*” clearly specifies the requirements. LPA’s Right-of-Way Acquisition and Relocation Assistance files must be certified by DOTD Right-of-Way Section.
- Non-Compliance - Non-compliance with Federal DOTD appraisal, negotiation, acquisition and relocation will cause any Federal funds spent on the project to be returned and future Federal funds to be withdrawn from the project.
- Delays - Bidding dates can be delayed if the right-of-way is not acquired. Projects are required to have right-of-way clearance **before** bidding for construction. The LPA’s right-of-way acquisition and relocation assistance files may be subject to review/audit by the DOTD Real Estate Section and/or FHWA. All files are audited by DOTD/FHWA prior to clearance.
- Prior to NEPA - Acquisition of right-of-way for federally funded projects prior to the completion of the project’s NEPA process is not allowed and could jeopardize all federal funding for project.



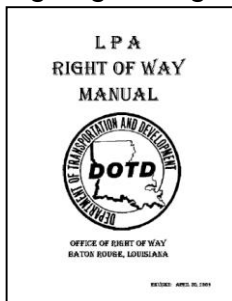
## *Local Public Agency Manual*

### *Engineering*

*(Project Design & Delivery:*

*Developing an LPA Project for Bidding)*

- Insufficient Right-of-Way - All liability and any cost incurred due to insufficient right-of-way is borne by the LPA. It is recommended to ensure sufficient R/W is identified before contacting land owners.
- Public Lands - Approval is required from land owners if right-of-way or servitude is on public land. Any purchase or donated publically owned land must have proper documentation
- Donations - Donations are accepted if all FHWA real estate acquisition procedures are followed. Donations and appraisals must be done in accordance with State & Federal requirements.
- Administration Costs - The LPA bears all administration costs unless stipulated in agreement.
- Notice to Proceed - Do not begin acquiring R/W prior to the written Notice to Proceed (NTP) from the DOTD Project Manager if seeking Federal reimbursement. The right-of-way acquisition phase will not be reimbursed if action is taken prior to the NTP.
- Certification - **All R/W must certified (by DOTD) prior to project bidding**
- Any purchased or donated publically owned land must have proper documentation
- Oversight - The LPA is subject to DOTD oversight and approval to enable Federal participation.
- LPA Real Estate Manual - The Real Estate Section has a detailed manual, entitled the “*LPA Real Estate Manual*”, to assist LPAs (whether parish, city, municipality, etc.) in either performing the necessary acquisition functions, or in going through the proper steps to get outside help in performing these functions, to maintain eligibility for Federal assistance.



The Manual is also intended to assist DOTD personnel in understanding their responsibilities in regards to those Local Public Agency projects.

While its goal is to clearly specify the requirements for acquiring right-of-way in accordance with the Uniform Act, it is important to remember that, while this guide attempts to cover most possibilities regarding who is responsible for the various acquisition functions on

## *Local Public Agency Manual*

### *Engineering*

*(Project Design & Delivery:*

*Developing an LPA Project for Bidding)*

Local Public Agency projects that the LPA is responsible for all property and property rights being acquired in accordance with Federal and State regulations and requirements. The LPA is subject to DOTD oversight and approval thereby enabling Federal participation. The LPA's right-of-way acquisition and relocation assistance files must be certified by the DOTD Real Estate Section prior to project bidding.

**It is necessary for the LPA to always check with DOTD Real Estate personnel before acting in any phase of acquisition where Federal participation might be jeopardized.**

There are steps in the funding, appraisal, negotiation, acquisition, and relocation process that the LPA must follow. It is the responsibility of the LPA to be aware of these steps from review of the Manual and maintaining contact with the DOTD Real Estate Section for direction in the process. No action should be taken without written authorization of DOTD Project Manager.

Non-compliance with Federal DOTD appraisal, negotiation, acquisition and relocation will cause any federal funds spent on the project to be returned and future federal funds to be withdrawn from the project.

Entity Verification Letter (R/W portion) - The LPA ensures that the project will be constructed within the existing right-of-way or within the right-of-way acquired by the LPA for the project, as shown on the construction plans. The LPA will send a letter certifying the project can be built within the existing right-of-way to the DOTD Project Manager. If right-of-way was acquired for construction, the letter should state that the right-of-way was acquired according to all state and federal guidelines as mentioned above. All liability and any costs incurred due to insufficient right-of-way is the responsibility of the LPA.



# *Local Public Agency Manual*

## *Engineering*

*(Project Design & Delivery:*

*Developing an LPA Project for Bidding)*

### **(Reference**

[http://wwwsp.dotd.la.gov/Inside\\_LaDOTD/Divisions/Engineering/Real\\_Estate/Pages/default.aspx](http://wwwsp.dotd.la.gov/Inside_LaDOTD/Divisions/Engineering/Real_Estate/Pages/default.aspx)).

#### Region 1

##### **Section Contacts: District 04**

Contact: Real Estate Regional Manager - Region 1

Mailing Address: District 04 Real Estate Office  
3339 Industrial Drive  
Bossier City, LA 71112

Phone Number: (318) 549-8455

##### **Section Contacts: District 05**

Contact: Real Estate Regional Manager - Region 1

Mailing Address: District 05 Real Estate Office  
P.O. Box 4068  
Monroe, LA 71211

Phone Number: (318) 342-0250

#### Region 2

##### **Section Contacts: District 08**

Contact: Real Estate Regional Manager - Region 2

Mailing Address: District 08 Real Estate Office  
3300 MacArthur Drive  
Alexandria, Louisiana 71301

Phone Number: (318) 561-5260

##### **Section Contacts: District 58**

Contact: Real Estate Regional Manager - Region 2

Mailing Address: District 58 Real Estate Office  
Highway 15 South  
Chase, Louisiana 71324

Phone Number: (318) 561-5260

#### Region 3

##### **Section Contacts: District 03**

Contact: Real Estate Regional Manager - Region 3

Mailing Address: District 03 Real Estate Office  
US Highway 90 East  
Lafayette, LA 70501

Phone Number: (337) 262-6251

##### **Section Contacts: District 07**

Contact: Real Estate Regional Manager - Region 3

## *Local Public Agency Manual*

### *Engineering*

*(Project Design & Delivery:  
Developing an LPA Project for Bidding)*

Mailing Address: District 07 Real Estate Office  
5827 Highway 90  
Lake Charles, Louisiana 70616

Phone Number: (337) 437-9250

#### Region 4

##### **Section Contacts: District 61**

Contact: Real Estate Regional Manager - Region 4

Mailing Address: La DOTD Headquarters Building  
P.O. Box 94245  
Baton Rouge, LA 70804

Phone Number: (225) 242-4593

#### Region 5

##### **Section Contacts: District 02**

Contact: Real Estate Regional Manager - Region 5

Mailing Address: District 02 Real Estate Office  
3108 Williams Blvd.  
Kenner, LA 70065

Phone Number: (504) 465-3468

##### **Section Contacts: District 62**

Contact: Real Estate Regional Manager - Region 5

Mailing Address: District 62 Real Estate Office  
685 North Morrison  
Hammond, Louisiana 70401

Phone Number: (985) 375-0250

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### **Right-of-Way Certification**

Certification of the LPA ownership of the property is required from the DOTD Real Estate Section prior to the project bidding. Examples of the forms the LPA is required to complete for the various types of acquisition can be found in the exhibits of the *LPA Right-of-Way Manual* beginning on page 38. **Reference** [http://wwwsp.dotd.la.gov/Inside\\_LaDOTD/Divisions/Engineering/Real\\_Estate/Manuals/Local%20Public%20Agency%20\(LPA\)%20Manual%20.pdf](http://wwwsp.dotd.la.gov/Inside_LaDOTD/Divisions/Engineering/Real_Estate/Manuals/Local%20Public%20Agency%20(LPA)%20Manual%20.pdf).

## *Local Public Agency Manual*

### *Engineering*

*(Project Design & Delivery:*

*Developing an LPA Project for Bidding)*

## **Railroad Permits**

### **(If a project is near or crosses a railroad)**

23 CFR 646.214(b)(2) requires a safety analysis when a project is near an at-grade railroad crossing. "Near" has been defined as

- The project beginning or ending between the crossing and the required advanced placement distance for the advanced railroad warning sign and the project involves roadway surfacing improvements (exception: preservation treatments and striping projects which DOTD Pavement Marking Standard Plan will govern)
- An intersection traffic signal within the project is linked to the crossing flashing light signal and gate or is within 200' of a crossing.

*Project Notice Package (PNP):* A PNP is an agreement used to modify existing or install new railroad warning devices and/or crossing surfaces. It typically consists of roadway construction plans, active warning device plans, cost estimate of the railroad work, a copy of the completed Diagnostic Review form, and a signature sheet. Roadway construction plans should be submitted to the DOTD Railroad Unit for review and determination of what is needed and a Diagnostic Review can be scheduled if necessary. A PNP approval takes approximately one year from the date DOTD receives the roadway plans. The typical project types are:

- New roadway with a new at-grade crossing (Some railroad companies may require one to three existing at-grade crossing closures and/or the road authority to assume all future maintenance costs of the new crossing surface and warning devices.),
- Roadway widening
- Overlay with travel lane widening
- New pedestrian at-grade crossings.

*Construction and Maintenance Agreement (CMA):* A CMA is an agreement between the affected railroad company and the road authority if the project will construct and require maintenance of a new facility/structure within or over the railroad's right of way. A CMA approval takes approximately two years from the date DOTD receives the first set of roadway plans. The railroad company will review each plan submittal to ensure that their minimum design requirements are met. A new servitude may be required if the new facility/structure is on a new horizontal alignment. These project types are typically new overpass/underpasses.

## *Local Public Agency Manual*

### *Engineering*

*(Project Design & Delivery:*

*Developing an LPA Project for Bidding)*

**Drainage Permit:** A drainage permit is used when a project requires installation of a new drainage structure within the railroad's right of way or modification/replacement of an existing drainage structure that is within the railroad's right of way if the original drainage permit cannot be found. The permit form can typically be found on the railroad company's website with instructions of how to complete and submit. Drainage calculations may be required to show there aren't any negative effects to the railroad's facilities and right of way. A drainage permit can take from six to twelve months to receive approval, depending on the level of impact to the railroad's facilities. Generally there are processing fees ranging up to \$1,000 and permit fees ranging up to \$1,500. A servitude is not required as the permit serves to document the right of use. The typical project types are:

- Subsurface drainage project that installs a drainage structure within the railroad's right of way, outfalls in the railroad's right of way, or crosses beneath the tracks
- Cross drain and side drain installation and replacement

**Wireline Permit:** A wireline permit is used when placing a utility within the railroad's right of way, either paralleling or crossing the tracks. The permit form can typically be found on the railroad company's website with instructions of how to complete and submit. A sketch showing the proposed location of the utility is generally required to determine if there will be any conflicts with existing utilities or active warning device wiring. A wireline permit can take from six to twelve months to receive approval, depending on the level of impact to the railroad's facilities or existing utilities. Generally there are processing fees ranging up to \$1,000 and permit fees ranging up to \$1,500. Servitude is not required as the permit serves to document the right of use. The typical project types are water and sewer improvements and fiber optic line installation.

**Right of Entry Agreement (ROE):** A ROE agreement is necessary for any project that will require the contractor to enter into the railroad's right of way. This agreement is a standard form agreement that all contractors must submit prior to beginning work on the railroad's right of way. This agreement is usually required in conjunction with all of the above permits/agreements. The ROE agreement is intended to protect the railroad company from all liability and damages that may be caused by contractor. It also advises the contractor of when he can work near the tracks, how to contact the railroad company if needed, and may require the contractor to provide a work schedule, and list what type of equipment will be used to complete the project. These agreements typically take one to three months to receive approval. The typical project types are:

- Overpass/underpass construction
- Roadway widening
- Pavement preservation
- Drainage improvement/maintenance

# *Local Public Agency Manual*

## *Engineering*

*(Project Design & Delivery:*

*Developing an LPA Project for Bidding)*

- Utility installation
- Striping

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### **Utility Relocation Procedures for LPA projects**

#### **I. Projects located on State Highways**

Must be handled by DOTD and will follow normal DOTD utility relocation process

#### **II. Non-state Routes – Entity Responsible for Utility Relocation**

##### **Rules and Regulations**

The LPA is to follow all Federal, State and Local Rules and Regulations as they pertain to their agreements, the LPA and the project.

##### 1.) Laws and Regulations

- a) Louisiana Administrative Code, Title 70, Part II Utilities, Chapter 5 (Reference Appendix <http://www.doa.la.gov/osr/lac/70v01/70v01.pdf>).

1. Including sections 501, 503, 505, 511, 513, 515, 527, 529, 535, 537
2. Note: Eligible Reimbursement Amount
  - Actual Cost any amount
  - Maximum \$25,000 lump sum per eligible agreement

- b) 23 Code of Federal Regulations (CFR) 172

- c) 23 CFR 635.410 “Buy America”

- d.) 23 CFR 645 subpart A

- e.) 23 CFR 645 subpart B  
F:\Electronic Code of Federal Regulations.mht

- f.) 23 United States Code (USC) 101, 109, 111, 116, 123 and 315

##### 2.) Other Publications

- a.) FHWA Utility Program Guide: Utility Relocation and Accommodation on Federal-Aid Highway Projects (Reference <http://www.fhwa.dot.gov/reports/utilguid/if03014.pdf>).

## *Local Public Agency Manual*

### *Engineering*

*(Project Design & Delivery:  
Developing an LPA Project for Bidding)*

- b.) AASHTO publication “A Guide for Accommodating Utilities Within Highway Right-of-Way” (Reference <https://law.resource.org/pub/us/cfr/ibr/001/aashto.utilities.2005.pdf>).
- c.) AASHTO publication “Roadside Design Guide”

### **Utility Definitions**

**Agreements** - At 100% Preliminary Plans (approximately mid-way), the Entity can start finalizing agreements if the right-of-way is determined. The agreements between the Entity and Utility Operator contain the principle office of the company, the name and title of the official representing the company, the estimated number of **CALENDAR DAYS** (not working days) and the method by which the costs will be developed (\$25,000 maximum lump sum per eligible agreement for federal projects or actual cost). DOTD is not a party to any Entity-Utility Operator agreement

**Approved Drawings Letter** - When the relocation cost of a utility line is 100%, the Utility Operator’s liability, articles of agreement and a cost estimate is not required. However, the Utility Operator must submit drawings showing their existing line and the proposed relocation of the utility line and a Statement of Work. The Utility Operator also sends a letter that acknowledges the relocation is 100% their cost and the number of calendar days necessary to relocate their line.

**Audit** - The Entity is responsible for providing the audit for all compensable interest payments. For Entity owned utilities an independent audit is required.

**Betterment** - Any upgrading of the facility being relocated that is not attributable to the highway construction and is made solely for the benefit of and at the election of the utility. Betterment is not a reimbursable cost.

**Cost Estimate or Estimate of Cost** - The Estimate of Cost should clearly show how the cost of the relocation is developed (Note that the final invoice must be in the same format as the estimate.) The estimate should be developed under the following applicable Sections:

- a. Preliminary Engineering – Cannot be a % of construction cost
- b. Right-of-Way
- c. Temporary Construction
- d. Permanent Construction
- e. Removal Costs
- f. Betterment
- g. Supervision and Overhead

Each Section should show the costs by items, unit hours, man-hours, contract unit prices, etc. in the same manner as the actual costs will be charged or that would support a lump sum estimate. A summary recap of the sections shown above must be included.

**Compensable Interest & Cost Distribution for Reimbursement** - Compensable interest is to be set in accordance to all Federal, State and Local Regulations. The percentage for each party



## *Local Public Agency Manual*

### *Engineering*

*(Project Design & Delivery:*

*Developing an LPA Project for Bidding)*

needs to be specified in the written agreement between the Entity and the Utility Operator. (Proof of prior rights, a franchise agreement, local law or other documents that would justify compensation is required from the Entity before funds can be authorized for reimbursement.) The cost estimate from the utility with a letter from the Entity's legal representative justifying compensation is sent to the DOTD District Utility Specialist (DUS). It must be provided for any compensation and approved by the FHWA through DOTD prior to the agreement execution. Written notification from DOTD is required prior to incurring any reimbursable expenditure.

**Entity Owned Utility** - The Entity is responsible to provide a Statement of Work and Plan Drawings showing the existing location of their utilities and any proposed relocation of their utilities. The Entity is to send either an agreement or a letter from the Entity stating their intention of which of their utility relocations are to be included in the construction plans (any utility work the project contractor is expected to perform). When reimbursement is being requested, the Entity is to provide a separate cost estimate for each Entity owned utility.

**Entity Responsibility** - It is the Entity's responsibility to ensure that their agreements with the Utility Operators and the percentages of compensable interest are in accordance with all applicable Federal, State and Local Laws and Regulations. The Entity is responsible for reviewing the plans/drawings submitted by the Utility Operators to ensure that the relocation of all utility lines are not in conflict with other utility lines or in conflict with proposed construction. (This includes review of relocation elevations with plan elevations; ditches, catch basins, roadway grade, etc.)

**Meeting Notifications** - The Entity is responsible for contacting the Utility Operators and inviting them and the DUS to the following meetings:

- 1.) Pre-Design
- 2.) Plan-in-Hand
- 3.) Preconstruction

**No Conflict Letter** - When a Utility Operator decides their line is not in conflict with the proposed construction, the Utility Operator sends a statement or letter stating "no conflict".

**Notification of Utility Operators** - Utility Operators shall be identified and contacted by the Entity. The Entity is responsible for providing the Utility Owner plans throughout the project development.

**Statement of Work** - When the Utility Operator has to relocate, the Utility Operator is to provide a "Statement of Work" to the Entity. The "Statement of Work" is to include a short narrative of the work to be performed, a more complete narrative of individual relocations which would not follow a routine relocation, a statement that the work will be performed by company forces, continuing contract, competitive bids or other method, an explanation of betterments if included in the relocation, estimated number of **CALENDAR DAYS** to complete the adjustments (show breakdown of: time to order material, design, and construction), justification for removal or abandonment of existing facilities, followed by documentation with estimate if necessary.

## ***Local Public Agency Manual***

### *Engineering*

*(Project Design & Delivery:*

*Developing an LPA Project for Bidding)*

**Utility Clear Date** - A project is not considered delivered until all utility documentation (utility agreements/letters and the Utility Certification Letter) have been submitted and reviewed by the DOTD. This does not mean that the utilities have been physically moved.

**Utility Documentation** - It is the Entity's responsibility to provide all required utility documentation to the DUS two months prior to the Utility Clear Date in order to have it reviewed, processed and any corrections made. The documentation includes the *Utility Certification Letter, Agreements between the Entity and the Utility Operators, Approved Drawings Letters, Waiver of Relocation Drawings Letters, and No-Conflict Letters*

**Utility Plans** - The Entity must give each Utility Operator a set of useable plans for the project. Each Utility Operator is to indicate on the provided plans or on their own set of plans\* their existing and proposed lines. These marked up plans are given to the Entity for approval prior to the written agreement being executed. \*Note: If using their own plans, the plans must use the same benchmarks and stations in the design plans.

**Utility Relocation Notice to Proceed (NTP)** - The Entity issues the NTP. This can be issued when the right-of-way has been acquired and the utilities can be moved. The Entity should issue a NTP at the earliest possible date.

**Waiver of Relocation Drawings Letter** - When a utility line is located on a pole owned by another operator, the Utility Operator sends a letter that they will relocate on the other operator's poles and state the number of calendar days needed to relocate their line.

**Note** – Any changes the Entity makes to the design can affect the utilities. After the utilities have been moved, any new relocation required because of plan errors or changes will be at the Entity's cost.

**The following is documentation required for all projects-**

1. Utility Certification Letter
  - Must be on the LPA's letterhead, signed by an authority of the LPA. It lists all utilities in the area even if there are no conflicts with any of the utilities. (DOTD includes this information in the construction contract.)
    - Total reimbursable cost of relocating the utility lines for the project
    - Name of each utility owner
    - Company address of each utility owner
    - Number of CALENDAR DAYS each utility operator required to complete their adjustments, including any LPA owned utility
    - A statement that the LPA responsible charge has received up-to-date design plans from all utility operators

## *Local Public Agency Manual*

### *Engineering*

*(Project Design & Delivery:*

*Developing an LPA Project for Bidding)*

- A statement from the LPA responsible charge that they have received letters from each utility operator stating that arrangements have been made to adjust their facilities to accommodate the project
  - A statement that the LPA will relocate their own lines that are not included in the construction plans
2. Utility Reimbursement Request Letter
    - Must be on the LPA's letterhead signed by an authority of the LPA. In this letter the LPA expresses whether or not they are requesting reimbursement from the program for utility relocation costs. (Only costs that are proven to be the LPA's liability will be considered.) This letter is sent to the DOTD Project Manager
  3. A letter is sent to the MPO (if applicable) and to the DOTD Project Manager with the cost breakdown of each utility
  4. The LPA responsible charge confirms the funding is on the TIP/STIP

### **Additional documentation required if reimbursement is requested**

1. Supporting documentation of the LPA's compensable interest is required. There must be proof of prior rights and letter from the LPA's legal representative verifying this information. A copy of this letter is sent to the DUS.
2. The agreements are between LPA & the utility operators should include:
  - The principal office of the utility operator.
  - The name & title of the official representing the company
  - The estimated number of CALENDAR DAYS (not working days)
  - The method by which the costs will be developed (lump sum or actual cost) & cost estimate
  - The amount of the agreement with a breakdown of amount owed by the LPA and utility operator
  - The breakdown of cost liabilities between the LPA and utility owner
  - The signature of utility owner's company official, with witnesses
  - The street address of location of the utility owner where records may be audited
  - The cost estimate
3. The utility plans (plans/drawings from each utility operator showing their existing & proposed lines)
4. A statement of work from the utility operators
  - A short narrative of the work to be performed
  - A more complete narrative of individual relocations which would not follow a routine relocation
  - A statement that the work will be performed by company force, continuing contract, competitive bid or other method
  - An explanation of a betterment if included in the relocation
  - An estimated number of CALENDAR DAYS to complete the adjustments
  - The justification for removal or abandonment of existing facilities, followed by documentation, if estimate is necessary

## *Local Public Agency Manual*

### *Engineering*

*(Project Design & Delivery:*

*Developing an LPA Project for Bidding)*

5. Cost estimate from the utility operators detailing the cost to relocate the utility line
6. Plans/drawings from the utility operators showing their existing and proposed lines
7. LPA owned utilities documentation
  - Statement of work
  - Plans/drawings showing the existing and proposed lines
  - Cost estimate breakdown for each LPA owned utility on the project

### **Additional documentation if no reimbursement required**

1. Approved Drawings / Letters
  - Includes the plans/drawings from the Utility Operators showing their existing and proposed lines
  - Statement of Work
2. Waiver of Relocation Drawings Letters
3. No-Conflict Letters

#### *Utility Coordination Preliminary Plan Tasks*

At 90% preliminary plans, the LPA responsible charge sends a list of utility operators to the District Utility Specialist (DUS). They send plans to the utility operators and notify each utility operator prior to the plan-in-hand meeting that a written agreement is needed for the utility operator to relocate their line.

At 95% preliminary plans, or the plan-in-hand/field inspection, the LPA responsible charge (or LPA consultant) invites and sends a copy of the plans to each utility operator and the DUS to the plan-in-hand meeting. The LPA responsible charge provides a date to DUS when they will have all required utility documentation to the DUS.

#### *Utility Coordination Final Plan Tasks*

These tasks begin at 60% final plans (approximately mid-way through final plans) through bidding

- The LPA responsible charge provides an estimated date of submittal of all utility agreements (Utility Clear Date).
- The LPA responsible charge provides monthly status updates of agreements to DUS
- The LPA responsible charge (or LPA consultant) finalizes agreements if final right-of-way taking lines are established.
- The LPA responsible charge issues NTP to utility operator

#### *Utility Coordination after Bidding Tasks*

- The LPA responsible charge (or LPA consultant) invites each utility operator and DUS to Pre-Construction meeting

# *Local Public Agency Manual*

## *Engineering*

*(Project Design & Delivery:  
Developing an LPA Project for Bidding)*

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### **Engineering Design & Plan Development**

★ The LPA is required to use State design standards as per State Law, RS §48:35, Minimum Safety Guidelines of Highway Design, Maintenance and Construction Exemptions, Section “C” *The Department of Transportation and Development shall adopt specific minimum safety guidelines with respect to highway and bridge design, construction, and maintenance for all public roads, highways, and streets under the jurisdiction of any political subdivision of this state and not in the state-maintained highway system. These guidelines shall correlate with and, so far as possible, conform to the system then current as approved by the American Association of State Highway and Transportation Officials.*”

Requirements from the Entity-State Agreement – *“The design shall comply with the latest edition of the Louisiana Standard Specifications for Roads and Bridges, applicable requirements of 23 CFR Part 630 (“Preconstruction Procedures”), criteria prescribed in 23 CFR Part 625 (“Design Standards For Highways”), LADOTD guidelines, conformance to the applicable Publications and Manuals on the DOTD website, all applicable accessibility codes and all related regulations.”*

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### **Policies and Procedures**

*The list below shows the most common references and manuals that reflect the DOTD policies and procedures. This list is not inclusive and the design engineers must use all policies and procedure that apply to their project.*

English and Preservation (PRR) Design Guidelines - State law, R.S. §48:35, requires that the state highway system (all roads & streets) conform to the DOTD minimum design guidelines in the state for

- Freeways
- Rural arterial roads
- Urban arterial roads and streets
- Suburban arterial roads and streets
- Rural collector roads
- Urban and suburban collector roads and streets
- Local roads and streets

## *Local Public Agency Manual*

### *Engineering*

*(Project Design & Delivery:*

*Developing an LPA Project for Bidding)*

Criteria for these guidelines are dictated by the scope of work. Categories are listed below.

- Major Rehabilitation
- Rural & Urban
- NHS Routes & Non-NHS Routes
- Minor Rehabilitation
- Rural & Urban
- NHS Routes & Non-NHS Routes

Louisiana Department of Transportation and Development Minimum Design Guidelines (reference

[http://wwwsp.dotd.la.gov/Inside\\_LaDOTD/Divisions/Engineering/Road\\_Design/Memoranda/Minimum\\_Design\\_Guidelines.pdf](http://wwwsp.dotd.la.gov/Inside_LaDOTD/Divisions/Engineering/Road_Design/Memoranda/Minimum_Design_Guidelines.pdf)) and Minimum PRR Design Guidelines (reference [http://wwwsp.dotd.la.gov/Inside\\_LaDOTD/Divisions/Engineering/Road\\_Design/Systems\\_Preservation/Pages/Documents.aspx](http://wwwsp.dotd.la.gov/Inside_LaDOTD/Divisions/Engineering/Road_Design/Systems_Preservation/Pages/Documents.aspx)).

Americans with Disabilities Act (ADA) – This law is from the U.S. Department of Justice and affects **all** public agencies. (Reference [http://wwwsp.dotd.la.gov/Inside\\_LaDOTD/Divisions/Administration/Compliance/Pages/tit16\\_vi.aspx](http://wwwsp.dotd.la.gov/Inside_LaDOTD/Divisions/Administration/Compliance/Pages/tit16_vi.aspx)). DOTD has created Standard Plan PED-01 – Sidewalks which addresses the requirements to make the sidewalks accessible. The Access Board can be consulted at 1-800-872-2253. Some of the design criteria are listed below (not inclusive list):

#### Sidewalk

- 5' desirable width
  - 4' minimum width with bump-outs
  - 200' turnaround if 4' width
- 2% max. cross slope
- 5% max. longitudinal slope

#### Ramps

- 8% max. slope in ramp
- Truncated domes at street intersections
- 25' max. length of a ramp without a rest area

AASHTO A Policy on Geometric Design of Highways and Streets is often called "The Green Book" because of the color of its cover. This book covers the functional design of roads and highways including such things as the layout of intersections, horizontal curves and vertical curves

## *Local Public Agency Manual*

### *Engineering*

*(Project Design & Delivery:  
Developing an LPA Project for Bidding)*

AASHTO Guide for the Planning, Design and Operation of Pedestrian Facilities, 1<sup>st</sup> Edition - This guide provides guidance on the planning, design, and operation of pedestrian facilities along streets and highways. It focuses on identifying effective measures for accommodating pedestrians on public rights-of-way.

AASHTO Guide for the Development of Bicycle Facilities, 4th Edition - This guide provides information on how to accommodate bicycle travel and operations in most riding environments. It provides guidance to meet the needs of bicyclists and other highway users.

Manual of Uniform Traffic Control Devices (MUTCD) - This manual was adopted by the DOTD to describe the uniform system of traffic control devices used on state highways.

Engineering Design and Standards Manual (EDSM) – These contain directives impacting the engineering functions of the DOTD. It consolidates all of the directives containing policies, procedures, standards, and guides relating to the administration of the Highway Program into one location. (Reference [http://wwwsp.dotd.la.gov/Inside\\_LaDOTD/Divisions/Engineering/EDSM/Pages/default.aspx](http://wwwsp.dotd.la.gov/Inside_LaDOTD/Divisions/Engineering/EDSM/Pages/default.aspx)).

- Examples:
- Curb policy - EDSM No: II.2.1.7
- Sidewalk policy -EDSM No: II.2.1.10
- Roundabout study and approval policy - EDSM No: VI.1.1.5
- Roundabout design policy- EDSM No: VI.1.1.6
- Traffic signal policy- EDSM No: VI.3.1.1

Roadway Design Procedures and Detail Manual – This manual was created to provide a convenient guide of the acceptable policies and procedures used for the development of roadway construction plans for DOTD. It is intended to promote consistency, where possible, between all individuals involved in the roadway design and plan preparation process. (Reference [http://wwwsp.dotd.la.gov/Inside\\_LaDOTD/Divisions/Engineering/Road\\_Design/Pages/Road-Design-Manual.aspx](http://wwwsp.dotd.la.gov/Inside_LaDOTD/Divisions/Engineering/Road_Design/Pages/Road-Design-Manual.aspx)).

### Bridge Design Manuals

Bridge Design Manual – This manual makes policy statements and can be used as a policy guide for structural analysis to aid the Engineer in developing bridge plans. It is to be used in conjunction with the Design Memorandums or revisions to the "Bridge Design Manual" issued as Memorandum to all Contractors prior to beginning any work. (Reference

## *Local Public Agency Manual*

### *Engineering*

*(Project Design & Delivery:  
Developing an LPA Project for Bidding)*

[http://wwwsp.dotd.la.gov/Inside\\_LaDOTD/Divisions/Engineering/Bridge\\_Design/Pages/BDEM.aspx](http://wwwsp.dotd.la.gov/Inside_LaDOTD/Divisions/Engineering/Bridge_Design/Pages/BDEM.aspx)).

DOTD Construction Plans Quality Control / Quality Assurance Manual – This manual is designed to provide a mechanism by which all construction plans can be subject to a systematic and consistent review with the goal to create a set of quality project plans, which should be substantially error free. (Reference [http://wwwsp.dotd.la.gov/Inside\\_LaDOTD/Divisions/Engineering/Bridge\\_Design/Pages/QC-QA.aspx](http://wwwsp.dotd.la.gov/Inside_LaDOTD/Divisions/Engineering/Bridge_Design/Pages/QC-QA.aspx)).

Standard Specifications (Purple Book) – This reference is a compilation of provisions and requirements for the performance of prescribed work. It contains the specifications for general application and repetitive use. The Supplemental Specifications are the additions and revisions to the Standard Specifications. (Reference [http://wwwsp.dotd.la.gov/Inside\\_LaDOTD/Divisions/Engineering/Standard\\_Specifications/Pages/Standard%20Specifications.aspx?RootFolder=%2FInside%5FLaDOTD%2FDivisions%2FEngineering%2FStandard%5FSpecifications%2FStandard%20Specifications%2F2016%20Standard%20Specifications%20for%20Roads%20and%20Bridges%20Manual%20%28for%20Use%20on%20Selected%20Projects%29&FolderCTID=0x012000F2BB18F0A355D04C8EF828EBDDC2D23C&View={780C4B20-7E80-4A7A-9EF5-60CC2A7A06C9}](http://wwwsp.dotd.la.gov/Inside_LaDOTD/Divisions/Engineering/Standard_Specifications/Pages/Standard%20Specifications.aspx?RootFolder=%2FInside%5FLaDOTD%2FDivisions%2FEngineering%2FStandard%5FSpecifications%2FStandard%20Specifications%2F2016%20Standard%20Specifications%20for%20Roads%20and%20Bridges%20Manual%20%28for%20Use%20on%20Selected%20Projects%29&FolderCTID=0x012000F2BB18F0A355D04C8EF828EBDDC2D23C&View={780C4B20-7E80-4A7A-9EF5-60CC2A7A06C9}) ).

Complete Streets Policy - All projects shall consider the impact that improvements will have on safety for all users and make all reasonable attempts to mitigate negative impacts on non-motorized users. If any facet of the policy is not implemented on a project, documentation is required from the designer that the policy was considered and why it was not implemented on the Design Guidelines documentation. (Reference [http://wwwsp.dotd.la.gov/Inside\\_LaDOTD/Divisions/Multimodal/Highway\\_Safety/Complete\\_Streets/Misc%20Documents/cs-la-dotpolicy.pdf](http://wwwsp.dotd.la.gov/Inside_LaDOTD/Divisions/Multimodal/Highway_Safety/Complete_Streets/Misc%20Documents/cs-la-dotpolicy.pdf)).

Access Connection Policy - It establishes uniform criteria regulating the location, design, and operation of new access connections, while balancing the needs and rights of property owners and roadway users. When an existing roadway is reconstructed, existing access connections should be altered to conform to the policy regulations. DOTD may allow site-specific deviations based on sound engineering principles and an engineering study for unique conditions. (Reference [http://wwwsp.dotd.la.gov/Inside\\_LaDOTD/Divisions/Engineering/Traffic\\_Engineering/Access%20Connections%20To%20Other%20State%20Highways/Access%20Connections%20Policy%20\(December%202013\).pdf](http://wwwsp.dotd.la.gov/Inside_LaDOTD/Divisions/Engineering/Traffic_Engineering/Access%20Connections%20To%20Other%20State%20Highways/Access%20Connections%20Policy%20(December%202013).pdf)).

Policy for Roadside Vegetation Management – Located on the DOTD website, it addresses the following items: Guidelines and Categories of Roadside Vegetative



## *Local Public Agency Manual*

### *Engineering*

*(Project Design & Delivery:*

*Developing an LPA Project for Bidding)*

Maintenance, Herbicides, Wildflowers and Landscaping. . (Reference [http://wwwsp.dotd.la.gov/Inside\\_LaDOTD/Divisions/Engineering/Misc%20Documents/Policy%20For%20Roadside%20Vegetation%20Management.pdf](http://wwwsp.dotd.la.gov/Inside_LaDOTD/Divisions/Engineering/Misc%20Documents/Policy%20For%20Roadside%20Vegetation%20Management.pdf)).

Technical Memoranda (Bridge Design) – It contains all of the technical memoranda referencing bridges. The documents in the technical memoranda section are changes that will be made to the Bridge Design manual in the next update. It is located on the DOTD Bridge Design website. (Reference [http://wwwsp.dotd.la.gov/Inside\\_LaDOTD/Divisions/Engineering/Bridge\\_Design/Pages/Technical-Memoranda.aspx](http://wwwsp.dotd.la.gov/Inside_LaDOTD/Divisions/Engineering/Bridge_Design/Pages/Technical-Memoranda.aspx)).

Asphalt Memorandum – This is the “How To” of asphalt. Some examples are: the unit weight of asphalt, pay items, uses, and types. (Reference [http://ladotnet/policies/Asphaltic\\_Pavement\\_Design\\_and\\_Specifications\\_Policy\\_and\\_Standards\\_Memo\\_200910.pdf](http://ladotnet/policies/Asphaltic_Pavement_Design_and_Specifications_Policy_and_Standards_Memo_200910.pdf)).

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## **Louisiana Professional Engineer & Land Surveyors (LAPELS) Board Rules**

The Louisiana Professional Engineering & Land Surveyors Board has specific requirements when engineering work is performed. The design engineers responsible for producing the plans shall follow the rules set forth by the Board. The following rules apply to using an engineering stamp. (Reference <http://www.lapels.com/>)

Preliminary Plans (§2701.4.b.i)

Completed Work (§2701.4.a.i)

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## **Survey**

The location survey for any particular project provides the essential field information necessary for the preparation of plans and specifications. It locates all features (data) within the project limits that could affect the design, i.e. utility location, drainage features.

## *Local Public Agency Manual*

### *Engineering*

*(Project Design & Delivery:  
Developing an LPA Project for Bidding)*

#### Example of a Scope of Services for an Overlay

The Consultant shall perform all services required to make a complete topographic survey, in English units of measure, as required for the proper design and layout of the project. The DOTD requirements which shall govern this survey are specified in the current edition of the DOTD Location and Survey Manual. Deviations to the manual shall be approved by the District Project Manager. Vertical control is not anticipated. The survey shall include, but is not limited to, one or more of the following:

- 1) Station the project centerline every 100'. Paint stations on paved shoulder, or where no paved shoulder exists, paint stations on travel lanes outside of apparent wheel paths.
- 2) Station reference points along the project in the event the painted centerline stations fade.
- 3) Station and inspect all drainage structures. Note condition, cover, size, type, thickness and length.
- 4) Cross-section the roadway at a minimum of every 1000' but not less than 3 representative sections. Cross sections to extend from back of sidewalk to back of sidewalk, or a minimum of 5' from the edge of the pavement or back of the curb. Cross-section the roadway at the PC, PT, and apex of curves to determine superelevation rates, and at visible changes in cross slopes. Station and cross section intersecting roads or driveways within curve and note radii, if applicable.
- 5) Station and measure travel lanes and shoulder widths at transition points or changes in material type. Station and measure turn lanes, acceleration and deceleration lanes, and parking lanes.
- 6) Determine the degree of curves, note directions, and locate the stations of the observed PCs and PTs.
- 7) Station and describe with approximate quantities, the type of striping, symbols, school crossings, railroad crossings, turn arrows, legends, and posted speed limit signs.
- 8) Count all driveways. Note type of material, whether residential or commercial. Measure the width of concrete driveways at or near the edge of the shoulder. Measure the width of asphaltic driveways at a point approximately 8' from the near edge of the travel lane.
- 9) Measure the area to be overlaid on city street turnouts. Survey for un-signalized intersections shall extend 5' beyond return P.C. and 50' down the cross streets for signalized intersections.
- 10) Station any exceptions to the overlay areas.
- 11) Station and offset all manholes, water valves, gas valves, and any other utilities visible at the surface and within 5' of the edge of pavement or back of curb.
- 12) Provide utility locations within limits of construction.

## *Local Public Agency Manual*

### *Engineering*

*(Project Design & Delivery:*

*Developing an LPA Project for Bidding)*

- 13) Station and measure the depth of any rutting. Station and measure any areas needing to be patched.
- 14) Station and measure the size of existing roadway patches.
- 15) Note any existing loop detectors and locate by cross road names.
- 16) Station and provide offset and description of any appurtenances (buildings, shrubs, planting beds, historical markers, statues, benches, etc...) within 5' of the edge of the pavement or back of curb which are visible at the surface.

#### Example of a Survey Scope for a Roundabout

The survey will begin at the Intersection of Louisiana Highway "A", City Street "1", City Street "2", and City Street "3". (This intersection will be referred to as the Point of Beginning in this scope) From this Point of Beginning the survey will proceed in a northeasterly direction along La Highway "A" for approximately 750 feet. The width of the Survey and DTM in this portion will be 150 feet East and West of the Existing Alignment of Louisiana Highway "A". From the above Point of Beginning the survey will proceed in a northwesterly direction along City Street "1" for approximately 750 feet. The width of the Survey and DTM in this portion will be 150 feet East and West of the Existing Alignment of City Street "2". From the above Point of Beginning the survey will proceed in a westerly direction along City Street "3" for approximately 750 feet. The width of the Survey and DTM in this portion will be 150 feet North and South of the Existing Alignment of City Street "3". From above Point of Beginning the survey will proceed in a southerly direction along La Highway "A" for approximately 750 feet. The width of the Survey and DTM in this portion will be 150 feet East and West of the Existing Alignment of Louisiana Highway "A". From above Point of Beginning the survey will proceed in an easterly direction along Back Street for approximately 750 feet. The width of the Survey and DTM in this portion will be 150 feet North and South of the Existing Alignment of Back Street.

Any side or major intersecting roads that the above description intersects shall also be included with the survey limits. (Refer to the survey request form)

An existing drainage map will be required. Please refer to the Location and Survey Manual for detailed instructions of what is required for the drainage map.

Permission of land owners shall be acquired by the consultant before entering any property associated with this description.

The project alignments shall be established using the existing centerline of roads.

All work to be done in the English units of measurement.

## *Local Public Agency Manual*

### *Engineering*

*(Project Design & Delivery:*

*Developing an LPA Project for Bidding)*

### **Scope Changes**

The plans must be designed to reflect the scope determined in Stage 0 document and/or the application and incorporated in the Entity-State Agreement

- Scope changes may be permitted. Examples of changes include changes to project limits or quantities
- The DOTD Program Manager (and MPO if applicable) must agree and approve the change
- Any significant change may require a Supplemental Agreement to the Entity-State Agreement
- The Funding Commitment Letter must be revised in the non-MPO areas and a TIP modification is required in the MPO areas (if there is a change in scope, there will be a change in budget.)
- Any change may affect the environmental clearance (including restarting the process)
- Added work may be non-participating (items of project work that are not a part of the federal aid funding)

The scope is not increased if your project is under budget

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### **Traffic Counts**

In order to analyze traffic load effects for reflection cracking, annual number of axle loads for each vehicle class and axle type is entered in the analysis process. The number of axle loads can be determined using the traffic load categorized based on the FHWA vehicle class (reference

<https://www.fhwa.dot.gov/publications/research/infrastructure/pavements/itpp/13091/002.cfm>), the axle type, and the number of tires.
















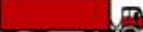
















- **Classification of Vehicles -**  
FHWA defines vehicles into 13 classes depending on whether they carry passenger or commodities. Non-passenger vehicle which are from class 4 to class 13 are divided by the number of axles and the trailer units. The light axle load groups, such as vehicle classes 1 to 3, do not have significant effects regarding load related distresses.

# Local Public Agency Manual

## Engineering

*(Project Design & Delivery:  
Developing an LPA Project for Bidding)*

The time is critical when performing traffic counts. Example: Make sure it is taken when school is in session and that it is at least 3 weeks after school starts if a school is near the project.

<b>Class 1</b> Motorcycles		<b>Class 7</b> Four or more axle, single unit	
<b>Class 2</b> Passenger cars		<b>Class 8</b> Four or less axle, single trailer	
			
			
			
<b>Class 3</b> Four tire, single unit		<b>Class 9</b> 5-Axle tractor semitrailer	
			
			
<b>Class 4</b> Buses		<b>Class 10</b> Six or more axle, single trailer	
			
			<b>Class 11</b> Five or less axle, multi trailer
<b>Class 5</b> Two axle, six tire, single unit		<b>Class 12</b> Six axle, multi-trailer	
			
			<b>Class 13</b> Seven or more axle, multi-trailer
<b>Class 6</b> Three axle, single unit			
			
			

## *Local Public Agency Manual*

### *Engineering*

*(Project Design & Delivery:*

*Developing an LPA Project for Bidding)*

## **Geotechnical Investigation**

Boring request initiates field work/design. The timeline depends on complexity of the site conditions or type of structure. Issues that can affect the timeline are access to property to obtain borings. This can be either permission or terrain. Change in alignment can affect the usefulness of the boring especially if it is more than 200' from original. It also depends on size of structure, number of original borings, site conditions

Typical Duration to obtain boring

A 100-ft long bridge; no special access required:

- 2 @110-ft deep borings
- Field work, testing, design = 2 months after NTP

A 400-ft long bridge; no special access required:

- 5 @130-ft deep borings
- Field work, testing, design = 3.5 months after NTP

An 800-ft long bridge; no special access required:

- 9 @140-ft deep borings
- Field work, testing, design = 6 months after NTP

Consult early with DOTD to avoid problem area such as levees, high fill ( over 10'), sequencing phase construction, bridge widening in tight conditions, sheet piles, detour pile lengths,

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## **Typical Section Design**

Overlays

- The LPA engineer/consultant is required to submit corings with samples taken approximately every 1000 feet to a depth of 4 feet below the existing roadway and no less than two feet below the bottom of the base course, whichever is greater. The different layers of the soil strata shall be identified every foot or strata break at the discretion of the lab engineer of record using the AASHTO

**Local Public Agency Manual**  
*Engineering*  
*(Project Design & Delivery:*  
*Developing an LPA Project for Bidding)*

classification system and the following tests: Atterberg limits, sieve analysis, hydrometer tests, percent organics, moisture content, as well as pH and resistivity when applicable.

**New Construction**

- The LPA engineer/consultant is required to submit a subgrade soil survey with samples taken approximately every 1000 feet along the new roadway alignment. The depth of each boring should be at least 8 feet below the finished roadway elevation or natural ground, whichever is greater, with additional testing requirements for areas of cut/fill greater than 10 feet.

**Settlement/Slope Stability Study**

- In cut areas, the material to be removed shall be tested and sampled with an emphasis on silt content, with the boring terminating at least 8 feet below the finished roadway elevation. In fill areas, the boring should be continuously sampled to at least two and up to three times the maximum fill height, with consolidation testing being necessary as the fill heights approach 10 feet.

<p>STATE PROJECT: _____          DESCRIPTION: _____          PARISH: ASCENSION          ROUTE NO: LA 44          TOTAL LENGTH: 0.534</p>	<p><b>DESIGN INFORMATION</b> (EXISTING ROADWAY)</p>	<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <th style="width: 33%;">PROJECT NO</th> <th style="width: 33%;">PARISH</th> <th style="width: 33%;">SHEET NO</th> </tr> <tr> <td style="text-align: center;">_____</td> <td style="text-align: center;">ASCENSION</td> <td style="text-align: center;">_____</td> </tr> </table>	PROJECT NO	PARISH	SHEET NO	_____	ASCENSION	_____
PROJECT NO	PARISH	SHEET NO						
_____	ASCENSION	_____						

LA 934	PAVEMENT			BASE		SUB-BASE	
ROADWAY	TYPE	ASP QUALITY	DEPTH (ft)	WIDTH (ft)	TYPE	DEPTH (ft)	DEPTH (ft)
0.1 MILE WEST of LA 44	HOT MIX	GOOD	0.00' - 0.25'	20.4'	SOIL CEMENT	0.25' - 1.12'	1.12' - 3.00'
0.1 MILE EAST of LA 44	HOT MIX	GOOD	0.00' - 0.29'	20.4'	SOIL CEMENT	0.29' - 1.17'	1.17' - 3.00'

LA 44	SOIL ON SIDE OF ROADWAY			
ROADWAY	TYPE	DEPTH (ft)	pH	RESISTIVITY
107+00 @ 31' LT ☒	STY LM & ORG	0.00' - 2.00'	8.3	2,775
113+50 @ 31' LT ☒	STY CL LM & ORG	0.00' - 2.00'	6.2	780

LA 44	PAVEMENT	
ROADWAY	TYPE	DEPTH (ft)
~ 400' @ ☒ NORTH of LA 934	CONCRETE	0.00' - 0.60'
~ 400' @ ☒ SOUTH of LA 934	CONCRETE	0.00' - 0.67'


**REMARKS:**

SHLY = Shelly  
 SSLM = Shelly Sand  
 GRAV = Gravel  
 SA = Sand  
 CMT = Cement

CL = Clay  
 LT = Light  
 LM = Loam  
 STY = Silty  
 PCC = Portland Cement Concrete

SDY LM = Sandy Loam  
 MED = Medium  
 SDY = Sandy

SHEET 1 OF 1



REG NO: \_\_\_\_\_  
 REGISTERED PROFESSIONAL ENGINEER  
 IN THE STATE OF LOUISIANA  
 CIVIL ENGINEER  
 District 61 Lab Engineer

**Figure 1 – Example of a Subgrade Soil Survey**

# *Local Public Agency Manual*

## *Engineering*

*(Project Design & Delivery:*

*Developing an LPA Project for Bidding)*

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### **Formatting Plan Sheets**

In the plan development phase all basic design decisions and recommendations are made and included in the plans.

Plans are defined as contract drawings which show location, type, dimensions and other details of the prescribed work

The Entity-State Agreement states: The design standards shall comply with the criteria prescribed in 23 CFR Part 625 (“Design Standards For Highways”), and DOTD guidelines. The format of the plans shall conform to the latest standards used by DOTD in the preparation of its contract plans for items of work of similar character.

Conformance to the applicable Publications and Manuals found on the DOTD website is required. The document must ensure all applicable accessibility codes and all related regulations are clearly stated in this section, include: ADAAG, 2010 ADA Standards for Accessible Design, MUTCD, PROWAG, Section 504 of the Rehabilitation Act of 1973, 23 CFR 450, State DOT Regulations, USDOT, 49 CFR Part 37.

Chapter 8, Roadway Plan Preparation, provides detailed information on DOTD plan formatting requirements and should be closely followed. To assist the LPA/consultant in providing the plans in the correct format, plan sheets templates are available through the DOTD project manager.

All DOTD plans follow the following format (Order of plan sheets can be found in Fig. 8.1.4 Road Design Manual). (Reference

[http://wwwsp.dotd.la.gov/Inside\\_LaDOTD/Divisions/Engineering/Road\\_Design/Road%20Design%20Manual/10%20Chapter%208%20-%20Roadway%20Plan%20Preparation.pdf](http://wwwsp.dotd.la.gov/Inside_LaDOTD/Divisions/Engineering/Road_Design/Road%20Design%20Manual/10%20Chapter%208%20-%20Roadway%20Plan%20Preparation.pdf)).

- Title Sheet – format examples can be obtained from the PMs
- Typical Section (if applicable) – must have legends
- Tables & Breakdowns - Examples can be found in the Road Design Manual
- Bid items – Must conform to the DOTD Bid item list
- Scope of work and the DOTD PM will determine which layout is required
  - Plan sheets – If all information can be accurately and easily communicated without a profile view
  - Plan and profile - Typically used when a grade is set or drainage is involved
    - Dual drainage lines require a profile for each



# *Local Public Agency Manual*

## *Engineering*

*(Project Design & Delivery:*

*Developing an LPA Project for Bidding)*

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### **Example how to Begin a Sidewalk Project**

1. Survey – Should look like CAD conform
  - a. Addendum “A” to the Location & Survey Manual
  - b. Road Design Automated Plan Production Guide
  - c. Roadway Plan Preparation Manual, Chapter 8 roadway plan preparation
2. Become familiar with DOTD Standard Guidelines/policies/procedures
  - a. EDSM – Search on Sidewalks, curbs
  - b. Complete Streets EDSM and Policy
  - c. Design Guidelines
  - d. Standard Specifications
  - e. Chapter 8 of the Roadway Plan Preparation Manual
3. Environmental Clearance
  - a. Send out SOVs
4. Begin design – Design should be designed at a minimum in accordance with the following documents
  - a. Design Guidelines
  - b. Americans with Disabilities Act (ADA)
  - c. *AASHTO A Policy on Geometric Design of Highways and Streets*
  - d. *AASHTO Guide for the Planning, Design and Operation of Pedestrian Facilities, 1<sup>st</sup> Edition*
  - e. Manual of Uniform Traffic Control Devices (MUTCD)
  - f. Engineering Design and Standards Manual (EDSM)
  - g. Roadway Design Procedures and Detail Manual
  - h. DOTD Construction Plans Quality Control / Quality Assurance Manual
  - i. DOTD Standard Specifications
  - j. Complete Streets Policy
  - k. Access Policy

# *Local Public Agency Manual*

## *Engineering*

*(Project Design & Delivery:*

*Developing an LPA Project for Bidding)*

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### **Design Submittals to DOTD**

#### **Preliminary Plan Submittals**

- ★ Submittals are sent by LPA responsible charge (not the consultant). It is recommended that the LPA responsible charge contact the DOTD PM before a submittal to ensure they have all of the required documents for the submittal. All comments from DOTD must have a written response. The engineer/designer is encouraged to contact the DOTD PM to discuss any comment.
- Each plan submittal must have the required information of the engineer of record (Chapter 27, Section 4.b.i. of the ***Professional and Occupational Standards*** (Louisiana Administrative Code October 2013 pp. 26-27) of the Louisiana Professional Engineers and Land Surveyor (LAPELS) Board Rule states “ *Preliminary Work: All preliminary documents, so marked in large bold letters, shall contain a statement that the documents are not to be used for construction, bidding recordation, conveyance, sales, or as the basis for the issuance of a permit. Preliminary documents are not required to have the licensee’s seal, signature and date affixed, but must bear the name and licensure number of the licensee, and the firm’s name, if applicable*”. (Reference <http://www.lapels.com/LawsRules.html>).
- Add a date generator on the electronic plan sheets (creates a printing date)

#### Required Submittals by Program

- LRSP – 2 (preliminary & final)
- TAP & SRTS – 3 (preliminary, Plan-in Hand & final)
- Urban System Preservation - 2 (preliminary & final)
- Urban System Large Project – 7 (30%, 60%, 90%, 100% preliminary & 60%, 95%, 100% final)
- 

Submittals for the preliminary submittal vary according to the program. Every program has a 95% submittal which is for a plan-in-hand (field inspection).

# *Local Public Agency Manual*

## *Engineering*

*(Project Design & Delivery:  
Developing an LPA Project for Bidding)*

### **Project Milestones**

#### **Large Project Prelim. Review**

30% Review  
60% Review  
90% Review  
95% Review (Plan-in-Hand - DOTD  
schedules and chairs)  
100% Review

#### **Large Project Final Plan Review**

- 60% Review
- 95% Advanced Check Print  
Submittal & Review
- 100% Submittal
- DOTD Chief Signs Plans

#### **Pavement Preservation Projects, TAP, SRTS, SRTPP & LRSP - Preliminary**

Preliminary Submittal  
  
Field Review/Plan-in-Hand  
Inspection

#### **Pavement Preservation Projects, TAP, SRTS, SRTPP & LSRP – Final Plans**

Final Submittal  
  
DOTD Chief Engineer Signs Plans

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### **Plan-in-Hand Inspection (Field Inspection)**

★ **This is a meeting that the Responsible Charge is required to attend.** The preliminary plans are considered 95% complete at this milestone. All basic design decisions, or recommendations, have been made and are shown on the plans. The purpose of this meeting is to allow the Plan-in-Hand inspection participants to evaluate the plans in relation to existing field conditions and note any changes that might affect the plans. An Office Review is held to discuss the project and identify any problems to review in the field. The field inspection participants will investigate the issues identified in the office review in the field and will discuss any concerns between the plans and the existing physical conditions.

## *Local Public Agency Manual*

### *Engineering*

*(Project Design & Delivery:*

*Developing an LPA Project for Bidding)*

This inspection also provides an opportunity for various sections and agencies to discuss the project and make recommendations. Final plan preparation address the issues identified in the field and can begin after the appropriate environmental clearance has been received.

The plan-in-hand inspection reviews the plans with respect to constructability. The following topics are discussed

- Typical section – Review proposed section
- Pay items – Ensure applicable items are included, i.e. temporary erosion control, tempo maintenance aggregate, cleaning ditches, etc.
- Plan-and-profile sheets – Ensure sufficient information is included, i.e. adequate right-of-way, adequate outfall information, potential hazards, etc.
- Geometric details – Review for areas that improvements can be made
- Sequence of construction – Review for traffic maintenance, detours, maintenance of drainage, time restrictions, etc.
- Bridge plans - Examples of review - Ensures are required information for construction is shown on the plans, identifies if detour is required, any required drainage excavation, need for test piles or vibration monitoring, etc.
- General topics – Identifies any potential issues such as major utility conflicts, major right-of-way conflicts, salvageable material, extra-ordinary maintenance problems anticipated, clearing and grubbing separate project, etc.

Plan-in-hand format typically has an office review prior to going to the field. In the office review, the plans are discussed by sheet. Issues are identified to review in the field.

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### **Design Exception/Design Waiver**

Definitions:

A *Design Exception* is requested to use a value that is outside of the acceptable range in the Design Guidelines

A *Design Waiver* is requested to use a value outside the preferred range in the Design Guidelines

Any design exception must be approved by the DOTD Chief Engineer in accordance with Section “B” As per State Law, RS §48:35, *The chief engineer may designate highways within the state highway system for reconstruction or repair at guidelines*

# Local Public Agency Manual

## Engineering

(Project Design & Delivery:  
Developing an LPA Project for Bidding)

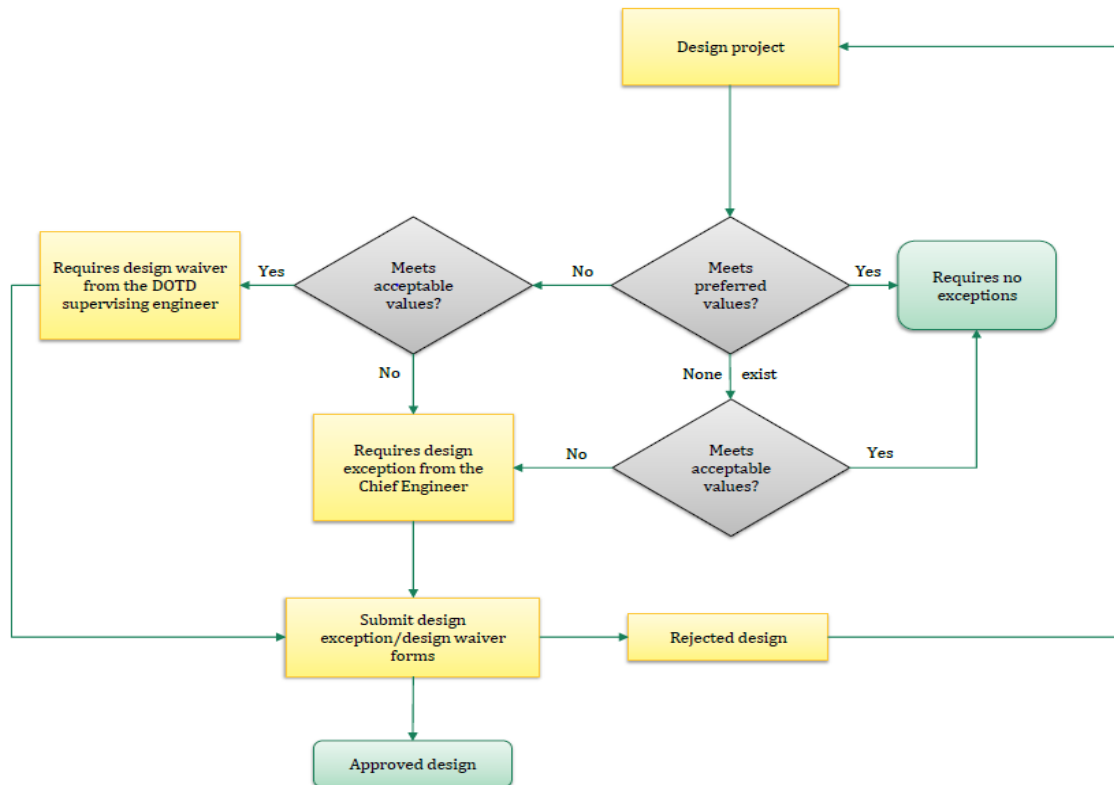
which are less than those as approved by the American Association of State Highway and Transportation Officials

### Design Exception Process

- The request must be studied, justified, and documented before sending a formal request to the DOTD Chief Engineer (Design Exception Form - [Reference http://wwwsp.dotd.la.gov/Inside\\_LaDOTD/Divisions/Engineering/Road\\_Design/Pages/Standard-Forms.aspx](http://wwwsp.dotd.la.gov/Inside_LaDOTD/Divisions/Engineering/Road_Design/Pages/Standard-Forms.aspx))
- Approved requests are recorded and noted on the plan sheet in the area of the affected request
- The note includes: the description of the exception/waiver, date of the exception approval, and name of the person approving the exception

### Design Waiver Process

- The request is sent to the DOTD PM
- The DOTD PM will forward the waiver to the appropriate supervising DOTD engineer for approval.



## *Local Public Agency Manual*

### *Engineering*

*(Project Design & Delivery:*

*Developing an LPA Project for Bidding)*

Exceptions to other DOTD polices or EDSMs must be processed in the same manner as directed by the DOTD PM and approval from the appropriate DOTD Section Head and/or DOTD Chief Engineer

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### **Final Plans**

- Final plan submittal to DOTD must be complete (Including signatures) before the Project Manager can submit the package to the DOTD Chief Engineering for signature and ultimately for bidding. The package should include the following:
  - Plan-in-Hand Report and Constructability Review (Reference [http://wwwsp.dotd.la.gov/Inside\\_LaDOTD/Divisions/Engineering/Road\\_Design/Pages/Standard-Forms.aspx](http://wwwsp.dotd.la.gov/Inside_LaDOTD/Divisions/Engineering/Road_Design/Pages/Standard-Forms.aspx))
  - QA/QC (Prelim. & Final) (Reference [http://wwwsp.dotd.la.gov/Inside\\_LaDOTD/Divisions/Engineering/Road\\_Design/QCQA/Forms/AllItems.aspx](http://wwwsp.dotd.la.gov/Inside_LaDOTD/Divisions/Engineering/Road_Design/QCQA/Forms/AllItems.aspx)).
  - Preservation Rehabilitation & Replacement (PRR) report and/or Design Exception/Design Waiver Request (Reference [http://wwwsp.dotd.la.gov/Inside\\_LaDOTD/Divisions/Engineering/Road\\_Design/Systems\\_Preservation/Pages/Documents.aspx](http://wwwsp.dotd.la.gov/Inside_LaDOTD/Divisions/Engineering/Road_Design/Systems_Preservation/Pages/Documents.aspx)).
  - Other checklists may be required as DOTD reevaluates its QA/QC policy

#### ***Final Full-Size Plan Submittal***

- 1 - Full sized set of stamped, signed and dated 22" X 34" plans, title sheet must be mylar
- 1 - Half sized set of plans 11" X 17"
- Cost estimate
- Approved NS pay items specifications with a stamped, signed and dated cover sheet – Electronic version also required
- Calculation reports
- Completed trainee determination form if cost of project is >\$750K

#### ***Final Letter Size Plan Submittal***

- 1 - final letter size set of stamped, signed and dated 8-1/2" X 11" plans, title sheet must be mylar
- Cost estimate

## *Local Public Agency Manual*

### *Engineering*

*(Project Design & Delivery:  
Developing an LPA Project for Bidding)*

- Approved NS pay items specifications with a stamped, signed and dated cover sheet – Electronic version also required
- Calculation reports
- Completed trainee determination form if cost of project is >\$750K

DOTD Standard Plans – These are sheets signed by the DOTD Chief Engineer. They are located on the internet (ProjectWise). They shall be listed on the title sheet with latest revision dates under the *Index to Sheets*. *The consultant/designer is required to insert them into the plans.* Modifications to these sheets are not allowed.

DOTD Special Details – These sheets are signed by a DOTD engineer, but not the DOTD Chief Engineer. They are located on the internet (ProjectWise). They shall be listed on Title Sheet in the Index to Sheets. *The consultant/designer is required to insert them into the plans.* Alternatives are allowed if they are stamped and signed by the designer without a design exception.

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## Lighting

★ ***All electrical plans must have a licensed Electrical Engineer design, stamp and seal the plans.***

The DOTD TAP *sidewalk* lighting only to light pedestrian and bike paths. The TAP sidewalk lighting must include the “**CERTIFICATION FOR PERMIT LIGHTING**” form with the plans (QA/QC from Bridge Design is also required).

**Street** Lighting has a separate Entity-State Agreement and requirements from sidewalk lighting. The plans delivered for street lighting projects must be reviewed by the DOTD Electrical Section. The use of a retainer contract by DOTD for the review of the plans may be necessary. If a retainer contract is used, the LPA will be required to fund the task order. The plan review process for consultant/LPA projects includes a 30; 60; 95% and final review of the plans. This review covers both electrical design and illumination design review.

All lighting projects require a signed maintenance agreement installation, a resolution signed by Mayor prior to beginning design, a maintenance agreement following the

## *Local Public Agency Manual*

### *Engineering*

*(Project Design & Delivery:*

*Developing an LPA Project for Bidding)*

resolution which can be lengthy. It is recommended that the sponsor starts early coordination to avoid delays in delivery.

#### Lighting Facts:

- All Roadway Lighting is owned and maintained by Local Municipalities
- E.D.S.M II.2.1.9 Lighting Of Roadways & Structures And Decorative Lighting Of State Bridges
- “A Guide to Constructing, Operating, And Maintaining Highway Lighting Systems” Reference [http://wwwsp.dotd.la.gov/Inside\\_LaDOTD/Divisions/Engineering/Bridge\\_Design/Documents/Highway%20Lighting%20Systems%20Guide.pdf](http://wwwsp.dotd.la.gov/Inside_LaDOTD/Divisions/Engineering/Bridge_Design/Documents/Highway%20Lighting%20Systems%20Guide.pdf).
- Illumination design must interface with surroundings and does not start and stop at a survey line
- Existing light poles can seldom be simply moved without violating lighting standards

## Landscaping

- ★ All landscaping plans must have
  - A licensed landscape architect design, stamp and seal the plans.
  - The plans should account for the topography, drainage and site distance for the site
  - The plans must include stationing with setback distances in the plan details (to assistance in construction layout)
  - A minimum of 3 plant sources should be listed and where the plant material can be obtained
  - A project specific signed Maintenance Schedule and Projected Annual Cost Report is to be included with the PS&E package and will become a part of the Agreement

*Lack of maintenance will be grounds for remedial action*

#### **Vegetation Policy**

This policy is located on the DOTD website (Reference [http://wwwsp.dotd.la.gov/Inside\\_LaDOTD/Divisions/Engineering/Misc%20Documents/Policy%20For%20Roadside%20Vegetation%20Management.pdf](http://wwwsp.dotd.la.gov/Inside_LaDOTD/Divisions/Engineering/Misc%20Documents/Policy%20For%20Roadside%20Vegetation%20Management.pdf)) and should be



## *Local Public Agency Manual*

### *Engineering*

*(Project Design & Delivery:*

*Developing an LPA Project for Bidding)*

considered when planning landscape features on DOTD right-of-way. *Any deviations from the vegetation policy must have written approval of the DOTD Chief Landscape Architect and the DOTD Chief Engineer.*

The policy objectives are to provide for safety of the traveling public, blend the roadside with adjacent land uses, improve aesthetic quality, reduce erosion and increase efficiency of maintenance operations.

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## **Transportation Management Plan (TMP)**

★ Every project that affects the transportation network excluding emergency maintenance work shall include a TMP.

### **What is a Transportation Management Plan (TMP)?**

A TMP is more comprehensive approach to managing Work Zone (WZ) safety and mobility. A TMP is a design document to show how a project will be built and how transportation safety and mobility will be managed during the project construction. A TMP lays out a set of coordinated transportation management strategies and describes how they will be used to manage the work zone impacts of a road project. A TMP is included in a set of construction plans. Transportation management strategies for a work zone include:

1. Temporary traffic control measures and devices (Temporary traffic control plans (TTC))\*
2. Public information and outreach
3. Operational strategies (e.g., travel demand management, signal retiming, traffic incident management, etc.).

The scope, content, and level of detail of a TMP may vary based on the State or local transportation agency's work zone policy and the anticipated regional and project level work zone impacts of the project.

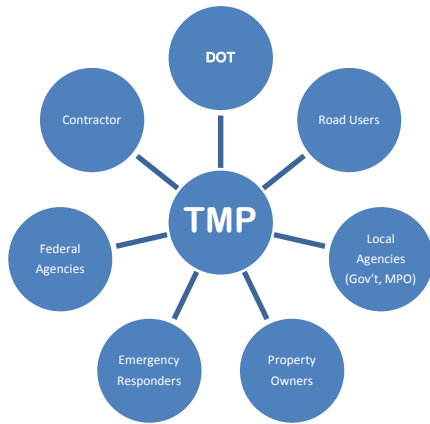
TMPs are necessary because WZ management is increasingly complex. There are increasing traffic volumes using the same roads that agencies need to maintain and rehabilitate. To address this problem the required traffic management efforts are beyond just the Temporary Traffic Control (TTC) plans for some projects. The key issues are safety, mobility, and accessibility.

# Local Public Agency Manual

## Engineering

(Project Design & Delivery:

Developing an LPA Project for Bidding)



The benefits of having a well thought-out approach to managing traffic during a construction project are numerous. A good plan considers the stakeholders (contractors, motorists, property owners, project owners, businesses, environment, event organizers, etc.) and uses a multidisciplinary approach. It can address safety and mobility impacts of work zones at corridor and network levels. It can promote efficient and effective construction phasing and staging, minimize contract duration, and control costs. A proficient plan improves safety for workers and road users while minimizing traffic and mobility impacts of the work zone.

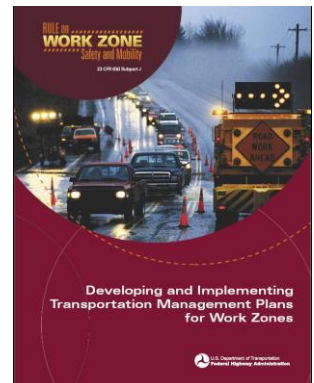
Other benefits include the potential of minimizing the impacts of circulation, access, and mobility to local communities and businesses and minimizing complaints from road users, businesses, and communities and improvement of intra- and inter-agency coordination and public awareness.

A TMP requires using scheduling, construction strategies, contracting strategies & transportation management strategies to help improve safety, reduce traffic and mobility impacts, and promote coordination in and around the work zone at the project and corridor level

*\*NOTE: A TMP for some projects may just be a TTC detail or TTC plan. Only major projects will require a more comprehensive TMP.*

### Who is responsible for developing and implementing the TMP?

A TMP must be developed for every Federal-aid project. The components of the TMP will vary based on the project scope. All public agencies that receive Federal-aid highway funding for projects are affected and need to implement the policies and procedures required by the federal regulations. Some local public agencies may already have their own work zone policies and procedures in place. If a local public agency uses its own policies and procedures, it is recommended that the State and local public agency work together to ensure their policies and procedures do not conflict.



### Federal Requirements

23 CFR Section 630 Part J & K of Oct 2007 requires the development and implementation of TMPs for all Federal Aid highway projects. The amount of content that is required in the plan depends on significance of the project. A significant project

## *Local Public Agency Manual*

### *Engineering*

*(Project Design & Delivery:*

*Developing an LPA Project for Bidding)*

is one that is expected to cause a relatively high level of disruption. All projects must have a Temporary Traffic Control (TTC) Plan. For significant projects defined by DOTD's EDSM No. VI.1.1.4, TMPs must also have a Traffic Operations (TO) component and a public information and outreach (PI) component.

### **TMP vs. TTCP**

A Temporary Traffic Control Plan (TTCP) is for handling traffic through the work zone with the use of traffic control devices.

A TMP is more comprehensive from a TTCP. It incorporates the broader issues of public awareness, mobility and safety impacts, operational concerns and stakeholder involvement. If a project is not "Significant", then the TMP can equal the TTCP.

### **When is a TMP Developed?**

TMP development should begin during planning (Stage 0) and progress through design. Beginning a TMP analyses early in the project development process helps to ensure traffic impacts are addressed in planning and preliminary engineering, and the TMP development and implementation costs are included in the project budget. The data needed for TMP analysis is collected early in the project development. During the design phase the WZ impacts are considered in evaluating and selecting design alternatives. All alternatives considered shall be documented in the TMP. For some projects it may be possible to choose a design alternative that alleviates many WZ impacts. The assessments of the WZ impacts should affect the choice of the best construction/staging option(s), the most suitable design and contracting approach and the most appropriate WZ traffic management strategies. The provisions for implementing the TMP strategies shall be in the project's **Plans, Specifications, and Estimates** (PS&Es) or the agency will commit to implementing the TMP strategies with their own forces.

### **What should it include?**

For all projects, the federal regulations require that the TMP include a Temporary Traffic Control (TTC) plan that addresses traffic safety and control through the work zone. If a project is expected to be **significant**, the TMP for that project must also contain both transportation operations and public information components. However, agencies are encouraged to consider transportation operations and public information strategies for all projects. When developing a TMP, agencies should develop and implement the plan in consultation with relevant stakeholders (**e.g.**, other transportation agencies, railroad agencies/operators, transit providers, freight movers, utility suppliers, police, fire, emergency medical services, schools, business communities, and regional transportation management centers).

# *Local Public Agency Manual*

## *Engineering*

*(Project Design & Delivery:*

*Developing an LPA Project for Bidding)*

### **Implementation**

Both the agency and the contractor must designate a trained person at the project level who "has the primary responsibility and sufficient authority for implementing the TMP and other safety and mobility aspects of the project". Having a responsible person from both the agency and the contractor will ensure that effective transportation management is planned, executed, and maintained. Effective management will minimize the causes for litigation. Neither party is immune from litigation. The agency's contract provisions will retain review, approval and any changes to the TMP elements.

### **Prospective TMP Components for Significant Projects**

- Project Description
- Existing and Future Conditions
- Work Zone Impacts Analysis and Assessment (Safety, Mobility and Accessibility)
- Work Zone Traffic Management Strategies (TTC Plan, Traffic Operations Plan, Public Information Campaign)
- TMP Monitoring Requirements
- Contingency Plans
- Implementation Costs
- Agencies should coordinate with appropriate **stakeholders** in developing a TMP
- Provisions for a TMP shall be in the project's **Plans, Specifications, and Estimates** (PS&Es)
- The LPA and the contractor shall each designate a **responsible person** for implementing the TMP at the project-level that is appropriately trained, has primary responsibility and has sufficient authority for implementing the TMP and other safety and mobility aspects of the project
- The plan should address the concerns of stakeholders
- The plan should use a multidisciplinary approach and define roles
- It should have a set of coordinated strategies implemented to manage the WZ impacts of a project
- The plans should be scale-able – projects with more expected impacts may need more analysis and more strategies

*A significant project is one that the agency expects will cause a relatively high level of disruption.*

The scope, content and level of detail of a TMP may vary based on the work zone impacts of the project.

There are 4 levels of projects.

- *Level 1 Projects:* Projects where the required work does not affect the existing road way (i.e. mowing, clearing and grubbing, drainage.)

## *Local Public Agency Manual*

### *Engineering*

*(Project Design & Delivery:*

*Developing an LPA Project for Bidding)*

- **Level 2 Projects:** Projects that will affect the existing road way.
- **Level 3 Projects:** Projects that meet the Level 2 conditions and the 3 following conditions:
  - Lies on a principal arterial and
  - Has a Level of Service of F and
  - Has a lane closure during the peak travel periods
- **Level 4 Projects:** Projects that meet Level 2 conditions and the 3 following conditions:
  - On an interstate or full control of access roadway and
  - Lies inside of a Transportation Management Area (urbanized area with a population over 200,000) or has a Level of Service of F and
  - Will have lane closures

EDSM No. VI.1.1.8, **Transportation Management Plans (TMP)** (Reference [http://wwwsp.dotd.la.gov/Inside\\_LaDOTD/Divisions/Engineering/EDSM/EDSM/EDSM\\_VI\\_1\\_1\\_8.pdf](http://wwwsp.dotd.la.gov/Inside_LaDOTD/Divisions/Engineering/EDSM/EDSM/EDSM_VI_1_1_8.pdf)) discusses the levels of TMPs and the actions required for each level.

To determine the type of TMP a project requires, a flowchart was developed. Reference [http://wwwsp.dotd.la.gov/Inside\\_LaDOTD/Divisions/Engineering/Road\\_Design/Transportation%20Management%20Plans/TMP%20Flowchart.pdf](http://wwwsp.dotd.la.gov/Inside_LaDOTD/Divisions/Engineering/Road_Design/Transportation%20Management%20Plans/TMP%20Flowchart.pdf).

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## **Project Proposal Preparation**

A project proposal is required for projects let through DOTD's bidding process. A proposal form is the document that the prospective Contractors submit bids both electronically and later hard copies. Proposals may be developed by DOTD depending on the program. In SRTS and LRSP, the proposals are most often developed by retainer consultants. A guide to develop a proposal can be found in the Proposal Preparation Manual.

### **Specifications**

Specifications are the compilation of provisions and requirements for the performance of prescribed work. If technical specs are needed, the designer/consultant has to provide them. These are considered Non-Standard specifications. There may be cases when even standard specifications require a write-up. An example is the removal of \_\_\_\_\_ may require a write-up on the removal process. There is a link for standard specs/step by step directions.

The 2016 Standard Specifications or blue book is a book of specifications for general application and repetitive use. (Reference

## *Local Public Agency Manual*

### *Engineering*

*(Project Design & Delivery:*

*Developing an LPA Project for Bidding)*

[http://wwwsp.dotd.la.gov/Inside\\_LaDOTD/Divisions/Engineering/Standard\\_Specifications/Pages/Standard%20Specifications.aspx](http://wwwsp.dotd.la.gov/Inside_LaDOTD/Divisions/Engineering/Standard_Specifications/Pages/Standard%20Specifications.aspx)).

The 2016 Supplemental Specifications are additions and revisions to the Standard Specifications for items that are repetitively used that were not included in the standard specification book. (Reference

[http://wwwsp.dotd.la.gov/Inside\\_LaDOTD/Divisions/Engineering/Standard\\_Specifications/Pages/Standard%20Specifications.aspx](http://wwwsp.dotd.la.gov/Inside_LaDOTD/Divisions/Engineering/Standard_Specifications/Pages/Standard%20Specifications.aspx)).

The majority of the proposal is boiler-plate language. The exception is the Non-Standard Pay Items. If Non-Standard Pay Items are proposed they must be created. The LPA/consultant is responsible for writing any Non-Standard specifications. The specification must follow DOTD standard format. Brand specific items are **not** allowed. The specification must allow for approved equals and it must be formally approved by DOTD then FHWA.

The project specifications include all Standard Specifications, Supplemental Specifications, Non-Standard Items, Special Provisions and other provisions applicable to the project.

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### **Construction Contract Time**

- 30-days is the minimum allowed time
- For non-roadway projects the LPA may be required to provide construction time
- Completion of spreadsheet

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### **Project Cost Estimate (Opinion of Probable Cost)**

★ The purpose of the Cost Estimate is:

- To place an expectation for the LPA to set aside sufficient money to fund the project.
- To place a reasonable expectation on the contractors for the proposed cost
- To introduce to contractors the relative magnitude of the project

## *Local Public Agency Manual*

### *Engineering*

*(Project Design & Delivery:*

*Developing an LPA Project for Bidding)*

The cost estimate is used by DOTD to prepare the Summary of Estimated Quantities Plan Sheet. This is generated by DOTD from the LPA submitted cost estimate; therefore, the consultant/designer no longer submits this plan sheet.

Quantities must be separated if:

- a project has different control sections (by control section)
- a project has non-participating items
- a project has multiple funding sources

Plan preparation itemizes the items of work and their quantities. The item numbers are entered into the DOTD system (AASHTO Trns.Port 2.0). When submitting the final estimate the quantity calculations are important. **DO NOT USE** “No Direct Pay” items. (There **MUST BE** pay items identified for each work element)

The Master Pay Items List (Weighted Unit Price) can be found on DOTD website (reference

[http://wwwsp.dotd.la.gov/Inside\\_LaDOTD/Divisions/Engineering/Standard\\_Specifications/Pages/Standard%20Specifications.aspx](http://wwwsp.dotd.la.gov/Inside_LaDOTD/Divisions/Engineering/Standard_Specifications/Pages/Standard%20Specifications.aspx)) shown at the bottom under Standard Pay Items List. This list shows both existing Non-Standard Pay Items and new Non-Standard Pay Items.

When producing plan quantities, it is desirable to remove things that cause ambiguity and conflicts. This will help to get the best prices from the contractor bids. Developing a Realistic Project Budgets will expedite the bid approval process due to bid selection parameters. A realistic project budget is required to ensure compliance with Louisiana State Bid Laws. The cost estimate is the “best guess” of the cost of the project but is not a guarantee of the actual low-bid amount.

There are two types of contract item types for construction projects; lump sum and unit price. The project cost will be based on costs of both types of items. Lump sum items vary by type of project. Lump sum items typically are the fixed costs that do not vary directly with the scope of the project. The unit price items vary by quantity (material cost). Unit price items vary directly with the amount of materials needed to complete the project due to the type of work to be performed.

The following are steps to creating a cost estimates.

1. Identify all cost items based on DOTD Contract Bid Items that are typically paid for by unit price.
2. Create a Worksheet with the Following Columns:
  - a. Item Description/Bid Item Number
  - b. Unit of Measure

## *Local Public Agency Manual*

### *Engineering*

*(Project Design & Delivery:*

*Developing an LPA Project for Bidding)*

- c. Weighted Unit Price
- d. Bid Item Quantity
- e. Item Cost
3. Determine a Unit Price Subtotal for the work to be performed.
4. Locate Weighted Unit Prices for Contract Bid Items on DOTD Website (reference [http://wwwsp.dotd.la.gov/Inside\\_LaDOTD/Divisions/Engineering/Standard\\_Specifications/Pages/Standard%20Specifications.aspx](http://wwwsp.dotd.la.gov/Inside_LaDOTD/Divisions/Engineering/Standard_Specifications/Pages/Standard%20Specifications.aspx)). Under: Standard Item File - Weighted Unit Price find the file: 20140707\_2008 Spec Year (English))
5. Use this file to obtain the current Statewide Average Unit Price for the Unit Price Items of work to be performed.

*The weighted prices that are shown in the table are based on the last quarter or the last four quarter quantities (which are provided) as well as the number of bids for that the unit price. High quantity items typically have fairly low bid prices relative to the overall market. The average quarterly unit price from this file from DOTD website will characteristically be lower than the unit price available for smaller projects with smaller quantities. Many LPA projects are relatively small and unit price is higher than for larger volume projects. A 150% adjustment is a normal rule of thumb for adjusting the unit price for a small quantity.*

6. Add These Lump Sum Items to EVERY PROJECT
  - a. Mobilization estimated at 5-15% of Unit Price Subtotal
  - b. Temporary Signs and Barricades estimated at 5-10% of Unit Price subtotal
  - c. Construction Layout estimated at 5%-10% of Unit Price Subtotal

*The selected percentage will be determined by the project size. (It is an inverse relationship)*

7. Add a contingency to spreadsheet.

*The range is typically from 5-15% based on project complexity. It will depend on the LPA's familiarity with construction bids and project. The recent estimates and bid results will be very important in this determination.*

### Bid Award Parameters

1. All projects that fall between 25% below to 10% above the DOTD engineer's estimate will be awarded.
2. A written explanation will be required before a project can be awarded if the project is more than 25% below the engineer's estimate.



## *Local Public Agency Manual*

### *Engineering*

*(Project Design & Delivery:*

*Developing an LPA Project for Bidding)*

3. Projects that are above 10% of the estimate will be reviewed for the concurrence of award/rejection decision by the DOTD Bid Review Committee, and a written justification will also be required from the Responsible Charge, Project Manager and the Program Manager, for the decision submitted.

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### **PS&E Package**

Plans, Specifications & Estimate package includes all of the final plans, specifications, an up-to-date cost estimate, and the required checklists. This package is submitted to the DOTD Chief Engineer for signing.

Time from submittal to bidding: 3 months

- DOTD prepares construction proposal – approx. 1 month
- DOTD Chief Engineer signs plans
- DOTD requests authorization from FHWA – approx. 1 month
- DOTD advertises project – 1 month
- Total = 3 months

## **Checklists/Submittals with PS&E Package**

Plan-in-hand/Constructability/Biddability

QA/QC – There are QA/QC checklist. There is one checklist for preliminary plans and one for final plans. Both must be reviewed and signed by the engineer of record and a reviewer.

Approved Design Exception/Design Waiver Request

Notice of Intent (NOI) – The Notice of Intent (NOI) will be submitted to the Louisiana Department of Environmental Quality (LADEQ) prior to the project bidding. The LPA project engineer will complete and submit the Notice of Termination (NOT) to the LADEQ after final stabilization of the site, in accordance with the terms of the permit. Use Phase I of the NPDES general permit applies, i.e., projects disturbing 5 acres or more of ground. Consult the Design Project Coordinator.

## *Local Public Agency Manual*

### *Engineering*

*(Project Design & Delivery:*

*Developing an LPA Project for Bidding)*

The LPA project engineer will complete and submit the Small Construction Activity Completion Report to the LADEQ by January 28th of the year following the calendar year of project acceptance and stabilization. Use Phase II of the NPDES general permit applies, i.e., projects disturbing 1 acre, but less than 5 acres of ground. Consult the Design Project Coordinator.

The use of erosion control features or methods other than those in the contract shall be as directed.

The Storm Water Pollution Prevention Plan shall be comprised of Section 204 of the standard specifications along with applicable supplemental specifications and special provisions, and Standard Plan EC-01, "Temporary Erosion Control Details."

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### **Requirements for Bidding**

The following items should serve as a checklist for bidding to happen:

- PS&E Package Completed
- Railroad Agreements (If Needed)
- Environmental Clearance
- Corps of Engineers Permit (If Needed)
- Coast Guard Permit (If Needed)
- Coast Guard Navigation Permit (If Needed)
- Water Quality Certification (If Needed)
- Coastal use Permit (If Needed)
- Scenic Stream Permit (If Needed)
- Levee Permit (If Needed)
- Utilities Relocated (If Needed)
- Right of Way Clearance (If Needed)
- Utility Clearance (If Relocations Not Needed)

DOTD uses the final plans, specifications, and estimate to prepare the construction proposals. If final the PS&E package is not submitted per the project schedule by the LPA, the bidding date will be delayed. Using the proposals, DOTD follows current practices, advertises for and receive bids for the work in accordance with DOTD's normal procedures

A 30-Day Advertising Window is Standard. Funding must be in place prior to bidding for all reimbursable projects.

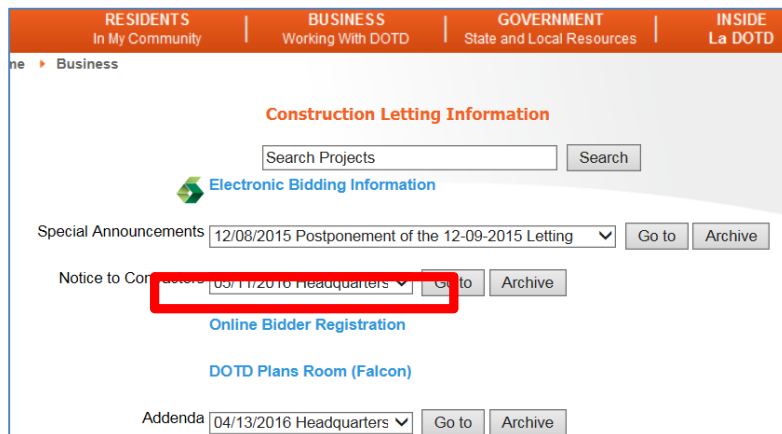
# Local Public Agency Manual

## Engineering

(Project Design & Delivery:  
Developing an LPA Project for Bidding)

### Falcon

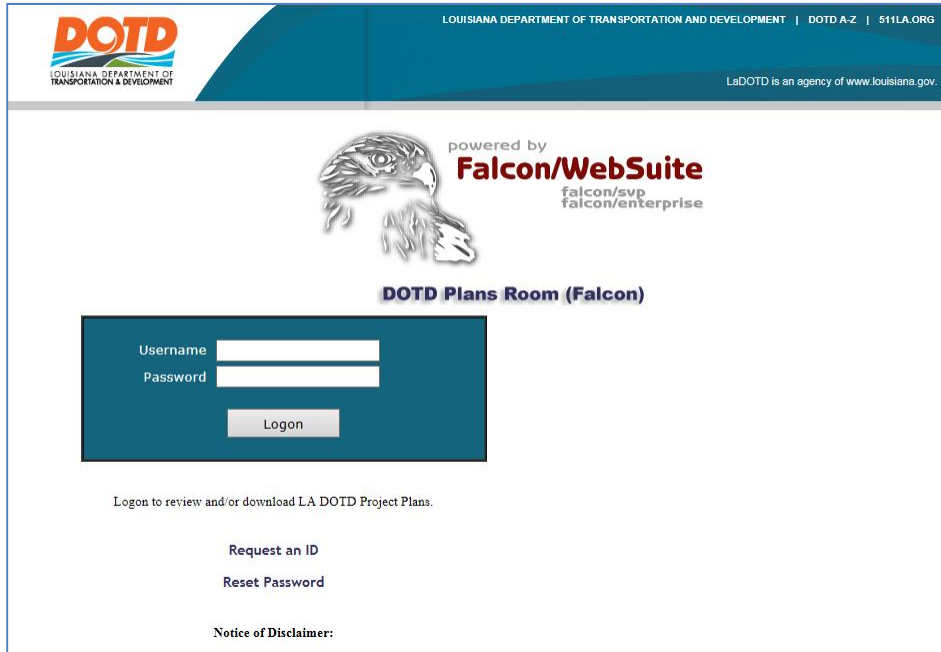
★ Falcon is a file sharing software system that DOTD uses to facilitate open competition in Bidding. It is available to contractors for their use in preparing bids and communicating questions. Prospective Bidders must register. They will be placed on an interested vendor list. This provides them access to all communication regarding the project. All contractor questions must be submitted through FALCON. The Q&A procedures for each project **MUST BE ADDRESSED THROUGH FALCON!** No one (the project managers, the responsible charges nor the design consultants) can answer questions about the project outside of this venue. The response to FALCON inquiries must be immediate by the Project Manager. Any information not in Falcon is not part of the contract. Questions submitted within 96 hours of the bid deadline may not be answered prior to bidding



The screenshot shows the DOTD website's 'Business' section. At the top, there are four navigation tabs: 'RESIDENTS In My Community', 'BUSINESS Working With DOTD', 'GOVERNMENT State and Local Resources', and 'INSIDE La DOTD'. Below the tabs, the page title is 'Business'. The main content area is titled 'Construction Letting Information' and includes a search bar for projects. Underneath is 'Electronic Bidding Information' with a 'Special Announcements' section. This section contains a dropdown menu with '12/08/2015 Postponement of the 12-09-2015 Letting' and 'Go to' and 'Archive' buttons. Below that is a 'Notice to Competitors' section with a dropdown menu showing '05/17/2016 Headquarters' and 'Go to' and 'Archive' buttons. A red box highlights the 'Notice to Competitors' link. Further down are links for 'Online Bidder Registration' and 'DOTD Plans Room (Falcon)'. At the bottom, there is an 'Addenda' section with a dropdown menu showing '04/13/2016 Headquarters' and 'Go to' and 'Archive' buttons.



















<http://wwwapps.dotd.la.gov/engineering/lettings/>

*Local Public Agency Manual*  
*Engineering*  
*(Project Design & Delivery:*  
*Developing an LPA Project for Bidding)*



Example of Sign-in page for Falcon

Example of Information in Falcon

  	<a href="#">005-05-0075</a>	TERREBONNE PARISH TURN LANES	03/17/2010
  	<a href="#">006-02-0075</a>	Jefferson Hwy Concrete Junction Box Repair	05/20/2010
  	<a href="#">007-05-0033</a>	Maintenance Mowing (MO)	10/05/2010
  	<a href="#">008-03-0058</a>	US 190 MORGANZA FLOODWAY RAIL REPAIR	12/01/2009
  	<a href="#">008-03-0061</a>	US 190 Morganza Spillway Bridge Rail Repair of 5-6-2009	05/25/2010
  	<a href="#">008-09-0059</a>	MAINTENANCE MOWING (CM)	07/27/2010

**★ Revisions, Postponements, Withdrawals**

Any revision to the plans after DOTD Chief Engineer has signed final plans must be submitted approximately 3-weeks prior to bidding in order for the bidding date to remain as scheduled. If a project is postponed, the project is let in not more than 30 days and does not require re-advertisement. If the project is withdrawn and re-advertise a later bidding date is scheduled. Postponing and/or withdrawing/re-advertising has a detrimental effect on contractors who are trying to schedule their workload and provide the best price for the work items.

## *Local Public Agency Manual*

### *Engineering*

*(Project Design & Delivery:*

*Developing an LPA Project for Bidding)*

Some of the reasons that a project may require revisions is because the plans have quantity error, changes to the quantities, or items left out.

#### **Missed Bidding dates -**

##### Deadlines for addendums are as follows:

- Plan revision - DOTD Program Manager must receive proposed addendum min. 12 days prior to bidding date.
- Specifications revision - DOTD Program Manager must receive proposed addendum min. 9 days prior to bidding date.
- Required addendum past deadline: Entity decision to remove project from bidding or proceed with the bidding. DOTD Program Manager should be verbally informed ASAP. Entity must send a letter requesting postponement of the letting ASAP.
- All addenda (revisions to the plans or specifications after the signature of the DOTD Chief Engineer) will be sent out by DOTD.

DOTD budgets their programs. The LPA programs are allowed a specified amount of funding allocated to be spent each fiscal year. Project missing their scheduled dates will have to be worked into the program manager's future funding schedule

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### **Bidding**

- Barring any irregularities, DOTD automatically recommends awarding the contract to the lowest bidder when the bid is within 10% over or 25% under the engineer's estimate.
- The LPA is responsible for reviewing and providing feedback on the bid prior to any award. **NO NEGOTIATIONS ARE ALLOWED WITH THE LOWEST BIDDER TO INCREASE/DECREASE SCOPE.**
- Suggestions for the LPA analyzing the bid.
  - Review the significant contract items. Consternation should be used when the items with bid extended amounts differing from the estimated extended amounts by greater than:
    - 0.50% of the total contract amount for contracts < \$2,000,000
    - 0.25% of the total contract amount for contracts = > \$2,000,000
  - Compare the extended bid amounts with the extended estimated amounts (extended amount = unit price X quantity unbalanced). Further evaluation should be done for items with bid unit price that differ from the estimated unit price by :

*Local Public Agency Manual*  
*Engineering*  
*(Project Design & Delivery:*  
*Developing an LPA Project for Bidding)*

- Greater than +50% of the estimated unit price
- Less than -75% of the estimated unit price
- Bid results can be seen after bid on the DOTD website

HOME Business

**Construction Letting Information**

Search Projects

**Electronic Bidding Information**

Special Announcements

Notice to Contractors

[Online Bidder Registration](#)

[DOTD Plans Room \(Falcon\)](#)

Addenda

Information Only Bidders

**Prospective Bidder List**

Apparent Bid Results

Letting Results

Bid Tabulations

DBE Directory for Federal Aid Projects

SBE Directory

▶ [Monthly Price Indices for Asphalt Cement and Fuel](#)

▶ [List of Active Contractors](#) ([view html](#)) ([download - comma delimited](#))

▶ [Ready, Willing, & Able Firms](#)

▶ [State Transportation Improvement Program \(STIP\)](#)

▶ [Design-Build Projects](#)

▶ [Projects Let in the Past Year](#)

▶ [Projects to be let in the next 6 months](#)

**Contractors Forms**

▶ [Bidders Assurance of DBE Participation \(Form CS-6AAA\)](#)

▶ [Request to Sublet and Extract of Subcontract \(Form OMF-1A\) - Online](#)

**Standard Item File - Weighted Unit Price**

[2007 Spec Year \(Metric\)](#)

[2008 Spec Year \(English\)](#)

▶ [View 2006 Spec Year](#)

# *Local Public Agency Manual*

## *Engineering*

*(Project Design & Delivery:*

*Developing an LPA Project for Bidding)*

### **Steps from Bidding to NTP**

(From Entity-State Agreement)  
For Entity held contracts

1. DOTD will advertise for and receive bids in accordance with DOTD's standard procedures
2. All bids are tabulated, extended, and summarized to determine the official low bidder
3. DOTD will submit copies of the bid tabulations to the Entity for review and comment
4. DOTD Review Committee will concurrently analyze the bids
5. The Entity is requested to review and concur with the official low bid.
  - a. The LPA must send in a written concurrence for the bid for the project (email is acceptable)
6. The contract is awarded by DOTD on behalf of the Entity following the favorable recommendation of award by the DOTD Review Committee and the Entity
7. The Entity is responsible for all costs above the amounts shown in their *Funding Commitment Letter* and must acknowledge this with an approval letter
8. DOTD transmits the construction contract to the Entity for its further handling toward execution
9. The Entity is responsible for construction contract recordation with the Clerk of Court in the Project's parish
10. A receipt of filing shall be sent to DOTD Financial Services Section
11. DOTD will inform the Entity in writing to issue to the Contractor an official NTP for construction

### **Responsible Charge Duties**

- Review bid tab for concurrence / disagreement
- Ensure contract gets executed timely
- Ensure executed contract is recorded in courthouse
- Issue Notice to Proceed to contractor (after receiving notice from DOTD to issue)

*Local Public Agency Manual*

*Engineering*

*(Project Design & Delivery:  
Developing an LPA Project for Bidding)*

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**★ Notice of Contract Execution  
& Notice to Proceed**

**Reimbursement** - No project construction can be reimbursed if begun before written authorization is provided by DOTD.

**NTP** - DOTD will, at the proper time, inform the LPA in writing to issue to the Contractor an official “**Notice to Proceed**” with construction. DOTD sends contractor “Entity Notice of Contract Execution” letter. This letter states that the construction contracts have been reviewed by DOTD and found satisfactory.

**★ Responsible Charge Duties**

- Issue the Notice to Proceed
- Schedule the set up meeting and preconstruction meeting
- Ensure contract is executed. (The time limit to sign the contract is 60 days.)



## Links

### Consultant Selection for Design Services

DOTD Consultant Contract Services Section -

<http://webmail.dotd.louisiana.gov/AgreStat.nsf/BWebView?OpenPage>

The Brooks Act – USC 40 Ch 11 -

<http://uscode.house.gov/view.xhtml?path=/prelim@title40/subtitle1/chapter11&edition=prelim>

DOTD monthly invoice format -

<http://webmail.dotd.louisiana.gov/ContWeb.nsf/Invoice+Info?OpenPage>

### Predesign Meeting

DOTD Predesign form -

[http://wwwsp.dotd.la.gov/Inside\\_LaDOTD/Divisions/Engineering/Road\\_Design/Pages/Standard-Forms.aspx](http://wwwsp.dotd.la.gov/Inside_LaDOTD/Divisions/Engineering/Road_Design/Pages/Standard-Forms.aspx) .

### Environmental NEPA (Stage 1)

“The National Environmental Policy Act (NEPA) 40 CFR 1500 -

<http://www.gpo.gov/fdsys/granule/CFR-2011-title40-vol33/CFR-2011-title40-vol33-part-id1102/content-detail.html>

DOTD Environmental website information -

[http://wwwsp.dotd.la.gov/Inside\\_LaDOTD/Divisions/Engineering/Environmental/Pages/default.aspx](http://wwwsp.dotd.la.gov/Inside_LaDOTD/Divisions/Engineering/Environmental/Pages/default.aspx)

DOTD Stage 1 Manual of Practice -

[http://wwwsp.dotd.la.gov/Inside\\_LaDOTD/Divisions/Engineering/Environmental/Pages/Stage\\_1.aspx](http://wwwsp.dotd.la.gov/Inside_LaDOTD/Divisions/Engineering/Environmental/Pages/Stage_1.aspx)

*Project Design & Delivery:  
Developing an LPA Project for Bidding*

Federal Aid Essentials Videos for Environment - <http://www.fhwa.dot.gov/federal-aidessentials/catmod.cfm?category=environm>

**Engineering Design & Plan Development**

State Law, RS §48:35, (Minimum Safety Guidelines of Highway Design, Maintenance and Construction Exemptions, Section “C”) -  
<http://www.legis.la.gov/Legis/Law.aspx?d=103172>

23 CFR Part 630 (“Preconstruction Procedures”) - <http://www.ecfr.gov/cgi-bin/text-idx?rgn=div5&node=23:1.0.1.7.21>

23 CFR Part 625 (“Design Standards For Highways”) -  
<http://www.fhwa.dot.gov/legsregs/directives/fapg/cfr0625.htm>

Louisiana Department of Transportation Minimum Design Guidelines -  
[http://wwwsp.dotd.la.gov/Inside\\_LaDOTD/Divisions/Engineering/Road\\_Design/Memoranda/Minimum%20Design%20Guidelines.pdf](http://wwwsp.dotd.la.gov/Inside_LaDOTD/Divisions/Engineering/Road_Design/Memoranda/Minimum%20Design%20Guidelines.pdf)

Minimum PRR Design Guidelines -  
[http://wwwsp.dotd.la.gov/Inside\\_LaDOTD/Divisions/Engineering/Road\\_Design/Systems\\_Preservation/Pages/Documents.aspx](http://wwwsp.dotd.la.gov/Inside_LaDOTD/Divisions/Engineering/Road_Design/Systems_Preservation/Pages/Documents.aspx)

Design Report -  
[http://wwwsp.dotd.la.gov/Inside\\_LaDOTD/Divisions/Engineering/Road\\_Design/Pages/Memoranda.aspx](http://wwwsp.dotd.la.gov/Inside_LaDOTD/Divisions/Engineering/Road_Design/Pages/Memoranda.aspx)

Americans with Disabilities Act (ADA) –  
[http://wwwsp.dotd.la.gov/Inside\\_LaDOTD/Divisions/Administration/Compliance/Pages/title\\_vi.aspx](http://wwwsp.dotd.la.gov/Inside_LaDOTD/Divisions/Administration/Compliance/Pages/title_vi.aspx)

2010 ADA Standards for Accessible Design (ADAAG) –  
[http://www.ada.gov/2010ADAstandards\\_index.htm](http://www.ada.gov/2010ADAstandards_index.htm)

MUTCD - <http://mutcd.fhwa.dot.gov/>

PROWAG - <http://www.access-board.gov/guidelines-and-standards/streets-sidewalks/public-rights-of-way/proposed-rights-of-way-guidelines>

USDOT, 49 CFR Part 37 - [http://www.fta.dot.gov/12876\\_3906.html](http://www.fta.dot.gov/12876_3906.html)

*Project Design & Delivery:  
Developing an LPA Project for Bidding*

Engineering Design and Standards Manual (EDSM) –

[http://wwwsp.dotd.la.gov/Inside\\_LaDOTD/Divisions/Engineering/EDSM/Pages/default.aspx](http://wwwsp.dotd.la.gov/Inside_LaDOTD/Divisions/Engineering/EDSM/Pages/default.aspx)

Roadway Design Procedures and Detail Manual –

[http://wwwsp.dotd.la.gov/Inside\\_LaDOTD/Divisions/Engineering/Road\\_Design/Pages/Road-Design-Manual.aspx](http://wwwsp.dotd.la.gov/Inside_LaDOTD/Divisions/Engineering/Road_Design/Pages/Road-Design-Manual.aspx)

Bridge Design Manual –

[http://wwwsp.dotd.la.gov/Inside\\_LaDOTD/Divisions/Engineering/Bridge\\_Design/Pages/BDEM.aspx](http://wwwsp.dotd.la.gov/Inside_LaDOTD/Divisions/Engineering/Bridge_Design/Pages/BDEM.aspx)

DOTD Construction Plans Quality Control / Quality Assurance Manual –

[http://wwwsp.dotd.la.gov/Inside\\_LaDOTD/Divisions/Engineering/Bridge\\_Design/Pages/QC-QA.aspx](http://wwwsp.dotd.la.gov/Inside_LaDOTD/Divisions/Engineering/Bridge_Design/Pages/QC-QA.aspx)

Standard Specifications (Purple Book)

[http://wwwsp.dotd.la.gov/Inside\\_LaDOTD/Divisions/Engineering/Standard\\_Specifications/Pages/Standard%20Specifications.aspx?RootFolder=%2FInside%5FLaDOTD%2FDivisions%2FEngineering%2FStandard%5FSpecifications%2FStandard%20Specifications%2F2016%20Standard%20Specifications%20for%20Roads%20and%20Bridges%20Manual%20%28for%20Use%20on%20Selected%20Projects%29&FolderCTID=0x012000F2BB18F0A355D04C8EF828EBDDC2D23C&View={780C4B20-7E80-4A7A-9EF5-60CC2A7A06C9}](http://wwwsp.dotd.la.gov/Inside_LaDOTD/Divisions/Engineering/Standard_Specifications/Pages/Standard%20Specifications.aspx?RootFolder=%2FInside%5FLaDOTD%2FDivisions%2FEngineering%2FStandard%5FSpecifications%2FStandard%20Specifications%2F2016%20Standard%20Specifications%20for%20Roads%20and%20Bridges%20Manual%20%28for%20Use%20on%20Selected%20Projects%29&FolderCTID=0x012000F2BB18F0A355D04C8EF828EBDDC2D23C&View={780C4B20-7E80-4A7A-9EF5-60CC2A7A06C9})

Complete Streets Policy -

[http://wwwsp.dotd.la.gov/Inside\\_LaDOTD/Divisions/Multimodal/Highway\\_Safety/Complete\\_Streets/Misc%20Documents/cs-la-dotpolicy.pdf](http://wwwsp.dotd.la.gov/Inside_LaDOTD/Divisions/Multimodal/Highway_Safety/Complete_Streets/Misc%20Documents/cs-la-dotpolicy.pdf)

Access Connection Policy -

[http://wwwsp.dotd.la.gov/Inside\\_LaDOTD/Divisions/Engineering/Traffic\\_Engineering/Access%20Connections%20To%20Other%20State%20Highways/Access%20Connections%20Policy%20\(December%202013\).pdf](http://wwwsp.dotd.la.gov/Inside_LaDOTD/Divisions/Engineering/Traffic_Engineering/Access%20Connections%20To%20Other%20State%20Highways/Access%20Connections%20Policy%20(December%202013).pdf)

Policy for Roadside Vegetation Management –.

[http://wwwsp.dotd.la.gov/Inside\\_LaDOTD/Divisions/Engineering/Misc%20Documents/Policy%20For%20Roadside%20Vegetation%20Management.pdf](http://wwwsp.dotd.la.gov/Inside_LaDOTD/Divisions/Engineering/Misc%20Documents/Policy%20For%20Roadside%20Vegetation%20Management.pdf)

Technical Memoranda (Bridge Design) –

[http://wwwsp.dotd.la.gov/Inside\\_LaDOTD/Divisions/Engineering/Bridge\\_Design/Pages/Technical-Memoranda.aspx](http://wwwsp.dotd.la.gov/Inside_LaDOTD/Divisions/Engineering/Bridge_Design/Pages/Technical-Memoranda.aspx)

*Project Design & Delivery:  
Developing an LPA Project for Bidding*

Asphalt Memorandum –

<http://ladotnet/policies/Asphaltic Pavement Design and Specifications Policy and Standards Memo 200910.pdf>

**Survey**

Location and Survey Website -

[http://wwwsp.dotd.la.gov/Inside\\_LaDOTD/Divisions/Engineering/LocationSurvey/Pages/default.aspx](http://wwwsp.dotd.la.gov/Inside_LaDOTD/Divisions/Engineering/LocationSurvey/Pages/default.aspx)

Forms and Manuals -

[http://wwwsp.dotd.la.gov/Inside\\_LaDOTD/Divisions/Engineering/LocationSurvey/Pages/Manuals-and-Forms.aspx](http://wwwsp.dotd.la.gov/Inside_LaDOTD/Divisions/Engineering/LocationSurvey/Pages/Manuals-and-Forms.aspx)

**Traffic Counts**

FHWA vehicle class -

<https://www.fhwa.dot.gov/publications/research/infrastructure/pavements/ltp/13091/002.cfm>

**Geotechnical Investigation**

Forms and Downloads -

[http://wwwsp.dotd.la.gov/Inside\\_LaDOTD/Divisions/Engineering/Pavement\\_Geotechnical/Pages/Forms-And-Downloads.aspx](http://wwwsp.dotd.la.gov/Inside_LaDOTD/Divisions/Engineering/Pavement_Geotechnical/Pages/Forms-And-Downloads.aspx)

**Formatting Plan Sheets**

Chapter 8, Roadway Plan Preparation -

[http://wwwsp.dotd.la.gov/Inside\\_LaDOTD/Divisions/Engineering/Road\\_Design/Road%20Design%20Manual/10%20Chapter%208%20-%20Roadway%20Plan%20Preparation.pdf](http://wwwsp.dotd.la.gov/Inside_LaDOTD/Divisions/Engineering/Road_Design/Road%20Design%20Manual/10%20Chapter%208%20-%20Roadway%20Plan%20Preparation.pdf)

All DOTD plans follow the following format (Order of plan sheets can be found in Fig. 8.1.4 Road Design Manual) -

[http://wwwsp.dotd.la.gov/Inside\\_LaDOTD/Divisions/Engineering/Road\\_Design/Road%20Design%20Manual/10%20Chapter%208%20-%20Roadway%20Plan%20Preparation.pdf](http://wwwsp.dotd.la.gov/Inside_LaDOTD/Divisions/Engineering/Road_Design/Road%20Design%20Manual/10%20Chapter%208%20-%20Roadway%20Plan%20Preparation.pdf)

*Project Design & Delivery:  
Developing an LPA Project for Bidding*

[0Design%20Manual/10%20Chapter%208%20-%20Roadway%20Plan%20Preparation.pdf](#)

**Design Submittals to DOTD**

Chapter 27, Section 4.b.i. of the **Professional and Occupational Standards** (Louisiana Administrative Code October 2013 pp. 26-27) of the Louisiana Professional Engineers and Land Surveyor (LAPELS) Board Rule - <http://www.lapels.com/LawsRules.html>

**Right-of-Way Maps**

Right-of-way map checklist -

[http://wwwsp.dotd.la.gov/Inside\\_LaDOTD/Divisions/Engineering/LocationSurvey/Manuals%20and%20Forms/Right%20of%20Way%20Map%20Checklist.pdf](http://wwwsp.dotd.la.gov/Inside_LaDOTD/Divisions/Engineering/LocationSurvey/Manuals%20and%20Forms/Right%20of%20Way%20Map%20Checklist.pdf)

Parcel Description Program (cogowin4) -

[http://wwwsp.dotd.la.gov/Inside\\_LaDOTD/Divisions/Engineering/LocationSurvey/Pages/Manuals-and-Forms.aspx](http://wwwsp.dotd.la.gov/Inside_LaDOTD/Divisions/Engineering/LocationSurvey/Pages/Manuals-and-Forms.aspx)

Sample Right-of-way Map -

[http://wwwsp.dotd.la.gov/Inside\\_LaDOTD/Divisions/Engineering/LocationSurvey/Manuals%20and%20Forms/Sample%20Right%20of%20Way%20Map.pdf](http://wwwsp.dotd.la.gov/Inside_LaDOTD/Divisions/Engineering/LocationSurvey/Manuals%20and%20Forms/Sample%20Right%20of%20Way%20Map.pdf)

**Right-of-Way Acquisition**

DOTD Office of Real Estate Page -

[http://wwwsp.dotd.la.gov/Inside\\_LaDOTD/Divisions/Engineering/Real\\_Estate/Pages/default.aspx](http://wwwsp.dotd.la.gov/Inside_LaDOTD/Divisions/Engineering/Real_Estate/Pages/default.aspx)

Local Public Agency (LPA) Exhibit A Work Plan -

[http://wwwsp.dotd.la.gov/Inside\\_LaDOTD/Divisions/Engineering/Real\\_Estate/Manuals/Local%20Public%20Agency%20\(LPA\)%20Exhibit%20A%20Work%20Plan%20.pdf](http://wwwsp.dotd.la.gov/Inside_LaDOTD/Divisions/Engineering/Real_Estate/Manuals/Local%20Public%20Agency%20(LPA)%20Exhibit%20A%20Work%20Plan%20.pdf)

*Project Design & Delivery:  
Developing an LPA Project for Bidding*

LPA Right of Way Manual -

[http://wwwsp.dotd.la.gov/Inside\\_LaDOTD/Divisions/Engineering/Real\\_Estate/Manuals/Local%20Public%20Agency%20\(LPA\)%20Manual%20.pdf](http://wwwsp.dotd.la.gov/Inside_LaDOTD/Divisions/Engineering/Real_Estate/Manuals/Local%20Public%20Agency%20(LPA)%20Manual%20.pdf)

**Design Exception/Design Waiver**

Design Exception Form -

[http://wwwsp.dotd.la.gov/Inside\\_LaDOTD/Divisions/Engineering/Road\\_Design/Pages/Standard-Forms.aspx](http://wwwsp.dotd.la.gov/Inside_LaDOTD/Divisions/Engineering/Road_Design/Pages/Standard-Forms.aspx)

**Final Plans**

Forms and Checklist -

[http://wwwsp.dotd.la.gov/Inside\\_LaDOTD/Divisions/Engineering/Road\\_Design/Pages/Standard-Forms.aspx](http://wwwsp.dotd.la.gov/Inside_LaDOTD/Divisions/Engineering/Road_Design/Pages/Standard-Forms.aspx)

QA/QC (Prelim. & Final) -

[http://wwwsp.dotd.la.gov/Inside\\_LaDOTD/Divisions/Engineering/Road\\_Design/QCQA/Forms/AllItems.aspx](http://wwwsp.dotd.la.gov/Inside_LaDOTD/Divisions/Engineering/Road_Design/QCQA/Forms/AllItems.aspx)

Preservation Rehabilitation & Replacement (PRR) report and/or Design Exception/Design Waiver Request –

[http://wwwsp.dotd.la.gov/Inside\\_LaDOTD/Divisions/Engineering/Road\\_Design/Systems\\_Preservation/Pages/Documents.aspx](http://wwwsp.dotd.la.gov/Inside_LaDOTD/Divisions/Engineering/Road_Design/Systems_Preservation/Pages/Documents.aspx)

**Lighting**

“A Guide to Constructing, Operating, And Maintaining Highway Lighting Systems”

- [http://wwwsp.dotd.la.gov/Inside\\_LaDOTD/Divisions/Engineering/Bridge\\_Design/Documents/Highway%20Lighting%20Systems%20Guide.pdf](http://wwwsp.dotd.la.gov/Inside_LaDOTD/Divisions/Engineering/Bridge_Design/Documents/Highway%20Lighting%20Systems%20Guide.pdf)

*Project Design & Delivery:  
Developing an LPA Project for Bidding*

**Landscaping**

Policy for Roadside Vegetation -

[http://wwwsp.dotd.la.gov/Inside\\_LaDOTD/Divisions/Engineering/Misc%20Documents/Policy%20For%20Roadside%20Vegetation%20Management.pdf](http://wwwsp.dotd.la.gov/Inside_LaDOTD/Divisions/Engineering/Misc%20Documents/Policy%20For%20Roadside%20Vegetation%20Management.pdf)

**Transportation Management Plans**

EDSM No. VI.1.1.8, **Transportation Management Plans (TMP)** -

[http://wwwsp.dotd.la.gov/Inside\\_LaDOTD/Divisions/Engineering/EDSM/EDSM/EDSM\\_VI\\_1\\_1\\_8.pdf](http://wwwsp.dotd.la.gov/Inside_LaDOTD/Divisions/Engineering/EDSM/EDSM/EDSM_VI_1_1_8.pdf)  
discusses the levels of TMPs and the actions required for each level.

To determine the type of TMP a project requires, a flowchart was developed -

[http://wwwsp.dotd.la.gov/Inside\\_LaDOTD/Divisions/Engineering/Road\\_Design/Transportation%20Management%20Plans/TMP%20Flowchart.pdf](http://wwwsp.dotd.la.gov/Inside_LaDOTD/Divisions/Engineering/Road_Design/Transportation%20Management%20Plans/TMP%20Flowchart.pdf)

**Railroad Permits**

23 CFR 646.214(b)(2) - <http://www.fhwa.dot.gov/legsregs/directives/fapg/cfr0646b.htm>

**Right-of-Way Certification**

*LPA Right-of-Way Manual* beginning on page 38 -

[http://wwwsp.dotd.la.gov/Inside\\_LaDOTD/Divisions/Engineering/Real\\_Estate/Manuals/Local%20Public%20Agency%20\(LPA\)%20Manual%20.pdf](http://wwwsp.dotd.la.gov/Inside_LaDOTD/Divisions/Engineering/Real_Estate/Manuals/Local%20Public%20Agency%20(LPA)%20Manual%20.pdf)

**Utility Relocation Procedures for LPA projects**

Louisiana Administrative Code, Title 70, Part II Utilities, Chapter 5 -

<http://www.doa.la.gov/osr/lac/70v01/70v01.pdf>

*Project Design & Delivery:  
Developing an LPA Project for Bidding*

FHWA Utility Program Guide: Utility Relocation and Accommodation on Federal-Aid Highway Projects - <http://www.fhwa.dot.gov/reports/utilguid/if03014.pdf>

AASHTO publication "A Guide for Accommodating Utilities Within Highway Right-of-Way" - <https://law.resource.org/pub/us/cfr/ibr/001/aashto.utilities.2005.pdf>

**Project Proposal Preparation**

The 2006 Standard Specifications

[http://wwwsp.dotd.la.gov/Inside\\_LaDOTD/Divisions/Engineering/Standard\\_Specifications/Pages/Standard%20Specifications.aspx](http://wwwsp.dotd.la.gov/Inside_LaDOTD/Divisions/Engineering/Standard_Specifications/Pages/Standard%20Specifications.aspx)

The 2016 Supplemental Specifications

[http://wwwsp.dotd.la.gov/Inside\\_LaDOTD/Divisions/Engineering/Standard\\_Specifications/Pages/Standard%20Specifications.aspx](http://wwwsp.dotd.la.gov/Inside_LaDOTD/Divisions/Engineering/Standard_Specifications/Pages/Standard%20Specifications.aspx)

**Opinion of Probable Cost (Project Estimate)**

The Master Pay Items List (Weighted Unit Price)

<http://wwwapps.dotd.la.gov/engineering/lettings/construction.aspx>

Locate Weighted Unit Prices for Contract Bid Items

[Http://wwwapps.dotd.la.gov/highways/lettings/](http://wwwapps.dotd.la.gov/highways/lettings/)