Project Title: High Early-strength High-performance Concrete for Rapid Pavement Repair

PI: Nader Ghafoori

Abstract: The objective of this study is to (1) review and survey the current materials, concrete mixes and procedures for rapid repair being used by different DOTs and other state highway agencies. The review/survey will include benefits, disadvantages, costs and longevity of each method. The findings of literature/survey will be used as a basis for definition of minimum strength and durability requirements of rapid repairs and selection of the most reliable methods for experimental program; (2) evaluate performance of different rapid repair methods and introduce high performance mixtures for rapid repair. Different mixtures with adequate longevity and for different opening times will be introduced to be applied in different projects. The final definition of test parameters, level of performance and costs will be provided; and (3) categorize technologies and methods available for installation, and provide a manual guidance for material specification, mix design, casting and curing of the rapid repairs.