

SECTION 74: ELEMENTS OF A FLEXIBLE PAVEMENT

1609. The normal components of flexible pavement construction (see Figure 16.1) are:

a. Subgrade. The subgrade is normally considered to be the in situ soil over which the road is constructed. It includes the stratum of soil exposed in cut and excavated soil deposited and compacted in fill. The interface between the subgrade and pavement is known as the 'formation'. It is customary to shape the formation with the camber or crossfall to assist drainage of the surface. If the remaining construction is not proceeding immediately, the formation should be left with an overfill or protection layer of 150 mm to 300 mm.

b. Sub-base. The sub-base is a layer of reasonably cheap material, eg natural gravel or hoggin. It is normally required to have compacted CBR (see Paragraph 0725) of 30%, depending on the intensity of traffic (see Sub-paragraph 0769f). If the CBR value of the subgrade reaches this value, no sub-base is necessary.

c. Base Course. The base course (formerly roadbase) comprises higher grade materials, eg rolled asphalt, dense macadam, wet mix macadam, dry bound macadam, lean concrete, and cement bound granular materials. Lower grade materials may be used in roads with low traffic intensity.

d. Surface Courses. The surface courses normally comprise two layers of high grade materials (see Figure 16.1). The top, or surface, course (formerly wearing course) provides the surface on which the traffic runs. The binder course (formerly base course) is less impervious than the surface course but is thicker and stronger and acts as a cushion between the base course (or roadbase) and the surface (or wearing) course, giving the latter a better riding quality. It is acceptable in roads with low traffic intensity to have a base course and surface course.

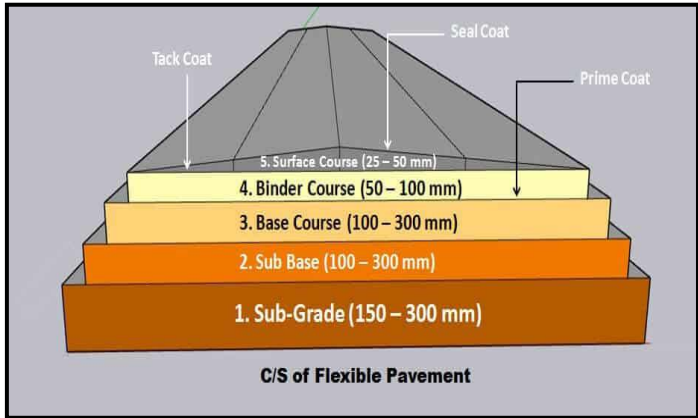


Figure 16-1. Normal Composition of a Flexible Pavement.

Selected Fill

1610. Where the strength of the subgrade is low and a thick sub-base would normally be required, some economies may result if a further layer of selected fill is laid between the subgrade and sub-base. Such material normally has a CBR value of a least 15%.