

9 Apr 84

CHAPTER 3

BASE COURSES

3-1. General requirements. Base courses may be required under rigid pavements for the purpose of: (a) providing additional structural strength, (b) providing a more uniform bearing surface for the pavement, (c) replacing soft, highly compressible or expansive soils, (d) providing protection for the subgrade against detrimental frost action, (e) providing drainage, and (f) providing a suitable surface for the operation of construction equipment during adverse weather conditions. Base courses, where required, will be a minimum of 4 inches in thickness over all subgrades. The designer is cautioned against the use of fine-grained material for leveling courses or choking open-graded base courses since this may create a pumping condition. Positive drainage should be provided for all base courses to insure against water being trapped directly beneath the pavement and saturation of these layers, thus inviting the pumping condition that the base course is intended to prevent. The use of base course for subsurface drainage is discussed further in EM 1110-3-136.

3-2. Compaction. Where base courses are used, the base-course material should be compacted with the same procedures as recommended for subgrades in paragraph 2-3. High densities are desirable to reduce future consolidation to a minimum.

3-3. Materials. If conditions indicate that a base course is desirable, an investigation should be made to determine the source, quantity, and characteristics of the available materials. The base course may consist of natural materials, processed materials, or stabilized materials. The material selected should be the one that best accomplishes the intended purpose of the base course. In general, the base-course material should be a well-graded, high-stability material. In this connection, all base courses to be placed beneath concrete pavements for Army roads and streets should conform to the following requirements:

Percent passing No. 10 sieve:	Not more than 85
Percent passing No. 200 sieve:	Not more than 15