The Highway Outlook
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Mr. Chairman and Gentlemen of the Convention: I am glad to meet with the members of this Association again. It is one of the old established Associations that has consistently stood for sound policies in the development of the road program of the United States. It has been especially interested in the development of the materials, machines and implements and the equipment necessary for the efficient and economical construction of the highways, embracing, if you please, a very practical material side of the highway development program in which, I presume, this country has made a far greater advance than any other country in the world. The problem today is largely concerned with finances, and as I see the present situation, we shall be more and more concerned with the financial side of highway improvement work. I am not going to read a long paper to you this morning. I am not even going to assert that some of the principles which I bring before you are those that are going to be adopted immediately, but it seems to me that certain indications which we have at the present time are light straws which point the way the wind is blowing.

Advancement Not Due to Any One Agency.

The great advance that has been made in highway development, within the past few years, contrary to what your Chairman has said, is not markedly the work of any single agency. I feel that the states and the Federal Government have developed a fine spirit of cooperation in dealing with this big task, and I am convinced that a similar spirit of cooperation must extend all through the industry associated with highway development, so that we may all be brought into close relation, not only the states and the Federal Government, but also the contractors, the men who furnish materials, and, most important of all, in my judgement, that element to which we are all responsible, the public - the tax payers who provide the funds with which the states, and you who are representatives of material or contractors' interests, must work. After all it does not make any difference how good a theory we are working under; it makes no difference how well we are doing or think we are doing our work, and it does not make very much difference how closely we harmonize the efforts of the states and Federal Government or that combined agency and the contracting agency, - unless we have the Public with us in that combination we shall fail; because, after all, the public furnishes the where-with-all for the continuance of this program. We must look to it for the means wherewith to extend our efforts, and in order to insure the continued support for which we hope, we must see that the Public benefits in a more than just measure from our efforts and our expenditures.

January, of all the months, is dedicated to the inventory, the analysis of profit and loss, the casting up of accounts. It is not so much a custom as a necessity. Private business could not succeed long without striking a balance sheet to govern the conduct of its operations. That it is the will of the people that governmental activities and their attendant expenditures must be able to stand up under keen scrutiny, and that each one must justify itself or be eliminated or materially reduced, is strikingly shown by the strength of the support from the public for the budget plan adopted to control the financial affairs of the Federal Government. A balance sheet has been set up which adjusts the outgo to the income. Further the proportions of the income to be devoted to the several purposes have been and are being carefully weighed in a comparative sense to adjust them as fairly as may be possible to each other.

The Demand for Economy.

There is the universal demand for economy which must be met. There is the insistent demand for the lowering of taxes which must be heeded. The same demands are made upon the local, state and Federal Governments. On the other hand, there is the unemployment situation, and the period of international competition ahead, and which we must prepare for. I believe it is not necessary to dwell on that particular feature. I think we all see that this immense war debt which the four nations have accumulated and which must be paid back to this country, cannot be paid back in money but must be paid in goods, and, if you please, in cheap labor. And for that reason, I say that we are facing a competitive period, industrially, such as we have not seen heretofore. And then there is the need for internal improvements which results from the fact that we have held back since 1914, when war was first started abroad; in the performance of needed works of internal improvements - works needed not only in the rural districts but in the large cities and in the small cities alike. Needed buildings of all characters; street improvement in the municipalities; public works such as water supply and sewerage; all these we have held back practically since 1914, and it was only in the latter part of 1919 that they were released in a great flood.

We have, of course, been making a little progress for the past two years, particularly in the building of highways; but it seems to me that the situation we now face demands the greatest wisdom, foresight and leadership, if we are to proceed along those lines which will avoid the peaks and the depressions of which, I believe, we have all had an ample sufficiency. I do not believe we wish to go quite so high or come quite so low as we have in the wave of the past several years. As to the highway outlook, which is the subject of my paper, it is not determined by any narrow or limited consideration, but by all the broad social and economic relationships with which the highways have intimate contact. We need to establish a highway balance sheet, national in extent, on which we may set up, on one side; 1. The funds available; 2. The economic situation; 3. Prices and costs for highway improvements. On the other side: 1. The deferred highway improvements; 2. The returns from highway investments; 3. The need of universal easy and cheap transportation facilities.

The Funds That Are Available

You see we have balanced on one side rather definitely determinate features, and against them what we may call the imponderables; that is, certain elements which we have a great difficulty in measuring, and in fact have only within the past year or so been able to measure definitely, at least in a relative degree. Now as to the funds available; If we go back to 1904 we find we were then expending about $59,000,000 per annum. In ten years - that is, in 1914, just prior to the war, we increased that expenditure to about $240,000,000. By 1918 we had increased it to $286,000,000, but during that time the value of the dollar had diminished so rapidly and so greatly that the $286,000,000, would pay for only about 20 per cent more construction and maintenance than the $120,000,000, which was available in 1910. In 1920 we advanced still further to an expenditure of $500,000,000 and in 1921 we spent about $600,000,000. Our estimates of the amount of money available for 1922 are as high as $720,000,000, but that, it seems to me, is a theoretical total because of the fact that it is subject to certain limitations and conditions. It may be affected particularly by public opinion; it is a total which may be reduced by changes in local sentiment; but, happily, we are bringing the dollar up toward its normal value so that we will be able to get along just as well on smaller resources. If, therefore, we figure our program this year on the basis of the actual expenditures last year, I think we will be on the safe side, particularly in so far as the purchasing power is concerned; by which I mean that we ought to be able, with the same amount of money, to accomplish much more this year. The sources of these revenues last year, as nearly as we can arrive at them, are as follows: From motor vehicle revenues, (not from their taxation as property, but from license fees, 95 per cent of which go into the highway funds) 19 per cent; from state road bonds, 7 per cent; local road bonds, 33 per cent; state taxes and appropriations, 12 per cent; Federal aid, 14 per cent; county, township, district taxes and assessments, 14 per cent. We have, then, for last year, and we assume that we can carry forward the same relative ratio, out of state aid and Federal aid one third of the cost of our total road bill - 33 per cent; from local bonds, 33 per cent; from state road bonds, 7 per cent; from state and local taxes, 26 per cent. Our estimated construction last year was $420,000,000; estimated maintenance, $180,000,000; a total expenditure of $600,000,000.

No Decreases in Federal and State Aid

I leave it to your imagination to forecast what changes there will be in those sources, and in the amounts derived from them. We know there will be no decrease in Federal aid, because the moneys are already provided. The same is true of state aid, so that the 33 per cent from these sources is practically assured. I assume with reference to the local bonds which account for another 33 per cent of last year's appropriations, that authority exists for their issuance which may or may not be exercised, and I believe there is a possibility of a decrease from this source by failure to issue the bonds. The state road bonds, I think, will not be decreased and probably will be actually increased in percentage. As to the state and local taxes, those of course were levied for this year, but we will go into the tax levying period for next year while we are still in this darkened or darker period, and it is my expectation that next year will see a decrease in the general tax items.

Let us see about the economic situation. Very briefly, agriculture, or the farm, furnishes 40 per cent of our entire population. It furnishes normally more than 40 per cent of our buying power in this country. As you know, we are going through a severe agricultural depression. It seems to me that the statement that was made recently by the Secretary of Agriculture ought to picture for you the reason for the attitude of the public, particularly in the agricultural districts. If prices now received by farmers for their crops were such as prevailed in 1919 and in the earlier part of 1920, they could pay increased rates without inconvenience, but farmers are not receiving such prices. In Iowa, for example, the farmers are receiving for their corn a price equal to but 65 per cent of the pre-war normal; for their oats, but 61 per cent of the pre-war normal; for their cattle and hogs, somewhat less than the pre-war normal. They are paying for labor 132 per cent of the pre-war normal; they are paying rent on land values 160 per cent of the pre-war normal, and even since the late reductions are paying freight rates 150 per cent of the pre-war normal. In other words, we have 40 per cent of the population in the country, representing more than 40 per cent of the buying power of the country, finding a spread of from 60 to 70 per cent between what they are receiving for the products which they have to sell and those things which they have to buy. Practically everything the farmer buys is well above the pre-war normal at the point of production, and to those higher prices must be added the higher freight rates to the farms.

Agricultural Situation is Serious

It is this condition which makes the present state of agriculture so serious. In times past we have seen lower prices for farm crops, but in those times the cost of things the farmers bought was low in proportion. The trouble now is that, whereas the prices the farmer receives for his crops are lower than before the war, the prices he pays for the things he needs are from 25 to 75 per cent above the pre-war prices, hence the purchasing power of the major farm crops is probably lower than at any time inour history, and this has very much to do with the nation-wide industrial and business depression. So much for the economic situation with reference to agriculture. And that same condition, as I have said and as you men know, is largely reflected throughout industry. The situation will not be greatly improved unless we can find a way to reduce that spread between what the farmer produces and what he has to buy. One of the things he has to buy, and the one thing in which we are most interested is highways, which leads me to a review of the trend of the prices and costs of highway improvement.

I am not trying to state a general average, because that is unfair, but the fall and winter lettings reflect that those items of work which are largely represented by the labor of men and teams have gone down practically to the pre-war level in price; in some cases perhaps they are still above that level, but not unfairly above it. In other words, wherever the larger part of the cost is made up of the wages of labor of men and teams, we are buying as cheaply, perhaps even more cheaply, then we should, and there should be no hesitancy in going ahead to let contracts to the extent of our ability for all work of that character. That would include the grading work. It would include all forms of work of the lower-cost type, where such road types will suffice for the purpose. It would also include the laying of the foundations or the fundamental work of road improvement for the higher types of pavement. But the prices for certain classes of materials and freight rates have not taken their fair cut along with labor. It is up to the road contractors of the country to see that their overhead and their profits are figured on a reasonable basis comparable with the cut that labor and the agricultural producers are having to take, because we have to break that spread between what we are receiving for our basic products in this country and what we pay for the manufactured products. We cannot raise the price of farm crops to meet the present levels of so many of the things that must be purchased, so we must bring the present levels of those things which we have to buy down to at least a fair meeting point somewhere between the two extremes. It is absolutely the only way that the economic balance can again be restored in this country. I think that is not a controversial point; it is simply a statement of a plain fact which exists. In other words, labor and the producer of our basic products have taken a very serious cut.

Now in order to meet the situation, the producers of materials, and the furnishers of transportation, must meet those cuts, at least in a greater degree than they have been met so far. There is no other way in which we can contimne to succeed in a large road program with the support of the public. It is an economic impossibility on any other basis.

The Deferred Highway Program

On the other hand, - and this is not quite so gloomy a picture - we have all the things which go to make up the reasons for continuing the highway program on a large scale, and the first of those is the deferred highway program to which I have already referred. In 1910 we had half a million motor vehicles in this country and we were spending, for the construction of roads and for their maintenance, about $120,000,000. In 1918 we had advanced our annual production in construction and maintenance only about 20 per cent above that figure; that is, in eight years we were producing only about 20 per cent, more due, as I said before, to the shrunken value of the dollar. But at the same time we had gone up about 1,200 per cent in automobile registrations. I will quote just briefly:

"During the period of 1910 to 1921, the potential number of motor vehicles demanding highway service increased more than 1,800 per cent; our actual expenditures for construction and maintenance increased about 400 per cent.

"During the period of 1910-1918, motor vehicle increased more than 1,100 per cent; highway expenditures about 140 per cent."

And I want to make this very plain, that at the end of that eight-year period in 1918, because of the shrunken value of the dollar, we are producing no more roads than we were in 1910 before we had this very large motor vehicle registration.

"During the period of 1918-1921, which has been the period of our greatest highway production in this country, motor vehicles increased about 700 per cent and highway expenditures about 260 per cent of the 1910 figures. But those figures do not truly represent the differential between the demand for highway service and our actual production. Without attempting impossible refinements, if the cost index of 1918 be taken at two and that of 1910 at one, the actual increase in production of 1918 over 1910 was only 20 per cent, and if the index for 1921 is taken at one and one-half the actual increase in production of 1921 is only about 233 per cent over the 1910 figures. That is, taken as a national aggregate, the number of motor vehicles, all at least potential users of the highways in some degree, has increased in eleven years since 1910 more than eighteen times."

Our greatest annual production of serviceable highways measured by the construction and maintenance expenditures has been not more than two and one third times the production of 1910, and it has been only within the past three years that the production has gone forward at a rate approximating the maximum.

Slackers in Highway Construction

I think that those figures bring out the fact that, for at least eight out of the last eleven years, we have been deferring the program of highway building in this country that we should have been carrying forward. For about three years or two and one half years we have carried on a large highway program, but for at least eight and one half years we have been slackers in highway building in this country. Perhaps, I should not use the terms "slackers" as applying to the period from 1916 to 1918 because the building of highways was absolutely out of the question during that period; but we were slackers during the period from 1910 to 1916, or six years, and we allowed our highways to go back during the period of the war without adequate maintenance, to say nothing of new construction. It has taken at least three years to bring those highways back to a proper point of maintenance, and it has taken a very much larger expenditure every year than our pre-war expenditure to take up the lag in maintenance. During the period of the war, when everybody thought our highways were going to pieces so rapidly because of the increased traffic, it was not the fault of the highways, but our own fault, - it was not the fault of the motor truck or the motor vehicle so much as it was our own fault for failing to take the stitch in time. We were not devoting either the money or the labor to the upkeep of the highways and they absolutely had to go to pieces.

Now, as to the returns from highway improvements: All our lives we have been talking about how much highways produce, how valuable they are, but I do not know of any state-wide survey of the economic value of highways to a state as a whole except the attempt which the Bureau of Public Roads made in California in 1920. Our traffic counts there were taken at points all over the state and at different times so that they represented the vehicular traffic from June first to November first in the state. The counts gave us 375,000,000 vehicle miles over the state road system in that one hundred and fifty day period, a figure that would have to be cut down, we will say, to one-third, of that amount for the rest of the year. Our daily average during the period was 2,500,000 vehicle miles. Seventeen bus lines operating on the highways carried 610,000 passengers one mile daily. Approximately 23 per cent of the agricultural products of the whole state reached the paved state road. From 1910 to 1920 the population of the whole state increased 44 per cent while the population increase on the roads, exclusive of the large cities of San Francisco and Los Angeles was 63 per cent; or a greater increase by 19 per cent in the population along the highways, exclusive of the large cities; than the average increase for the state. Agricultural products increased 300 per cent.

The Value of Good Roads to California.

At the time this study was made there were only 1,345 miles of paved state road and 206 miles under construction out of a total system of 5,500 miles. If these figures are true, - and they are as true as they can be made by taking the count of the actual traffic on the highways,

--- if these figures are true for about one-fourth of the system, you can well figure, in a rather definite manner, the actual value to the state of the transportation facilities which will be furnished to the people in the state when the entire system of 5,500 miles of roads is completed. I do not think it is necessary to dwell on the other point, -- the need of universal easy and cheap transportation; but I think that you will all agree that during the peak period of the war, we came to understand as we have never understood before, that it does not make much difference what production and consumption there is in this country if, interposed between those two is the lack of transportation. Easy and cheap transportation is as fundamental to the development of this country as greater production or a better market for the goods produced.

There is perhaps no more striking illustration of what the lack of transportation may mean to a nation than that of China. Perhaps it is an extreme illustration, but the American Red Cross assisting in relief in China has operated on the basis of furnishing labor and paying for the labor as a means for distributing relief funds, and that labor was applied to the building of roads, because during the period there were starving thousands in parts of China and food was being taken to that country from America, there were excess products of food stuffs in other provinces of the same country and they could not be obtained because of lack of internal transportation facilities.

Now summing up and placing all of these factors for and against a large road program, I come to this conclusion: We cannot support a program as large as we had last year and as large as funds are provided for this year, without making, to an extent, a redistribution of the sources of those revenues. That should not, in my judgment be an upsetting or a violent readjustment, but a changing of more of the revenues from taxes on property as such to taxes on transportation as such, taxes on the users or on the use of the highways, because a very small tax, a very small value credited to the use of improved highways, will pay for the continuance of the road program. Such a tax, it seems to me, falls exactly where it should fall. I believe that there should be a determined effort made to continue the program on as large a scale as that upon which we have been proceeding the past year, with a readjustment to a reasonable extent, of the sources of revenue and a readjustment of prices, to a greater extent than we can yet foresee as applying to this year's road program for the higher types of roads, because I do not feel they are taking a cut comparable with that which has been taken by labor and the producer of farm products. In fact I do not think it is desirable that they should take a violent cut, but there must be a reasonable meeting of these other extremes which have been forced upon us.

Need of a Definite System of Highways

Now there is the other side of the picture that we have before us this year, the most important thing that will happen in my judgment in the highway situation for many years to come, and that is the laying out of a definite system of highways, national in extent but reaching down into the smaller communities - in other words, not so limited but that we will eventually bring improved transportation facilities near the door of the producer. If we confine our efforts to the furtherance of a program such as that which has been defined for the next ten to fifteen years, we will give this country a wonderful system of highway transportation facilities. In the last six months of this year, the mileage of actually completed highways under the Federal aid program has reached nearly the mark of 8,000 - that is, in the six months period we have nearly completed under the Federal aid program alone, a program that is perhaps a little more than one half of the total construction program for the year, leaving out maintenance.

There is one other thought I should like to leave with you on this question of how fast we shall go in the building of roads. If we deduct the amount which the motor vehicles paid into the highway funds lastyear as license fees and distribute the balance of the cost, we find that the cost of highways in this country to each one of its people was about four dollars and forty cents. Now, so far as I know, there is not a single individual in the country who does not in some way come in daily contact, directly or indirectly, with the highways of the country, if it is no more than the matter of the transportation of his food products which practically all originate and are carried over the highways. It seems to me that there can be no question about the return by the highway system of this country of more than four dollars per year to each person who lives in the country. You see that amounts to about one cent per day and it seems to me that nothing else will give us the food supplies alone which come over the highways and which we consume every year for a penny a day. I want to thank you. (Applause)