

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

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SYNOPSIS

A review of roadside activities, dating back less than a decade, shows that the movement which first developed in the interests of esthetic landscaping was very quick to become one of economic and utilitarian importance. Today such undertakings include consideration of proper drainage, the prevention of erosion, creation of land values, safety factors, snow control, and the provision of greater opportunities of highway use for the motoring public.

When a pavement, bridge, or any other mechanical structure is built, it immediately becomes a liability, in that it begins to deteriorate and create a maintenance expense. Not so with roadside development if done along technical lines, for when a roadside is properly graded, drainage adequately cared for, and ground covers and trees established, nature is given an opportunity to work day and night in building up positive assets and creating an immeasurable reserve of utilitarian benefits. Such a program is not merely roadside beautification or roadside improvement, but roadside naturalization.

The results obtained from current research projects justify the belief that the saving in maintenance operating costs made possible by a roadside program will alone offset initial construction costs, and that over a period of years a fund may be thereby set up which will be sufficient to landscape many thousand additional miles.

This brief review of intensive roadside activities covers less than a decade. In 1928 an amendment to Federal Aid highway legislation permitted the planting of shade trees as a part of Federal Aid improvement, but because the cost of highway construction tended to use up all the available funds before tree planting could be considered, very little was accomplished at that time. Prior to 1930 various committees of the American Association of State Highway Officials had discussed phases of roadside maintenance, such as care of trees, shrubs and plants, advertising signs, the cutting and clearing of vegetation on the right of way, and in 1929 the committee on Road Design recommended "That the esthetic development of the highway

shall be considered of primary importance in its location and design, and that men of proper training for the consideration of this feature be employed on such work." In 1930 the Association appointed the first Committee on Roadside Beautification. No sooner had this Committee started an intensive study of the subject than we realized that the term Roadside Beautification was a misnomer, for it focused the attention of the public, as well as the engineers, primarily on esthetic features. The subsequent discussions brought out forcibly the fact that there are important economic and utilitarian factors in a comprehensive roadside development program which are of equal importance to the esthetic values. In order to present adequately

the technical aspects of the subject in tangible form, it was evident that the subject would require intensive research. About this time the Highway Research Board was urged by the American Society of Landscape Architects to make a nation-wide survey of the whole roadside development situation.

In 1932 the Committee of the American Association of State Highway Officials recommended the appointment of a Joint Committee on Roadside Development of the Association and the Highway Research Board. This Joint Committee was duly appointed and held its first meeting the following year. It has met annually since that time. In July of 1936 an open conference was held at Saint Louis, Missouri, where delegates of state highway departments from all sections of the country, as well as representatives from federal departments, were present.

The rapidly increasing interest which has been manifested in the condition and development of roadsides during the past decade has found various terms being given to the subject—first, *roadside beautification* by the garden clubs and others interested in tree planting and esthetic effects—and later, *Roadside Improvement and Roadside Development*—synonymous terms, including the engineering aspects of location, alignment, grading, drainage, erosion, zoning safety, as well as purely esthetic features of landscape design.

When the development of the network of roads in the United States is traced one can easily see the reason for the popular demand that something be done to improve the roadsides and restore their natural beauty. The earliest trails which were cut through the virgin forests, allowed sunlight and air to penetrate their density and permitted the dormant undergrowth to break forth in all its glory along the trail sides. Then came the widening of these trails to country

roads, again leaving nature an opportunity to grow unhampered, and later to the intensively developed highways with their heavy cut and fill slopes and widening processes denuding the roadsides of all vegetation as well as fertile soil, leaving nature no chance for rehabilitation. In the final analysis, the basic objective of a roadside development program is to adapt the engineering and landscape efforts of men to the forces of nature. In this way a proper and permanent balance of natural forces will be economically obtained. We now develop the roadsides and landscape them for more economic maintenance, for more adequate drainage, for more opportunities for use by the travelling public, in order that they may be more pleasing to the eye, may offer definite safety and utilitarian factors to the motoring public, may create enhanced land values, control drifting snow and sand, and thereby make them assets rather than liabilities.

In 1934 this Committee stated in no uncertain terms that it "has found and maintains that practical roadside development when accomplished in accordance with approved principles of landscape engineering contributes to the economy, efficiency, and safety of highway maintenance and operation. In addition to these factors which elevate standards of efficiency, safety and economy are the many important considerations of increased utility and esthetic enjoyment." These statements have evidently been generally accepted. At least they have not been disputed. Why? Are they infallible or is it a case of little concern to the engineering profession? The Committee recognized the intangibility of some of these statements, and in order to substantiate them, proceeded immediately to organize five major research projects for intensive study, viz:

- 1 *Project on Erosion*. This sub-committee prepared an intensive outline report for a typical highway erosional

and soil conservation research project. This was subsequently approved by the Bureau of Public Roads and the Soil Conservation Service of the U S Department of Agriculture and a memorandum of understanding between these agencies was issued effective May 6, 1936. On July 16, 1936, Mr T H MacDonald, Chief of the Bureau of Public Roads transmitted this memorandum to the District Engineers of the Bureau with authority to proceed with the execution of this project by the several states.

The sub-committee on erosion has already received two completed reports from Arkansas and it is understood that Missouri, Wisconsin and Virginia have initiated or are awaiting approval of this project. It is hoped that other States will be ready to report activity within a very short time.¹

2 *Plant Materials* This sub-committee's report emphasizes the need for technical landscape analysis of the region traversed by the highway.

3 *Zoning* This sub-committee has made a study of the principles of urban and suburban zoning and the adaptation of these to rural areas along highways and parkways in those regions where zoning legislation has been enacted.

It reports the following findings:

(a) The problem of securing adequate right of way is becoming increasingly complex as highway systems are improved and extended.

(b) In securing additional right of way for highway purposes it is found that in many cases so called ribbon development of lands adjacent to the highway has resulted in the building of certain temporary and unsightly structures within areas to be acquired. These structures tend to jeopardize the value of the highway investment.

(c) Much of the commercial development which follows highway reconstruction tends to encroach upon the new highway limits, in effect narrowing the highway and introducing traffic hazards.

(d) It is apparent that the countryside adjoining the highway must be considered to have an important direct relationship to lands within highway limits. It is important that some means be found to regulate and control the use of these adjoining lands. This end should be accomplished by comprehensive rural zoning.

(e) In those states where rural zoning laws have been enacted their effect has as yet been purely local.

4 *Highway Types and Roadside Areas* This sub-committee has been continuing its studies and collecting factual data. It was considered advisable to wait for more comprehensive outlines from other project committees before attempting to formulate a research outline, in order that their conclusions and recommendations might be incorporated in the studies. It is essential that consideration be given to rights of way requirements for erosion problems, planting requirements and zoning processes, as well as engineering factors.

5 *Educational and Public Relations* The salient points covered by this sub-committee report are.

1 Landscape engineering demands broad fundamental training in engineering, architecture, ecology, horticulture, botany, entomology and other sciences relating to landscape designs. Therefore educational standards for this profession should be comparable with those required in other technical fields involved in highway design and construction.

2 The following means for developing and training field organization should be made available.

(a) A pictorial and descriptive record of field methods, practices and accomplished results.

(b) An outline of supplementary reading and study.

(c) A series of state or intra-state short courses or conferences.

(d) A manual of standard roadside development practices.

3 The public should be kept informed regarding progress in roadside development through the medium of—

(a) Authentic articles in the press, popular magazines and technical journals

(b) Slides, film strips, etc., released by State Highway Departments, the Bureau of Public Roads and the Highway Research Board

The value of the results obtained by these research project committees will be dependent on the cooperation and assistance they receive from the highway engineering organizations in conducting these researches and in putting them into operation. Each of the projects is of economic importance to maintenance operations of our highway systems. We are more and more confident that the assertions made in our 1932 report are substantially correct, but to what extent a state is justified from an economic standpoint in promoting an extensive roadside program is not definitely known. We feel safe, however, in assert-

ing that the maintenance operating costs incident to erosion alone on undeveloped roadsides as compared with the same roadsides after sloping and planting, would offset the cost of the initial construction, and over a period of years would set up a fund sufficient to landscape comprehensively many thousand additional miles.

When a pavement, bridge, or any other mechanical structure is built it immediately becomes a liability, in that it begins to deteriorate and becomes a maintenance expense. Not so with a roadside properly developed, for when a roadside is properly graded, drainage properly cared for, and ground covers and trees established, nature is again given an opportunity to work day and night throughout the year—increasing in value, building up positive assets, setting up an immeasurable reserve in utilitarian benefits for the travelling public—in enhanced land values, and an ever increasing local, state and national civic pride.