IN-LB Inch-Pound Units

An ACI Standard

Repair of Concrete in Buildings—Specification

Reported by ACI Committee 563

ACI SPEC-563-25

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First Printing
March 2025
ISBN: 978-1-64195-305-4

Repair of Concrete in Buildings—Specification

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This is a Reference Specification that the Architect/Engineer can apply to any construction repair and rehabilitation project involving structural concrete by citing it in the Project Specifications. Mandatory requirements and optional requirements checklists are provided to assist the Architect/Engineer in supplementing the provisions of this Specification, as required or needed, by designating or specifying individual project requirements. The first section covers general construction requirements for repair Work. The second section covers shoring and bracing of the structure or member to be repaired, and addresses sequencing of repair Work as the structure is unloaded and reloaded. The third section covers concrete removal and preparation of the concrete substrate for repair and defines common equipment and methods. The next five sections cover materials and proportioning of concrete; proprietary cementitious and polymer repair materials; reinforcement; production, placing, finishing, and curing of repair materials; formwork performance criteria and construction; treatment of joints; embedded items; repair of surface defects; mockups, and finishing of formed and unformed surfaces. New sections included in this edition of the Specification includes waterproofing cracks by chemical grout injection, architectural concrete repair, structural precast concrete repair, unbonded post-tensioned concrete repair, overlays, protective membranes, and cathodic protection by galvanic anodes. Provisions governing testing, evaluation, and acceptance of repair materials as well as acceptance of the repair Work are included. Sections 16, 17 and 18 incorporate by reference other ACI specifications into this ACI Standard: ACI SPEC-503.7 for crack repair by epoxy injection, ACI SPEC-506.2 for shotcrete, and ACI SPEC-440.12 for wet-layup FRP.

Keywords: bracing; cold weather; compressive strength; consolidation; curing; durability; epoxy injection; finish; formwork; grouting; hot weather; inspection; joints; mockups; placing; precast; rehabilitation; repair; reshoring; shoring; shotcrete; slab; steel reinforcement; surface preparation; testing; tolerance; welded wire.

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ACI SPEC-563-25 supersedes ACI 563-18 and was approved by the ACI Standards Board for publication January 2025, and published March 2025. This Specification was first published in 2018 and revised in 2018.

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SECTION 1—GENERAL REQUIREMENTS

1.1—Scope

1.1.1 This Specification covers repair of concrete in existing structures.

1.1.2 This Specification is incorporated by Contract Documents and provides requirements for Contractor.

1.1.3 This Specification governs for construction within its scope, except project-specific Contract Documents govern if there is a conflict.

1.1.4 This Specification governs if there is a conflict with referenced material and testing standards.

1.1.5 Contractor is permitted to submit written alternatives to any provision in this Specification for consideration.

1.1.6 Do not use this Specification in conjunction with ACI SPEC-301, ACI SPEC-350.5, or ACI CODE-530/530.1-13 unless Contract Documents state that this Specification governs for Work covered by 1.1.1.

1.1.7 Ignore provisions of this specification that are not applicable to Work.

1.1.8 Values in this Specification are stated in inch-pound units. A companion specification in SI units is available.

1.1.9 The Notes to Specifier are not part of this Specification.

1.2—Interpretation

1.2.1 Unless otherwise explicitly stated, this Specification shall be interpreted using the following principles:

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