

FINAL REPORT  
JOINT COMMITTEE ON ROADSIDE DEVELOPMENT  
AMERICAN ASSOCIATION OF STATE HIGHWAY OFFICIALS  
AND HIGHWAY RESEARCH BOARD

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SYNOPSIS

The Committee announces the dissolution of Joint Committee on the accomplishment of its task of integrating the work of the various agencies, and of defining the various factors in a complete roadside development program. The work properly divided and correlated is to be continued by appropriate committees of the Association and the Board.

Brief résumés of the reports of the subcommittees on Highway Types and Roadside Areas, Slope Erosion Control, Plant Ecology, Zoning, Roadside Economics and Education and Public Relations are given.

In 1932 the American Association of State Highway Officials and the Highway Research Board jointly appointed a Committee on Roadside Development. At that time, it will be recalled, the first serious consideration was being given to the development of the nation's roadsides, with only a few States organized for handling the work. To many it was an æsthetic gesture, devoid of economic background. The interest manifested by the sponsors of the committee and by the Bureau of Public Roads in this new field of endeavor inspired a nation-wide interest in the improvement and development of the roadsides that has now permeated every State. The Committee was constituted primarily to study every factor involved in a complete roadside development program.

It has functioned under six project-committees, involving major research of Highway Types and Roadside Areas, Erosion, Plant Ecology, Zoning, Roadside Economics, and Education and Public Relations. Members of these subcommittees have labored diligently during the seven years of their existence, and the reports published by the Highway Research Board during the last three years readily emphasize the valu-

able contributions their studies have furnished the highway engineers.

At a meeting of the Joint Committee held in Minnesota in August of this year, a resolution was unanimously adopted recommending the discharge of the Joint Committee, based on the fact that the primary objectives for which the Committee was appointed had been accomplished, up to a point where the purely technical research problems and the administrative factors could be more efficiently handled by separate committees. The Committee on Roadside Development of the American Association of State Highway Officials has agreed to undertake a study of the general phases which do not involve intensive research. To this end, its Chairman has appointed sub-committees in every district of the Public Roads Administration. These sub-committees will function directly with the district engineers and the staff of the Public Roads Administration and the landscape engineers of the States involved. They will study the various problems pertinent to the geographical area of the district, based on nation-wide mutual problems. Coincidental with the work of this committee, it is recommended that the Highway Research

Board appoint a committee<sup>1</sup> to study and report on the purely research problems. In this way, the Committee of the American Association of State Highway Officials will refer research problems to the research committee, and by the same token the research committee will refer administrative problems to their committee. It is felt that by this procedure a more complete and intensive study of the economic, utilitarian, and æsthetic problems involved in the development of the nation's roadsides will be more completely covered. Therefore, this report will constitute the last official report of the Joint Committee.

It is interesting to note at this time a gradual integration of the original recommendations of this committee into the roadside programs of the various States. In brief, these involve—more adequate right-of-way width, together with absolute control being vested in the various highway departments; conservation of natural roadside vegetation; competent landscape personnel in every State; the use of adequate ground cover and mulch to prevent erosion; the featuring of appropriate plant materials at intersections, for avenue effects, for snow breaks, for architectural features; the promotion of wayside areas; the development of roadside springs; the opening and development of safety turnouts and vista sites; the control of outdoor advertising; the encouraging of cleaner, more sanitary, and landscaped roadside stands; and in general the promotion of any activity that will improve and give the public better use of the roadsides. The roadsides are but the frame of a continuous panorama landscape and as such their

development must be devoid of artificial effects and replete with natural settings. The gradual advancement of these factors has been accomplished through a better appreciation of their values by the public, and by the constantly increasing cooperation of the highway engineers.

Your Committee, from time to time at its various meetings and through the medium of its reports, has stressed all of these features, substantiating their claim that developed roadsides make for economy and safety, and that natural roadsides make for beauty.

The various trade journals, publications, and the press of the nation have been most cooperative in publishing many valuable contributions concerning Roadside Development activities. No doubt, the most outstanding contribution of the past year was by the *Contractors and Engineers Monthly* in offering a trophy as a national award for the contractor or his superintendent that made the greatest contribution toward Roadside Development in the United States during 1939. Supplementing this award, they have offered four sectional awards. This has awakened the interest of the contractor, to the higher ideals incident to a more finished appearance and protection of the roadsides of what has previously been a typical "no man's land." Not only have the contractors who have been nominated for these awards fulfilled their obligations to the State in adhering to the specifications and completing the same to the best of their ability, but they have provided ancillary note that will redound to their credit in future years.

A brief résumé of the Project Committee's reports is given herewith. The full reports of the Committee<sup>2</sup> will be published and will be available for distribution.

<sup>2</sup> Report of Joint Committee on Roadside Development for 1939, Bulletin, Highway Research Board.

<sup>1</sup> A committee of the Design Department of the Highway Research Board on *Roadside Development* has been appointed with the following initial membership: H. J. Neale, chairman, F. A. Aust, P. H. Elwood, Wilbur Simonson, F. E. Clements, G. B. Gordon, J. L. Wright, Arnold Davis, A. R. Nichols, Frank Brant, Hugh Pomeroy.

#### HIGHWAY TYPES AND ROADSIDE AREAS

The third annual report of the Sub-committee on Highway Types and Roadside Areas contains a brief review of the two previous reports of 1937 and 1938 as a background for the present report. The objectives of the Sub-committee are outlined in a general way as the basis for a possible program for further detailed analysis on a regional administrative basis.

The 1937 report emphasized the need for a broader approach to the highway cross-section problem so that the right-of-way as a whole is considered a part of its surroundings.

The 1938 report further emphasized this relationship of the highway to its surroundings. The foundation of a well-balanced design is an adequate width of right-of-way, with roadbed, roadside, and adjacent lands all united in proper relation. The composite diagram in the report showing the "Trend in Expanding Widths of Divided Highways in Relation to Rights-of-Way" presented basic information recognizing the need for those elements that contribute to a balanced program of highway development.

The present report includes typical highway cross-sections now in regular use in one specific administrative region or highway district to show the gains which have been made in recognition of the many advantages of orderly roadside development through integration of landscape practices including flattening and rounding of slopes in initial highway construction. The cross-sections for the region selected typify the evolutionary progress in the improvement of the actual right-of-way and the relation of the right-of-way to adjacent lands.

In order to provide for factors of safety and recreation the modern highway should include provision for wayside areas in addition to the fundamentals of highway engineering and landscape design.

It is proposed that this single regional presentation serve as a sample for the guidance of further studies along similar lines in every administrative highway region of the United States.

#### SLOPE EROSION CONTROL

The prevention of erosion along and adjacent to highways is a widespread problem throughout the nation. The soil treatment thereof to prevent erosion has often proved very costly and in many cases has not always been entirely successful. For effective erosion control, the solution of these problems involves engineering factors pertaining to cross-section, methods of drainage, construction of stabilizing structures, and problems of location, and the necessary drainage structures with respect to topography, as well as forestry, agronomy and soil problems dealing with the establishment of conditions most effective for plant growth.

The Project-Committee on Slope Erosion has studied these problems as they relate themselves to the three major fields:

- (1) Watershed areas adjacent to the highways, both above and below the highway;
- (2) highway ditches, and
- (3) cut and fill slopes.

To study these related problems in the different problem areas of soil, climate and topography, 110 cooperative projects have been planned and constructed in 37 States. The work has gone forward according to the outline prepared by the committee. Results of the work, as based on three years' experience, are found in (1) the earlier reports of this committee, (2) the handbook now ready for publication, "Graphic Solution of Ditch Design and Erosion Control," and (3) in the preliminary and final reports of the various projects. The final reports will be digested by the future committee. The

time interval required for the testing and studying before conclusions may be evaluated is a matter of five or more years rather than the short time which has elapsed since these projects have been undertaken.

#### PLANT ECOLOGY

The Project Committee on Plant Ecology has made extended studies during past years of the plant materials best adapted for highway planting in the various climatic regions. The experience of the State highway departments up to the present time leads to these conclusions:

1. That in each region, existing vegetation along a highway furnishes the key to proper selection of the trees and ground cover plants to be established on each section of that highway.
2. That well-selected native trees and other native and well-naturalized plants can be readily established, and can be maintained after establishment on highway areas at low maintenance cost.
3. That successful and economical establishment of well-selected plant materials, either by artificial seeding and planting or by natural volunteer growth, is largely dependent upon *good original highway location, a well-flattened and rounded cross-section* and upon *restoration of soil* which will support plant growth.

The report of the Project Committee for 1939 covers an analysis of the problem of selection and use of ground cover plants on highway areas with special regard to the Northeastern and Middle Atlantic regions of the United States.

#### ZONING

Since the purpose of roadside development is to merge the highway into the

landscape surroundings, the studies of the Project Committee on Zoning justify the conclusion that comprehensive control of lands adjacent to the highways is essential to protect mutually the highway investment and the economic and scenic values of the adjacent lands. Zoning is an important implement of planning and as such the planning surveys being conducted by the various States will effect more permanency through its use.

#### ROADSIDE ECONOMICS

The Project Committee on Roadside Economics was appointed for the purpose of assembling data relating roadside development to safety, maintenance cost, and property values.

Since the accident records are not available for a sufficient period of time, and since there are extreme variations in accounting practices, only case history methods of study could be used on selected highway mileages instead of collecting comprehensive data based on entire State highway systems.

The report furnishes interesting data on the cost of various types and classifications of work on which roadside development funds have been expended, and also comparative data concerning mowing operations on improved and unimproved roadsides.

#### EDUCATION AND PUBLIC RELATIONS

In order to furnish literature concerning activities of the Joint Committee and roadside development operations in various parts of the country, a Project Committee on education and public relations was appointed. The report of this Committee was accompanied with a first issue of the bulletin entitled "Roadsides—A Record of Progress"—the bulletin which the Committee expects to publish quarterly. This Project Committee also sponsored a traveling photographic exhibit in

cooperation with the Public Roads Administration. The Committee reports and cites various articles on roadside development which have been issued during the last year.

In conclusion, the Chairman is desirous of acknowledging the valuable and conscientious cooperation received from the various members of the Committee and project committees, the Director of the Highway Research Board, the Chairman

of the Department of Design of the Highway Research Board, the Public Roads Administration, the Soil Conservation Service, the National Park Service, the Tennessee Valley Authority, the United States Forest Service, the various State highway departments, and the many public-spirited citizens who have given of their time and thought toward an economical and efficient program of roadside development.