



*Pre-heating the cold, compacted layer is specified on some applications.*

A longitudinal joint that is properly constructed, treated with a good adhesive, and properly compacted should resist moisture penetration and stay bound together. Another technique that can help longitudinal joints last longer is pre-heating prior to compaction.

Research conducted by public works agencies, associations and universities has proven that pre-heating the cold, compacted layer just prior to joint

matching and compaction increases joint density and decreases permeability. For some applications, joint heating is a method specification mandated by the project owner.

There are various types of joint heaters. Some attach to the paver and are towed by the paver. Others are towed by some other vehicle. Often, the decision to tow with the paver or another vehicle is determined by the width of paving.

Joint heaters generate high temperatures, but not so high as to damage the properties of the asphalt cement used as binder. A propane heater with infrared technology can heat the cold joint to a typical average of about 120° C (250° F) while being towed at normal paving speeds. The cold layer becomes flexible at the joint to a depth of around 25 mm (1") for improved bonding with the adjacent hot layer.

In summary, the construction of longitudinal joints is one of the most important responsibilities for the paving crew. The main elements of good joint construction are: straight line easy to match; correct overlap up to 25 mm (1"); correct height allowing for compaction rate; and no raking.



*Heat from the joint heater penetrates the cold layer at the longitudinal joint.*

