## REPORT OF SUBCOMMITTEE ON SHOULDERS

By

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In last year's report the committee presented a study outline dealing with two problems, stability of turf shoulders and build-up of turf shoulders.

The first problem is stated as "establishment and maintenance of satisfactory turf on shoulders having sufficient stability to safely support occasional traffic."

The only current and specific highway research work on this subject that is known to the committee has been conducted in Michigan, New Jersey and New York. This work is being reported in three separate papers. Also being reported are investigations on the same subject that have been conducted by the Corps of Engineers, Department of the Army.

A series of analyses of existing turf shoulders was proposed in last year's report. During 1947 five states indicated a willingness to make such analyses but for varied reasons the information has not been made available to the committee up to the present time.

Use of Turf Shoulders in the Several States - Informal inquiries by the Committee during the past two years indicate that in 20 states turf shoulders are in general use and are considered generally satisfactory; in 5 states turf shoulders are existing but unsatisfactory, and are not being used on new construction; and in 12 states turf shoulders are not used. Information was not available from 11 states. Practically all states reporting the general use of turf shoulders have several qualifications as to where such shoulders are to be used. Wide variations in these qualifications prevent the listing of them here.

The second problem as stated in the Committee's 1946 report is "design of a shoulder cross-section that will be practical from a construction standpoint, and that will lessen or delay shoulder build-up without sacrificing safety or unduly complicating shoulder maintenance operations."

Turf Shoulder "Build-Up" — Serious Maintenance Problem — There have been very few answers to the series of questions concerding turf shoulder build-up, and the Committee has made very little progress on this portion of its assignment.

Much of the correspondence received during the year, however, gives additional confirmation to the belief that the maintenance problem resulting from turf shoulder build-up is serious. The emphasis on this phase of the problem prompts the Committee to undertake the collection of information on maintenance operations now in use in the various States in reducing or correcting turf shoulder build-up. Even if there were an immediate answer on how to eliminate build-up on new turf shoulders, there would be a long period of time before existing turf shoulder mileage could be corrected. It would be helpful to know the detailed maintenance operations currently being used to reduce shoulder build-up or to cut down high shoulders to a proper slope without losing the turf cover.