

# ACI/ICRI Webinar: Introduction to the Concrete Repair Code (ACI 562)

Wednesday, May 01, 2013

## Responses to Attendee Questions

Questions Asked by Attendee	Response
<p>Q: another way to ask the question is how do 562 and 440-08 coexist?</p> <p>Q: since 562 includes FRP, does it somehow "supersede" ACI 440-08 or does it include 440-08.</p>	<p>ACI 562-13 does not "supercede" the documents related to design of FRP by ACI Committee 440. Section 7.8 of ACI 562-13 allows the use of FRP for repair. The commentary to Section 7.8 recommends that the design and detailing of these repairs be consistent with ACI 440.1R, 440.2R, and 440.4R, as applicable. These documents cannot be directly referenced in the code because they are guides and written in non-mandatory language.</p>
<p>Q: What's the source of the \$8B and \$20B figures?</p>	<p>The \$20B value was presented in the Vision 2020 document (<a href="http://www.concretesdc.org/projects/Vision_2020.htm">http://www.concretesdc.org/projects/Vision_2020.htm</a>).</p>
<p>Q: can we use this code for the coastal structures repairing ?</p>	<p>Refer to the webinar recording for discussion. Section 1.2.2 [of ACI 562-13] states: "this code shall govern the evaluation, repair, rehabilitation, and strengthening of nonbuilding concrete structures when required by the</p>
<p>Q: does ACI 562-13 address this?</p> <p>Q: what is the most common repair mistake made by LDP's in your experience?</p>	<p>Hard to say what is the most common mistake, likely not considering the repair system as a whole, and failure to fully evaluate the structure. Durability considerations are presented in Chapter 8, which discusses repair systems.</p>
<p>Q: Does the new code require excavation of concrete for some distance behind a rebar when the surface of a main bar is exposed by degradation?</p>	<p>No specific distance requirement is given. ACI 562-13 commentary refers users to ACI 546 and to ICRI 310.1 which give guidance to repair around existing reinforcement.</p>
<p>Q: how can we use recycled material from existing material in repairing building</p>	<p>This is not addressed in the document</p>
<p>Q: How does this code interface with ACI-349?</p>	<p>ACI 562-13 can not be used for nuclear-safety related structures until it is approved by the Nuclear Regulatory Commission.</p>
<p>Q: Did the committee consider environmental structures (i.e. corresponding to new structures covered by ACI 350)?</p>	<p>Refer to the webinar recording for discussion.</p>
<p>Q: If desired to be used, what is the best method given not currently adopted by IEBC or IBC? work with building code official? Any other methods?</p>	<p>Work with the Building Code Official.</p>
<p>Q: is code include use of carbon fiber material?</p> <p>Q: does code 562 address repair material ?</p>	<p>Section 7.8 of ACI 562-13 allows the use of FRP for repair. The commentary to Section 7.8 recommends that the design and detailing of these repairs be consistent with ACI 440.1R, 440.2R, and 440.4R, as applicable. These documents cannot be directly referenced in the code because they are guides and written in non-mandatory</p>

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Q: Is impregnating cracks with lithium nitrate a good treatment for the Alkali-Silica Reactivity (ASR) problem and how do we administer the injection?	ACI 562-13 does not require specific repair treatments for different causes of deterioration. Means and methods of injection are beyond the scope of the document.
Q: Is it applicable to use the FRP rebars in the structure repair that have regular steel rebar.	Section 7.8 of ACI 562-13 allows the use of FRP for repair. The commentary to Section 7.8 recommends that the design and detailing of these repairs be consistent with ACI 440.1R, 440.2R, and 440.4R, as applicable. These documents cannot be directly referenced in the code because they are guides and written in non-mandatory language. If a user specifically chooses to use carbon FRP bars in combination with existing steel reinforcement, Chapter 8, Durability, requires the following: "Galvanic
<p>Q: Is the intent of ACI 562 to govern all concrete retrofit projects or just those when there is damage to be repaired?</p> <p>Q: Any thought to provide direction on dealing with changes from past 318 versions such as the introduction of the phi-vc/2 rule or structural integrity requirements?</p> <p>Q: Why a different existing structure load case than in the FRP committee document?</p>	The scope of ACI 562 includes strengthening as well as repair. Chapter 1 of the code address applicability of the code to structures designed with previous versions of ACI 318. The load case with respect to unprotected repairs was intended to provide a minimum strength level in the event that strengthening measures will be destroyed by an extreme event.
Q: Is there anything that would prohibit use of ACI 562 with ACI 349 structures?	ACI 562-13 can not be used for nuclear-safety related structures until it is approved by the Nuclear Regulatory Commission.
Q: is there difference between repair and rehabilitation as such? Are the words interchangeable?	Refer to the webinar recording for discussion. ACI 364.1R provides a discussion and definition of repair and rehabilitation.
Q: Is there relation between this code and ACI efforts in sustainability?	ACI 562-13 sets a minimum standard for the design of repairs to concrete structures. Its proper use will result in more durable repairs that will increase the service life of a structure and avoid the need for demolishing the structure, dealing with material disposal, and construction of a new
Q: Should there have been more than one material supplier on the committee?	The committee felt that appropriate balance was maintained.
<p>Q: one quick question, can this be used for repair and rehabilitation of bridges? Thanks,</p> <p>Q: another thought: for repair of concrete building project outside of USA, is it still applicable?</p>	Repair and rehabilitation of bridges is outside the scope of ACI 562-13. For projects outside of the United States, ACI 562 would need to be referenced by a general building code or by its use required by a building official.

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<p>Q: What is Con Rep Net?</p> <p>Q: sorry... 381 should be 318 in last sentence of previous comment</p> <p>Q: Regarding your statement that ACI 318 doesn't cover non-building structures: The Scope statement (paragraph 1.1) of the 2011 version of 318 says it includes "any structure" erected under a legally adopted general building code (such as the IBC, which includes non-building structures). And paragraph 1.1.5 of 381 gives examples of non-</p>	<p>Con Rep Net - is concrete repair network, a UK based group that is examining concrete repair. You can find them using an internet search. We agree with the comment regarding ACI 318.</p>
<p>Q: what is considered as "sustantial structural damage" per the IEBC?</p>	<p>Refer to the webinar recording for discussion.</p>
<p>Q: When do you anticipate the ICRI notes to become available?</p>	<p>A guide to the use of ACI 562 will be jointly published by ACI and ICRI. It is likely 18 - 24 months away from publication.</p>
<p>Q: What is the vision for ACI 563 (specs)? How will it tie to ACI 562?</p>	<p>The vision for the ACI 563 Repair Specification is outside the scope of this webinar. It is intended to coordinate with ACI 562 in much the same manner as ACI 301 coordinates</p>
<p>Q: When calculatng minimum strength requirements as <math>1.2D+0.5L+A_k+0.2S</math>, does <math>A_k</math> include blast loads? If so, FRP cannot be used for blast protection</p>	<p><math>A_k</math> does include blast loads. Not sure what is implied by the second half of the question. The equation is intended to address the situation where repair measures may be damaged by an extreme event. See ASCE 7-10 for additional information and commentary on this load case.</p>
<p>Q: WTP and WWTP repair constitute a significant area of concrete repair. Is it the intent of ACI 562 to include these structures, even though they are not "buidlings," per se?</p>	<p>Refer to the webinar recording for discussion.</p>
<p>Q: What's the difference between rehabilitation &amp; concrete repair?</p> <p>Q: Isolated minor repairs should be meet all requirements of the ACI-318 or 562?</p> <p>Q: The DOB requires, that repairs be done following the ACI-562?</p>	<p>The difference between rehabilitation and repair was addressed in the webinar.</p> <p>Repairs should satisfy the requirements of the design basis code, which may be ACI 318 or ACI 562.</p> <p>Not sure I understand the question. A building official may require the use of ACI 562 as a design basis code for</p>