

**Longitudinal Joint Study** – The study suggested to address this issue involves the use of a proprietary mechanical device, attached to the screed extension of a paving machine, that employs extrusion and shear technology to produce interlocking orientation of HMA aggregates resulting in longitudinal joint levels proximate to average mat density. It is well known by HMA practitioners that low-density longitudinal joints have high permeability that allows excessive penetration of water, which in turn undermines the integrity and shortens the life of longitudinal joints, and eventually other parts of the pavement. The proposed study will provide data to either substantiate or rebut the claim that this innovative device can enable longer life HMA pavements, increase construction speed and productivity, provide increased work zone safety and reduce paving costs and motorist delays that result from premature repairs after the initial construction. Because TransTech's Pavement Quality Indicator (PQI™) can very rapidly determine the density of asphalt pavement, it is suggested that this tool be utilized during such a study. In this way, a great deal more data could be collected during the study. Since the best statistical methods require as much data as possible in order to achieve reliable results, this study could be definitive over a wide range of mix designs and site conditions. Such a study could have a major impact on the longer life roads movement currently underway in this country.