



U.S. Department
of Transportation

**Federal Aviation
Administration**

Memorandum

Subject: Program Guidance Letter #12

Date: June 28, 1983

From: Lowell H. Johnson, Manager
Grants-In-Aid Division, APP-500

Reply to
Attn of:

To: All Regions and AAC-960
ATTN: Manager, Airports Division

12.1 Letter of Credit Order - Jack Cathell (426-3857). The FAA Office of Accounting has developed a new order for Letter of Credit-Federal Reserve Bank (FRB) system procedures for Federal programs including the AIP. The order establishes the Airports District Office and/or regional Airports Division as the FAA contact for the airport grant program, the procurement offices as FAA contact for direct Federal contracts, and the FAA accounting offices as the contact for all other letter-of-credit matters. The proposed order will cancel FAA Order 2700.25, Letter of Credit-Federal Reserve Bank (FRB) System, dated August 22, 1980. The new order was forwarded to OST (DOT) for review and approval which is expected shortly.

12.2 Contractor Suspension and Debarment Lists - Ben Castellano (426-3857)

The Office of Installations and Logistics (M-60) performed a survey of administrative practices in the airport grant program in July-Oct. 1982. They have recommended, along with several other things, that the FAA again take action to assure that sponsors are apprised, to the extent necessary, of the suspension and debarment listings sent monthly to the Regional Logistics Divisions. It is not necessary to distribute the listings to all airport sponsors but action should be taken to ensure that sponsors actively engaged in contracting activities are apprised of the current monthly listing before contracts are awarded. Attached for your information (Attachment 1) is a copy of correspondence previously sent to you on this subject dated December 2, 1981.

12.3 Retainage - Jack Cathell (426-3857) - The M-60 survey also noted that some FAA field offices were apparently retaining 10 percent of each partial payment made to some sponsors, pending completion of the project. This violates the requirement in paragraph 7, Attachment J of OMB Circular A-102 which does not allow withholding payments for proper charges unless the sponsor has failed to comply with program objectives, grant award conditions, or reporting requirements, or is indebted to the U.S. Regions should follow guidance in Order 5100.36, Chapter 13.

12.4 Engineering Plans and Specifications - Bob Yatzeck (426-3857) - The Airport and Airway Improvement Act of 1982 established as an eligible item of airport development ~~only~~ projects for the "preparation of plans and specifications, including field investigations incident thereto." FAA policy is to fund such projects only if they result in the complete preparation of plans and specifications for airport development work which the region has every expectation will begin within two years. Projects involving only field investigations, such as pavement evaluation, for example, will not be funded on a "stand alone" basis. Work of this limited nature could be funded either retroactively when tied to preliminary engineering for a specific airport development project, or as an element of an airport master planning study.

12.5 Runway Friction Measuring Equipment - Ben Castellano (426-3857) - Due to modifications of proposed performance specifications for runway friction measuring equipment, AAS-1 plans to coordinate these proposed specs outside FAA before incorporating them in AC 150/5320-12. This could take several months. No friction measuring equipment should be programmed until advised by APP-500.

12.6 Bid Rigging - Ben Castellano (426-3857) - Paragraphs 1021 and 1022 of Order 5100.36 were added as a result of an OIG audit. Recently a meeting was held with the OIG in which bid rigging was discussed. As a result of that meeting, it was determined that a change to the handbook was in order. Paragraphs 1021 and 1022, revised to reflect that change, are attached (Attachment 2) and should be used in lieu of the paragraphs presently in the handbook.

In paragraph 1022, reference is made to the OIG regional special agent in charge of investigation. Since their regional structure does not parallel that of the FAA, listed below are the areas of jurisdiction.

<u>Office</u>	<u>States</u>
Baltimore, Maryland	ME, VT, NH, MA, CT, RI, NY, NJ, PA, DE, WV, MD, & VA (MD & VA are served out of the Washington Field Office)
Atlanta, Georgia	NC, SC, KY, TN, MS, AL, GA, FL, PR
Chicago, Illinois	OH, IN, MI, MN, WI, IL ^{IA} , IL, MO, NE, KS
Ft. Worth, Texas	AR, LA, OK, TX, NM, CO, UT, WY, SD, ND, MT
San Francisco, California	AZ, NV, CA, OR, WA, ID, AK, HI, GU

All field personnel should familiarize themselves with the content of the paper prepared by the Interdepartmental Bid Rigging Investigation Coordinating Committee entitled "Suggestions for the Detection and Prevention of Construction Contract Bid Rigging." The paper addresses both the detection and prevention of bid rigging and, while designed for procurement and contract specialists, it should be useful to Airports personnel.

12.7 Ultralight Facility Eligibility - Ed Williams (426-3857). Land or construction for ultralight operations at an existing airport is eligible if it is necessary for safety or capacity purposes and if the airport itself is eligible. Establishment of a new ultralight airport is not eligible.

12.8 Transfer of Sponsor Entitlement Funds - Jack Cathell (426-3857). Section 508(b)(2) of the Airport and Airway Improvement Act of 1982 provides for transfer of entitlement funds from a primary airport to another public-use airport. The format in Attachment 3 should be used to document such transfers, with a copy provided to the transferor sponsor, the transferee sponsor, and the project file. Sponsors making and accepting such transfers should be advised that the three-year limitation on entitlement fund availability does not start anew with the transfer, but remains the same as originally imposed on the transferor sponsor. Since these entitlement funds are not obligated until the execution of a grant to the transferee, the regions should encourage early use of transferred funds to reduce the carry-over problem. Also, multi-year fund transfer agreements may be executed by use of a separate form for each fiscal year or clearly described on one form. For any accounting or record-keeping of these transferred funds, either in the AIP or accounting systems, they should always be identified by the discrete sponsor code of the original (transferor) sponsor.

12.9 Visual Approach Slope Indicators - Bob David (426-3857). At most airports, three different systems could provide an acceptable means of visual vertical guidance. These include PLASI, VASI, and PAPI. Consequently, the specification shall not be approved if it requires a particular system. The term "visual approach slope indicator" when used in the lower case is now considered a generic term that encompasses the three previously mentioned systems. This term should be used in grant descriptions and specifications.



Lowell H. Johnson

Attachments

Suspension and Debarment of Grantee Contractors

Original signed by

- 2 DEC 1981

Lowell H. Johnson
Chief, Grants-in-Aid Division, APP-500

BURNETT63857

All Regions and AAC-960
Attention: Chief, Airports Division

The attached list of grantee contractors, who have been found in violation of Federal Highway Administration regulations, is forwarded for your information. The transmittal memorandum furnishes background information. Sponsors who have contracting opportunities as a result of ADAP grants should be made aware of this list. This does not affect a sponsor's obligation to follow OMB Circular A-102 (Attachment O) procedures, as well as state and local requirements in the award of contracts, but it does provide additional information for a sponsor's consideration.

Attachment



U.S. Department of
Transportation

Office of the Secretary
of Transportation

Memorandum

Subject: ACTION: Suspension and Debarment of
Grantee Contractors

Date: November 16, 1981

From: Robert L. Fairman 
Assistant Secretary for Administration

Reply to
Attn. of: McLaughlin:X64160

To: Office of Inspector General
Chief of Staff, USCG

Associate Administrator for Administration, FAA —
Associate Administrator for Administration, FRA
Associate Administrator for Administration, NHTSA
Associate Administrator for Administration, UMTA
Associate Administrator for Policy, Plans and
Program Management, RSPA

On September 23, 1981, Secretary Lewis directed my office to maintain a current list of the names of grantee contractors who have been disqualified from participation under the Federal Highway Administration's (FHWA) Federal assistance programs (Attachment 1). FHWA has now provided the attached summary of unacceptability actions as of November 2, 1981 (Attachment 2). The Secretary's memorandum also directed that each modal administration take action to see that their grantees are aware of this listing, and that the FHWA disqualification is a factor in determining whether a contractor is eligible to participate under a particular grant project.

Also attached is a consolidated list of persons or firms currently debarred for violation of various public contract acts incorporating labor standards provisions which was provided by the Department of Labor (Attachment 3). Any individuals or organizations, with the exception of those found to be in violation of the Service Contract Act of 1965, listed therein are ineligible to receive a direct Federal contract or contract under a Federal assistance program. Department of Transportation (DOT) administrations should take action to ensure that grantees are also aware of this listing. The Office of Installations and Logistics will notify modal administrations of any changes to these listings as they occur.

If there are any questions, please contact Charles McLaughlin at 426-4160.

3 Attachments

-#-



It's a law we
can live with.

memorandum

Subject: Suspension and Debarment of Contractors

Date: SEP 23 1981

From: The Secretary

Reply to
Attn. of:

To: Heads of Administrations and Secretarial Officers

At this time there are no DOT-wide procedures for suspension and debarment of contractors who engage in bid-rigging, collusion or other prohibited activities under contracts with grantees in programs funded by the Department of Transportation. The Federal Highway Administration is the source of funds for many contracts between local authorities and private contractors, and FHWA has adopted regulations on disqualification of grantee contractors (23 C.F.R. Part 16); however, action by the FHWA does not preclude a delinquent contractor from obtaining a contract under a program funded by other DOT Administrations.

The General Counsel's Office has under consideration the promulgation of regulations, initiated by the Office of the Inspector General for suspension and debarment of grantee contractors which would apply to the entire Department. A task force has been established to draft regulations. Such a DOT-wide suspension and debarment program is in line with the President's Executive Order on Integrity and Efficiency in Federal Programs dated March 26, 1981. This program supplements the Office of Federal Procurement Policy's proposed debarment and suspension policy letter which is now distributed to agencies for comment.

While the Department-wide regulations are being completed, the Office of the Assistant Secretary for Administration will maintain a current list of the names of the grantee contractors who have been found to be in violation of the FHWA regulations. These contractors' names will be circulated among all DOT Administrations, and DOT offices shall consider their suspension and debarment in determining whether they are responsible contractors. The list will be maintained by the Office of Installations and Logistics (M-60).



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1021. DETERMINATION OF REASONABLENESS OF COSTS. To be allowable, a cost must be reasonable. Although the final determination of reasonableness of costs is made the time of the project closeout, it is incumbent on FAA field personnel to determine during the review of the application that the amount of funds requested by the sponsor is reasonable. Issuance of a grant offer constitutes a determination in this regard. The determination should be made in accordance with the following methods:

a. Application amounts based upon estimated costs:

(1) Requested amounts should be compared to the costs of similar type work included in other recently awarded grants, taking into account such factors as inflation and geographical differences;

(2) Estimated cost of land acquisition should be based on appraisals of the parcels to be acquired as well as appropriate relocation assistance and administrative costs.

b. Application amounts based upon sealed competitive bids:

(1) The sponsor is required to submit an itemized abstract of bids and a copy of the engineer's estimate, both to be included in the project file. The low bid should be compared to the engineer's estimate, as well as costs for similar type work in other projects. If there are several bids, it may not be necessary to compare the low bids to costs in other projects since experience has shown that the greater the number of bidders, the lower the price;

(2) If only one bid is received, the FAA should encourage the sponsor negotiate with the sole bidder to obtain lower prices if such negotiation is permitted by state or local law;

(3) If there are less than five bidders and the low bid exceeds the engineer's estimate by 10%, the grant should not be issued unless the FAA satisfies itself that the costs are reasonable.

1022. REVIEW FOR BID IMPROPRIETIES.

a. In reviewing the abstract of bids to determine the reasonableness of costs, FAA personnel should be alert to possibilities of improprieties in the procurement process such as bid rigging and collusion. FAA personnel should notify the OIG Regional Special Agent-in-Charge of Investigations when:

(1) There are five or fewer bidders on a construction project and the low bid is 95% or more of the engineer's estimate and the bid is \$200,000 or more;

(2) There is only a single bidder on a construction contract and the bid is \$100,000 or more;

(3) Any bid package which FAA field personnel feel contains any unusual or suspicious bid patterns or activities.

b. When a bid package is submitted to the OIG Office of Investigation, the grant award should not be delayed unless the Special Agent-in-Charge indicates otherwise.

DEPARTMENT OF TRANSPORTATION
FEDERAL AVIATION ADMINISTRATION
AGREEMENT FOR TRANSFER OF ENTITLEMENTS

In accordance with Section 508(b)(2) of the Airport and Airway Improvement Act of 1982,

(Name of Transferor Sponsor)

hereby waives receipt of \$ _____ of funds apportioned to it for Fiscal Year _____ under Section 505 of the Act on the condition that the Federal Aviation Administration makes the waived amount available to:

(Name of Transferee Sponsor)

for eligible projects under Section 505 of the Act.

FOR THE UNITED STATES OF AMERICA
FEDERAL AVIATION ADMINISTRATION

FOR _____
(Name of Transferor Sponsor)

BY _____

BY _____

TITLE _____

TITLE _____

DATE _____

DATE _____

CERTIFICATE OF SPONSOR'S ATTORNEY

I, _____ acting as Attorney for the Sponsor do hereby certify:

That I have examined the foregoing Agreement and find that the Sponsor has been duly authorized to make such transfer and that the execution thereof is in all respects due and proper and in accordance with the laws of the State of _____ and the Act.

Dated at _____ this _____ day of _____, 19 ____.

.....

Title



SUGGESTIONS FOR THE DETECTION AND PREVENTION
OF CONSTRUCTION CONTRACT BID RIGGING

Prepared by:

The Interdepartmental Bid Rigging
Investigations Coordinating Committee

Joseph P. Welsch
Inspector General
U.S. Department of Transportation
Cochairman

Helmut F. Furth
Deputy Assistant Attorney General
Antitrust Division
U.S. Department of Justice
Cochairman

February 1983

INTRODUCTION

This paper was prepared by the Interdepartmental Bid Rigging Investigations Coordinating Committee, which was formed in August 1982 to refine the joint investigative efforts of the Department of Transportation and the Department of Justice in the area of highway and airport construction contract bid rigging.

The paper addresses the detection and prevention of bid rigging, and is designed primarily for procurement and contract specialists and for investigative and audit personnel. It provides suggestions for steps to be taken to identify evidence of collusion and to improve state procurement procedures with a view to stimulating competition and inhibiting anticompetitive behavior. The suggestions offered are derived from successful detection and prevention methodologies developed during past investigations.

While the paper specifically deals with the letting of highway construction contracts, most of the recommendations are readily adaptable to other categories of procurements.

SECTION 1 - DETECTION

Purpose. The object of this portion of the paper is to present a methodology that can be utilized to detect collusion in highway construction contracts. This methodology has been utilized successfully in previous bid rigging investigations. It is intended to disclose various bidding practices and patterns which might indicate that bid rigging is occurring. This will focus any subsequent investigation as well as allow you to gain background information on contractor activity within a particular state.

When feasible, the use of electronic data processing equipment should be considered to assist in this effort. The Department of Transportation, Office of Inspector General, and the Department of Justice, Antitrust Division's Information Systems Support Group can provide guidance and assistance in this regard.

We suggest that this analysis be conducted by a team composed of an investigator, an auditor, an attorney, and a state department of transportation engineer. This mix will be extremely beneficial as the analysis progresses, especially if the determination is made to proceed to the investigative phase.

A. INITIAL SCREENING

The initial screening consists of reviewing all bid tabs and selecting those projects that involved five or fewer bidders and where the low bid exceeded or was within 5 percent of the state engineer's estimate.

1. On These State and Federally-funded Contracts, Perform the Following Analysis:

- a. Compute the percentage difference between the second place bidder and the winning bid,
- b. Compute the percentage difference between the third place bidder and the winning bid, and
- c. Compute the percentage difference between the first and last place bidder.

If the difference between the winning bidder and the second place bidder is within 6 percent, and the difference between the winning bidder and the third place bidder is less than 9 percent, and there is no more than 17 percent difference between the first and last place bidders, there is a significant possibility that the bids were rigged.*

2. The Contracts That Meet the Percentage Difference Criteria Should Be Considered Suspect and Should Be Examined in More Detail. This examination will, in most instances, require additional information which should be available in the state department of transportation. This information would include at a minimum:
 - a. A list of all prequalified bidders and their capabilities.
 - b. Line item prices on suspect jobs.
 - c. Identity of all subcontractors on suspect jobs.
 - d. A list of each company that received bid packages on the suspect jobs.
 - e. Location and capacity of each contractor's asphalt plants.

B. SECONDARY ANALYSIS

Having determined that the potential for bid rigging may exist, a closer examination should be made to determine if any of the following bidding practices are present. These practices have, in the past, indicated collusion:

1. Failure of Qualified Bidders to Bid;
2. Certain Contractors Repeatedly Bid Against One Another or, Conversely, Certain Contractors Do Not Bid Against One Another;
3. The Successful Bidder Repeatedly Subcontracts Work to Companies That Submitted Higher Bids on the Same Projects or That Picked Up Bid Packages But Did Not Submit Bids;
4. Different Groups of Contractors Appear to Specialize in Federal, State, or Local Jobs Exclusively;

*Note that, with the wide distribution of this paper, it is conceivable that the information concerning these percentage criteria may become known among contractors. Colluding contractors might arrange to have future bids fall outside the specified ranges. Therefore, the percentage criteria presented in this paper may not be valid for bids received after February 1983.

5. An Unusual Disparity in Front-end or Lump Sum Payment Items Among the Bidders;
6. A Particular Contractor Always Winning in a Certain Geographical Area;
7. Contractors Who Bid Frequently, But Never Win;
8. Identical Bid Amounts on a Contract Line Item by Two or More Contractors. Some instances of identical line item bids are explainable, as suppliers often quote the same prices to several bidders. But a large number of identical bids, or identical bids on any service-related item, should be viewed critically.
9. Contractors Previously Convicted of Bid Rigging in Other States Who Are Operating in the State Under Review;
10. Joint Venture Bids Where Either Contractor Could Have Bid Individually as a Prime;
11. Failure of Original Bidders to Rebid, or an Identical Ranking of the Same Bidders upon Rebidding, Where Original Bids Were Rejected for Being Too Far Over Estimate; or
12. Discrepancies in Similar Line Items Bid by a Given Firm on Different Projects in the Same General Area at the Same Letting or on Comparable Projects at Different Lettings Within a Relatively Short Time Period.

Additional insight on bidding patterns/activities can be gained by:

1. Plotting Suspect Contracts in Relation to Fixed Asphalt Plants. This can be accomplished by assigning each vendor a different color and making the appropriate notation on a state map. This can be useful in detecting the existence of territorial divisions by contractors, provided due recognition is given to the fact that there are natural limits (usually 20 to 40 miles) to the transport of hot-mix asphalt.
2. Preparing a Competition Matrix by Year for a 5-year Period. This matrix would include the major contractors, the number of contracts they were awarded during the period, the dollar volume these contracts represented, the percentage of the total contracts and the total dollar volume won by each vendor, and the ranking of the contractors based on the above. Additional information may be included in the matrix but it should, at this point in time, be kept simple enough so that it can be manually compiled in the shortest period of time. A more complex matrix can be developed once a determination has been made as to whether to proceed to the investigative stage.

3. Reviewing the State's Prequalified Bidders List, Which Indicates the Extent of a Contractor's Capabilities (i.e., Design, Grading, Total Project, etc.). When reviewing bids, it is important to note the qualifications of each of the bidders, not merely the low bidder. Cases have been recorded where the low bidder was fully qualified, but some of the other bidders were not capable of performing the entire project even though they bid on it.
4. Analyzing Changes in the Financial Position of Companies Over the Last 5 Years. In several states, it has been noted that companies winning contracts during the 1977-1980 time frame are currently experiencing financial difficulty. This may be attributable to the companies' inability to operate successfully in a truly competitive marketplace.
5. Determining the Degree of Influence That Suppliers (e.g., Liquid Asphalt, Aggregate, Prestressed Concrete, Pipe, etc.) Have on Contract Awards. Investigations have indicated that prices quoted (or not quoted) for materials can be the determining factor in the eventual low bid. A supplier's refusal to quote material prices to potential bidders, or to quote substantially higher prices to some potential bidders, can have a significant impact on the degree of competition on a particular contract.

D. DETERMINATION

Having completed the foregoing, the team members should be in a position to make a determination as to the potential for bid rigging in the state and a determination as to whether an investigation should be initiated.

While the indicators and analyses described above have proven to be valuable in successful bid rigging investigations, they are not sufficient to prove collusion. They merely suggest where to look. They provide the background information and marketplace knowledge which enables investigators to conduct detailed interviews and ask specific questions of contractors. It must be remembered that successful prosecutions have resulted principally from the testimony of individuals who were directly involved in the bid rigging schemes. This analysis can lead you to those individuals.

SECTION 2 - PREVENTION

Purpose. This section focuses on three areas: Bidding/contracting procedures; Data collection/retention; and Utilization of computers. The administrative and technical suggestions presented herein can serve as effective deterrents to bid rigging and other forms of contractor collusion.

A. SUGGESTIONS CONCERNING STATE AGENCY BIDDING AND CONTRACTING PROCEDURES.

State agency procedures for soliciting competitive bids on road construction projects are generally designed to assure that the work is done by responsible bidders at the lowest available price. However, we have found that in many cases existing procedures are inadequate to deal with collusion among contractors. In light of the high incidence of collusive activity, we believe that state agencies should review their bidding and contracting procedures and consider modifying them to provide better protection against the submission of rigged bids. We believe that the suggestions set out below could significantly narrow the opportunities for collusion among contractors and assist Federal and state agencies in pinpointing instances of unlawful conduct.

1. The State Engineer's Estimate Should Not Be Disclosed Prior to the Award of the Job.

Some state agencies include their engineer's cost estimate for a project among the materials furnished to prospective bidders. The agency may provide either an estimate for each line item on the bidding form or a lump sum estimate for the entire project.

We suggest that state agencies maintain all such estimates as confidential until after the bids are received and a contract is awarded. Releasing this information earlier encourages and facilitates bid rigging by permitting prospective bidders to gauge what the state agency would consider to be a reasonable price for the project and to decide how far a rigged bid may exceed the estimate without jeopardizing the award of a contract.*

We are not aware of any compelling business reason for making the state engineer's estimate available to prospective bidders. It is not necessary to help them estimate the cost of materials, since bidders are intimately familiar with these costs. Relying on past experience, bidders can readily determine their own mobilization and labor costs. We are advised that state engineers in some cases obtain the data on which their estimates are based from the same contractors who later bid on the job. We are persuaded, therefore, that the bidding process would not be impaired if the state engineer's estimates were withheld from prospective bidders prior to the letting of construction contracts.

*In some states, if the lowest bid exceeds the state estimate by 10 percent, the bidding process is repeated and the project is re-let.

2. Contractors Should Be Prequalified for Road Construction Work.

A number of states require contractors who wish to bid on state road construction jobs to be prequalified by the state agency having responsibility for the work. Based largely on information supplied by each contractor, the agency determines prior to soliciting bids for a particular job which contractors would be acceptable bidders.

We suggest that this procedure be followed uniformly by state agencies as to road construction contractors, and that contractors seeking prequalification be required to submit to the state agency information that will prove useful in conducting audits and investigating bidding practices. Such information includes (i) the identity of the officers and directors of the firm, the person in the firm having final bidding authority, and its chief estimator; (ii) a statement disclosing whether or not the firm or any of its officers or directors is affiliated with any other contractor, and, if so, providing the pertinent details; (iii) a statement of the assets of the firm, including a brief description of plants and heavy equipment that it owns or leases; and (iv) a brief description of the firm's prior work experience, if any, or other basis qualifying it for the type of work in question.

We also suggest that each prequalified contractor be required to update this information annually.

3. The State Agency Should Seek Line Item Bids Rather Than Lump Sum Bids.

Some states require that bidders submit their bids on a line item basis, i.e., the bidder must submit separate figures covering each of the principal cost elements of the project, such as materials, direct labor, and mobilization. Other state agencies require only the submission of a lump sum bid covering the entire work.

We believe that the former procedure is preferable. By obtaining bids on a line item basis, it is possible for the state agency to make a meaningful comparison of the submitted bids with the agency's own internal cost estimates. The disclosed fact that line item bids on a particular project deviate significantly from line item bids made on other, similar projects in the same geographic area will alert the state agency to the desirability of further investigation. Colluding contractors frequently increase the mobilization expense item to secure extra profits on the rigged job or to defray the costs of payoffs to coconspirators. Once an investigation is commenced, a comparison of the contractor's internal work sheets with his line item bids may reveal the arbitrary or unusual price changes that are indicative of bid rigging.

4. Bidders Should Identify Joint Venturers, Partners, and Major Subcontractors and Suppliers.

Collusion among contractors often takes the form of agreements whereby competitors become joint venturers or partners on a project, or assign subcontracts to each other. We recognize that such arrangements can serve entirely legitimate functions; it would be undesirable to prohibit them across-the-board. Nevertheless, it is advisable that the state contracting agency be informed of them at the time bids are submitted. The agency can then make its own determination as to whether or not to accept a particular bid. For example, if the state agency is informed that the lowest bidder proposes to utilize one of his principal competitors as a subcontractor, and on further inquiry no adequate justification for doing so is provided, the state agency could decide to disqualify the bid and either accept the next lowest bid or to invite a new round of bids.

The very fact that the rules of the state agency call for disclosure of this type of information will, we believe, inhibit the use of joint venture, partnership, subcontracting, or supplier arrangements among competitors as a means of implementing bid rigging schemes. Such information will also be useful for subsequent investigations if the state agency decides to award the bid to the party making the disclosure. Further, should a successful bidder fail to disclose the required information, the state agency would have a basis for later canceling the award of the contract, withholding payments, or imposing other penalties.

Accordingly, we suggest that state agencies require each bidder to identify his partners, joint venturers, and major subcontractors or suppliers on the project with respect to which bids are being solicited. To limit the possible burdensomeness of this requirement, the rules of the agency might define a "major" subcontractor or supplier as one who is responsible for not less than a specified minimum (e.g., 5 percent) of the project work, stated as a percentage of total costs. The term "joint venturer" should be defined to include all persons who will share in the profits or expenses of the work or provide capital for the work (other than regular lending institutions or investors not directly engaged as contractors in road construction work). The term "subcontractor" should be defined to include not only contractors handling a portion of the work directly but also lessors of equipment used by the bidder for the work (other than persons engaged principally in the business of leasing equipment and not directly engaged in road construction work).

Following the award of a contract, the successful bidder should be required periodically to update the information furnished at the time of the bid, and to promptly identify every person who at any time after the original submission of the bid has become a joint venturer, partner, or major subcontractor or supplier of the bidder on the project.

5. Review State Engineers' Estimating Techniques.

State engineers' estimating procedures vary from state to state, and often within a state from one estimator to another. The accuracy of the state engineering estimate is important for at least two reasons. First, it provides an approximate dollar amount for development of the state budget. Second, it serves as a benchmark for evaluating contractor bids.

Investigations in several states have disclosed weaknesses in estimating procedures. The most common fault lies in the use of historical estimates or bid prices as a basis for current estimates. This can have the effect of compounding an earlier erroneous estimate, particularly where prior data are based in whole or in part on rigged contracts. Even in situations where historical data have not been used in constructing the estimates, there have been wide swings in estimates for the same item, where quantities, letting dates, job sites, and other factors have remained essentially constant. These occurrences are normally attributable to different estimators, which further underscores the need for a consistent approach to estimating.

In the development of estimates for upcoming projects, states should rely on continuously updated material price and labor rate information. This information should be centrally recorded and readily retrievable for use by all state estimators.

Pricing data for many items will vary due to economies of scale, project location, and other factors. These variables should be noted in the central record so that equivalency can be determined. The resultant record will reflect a range of prices for an item. State estimates and bid amounts should normally fall within this established range; any variations beyond the range should be critically reviewed prior to contract award.

6. States Should Require Antitrust Audits.

States should conduct periodic antitrust audits to look for evidence of collusion or bid rigging. The focus should be on groups or types of contracts awarded through the competitive bidding process. Such audits should involve purchasing officials familiar with the industry and investigators familiar with the antitrust laws. These audits would serve both as a detection mechanism and as a deterrent.

7. All Bidders Should Execute an Affidavit of Non-Collusion.

A detailed discussion of this suggestion, including a sample affidavit, is currently under development and will be distributed at a later date following review by program management.

8. Additional Suggestions.

- a. States should consider withholding the names of prospective bidders until after the letting date.

The pre-letting release of the names of contractors and suppliers who picked up bid packages on a particular project offers no advantage to the state, and can provide colluding bidders with useful information concerning the universe of competition.

- b. States should consider increasing the frequency of bid lettings.

Many states open bids once a month or less frequently. During peak construction periods, when many projects are being bid, this facilitates collusion among contractors by requiring only one meeting per month, where they could set up several jobs at the same time. More frequent lettings during peak bidding periods would at a minimum make these meetings less convenient. This inconvenience could result in more overt collusive behavior, which might be more easily detected.

- c. States should consider dividing large projects into smaller segments when feasible.

Large volume contracts limit the number of bidders to large companies or those that have substantial excess capacity. Division of large contracts whenever possible, while perhaps administratively more cumbersome for the state, can result in a net savings due to increased competition.

B. SUGGESTIONS CONCERNING THE MAINTENANCE OF RECORDS AND DATA.

In many cases, the successful investigation and prosecution of unlawful collusion and bid rigging depends on the availability to Federal and state authorities of a substantial body of bidding and other job records and data. Set out below are our observations concerning the types of records and data that state contracting agencies should maintain. We believe that all of the items listed are relevant to the investigation and prosecution of bid riggers and the recovery of overcharges, and their unavailability to Federal and state investigators may, in some instances, bar any effective legal action against the guilty parties. The items to be retained should be indexed and filed or stored in a manner that will allow ready access and retrieval.

We suggest a minimum retention period of 5 years. Five years is the statutory period of limitations for prosecutions under the Federal antitrust laws.* Although transactions occurring earlier than 5 years before the event in question will at times be relevant, experience indicates that it is seldom possible to establish the existence of an unlawful conspiracy if no evidence of collusion has surfaced within 5 years after the event. All things considered, therefore, we believe that a 5-year across-the-board retention period would be adequate. Presumably, where the state agency has reason to suspect bid rigging on a particular project, it would take steps to retain the relevant records even after the expiration of the normal retention period.

Many states currently retain some of the records and information listed below; other states either do not collect this type of information or do not retain it. Due to the disparity of state procedures, it may be necessary for some state agencies to develop a document retention program; to redraft or modify existing forms; or to develop new forms and applications that contractors will be required to submit during the bidding process. In most cases, the burden of modifying existing forms and developing new ones should be minimal.

We believe that the following documents and data should be retained:

1. Basic Information Concerning Each Project Let for Bidding:
 - a. Project number or identification,
 - b. Description of the project (type of work),
 - c. Location of the project (road or road segments involved),
 - d. Identification of the agency responsible for supervision of the project, and
 - e. Bid and award dates.
2. A List of Names and Addresses of Each Company Invited to Bid.
3. A List of Each Company Requesting Bid Specifications.
4. The Date-stamped Bid Proposal Submitted By Each Contractor.** This document should include the following information, whenever possible:

*Civil actions under the Federal antitrust laws to recover overcharges must ordinarily be brought within 4 years after the date of injury; this time period may be extended by the court in cases where the guilty parties have fraudulently concealed their collusive activities.

**Mailing envelopes used by bidders to submit bids, information, and non-collusion affidavits should be retained. Proof of mailing is necessary to establish a mail fraud violation under Federal law.

- a. Bid prices, including all line item prices;*
 - b. The identity of subcontractors whose quotations were used to formulate the bid, their addresses, and a description of the work to be performed by each;**
 - c. The identity of suppliers to be used, their addresses, and the quantity and value of materials or services to be provided by each;**
 - d. The identity of all joint venturers and partners involved in or underwriting the performance of work on the project;** and
 - e. A non-collusion affidavit.***
5. The State Engineer's Estimate Covering All Work To Be Performed on the Project. This estimate should disclose the following information:
- a. All line item price estimates,
 - b. Total project estimate,
 - c. Source of cost data used to formulate line item price estimates, and
 - d. Identification of the person preparing the estimate.
6. Memoranda of All Pre-award Conferences. These memoranda should disclose the following information:
- a. Date and place of the conference,
 - b. Identity of all persons present,
 - c. Summary of subject matters discussed, and
 - d. Results of the conference.
7. All Documentation Relating To the Award of the Project.
8. All Documentation Concerning the Source of Materials Used on the Project.

*Whenever possible, line item prices should be requested instead of a lump sum bid (see paragraph A.3.).

**The successful bidder should be required to update this information following the submission of his bid (see paragraph A.4.).

*** (See paragraph A.7.)

9. All Financial Records Concerning the Project, Including the Following:
 - a. Progress reports;
 - b. All invoices submitted by contractors;
 - c. All payment records, dates, and warrant numbers of checks issued; and
 - d. All change orders.
10. Information and All Documentation Concerning the Expenditure of Federal Funds in Connection with Each Project, Including the Following:
 - a. Each disbursement of Federal funds, together with warrant numbers and dates of checks issued; and
 - b. Total amount of Federal funds expended.
11. A List of All Prequalified Bidders. This list should be updated annually, and should provide the following information:
 - a. The name and address of each company;
 - b. The names of all officers and directors of the company;
 - c. The names of all employees authorized to submit bids on behalf of the company;
 - d. The names of the person having final bidding authority, and of the chief estimator of the company;
 - e. A description of all affiliations between the company or any of its officers or directors with other firms in the road construction industry; and
 - f. Identification by description, location, and capacity of each production facility or plant (hot-mix, surface treatment, portable, stone crushing, etc.) owned or leased and operated by the bidder.

C. SUGGESTIONS CONCERNING THE MAINTENANCE OF INFORMATION IN COMPUTER-RETRIEVABLE FORM.

Due to the great number of road construction projects let each year around the country, it is not feasible for either Federal or state authorities to investigate every project as to possible collusion or bid rigging. Tools must be developed for identifying a select number of situations that may warrant further inquiries. To this end, the computer programming of key data is essential.

It would be advantageous for each state department of transportation to set up a comprehensive computer system for programming the data outlined in part 1 below, which we believe to be essential for the purpose of pinpointing collusive activities.

Additional data that merit inclusion in a computer data base, but which we do not consider to be essential, are outlined in part 2 below.

1. Essential Project Data To Be Computerized:*

- a. Project number of identification;
- b. Description of the project (type of work);
- c. Location of the project:
 - (1) By county, and
 - (2) By road or road segments involved;
- d. Engineer's estimate (aggregate amount);
- e. Bid date;
- f. Award date;
- g. List of all bidders and their respective bids (aggregate amounts bid by each);
- h. Identification of subcontractors and the type of work done by each; and
- i. The final cost of the project.

Once recorded in computer-retrievable form, the data can be programmed to create various cross-reference tables or indices. For example, the basic project data can be programmed chronologically for specified periods of time; by contractor, indicating chronologically all projects on which a contractor has bid during a specific period (regardless of whether or not the contractor was the low bidder); or by county, indicating chronologically all projects let in a specified geographic area and related data.

*The data can be organized in various formats. Attached hereto as Appendix A are samples of the format developed by the North Carolina Department of Transportation. We found this format to be informative and relatively easy to use in analyzing bidding patterns by contractors in particular geographic areas and in evaluating preliminarily whether winning bid prices looked reasonable in relation to the state engineer's estimate.

2. Additional Data That Might Be Computerized:

- a. A list of all companies that received bid specifications for each project;
- b. All line item prices for each project;*
- c. All financial data related to each project, including the following:
 - (1) Progress reports;
 - (2) All invoice data submitted by contractors;
 - (3) Payment history, dates, and warrant numbers and checks issued; and
 - (4) All change order data; and
- d. All data related to the expenditure of Federal funds in connection with each project, including the following:
 - (1) Each disbursement of Federal funds, together with warrant numbers and dates of checks issued; and
 - (2) Total amount of Federal funds expended.

*Computerizing this information will permit the preparation of cross-reference tables or indices tracing the history by location and contractor of particular line items.

NORTH CAROLINA DEPARTMENT OF TRANSPORTATION

BY Contractor - Chronologically

LET	PROJ/ TIP	JOB	COUNTY	BIDDER	NAME	8810TOTAL	DIFF	88GESTIM	88FINALPAY	LOCATION
AUG/74 10	8.1558304 R-8088	GRADING PAVING STRUCT	MONTGOMERY	1	DICKERSON INC	5,487,567	-17	6,612,614	0	US 220 RELOC NC 24-27 SE OF BISCOE TO S OF NC 211 CANDO
				2	D R ALLEN & SON	5,701,266	-14			
				3	SHEPHERD CONST CO	5,735,529	-13			
				4	C W MATTHEWS CONTR	5,777,249	-13			
				5	CROWELL CONSTRUCTOR	5,820,486	-12			
				6	C G TATE CONST CO	5,823,795	-12			
				7	R G K INC & KNIGHT	6,108,672	-8			
				8	E V WILLIAMS CO	6,626,242	+0			
				9	PROPT CONST CO INC	6,783,510	+2			
				10	BERO CONT CORP	6,950,013	+9			
				11	SHOOSMITH BROS INC	6,964,418	+5			
				12	HIGGERSON-BUCHANAN	7,215,829	+9			
				13	COLONY CONST CO	7,344,487	+11			
AUG/74 11	8.1198204 1-150	GRADING PAVING STRUCT	WILSON NASH	1	S T WOOTEEN CONST CO	10,327,091	+9	9,472,988	10,811,920	1-95 MILLSTONE CRY BRIDGE NE TO TAM RIVER BRIDGE *** PREV LET JUN/24/75 ***
				2	BARNHILL CONTR CO	10,572,120	+12			
				3	DICKERSON INC	10,609,690	+12			
				4	C W MATTHEWS CONTR	10,806,482	+14			
AUG/75 18	9.7013203	WIDEN RESURF	WASHINGTON	1	BARRUS CONST CO	27,305	-13	31,429	13,745	EAST MAIN ST SR 1325 BULLARD ST TO RAMKIN ST IN PLYMOUTH
				2	DICKERSON INC	35,192	+12			
AUG/75 19	8.804104 S-214	RESURF	MOORE	1	LEE PAVING CO INC	71,317	-32	104,269	63,077	RESURF SR 1470 ROBBINS CITY LIMITS TO SR 1507
				2	SO. EASTERN ASPH CONC	74,149	-29			
				3	CUMBERLAND PAVING	111,580	+7			
				4	DICKERSON INC	118,381	+13			
SEP/75 1	8.0221015	RESURF	CAMDEN CURRITUCK	1	DICKERSON INC	143,802	+8	133,634	134,612	RESURF 6 SECT 2ND ROADS
				2	BARRUS CONST CO	147,692	+10			
				3	CUMBERLAND PAVING	151,137	+13			
SEP/75 2	8.1811014	RESURF	PASQUOTANK	1	DICKERSON INC	371,403	+8	343,735	356,243	US 17 RESURF 3 SECT PRIMARY 1 SECT 2ND ROADS
				2	BARRUS CONST CO	380,417	+11			
				3	CUMBERLAND PAVING	402,336	+17			
SEP/75 3	5.1821011	RESURF	GREFNE PITT	1	BARRUS CONST CO	150,286	-3	155,710	144,204	NC 903 RESURF 1 SECT PRIMARY 8 SECT 2ND ROADS
				2	S T WOOTEEN CONST CO	159,171	+2			
				3	DICKERSON INC	162,523	+4			
SEP/75 4	5.2311016	SURF RESURF	BRUNSWICK PENDER	1	DICKERSON INC	195,138	-20	242,731	194,347	US 17 SURF 1 SECT 2ND RESURF 2 SECT PRIMARY ROADS
				2	REAGAN CONST CO	236,983	-2			
				3	C W MATTHEWS CONTR	270,355	+11			
				4	CROWELL CONSTRUCTOR	289,852	+19			
SEP/75 5	8.2412015	RESURF	DUPLIN SAMPSON	1	CUMBERLAND PAVING	352,012	+3	340,183	352,374	US 421 RESURF 3 SECT PRIMARY 12 SECT 2ND ROADS
				2	SHEPHERD CONST CO	354,990	+4			
				3	S T WOOTEEN CONST CO	362,920	+7			
				4	HOLLING SPRING CON	368,299	+8			
				5	DICKERSON INC	373,378	+10			
				6	CROWELL CONSTRUCTOR	380,471	+12			
SEP/75 6	5.3211034	RESURF	NASH	1	S T WOOTEEN CONST CO	143,098	-4	149,984	130,091	NC 97 RESURF FROM NC 981 TO NC 98
				2	REA CONST CO	149,474	+0			
				3	BARNHILL CONTR CO	153,300	+2			

PRIMA Sorting method:
By County

LETTING HISTORY
NORTH CAROLINA DEPARTMENT OF TRANSPORTATION

LET	PROJ. TIP	JOB	COUNTY	BIDDER	NAME	BID TOTAL	DIF	SENGESTIM	FINAL PAY	LENGTH / LOCATION
DEC/78	B.1901412	GRADING	BUNCOMBE	1	P M ALEXANDER CONST CO	169,064	-36	266,561	166,264	0.152 MILES
A	I-401E	PAVING		2	TENNOGA CONST CO	179,480	-33			CONN. AND RAMP OF
				3	ASHEVILLE CONTR CO	188,565	-29			WEST EXPRESSWAY, ASHEV
				4	TAYLOR & MURPHY CONST	192,363	-28			
JUL/75	B.1909312	GRADING	BUNCOMBE	1	ASHEVILLE CONTR CO	2,486,584	-20	3,131,239	2,813,279	1.373 MILES
18	U-49R			2	BURNS AND SPANGLER INC	2,498,638	-20			US 74 RELOC IN ASHEVIL
				3	HARRISON CONST CO INC	2,515,292	-20			US 70 TO NW OF US 74
				4	P M ALEXANDER CONST CO	2,681,471	-14			
				5	S T WOOTEN CONST CO	2,852,363	-9			
				6	BLALOCK & SONS INC	2,880,252	-8			
				7	C G TATE CONST CO	3,292,815	+5			
FEB/74	B.1901408	GRADING	BUNCOMBE	1	ASHEVILLE CONTR CO	7,484,149	+9	6,886,394		0 1.110 MILES
1	U-49C	STRUCT		2	HARRISON CONST CO INC	7,539,012	+17			US 70-74 NR ASHEVILLE
				3	C G TATE CONST CO	7,567,886	+10			CHUNNS COVE RD TO SE U
				4	TROY SMITH-C R DUNCAN	7,754,465	+13			
				5	HICKORY CONST CO INC	7,844,745	+14			
				6	S T WOOTEN CONST CO	7,971,039	+16			
				7	BLALOCK & SONS INC	8,137,104	+18			
				8	TILFITT BROS CONST CO	8,195,843	+19			
				9	A B HURTON AND CO INC	8,565,818	+25			
				10	MC DONWELL CONTR INC	8,798,284	+28			
NOV/76	B.1901410	GRADING	BUNCOMBE	1	ASHEVILLE CONTR CO	9,965,409	-21	12,625,498		0 0.725 MILES
15	U-49D	PAVING		2	BURNS AND SPANGLER INC	11,615,074	-8			US 70,74 RELOC IN ASHE
		STRUCT		3	C G TATE CONST CO	11,896,517	-6			THRU BEAUCATCHER MOUNT
				4	BLALOCK & SONS INC	12,116,226	-4			
				5	S T WOOTEN CONST CO	11,365,883	+6			
				6	BURNS & HAKER INC	11,388,574	+6			
				7	NELLO L TEER CO	14,457,612	+14			
				8	WRIGHT CONTR CO	14,486,340	+15			
AUG/79	B.1909314	GRADING	BUNCOMBE	1	ASHEVILLE CONTR CO	171,055	+15	148,945	181,312	0.112 MILES
12	I-40AG			2	A M TUCK	188,047	+26			RAMP C ON I-40 AT US74
										INTERCHANGE, ASHEVILLE.
MAY/80	B.1904303	GRADING	BUNCOMBE	1	ASHEVILLE CONTR CO	418,946	-8	453,864		0 0.589 MILES
4	U-7	PAVING		2	A B HURTON AND CO INC	462,946	+2			NC 197 FR SR 2172 TO E.
				3	TAYLOR & MURPHY CONST	493,366	+8			BARNARDSVILLE
				4	DILLINGHAM CONST CO	505,463	+11			
				5	P M ALEXANDER CONST CO	559,710	+23			
				6	L A REYNOLDS CO	566,887	+25			
				7	3-C CONSTRUCTION CO	578,980	+27			
NOV/76	B.1909408	PAVING	BUNCOMBE	1	ASHEVILLE PAVING CO	2,308,938	-29	2,899,332	2,366,324	4.192 MILES
16	I-12			2	MARKEN BROS COMPANY	2,637,756	-9			I-40 SWANNANOVA TO NC 9
				3	A B HURTON AND CO INC	2,687,820	-7			BLACK MOUNTAIN
				4	THOMPSON CONTR INC	2,686,039	-7			
				5	LEDRETT BROS INC	2,748,692	-5			
				6	PROBST CONST CO INC	2,753,410	-5			
				7	WRIGHT CONTR CO	2,811,680	-3			
				8	C M MATTHEWS CONTR CO	3,141,711	+2			