

Technical Bulletin

FROM SPEIGHT, MARSHALL & FRANCIS,
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On a regular basis, we plan to distribute these informational leaflets about crucial - but often ambiguous - structural engineering topics. With the knowledge our featured subjects, our goal is to help our clients improve their profitability while reducing their liability. We suggest distributing a copy of our technical bulletins throughout your office and keeping them on hand for quick reference.

SPECIAL INSPECTIONS (PART VII)

Prestressing Process and Precast Concrete (BOCA 1705.4.5-1705.4.7)



Introduction:

In this bulletin we will outline the inspection and evaluation process of Prestressing and Precast Concrete. Agent No. 1, the Special Inspector (typically the Structural Engineer) should be responsible for these inspections; however, it may be necessary to utilize Agent No. 2, the Testing Laboratory (typically the Geotechnical Engineer) for any in-plant concrete inspections that may be necessary.

Prestressing (1705.4.5)

- Inspect the process of applying prestressing forces for compliance with Section 18.18 of ACI 318.
- Inspection during grouting of bonded prestressing tendons is required for structures designed with seismic performance categories C, D, and E.

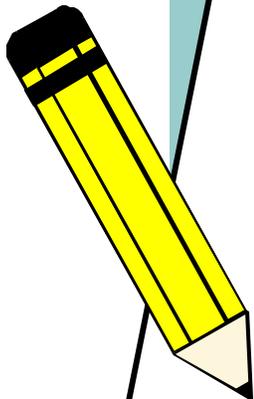


Precast Concrete (1705.4.6):

- The manufacturing of precast concrete is subject to a quality control program performed by an approved agency per Section 1705.2.
- Review documents of proof of participation in a quality control program.
- Inspect erection of precast concrete for compliance with approved Construction Documents per Section 1705.4.7.

Conclusion:

Inspection of prestressing operations and precast concreting are not as prevalent as other areas of Special Inspections. During erection, the precast elements designed for a structure become the structure itself as would a cast-in-place wall, slab or beam. With that in mind the quality and placement of the product should be as closely scrutinized as on-site construction and deserves Special Inspections status. One can not assume that a manufactured structural item is sound, one must follow through with the inspections required, however few or insignificant they may seem.



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