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**MEMORANDUM**  
**06-09**

TO: District Directors  
District Construction Engineers  
Toll Road Operations Engineers  
District Materials & Tests Engineers  
District Highway Management Directors  
District Area Engineers  
Project Engineers/Supervisors

FROM: Mark A. Miller, Director *MAM*  
Division of Construction Management

SUBJECT: Cellular Concrete Grout Testing

At a Failed Materials Meeting held in February 2006, there were two different contracts that used Cellular Concrete Grout to fill the annular space between existing pipe structures and a new pipe liner. This grout, per Standard Specification 725, is required to have a 28 day compressive strength of at least 150 psi. The specification requires that a specific job mix be submitted to the Project Engineer/Supervisor for approval prior to using the grout. The specification also requires, as stated above, that the specific job mix be tested and verified to be in accordance with the specification, including the 28 day compressive strength; or approved based on prior acceptable performance on Department contracts.

The Project Engineers/Supervisors did not follow the specification requirements and the material was placed without being properly tested. The compressive strength requirement for this material is not intended to solely address structural concerns, but rather evaluates the proper batching and foam expansion to ensure that consistent material completely supports the pipe liner without voids or segregation during placement.

Both contractors were assessed, by the Failed Materials Committee, a dollar amount for the hours it took central testing personnel to gather require data, perform the investigation, determine that there were strength deficiencies and for not following specification requirements. One decision was later reversed when it was discovered that the cylinders had not been cured in accordance with the specifications. Communication between the project and District Testing Office is required to coordinate the transporting and curing of cylinders.

If you have Cellular Concrete Grout to be placed on your project, please read the requirements of Standard Specification 725 and be sure the contractor follows the job mix submittal requirements. Also make sure that the cylinders are handled and cured in accordance with the specifications.

DAK:MAM:sec