

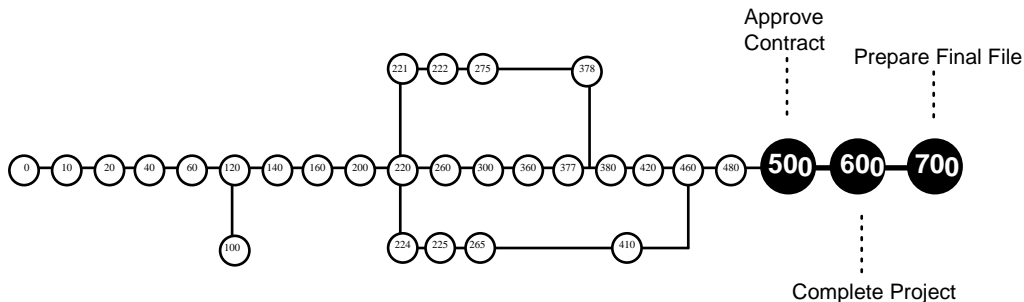
CHAPTER 15 - Final Project Development Procedures

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CHAPTER 15 - Final Project Development Procedures

SECTION 1 - Contract Procedures



This chapter discusses the project development workflow tasks between Milestones 500 and 700. For details on these tasks, see the *Project Development Workflow Tasks Manual*.

Prepare Project for Advertising

The HQ Office Engineer (OE) is responsible for verifying that all aspects of the Plans, Specifications, & Estimate (PS&E) are complete before preparing the project for advertising. All permits must be current, right of way must be certified, Freeway and Cooperative Agreements must be executed, and the necessary funds must be voted by the CTC.

After all corrections have been made to the PS&E, the final product is assembled and "boilerplate" language is added (legal language specific to a particular type of project). At this point, the BEES estimate (Final Engineer's Estimate) is locked and can only be changed by the Division of Engineering Services Office of Office Engineer (DES-O OE). All contract documents are then reproduced for distribution to prospective bidders.

Addenda

After the project has been prepared and listed for advertising, additional information may become available that would affect the bidding process. At the request of the district, an addendum may be issued by DES-O OE prior to bid opening to notify prospective bidders of any errors, omissions, or conflicts in the bidding documents.

Advertise and Award

The duration times for advertising are based on the cost and complexity of the project. These time limits are summarized in the [RTL Guide](#). Bid openings for projects (except "Minor B" projects) are handled by Headquarters. After the opening, the contract is

awarded to the lowest qualified bidder, provided that all procedures and legal requirements have been fulfilled. The contract is then approved by the Caltrans Legal Division for the Attorney General, and the contractor is notified of contract approval.

SECTION 2 - Construction

Resident Engineer File

After the contract is advertised and awarded, the project is ready for construction. The Project Engineer (PE) is responsible for furnishing the Resident Engineer (RE) with any pertinent project data required to administer the construction contract. The information is compiled in an RE File, and appropriate items to be placed in this file include, but are not limited to the following:

- Calculations (quantity calculations, structures movement rating sheets, etc.)
- Right of way clearance letters
- Foundation studies and geology report
- Falsework clearances and calculations
- Agreements and permits
- Hazardous waste contracts (if hazardous waste is not removed prior to construction)
- Right of way contracts and obligations
- Project cost estimates
- Safety Review Report
- Aesthetics Report
- Drainage Report
- Materials Handouts, including tests
- Final Environmental Review and Reevaluation, listing required mitigation (include permits)
- Funds Request and CTC vote
- Contract documents

- Exceptions to Mandatory and Advisory Design Standards
- PE (designer) notes
- Preliminary Progress Schedule, structures working day schedule, etc.
- Survey File
- Cross-sections
- Pending relinquishment actions (to inform R/W Engineers four months before completion of construction)

Refer to Appendix GG for a RE File Checklist.

Survey File

The PE must provide the RE with a file of all surveying information required to construct the project. This Survey File contains alignment notes, right of way ties, benchmarks, slope stake notes, grid grade notes, and other related items. At the request of the RE, the information may also be provided in the form of cross section plots or electronic data.

The RE is responsible for determining the level of support needed from the Surveys Unit and for requesting that construction staking be performed. See Chapter 3, Section 3, "Surveys", for further information. Refer to the Survey File Checklist in the [Appendix GG](#) of this manual to determine additional electronic files that district surveys may need.

Construction Activities

Activities performed during the construction of a project are described in the [Construction Manual](#). These activities include the following:

- Inspection for compliance to contract plans and specifications
- Testing of materials
- Public relations
- Measurement and payment for work performed
- Processing Contract Change Orders
- Oversight for local agency contracts
- Maintaining contract and permanent records

Coordination

Prior to the start of construction, a meeting must be held between the RE and the contractor (and appropriate subcontractors) to discuss the plan of work. To review the project, a separate preconstruction meeting should be held between the PM, the PE, the RE, and any other interested parties. Topics to be discussed include right of way obligations, materials sites, traffic handling, environmental commitments, potential maintenance problems, and project scheduling.

During the course of constructing the project, it may be necessary to hold subsequent meetings to discuss complicated design features or to resolve unanticipated problems. The PM must monitor the progress of the contract to ensure adherence to all permits, right of way obligations, agreements, environmental mitigation, and other project commitments.

Contract Change Orders

If revisions to design features are required, the Contract Change Orders (CCO) must have review and concurrence by the PE and must be approved by the PM before execution. Any changes that require exceptions to Mandatory Design Standards shall be approved by the Design Coordinator prior to CCO execution. Exceptions to Advisory Design Standards should be approved in accordance with district procedures. See Chapter 21, "Exceptions to Design Standards", for further information.

The RE is responsible for contacting the Environmental Unit to determine the impact of proposed changes to any environmental obligations. Proper coordination between all involved parties is needed to expedite decisions and minimize delays to the contractor.

SECTION 3 - Project Completion

Contract Acceptance

The improvements belong to the contractor for the time period during construction. Upon completion of construction, the RE recommends acceptance of the contract as the representative of the State. HQ Division of Construction ultimately accepts the construction contract for the Director of Caltrans. Local agency officials are involved in the process for those projects financed or constructed by the local agencies, but acceptance rests with the State for the portion of the project that is within the State right of way. When the contract includes work on local agency facilities, the local agency officials must be involved in the acceptance reviews.

Upon contract acceptance, the RE must assemble the Final Construction Project Records as described in the *Construction Manual*. The proposed final estimate is then transmitted to the contractor for acceptance. Claims from the contractor for specific items of work or liquidated damages may result in a lengthy process for reviews and negotiations.

Maintenance Agreements and Relinquishment Maps

The acquisition of right of way may include property that is no longer required at end of project. Such excess acquisitions may have resulted from total parcel acquisitions, retention of property for the contractor's yard or State construction office, use of land for detours, the purchase of material sites, etc. It is now necessary to dispose of these excess lands. For more details, see Chapter 26, "Disposal of Rights of Way."

Projects may also involve improvements that will be relinquished to the local agency upon completion of construction. Relinquishment procedures include the preparation of Maintenance Agreements and maps. (See Chapter 25, "Relinquishments.")

Project History Files and As-Built Plans

After the construction contract improvements are accepted on behalf of the State of California, the Project History File is prepared. For this file, the RE accumulates construction contract records and the PE contributes pertinent planning and design data. To determine which records should be included in this file, see Chapter 7, "Uniform File System." The PM is responsible for insuring that the compiling and archiving of this information is accomplished.

The RE must prepare the draft As-Built Plans to reflect all pertinent changes or corrections made during the life of the project contract. If the plans have not been edited to indicate the as-built conditions, future misinterpretation of existing field conditions may result.

As-Built plans for projects with fewer than 300 plan sheets (roadway and structure combined) must be submitted to the DRS unit at the Headquarters Office of Computer Aided Drafting Design and Engineering Global Information System Support (Office of CADD and Engineering GIS Support) within 180 days from Construction Contract Acceptance (CCA). As-Built plans for projects with more than 300 plan sheets must be submitted within 270 days from CCA. The date of entry into the DRS will be used as the milestone date indicating the As-Built plan set is completed.

Archive-ready As-Built Plans

Archive-ready As-Built roadway plans are to be completed and submitted by the district to the DRS unit. Archive-ready As-Built structure plans are to be completed by Division of Engineering Services (DES) and submitted through Structure Maintenance and Investigation to the DRS unit. All projects (including Minor projects implemented or funded by others) are to be submitted electronically in a tiff format for entry into the DRS. It is the responsibility of the districts and DES to obtain these archive-ready As-Built plans from the consultants and Local Agencies preparing these products.

Structure As-Built plan sheets will also continue to be entered into the Bridge Inspection Retrieval Information System (BIRIS) by Structure Maintenance and Investigations, using existing procedures. Encroachment Permit As-Built plans will continue to be submitted using existing procedures. The backlog of As-Built plans shall be handled according to procedures found in the [CADD Users Manual](#).

As-Built standards and procedures for creating electronic As-Built sheets from the as-awarded Computer Aided-Drafting Design (CADD) files can be found in the following manuals:

- [Plans Preparation Manual](#)
- [CADD Users Manual](#)
- [Construction Manual](#)
- [Bridge Design Details Manual:](#)
- [Bridge Memo to Designers](#)

Microfilming As-Built Plans

Except for encroachment permit projects, the district DRS unit will forward final microfilm sets to the Headquarters Microfilm Unit. The microfilm set includes microfilm from the district and Structure Maintenance and Investigation As Built files.

Microfilming of encroachment permit As-Built sheets is the responsibility of the Headquarters Microfilm unit.