

## **Revision of Section 105 Segmental Concrete Control Of Work**

**Revise Section 105 of the Standard Specifications for the project as follows:**

**Subsection 105.02 shall include the following:**

The Contractor shall submit, as soon as possible, but not more than 120 calendar days following the "Notice to Proceed," complete final plans and computations for review. Approved final plans are required before reviewing working and shop drawings. Revise the plans and computations for only those portions of the work that are modified or affected.

The preliminary and final computations and drawings are incidental to the contract; include them in the work price. The submittal of the computations and drawings shall not absolve the Contractor of any responsibility for fabrication plans required under Section 105 or elsewhere in these specifications.

No additional compensation shall be allowed for any subsequent changes or deviations from the plans, for additional material, equipment, or costs.

The contract time shall apply. No extensions of these dates will be allowed for preparation, submittal, or approval of plans or computations.

The Contractor shall submit information which shall include, but not limited to, the following:

1. Detailed shop drawings per Section 618.
2. Schedule of casting and erection of segments with approximate dates; the schedule shall show chronological order of every phase and stage of erection and construction of the superstructure.
3. Method and length of curing.

4. Concept drawings showing schematic methods for handling and erecting segments; these are not working drawings but are provided for information only. The Contractor shall submit for the Engineer's review, proposed erection details and appropriate calculations showing the methods, equipment, and construction loads analyses involved with the various bridge components. No erection of the precast segments will be permitted until the Engineer reviews the erection details.
5. Any handling and erection equipment proposed for use shall be consistent with the concept shown on the plans to assure compatibility with the overall design.
6. The design and construction of all special handling and erection equipment is the Contractor's responsibility. No extra payment will be made to the Contractor for any cost incurred in modifying the permanent structure due to temporary loadings induced by alternate handling and erection equipment.
7. Additional information: In addition to the above, submit the following information for Structure for review:
  - Locations and layout drawing of the casting site.
  - Complete details of the fabrication system to be used, including the forms, foundations, and geometry controls.
  - Details of handling, storing, and transporting segments.
  - Details of handling traffic during erection.
  - Type and supplier of epoxy adhesive; method and procedure of application.
  - A casting curve prepared per casting and erection methods and schedule proposed by the Contractor. The casting curve shall have sufficient accuracy to determine control point settings for accurately casting the segments. The preparation of the casting curve shall recognize all deviations from straight-line and deformations due to the final required alignment and due to dead load, erection loads, post-tensioning stresses, including secondary moments, creep, and shrinkage. The preparation of the casting curve shall be done at no additional cost to CDOT but shall be considered incidental to the contract.

## **Final Work Plan**

It shall be the Contractor's responsibility to submit deflections and camber data for each stage of construction, as required, to construct the structure to its final grade. The procedure used shall account for the effect of time-dependent prestress losses, shrinkage, and creep occurring during the construction phase. Submit the data for the entire bridge for the Engineer's review before commencing the erection.

Monitor the structure's camber at each stage and perform corrective actions, as approved by the Engineer, to assure proper erection of the structure to its final grade.

The final work plan shall include graphs, charts, or tables showing the theoretical location of forming. Furnish this data to the Engineer to use in checking the erection.

The final work plan shall also include complete details of the system to be used, including all geometry controls.

## **Design Calculations**

Submit design calculations for falsework, travelers, staging, forms, and any other temporary construction required and subject to calculated stresses. Also, submit calculations to support the system and method of stressing proposed by the Contractor. Perform the calculations under the direct supervision of a professional engineer (PE) registered in the State of Colorado ; the PE shall approve and electronically seal them.

## Permanent Changes to Project Dated Special Provisions

### Revision of Section 105 Segmental Concrete Control Of Work

<u>Date</u>	<u>Author</u>	<u>Description of Change</u>
3/2/90		Conversion from WANG
9/17/1999	M. Nord	Verified the specification references for conformance with the <i>1999 Colorado DOT Standard Specifications for Road and Bridge Construction</i> . No exceptions were found.  On page 2 subsection 7: Removed F-08-AH and replaced it with an underlined blank.  Converted to Microsoft Word 97 SR-2
11.01.2021	M. Kayen	Revisions to grammar, format as per CDOT Style Guide (4.22.21)
04.06.2023	M. Kayen	Revisions to make spec online accessibility-compliant. 5.22.23 Additional accessibility work.