asphalt plant. Our operations were capable of organization, and we developed a degree of efficiency. The completed work was pleasing to the eye, and there was little question of acceptance when the work was completed. Our unit costs were no less than road-mix costs; but the added volume of work handled, in our opinion, justified the small increment in unit costs. Our contract prices for the finished mix in the completed road, including asphalt, varied from $2.75 per ton to $3.00 per ton.

We think we can improve both our equipment and our own efficiency in the future. We are really pioneering in this type of construction in Indiana and have acquired all our work by submitting a lower bid than our road-mix competitors. The cost to the State has actually been lower than road-mix on the work we performed.

One vexing problem that we have not solved involves the State Highway Commission personnel. Mr. Schaub did not mention this; so I judge that this problem does not exist in Michigan. Engineers and inspectors during the past season have moved to the site of our work with their families and with the apparent intention of staying for the season or the year. Most of them welcomed our plant-mix methods and cooperated with us in the prompt prosecution of the work. The natural results was that the work was complete on or before the contract completion date, and the state personnel was available for other work. Now, it seems that moving is a personal expense not shared by the employer; so that even though the state has profited, the individual engineer-inspector is penalized for being there. To date, I have heard of no attempt at solution of this problem. I think that I have one to suggest, but I haven’t been bothered much lately with requests for my suggestions.

In conclusion, let me say that I have no desire to see road-mix eliminated from the competition in Indiana. Possibly we should retain such methods to insure low costs. However, it is hardly fair to lower standards to accommodate one method and require higher standards of a competing method. Keep the quantities and the construction standards the same, and the contractor will have little complaint.

WPA CO-OPERATION WITH CITY AND COUNTY OFFICIALS ON STREET AND ROAD IMPROVEMENT
Stanton T. Bryan,
Deputy State Administrator of WPA,
Indianapolis

In the operation of a program as extensive as that of the Work Projects Administration, dealing as it does with many governmental units having diversified interests, it is rather
to be expected that misconceptions as to regulations, purposes of the program, etc., will quite frequently develop in the minds of the sponsors. Unfortunately, a means of correcting such misunderstandings is not conveniently available. When a similar situation exists among our own staff members, a meeting can be called and the various points in question explained and clarified. Obviously, such a scheme cannot be employed with respect to sponsors, with the result that many problems continue to remain unsolved, and many questions must forever go unanswered. It is for this reason that I consider a meeting such as this one a chance of a lifetime, so to speak, insofar as the Work Projects Administration is concerned. I know of no other assembly where so many project sponsors are represented or which would be better suited to the discussion of our mutual problems.

There is no need for me to dwell upon the importance of roads and streets in our present economic system. In your positions you gentlemen are all thoroughly conversant with that fact. You realize that our vast automobile industry employing thousands of workers could not exist on any scale even remotely comparable to its present size without an adequate and ever-improving highway system. New developments in automobiles, increases in their speed, and other improvements invariably are accompanied by new problems in highway construction which must be solved not tomorrow, next week, or next year, but today if we are to receive full advantage of the flow of mechanical improvements constantly coming from that industry.
I also need not tell you of the favorable public reaction among local citizens when a chuck-holed street with weed-grown side ditches is transformed into a smooth, hard-surfaced drive with neat curbs and gutters. Nor of the sincere gratitude of the farmer who suddenly finds himself placed in immediate touch with the world by means of an all-weather road after having pounded his way for years over a road of the covered-wagon vintage, unable to get his crops out during times when market conditions were most favorable for their sale and equally unable to get supplies in or obtain medical aid in times of illness. You men already know these things and need no selling.

I wonder, however, how many of you have ever stopped to consider another phase of road and street construction—one which is quite separate and distinct from such tangible matters as design and construction problems, but one which in my opinion is of equal importance? I refer specifically to that phase of road and street construction that relates to the program of the Work Projects Administration. I mean the use of such work for providing idle men with jobs and, having given them jobs, obtaining the maximum of public benefits possible from their labor.

MAGNITUDE OF WPA ROAD WORK

In order that we may all be properly impressed with the magnitude of this phase of the work, I should like to show you what it amounts to in dollars and cents right here in Indiana. From August, 1935, to October, 1939, the Work Projects Administration has expended on roads and streets, in Indiana
alone, $126,000,000. This is exclusive of items supplied by sponsors as their contribution. Fifty-two per cent of this money went for the construction and improvement of secondary roads and feeders, about 43 per cent for city streets and alleys, and about 5 per cent for work on primary roads.

Because of the fact that road and street work, unlike certain other types of construction work, can, under competent supervision, be satisfactorily prosecuted with a large amount of unskilled labor, it has been particularly adaptable to the available labor inventories of WPA. The result has been that roads and streets during the past year have accounted for the employment of approximately 68 per cent of all labor employed by the Indiana Work Projects Administration in construction work. Of the 48,800 workers employed on construction work on December 1, 1939, 33,100 were engaged in street and road work.

We should all forever dismiss from our minds the thought that WPA funds are intended merely for relief. We should recognize them as a double-edged sword: the one side to assist in the mitigation of the hardships of unemployment and the other to provide our citizens and our communities with the improvements they need but otherwise could not obtain. I see no justifiable reason why the WPA dollar should not be viewed as containing just as many potential possibilities for a community as any other dollar. I see no reason why in its spending we should not exercise the same prudence in obtaining a dollar's worth of benefits for every dollar expended.

I should like to comment briefly at this time on a quite general type of sponsor's complaint, which our offices have been receiving recently. I refer specifically to a "tightening up of regulations" as they apply to the submission of projects. Many sponsors have voiced the objection that we are becoming too technical, that we are requiring more complete plans, more accurate estimates of costs, breakdowns of units of work, etc., which heretofore have not been necessary.

EVOLUTION OF WPA PROGRAM

In order that you may better understand the reasons for such a procedure, I should like to outline rather hastily the evolution of this program since the period of its inception.

The Work Projects Administration, as you know, virtually sprang up over night into a mammoth organization designed primarily to take care of a critical economic situation that our nation was facing. It followed upon the heels of various local and state "leaf-raking" programs as they were often referred to, and was designed to provide employment for unemployed workers upon a more systematic and uniform basis. While this was its basic function, another important objective was to provide such employment in the creation of useful and enduring public benefits. It is quite natural in the develop-
ment of so large a program in so short a time that mistakes were made. It is also quite natural that transition was not easy, but I believe we are now finally accomplishing the purpose for which the program was originally designed.

It is true that in former programs and in the formative period of the present one, projects were accepted upon the most meager information. The result was that very little well-planned work was developed. While some outstanding projects were prosecuted under these conditions, even they did not reflect the efficiency in operation nor the proper return in benefits for the expenditures they represented that could have been obtained had better advance planning been provided for. Severe public criticism was directed at what was termed wasteful expenditure of public funds. In placing certain restrictions and requirements upon the submission of WPA projects, we are only doing that which any sensible business man would do under like conditions. We are first providing employment for unemployed persons and, second, we are making use of that employment in the most efficient manner possible by giving the public as much in the way of public benefits as possible. Fundamentally, we are striving for the same objective, whether we be a sponsor or an administrator of this program. We are all interested in prosecuting projects that will prove of worth-while and permanent value to our communities and that represent the ultimate obtainable in permanent public improvements. To do otherwise would result only in a program that would rapidly fall into public disrepute.

In operating a construction project, whether it be financed from public or private funds, it is generally recognized that certain preliminary work is of vital importance. A private corporation, for example, would not consider undertaking the construction of a large addition to their manufacturing facilities without first availing themselves of technical advice in order to plan accurately the contemplated improvements and provide an estimate of the cost. As you know from your own experience, when a municipality or a county desires to prosecute a major improvement, particularly one which is to be financed through a bond issue, the preparation of accurate plans and estimates is essential before even the financing may be accomplished. I believe you will agree that if such methods were wasteful, private industry would be the first to abandon them as an unnecessary expenditure. In placing technical requirements on the submission of projects, we are only doing that which private industry and other public work has accepted as necessary in order to accomplish economical operation. I will grant that it is much easier to submit, and even to administer, a project in a “hit or miss” fashion; but we must all recognize that in so doing we are avoiding an obligation and are not obtaining the full and effi-
cient use of the funds at hand, which the public has every right to expect. We cannot operate any project efficiently and at the same time permit it to drift aimlessly along.

It has been pointed out that proper technical services are not always available, especially to the smaller counties and communities, and that, as a result, a tightening up of project requirements inflicts a hardship upon these sponsors. This, however, is really not the case. Under requirements of the ERA Act of 1939, sponsors must now provide a minimum of 25 per cent of the cost of a project. It is perfectly legitimate to submit as sponsors' contribution a charge for technical services. Under present regulations, sponsors may submit as contribution the actual cost of the services of county or city engineering staffs in connection with work they have performed in developing or prosecuting a project. A sponsor's contribution up to 4 per cent of the total cost of a project may be submitted for such services without additional justification other than supporting evidence that such services have been provided. When a special engineer has been employed and the cost of his services together with other engineering costs exceeds 4 per cent, the additional amount spent is eligible as sponsors' contribution upon proper justification. Such justification would usually include a copy of the contract that has been executed between the local units of government and the engineer, together with an itemized list of other engineering expenditures. It therefore should result in no burden upon sponsors to accompany project applications with adequate plans and specifications and, on the other hand, will result in far greater benefits in the way of actual accomplishments.

In this same connection I should like to suggest that all of you familiarize yourselves with the latest regulations pertaining to sponsors' contributions. Your local Area Engineers can provide you with detailed information on this subject. In view of present requirements, it is particularly important that sponsors avail themselves of every eligible contribution. We have found on numerous occasions that sponsors have failed to report items in sizable amounts that are eligible as contributions and that the sponsors either overlooked or considered ineligible.

**PROPER PLANNING**

A great deal is being said nowadays about planning. We all believe in planning. Since the future of the Work Projects Administration is uncertain, it is realized that we live in a glass house and possibly are not entitled to throw many stones. Nevertheless, I think I shall take the risk of throwing a few pebbles.

I know that the temporary and emergency character of our WPA program makes planning difficult. We could plan our program much better if we were established on a perma-
nenent basis, and could count on funds for a few years ahead. We have to make the best of our situation, and you also have to make the best of your situation, and that is just what I think a great many sponsors fail to do. Your governmental units are not like WPA, officially regarded as temporary affairs, mere emergency set-ups, here today, but perhaps gone tomorrow. You confidently expect your cities and counties to be in existence fifty years from now. But how many of you are carrying your planning so far as to set up budgets for capital improvements five or six years ahead? The setting up of that kind of budget is not beyond the power of any governmental unit. In fact, I understand that the adoption of such a long-term budget is now being promoted as a demonstration project in half a dozen or more American cities. I earnestly hope that long-term planning will become general among our sponsors within a few years.

Before closing, I should like to transgress just a little, if I may, and make a few general remarks which, while they apply to road and street projects, apply equally to other types of projects, many of which are sponsored by the units of government represented here today. In connection with the financing of the projects that we carry out jointly with sponsors, I wish to make it clear that our cards are on the table for everyone to see. The amount of our appropriation is a matter of public record, as are the wages we pay to relief workers on projects. Nothing is hidden on our side of the table.

SPONSORS’ CONTRIBUTIONS

One of the chief points of issue in our joint endeavors is sponsors’ contributions—the proportion of the costs of projects that can be borne by federal funds. You know, of course, that the Work Projects Administration is primarily an agency for providing work for the needy unemployed. This means that the bulk of our expenditures must be in the form of wages paid to project workers. There is, in fact, a considerable school of thought to the effect that the WPA should put all of its funds into wages for the unemployed and that sponsors should be required to bear the entire cost of materials and equipment.

Under our present appropriation act the WPA is permitted to expend an average of not to exceed six dollars per worker, per month, for non-labor purposes. Our six dollars per worker per month must average out for the state as a whole. It is obvious that, should we accept some projects which require more than six dollars per man-month in non-labor costs, we would have to accept others calling for lesser non-labor expenditures. The extent to which high non-labor cost projects can be accepted is therefore quite limited, for the reason that sponsors in general will demand equal treatment. It follows,
therefore, that expensive projects must come to us with a high proportion of sponsors' contribution in money or in kind if they are to receive favorable consideration.

I wish that I might disabuse sponsors of the idea that there exists some hidden "kitty" of funds about which they know nothing but which can be used to finance expensive projects at federal expense if sufficient pressure is applied. A great deal of energy is continually expended in trying to get the WPA to undertake projects that they should not undertake or on terms upon which they cannot be justifiably accepted. It would be far better if the same energy could be diverted to wise and farsighted planning. I simply cannot believe that the best interests of any governmental unit are served by the effort to keep down the local share and increase the federal share of every project. It may appear for the moment to be good local policy, but it is far from the kind of planning that will increase the welfare and prosperity of a community over any period of years.

The benefits that any sponsor can get from the kind of assistance we have to give will depend essentially upon wise local planning. Such planning should include a reasonable effort to finance the average non-federal share of project costs. Uncertainty concerning the next federal appropriation should not be made an excuse for lack of budgetary provision for the local share of WPA program costs. Underlying this planning there will be a recognition of the considerable net saving to the sponsors that is effected through not having to provide direct relief to those unemployed workers who are receiving federal wages on WPA projects. And, conversely, it should be clear to local budget workers that the unwillingness of a sponsor to participate adequately in the financing of projects may result in the readjustment of WPA quotas away from that locality. In a word, co-operation with the federal government is not a one-way proposition.

RESPONSIBILITY FOR PROJECTS

I should like to point out right here that the Work Projects Administration does not initiate projects. The responsibility for the submission of projects, and for the type of project submitted is the responsibility of local sponsors. This agency prosecutes no work that has not previously been requested by some local governmental unit. Therefore, the type of program operated in a locality or even the operation of any program at all is reflected directly by the number and type of projects presented and is a matter entirely in the hands of local officials.

There are at the present time numerous sections throughout this state where sponsors have not submitted sufficient projects to employ all eligible workers in their locality, even though the present quota would permit the employment of
these workers if projects were available. Such a situation, of course, results in increased local relief costs, loss of federal
funds to the merchants and others in the particular section, and the loss of any constructive public benefits that might have
accrued from these funds. It does, however, constitute strictly
a local problem and one which by its very nature precludes
WPA assistance. Unless local sponsors can maintain a reser-
voir of projects sufficient to employ their needy unemployed,
there is no other alternative than to throw the load upon local
relief officials.

But the sponsors' contribution is not the only point at
issue in our co-operative efforts. Another point is that of the
social value and usefulness of the projects. I know how un-
justly the WPA has been criticized for some of its projects,
but the criticism is not always unjust. Sometimes it is well
founded. And when WPA projects are open to criticism it is
sometimes the WPA that is to blame, but not always.

Among the applications for WPA projects that come to
us there are many that must be rejected. It is often with great
reluctance and regret that they are rejected. They may be of
great social use and value and yet fail to meet some necessary
requirement. But I don't mind telling you that there are some
project applications that it is a pleasure as well as a duty to
reject. Gentlemen, the things that some people can think up
for us to spend money on stagger the imagination.

On the other hand, there are a great many projects that
we are proud to point to as examples of WPA work. I think in
all fairness that we must give you sponsors the main credit
for our best projects. And the fact that our WPA program
has been able to make really important contributions to com-

munity welfare is certainly due to the civic spirit, the plan-
ing, and the administrative capacity of the local govern-
ments you represent.

Whatever our separate virtues and faults may be, there is
no question about the fact that you and the federal govern-
ment have been engaged in a remarkable kind of co-operation.
I think it can truthfully be described as the largest and most
successful example of peace-time co-operation in the history
of our nation.

However, I am not going to expand upon the record of our
past joint achievements. You gentlemen do not need to be re-
mined of how many roads, bridges, schools, hospitals, parks,
and airports we have built together; but I should like to speak
briefly in conclusion about our future.

THE FUTURE OF WPA

I know there are some people who hope and believe that
this kind of co-operation on public work for the relief of un-
employment will soon come to an end. I do not agree with
them for two reasons. In the first place, it is now evident that
large-scale unemployment is going to be with us for years to come. In the second place, there is still a vast amount of public work that needs to be done throughout the country. For those two substantial reasons I am convinced that our co-operation through the Work Projects Administration or some similar agency will continue.

In closing I should like to make it clear that I do not for a moment believe that the WPA program as now operated is the final answer to federal participation in the solution of the problem of unemployment. The WPA is in a continual state of evolution, and many improvements have been made in the four and one-half years of its existence. However, I regard it as one of our main responsibilities to search for further improvements and increased efficiency. In this endeavor I solicit your co-operation and assistance, as governmental officials who have sponsored projects with us are among those persons who are best fitted to make constructive suggestions for the improvement of the program.

SALVAGING HIGHWAY INVESTMENTS
N. F. Schafer,
Engineer of Maintenance, State Highway Commission of Indiana, Indianapolis

Webster says that "salvaging is the act of saving"; "highway is a road or way open to the public"; and "investment is the laying out of money in the purchase of some species of property." Therefore, the title of this paper is interpreted to