

EXPECTED IMPLEMENTATION JANUARY 2016

450 PRECAST PRESTRESSED CONCRETE CONSTRUCTION. **(REV 5-5-15) (FA 5-12-15) (1-16)**

SUBARTICLE 450-2.1 is deleted and the following substituted:

450-2.1 General: Develop a Producer Quality Control Program as specified in Section 105.

Meet the requirements of the accepted Quality Control Program, Contract Documents, and Precast/Prestressed Concrete Institute (PCI) Manual for Quality Control for plants and production of structural precast concrete products. The requirements of the Contract Documents will govern, when there is a discrepancy between the PCI Manual and the Contract Documents.

Accept responsibility for performing daily Quality Control (QC) inspections of all phases of work ensuring all materials and workmanship incorporated into the product meet the requirements of the Contract Documents. Also, maintain a daily activity report detailing the results of the daily Quality Control Program activities. Ensure these daily reports and minutes of the weekly meetings with the Engineer and the plant's production personnel are maintained at the plant. During the weekly meetings, discuss the results of the QC inspections.

Inspect the product for conformance with the product dimension tolerances shown in Appendix B of PCI Manual MNL-116 (Manual for Quality Control for Plants and Production of Structural Precast Concrete Products), except as modified herein. Apply the tolerances with respect to the theoretical positions and dimensions shown in the Plans. Apply the same tolerances for U-Beams as those specified for I-girders, excluding sweep tolerance, when inspecting the product for conformance with dimension tolerances. For Florida U-Beam diaphragms, the tolerance for the thickness of the intermediate and end diaphragms is plus 1 inch and minus 1/2 inch, and the location of intermediate diaphragms, relative to design plan positions, is plus or minus 3 inches. The tolerance of the thickness of end diaphragms shall be plus 3 inches and minus 1/2 inch.

Limit sweep to 1/2 inch for U-Beams and Inverted-T Beams. The maximum allowable sweep for I Beams is 1/8 inch per 10 foot length, but not to exceed 1.5 inch. The maximum allowable sweep for piling is 1/8 inch per 10 feet, but not to exceed 1.0 inch.

The tolerance for beam strand sheathing is plus or minus 2 inches.

Ensure the tolerance on all miscellaneous shaping including, but not limited to, chamfers, miters, bevels, keys, tapers, radii, holes, inserts, and block outs is within plus or minus 1/8 inch of the control dimension of the shape.

The tolerances represent the total allowable tolerance that will be accepted in the finished product. Do not apply tolerances shown for the overall dimensions of a member to violate the tolerances shown for positions of reinforcing and prestressing steel. Apply the tolerances during and after the fabrication of prestressed products. Do not reduce the concrete cover for reinforcing steel, prestressing steel or any other metallic objects specified in the Plans more than 1/4 inch. Do not reduce the concrete cover for reinforcing steel, prestressing steel or any other metallic objects when the cover specified in the Plans is minimum cover.

Ensure the QC inspector is present during concrete placements and performs inspection during all fabrication of precast prestressed concrete products, including the inspection of the operations before, during and after the placement of concrete.

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Ensure the Plant QC Manager, or the QC inspectors under their direction, examine all precast prestressed concrete products within five working days of detensioning to ensure their dimensions conform to the specified tolerances and to determine if there are any deficiencies. This process control shall be listed on the Producer Quality Control Plan (QC Plan).

SUBARTICLE 450-14.2 is deleted and the following substituted:

450-14.2 Submittal of Repair Proposal:

The repair proposal must be completed by the Contractor's Engineer of Record and shall consist of the following:

1. A cover letter prepared on the Contractor's letterhead addressed to the Engineer describing the product.
2. Information in a format acceptable to the Engineer describing the details of the non-compliance and the proposed repairs.
3. An engineering evaluation: A structural performance and durability evaluation which explains why the performance and durability of the repaired deficient product is acceptable as compared to that of an undamaged comparable product. The evaluation must be supported by one or more of the following types of information:
 - a. Written evidence of a previously approved comparable deficiency and its repair.
 - b. Documented research that demonstrates the proposed repair to be effective.
 - c. If applicable, engineering calculations providing support for recommendations.
4. A proposed credit to the Contract proportionate to the product's deficiency. The credit is in addition to the cost for review and evaluation of the proposal.
5. Any other supportive information, pictures and drawings. For cracked elements, show on a drawing the location, average width, depth, length, and termination points of each crack along the surfaces. Provide the distance from each termination point to a fixed reference point on the component, such as beam end or edge of flange. The description of the proposed repair and the structural and durability evaluation of the product must be prepared by or under the direct supervision of the Contractor's Engineer of Record and must bear their signature and seal.

If the proposal is accepted by the Engineer, all Department costs associated with review of the proposal, including the cost of any and all engineering evaluation and testing services required, will be deducted from payment to the Contractor, but not to exceed 15% of the product value based on unit bid prices.

Include in the proposed credit consideration of the Department's added costs which may include but are not necessarily limited to re-inspection, testing, reduced durability, or increased maintenance cost. The Engineer will review and evaluate the Contractor's proposal and will notify the Contractor of its disposition. The Engineer's review of the Contractor's proposal does not amend or delete code requirements, unless such changes are specifically brought to the Engineer's attention and accepted by the Engineer. The Engineer's acceptance of a proposal does not relieve the Contractor of his responsibility to provide products that are structurally adequate to resist the loads specified in the Contract drawings and that maintain the

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intended aesthetic, durability and maintenance aspects of the product. The Engineer will not accept repaired products unless repairs are made as proposed or described, the resulting repairs are sound in all aspects, and the repairs are aesthetically acceptable. Replace a rejected product with a product meeting the requirements of the Contract Documents at no additional expense to the Department.

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