



Tech Corner

Hyped about HIPERPAV

What's the Hype about?

We've all probably heard of HIPERPAV by now... FHWA is even releasing a new version of it this summer called HIPERPAV II. But what is HIPERPAV really, and more importantly, how can it help us?

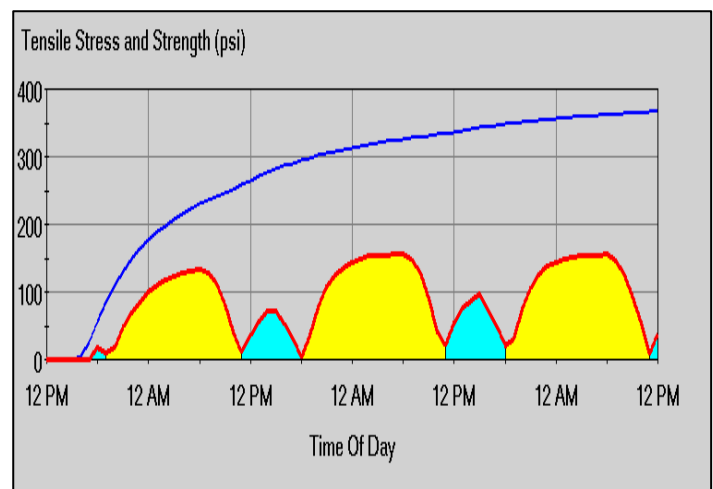
In broad strokes, HIPERPAV is an analysis tool that allows the user to minimize the potential for uncontrolled cracking (mid-slab, near joint, etc.). The software compares projected concrete strengths to projected stresses within the pavement in order to predict early-age cracking potential.

This simple and ingenious approach works because concrete will never crack unless stresses exceed the strength. HIPERPAV makes the strength and stress projections based on readily available user inputs in four categories: Design, Materials/Mix Design, Construction and Environment. After entering the required inputs into the HIPERPAV software (usually taking less than ½ hour), each successive run of the software takes only 5 seconds.

Now, how will a concrete contractor benefit from using HIPERPAV?

HIPERPAV's real benefit to a concrete contractor is its utility as a risk mitigation tool. A HIPERPAV analysis can be performed prior to each day's paving to see if there is a significant potential for early-age cracking.

If, under the particular conditions of that day's paving, HIPERPAV suggests that cracking is likely, the users can adjust any of the

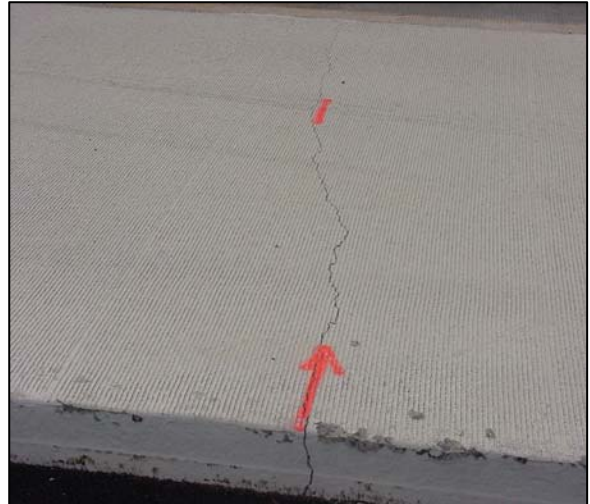


inputs that under their control (typically in the Construction category), to reduce the predicted cracking potential. Adjustment to such inputs as placement time, time of sawing, concrete temperature, curing method or time, and in some cases mixture proportions are often effective in reducing failure potentials.

In this way, a paving contractor can use a fast and convenient computer analysis to be proactive and make daily adjustments to the paving operation, in order to minimize the risk of unwanted cracking.

Since the software was initially released more than seven years ago, HIPERPAV has been used by concrete pavers for various uses beyond prediction of early-age cracking, including estimating plastic shrinkage potential, joint sawing windows, managing the curing regime, and even projecting the time of setting in colder temperatures.

Visit WWW.HIPERPAV.COM to find further details on the background or copies of the software to download.



More questions about pavement cracks and cracking? Contact [Leif Wathne](mailto:Leif.Wathne@acpa.org) at 202-887-8290. To view or download back issues of Tech Corner, visit www.pavement.com.

Tech Corner is seen in ACPA's "On the Grade" and "Concrete Pavement Progress" newsletters.



American Concrete Pavement Association
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