

CITY OF TUCSON, ARIZONA
DEPARTMENT OF TRANSPORTATION

ENGINEERING DIVISION
ACTIVE PRACTICES GUIDELINES

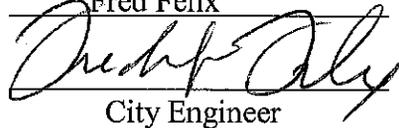
PREPARED BY:

Fred Felix

EFFECTIVE:

11/14/16

APPROVED BY:


City Engineer

DATE:

11/14/16

SUBJECT: CONSTRUCTION CONTRACT MANAGEMENT GUIDELINES

A. PURPOSE:

The purpose of this APG is to identify reasons and require that all Project Managers (PMs) follow the same procedure to ensure that construction contract cost information is updated on a regular basis so that the impacts to respective projects are communicated accurately and funding is made available in cases where costs are expected to overrun the original contract amount.

B. GENERAL

Contract cost overruns can be expected when the scope of work and/or schedule exceed the original contract for either or both of these categories. Costs of materials may become a factor and cause an increase in costs for all contracts but especially for contracts longer than eight (8) months. Force account items must be reviewed on a regular basis to ensure the estimated amount for each transaction is separate and identifiable.

C. DISCUSSION

As with every budget, the PM may have an opportunity to adjust the scope of work to meet the contract budget. This can be done with a Value Engineering Analysis; however, there may not be enough opportunities to make this possible or feasible. The PM must decide if the scope of work can be reduced to cover unexpected costs or quantity overruns. This can be done by either renegotiating scopes of work, unit pricing, or communicating the need to the accepting agency the need to add funding to the project to meet the revised contract amount.

The construction contract has some built in contingencies that can go towards covering payment for additional work or quantity overruns. The PM cannot always rely on the contingencies to be available and must update and communicate the contract status each month.

The contract updates become increasingly more important once the contract is at forty percent completed value (40%) or significant changes have occurred before the forty percent

milestone. The PM may use the opportunity to reduce the quantity of items based upon percent of item completed when it is reasonable to do so.

D. PROCEDURE

The contract costs shall be reviewed each month and updated as needed per the criteria listed. The general criteria to communicate the need of funding increases shall be established as follows:

1. a value of five thousand dollars (\$5,000) for any one item;
2. one hundred twenty five percent (125%) increase for any one item is exceeded;
3. when the cumulative value of cost increases for the contract is \$10,000 or more, and;
4. Contract adjusted monthly when forty percent of the contract value has been expended.

E. CONTRACT NEGOTIATIONS

1. EXISTING UNIT PRICING-The contract shall be updated each time additional work is added to the contract. If existing unit pricing is acceptable to the contractor, the approval should be noted by a written communication for the file and an estimate as to how much the added work will cost. If existing contract pricing is accepted, the PM needs only update the contract by a supplemental agreement. The PM shall evaluate whether the unit pricing is reasonable before using the contract unit price. If the contract unit price is higher than normal (when compared to historical pricing for the same item), the PM shall negotiate to reduce the unit price once the quantities reach 125% of the contract quantity.
2. NEW COSTS- New or modified scopes of work shall require documentation that includes a cost and time negotiation. The PM shall communicate in writing the scope of work and requests information concerning impacts to the schedule. The contractor shall provide a cost proposal that includes the cost for the scope provided and the schedule impacts. If the cost and schedule impacts are agreed upon, the PM shall provide a written communication to proceed. Schedule impact approvals are not automatic and it is important that the contractor justify any additional time. The contract is modified using one of several contract documents.

F. CONTRACT DOCUMENTS

1. SUPPLEMENTAL AGREEMENT – a supplemental agreement is used to change the scope, specifications, cost accounting, or time of a contract. The result is a change in contract amount. The contractor and city personnel will execute the agreement before payment can be issued to the contractor. The PM shall ensure that payment is available by completing and processing all forms necessary to receive formal approval before the end of the month, where possible, and in no case more than thirty days from the time the work is originally authorized.
2. FISCAL VARIANCES – a fiscal variance is an internal document used to modify the encumbered funding either up or down. It is a supplemental agreement and assumes the contract unit prices do not need to be changed. It is processed to

reserve funding and for cost reporting. The contractor is not included in the processing of this document.

3. LETTER AGREEMENTS- small contract additions that do not exceed \$5,000 per letter. The contractor and city personnel will execute the agreement before payment can be invoiced by the contractor. More than one agreement having a net value exceeding \$5,000 should be processed under a supplemental agreement.
4. FORCE ACCOUNTS- a force account is established when either the work needs to proceed immediately or both parties cannot agree on a price. The amount of the force account shall be determined by performing an independent cost estimate (ICE). The FA shall be included in a supplemental agreement and the document and backup information prepared immediately.
5. TIME EXTENSIONS- Time extensions are based upon review of the contractor's overall schedule and the critical path elements shown. Available float time shall also be taken into account. Work that can be done concurrently, will not be awarded extra time. Work that can wait before the next task can be completed on the critical path, will not be awarded extra time.

G. SUPPLEMENTAL INFORMATION

1. PROJECT CORRESPONDENCE- project correspondence identifying the need for new work or a change in scope of work shall accompany all change order transactions and made a part of the contract file. The correspondence should include the location (by stationing), reason for the work, and impacts should the work not be done.
2. COST ANALYSIS- a contractor's cost proposal may be reviewed and approved by the PM provided a cost breakdown is included in the contractor's request for change order and includes all materials, labor, and equipment costs to support the proposed price. Should this detailed information not be provided, a cost analysis will need to be performed by the PM to determine if the proposed value is consistent with known values for similar work. The PM shall compare at least three (3) historical unit prices for similar work and of the same or similar economy of scale. If the contractor does not provide backup calculations supporting his proposed price for the desired work and no comparable historical cost data is available, the PM shall perform an independent cost estimate (ICE) to determine if the proposed price is acceptable. A review sheet shall accompany all change order transactions and made part of the contract file.
3. INDEPENDENT COST ESTIMATE (ICE)
The PM shall prepare the ICE and it shall include a specific scope of work. The ICE should include equipment, labor, and material assumptions based upon calculations of the area, depth, and or limits of the impacts caused by the work. Cost calculations shall also include considerations for tax, profit, and bond. Rates for expected equipment, the industry standard for an accepted team of labor, a list

of the materials needed to perform the work, and standard production rates will be the assumptions used to complete the estimate. This calculation shall accompany all change order transactions and made part of the contract file.

4. CONTRACTOR CORRESPONDENCE- any correspondence referencing the agreed upon pricing must be provided with every contract change order.

H. AUTHORITY TO APPROVE

1. PROCUREMENT- the Procurement Department must be notified and approve of any transaction ahead of time. This can be done by including the Procurement liaison on the correspondence chain or by telephone. A reference as to when the transaction was approved must appear on the supplemental agreement.
2. AUTHORIZATION REQUEST MEMORANDUM (ARM)- an authorization request memorandum must be submitted to the department's Administrative Services Financial Manager to authorize the allocation of funding for any expenditure or to increase funding for projected expenditures.
3. On federal projects, any change orders must be discussed and approved by the ADOT project manager.

S:Engineering/CONTRACTADMIN/CONTRACTMOD-EARDOCS

1. Supplemental Agreement sample
2. Fiscal Variance Sample
3. Letter Agreement Sample
4. Cost Analysis Example
5. Independent Cost Estimate Sample
6. Authorization Request Memorandum (ARM)