Florida Department of Transportation

RICK SCOTT
GOVERNOR

605 Suwannee Street
Tallahassee, FL 32399-0450

MIKE DEW
SECRETARY

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This Memo has expired

TO: **DISTRICT MATERIALS AND RESEARCH ENGINEERS**
DISTRICT CONSTRUCTION ENGINEERS

FROM: Timothy Ruelke P.E., Director, Office of Materials
David A. Sadler, P.E., Director, Office of Construction

Timothy J. Ruelke, P.E. Digitally signed by Timothy J. Ruelke, P.E. Date: 2018.01.08 15:01:02 -05'00'

David A Sadler Digitally signed by David A Sadler Date: 2018.01.08 14:27:22 -05'00'

COPIES: Bob Burleson, Ananth Prasad, Courtney Drummond, Amy Tootle, Nick Finch, Rafiq Darji

SUBJECT: **CTQP Limerock Bearing Ratio Technician Course Length**

Pursuant to discussions within the Department, the Construction Training Qualification Program's (CTQP) Limerock Bearing Ratio Technician course length will be adjusted based on the following.

The Florida Test Method for the Limerock Bearing Ratio (LBR) test FM 5-515 has been revised, along with the LBR exams. The revised method cites the procedure for compaction in FM 1-T 180, Moisture Density Relations of Soils Using a 10-lb. (4.54kg) Rammer and an 18-in. (457mm) Drop.

Therefore, the length of time for the class has been reduced to one day. The compaction method is reviewed, but not taught in detail because it is taught in the Aggregate Base Testing Technician course (ABTT). The proficiency test for compaction has also been eliminated. In addition to shortening the class length, the procedural change allows a laboratory the efficiency of separate technicians compacting the test specimens, step 1, and using the load press step 2, if desired. The ABBT is no longer a prerequisite for obtaining the LBR Qualification. A summary of two possible scenarios follows.

Scenario 1

- One technician can be trained to perform T 180 and prepare all samples whether they will also be tested for LBR
    - This technician needs ABTT
    - This technician may need no knowledge of the LBR test (there are technicians in the SMO and Industry labs currently in this category)
- Another technician can be trained to perform LBR and invert, soak, drain and run the penetration tests
    - This technician needs the LBR Technician Qualification, but does not need the ABTT because the compaction is performed by someone else
    - This increases the efficiency in a lab
    - No prerequisite for ABTT is needed in this scenario
    - The T 180 procedure is still significantly reviewed in the LBR course
- Because the compaction is covered in T 180, the proficiency for the compaction procedure is still covered in the ABTT course
    - Because the LBR method refers to T 180, which must be performed by a technician with ABTT, the T 180 compaction procedure proficiency is not required in the LBR course
    - A technician taking the LBR course must take a proficiency in the LBR procedures for the inversion, soak, drain and penetration of the specimens

Scenario 2

- A lab can maintain the previous status quo and use one technician to perform the T 180 compaction and LBR penetration
    - This technician needs ABTT and the LBR course but they are still separate qualifications
    - If this technician gets the LBR qualification, but not the ABTT, the technician cannot perform T 180 compaction

By eliminating the T 180 proficiency, and having only the LBR procedure proficiency, the course can be shortened to one day. This eliminates the need for overnight travel expenses and eliminates a day of being away from work in the lab.

These changes will be included in the Construction Training Qualification Manual (CTQM) section 2.4.5 and 2.4.5.1 during the next editing cycle.

Should you have any questions concerning this matter, please contact John Shoucair (352) 955-2925 at the State Materials Office.

TR/js