ALABAMA DEPARTMENT OF TRANSPORTATION
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Don Siegelman
Governor

G. M. Roberts
Transportation Director

June 16, 2000

MATERIALS AND TESTS TECHNICAL ADVISORY 1-00

TO: Holders of Testing Manual

FROM: Larry Lockett
Materials and Tests Engineer

RE: Sampling and Testing Guidelines for Drilled Shaft Concrete

Effective upon receipt the attached guidelines are in effect for drilled shaft concrete.

Please file a copy of this Technical Advisory in the Technical and Advisory Memorandums jacket contained in the testing manual.

Questions concerning this advisory may be directed to Mr. Sergio Rodriguez at (334) 206-2410.

RLW/dh
Attachment
cc: ALDOT Construction Engineer (Mr. McDuffie)
ALDOT Division Engineers
ALDOT Divisions (ATTN: Construction and Materials Engineers)
ALDOT Geotechnical Engineer (Mr. Cox)
ALDOT Testing Engineer (Mr. Wolfe)
FHWA (Mr. Wilkerson)
Alabama Road Builders' Association
Alabama Bridge Construction Association
Alabama Concrete Industries Association
File

ALDOT MATERIALS AND TESTS
TECHNICAL ADVISORY 1-00
JUNE 16, 2000

SAMPLING AND TESTING GUIDELINES FOR DRILLED SHAFT CONCRETE

1. Sampling freshly mixed concrete for use in determining compliance with air content, slump, temperature and compressive strength specifications shall be per AASHTO T-141.

2. For each drilled shaft (DS), cast a set of concrete cylinders for each 50 cubic yards (40 cubic meters) of concrete or fraction thereof for the first 100 cubic yards (80 cubic meters) placed. The frequency is decreased to one set of concrete cylinders for each 100 cubic yards (80 cubic meters) or fraction thereof for concrete placed exceeding 100 cubic yards (80 cubic meters).

3. DS concrete uses admixtures that delay the setting time of the concrete more than normal concrete; therefore, before moving a cylinder check to see if the concrete has already set. If the concrete has not set, prolong the initial curing to 48 hours rather than risking damage to the cylinder.

4. A set of concrete cylinders consists of 2 - 7 day, 2 - 14 day, and 2 - 28 day cylinders. All the cylinders from one set have to be cast from the same batch and as per AASHTO T-23.

5. For each drilled shaft, tests for air content, slump, and temperature have to be performed at the same frequency as casting a set of concrete cylinders.

6. Concrete that exceeds the specified air content shall not be accepted since it will affect the compressive strength of the concrete.

7. The chemical admixtures used in DS concrete can be adjusted to compensate for ambient temperature changes, but at no time shall the manufacturer recommended dose be exceeded.