



Filling in the voids

Volume #3

Core drilling

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The question arises (often too late) for a 'rule of thumb' or a printed set of guidelines for core drilling or cutting other openings through a hollow core deck. Unfortunately that's a little like asking for a set of rules before crossing a busy intersection and the answer is similar; it depends on the circumstances and conditions.

Generally questions about openings, core drilled or otherwise, are handled on a case-by-case basis treating each project and situation individually. One of the best things we suggest is for a set of the hollow core shop drawings to be passed among the trades expected to penetrate the deck. Each trade would then mark their respective openings and pass the drawing on to the next. Once complete the contractor would then submit the marked up drawing to the prestressed engineer for evaluation.

Alternately, if a structure has a regular layout with a number of repetitive rooms or units, one unit can be selected for an actual full size field layout. After the trades mark the installed deck (but before cutting), a site visit is scheduled for the prestressed engineer. It's usually a good idea to have a representative from each trade attend especially in areas where the layout is congested in case adjustments are necessary.

There are however a few basic principals that lessen the structural impact of penetrations. First, straddling the grouted keyway between two plank allows 'sharing' of the effects. Second, aligning openings to each other as much as possible running parallel to the hollow core span. Third, adjusting the location to pass thru a plank void when the position is not critical.

The most important rule to remember is that all openings and penetrations should be evaluated by the prestressed engineer prior to their being cut or drilled. It is often the case that we are asked to take a look at cutting which has already been done. Frequently a few minor location, size, or orientation adjustments can significantly reduce negative effects on hollow core deck performance.