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Role of BPR in Federal-Aid Highway Construction

Presented at the Highway Directors Session of the
Associated General Contractors Midyear Board Meeting,
Portland, Oregon, September 22, 1964
F. C. TURNER
Chief Engineer, Bureau of Public Roads

You have asked me to talk with you on the Bureau of Public Roads' role in the present Federal-aid highway program. In having asked the question, there is the implication of a lack of understanding of our role, or perhaps even some disagreement with what you may construe to be the role we are now playing in the program. The best place to begin is in the law itself—to see what it requires.

It is significant that the basic underlying principles which control this huge current public works program are almost identical in stated intent with those expressed in the first authorizing Congressional acts of 1916 and 1921. Those two pieces of legislation were formulated after considerable debate and hearings from careful studies by special committees of the Congress and the affected highway interest groups. They were no shallow, quickie productions. It is true that these original acts have been amended or supplemented almost every year in some form or another by nearly 50 subsequent Congressional acts. But in so doing, neither the philosophy nor in fact the words themselves, of the statements underlying the relationship and general procedures, have been altered, even after careful and exhaustive analysis and critical review by Congressional committees, the Bureau, and the State highway departments. In fact, in the directive of 1954 to codify the Federal-aid highway law, just the opposite was required. The Congress directed us to change nothing in existing law except as needed to put it in better format so as to be easier to use. We were specifically forbidden to make substantive changes; and so the Title 23 USC which we refer to today as being the Federal-aid highway law actually contains the same words, phrases, and intent that governed the program in its very beginning 48 years ago in 1916. It is apparent, therefore, that there is a solid body of experience on which to base conclusions, with respect to what is the Bureau role in the Federal-aid highway program.

This role is to approve, disapprove, or require modifications or revisions in the individual State proposals as made by them for use of the Federally apportioned aid monies and to do so at each step in the process in such manner and degree as to be able to certify to the Congress through the various executive agencies that the proposals have in actual fact been accomplished in accordance with the proposal as approved, before these Federal-aid funds are finally paid out of the Treasury to the State. This role, you will note, involves the Bureau and the State highway department and does not even mention you as contractors. This is not intended in any way to disparage the important and vital role which the contractor plays, but simply to clearly emphasize that the Bureau relationship is with the State—and this is as defined by statute.

But it is correct that when and if a State chooses to avail itself of these funds—if it makes this choice—then there are certain responsibilities that must be met. I can see nothing wrong with having responsibility requirements attached to the use of the money; in fact, I think it is proper and necessary that this be so. In any cooperative undertaking, necessarily there are certain agreed upon rules for use of partnership assets, whether it be a large contracting or other business organization, policy ownership in a mutual life insurance company, membership in a social club, or even use of the family car by the wife and children.

Such rules as the Bureau makes regarding use by the States of these apportioned funds, then, can hardly be complained about unless these rules are made by abusing the public trust placed in the Federal Highway Administrator. I don't believe many—if any—of these rules can honestly be so classified. But in any event, what either you or I might personally think or feel about them makes little difference. The rules all are either spelled out in the law as statutory requirements or are derived from the law by regulations which the statute authorizes to be issued to govern use of the funds.

So the State having chosen to use the funds—and thus having accepted the responsibility that goes with them—the State then submits a program in which is listed the projects on which it desires to apply the funds. The law sets up the requirement that the projects must be confined to a previously chosen system of routes serving certain purposes defined in the law, in order to serve the greatest good and to avoid dissipating the funds on unconnected bits and pieces of road. The projects in the program, by law, must also be conducive to safety, be durable in material and workmanship, be economical in later maintenance, and meet the existing and probable future traffic needs and conditions. Again, these are the words from the statute itself—of 1921, that is.

If these are arbitrary and unreasonable requirements, in the exercise of which the Bureau has usurped the rights of the States, or has abused its authority, it would seem that the Congress would long ago have taken summary action to correct the situation. In seeing that the rules laid down by the Congress itself in the statute are being complied with, the Bureau is thus following the role required of it by Congress.

Carrying our illustrative highway project further into the alleged web of bureaucratic red tape, after the program is approved the State proceeds with the survey, design, right-of-way acquisition, and preparation of plans, specifications, and estimates of cost—commonly called PS&E. After submitting each of these for the individual project to the Bureau and receiving approval thereof, the State is authorized to advertise for the receipt of bids to be submitted by your contractors for construction of the project. The law

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specifics that the Bureau's letter of approval of the PS&E, when issued to the State, creates a firm contractual commitment binding the Federal Government to pay its legal pro-rata share of the approved cost of the project when that project has been constructed in accordance with the PS&E as submitted by the State, and approved by the Bureau.

So, in addition to establishing basic principles, the law also has quite a bit to say both directly and indirectly about the kind of projects that are to be constructed, the kind of paperwork required and how it shall be handled, how much advertising time is required, how bidders can be selected, how the plans shall be prepared, and what the specifications can and cannot say about products and materials. The law specifies that the work shall be done by contract unless in some special case there are compelling reasons for doing otherwise; and such instances, by law, must be reported each year to the Congress. While these project procedures involve the State and Bureau and are of no particular concern to you, I cite them for you in order to demonstrate that much of the detailed procedure and red tape which the Bureau requires to be followed is done so in order to comply with the law and not just to give us something to do or to be exercising our bureaucratic prerogatives.

Now, you may have concluded that at this point, in the course of a Federal-aid project, you as contractors have finally come to grips directly with the Bureau of Public Roads. But not so. Your contract is with the State and in no way, shape, or manner do you have a contract with the Bureau. What you have is a two-party contract between you and the State highway department. True, the State's selection of you as the contractor has been referred to the Bureau and has received our concurrence before you were officially awarded the contract; and the contract itself, the plans and specifications, and every feature connected with the project has also received our prior approval. But there is a separate and distinct contract between the Bureau and the State covering the project for which you have contracted with the State. That contract between the State and us, called a project agreement, incorporates by reference the contract which the State has made with you. The Bureau-State project agreement calls for the State to construct—or cause to be constructed—the project which was described in the plans, specifications, and estimate to which I previously referred. We now have three parties involved, but by way of two separate contracts—the State at this point being in the middle, since it is a party to each of the two contracts.

And the State is truly in the middle—in about the way the words imply. It is perhaps this situation which raises the question you are asking me to dis-

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As we move ahead wih the building of the Nation's Interstate highway system, I think of how it will serve the millions of American families on vacation, workers commuting to their jobs, businessmen making calls in another city.

By reducing time, accident and operating costs, the sections already in use will save the average automobile owner $29 this year alone. Each unnecessary stop eliminated saves the motorist two cents in reduced tire and brake wear and gasoline consumption, for example. Such savings will total $92 a year for the average automobile owner after this highway system is completed in 1972, and $11 billion a year for our Nation as a whole.

The construction of the Interstate highway system is speeding the produce of our farms and the output of our factories all across the land. It is strengthening our national defense and spurring our economic growth.

The safety features of the Interstate highway system will save the lives of 3,500 Americans who would otherwise be killed in traffic accidents this year. It will save 8,000 lives a year when completed.

The Interstate highway system is being built by the states under one of the finest examples of Federal Government and State Government cooperation. It is a public project to serve all Americans, one of which all Americans can be proud.

LYNDON B. JOHNSON
President

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cuss, because it is the State's performance in this middle position which affects us both.

After you, the contractor, begin work, a Bureau man will appear periodically on your project to make an inspection. Generally he will find everything going satisfactorily. But he may find that some operations are not in accord with the PS&E approval on which our project agreement with the State is based. So he calls this to the attention of the State with a request for corrective action—this of course eventually reaching on to the contractor. But this Bureau representative is there for the purpose of reviewing the State's performance in causing the project to be constructed in accordance with the approved PS&E—this he must do before he can make a determination that the work and materials conform reasonably to the approved PS&E and thus permit the Bureau to certify that the materials are in conformity with the approved PS&E and make payment to the State under the terms of the project agreement.

Of course, you, the contractor, are affected indirectly by a Bureau action of the type just described. It may seem pretty direct or at least inevitable, to you. But actually you look to and depend on the State and the State's project engineer for approval of materials test reports as you dig the material and place it on the roads. It is the State that has given you to understand that the material is meeting the specifications. Disregarding other aspects of such a situation as described, I will use it to illustrate and emphasize the point that the State is free to go right ahead with the work and is obligated by terms of their contract with you to pay you for the material if in their supervision of the contract they consider it satisfactorily meets the contract terms. Of course, that decision is not binding on the Bureau and the State's contract with you contains no clauses making it contingent on what the Bureau may later approve and pay for. We do not necessarily have to accept and reimburse the State for every item of payment which they may make to you—ours is an entirely separate legal documentary contract between the State and Bureau.

I'm fully aware that you don't care about the fine point of distinction I have made between the two contract documents; that you may say it doesn't make any difference to you whether the Bureau representative is only inspecting the State's performance, rather than yours; and that the net effect on you and your operation is just the same as though we rather than the State were directly inspecting and supervising your contract. In practice, this is true, for the simple reason as I have just stated, that your own contract with the State is incorporated verbatim and in toto in the contract which the State in turn has then made with us. It has become the means whereby the State will carry out their part of the agreement "to construct or cause to be constructed" the project on which they have filed an application with us for use of the apportioned Federal-aid monies.

Since the requirements governing the workmanship and materials are the same, it follows then that the only things which the Bureau inspecting engineer requires the State to do are the same ones which the State in its own supervision of the project should already have required you to do. The terms of the contract must obviously be met in both cases and I'm confident that there is no disposition on your part to do otherwise. The rub comes when there is a difference of opinion or judgment as to what does actually constitute a meeting of the contract's requirements. And in this field we will forever find some differences between individuals when each is conscientiously bringing to the problem his individual and varied range of training, experience, and objective judgment based thereon.

This judgment can, of course, be abused by our Bureau engineer, but I'm not aware of any case where it has actually occurred. We're no more willing to condone abuse of this responsibility than you are to experience it. Honest differences of opinion and judgment are usually constructive for both parties and in our system there has to

The opening of each new section of Interstate highway is a tribute to state and federal cooperation. Through the successful Federal Aid Highway Program, the states are being assisted in building the economical, efficient and safe highway system our Nation needs for its continued economic growth.

This year alone, the Federal Aid Highway Program is providing over $2.5 billion to the states for the construction of the Interstate highway system and nearly $1 billion for the construction of other roads.

With the addition of state funds, these investments in highways produce benefits that are local and regional, as well as national. Also, the Federal Aid Highway Program is proving a direct stimulus to economic growth because of the employment opportunities it creates. Highway construction at all levels of government—federal, state and local—provides employment for 870,000 persons.

With one out of every seven jobs and one out of every six businesses in the highway transportation field, highway construction truly is one of our best investments in the future.

LUTHER H. HODGES
Secretary of Commerce

be a referee to reconcile the difference. Sometimes we have to act in that capacity.

To bring some remedy to this problem is why so much work has been done in the past few years by the AASHO, AGC and others on improved specifications—largely through some standardization of specification requirements so that there can be built up a consistent body of uniform interpretation and application from State to State and job to job.

Likewise, a great deal of relief can be obtained by better trained and qualified project inspector personnel. Many of the individual instances which you have experienced are traceable to errors of decision and interpretation made by untrained inspectors, which errors have to be subsequently corrected by the State or Bureau supervisory engineers. And some of the complaints arise also from inexperienced personnel lacking in confidence in their own decisions and thus being reluctant or unable to make a decision. Better trained personnel will bring sizeable reduction in this problem. This is why we are working hard with appropriate AASHO committees to institute regular formalized training programs for project personnel in each highway department. While there are a number of such training programs already in operation in individual State highway departments, we need to enlist all States in this important and worthwhile effort. I believe you can help yourself by continuing your active support of both these remedial measures.

One of the widespread "hearsay" complaints about the dual inspection-approval process is that it occasions useless, long delays. Let's take a dispassionate look at such a situation. Suppose there is a final record test that has been made on a section of base course which you are ready to prime and put the top on, but the test report has not yet been approved by the Bureau. There is no requirement on our part that once the work has been found satisfactory to the State, it must await our concurrence before the State allows the contractor to proceed with the topping. If the test was made properly by the State—and the test procedures are standard and developed by AASHO rather than the Bureau—and the State has confidence that their own test operations were properly carried out, then I can't see why they should delay the contractor. If they do delay, then it can seem to mean only that they do not have full confidence in themselves, sufficient to justify the position of trust and responsibility required of them under the Federal-aid statute. In effect, they are abdicating their rightful position and handling their independence over to the Bureau.

Change orders are slightly different. In effect a change order or extra work order goes outside of the approved project documents and must be treated in pretty much the same general way as the initial project. Any work that the Bureau participates in, must be approved in advance. This is not a whim of a power-hungry bureaucracy—it is just simply the law, and has been since 1916, without change. Therefore it is necessary for the State to get Bureau approval on change orders or extra work orders in advance if we are to participate financially at all—regardless of the merits of the order or the obvious need therefor. We recognize that such orders involve going projects—and that decisions are needed fast—so we have long had in operation a rapid approval process. Often this involves sight-unseen approval by telephone, based upon the State's verbal presentation, with the required "red-tape" papers called for by statute coming later on in due course.

The act of 1921 has weathered the test of time and its philosophy and principles have been proven. They are good today not simply because they are old—rather they have been allowed to become old but basically unchanged simply because they have been found to be a good basis for operating our highway program.

As a practical matter and in keeping with the legislative philosophy, we are dependent in a very large measure on the capability and integrity of the individual State highway departments. By and large—with notably small percentages of failure in any of the important and significant matters—the arrangement has worked well. By emphasizing that the present method has worked well I do not mean in any way to say we are against change—just the opposite, in fact, where proof has been advanced to demonstrate with reasonableness that another way would be better. Few programs and agencies have been as free of scandal charges having substance—and few programs have had the year-after-year overwhelming bipartisan support of the Congress.

Restating it now, the Bureau's role is large and admittedly one of influence. But the right to initiate, the responsibility to actually construct and

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maintain, and the final ownership of the roads rest with the State. Ours is a role of approval or concurrence as each step is taken by the State, including the right and responsibility to disagree and disapprove when in our judgment that is necessary to meet the principles and objectives stated in the enabling legislation.

The results that are clearly visible to all prove the value of the scheme because we have unquestionably produced in the United States the safest, finest, most efficient highway network in the world, serving national, local, and personal needs—defense, industry, business, and pleasure.

The Bureau's role in the program is as stated repeatedly in the enabling legislation—namely, to approve (or disapprove) each action proposed by the sovereign State's highway department when that action proposes the use of funds made available through the Federal Government—or to require revision or modification of these proposals to make them acceptable to a Federal Highway Administrator who carries the responsibility of representing all of the people in all of the States. With the exclusive privilege which the State has to initiate every project proposal and to own the project on its completion goes a responsibility to see that it is built in accordance with the proposal as agreed upon; and with the responsibility which the law imposes on the Bureau to review and approve or disapprove such proposals, necessarily goes the right to independently inquire into these proposals and to be satisfied therewith before giving approval to them.

Lending to Contractors Viewed by Surety

The proper extension of credit to general contractors is a matter of great importance not only to bankers but also to sureties because, in addition to needing loans to finance their work, most contractors regularly require payment bonds to guarantee their operations.

The surety's views on this matter were thoroughly explored by Normal A. Burgoon, Jr., vice president, Fidelity and Deposit Co. of Maryland, Baltimore, Md., in a panel discussion entitled "Are You Really Informed on Contractor Loans?" sponsored by the Robert Morris Associates at the 16th Annual American Bankers Association National Credit Conference held in Philadelphia earlier this year.

Because of the high level of construction failures and the small profit margins, Mr. Burgoon stated, the key to success in writing contract bonds is specialization. "Where we try to handle this very risky and complex business as a sideline or with relatively inexperienced credit personnel whose forte or customary duties lie in other areas, we are going to have poor results," he said. "We will also merit the oft-repeated criticism of responsible contractors that we are financing and bonding too many unqualified firms and contributing to the industry's dilemma."

What yardsticks should the surety use in establishing bond limits?

First, Mr. Burgoon pointed out, a surety looks for good character. Unless a contractor's reputation for integrity and honorable dealings is good, he declared, "the risk is great that underwriting details, including financial information may be erroneous; improper short cuts may be taken in complying with the specifications, and the moral fiber needed to cope successfully with the situation when unforeseen troubles develop is likely to be missing."

Equally important is sufficient experience. In evaluating this factor, Mr. Burgoon emphasized, the surety wants to know that the applicant has previously performed simlar jobs of the same relative size and nature. While a switch from one line of contracting business to another can successfully be made under appropriate conditions, he stated, "we look for a larger than normal financial capacity and expect the contractor to cut his eye teeth on a relatively small job in the new category." The surety is also interested in who can, and will, take over if the principal dies, particularly if the owner is well along in years.

Another important yardstick in underwriting bonds is a prompt pay record. "Well financed contractors who are not overextending and who have their affairs in shape are able to maintain prompt and discount pay records," Mr. Burgoon declared, and "the contractor who does not pay promptly is often lacking in financial strength, business ability, or has in turn too many accounts due from people who are unable to pay promptly or who, perhaps, are disputing the debt." Too often, he warned, "we ignore the im-

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subcontractor performing construction work at the site, regardless of tier in contracting relationships, post a payment bond.

Some have refused to bid on work having this requirement since they do not know the extent of their responsibility and how many tiers there are or where to stop. Others questioned its legality, or concluded that it would increase cost but not provide the added protection which the Bureau wants.

The requirement was considered unworkable and those performing reclamation work were requested to submit recommendations to the national office so that a workable solution may be found.

Vice-chairman Irving F. Jensen reported for Task Unit Chairman C. W. Crumpecker on a meeting of the Corps of Engineers' Specifications Task Unit which discussed such subjects as unclassified excavation, value engineering and day labor dredging, among others.

Assistant Division Director D. A. Giampaoli reported for Task Unit Chairman John L. Connolly as to results of a recent Bureau of Yards and Docks Specifications Task Unit. Subjects discussed included: value engineering, CPM, inspection and acceptance.

Co-chairman Edward C. Losch gave a report on the activities of the APWA-AGC Joint Cooperative Committee, noting that APWA favors the contract method. The AGC side of the committee will urge APWA adoption of Section 7 of the Federal Standard Form 23-A concerning payments to contractors. He was pleased with the progress being made to establish local cooperative committees with APWA. There are at least 12 such committees established throughout the country currently, Mr. Losch pointed out.

Equitable adjustment for consequential costs

The "ripple effect" resulting from costs incurred on items of work not in themselves changed, but affected by a change, were considered. It was reported that more information is needed before administrative action or legislation can be undertaken to provide payment for consequential costs incurred. This subject will be considered during the second AGC Contracts Conference.

A movement to reiterate the AGC resolution on bidding errors was approved. The national staff was requested, through the Corps of Engineers and the Bureau of Reclamation Specifications Task Units, to study the suggestion made by the Texas Highway Heavy Branch, AGC, to double the monetary and percentage penalties contained in the Corps of Engineers' and Bureau of Reclamation's "Mistakes in Bid" clauses. Alton V. Phillips is chairman of this division and Irving F. Jensen is co-chairman.

In an earlier action, the Labor Committee discussed the organizing drive of the National Utility Contractors' Association and made this statement: "The committee noted the efforts of the Laborers' International Union to protect its jurisdiction in the utilities construction field, but voted to go on record as opposing any labor organization pre-empting management's rights by actively promoting and establishing a competing management organization." □□

F. C. Turner
Chief Engineer

B. B. Armstrong
Chairman

F. W. Whitcomb
Vice Chairman

Highway Directors Seek Facts

Bureau's Role in Highway Program Clarified

HOW MUCH CONTROL should the Bureau of Public Roads exercise in Federal-aid highway construction?

This question has cropped up often enough lately to indicate that there is an area of misunderstanding here which needs to be rectified if the highway program is to progress smoothly.

The problem stems from the fact that some states feel the Bureau is interfering with—if not usurping—their authority. There has been criticism of the Bureau's inspection and testing policy. Some believe the duplication of effort is wasteful, impedes scheduling and tends to undermine morale.

Highway contractors have been affected by this bickering, directly and indirectly, too. Delays in field decisions have slowed down their work and run-up costs. They are also confused and disturbed that their relationship with state highway departments, which has been so good for 48 years, now seems in danger of disruption.

To clear the air, the highway directors invited Frank C. Turner to meet with them and clarify BPR-state highway department-contractor relations. As Chief Engineer of the Bureau of Public Roads, Mr. Turner provided at least a partial answer to the question.

Each has a role

Mr. Turner began by tracing the history of the Federal Highway Act to show that the basic underlying principles which control the public works program today are almost identical in stated intent with those expressed in the first enabling Acts of 1916 and 1921.

His explanation of Bureau and State roles may be paraphrased thusly: The Bureau's role is to approve or disapprove, modify or revise, each action proposed by the sovereign State's highway department when that action proposes the use of federal-aid funds. The Bureau must act as each step is taken so as to be able to certify that the work has been done as originally proposed—before the funds are finally paid out.

The State choosing to use these funds

must accept the accompanying responsibility to comply with certain requirements. By law, the projects must fit into a predetermined system of routes serving certain purposes defined in the law, in order to serve the greatest good. The law further states that the projects must also be conducive to safety, be durable in material and workmanship, be economical in later maintenance, and meet the existing and probable future needs and conditions.

Mr. Turner noted that the contractor isn't even mentioned since the Bureau's relationship is with the State. "Your contract is with the State," he said, "and in no way, shape or manner do you have a contract with the Bureau. It is a two-party contract with you and the State highway department. . . . There is a separate and distinct contract between the Bureau and the State covering the project for which you have contracted with the State. It is called a project agreement and incorporates by reference the contract which the State has made with you.

"The State is truly in the middle," he continued, "and it is perhaps this situation which raises the question you have asked me to discuss, because it is the State's performance in this middle position which affects us both."

Mr. Turner emphasized the point that the State is obligated by terms of its contract with you to pay you for the material if in its supervision of the contract it considers that you satisfactorily meet the contract terms. "Of course," he continued, "that decision is not binding on the Bureau and the State's contract with you contains no clauses making it contingent on what the Bureau may later approve and pay for. We do not necessarily have to accept and reimburse the State for every item of payment which they may make to you."

Dual inspection-approval process

Mr. Turner defended the "dual inspection-approval process" pointing out that the Bureau representative is inspecting the State's performance rather than the contractor's. "Since the requirements governing the workmanship and materials are the same, it follows then that the only things which the Bureau inspecting engineer requires the State to do are the same ones which the State in its own supervision of the project should already have required you to do." He admitted that the rub comes when there is a difference of opinion or judgment as to what does actually constitute a meeting of the contract's requirements.

As to the complaint that dual inspection-approval occasions long and useless delays, Mr. Turner had this to say: "If the test is made properly by the State—and the test procedures are standard and developed by AASHO rather than by the Bureau—and the State has confidence that their own test operations have been properly carried out, then I can't see why they should delay the contractor. If they do delay, then . . . in effect, they are abdicating their rightful position and handing their independence over to the Bureau."

The balance of the Highway session, attended by some 130 contractors and chapter managers, was given over to staff and committee reports.

Guide specification progress

Walter F. Maxwell, co-chairman, American Association of State Highway Officials-AGC Joint Cooperative Committee, urged aggressive follow-up at the local level to get the principles as well as the specifics of the AASHO Guide Specifications adopted.

A call for a show of hands revealed that seven states had adopted the "Guide Specs" at least partially but apparently none had accepted them fully as yet. Mr. Maxwell assured his listeners that the revised specs are something both engineers and contractors can live with.

David G. Agnew Jr., chairman of the Bureau of Public Roads-AGC meeting held last May, reported that BPR's *Standard Specifications for Construction of Roads and Bridges on Federal Highway Projects—FP-61,* will be published sometime in 1965.

As far as the highway market is concerned, contractors have at least four good reasons to be optimistic; 1) Congress this year authorized a record $2 billion ABC program, 2) there has been substantial progress in the construction of the Interstate Highway System with 86% of the total 41,000 mile system now underway or completed, 3) contractor-highway department relationships continue to improve, and 4) highway construction prospects after 1972 look good. □□

Building Directors' Report

Progress Made in Intra-industry Relations

Daniel Mardian
Chairman

Cliff Mortenson
Vice Chairman

INTRA-INDUSTRY relations occupied the attention of the AGC Building Contractors' Division at its recent meeting in Portland, with relations between general contractors and subcontractors again being the main topic of discussion.

Division Chairman Dan Mardian, who also is chairman of the Subcontracting Procedures Committee, reported no agreement had as yet been reached on a plan for handling and receiving subbids on federal work. The committee, which has been meeting with the Council of Mechanical and Specialty Contracting Industries in an effort to improve relations between generals and subs—including exploration of the subbid handling plan possibilities—will continue to seek a formula that would be acceptable to AGC, the CMSCI and the federal government.

The Subcontract Form, developed jointly by this committee and CMSCI (adopted at the last AGC convention), is now in use. More than 50,000 copies have been sold, Division Director J. K. Bowersox told the builders. Special recognition was accorded Ancle C. Tester, for his extensive work in helping prepare the standard Subcontract Form guide that finally was adopted.

Mr. Mardian made a detailed report on relationships between general contractors and subcontractors over the past several years. Discussion brought out the question of bonding subcontractors, particularly in view of

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