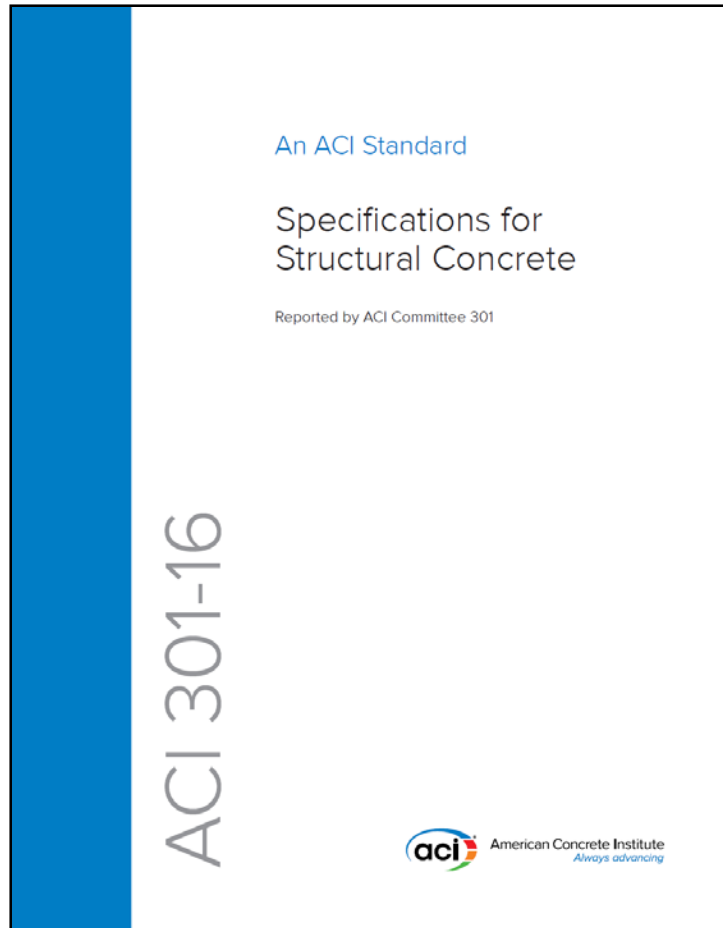


Overview of ACI 301



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- **301 is referenced in the Contract Documents of the Project.**
- **Specification is written to the Contractor.**
- **The Notes to Specifier and Checklists are written to the Specifier**



Contract Documents

- **Project Drawings**
- **Notes on Drawings**
- **Project Specifications**
- **ACI 301 Specifications for Structural Concrete**
- **Other ACI Specifications**
- **ASTM Specifications**
- **ASTM Test Methods**



Legal Document-

Body of the Specification (51 pages)

- The Body of the Specification gives direction to the Contractor

Non-Mandatory Portion

Pages 52-66

- This area of the Specification gives direction to the Specifier.
- Mandatory Requirements Checklist
- Optional Requirements Checklist



Mandatory Requirements Checklist

- **Trigger language- 'specified in Contract Documents'**
 - Items requires the Specifier to take action
 - f'_c
 - aggregate size
 - tolerance of mesh reinforcement
 - Specify specialty sections scope
 - ie: What portions of project are architectural concrete , mass concrete, or post-tensioned.



Optional Requirements Checklist

- **Trigger language-‘Unless Otherwise Specified’**
 - The Body of the Specification has defaults
 - Defaults are generally set to cover most situations
 - It is a flag that the Specifier may want to review the item
 - It is a flag to the Contractor that there is an alternative available



Specifications

- Clear
- Single interpretation
- Should be what is actually desired
- List only requirements
- Be written so that it cannot be misunderstood



Purpose of Specifications

- **Informs the contractor what needs to be done to construct a structure that will meet the needs of the owner**
- **Does not tell the contractor how to construct the structure unless you want him to do it**



Do you know your defaults?

ACI 318- *Building Code Requirements for Structural Concrete*

ACI 301- *Standard Specification for Structural Concrete*

ACI 311.6 - *Specification for Ready Mixed Concrete Testing Services*

ACI 117- *Specifications for Tolerances for Concrete Construction*

ASTM C94- *Standard Specification for Ready-Mixed Concrete*



MasterFormat

- **Reference specification that is written to be CSI Three Part Format**
 - General
 - Products
 - Execution



Main Body

- **Section 1—General requirements**
- **Section 2—Formwork and formwork accessories**
- **Section 3—Reinforcement and reinforcement supports**
- **Section 4—Concrete mixtures**
- **Section 5—Handling, placing, and constructing**



Optional Sections

- **Section 6—Architectural concrete**
- **Section 7—Lightweight concrete**
- **Section 8—Mass concrete**
- **Section 9—Post-tensioned concrete**
- **Section 10—Shrinkage-compensating concrete for interior slabs**
- **Section 11—Industrial floor slabs**
- **Section 12—Tilt-up construction**
- **Section 13—Precast structural concrete**
- **Section 14—Precast architectural concrete**





In Summary... the Goal of 301



Clear on Desired Outcome

- **Specifications should have the right “hoops” to jump through to get the performance required for service conditions.**



States the Obvious

- **Know what's written.**

Ex:

- **Curing Condition**
- **Thermal Control**
- **Performance Testing**



Cautions Requirements that Bind Contractors Hands

- Means and Methods
- Materials Types, Limits



Default vs. Optional Requirements



There is more than one way to get the job done.



Questions and Further Information

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