

## Section 10.2

### PRECAST PRESTRESSED CONCRETE COMPONENTS

#### 10.2.1 Purpose

To provide a process for the evaluation and disposition of proposals for acceptance of prestressed concrete components that are not in compliance with the contract plans and specifications. This procedure has the corresponding **Flow Chart 10-2**, which graphically displays each major step of this procedure starting with the identification of a defect by the Producer.

#### 10.2.2 Authority

Sections 20.23(4)(a) and 334.048(3), Florida Statutes (F.S.)

#### 10.2.3 Reference

Section 450, "Precast Prestressed Concrete Construction," Standard Specifications for Road and Bridge Construction

#### 10.2.4 General

The Producer of a prestressed concrete product is the party expected to directly address the disposition of defects; however, the Contractor always has the total and final responsibility for the quality of all products and must concur with all Producer proposals prior to review by the Department. Repeated production of non-complying components is not acceptable and the cause of such problems must be resolved. Non-complying components containing specific defects or damage which are classified as minor by **Specification 450-12** are not covered by this procedure and are not subject to the disposition requirements in this procedure but instead must be repaired in accordance with **Specification 450-13**. However, if for a minor defect, an alternate nonstandard repair method not covered by **Specification 450-13** is proposed by the Producer or if the defect will be encased within the diaphragm concrete, then this procedure applies. For defects covered by this procedure, the Producer must comply with **Specification 450-14**, which requires the submittal of a repair proposal to the Project Administrator and specifies what the contents of the proposal shall be.

A separate repair proposal is not required if the repair procedure for the defect has been pre-approved in the Producer's Quality Control Plan (QC Plan). However, if the type,

location or size of the defect is not the same as for a QC Plan pre-approved defect then an individual repair proposal must be submitted. Components in the casting yard which require repair shall not be shipped to the project site until such repairs are complete and the component has been accepted by the Department. If the component is repaired and determined to be acceptable to the Department, the component shall be stamped by the Producer as approved. Producer-stamped prestressed components arriving at the job site shall not be rejected by project personnel for reasons other than obvious shipping damage which makes the component unacceptable. If the CEI personnel on the project site have questions about the acceptability of stamped components, these questions shall be resolved only after consulting with the District Materials Verification personnel at the shipping point.

### 10.2.5 Proposal Format and Requirements

The Contractor's proposal must be prepared in accordance with **Specification 450-14** and must include the following information:

- (A) A cover letter prepared on the Contractor's letterhead and addressed to the Project Administrator briefly describing the component.
- (B) A completed **Non-complying Prestressed/Precast Concrete Component Data Sheet, Form No. 700-030-10**, prepared by the Producer or Contractor and countersigned by the Department Prestressed Concrete Specialist (DPCS) to indicate agreement with the described defect or noncompliance feature. If not in agreement with the information or description, the DPCS shall either reject the submittal indicating reason(s) for rejection or modify the submittal as necessary. In the latter event, the preparer shall initial and date the submittal indicating agreement or disagreement with the modifications. When a defect or noncompliance feature has a prior occurrence of the same type, with the DPCS's approval, the Contractor will only be required to submit a **Non-complying Prestressed/Precast Concrete Component Data Sheet** on which the prior occurrence's **Non-complying Prestressed/Precast Concrete Component Data Sheet** is clearly identified for reference. In addition, the Contractor should state on the form that the referenced **Non-complying Prestressed/Precast Concrete Component Data Sheet** is intended to cover the current defect and, if applicable, should also propose a credit to the contract proportionate to the defect or specification noncompliance.

When the volume of supporting information exceeds the space available on the **Non-complying Prestressed/Precast Concrete Component Data Sheet**, the information shall instead be provided as an attachment. Attached supporting sketches, records, calculations, and any other documents, shall be listed for reference on the **Non-complying Prestressed/Precast Concrete Component Data Sheet**. All the supporting information

must be prepared by the Contractor's Engineer of Record who shall sign and seal one (1) complete copy of the supporting information which shall serve as the Project Administrator's record copy.

## **10.2.6 Review and Evaluation**

### **(A) Resident Level Responsibilities**

The Project Administrator shall review the Producer's proposal and when warranted enlist the assistance of various offices within the Department (State Construction Office, District Structures Design Office, State Structures Design Office, District Materials Office, State Materials Office), the Engineer of Record and the FHWA as deemed appropriate. Upon completion of the evaluation, the Project Administrator may accept the Contractor's proposed repair method, negotiate a more satisfactory repair method, or reject the proposal. Department costs associated with proposal review shall be addressed per **Specification 450-14.2**. With approval by the Resident Engineer, cosmetic or minor defects that will be completely encased by the end diaphragm may be filled with diaphragm concrete in lieu of patching at the casting yard. This does not include major defects as defined by **Specification 450-12**. Beam end defects that begin within the limits of the diaphragm and extend beyond the limits of the diaphragm must be repaired prior to diaphragm construction. Cleaning and preparation of all defects prior to diaphragm concrete placement shall be in accordance with the Specification or as approved by the Resident Engineer. Prior to the Project Administrator's transmittal of the official Department response to the Producer's proposal, the Project Administrator must receive concurrence for the response from the DCE for the district the project is in, the Engineer of Record, and if requested the District Materials Engineer (DME) of the district in which the products are produced. For Category I structures, the Project Administrator must also receive concurrence from the District Structures Design Engineer for the district the project is located in. For Category II structures, the Project Administrator must receive concurrence from the State Construction Structures Engineer. It is very important that a copy of the official Department response be sent by the Project Administrator to the DPCS so that the Department's staff at the prestressed plant will be fully aware of what actions are required of the Producer for disposition of the defective product.

## **10.2.7 Disposition and Distribution**

### **(A) Resident Level Responsibilities**

The Project Administrator shall indicate acceptance in the response and distribute the proposal and the disposition to appropriate District personnel in addition to the following offices:

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1. Project File (Signed and Sealed)
  2. State Materials Office
  3. FHWA Area Engineer (for Federal-Aid Full Oversight Jobs only)
  4. DPCS

The Department's Official response as transmitted by the Project Administrator will require one of three actions by the Producer as follows:

**Correct:** The Producer will be permitted to correct the defect and the correction may be witnessed by a DPCS. A credit to the Department may be required since the defective component, even if satisfactorily repaired, is not considered by the Department to be fully equivalent to a component that has never had a defect.

**Reject:** The Producer will not be permitted to correct the defect and the component must not be used on any Department project.

**Revise:** The Producer's proposal is such that the Department cannot make a final decision about the proposal due to incomplete or unclear information and; therefore, the Producer has the option of revising the proposal and then resubmitting it to the Department.

If the Producer disagrees with any of the three (3) actions above, the Producer may appeal to the DCE of the project district for a hearing. The DCE shall have the discretion to hear or not hear the appeal but if heard, will make the final decision on the disposition of the defect.