Are anchorage back-up bars required for post-tensioned slab-on-ground construction using ½-in. diameter or smaller seven-wire, 270 ksi strand tendons?

In common slabs-on-ground applications the answer is NO, unless they are required by governing building code or the licensed design professional.

BACKGROUND
This opinion by the PTI DC-10 Slab-on-Ground Committee is based on the acceptable performance of millions of slab-on-ground applications that have been constructed in the past 40+ years where back-up bars have not been used. A paper, “Back-Up Bars for Residential Slab-on-Ground Foundations”, by Gregory P. Chacos, PTI Journal, V5, No. 1, July 2007, supports this opinion.

ACI 318 Building Code Requirements for Structural Concrete does not govern the design and construction of post-tensioned slab-on-ground foundations (see R1.1.7 of ACI 318-08). Thus, the back-up bar requirements specified in ACI 318 do not apply to post-tensioned slab-on-ground applications.