

THE CHANGING HIGHWAY PICTURE

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The year 1936 has marked outstanding achievements in the field of highway improvement. It has given to the world a series of notable projects conceived on a magnificent scale and carried to completion by a combination of engineering genius and industrial efficiency. Many of these finest examples of progress are of other lands.

The nearest to us in many ways is the Mexico City - Laredo Highway officially opened in July last, - an accomplishment of the Department of Communications and Public Works that commands the respect and enthusiasm of our whole nation. It assures the continuous growth of friendly relationships between the people of Mexico and the United States at an accelerated rate that could not be possible without this great physical bond.

In Europe, Germany has set an example to the world in the conception of a nation-wide plan of motor roads designed on a scale so surpassingly big that it is difficult through mere description to convey to others a real understanding of her program. No imagination can envision these roads becoming inadequate regardless of the amount of traffic that develops.

France is busily engaged upon a program of wholly new arterial auto roads to serve Paris and the surrounding communities and upon the rebuilding of a number of the time-famous bridges over the Seine.

Far away Hungary has completed from border to border a highway of modern design and very high class construction even though in its eastern reaches the major traffic is animal-drawn.

Argentina in December celebrated the opening of 380 kilometers of modern pavement between Buenos Aires and Rosario. Señor Allende Posse, President of the National Highway Department, designates it the southern-most section in a system of Pan American highways which will permit ready communication by land between all of the countries of this continent.

In our country the greatest engineering and construction triumph is the San Francisco Bay Bridge - a product of the Division of Highways, Department of Public Works of California. The project is outstanding not only in its design and in the pioneering methods of construction, but also in its assured success as a public investment. Financed through the issuance of revenue bonds whose total will reach some \$70,000,000 when all supplementary construction is completed, the income from reasonable charges for the use of the combined rail and highway facilities will carry the interest, operation costs and retire the principal within a reasonable time.

The grade crossing elimination program while made up of a large number of units, in the aggregate accomplishment deserves a high place in the year's notable highway progress. Undertaken as a part of the 1935 works program to give employment, the number of crossings completed and included in the going program is 1825, with an additional 278 programmed. Obsolete crossing structures, many very dangerous to highway traffic, have been reconstructed to a total of 289, with an additional 43 programmed. Standard flashing light protection signals have been installed at 719 crossings, with 447 additional included in the program. Authority for carrying the full construction costs of grade crossing improvement projects from Federal funds was first provided in the public works legislation of June, 1933. The first ensuing program provided for the elimination of 690 grade crossings and the protection with standard signals of 706 crossings. Thus, we have since the summer of 1933 a total of 3125 grade crossings completed or carried in the program for immediate construction, and standard protection signals installed and being installed, total 1872. This combined elimination and protection program totals 4997 railroad crossings and does not include an additional number from which the travel has been removed by road relocation. While the construction costs in large measure have been paid from the Federal funds, the States and the railroads have provided the rights of way and other incidental costs which in the aggregate constitute a substantial contribution.

These are the statistical records. Too often we discuss highway progress in terms of the dry facts and thus obscure the social significance of the facilities provided. These projects which now carry highway traffic over or under the railroads were selected by reason of the relatively large number of trains, vehicles and pedestrians which daily moved over them. Many are on important streets in large cities. The number of people who now cross in safety the busy railroad lines is yet problematic. Yet from the knowledge of the average traffic flows, it is conservative to estimate that a population equal to the greatest city in the country, New York City, is daily protected from train operations by the facilities provided in this grade crossing elimination program.

Repeating what I have said heretofore, public policies relating to highway improvements and highway use in the future will be very much more modified by their social significance than in the past. Not that this marks a change exclusively of the past year, but certainly the trend of public thinking toward greater recognition of social objectives is much more apparent. For two decades or more the struggle has been to get out of the mud on any kind of roads. Now, with this end only partially accomplished, the demand is both apparent and insistent for highways that have far greater qualities of social service.

In evaluating the enlarged attributes of our highways, with good reason first place must be accorded to safety. Following these provisions are greater efficiency in time saving and more attractive and better kept highways. The difference between the uncontrolled use and misuse of our roadsides, particularly along our major thoroughfares, in contrast to the roadsides of Europe, is shocking. This discussion is not introduced to cover the details of these subjects but to call definite attention to the changed conditions to be met by the highway departments and highway officials.

There must be a considerable expansion of the highway organizations and the scope of their operations. Three of these distinctive fields require definite sections to handle - traffic engineering, landscaping and planting of roadsides and the planning of future work as a continuing element of administration. These are not temporary but permanent additions to the work of the highway departments, State and Federal, to permit them to carry successfully logical responsibilities. These are neither new nor hazy ideas. A few States have accepted them and have made real progress in one or all of these particular fields. The point is, however, that these are essential in every State and in its cooperative work with the States the Bureau of Public Roads acknowledges its responsibility.

Two of the most important changed conditions of the past two or three years are the entrance of the State highway departments into the fields of both urban and secondary highways. Now, with the new Federal legislation, to take advantage of the funds provided it will be necessary for the States to have legal authority to act and to use funds under their direction in the urban districts and in the rural communities.

Always, more work looms ahead. It is somewhat confusing to attempt a statement that will give a clear conception of the annual amount of construction work that has been administered in cooperation between the State highway departments and the Bureau of Public Roads. There have been a number of different appropriations provided at irregular intervals and these have overlapped, so that possibly the most accurate way to measure the annual construction program is to average the results for the 3-1/2 year period, July, 1933 to January, 1937. This has the advantage of permitting the State highway departments and the highway material and construction industry to get a fair conception of the average program that has been current and to compare this average with the new program for which the Federal funds are provided now.

The average total estimated cost of the projects approved annually for this period is \$375,000,000, divided between Federal funds \$315,000,000 and State funds \$60,000,000. The Hayden-

Cartwright Act permits a new program for 1938-1939 which reaches a total of \$350,000,000 divided between Federal funds \$200,000,000 and State funds \$150,000,000. The allotments for the fiscal year 1938 have just been made to the States. These new allotments, together with the balances of previous funds available for new projects, will permit a total program of new projects of \$550,000,000 if the States provide \$230,000,000, in addition to the work on going contracts yet to be done. Construction work therefore in the total amount of \$800,000,000 for the ensuing year is possible if the States will furnish the funds necessary to meet the Federal allotments.

While this is a statement of the potential program we know that this whole program of new and necessary construction will not be secured. There are two reasons, first, the diversion of highway income to other purposes, and second, the diversion of highway income from the jurisdiction of the State highway departments. These two causes combine to take from the jurisdiction of the State highway departments upwards of 40 per cent of the total income. These are the facts and certainly must not be construed as criticism of the large majority of States that have their financial affairs in order and are taking full advantage of the Federal contributions for needed highway facilities.

In conclusion, as we review the months which have been filled with extraordinary efforts to carry the maximum highway program for the primary purpose of providing employment, it is both a pleasure and a responsibility to make fitting acknowledgment of the cooperation which has been so generously extended by the contractors and by the highway industry as a whole.

Fortunately, the greatly improved economic conditions have made many of the administrative requirements unnecessary in the future program. We begin the new year under more favorable circumstances than have prevailed for many years, and I am certain that we can undertake with enthusiasm the orderly rhythm of the year's program of highway improvement.
