

REPORT OF THE JOINT COMMITTEE
ON
ROADSIDE DEVELOPMENT

By

H. J. Neale, Chairman

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During the past year definite progress has been made toward fundamental objectives. It is particularly gratifying to note that the various Sub-committees, with personnel distributed over the entire country, have been especially active.

In addition to the reports of these Sub-committees special mention is made of the following:

1. The report of the Committee, published by the Highway Research Board in June, 1937, has been widely distributed and favorably received.
2. Iowa State College held the first regional short course on roadside development in February, 1937, and has published and distributed a bulletin covering the activities of the school. The College announces that this short course will be conducted in 1938 with an extended program covering subjects of interest not only to highway departments, but to garden clubs and other civic organizations, emphasizing shade and street tree problems. It is hoped that this example will be repeated in other regions where local problems can be taken up effectively.
3. Some States, notably Missouri, Texas, Virginia and Pennsylvania, have conducted training schools for highway employees engaged in landscape work, with gratifying results. The Committee recommends that similar activities be given consideration in all States.
4. Public understanding and appreciation of roadside development has been stimulated through the medium of magazine articles, radio talks, lectures, and the press.

5. The Committee acknowledges the cooperation furnished by the Bureau of Public Roads, Soil Conservation Service, Tennessee Valley Authority, National Park Service, and the various highway departments in its research studies and in the sponsoring of uniform roadside procedure.
6. The continued and growing interest manifested by garden clubs, civic organizations and other agencies is commended, especially in Texas, Missouri, Iowa, Minnesota, Michigan, and Virginia. The results obtained should stimulate similar interest in other States.
7. The interesting and instructive exhibits of photographs, plans and sketches furnished for the Boston meeting of the American Association of State Highway Officials and the meeting of the Highway Research Board in Washington, D. C., are highly appreciated and are indicative of the rapid trend toward intelligent and effective roadside development.

DIGEST OF SUB-COMMITTEE REPORTS*

Erosion

1. On October 1, 1937, 11 States were actively cooperating with the Soil Conservation Service of the U. S. Department of Agriculture on 71 erosion control research projects, and 17 others have indicated progress in this direction. Several States, including some outside of the Soil Conservation Service regions, have undertaken soil erosion projects in accordance with the outline prepared by the Committee.
2. The Soil Conservation Service, in recognition of the importance of this work, has assigned one of its technicians to coordinate highway erosion control research projects throughout the country.
3. The Committee hopes that means may be found for the establishment of research fellowships in certain strategically situated universities or agricultural experiment stations, the purpose of these fellowships being to study special interrelated problems on soil conservation and erosion adaptable to highway practice.

*Complete Sub-committee Reports presented elsewhere in the Report.

4. Erosion control research projects must be systematically selected and planned to obtain comparable data and cost figures and to determine basic procedure for erosion control methods of similar soil types and climatic conditions.

5. The practical value of these studies will depend largely on the degree of coordination secured in design, construction and maintenance.

The most important interdependent factors in soil erosion research on highway lands and the basic objectives of both highway erosion control and roadside development are treated in the full report.

Zoning

Highway right-of-way requirements are to a large extent dependent for their realization upon the intensity and character of abutting land uses.

Safety, convenience, adequacy, and aesthetic considerations are all directly dependent on the character of the lands adjacent to the highway.

Lack of control of abutting land hampers and restricts adequate development of the roadsides for maximum safety and utility. The control of this land may be accomplished by (a) deed restrictions; (b) eminent domain; and (c) use of the police power.

State planning boards can cooperate effectively with State highway departments in establishing adequate set-back lines to be embodied in county and city plans.

Zoning, both urban and rural, is the best answer to control of roadside development outside the right-of-way. Right-of-way widths, location of buildings, billboards, prevention of undesirable land uses and the elimination of existing undesirable features may all be controlled through zoning.

All available facts relating to traffic and to local, county, State and national planning should be considered when replanning and extending the national and local highway systems. The present State-wide highway planning surveys, in cooperation with State planning boards, State conservation commissions and local planning agencies, should make possible coordinated highway programs which will most economically and effectively serve our transportation needs. In accomplishing this end the landscape engineer in charge of roadside development should be very helpful.

Roadside Development Economics

The name of this Sub-committee has been changed from Roadside Development Cost Records to Roadside Development Economics to cover the broader aspects of roadside development cost analysis. Among subjects suggested for immediate study are:

1. Savings in safety.
2. Savings in maintenance operations: mowing, erosion, slides, shoulders, ditches and snow removal.
3. Enhanced land values.
4. Comparative cost records of force account and contract work.

It is suggested that State highway departments can effectively cooperate with this Sub-committee by furnishing representative cost data.

Plant Ecology

Ecological factors should determine the selection of plants for roadside use.

Within regions of varying ecological characteristics in each State certain dominant types of native vines, low shrubs and grasses will be found of outstanding value for roadside planting.

State highway departments should enlist the cooperation of agricultural experiment stations and other scientific agencies in preparing lists of dominant native plants best adapted for use in highway landscape development.

Education and Public Relations

Preparation of a roadside development bibliography is being undertaken by this Sub-committee, as well as an illustrated technical manual.

It is hoped that funds will be forthcoming to publish a comprehensive booklet depicting in attractive form many of the excellent examples of various types of roadside development work accomplished throughout the nation. This volume should include photographs and plans, with brief descriptions to assist effectively in their interpretation.

The Committee urges more frequent contacts in the various States by landscape inspectors from the Bureau of Public Roads to encourage those in charge and raise the standards of work.

The Committee proposes to organize a traveling exhibition to be circulated among the States and shown at meetings, conventions, and colleges to increase local interest and understanding of the objectives and results of intelligent roadside planning and construction.

The best means of educating the traveling public on our highways is through the accomplishment of good landscape work in the several States, and any means toward that end should be encouraged.

Highway Types and Roadside Areas

Previous studies of the highway cross-section have usually been limited to data concerning the actual traveled way and have not been approached from the viewpoint of the right-of-way as a whole in relation to its surroundings. Past efforts in this direction have aimed to cover certain portions of the cross-section only, such as the type, thickness, crown, width of pavement or surfacing, shoulders, guard rail, superelevation and widening, and similar engineering details of construction.

Tabulations accompanying the full report indicate the various elements of the sections covered in detail by a survey of 2,000 types of cross-section selected from an estimated total of 50,000 projects submitted to the Bureau of Public Roads by the various States.

Data regarding highway design factors which contribute to safe travel are of interest to all individuals and organizations, and especially to the design engineer. Of particular interest at this time are the safety aspects of landscape development. Further study during 1938 is planned to permit the inclusion of the major highway types in a report of more constructive recommendations.

Recommendations and Conclusions

1. To effect savings in maintenance operation, there should be more integration of approved roadside development practices in the design and construction of all projects.

2. Consideration should be given not only to the protection of the highway investment, now running into billions, but also to the conservation of enormous land values adjacent to these highways.

3. In order to meet more adequately the constantly growing demands of over 24,000,000 passenger car owners for highway safety and enjoyment, more consideration should be given to every landscape advantage, together with the acquisition, design and development of wayside areas at strategic locations.

According to the best records available, out of the approximately 150,000 miles of improved highways on the Federal-aid system only about 5,000 miles have received intensive roadside development. Greater use of Civilian Conservation Corps, Works Progress Administration and National Youth Administration, and other relief labor on this vast remaining mileage could be utilized most effectively, as it has been demonstrated that such work provides a maximum percentage of available funds for labor without involving excessive expenditures for materials and equipment.

In conclusion the Committee quotes from an address given by Mr. Thomas H. MacDonald, Chief of the U. S. Bureau of Public Roads, at the 23rd Annual Meeting of the American Association of State Highway Officials, in which he stated that "The highway administrator has been mistaken in not attaching the same degree of importance to the planting and improvement of the roadsides as to the building of the roadways themselves. Out of really adequate highway facilities comes the safest possible use of our highways; out of the proper grading and planting of the roadsides come not only safer highways but their protection against erosion and consequent deterioration. The proper treatment of roadsides under trained and experienced direction can be made a large factor in economical maintenance."