

Highway Shoulders as They Affect Rigid Pavement Design

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● THE structural design or performance of a rigid pavement is not directly affected by the shoulders. Where the subgrade or subbase is of an impervious character, however, water which leaks through the joints and cracks accumulates on the subgrade or subbase. This water is sometimes forced out between the pavement edge and shoulder thus breaking the seal, at points, between the pavement edge and shoulder. When this develops, shoulder maintenance is required near the edges of the pavement to prevent excessive amounts of water from leaking through these breaks to the supporting medium.

When rigid pavements are placed on an impervious supporting medium it is desirable that the shoulders be constructed so that they can be properly maintained without unduly marring their appearance, and the shoulder material should be of a character that it will not tend to shrink away from the pavement for some distance adjacent to the edge. If turf is to be used on the shoulders it might be desirable to leave approximately a 2-ft bare strip adjacent to the pavement edge to make proper maintenance of this area more feasible.

The control of pumping is an important consideration in the design of rigid pavements, and the design and maintenance of the shoulders are important in this matter. The subject of shoulder design is, however, being discussed by a representative of the Committee on Maintenance of Concrete Pavement as Related to the Pumping Action of Slabs so it will not be discussed further.