



**aci**  
American Concrete Institute

**ACI 562-16:**  
Assessment, Repair, and Rehabilitation of Existing Concrete Structures

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ACI is:

- A technical and educational society dedicated to improving:
  - design
  - construction
  - maintenance
  - repair
- One of the world's largest sources of concrete knowledge
- 501.C.3 corporation

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ACI is NOT:

- A Trade or Promotional Association
- A Government Agency
- An Educational Institution

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ACI members are:

- Architects
- Consultants
- Contractors
- Educators
- Engineers
- Materials Suppliers
- Lawyers
- Researchers
- Students
- Laboratory Technicians
- Insurance Agents



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More than 400 technical documents, including:

- Codes
- Specifications
- Reports and Guides
- References
- Annual *Manual of Concrete Practice*



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Certification Programs

- Field Testing Technician
- Flatwork Finisher
- Strength Technician
- Laboratory Technician
- Aggregate Technician
- Concrete Construction Inspector
- Tilt-Up Supervisor and Technician
- Shotcrete Nozzleman
- Adhesive Anchor Installer



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Educational offerings:  
More than 100 online learning modules supporting:

- Technical committee documents
- Certification
- General education



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**Part I**  
I-A: Why do we need a uniform concrete repair code?  
I-B: Relative success with current repair methods  
I-C: Reasons for repair failures  
I-D: Goals of ACI 562 – “Repair Code”

**Part II**  
II-A: Model Building Code  
II-B: Understanding the Code Development Process  
II-C: State and Local Codes  
II-D: Action Plan



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I-A: Why a Repair Code?

Create a uniform set of requirements

- Consistent methods to decide governing code for repair work
- Consistent methods to assess damage

Identify flexibility in repair solutions

- Performance base and prescriptive approach



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### I-A Why?: \$18 to 21 billion/year

Source: American Concrete Institute (ACI) Foundation's Strategic Development Council



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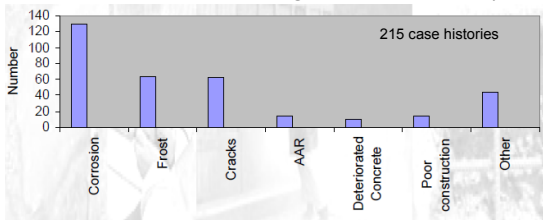
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### I-B Successes: Factors affecting concrete (case study)



<http://projects.bre.co.uk/concrepnet/pdf/newsletter3.pdf>  
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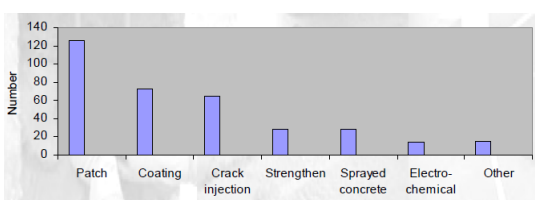
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### I-B Successes: Repair methods: Conventional approaches



<http://projects.bre.co.uk/concrepnet/pdf/newsletter3.pdf>  
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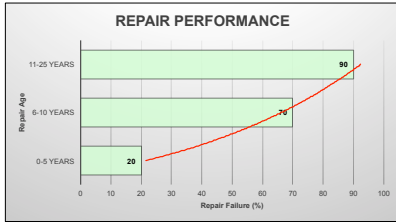
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I-B Successes:



<http://projects.bre.co.uk/concrenet/pdf/newsletter3.pdf>



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I-C Failures: Common Causes of Failed Repairs

Engineering issues:

- Incorrect diagnosis of the cause of deterioration
- Incorrect design of the repair
- Selection of inappropriate repair material

Construction issues:

- Incorrect method of applying repairs
- Workmanship issues



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Part I-D Goals: ACI 562 a New Repair Code

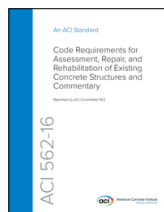
Standardizes industry practice

Licensed design professional

Building inspectors

Owners

Supplements IEBC or as a stand-alone code



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Part 1-D: What type of code is it?

- Performance and prescriptive
- Minimum material and design
- Minimum life safety and repair performance



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Part I-D: Where is ACI 562 applicable?

Buildings that hold a legal certificate of occupancy



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Part II-A: Code



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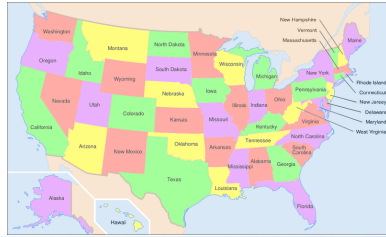
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Part II-A: Code



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Part II-A: Code

International Code Council family of codes

Building, Energy Conservation, Existing Building, Fire, Fuel Gas, Mechanical, Performance, Plumbing, Private Sewage Disposal, Property Maintenance, Residential, Swimming Pool and Spa, Urban-Wildland Interface, Zoning



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Part II-B Process: ANSI Accredited Technical Venues:  
Balance and Vetted



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Part II-B Process: ICC Committee Action Hearings



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Part II-B: ICC Public Comment Hearings

Code Officials at PCH  
Subsequent On-line Voting



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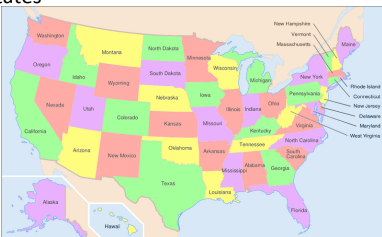
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Part II-C: States



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Part II-C States:

Local officials voting  
Legislative influence  
State codes



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Part II-D Plan: Network of Advocates

Network of grass roots initiatives  
Need committed volunteers  
Orchestration by ACI and allied interests  
Need committed organizations  
Need testimonials for I-code proposals  
Need code change proposals  
Need code official testimonies at hearings



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Part II-D Plan: State adoptions - Hawaii State Building Code

**(53) Existing Concrete Structures.**  
Section 3401.6 Alternative compliance is amended to read as follows:  
**"3401.6 Alternative compliance.**  
1) Work performed in accordance with the International Existing Building Code shall be deemed to comply with the provisions of this chapter.  
2) Work performed in accordance with the 2016 version of the American Concrete Institute Committee 562, "Code Requirements for Assessment, Repair, and Rehabilitation of Existing Concrete Structures" shall be deemed to comply with this chapter when used as a supplement to the requirements of this chapter or the International Existing Building Code. Wherever the term International Existing Building Code (IEBC) is used in ACI 562-16, it shall mean International Existing Building

Gaur Johnson, Moffatt and Nichol



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Part II Plan: Representation:

- Yourself
- Your firm
- Your organizations

- Established as a resource
- Advise ACI is a professional society
- Encourage adoption for public benefit



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aci  
American Concrete Institute

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Thank you!



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