

CHAPTER 11

CONCRETE PAVEMENT

11-1. Mix Proportioning and Control.

Proportioning of the concrete mix and control of the concrete for pavement construction will be in accordance with TM 5-822-7. Normally, a design flexural strength at 28-day age will be used for the pavement thickness determination. Should it be necessary to use the pavements at an earlier age, consideration should be given to the use of a design flexural strength at the earlier age or to the use of high early strength cement, whichever is more economical. Flyash gains strength more slowly than cement, so that if used it may be desirable to select a strength value at a period other than 28 days if time permits.

11-2. Testing.

The flexural strength of the concrete and lean concrete base will be determined in accordance with ASTM C 78. The standard test specimen will be a 6- by 6-inch section long enough to permit testing over a span of 18 inches. The standard beam will be

used for concrete with the maximum size aggregate up to 2 inches. When aggregate larger than the 2-inch nominal size is used in the concrete, the cross-sectional dimensions of the beam will be at least three times the nominal maximum size of the aggregate, and the length will be increased to at least 2 inches more than three times the depth.

11-3. Special Conditions.

Mix proportion or pavement thickness may have to be adjusted due to results of concrete tests. If the tests show a strength gain less than predicted or a retrogression in strength, then the pavement would have to be thicker. If the concrete strength was higher than predicted, then the thickness may be reduced. Rather than modifying the thickness required as a result of tests on the concrete, the mix proportioning could be changed to increase or decrease the concrete strength, thereby not changing the thickness.