

GUIDELINES and PROCEDURES

For

ESTIMATING and SAAP SECTION

SCHEDULING & CONTRACT DIVISION

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INTRODUCTION

The following procedures have been developed to ensure that the Estimating and SAAP Sections of the Scheduling & Contract Division maintain sufficient and uniform documentation of the Evaluative Estimate and bid reviews, for both RAAP and SAAP proposals.

ESTIMATING PROCEDURES

All cost estimates, SAAP and work order documentation referred to in these Guidelines and Procedures are to be retained in accordance with the record retention policy of the Scheduling and Contract Division and the Department. It is the responsibility of each estimator, working under the direction of the State Estimates and Bid Engineer to maintain current cost evaluation information for the purpose of evaluating work orders, claims, and competitive bids submitted for construction contracts. The information will be pertinent to cost estimation by the "Rational Method". The definition of a rational estimate is: "An estimate prepared by determining the required manpower, equipment, labor, and production rate, per day needed to complete a unit of work". Generally, a unit of work would be defined by standard item code numbers, but could also be a non-standard item. Each unit estimated will have an individual "Cost Sheet" clearly showing; the materials, equipment, labor and production rate needed to complete the unit of work being evaluated. The cost sheet is to include demonstrated overheads for each component of the cost sheet, and a fair and equitable profit margin.

In order to maintain a fair and equitable cost evaluation, the various R.S. Means Construction Estimating Manuals will be the general guideline as to the industry's standards of construction. The Department will provide current copies of these guidelines for use by the Estimating staff. The R. S. Means Manuals are not retained, but the cost sheets supporting any given estimate are retained along with other estimate documentation. These guidelines will be updated annually. The basis for crew structure, to include the amount and type of equipment, the amount of labor by trade classification, and seasonal production rates, will come from these manuals. It is the responsibility of each estimator to adjust these standards to fit site conditions for each project estimated. Adjustments will be made based on availability of material, hauling distance, type of terrain, composition of soils, working restrictions, and other conditions that may affect the current R.S. Means standard production rates.

In the following paragraphs the term "catalog" is used in referring to equipment, labor and material costs. These catalogs are databases which are loaded into the Estimator Software used by the estimator in preparing the cost estimate.

Equipment costs will come from the Blue Book of Construction Equipment Rental Rates. The costs in the estimator's "catalogs of costs" will be updated periodically as the Blue Book is revised and no less than annually. Each estimator will post a copy of the updated equipment catalog in the Estimator Folder on the Scheduling and Contract Division's server at least once a year. The State Estimates and Bid Engineer will verify that the updated catalogs are posted. In cases of unusual equipment needs or in cases where the equipment data is not found in the Blue Book, other sources may be used, provided the estimator indicates the source to the State Estimates and Bid Engineer for filing with the project records.

ESTIMATING PROCEDURES (continued)

Labor rates are to be taken from the most current labor rates published by the Virginia Employment Commission (VEC). It is each estimator's responsibility to maintain the labor rate catalog in accordance with the above-published rates. The "median labor rate" will prevail, excepting that no rate shall be less than that shown by the federal minimum wage rates listed in the Bacon Davis wage rate publications. Because the rates published by VEC are one year old at the time they are published these rates may be escalated at the average rate for the previous two years. This average will be applied twice to the published rate. The first escalation is intended to bring the rate current, and the second is intended to project the true labor cost on future work being estimated. In addition estimators should periodically check the VEC rates against rates being submitted on C-28 forms for current projects. Labor rates will be corrected and revised annually and may also be corrected as required by economic conditions based on the estimator's judgment. Each estimator will post a copy of the appropriate updated labor catalog in the Estimator Folder on the Scheduling and Contract Division's server once a year. The State Estimates and Bid Engineer will verify that the updated catalog has been posted.

Material prices may come from the "Material on Hand" (VDOT form C-22) reports, individual suppliers, or the Internet. The Material on Hand report will show the material, unit of measure, and total units of material in the voucher, the total voucher cost, unit costs, the date, and the district of origin. Hard copies of the C-22 are sent to Scheduling & Contract Division from active construction projects and provided to each estimator. Material cost information from the C-22's should depict actual prices paid for materials. Each estimator will maintain a file with the prices that have been collected from the above-mentioned sources. Each estimator will post a copy of the updated material catalog in the Estimator Folder on the Scheduling and Contract Division's server once a year. The State Estimates and Bid Engineer will verify that the updated catalog has been posted. All updated catalogs should be posted to the Scheduling and Contract Division's server by September 30th of each year.

EVALUATIVE ESTIMATE

The Estimating Section is responsible for developing the Evaluative Estimate used in determining a fair and reasonable cost of highway construction projects. The Estimate is developed using TRNS*PORT and the ESTIMATOR program. TRNS*PORT is used to modify unit prices and generate the Evaluative Estimate. ESTIMATOR is used to develop a rational estimate for significant contract bid items. The Evaluative Estimate is a classified document and is, by law, exempt from the Freedom of Information Act. It should be kept secure at all times. Any discarded copies of the Evaluative Estimate are to be shredded.

EVALUATIVE ESTIMATE (continued)

To ensure the Estimate is an accurate reflection of the cost of the work to be performed, the following are to be considered:

- Plan and proposal review
- Project site conditions
- Time limit
- Sequence of construction
- Seasonal limitations
- Regional conditions
- Current market conditions
- Quantities/price relationships
- Inflation/risk costs-on projects with a duration of greater than 12 months

The above list is a guide only. Additional factors may need to be considered depending on the work involved and the specific contract provisions.

Project site conditions are to be evaluated by a visit to the site and/or by attending the project showing. Project details should be discussed with the appropriate District Staff and/or Designer as needed.

All unit prices are to be reviewed and modified as deemed necessary. A rational estimate is required on approximately 65% of the dollar value of the proposed project. This 65% is determined by evaluating the major cost items on the project that drive the total project cost. Prices that have been changed from the L & D final estimate in the Evaluative Estimate must be documented (by listing change as "Ad Hoc" in the Estimator file) if they are not TRNS*PORT generated prices. The previous sentence applies only to the 35% of the project that is not rationally estimated.

The ESTIMATOR file is to be copied into the "Estimator" folder maintained on Scheduling and Contract Division's server.

The Evaluative Estimate is to be labeled "Freedom of Information Exempt". Prior to final submission, each estimate is signed by the primary estimator, reviewed by a second estimator for the purpose of insuring that the cost worked up in the Estimator Software is correctly transferred to the TRNS*PORT estimate and for general compliance with these guidelines. The estimate is then provided to the State Estimates & Bid Engineer. The date on the estimate and supporting documents is system generated and clearly shows on each estimate.

Projects that have Federal funding are to be given to the Federal Submission Section no later than 22 working days prior to advertisement, with a final Estimate submitted at least one week prior to receipt of bids. All Non-Federal Estimates are due as early as possible, but no later than one week prior to receipt of bids.

EVALUATIVE ESTIMATE (continued)

On projects where it is necessary to increase the last design estimate by more than 3% the State Estimates and Bid Engineer must notify the Project Manager for that project in writing and ask the question "Do you have sufficient funds to advertise this project assuming it comes in within 7% of the revised estimate?" This same notification process must take place on re-advertised projects where estimates may be increased. The comparison in this case should go back to the original design estimate submitted on the project.

The following documentation is required with the final submission of the Evaluative Estimate:

- TRNS*PORT Estimate
- ESTIMATOR Summary of items estimated by the rational method.
- Site Review Form including a project narrative
- Other supporting documentation if required- this may include a consultant's estimate or other pertinent documentation. In cases of specialty work, it may be written approval for use of statistical prices. This approval is to be project-specific and received from the State Estimates & Bid Engineer.

The Scheduling and Contract Division website and/or plan room should be checked periodically by the assigned estimator for revisions. If a revision does occur, verify the impact, if any, it has on the Evaluative Estimate and, if necessary, update unit prices and submit a new Estimate.

BID REVIEW

Once bid data is entered into the TRNS*PORT system and verified for accuracy, the estimators will receive bid tabulations for each of their projects. Bid tabs are available the Friday after receipt of bids.

The bid tabulations are to be reviewed by the assigned estimator for all projects both RAAPs and SAAPs. The low bid is to be reviewed by the assigned estimator for front loading, unbalancing and any other bidding irregularities as defined in the Road and Bridge Specifications. A written bid analysis is to be prepared for each project and should include the following:

- Number of bids received
- Percent the low bid deviated from the Evaluative Estimate
- Relative position of the Evaluative Estimate to all bidders
- An explanation of any variations found between the Evaluative Estimate and the low bid
- Recommendation for award or rejection and reason for rejection of bid

BID REVIEW (continued)

A paper copy of each bid analysis is to be submitted to the State Estimates & Bid Engineer and an electronic copy placed in the "Estimator" folder maintained on the Scheduling and Contract Division's server. On Federal Oversight projects a paper copy is also to be sent to the FHWA when the department requests concurrence to award a contract. It is the estimator's responsibility to give the bid analysis to the federal submissions section for handling.

The State Estimates & Bid Engineer will notify, by e-mail, the District Administrator, District Construction Engineer and Maintenance Engineer of any projects in their district likely to be recommended for rejection. They will be given the opportunity to comment and provide information that may affect the decision to award or reject the project.

The State Contract Officer meets with the Estimating staff on the Monday after bids are received to discuss their analysis of the bids. The individual estimator recommends projects for acceptance or rejection based on the Estimating Section Guidelines & Procedures. The Contract Officer considers the recommendations and decides to accept or reject the projects based in part on the recommendations of staff, or takes any other action that he may find necessary. Other possible actions are to recommend rejection of all bids, to do further research, defer the award to a later date, etc. The Contract Officer reviews his recommendations with the State Construction Engineer. The Contract Officer, accompanied by the State Construction Engineer and/or Estimates & Bid Engineer when possible, presents his bid recommendations to the Chief Engineer, who makes the final decision on the bid recommendations to the Commissioner or Commonwealth Transportation Board. The Chief Engineer notes the decision to award or reject a project on his/her summary copy of "as read bids" and the Estimates & Bid Engineer makes the same notation on his copy of the "as read bids". The Estimate and Bid Engineer's copy of this summary is filed along with monthly bid tabs.

When the low bid is greater than 25% below the Evaluative Estimate and greater than 25% below the second place bid, the low bidder will be contacted to discuss his bid. This contact may be by telephone conversation or a face to face meeting. If the contractor is confident that his bid is accurate and convinces the department that he will be able to perform the work at the price offered, the recommendation will be to award the contract. If it is evident that the contractor has made a bidding error, the bid will be deemed irregular and the bid will be rejected. In this case, the second bidder may be recommended for award providing their bid meets all of the required criteria.

AWARD RECOMMENDATION

Estimators will present their recommendations at the monthly Bid Review meeting, scheduled for the first Monday after receipt of bids. The State Estimates & Bid Engineer, or appropriate designee, will conduct the meeting to discuss any concerns and review the recommendations.

Each estimator will briefly review their findings, identifying any bidding irregularities or questionable unit prices, as well as any deficiencies found in the Evaluative Estimate.

They will also make their recommendation for award or rejection based on the bids received.

On Federal Oversight projects when the department determines that the low bidder is not responsive, the department shall notify FHWA and obtain their written concurrence before awarding the contract to the next lowest responsible bidder. Also on Federal Oversight projects when the department's decision is made to reject all bids, adequate justification must be submitted to the FHWA for their concurrence. Lastly, on Federal Oversight projects that exceed the Evaluative Estimate by 7%, written justification must be provided to the FHWA when the department requests their concurrence in the award of a contract. The estimator's responsibility for each of the above occurrences shall be to prepare the justification for the recommendation, and to share this information with the Federal Submissions Section and/or the Contract Engineer.

Low bids are considered to be within an **acceptable range** if they don't exceed the Evaluative Estimate by more than 7 percent. This guideline however, should not be considered automatic and without question. Evidence of any bidding irregularities may be cause for rejection of a bid regardless of where it falls in relation to the Estimate.

The State Estimates & Bid Engineer will prepare a written summary documenting the group's findings. It will include the following information for each project reviewed:

- Order and Project number
- Percent deviation from the Evaluative Estimate
- Estimator's recommendation for award or rejection
- Reasons for rejections
- Concerns discussed at the bid review meeting

The summary will also note the date of the meeting and those in attendance.

The State Estimates & Bid Engineer will document any change to these recommendations including who authorized the change, the reason for the change, and the date of the change.

The State Estimates & Bid Engineer will prepare a written justification for each project recommended for award where the low bid exceeded the Estimate by more than 7 percent. These justifications will be due to the Contract Engineer no later than Monday one week prior to the CTB meeting.

AWARD RECOMMENDATION (continued)

The State Estimates & Bid Engineer will maintain a monthly bid-letting folder containing the following documentation:

- Complete set of bid tabulations
- Estimator's bid analysis for each project
- Bid Review Meeting summary
- Justification for awards over 7%
- Documentation for any changes made to the estimator's recommendation

SAAP REVIEW

Projects eligible for the Special Advertisement & Award Process (SAAP) are non-federal aid projects without plans and little or no preliminary engineering. The proposal assemblies and Evaluative Estimate are developed by the District and submitted to Scheduling and Contract Division for advertisement and award. The SAAP Coordinator is responsible for reviewing the proposal assembly and Estimate for accuracy and completeness. The following are to be reviewed:

Proposal

- Meets SAAP criteria
- General notes and sketches
- Special Provisions and Copied Notes
- Price sheets
- Proposal forms
- Bid letting date
- Bid items
- Time limit
- Price and Fuel adjustments

The SAAP Coordinator is to resolve any irregularities in the proposal with the District SAAP Coordinator. The revised proposal and/or price sheets are to be printed and verified by the central office SAAP coordinator to ensure changes were made.

The central office SAAP coordinator reviews the SAAP Submission Form C-117 to ensure that the information is consistent with that in the proposal.

The SAAP Coordinator is to verify that funding approval is in the project file. Approval is required on all non-maintenance projects. The Asset Management Division is responsible for verifying funding availability on all maintenance-funded projects.

Each central office estimator is responsible to review the following on SAAP contracts:

- Unit prices and District price documentation for the following:
 - Lump Sum grading - A cost-based estimate is required.
 - Non-standard items
 - Standard items where TRNS*PORT price has been changed

The SAAP Coordinator is to review the project file and if documentation is missing, contact the District SAAP Coordinator.

The central office estimator will contact the District SAAP Coordinator with any price correction recommendations. If the District approves corrections, the estimator will correct the TRNS*PORT estimate and note the changes. If the District disagrees with the correction, the estimator will place the rejection documentation in the project file.

WORK ORDER REVIEW

On written request from Districts, the Estimator will review work orders to assist the Area Construction Engineer in determining if work order prices, presented by the contractor, are fair and reasonable.

The work order review is to include:

Labor: crew size and composition, rate of pay, production, and mark up

Equipment: number of pieces of equipment required, rates charged, production, and mark up

Material: price with tax, freight and mark up

The work order review documentation is to be placed in the Estimator Folder on the Scheduling and Contract Division's server.

Work orders are to be reviewed within 14 calendar days of receiving all information as specified in the Road & Bridge Specifications. The estimator will provide a written review of their analysis to the District.