

Recommended Repairs for Cracking in PCC Pavements

Defect	Orientation	Location	Description	Dowelled/Undowelled Transverse Joints	Recommended Repair
Plastic Shrinkage	Any	Anywhere	Partial-depth and more than 0.007 in. (0.18 mm) wide	Either	Do nothing
Uncontrolled Crack	Transverse	Mid-Panel	Full-Depth	Undowelled	Saw/route and seal crack
Uncontrolled Crack	Transverse	Crosses or ends at transverse joint	Full-Depth	Dowelled	Full-Depth Repair or LTR ^a
Uncontrolled Crack	Transverse	Parallel to & within 5 ft. (1.5 m) of joint	Full-Depth	Undowelled	Saw & seal crack; Epoxy sawed joint if uncracked
Spalled sawcut or uncontrolled crack	Transverse	Anywhere	Spalling; more than 3.0 in. (75 mm) wide	Dowelled	Full-Depth Repair or Full-Depth Repair if crack jumps from sawcut to edge of slab within 3 feet of edge of slab, stop sawcut, saw & seal crack
Uncontrolled Crack	Longitudinal	Relatively parallel to & within 1 ft. (0.3 m) of joint; May cross or end at longitudinal joint	Full-Depth	Undowelled	Saw and seal crack Seal joint
Uncontrolled Crack	Longitudinal	Relatively parallel to & within wheel path; 1 - 5 ft. (0.3-1.5 m) from joint	Full-Depth	Dowelled	Full-Depth repair to replace crack and joint
Uncontrolled Crack	Longitudinal	Relatively parallel to & further than 5 ft. (1.5 m) from a longitudinal joint or edge	Full-Depth	Either	Partial-Depth Repair
Spalled sawcut or uncontrolled crack	Longitudinal	Anywhere	Full-Depth, hairline, or spalled	Either	Saw/route & seal the crack or cross-stitch the crack Epoxy sawed joint if uncracked
Uncontrolled Crack	Longitudinal	Anywhere	Full-Depth	Either	Remove and replace panel or cross-stitch crack
Uncontrolled Crack	Diagonal	Anywhere	Spalled	Either	Cross-stitch crack
Uncontrolled Crack	Multiple per panel	Anywhere	Two or more full depth cracks dividing panel into 3 or more pieces	Partial-Depth Repair	Partial-Depth Repair
				Full-Depth Repair	Full-Depth Repair
				Remove and replace panel	Remove and replace panel

Notes: Full-Depth repair per *Specification 2529*
 Partial-Depth repair per *Specification 2530*
 Cross-stitch repair per *Construction Manual 9.27*
 Repairs should be made without use of Calcium Chloride unless early opening to traffic is necessary.

^a LTR = load-transfer restoration (if faulted less than 1/2"); 3 dowel bars per wheel path grouted into slots sawed across the crack. Slots must be parallel to each other and the longitudinal joint. Backfill with non-shrink, cement-based grout. Diamond grind if faulting is severe.

