

HIGHWAYS OF THE FUTURE

Paper presented by Thos. H. MacDonald, Chief, U. S. Bureau of Public Roads, at Fourteenth Annual Meeting of the Chicago Regional Planning Association, Palmer House, Chicago, Illinois, May 6, 1937.

When I approach the subject "Highways of the Future" with the question of "What is there of serious import that may be brought before this Fourteenth Annual Meeting of the Chicago Regional Planning Association?" I am confronted by a knowledge of the vast amount of intelligent effort that has already been devoted to the subject of planning in this immediate area. Probably no similar area has a greater wealth of material of sound engineering and economic value on which to base a program of construction costing hundreds of millions of dollars and reaching for an unlimited period into the future.

While recognizing the all too frequent error of occupying the time of an audience with a recital of the familiar facts of the past, when the matter of interest is what can and should be done in the future, nevertheless it does seem important to catalogue briefly, at least, some of the more important foundation stones already laid in this area that will serve as a secure base for future highway improvement undertakings.

The very splendid Plan of Chicago prepared under the direction of the Commercial Club by Mr. Daniel H. Burnham and Mr. Edward H.

Handwritten signature: Daniel H. Burnham

Bennett, beginning in 1906, even though the amazing growth of motor vehicle traffic had not yet given any real indication of the magnificent proportions it has so rapidly attained, is yet, and I predict will remain, a work of dynamic importance and conception without time. While there have been continuous studies in this area and the Chicago Regional Planning Association is now fourteen years old, there are certain studies which, by reason of the great amount of factual data gathered and analyzed, should be particularly mentioned.

In 1934 a study of highway traffic and the highway system of Cook County was conducted through cooperation with the Cook County Highway Department, the Illinois Department of Highways, the Chicago Planning Commission, and the United States Bureau of Public Roads.

In 1932 the Department of Public Works and Buildings, Division of Highways, made a survey of traffic, and in this study included an intensive study of the Chicago area.

In 1932, also, the Committee on Traffic and Public Safety of the City Council of the City of Chicago, Mr. John A. Hansen, Chairman, Mr. Miller McClintock, Consultant, prepared a series of three reports including: The Greater Chicago Traffic Area, Limited Ways for the Greater Chicago Traffic Area and A Limited Way Plan for The Greater Chicago Traffic Area.

Many other notable engineering studies and reports have been made and are available, one of which is the study by Mr. Elton J. Arnold. So, recognizing the sound values and comprehensive scope of the studies and reports which have been made and the need to keep them up to date and to examine and correct them in detail, it seems to me that the problem now facing the Regional Planning Association is the major one of how to fix priorities for the improvements contemplated, and how to devise a mode of operation that will carry the plan into effect with reasonable adherence to the indicated sequence. This requires not only an evaluation of the elements of the plan, but also a formulation of methods of financing them which will draw fairly for their support from the various benefitted groups in proportion to their benefits and their capacity to pay.

In this connection, it seems important to review briefly some of the handicaps that are peculiar to our system of governmental administration. These are pointedly defined with particular reference to this area in the report of the 1934 Cook County study and what was then written is still wholly true and of even greater importance because of the growth in the conception and cost of the projects now necessary to give major relief to traffic. The report says: "The County of Cook, the City of Chicago, the State of Illinois and the various smaller political units within Cook County, are contemplating large programs of highway and street

improvements. Each political unit is limited in its operations by legal restrictions. To obtain, therefore, a unified highway system, it is essential that all agencies agree upon a definite improvement plan. By coordinating highway improvements according to an established plan with a known sequence of improvement, each community involved will secure the greatest possible benefit for the least expenditure.

"In order to obtain the best results each governmental unit engaged in highway and street improvement should adopt the plan and work in harmony to complete the program of improvement. The poorest section of a highway determines the capacity of the entire route, and the failure of one political unit to follow the general plan of improvement may impair highway service to an entire community." Since this report was written our conception of the radius of influence of such a concentration of population as the City of Chicago, has increased to such an extent that many governmental entities in addition to those mentioned, are now vital elements in this enlarged regional area.

During a study of conditions abroad, there was opportunity to observe various aspects of this problem of governmental control and the inevitable effects growing out of them. Paris presents the opportunity to observe major projects under way for the relief of street and highway congestion in a metropolitan area. One gets a conception of the instability of great population centers when

new transportation facilities are available. If we have accepted the changing aspects of our own cities because they are in a relative sense youthful, the example of Paris is illuminating since it is an old world city, ancient in comparison to any of our own. Paris did not grow without direction, although it can not be said to have adhered to a single plan through the years. What we now see is the result of progressive conceptions, each developed in harmony with those preceding. The earlier undertakings of major importance, beginning with those fostered by Louis XIV, were the result of power exerted through a single individual. Highways, but particularly bridges, developed by Louis XIV and Napoleon are yet in service, a tribute to the ability of the technicians of a century and a half ago. Because of governmental control exerted through rulers who had the foresight and determination to accomplish improvements of magnificent proportions adequate far into the future, Paris has remained undated, a city without time.

With the advent of motor transportation and the inevitable changes which it has brought in the amount of traffic and the extension of the city's influence into the surrounding country, new major projects are now formulating; and although, in the course of years, France has supplanted its once absolute rulers by a form of democratic government not unlike our own, it is important to note that the modern projects are being conceived and directed by engineers of the National Department of Highways, all of whom have been trained in the Ecole des Ponts et Chaussées, the French School of Roads and Bridges. For it has been this same great technical institution that has supplied the genius to carry out all the great national engineering undertakings at least as far back as Louis XIV, and it is this institution whose sons are now the agents of a sovereign people in carrying out the modern street and highway developments in and surrounding the city of Paris. With this long unbroken succession of single-minded, long-visioned control I ask you to compare the situation as to engineering control existing in the area comprising the Chicago Region.

Or take another example, that of the Germany of today. Here a program of construction of super-highways is under way which will give roughly three lines of highways north and south and three east and west, with a total of about 4,500 miles.

The area of Germany is about 3.2 times that of Illinois, its population eight times. On the basis of area, therefore, the German undertaking is about equivalent to the construction in Illinois of 1,400 miles of super-highways; on the population basis, to a construction of about 560 miles in the State. If, however, we base the comparison on the ratio of motor vehicle registrations, Illinois would be required to build around 6,660 miles to equal the undertaking of Germany. Without here considering either cost or details of design, the governmental situation in Germany that produced the previous conditions and those that are responsible for the present undertakings are as strongly contrasted as it is possible for opposites to be. Germany is composed of 18 States. These States, under the Emperor, were responsible for the laying out and building each of its own highways. I quote Dr. Allmers, President of the National Association of the Motor Industry of Germany: "State and provincial governments, district and communal authorities, made every effort to obstruct a sound development based on uniform principles. The Ministry of Transport was powerless, and years elapsed before applications were sanctioned by the competent governments of the federal States. Every district road engineer built his roads in a different way, but nearly all of them built them in the wrong way, and only a few appreciated the requirements of

automobile traffic and these few mostly lacked the necessary funds."

Prior to the war there was no concerted national plan directed toward the building of a system of roads. It is true that the Ministry of Transport had a broad study under way, and, while I can not be certain, I am satisfied that the system which I saw in its developing paper stages nearly ten years ago, is the system which was the forerunner, at least of the system which is now rapidly taking form. Undoubtedly it is changed in some respects as a national concept, and certainly the magnificent concept of the engineering and architectural designs is many times greater than was ever put forth by the old Germany. But the important point is this, - that it was not until the National Socialist Party, with its Chief, Herr Hitler, established its authoritative control over the national life, that this great scheme, - amazing both in the magnificence of its engineering and architectural design and in the speed of its realization - began to take form. One feature of it is of outstanding significance from the governmental angle.

Practically all of this system occupies wholly new rights-of-way. That it has been possible to obtain so quickly the locations necessary, is a demonstration that all of us who have been concerned with the securing of land

necessary for public improvements must agree is a most convincing example of the power and determination of the national government of Germany.

France, through a history of at least a century and a half, has carried out major improvements through a central engineering control with all the personnel developed, or at least given final training in a single institution. In contrast, Germany almost over night upset the status of State control of planning and executing highway improvements and turned to a national plan rigidly controlled in conception and execution through the power of authoritarian government.

These examples doubtless sufficiently develop the principle that a type of governmental control is necessary in the Chicago regional area that will result in a ruling concept in the making and execution of a program, if such a program is to be faithfully carried out over the period of years necessary for the consummation of a truly adequate plan. During the past several years when the highway work has been forced above its normal pace to give employment, we have seen the ill effects of lack of planning, of control too decentralized, and of too many units having similar authority in the same general area. The right-of-way problem under present laws and multiple units of control is

an impossible one in a metropolitan area and only slightly less so in the rural areas. The securing of the necessary property and the evaluation of property damages is the greatest single deterrent to the making of plans that are adequate for our future streets and highways, and unless remedied will impose waste and delays into an endless future. I do not propose the effective remedies. For effective governmental control in the Chicago regional area the problem is one for solution through such associations as the Regional Planning Association in conference with the governmental units involved.

If long years of public service have disclosed to me a ruling principle for accomplishment, it is that those having the authority and charged with the responsibility for carrying improvements into effect must have a major part in the preparation of the plans. It is acting upon this principle that the Bureau of Public Roads has exerted every effort to secure a nation-wide highway planning survey, but in its execution the work is being done under the direct supervision of each State highway department participating.

This information which is being gathered in Illinois, in common with 39 other States, will add fresh knowledge of great importance to the information already available on

which to base a comprehensive plan for the Greater Chicago Regional Area. But I have little faith that it will be possible to bring these conceptions of integrated traffic facilities into actuality unless some single and effective agency is placed in command and charged with the execution of this work in this area.