

Proper Use of ACI Reference Specifications

ASCC Position Statement #42

The American Concrete Institute (ACI) has developed a number of specifications that are often referenced in project Contract Documents. The most familiar of these referenced specifications are ACI 117, “Standard Specifications for Tolerances for Concrete Materials and Construction,” and ACI 301, “Standard Specifications for Structural Concrete.” Specifiers often cite ACI Specifications in the Contract Documents, but many fail to comply with the Mandatory Requirements Checklist included in the Notes to Specifier.

The ACI 2013 Technical Committee Manual describes the Mandatory Requirements Checklist as follows:

“The Mandatory Requirements Checklist identifies provisions that do not have a default requirement and specific requirements must be provided in the contract documents.”

ACI 301-10 also reminds the Specifier of this requirement with the following sentence in Section F4 of the ACI 301 Foreword to checklists:

“The Specifier must include these requirements in the Project Specification.”

If the Specifier fails to follow the Mandatory Requirements Checklist and provide “specific requirements in the Contract Documents,” much of the referenced specification is not applicable to the construction of the project. As an example, ACI 301 contains sections on architectural concrete, lightweight concrete, mass concrete, and industrial floor slabs. The Mandatory Requirements Checklist provides the following in the Notes to Specifier:

- Designate areas to be treated as architectural concrete;
- Designate portions of the structure to be constructed of lightweight concrete;
- Designate portions of the structure to be treated as mass concrete; and
- Designate portions of the structure to be constructed as industrial floor slabs.

If no areas or portions of the structure are designated in the Contract Documents as architectural concrete, lightweight concrete, mass concrete, or industrial floor slabs, the specifications in each of these sections do not apply to the project.

Similarly, the ACI 301 Mandatory Requirements Checklist also requires the Specifier to “designate in the

Contract Documents the exposure class for portions of the structure” requiring concrete to be resistant to sulfate attack and freezing and thawing, or when concrete is required to have low permeability or increased corrosion protection for reinforcement. If the Specifier does not designate the exposure class for portions of the structure, the Contractor can justifiably conclude that there are no special exposure requirements for the concrete.

If the Specifier fails to specify the information required in the ACI 301 Mandatory Requirements Checklist, concrete contractors cannot include that work in their bid. Most Specifiers do follow one requirement in the Mandatory Requirements Checklist item for Section 4.2.2.8 of ACI 301-10:

“Indicate the specified compressive strength of concrete f'_c for various portions of the Work.”

A project could not be bid accurately without information regarding required concrete strength for different portions of the work. Similarly, projects can’t be accurately bid if the Specifier doesn’t address the other items in the Mandatory Requirements Checklist.

ACI 301 and many other specifications include numerous provisions that are not applicable to a specific work or project. Contractors can consider in their bid only such provisions that are designated as applicable to the project in either the specifications or the drawings. A change order for extra work will be submitted if the Owner, Architect/Engineer, or Construction Manager enforces requirements for portions of the structure that weren’t designated in the Contract Documents.

ASCC concrete contractors will work with Owners, Construction Managers, and Engineers in addressing nonconforming work to make sure the original work or the repaired work is adequate for its intended purpose. If you have any questions, contact your ASCC concrete contractor or the ASCC Technical Hotline at 800-331-0668.



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