

HIGHWAY CONTRACTORS ARE READY TO GO

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A tremendous highway construction program faces the U. S. Maximum cooperation between highway officials and contractors will be required to carry out an adequate construction program efficiently. Because of this fact, on behalf of the nearly 3,000 highway contractors that belong to A.G.C., I appreciate greatly the opportunity of addressing this conference.

Needs Total \$32 Billions of Federal-Aid Roads

A few days ago officers of the AASHO in testifying before Congress on the new Federal-aid Highway bill reported that today's construction needs on the Federal-aid systems alone total over \$32 billions. Mind you, this is the Federal-aid systems only, or 664,000 miles of the country's total mileage of approximately 3 million miles.

Inadequate Highways Cause Tremendous Loss

Commissioner Thos. H. MacDonald of the Bureau of Public Roads dramatically outlined America's huge highway problem when he testified before the Congress on the same bills. At that time he made available the following summary of motor fuel accident data compiled by the National Safety Council for the years 1945-1950, inclusive:

1. *Number of accidents* — Increased 51 percent, from 5.5 million in 1945 to 8.3 million in 1950.
2. *Number of non-fatal injuries* — Increased 20 percent, from 1.0 million in 1945 to 1.2 million in 1950.
3. *Number of deaths* — Increased 25 percent, from 28,076 in 1945 to 35,000 in 1950. The preliminary estimate for 1951 is 37,500 deaths, an increase of one-third since 1945.
4. *Property damage* — Increased 92 percent, from \$650,000,000 in 1945 to \$1,250,000,000 in 1950.

Let us now review how the nation's highway contractors look at the task ahead.

Costs Are in Line

1. Highway construction costs are in line with the prices of other services and commodities, so that full value is assured for the investment in highways. Evidence that the state highway departments are

getting good bids is the fact that 99 percent of the national volume of Federal-aid highway construction during the past five years has been done by the contract method.

Keen Competition Prevails

2. The keen competition prevailing and expected to prevail in highway construction is assurance to the public that the construction will be executed as efficiently and economically as possible.

Industry Has Capacity For Bigger Program

3. The highway contracting industry has the capacity to carry out an expanding highway construction program, and to do the work economically.

Steel Supply Major Delaying Factor

4. Major factor delaying highway work is the relative small amount of steel allocated to highway construction and the numerous projects delayed by slow steel deliveries.

Highway Contractors Seek More Economical Methods

5. Highway contractors, through their local and national associations are cooperating with highway departments in practical means of increasing the efficiency of construction operations.

Increase in Bureau Cost Index is Small

Let us briefly discuss the question, highway construction costs. The Bureau of Public Roads' composite mile price index increased somewhat in 1951. However, the average for 1951 was placed at 163.3 which compares to 158.2 for 1948, when conditions were somewhat similar. Thus, despite all the wage increases, and higher prices for materials, supplies, new equipment and repair parts, *the index for last year was but 3.2% above that of 1948.* Comparing calendar years 1951 and 1948 even further the index for the fourth quarter of last year was but 0.8% above that for the fourth quarter of 1948.

Wholesale Index Rise 8% Against 5% for Roads

A comparison between the Bureau of Labor Statistics wholesale price index for all commodities and the Bureau of Public Roads composite mile price index also shows that the cost of highway construction compares very favorably with other products. The wholesale index average for calendar 1948 was placed at 165.1 and the average for the month of November 1951, which is the latest monthly figure available, at 178.3. Thus, this indicates a rise of 8%. In contrast, the difference in the Bureau of Public Roads composite mile index between the average for 1948 and the fourth quarter of 1951 is only 5%.

In other words, intense competition caused the cost of highway construction to drop in 1948 and 1950, when materials were available in good supply. But as wages continued to increase and the price of necessary construction supplies climbed upward, the cost of building highways had to climb.

Keen Competition Continues

One of the strongest forces working toward increased efficiency in highway construction is the continued keen competition between highway contractors.

Tabulations by the Bureau of Public Roads show that the average number of bids on Federal-aid projects during the past six years nation-wide has been as follows:

<i>Year</i>	<i>Bids per Project</i>
1946	3.9
1947	3.8
1948	4.2
1949	6.3
1950	6.0
1951	4.5

So long as competitive conditions prevail, and there is no reason to doubt that they will prevail for an indefinite period, the public is assured that it will receive value for highway expenditures.

Ample Contractor Capacity for Enlarged Program

Before testifying before the Congress on the Federal-aid Highway bills, the AGC made a national survey of the capacity of highway contractors to carry out a larger program in 1952. Reports were received from thirty states and the Territory of Alaska.

All of these states reported that the contractors had the capacity to carry out this year a minimum of 30 percent more highway construction than was completed in calendar 1951.

50% Greater Program Possible in 93% of States Reporting

The reports from 28 states or 93% of those reporting went even further to state that the contractors have the capacity to handle a program 50% greater than last year.

In addition, the reports from 19 of these states or 63% of those replying revealed that the contractors could construct a highway volume 100% larger than in 1951.

Three states reported that the highway program was so small in

those states last year that the contractors have the facilities to handle a program three times as large.

Steel Major Delaying Factor in 87% of States

Results of the national survey also showed that the limited allotments by the defense agencies of steel for highway construction was another major delaying factor. Of the states reporting 87% listed steel supplies as inadequate.

Steel Problem is Starting to Ease

Indications from many sections of the country are that the steel problem is easing rapidly. During the House hearings on the Federal-aid Bill, Commissioner MacDonald of the Bureau stated that by the middle of Summer conditions should be improved greatly. He also stated that by 1953 the steel supply should be no problem.

AGC Convention Passes Highway Resolution

One of the strongest resolutions passed at the AGC Annual Convention in Detroit a few weeks ago was that pertaining to highways. This resolution reads as follows:

"Highway construction, which was virtually stopped during World War II, has not kept pace with the demands of traffic and safety since the war. Unless the volume of highway construction is increased, the nation will soon be faced with a breakdown of its highway transportation system which will have a serious impact on industry, agriculture and commerce.

"The survey of the American Association of State Highway Officials which shows the need for expenditure of \$32 billion on the federal-aid highway system alone over the next ten years can be regarded as conservative.

"Therefore, the 33rd annual convention of The Associated General Contractors of America, in Detroit, February 25 to 28, 1952, recommends to Congress that it adopt the recommendation of the American Association of Highway Officials of a federal-aid highway authorization of \$810,000,000 for each of the fiscal years 1954 and 1955 as the minimum essential to prevent further deterioration of the highway system.

"It further recommends that federal, state, and local governments safeguard public funds by awarding contracts for construction and maintenance to the lowest responsible bid submitted in competition after public advertisement."

Many States Increase Financing

Since 1945 some 31 states have increased taxes to provide additional funds for construction. With the easing of the steel situation the citizens of this very large number of states will expect action on improving highways of their areas.

Work Must Now Go Forward

The net result of the traffic slaughter on our highways, improvement in the steel supply picture and the increased financing in so many

states all adds up to the fact that the highway users of America will demand prompt use of the funds available. To make maximum use this year of the many on hand appears to be the major immediate problem facing highway officials and contractors alike.

Award Immediately All Work Possible

In view of these conditions the contractors recommend prompt award of the maximum amount of work. They are aware of the severe shortage of engineers and technical people to prepare plans, but they feel that the highway user will not be satisfied with this as an excuse and we urge the departments to employ a maximum of consultants.

Consultants Employed by New York

New York State already has 30 consulting firms working on the preparation of plans for new highway facilities. That state already has under construction much work that outside consultants have designed.

1952 Expected to be Good Year

Indications are that the highway industry will go ahead with a good program this year and that in 1952 the construction volume will be high. It further appears that the next couple of years will be good ones. But let us consider what should be done to assure a good volume of construction over the next decade or even longer.

Long-Range Plans Must be Made

The first step is the preparation of good plans or those for programs covering 10 or 15 years or even longer. In this work the state highway departments must make long-range plans outlining programs of several years. The most capable highway engineers in the country must be employed by the State Highway Departments. To secure such men in adequate number the states must pay better salaries.

Highway Engineers Must be Paid Better

For the past several years, the Joint Cooperative Committee of the American Association of State Highway Officials and the Associated General Contractors have been working on this problem. But each person here, plus all segments of the contracting industry, must fight for better salaries for our highway engineers if the huge construction task ahead is to be planned properly.

For the past several years the Joint Cooperative Committee between the American Association of State Highway Officials and the AGC has been working hard to get increased compensation for highway engineers. This committee was organized in 1921.

Joint Cooperative Committee, ASCE-AGC, Helps

I am glad to report that the Joint Cooperative Committee of the American Society of Civil Engineers and the AGC, which was organized in 1948, also is at work to secure better salaries for civil engineers and attempting to provide better trained civil engineers for construction. This committee is striving hard to improve the ASCE student chapters in the U. S. engineering colleges. All AGC chapters are assisting at every opportunity in this program.

This Joint Committee also plans to help in every way possible in providing summer employment for student engineers and to attempt to get more engineer graduates to enter highway construction. Such activity should aid greatly in overcoming the severe shortage of engineers for highway work.

Many States Have Made Long-Range Studies

Numerous states, including Illinois, California, Oregon, Washington, Idaho, Iowa, Michigan, Minnesota, Mississippi, Nebraska, Kansas, Maine, Ohio, Vermont, and others, have already completed long-range plans. Added states have long range studies in progress.

Good Plans Provide Many Advantages

Advantages of long-range plans include:

1. Needs will be more fully understood and appreciated by the state highway departments themselves.
2. The long-range plan is required to sell the public on financing the big job to be done.
3. Required land can be secured on schedule and at lower cost.
4. More contractors will take an interest and better bids will result.
5. Better engineers can be employed, for they will know they can expect employment with the state highway department for several years.
6. Producers of construction materials will be more apt to have the necessary capacity to produce adequate supplies, as they can make more logical investments to meet the large needs to be filled.
7. A big financial saving to the entire construction program will result.

Diversion of Funds Must End

The second big step in meeting the nation's highway construction needs is financing the program. This work requires termination of the diversion of gasoline taxes and other highway-user taxes to non-highway purposes.

During the years 1924 to 1950 inclusive, this diversion totalled over \$3 billions, and in 1950, the last year for which detailed figures are available, diversion totalled \$217 millions and eight states diverted more than 10 percent of their highway revenues. Last year about \$1.5 billions of new road construction was awarded by the state highway departments, which indicates forcefully the great scope of diversion to date.

Anti-Diversion Amendments Required

Diversion can be stopped effectively only by the states passing anti-diversion amendments. To date only 21 states have taken such action, although the legislatures in two additional states in 1951 passed special amendments and these will come before the voters this year for final approval. But the support of the general public must be placed behind the drive for similar laws in the remaining states if diversion is to be prevented.

At present the following 21 states have constitutional amendments to conserve highway revenue for highway purposes:

California	Maine	New Hampshire	Texas
Colorado	Massachusetts	North Dakota	Washington
Idaho	Michigan	Ohio	West Virginia
Iowa	Minnesota	Oregon	
Kansas	Missouri	Pennsylvania	
Kentucky	Nevada	South Dakota	

It is indeed fortunate that Kentucky has the protection of such an amendment.

Brookings Institution Calls for More Road Construction

Those attempting to finance large highway construction programs received a valuable aid in July, 1949, when the Brookings Institution released a comprehensive report on our highway problem. This study concluded that investing less for highway construction and improvements means greater payment for highway transportation.

The Brookings Institution found that if the per-mile cost of automotive transportation is to be brought to the lowest possible level, a greater portion of the automotive transportation is to be brought to the lowest possible level, a greater portion of the automotive transportation dollar must be devoted to improving America's over-burdened highways. Today only 5 to 10 cents of every dollar spent for automotive transportation is applied to the provision of highways, the remaining 90 to 95 percent being absorbed by vehicle maintenance, gasoline purchase and other operating costs. This investment in highways is considered much too small and illogical.

Present Method Termed Illogical

"The logic of this division of the highway transportation dollar appears highly questionable whenever the highway system is inadequate, since the excessive cost of the vehicle may in large part result from this inadequacy. Paying less for highways may mean paying more for highway transportation. "What we save in highways expenditures we may lose in higher operating costs, with lower standards of service the net result," the report concludes.

Results of the Brookings Institution study were made available July 25, 1949, when a book by Wilfred Owen entitled, "Automotive Transportation Trends and Problems" was released.

Actual Construction a Challenge

After comprehensive planning and financing have been completed, the actual construction is the third big step in meeting the country's highway needs.

This part of the program is where the highway engineers must write clear specifications and prepare good plans. This work must be accomplished in a manner that tells the contractors what is to be done, but leaves him free to choose the construction equipment and methods he considers the most satisfactory. In other words, highway engineers should specify results, but not methods.

Contract Method Has Many Advantages

It is assumed, of course, that construction will be by the contract method. This view is taken for the following reasons:

1. Cost of the project is guaranteed before construction starts.
2. Quality is guaranteed in accordance with plans and specifications.
3. The general contractor has the financial incentive to complete the project on schedule.
4. Lowest possible cost is secured through free and open competition between competent general contractors.
5. The detailed planning required by skilled engineers before bids can be taken assures a properly planned project.
6. The contract method centralizes responsibility for construction in the general contractor for maximum efficiency.
7. Experience has demonstrated repeatedly that the construction industry through its normal channels can fulfill public needs more economically and more rapidly than is possible by any other means.

Too Many Payments Withheld

Numerous contractors report that their state highway departments could make a big improvement if they would retain but 10 percent on partial estimates, until 50 percent of the work is complete, and then retain only 5 percent of partial payments until the job is completed. Some contractors report their states long ago saw the value of this procedure and now follow such a policy. Still other contractors reported their highway departments have made even greater improvements.

Contractors Should be Paid Promptly

Prompt payment to the contractor must be made as the work proceeds. The highway contractor's investment is huge and his financial responsibilities severe.

Other Ways to Speed Construction

Other ways to speed up highway construction as viewed by the contracting industry include:

1. Permit the contractor free use of new types of equipment.
2. Be sure land is available and the job is ready for the contractor to move in and start work when bids are opened.
3. Use local construction materials to a maximum, which will also reduce costs.
4. Cut hand labor to a minimum.
5. Award programs in contracts of various sizes.
6. Work for greater standardization of design to permit, for example, those savings possible where the contractors can use the same type of bridge forms in neighboring states.
7. To make each year's construction season as long as possible, have some lettings as early as possible to permit maximum use of the contractor's equipment and personnel, and thereby get better prices.
8. Seek for a balanced construction program each year.

In regard to the latter point, if a highway department has a large volume of black-top work one year and none the next, it will be difficult for the construction industry to keep in step and higher prices will result.

Public Relations Must be Improved

For any highway construction program to be successful, the general public must be kept fully informed of the extensive know-how required for highway construction projects. In a nutshell, this means the

public must be better informed than ever before regarding what is being done and the great effort being made to improve America's highways. To do this, highway officials and contractors alike must improve greatly their public relations programs.

Slaughter on U. S. Highways Must End

Finally, each of us must remember that almost each half hour at least one person dies in the U. S. traffic accidents, and each few seconds a major accident occurs on America's highways. I repeat that 37,500 people were killed on America's highways last year. This slaughter must stop. We must all work hard to accomplish this aim. In so doing, highway officials and the contracting industry must not only build and improve our highways, but they must sell the general public on the great value of what is being done and on the great importance of improved highway transportation to our economy and to national defense.

When we fully inform the general public of the fact that we are paying for better roads whether we have them or not, we shall have a new era in highway construction.