

Questions and Answers from Tech Tuesday Webinar on *Preservation, Repair, and Rehab of Concrete Pavements* September 22, 2026

Q1 - Fibrecrete, a ASTM D8260 fiber reinforced polymer patching material, is approved for use by many states for flexible partial depth repairs. No saw cutting means much less prep. quick return to traffic, much less than 8 hours. No air temperature restrictions, just clean, dry pavement. (Industry, PA)

Response: Due to time restrictions, specific materials were not discussed but it is recognized that there are a number of commercial products with characteristics allowing more rapid repair completion. Many State DOTs have these as approved products.

Q2 - Does the grooves get filled with ice during freezing months? (Agency, IN)

Response: The short answer is no. When we first introduced NGCS (it has the highest density of longitudinal grooves), we wondered that same thing. The first two installations of NGCS were on I-355 in Chicago and I-94 just west of Minneapolis. Ice formation was not an issue. One of the reasons we had not thought about was that the de-icing chemicals stayed longer in the grooves and helped melt ice and snow.

Q3 - Any maximum length recommended for partial depth repair? (Agency, Canada)

Response: For cementitious materials, there are no restrictions but at some point it may become an economic question. One exception might be the presence of spalling along the length of a longitudinal joint, for example, which can be quickly and easily removed by milling allowing for the placement of the repair material. However, if the area of the PDR becomes excessive on a slab, a full-depth repair may become a more cost-effective solution.

For polymer and similar proprietary materials, the manufacturers may have suggested maximum repair sizes and maximum lifts, and some agencies impose similar restrictions.

Q4 - Larry - For small sized exterior flatwork such as sidewalks or raised medians that have a compromised softer surface exhibiting light scaling, is there equipment to grind and restore surface texture for traction? (Industry, OH)

Response: yes, there are hand grinders and small walk behind grinders. But it's obviously more work.

Q5 – Is there a minimum separation distance between two full depth patches at which, if the spacing falls below that threshold, the patches should be combined into a single larger patch? (Agency, VA)

Response: For full-depth repairs, general guidance on combining repairs is available from the ACPA in the table below, based on overall economics of the cost of additional repair materials and the cost of individual repair preparation. The economics for this may be a bit dated but it is expected the overall trends remain reasonable.

Slab Thickness, inches	Distances Between Proposed Individual Repairs, feet* <i>(If two proposed repairs are closer than the distances given, it is likely more cost effective to combine into a single, larger repair)</i>
6	15
7	13
8	11
9	10
10	9
11	8
12	8

* For 12-ft wide lane-width repairs

Adapted from 2006 ACPA Report EB239p, Concrete Pavement Field Reference – Preservation and Repair

For partial-depth repairs, it also becomes an economic question and depends on the size of the spalled areas, the depth of the spalled areas, and their proximity to each other and to other spalled areas. While some guidance suggested that the spalled areas should be combined if they are within 24 inches, that may also depend on the integrity of the concrete between them and the size of those individual spalls (small individual spalls may not be combined but large individual spalls may be combined or a full-depth repair could be considered).

Q6 - Should there be a limit on the size or weight of jackhammers used for concrete removal in CRCP to prevent vibrations that could cause debonding between the stay in place rebar and the surrounding concrete? (Agency, VA)

Response: In CRCP repair, the size of the jackhammer is often limited when removing concrete along the edges to prevent cracking in the sound concrete that is to remain and minimize damage to the base. A maximum weight of 15 lbs is specified by one agency but hammers up to 30 or 35 lbs may be allowed in special cases with engineer approval.

Q7 - Would you recommend specifying the tie wire diameter to ensure there is no movement and that proper load transfer is maintained? (Agency, VA)

Response: If this refers to the tie wire diameter for tying lapping steel rebar in CRCP repairs, yes, this should be specified.

Q8 - For new repair isolation, can a wax based curing compound be used as a bond breaker between the patch and the surrounding existing concrete? (Agency, VA)

Response: A physical bond breaker helps ensure unrestricted movement, whereas a curing compound may not prevent mechanical interactions between adjacent slabs.

Q9 - For dowel installation on sharp curves, such as on and off ramps, should the standard practice of placing dowels parallel to the direction of travel be adjusted to account for the change in geometry? (Agency, VA)

Response: Always in the direction of travel. On a curve you are still parallel to the edge line at the point of the joint.

Q10 - Is there a recommended embedment depth for resin bonded anchors in CRCP full depth repairs? (Agency, OR)

Response: Is this referring to the use of tiebars anchored into the joint faces for carrying the steel through the repair (as opposed to exposing the existing steel in the slab and tying the new repair steel to that)? Not aware of any specific recommendations but an embedment depth on the order of 12 inches would likely be appropriate.

Q11 - Can you put in ruts in precast panels? (Agency, OR)

Response: If the question is whether precast panels will rut, the answer is that they would be susceptible to chain/studded tire wear just as cast-in-place repairs.

Q12 - We have ASR in our area (Eastern Nebraska). Fly Ash / IP Cement has been historically used, but fly ash is on limited supply. Type IL Cement wouldn't meet ASR, so there are multiple blended cements being used and it's caused issues with finishing due to different bleed rates. Curious if this is occurring throughout the country and what best practices / requirements associated with curing and finishing have been implemented. (Industry, NE)

Response: Please see a recent webinar by the CPTech Center on this topic: <https://www.cptechcenter.org/best-practices-for-finishing-concrete-roadways/>.