

Design Tip: Cantilever Slabs for Pour Strip Bays

Reduce dead load construction challenges with self-supporting cantilever slabs.

A self-supporting cantilevered slab design allows the quickest pour back of pour/tension/delay strips and subsequent removal of formwork. It also minimizes the need for stacked shoring, which can delay finish trades and reduce the parking structure's constructability.

- When designing the slab cantilever for a pour/tension/delay strip, ensure the dead loads are accounted for when the concrete strength is sufficient for tensioning. Temporary reshoring in the pour/tension/delay strip bay of live loads (construction or long-term usage) is not necessary.
- If designing the self-supporting slab cantilever for a pour/tension/delay strip becomes challenging, consider widening the mild-reinforced strip to shorten the cantilever from the adjacent beam.
- Do not be overly concerned about cantilever deflection in the pour/delay strip bay. Supporting formwork for this bay can be left in place to control deflection until pour back has reach sufficient strength.
- Design the cantilevered slabs of the pour/delay strip bay to be self-supporting in the temporary cantilevered stage. When there are multiple levels of open pour/delay strip bay slabs that are not self-supporting, the result is a compounding of dead loads that will require many levels of stacked shoring below. The required length of time the slabs are allowed to shrink before the pour/delay strips can be poured back will impact the duration the shoring must remain in place—and the number of levels or shoring required. Shoring must remain in place until the poured-back strips have reached a strength where they can support their own weight and other applied construction loading of the shoring system from above. Shores remaining in place for long periods of time will restrict access for finishing trades on the levels below.

