

DISTRICT 4 SECOND GROUP MEETING --

RAPID CITY, SOUTH DAKOTA

H. E. OLSON, *Coordinator*

(North Dakota, South Dakota, Minnesota, Wisconsin)

OCTOBER 13-15

A well-illustrated 36-page mimeographed report covering this important conference may be obtained if desired on direct request to the coordinator. Twenty-nine representatives attending the meeting included highway officials and engineers from six States in all departments of planning, design, construction, maintenance, and materials. The Soil Conservation Service, State Forestry Department, U. S. Forest Service, State schools, and Public Roads Administration were also represented.

Discussion brought out that:

1. Topsoil should be conserved and replaced on all grading work in District 4.
2. It would be advisable to experiment with the terracing of the backslopes especially in the Dakotas where the rainfall is quite limited, so as to provide gutters where the rainfall could be caught and thus aid in the germination of the grass seed sown for ground cover.
3. Adequate spillways of sodded or paved surfaces be provided at outlets of drainage structures.
4. With the modern road cross-section design and type of grading equipment now in use, hand finishing of slopes is unnecessary as suitable rounding and finishing of slopes can be performed entirely with the mechanized equipment.
5. The total ideal of fitting together all the parts in the highway development program can only result from coordinated planning by many minds. It should be a comprehensive program representing all the various angles of traffic, construction, safety, and public convenience and enjoyment. Roadside development is closely related to all these angles and must not be thought of only as an aesthetic accessory, but as a meeting of the minds with varying angles of approach. The utilitarian requirements dovetail and overlap into the realm of pleasing appearance.
6. In view of our relation to the total highway picture we must carry on an educational program with relation to the control

of the roadside and the adjacent environment. After we have formulated public sentiment, the proper legislation will follow.

7. Rainfall and type of soil are two of the most important things to take into consideration when planting trees. Do not plant in soil that is on the heavy side, nor where rainfall is below 17 inches. Species used depends on soil. Keep 100 feet clear of intersections for open sight distance.
8. Sagebrush and similar types of material have been used to good advantage for binding soil.
9. No burning should be permitted on the right-of-way, as the fire destroys the seed, stolons, roots, and humus in the soil, thereby making ugly sterile patches along the right-of-way which makes them susceptible to erosion.
10. The use of brome grass for mulching was experimented with successfully in Illinois.
11. There has been no satisfactory means of obtaining any quantity of buffalo grass seed as yet, due to the lack of grass available
12. Grama grass grows in clumps in sandy soil but it is not as good a grass as the buffalo grass. Blue grama grass seed has a very low germination percentage, consequently, it cannot be used for quick ground cover. Because buffalo grass seed is so expensive, western wheat and similar types of seed are used.
13. The problem of "ditch checks" is a serious one as the mechanical structure is a road hazard. It is difficult to avoid such installations where no other means are considered satisfactory because no seed has been found entirely suitable for ditch ground covers. Bermuda grass has been found suitable in some places.
14. Road location and design should aim to avoid the heavy cost of paved gutters and high maintenance costs. By so doing some of the erosion problems can be avoided.
15. To prevent erosion, maintenance graders are not allowed to go into the ditches on our forest roads and disturb the ground cover.
16. In highway construction, projects cannot be "standardized," because each individual project is governed by local conditions and what may apply to one project may not apply to another. Cooperation in getting together and solving these

problems as a unit is needed rather than standardizing the problem from one point of view.

17. If the streamlined section is used, there will be little need to plant snow fences. The permanent remedy in old (drift) locations is not "snow hedges" but reconstruction to a "streamlined" section, with wider roadbeds and right-of-way.
18. Each erosion problem must be considered individually according to location and desired result. The erosion that bothers us more than anything else is ditch erosion.
19. Many of the problems are connected directly with one another as recognized in the progress and application of good solutions in improved highway construction practices.

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NOVEMBER 6

NIGHT LETTER TO ALL PROJECT CHAIRMEN ANNOUNCING CHANGE IN LOCATION OF HRB MEETING TO JOHNS HOPKINS UNIVERSITY IN BALTIMORE, LIMITING LENGTH OF COMMITTEE MEETINGS AND URGING ALL PROJECT ABSTRACTS OR REPORTS BE IN SECRETARY'S OFFICE BY NOVEMBER 15. CONFIRMED IN MORE DETAILED FOLLOW UP LETTER FROM CHAIRMAN NEALE, DATED NOVEMBER 6, POINTING OUT THAT THE COMMITTEE HAS HAD FREQUENT INQUIRIES FROM VARIOUS MILITARY AND OTHER DEFENSE OFFICIALS CONCERNING SLOPE CONTROL AND TURF PROTECTION PRACTICES. THE REPORT DEALING WITH THESE SUBJECTS THIS YEAR WILL FURNISH A COMPLETE RECORD OF ACTIVITIES OF THE COMMITTEE FOR WAR AND POST-WAR NEEDS.

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NOVEMBER 19

APPROVAL OF DEFENSE HIGHWAY ACT OF 1941, WHICH INCLUDES A SECTION REGARDING "FLIGHT STRIPS."

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DECEMBER 1

MEETING OF EXECUTIVE COMMITTEE AT THE LORD BALTIMORE HOTEL, BALTIMORE, MARYLAND.

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