

Ch 7 - Analyzing Direct Labor Costs

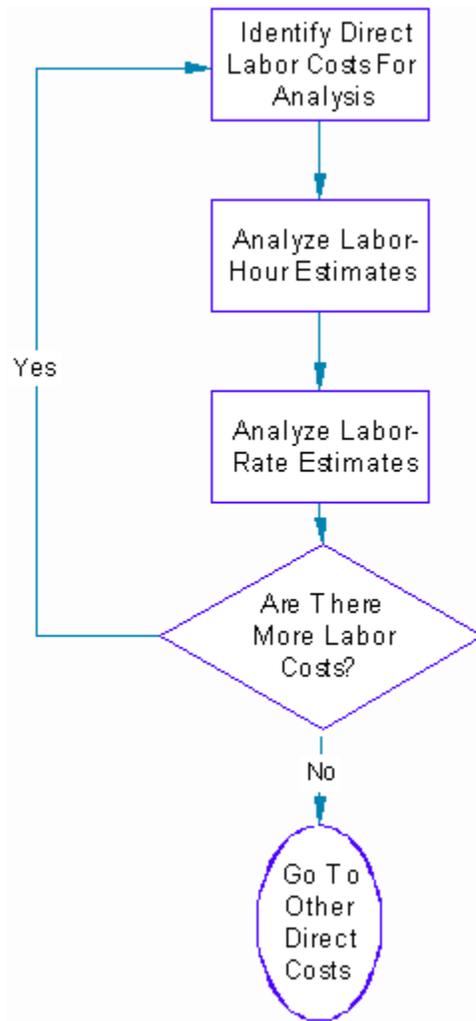
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7.0 Chapter Introduction

This chapter identifies points to consider as you develop your prenegotiation position on direct labor costs.

Analysis Responsibility ([FAR 15.402\(a\)](#) and [15.404-2\(a\)](#)). The contracting officer has the ultimate responsibility for determining price reasonableness, but no one expects the contracting officer to be an expert in all the accounting and technical issues associated with direct labor cost analysis. However, you are expected to know who to ask for assistance and when.

Flowchart of Direct Labor Cost Analysis. The following flowchart depicts the key events completed as part of a typical direct labor cost analysis.



7.1 Identifying Direct Labor Costs For Analysis

This section presents points that you should consider as you identify direct labor costs and plan for further analysis.

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7.1.1 Identifying Direct Labor Classifications

Labor Classification System. Each offeror should have a position classification system which serves as a guide for personnel selection and assignment. This system should provide both contractor and Government members of the Acquisition Team with information on relevant position descriptions, position classes, and the position classification plan. That information can prove invaluable as you and other Government personnel evaluate the appropriateness of proposed labor estimates. In other words, this system can help you and other Government personnel determine if employee qualifications match contract requirements.

For example: When auditors perform formal contractor employee compensation reviews, they compare the firm's personnel classification data and related compensation with the compensation paid for similar skills by other firms in the local area.

Position Description. A position description is the documentation of the types of work (i.e., duties and responsibilities) assigned to an employee. Most firms should be able to produce a position description for each position. That description should identify specific position duties and responsibilities, as well as, qualification requirements (e.g., the required experience, skills, knowledge, and educational need to work in the position).

Position Class. A position class is a grouping of all positions that share the same title and pay level. For example, "Senior Electrical Engineer - Pay Level IV" is the title assigned to a class of positions. Normally, positions are assigned the same title and pay level only if the workers in the positions perform duties that:

- Are comparable in kind or subject matter;
- Are at the same levels of difficulty and responsibility; and
- Require the same basic qualifications.

Position Classification Plan. Sometimes called job evaluation plans, position classification plans identify the classes of labor employed by the firm and provide guidelines for determining the title and pay level of each position in the firm. Guidelines are generally in the form of job factors, degree requirements, skill qualification

requirements, and conversion tables (such as the possible trade-offs between education and experience).

The position classes and labor rates identified in the proposal should be consistent with the offeror's classification plan. In other words, the offeror should not propose a top scientist to perform the type of work normally assigned to a journeyman engineer.

If an offeror does propose a top scientist to perform work normally assigned to a journeyman engineer, question the related excess cost. However, a top scientist may be acceptable if the offeror can demonstrate related savings, such as a reduction in the total labor hours required.

7.1.2 Identifying Major Types Of Direct Labor

Labor Cost. The amount and types of labor required to complete a contract will vary based on contract requirements. To complete a supply contract, the contractor will likely require engineers, manufacturing personnel, and a wide range of support personnel. A service contract might require a wide variety of personnel depending on contract requirements. Of course, most contracts will require personnel involved in administration and support of contract operations.

Direct vs. Indirect Labor Cost ([FAR 31.202](#) and [31.203](#)). Most contracts require both direct and indirect labor. However, you will find that accounting and estimating treatment will vary from firm to firm.

- **Direct Labor Cost.** A direct labor cost is any labor cost that can be identified specifically with a final cost objective (e.g., a particular contract).
 - Labor costs identified specifically with a particular contract are direct costs of the contract and must be charged to that contract.
 - Labor costs must not be charged to a contract as a direct cost if other labor costs incurred for the same purpose in like circumstances have been charged as an indirect cost to that contract or any other contract.
 - All labor costs specifically identified with other contracts are direct costs for those

contracts and must not be charged to another contract directly or indirectly.

- **Indirect Labor Cost.** An indirect labor cost is any labor cost not directly identified with a single final cost objective, but identified with two or more final cost objectives or an intermediate cost objective. For reasons of practicality, any **direct labor cost of minor dollar amount** may be treated as an indirect cost if the accounting treatment:
 - Is consistently applied to all final objectives, and
 - Produces substantially the same results as treating the cost as a direct cost.

Common Direct Labor Categories. While each offeror will have different terminology and different ways of categorizing its labor force, the two most common and largest types of direct labor in manufacturing contracts are engineering and manufacturing labor. The labor categories in service contracts are much more diverse.

Engineering Labor. Engineering involves a variety of activities associated with product research, product design, and the development of manufacturing methods and procedures. Most engineering activity is typically charged as a direct labor cost. However, the efforts of supervisors and many engineering support personnel may be charged as indirect costs.

Assure that the offeror is consistent in charging these costs as direct or indirect. If you have any question about proper cost treatment, contact the cognizant Government auditor for advice and assistance.

The following table presents descriptions of some of the most common engineering labor classifications.

Examples of Engineering Classifications	Description
Design Engineer	Involves delineating the end-product's characteristics and specifications
Manufacturing Engineer	Involves manufacturing planning, process instructions & work methods, shop loading, organizing work stations, and matching shop capabilities to contractual

	requirements
Reliability & Maintainability Engineer	Involves designing and manufacturing products to meet longevity and repair requirements
Quality Assurance Engineer	Involves the formulation of standards and specifications for tests and inspections
Sustaining Engineer	Involves "as needed" support as problems arise throughout the life of the contract

Manufacturing Labor. Manufacturing labor is the effort required to actually produce an item. Most manufacturing labor cost is a "hands-on" direct cost. Some types of manufacturing direct cost (e.g., inspection), may be allocated to each job as an indirect cost. Depending on the circumstances and contractor accounting procedures, supervision may be a direct or an indirect cost.

As with engineering labor, assure that the offeror is consistent in charging these costs as direct or indirect under similar circumstances. If you have any question about proper cost treatment, contact the cognizant Government auditor for advice and assistance.

The following table presents examples of some of the most common manufacturing labor classifications.

Examples of Manufacturing Classifications	Description
Fabrication Labor	Involves the fashioning of parts from raw or purchased materials
Assembly Labor	Involves the effort to combine parts into subassemblies and assemblies
Quality Control Labor	Involves the act of testing or inspecting the product during the manufacturing process and prior to final acceptance

Services Labor ([FAR 37.101](#)). A service contract directly engages the time and effort of a contractor whose primary purpose is to perform an identifiable task rather than to furnish an end-item of supply. It can require professional or nonprofessional personnel on a individual or organizational basis.

The classes of labor effort required for contract performance will vary widely based on the tasks that must be performed to complete the contract. Tasks might include any of the following:

- Maintenance, overhaul, repair, servicing, rehabilitation, salvage, modernization, or modification of supplies, systems, or equipment;
- Routine recurring maintenance of real property;
- Housekeeping and base services;
- Advisory and assistance services;
- Operation of Government-owned equipment, facilities, and systems;
- Communications services;
- Architect-engineering services;
- Transportation and related services;
- Research and development; or
- Other services.

The service contract solicitation may define labor categories which the offeror must use in proposal preparation and contract performance (e.g., senior engineer or senior analyst). To comply with these solicitation-defined labor categories, the offeror may need to use a blend of personnel from more than one of the firm's position classes. In such cases, the offeror should identify the labor classifications that were blended to meet solicitation requirements. The blended labor-rate should correspond to the blend of skills required.

If you have any question about proper cost treatment, contact the cognizant Government auditor for advice and assistance.

7.1.3 Planning For Further Analysis

Points to Consider. As you prepare your plan for direct labor cost analysis, look for indicators of uneconomical or inefficient practices. Consider the results of any technical analyses. If an element of proposed direct labor cost appears suspicious, concentrate more analysis effort on that element than on a less suspicious cost element of similar dollar value. As you plan:

- Identify and evaluate the methodology used by the offeror to estimate direct labor cost.
- Identify any proposed direct labor cost that does not appear reasonable.
- Identify any proposed direct labor cost that should be classified as an indirect cost.
- Identify any proposed direct labor cost that merits special attention because of high value or other reasons.
- Assure that preliminary concerns about direct labor cost estimates are well documented.

Identify and Evaluate Estimating Methodology. To identify and evaluate the methodology used by the offeror to estimate direct labor cost, ask questions such as the following:

- ***What basis did the offeror use to estimate direct labor cost?***

Labor cost estimates normally include estimates of both labor hours and a labor-rate for each position classification. Estimates may be developed using round-table, comparison, or detailed estimating techniques.

- ***Does the methodology appear appropriate for the current estimating situation?***

The method selected should use the information available to produce reasonable and equitable results. If the methodology used by the offeror does not appear appropriate, consider using a different methodology to develop your pricing position.

Identify any Cost That Does Not Appear Reasonable. To identify any proposed direct labor cost that does not appear reasonable, ask questions such as the following:

- ***Is the proposed labor effort consistent with the offeror's estimating assumptions?***

If any part of the estimate is not consistent with stated estimating assumptions, question the costs involved.

- ***Is the proposed labor effort necessary to complete the contract?***

Require the offeror to support the need for any direct labor cost that does not appear needed to complete contract tasks.

- ***Has the offeror accounted for all types of labor reasonably required to complete the contract?***

Compare the contract task requirements with the skills proposed by the offeror. If the proposed labor cost does not include personnel with adequate qualifications to perform a specific task, question the labor cost for that task.

- ***Are the proposed labor classes and pay levels consistent with the firm's position classification plan?***

If the proposed labor classes are not consistent with the offeror's position classification plan, it is likely that the proposal was not prepared in accordance with the firm's normal estimating procedures. Such proposals may include inflated labor costs or proposed personnel that do not have the knowledge, skills, and experience required to complete the contract.

- ***Are position class qualifications consistent with the knowledge, skills, and experience required to complete identified contract tasks?***

When less-qualified personnel are assigned to tasks requiring higher qualifications, contract performance risk increases. Performance may even be impossible with the identified personnel. Assignment of high-skilled personnel with higher labor rates to tasks that can be efficiently completed by less-qualified personnel needlessly increases contract cost unless their higher qualifications increase performance efficiency enough to compensate for the higher labor rates.

- ***Do the proposed labor classes and wage levels meet solicitation requirements?***

Many service solicitations identify the types of skills needed to perform the contract. If proposed personnel fail to meet minimum solicitation requirements, the offeror's proposal will likely be unacceptable. If you accept unnecessarily high skilled personnel, contract cost

increases unless their higher qualifications increase performance efficiency enough to compensate for the higher labor rates.

- ***Does the proposal include labor to complete the same task more than once?***

Watch for task overlaps. For example, in writing technical publications and manuals, the proposal should clearly define where the responsibilities of the design engineer for preparing drawings, supporting materials, and documentation end and the responsibilities of the technical writer to transform these materials into a document begin. If the different tasks are not clearly defined, it is possible that both engineering and technical writing estimates may include estimated hours to perform the same work.

- ***Does the proposal include labor to complete work being performed under a related contract?***

Occasionally an offeror will propose work that is actually performed under a related contract. Tasks that cross different contracts in the same project/program (e.g., project administration) are particularly susceptible to such overlaps.

- ***Is the proposed labor mix consistent with the historical mix for the task?***

If the mix of labor used to complete past contracts is substantially different than the proposed mix, the proposal should explain why the change is necessary and reasonable.

Even if the mix is consistent with the past, you may want to consider whether there should be a change. For example, when a product is new, contract performance may require more highly skilled engineers. As a product matures and moves into the later stages of its product life cycle, fewer and less skilled (and less expensive) engineers may be more appropriate.

- ***Does the proposed labor mix represent the firm's available work force, or the skill mix actually needed to complete the contract?***

Be careful when the proposed labor is a better representation of the skill mix in the offeror's work force than the skill mix required to complete the contract. The offeror may not understand the work required to complete the contract. Alternatively, the offeror may be overestimating the work required to complete the contract.

- ***Do the labor hours proposed for any labor classification exceed the offeror hours available in that classification?***

Occasionally an offeror will propose more hours in a particular position classification than the firm has available in that classification. When that happens assure that the estimate includes information on how the offeror will obtain the skilled personnel required to complete the contract.

Identify Any Proposed Direct Labor Cost That Should Be Classified As an Indirect Cost. To identify any proposed direct labor cost that should be classified as an indirect cost, ask questions such as the following:

- ***Has the offeror consistently treated this type of labor as a direct cost?***

Similar costs incurred under similar circumstances should be charged in the same way. For example, if labor cost for shop expediter is normally charged as an indirect cost, then shop expediter labor cost for similar expediting effort should always be charged as an indirect cost.

Be careful, a technical evaluator may object to classifying a cost (e.g., shop expediter labor cost) as a direct cost because other firms classify similar labor as an indirect cost. However, the issue is not how other firms classify the cost but rather how the offeror's estimating and accounting systems treat the cost.

- ***Do the personnel projected to the work on this contract charge their time as a direct or an indirect cost under similar circumstances?***

If similar costs are charged as a direct cost on one occasion and as an indirect cost on another occasion, the Government may be double charged for similar costs (once as a direct cost and once as an indirect cost). One way to

quickly check if this type of labor should be a direct or indirect cost is to review the time cards of personnel projected to work on the contract. If an employee is currently charging time to a charge number that goes to an overhead account, you should determine how the situation will change under the proposed contract. If you have any questions, contact the cognizant Government auditor.

- ***Will each labor hour proposed for this contract benefit only this contract?***

There may be situations where an employee is charging part-time to each of several contracts and part-time to overhead (e.g. a lead engineer who does both team management tasks and "hands-on" design work). Only those hours proposed for specific contract tasks should be recognized as a direct cost. Any indirect contract support (e.g., as team management) will be covered by application of overhead rates.

- ***Is it practical to account for this labor as a direct cost?***

Good cost accounting practices will specifically identify a direct contract cost to the appropriate contract whenever it is practical. However, a minor direct cost may be treated as an indirect cost if the accounting treatment:

- Is consistently applied to all contracts, and
- Produces substantially the same results as treating the cost as a direct cost.

If you have a question concerning whether a cost should be a direct cost or is already covered in an overhead account, seek assistance from the cognizant Government auditor.

Identify Direct Labor Costs Which Merit Special Attention. To identify any proposed direct labor cost that merits special attention because of high proposed cost or other reasons, ask questions such as the following:

- ***Is the direct labor estimate for any task a large portion of the entire direct labor cost estimate?***

Many times a single task estimate will be a large part of the entire estimate. That estimate will normally merit special attention because of the dollars involved.

- ***Is any direct labor effort uniquely critical to contract performance?***

Many times the direct labor effort for a specific task or group of tasks will be uniquely critical to contract performance, because of schedule or technical requirements. Related cost estimates may merit special attention, to assure offeror understanding of the task.

Document Concerns About Direct Labor Cost Estimates. To assure that concerns about direct labor cost estimates are well documented, ask questions such as the following:

- ***Have you identified concerns about direct labor cost estimates?***

If the answer is "yes" document the areas of concern for reference as you perform more in-depth analysis.

- ***Has the offeror had an opportunity to answer your concerns?***

Consider raising these concerns in fact-finding conversations with the offeror. If the problem is an error in the proposal, bring the error to the offeror's attention so that it can be corrected prior to formal negotiations.

7.2 Analyzing Labor-Hour Estimates

This section identifies points to consider as you analyze direct labor- hour estimates.

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- 7.2.2 - [Analyzing Comparison Estimates](#)
- 7.2.3 - [Analyzing Estimates Developed Using Labor Standards](#)

Steps for Labor-Hour Estimate Analysis. The points that you consider in your analysis will not be the same for every estimate. However, there are general steps that you should follow as you conduct your analysis of direct labor-hour estimates:

- Give special attention to any direct labor-hour concerns identified during your preliminary review of direct labor cost estimates.
- Determine whether the estimating method is appropriate for the estimating situation.
- Determine whether the estimating method was properly applied.

Develop and Document Your Prenegotiation Position. As you develop and document your prenegotiation position on direct labor hours:

- If you accept the offeror's labor-hour estimate, document that acceptance.
- If you do not accept the labor-hour estimate, document your concerns with the estimate and develop your own prenegotiation position for costs covered by the estimate.
- If you can identify information that would permit you to perform a more accurate analysis of direct labor-hours, use the available information. Your analysis is not bound by the estimating methods used by the offeror.

7.2.1 Analyzing Round-Table Estimates

Round-Table Estimates. Experts develop round-table labor-hour estimates based on their experience and judgment without using detailed drawings or a bill of materials, and with limited information on specifications.

Determine If a Round-Table Estimate Is Appropriate. To determine whether use of a round-table estimate is appropriate for the estimating situation, ask questions such as the following:

- ***Are there sufficient information and historical data available for use of a more accurate cost estimating method?***

Round-table estimating should only be used in situations where detailed drawings, bills of material, and firm specifications are not available. Carefully scrutinize all round-table estimates to assure that sufficient information and historical data are not available for use of cost

estimating method that typically produces more accurate results.

- ***Does the offeror commonly use round-table estimates in similar estimating situations?***

Round-table labor-hour estimates are most commonly used for research and development contracts and other contracts that will require the offeror to perform tasks that are not well defined at the time the estimate is prepared.

- ***Does the cost involved warrant a more detailed estimate?***

For a small dollar amount, a round-table estimate may be acceptable, because the cost risk involved does not warrant the collection the data required for use of another estimating method.

Determine If The Round-Table Estimate Was Properly Developed And Applied. To determine if the round-table estimate was properly developed and applied, ask questions such as the following:

- ***Is the estimator's experience appropriate for developing a round-table estimate in this situation?***

The offeror may assign a single estimator or a group of estimators to develop the estimate. The estimators will define the effort required in general terms and use that definition to estimate the number of people and the time required to perform the task.

Evaluate the estimators' experience with similar work. Anyone can guess about future costs. Personnel preparing round-table estimates should have experience with similar work and similar situations.

- ***Has the estimator prepared accurate round-table estimates for other contracts?***

Normally, you should be more concerned about estimates prepared by a person with little estimating experience or a record of inaccurate estimates.

- ***Does the estimate include an adequate description of the task involved?***

Round-table estimates may be summary level estimates of the time to complete an entire contract or lower level estimates of the time to complete a particular task. Require the offeror to document the definition of the task used in preparing the estimate.

- ***Does the estimate include an adequate description of the process and assumptions used to develop the estimate?***

The estimate should include a clear description of the rationale used to develop the estimate. The rationale may be brief, but it must describe the process and assumptions used in preparing the estimate.

- ***If the estimate assumes a fixed level of effort over a period of time, is that assumption reasonable?***

A fixed level of effort is commonly used to estimate the hours to perform repetitive tasks such as those found in project management and administration (e.g., a full-time project manager throughout the term of the contract). Evaluate the need for a fixed level of effort. For example, a large staff may be required for contract start-up but a much smaller staff may be able to do the work required during later contract performance.

- ***Does the estimate indicate that the required effort is more complex than it really is?***

A more complex effort will require more time and higher skill levels than a less complex effort. Evaluating the task complexity is usually rather subjective. However, you might be able to develop a feel for the complexity of a task by relating it to the effort required to perform a similar task.

Do not be misled. For years, the Government and its contractors have pushed forward the state-of-the-art in many fields. Today's knowledge is far broader than it was a few years ago. Because complexity is relative, the problems of today, relatively speaking, may be easier to solve than the less complex problems of the past.

- ***What does YOUR professional JUDGMENT tell you?***

It is not enough to ask for the advice of technical experts. Ask questions until YOU understand. You will receive two benefits from asking questions: you will learn about the labor specialties and the language involved in performing the work required and you will become more confident in your objective if you truly understand the contract effort required.

7.2.2 Analyzing Comparison Estimates

Comparison Estimate. To develop a comparison labor-hour estimate, an estimator must first determine the cost to complete the same or similar work in the past. Then the estimator must develop an estimate of future contract cost based on the historical experience. Comparisons can be simple or involve the use of complex quantitative techniques. The two most common forms are:

- **Direct Comparison.** Comparisons may be based on a direct comparison with the hours it took to perform the same or similar effort in the past. The effort may be a specific task or a level of effort. The comparison may be used to estimate the labor cost for an entire contract or a segment of the contract. Remember even in a contract for a unique requirement, there may be tasks that are similar to the work performed in past contracts.

Most direct comparison estimates will include an adjustment to consider differences in the acquisition situation. The rationale for these adjustments should be explained whether they are made using a quantitative or a subjective analysis.

- Quantitative techniques (e.g., moving averages, improvement curves, or regression analysis) are frequently used to identify trends in historical data. Once a trend is identified, you can use these same techniques to project it into the future.
- Estimators also frequently use subjective adjustment factors in comparison estimate development. These subjective factors are commonly given names such as, "plant condition factor," "manufacturing allowance," or

"complexity factor." For example, the estimate may state that the direct labor cost of a proposed contract is similar to the effort on a previous contract but is 20 percent more complex.

- **Cost Estimating Relationships.** A cost estimating relationship (CER) is a technique used to extend comparisons. Instead of simply basing a labor-hour estimate on the labor hours required to complete a similar task in the past, an estimator can develop CER that relates changes in cost to changes in an independent product variable or group of independent variables. Once a CER is developed, you can use it to develop more accurate estimates of labor-hour requirements. That independent variable may be another contract cost or a product characteristic:
 - A **cost-to-cost relationship** is based on an established relationship between two contract costs. For example, the offeror may analyze historical data from contracts that require engineering effort and find that engineering assistants work four hours for every hour worked by a senior engineer. Based on that analysis the estimator would include four engineering assistants for every hour of senior engineer labor.
 - The **product-to-cost relationship** relates a labor-hour estimate to a physical or performance characteristic of the product. For example, the offeror may find that the labor effort required to complete a janitorial service contract is related to number of square feet included in the contract.

Determine If a Comparison Estimate Is Appropriate. To determine whether use of a comparison estimate is appropriate for the estimating situation, ask questions such as the following:

- ***Is there a detailed analysis of work requirements that could be used for estimate development?***

Comparison estimates can be quite accurate, but detailed estimating information should generally be used when available.

- ***Does the offeror commonly use comparison estimates in similar estimating situations?***

If the offeror typically uses a detailed estimate in similar situations, question why one was not used to prepare the estimate under analysis.

- ***Does the cost involved warrant a more detailed estimate?***

While they typically provide more insight into offeror procedures and requirement analysis, detailed estimates are time consuming and costly to develop. For a small dollar amount, a round-table or comparison estimate may be more desirable, because of the faster and less expensive analysis required.

Determine If The Comparison Estimate Was Properly Developed And Applied. Analysis of any labor estimate based on historical labor hours should consider the acquisition situation that existed when the historical labor hours were incurred and any differences between that situation and the current acquisition situation. To determine if the comparison estimate was properly developed and applied, ask questions such as the following:

- ***Are the methods to be employed on the proposed contract identical to those used in the historical effort?***

If methods have changed, the value of comparison estimates is open to question. You are in effect comparing apples and oranges. For example, the use of new labor saving equipment could significantly reduce the labor hours required on the contract.

- ***Do the historical costs represent efficient application of labor to contract completion?***

If a one-time problem occurred during performance of the prior contract and no adjustment is made, you will be assuming that the same problem or a similar problem will occur on the proposed contract.

- ***Do historical costs include the cost of changes?***

If the cost history includes the cost of changes, a cost estimate based on that history will project similar changes in the future. It may be necessary to purge the history of costs that are not anticipated to be part of the proposed work. Examples of costs that may need to be purged include: non-recurring costs, engineering changes, program redirection, rework, and production start-up.

- ***Has the make-or-buy plan changed?***

If the offeror is now buying items that were previously made, the historical data should be adjusted to preclude estimating the labor cost to make an item that is being purchased.

- ***Is there any labor activity included in the historical costs that is also estimated separately?***

If there is, the offeror has double estimated the cost. It must be eliminated in one estimate or the other. The time for rework and repair is an important example. Actual costs typically include the time for rework and repair. If such costs are included, do not accept any additional factors for rework and repair.

- ***Are the historical data complete?***

The history should be accurate, complete, and current. Assure that portions of the relevant history are not missing, and that latest cost history is included.

- ***How reliable are the historical data?***

The cognizant Government auditor can provide guidance on the acceptability of the offeror's cost accounting system. If the auditor feels that the offeror's system lacks appropriate checks and balances, is riddled with errors, or has resulted in mischarging, then the accuracy and reliability of the data are questionable.

- ***Does application of the should-cost principles reveal incidents of uneconomical or inefficient historical performance?***

Use of cost history without critical examination could perpetuate the inefficiencies and problems of the past.

- ***Did the offeror correctly adjust the estimate for all significant changes in the production environment since the last contract?***

Look for any significant differences in working or operating conditions that could throw off the estimate. For instance, be alert for differences in:

- Specifications (especially if specifications have been simplified since the last contract);
- Process steps;
- Equipment and tooling;
- Plant layout;
- Inspection procedures;
- Labor mix;
- Employee skill levels;
- Type of shop (e.g., model vs. production);
- Delivery schedules;
- Production rates and quantities;
- Plant capacity (full vs. idle);
- Number of shifts; or
- Overtime hours.

- ***If the labor-hour estimate includes a subjective adjustment factor, is the factor reasonable?***

The offeror may have provided subjective estimates for such factors as task complexity. When an offeror uses a subjective adjustment factor, the offeror should document both the need for such a factor and the rationale used to arrive at the adjustment included in the estimate.

- ***Have appropriate quantitative techniques been used to adjust historical data to estimate proposed contract costs?***

If the offeror has had experience in making this or a like deliverable, examine historical data for evidence of trends in labor hours per unit. If there is such evidence, trend analysis or improvement curve theory could result in a more accurate projection of future labor hours.

- ***If the labor-hour estimate was developed using a quantitative technique (e.g., a CER, moving average, improvement curve, or regression analysis), did the estimator consider the related issues and concerns?***

Whenever an estimator uses a quantitative analysis technique in estimate development, the proposal and related data should consider the issues and concerns related to the use of that technique.

7.2.3 Analyzing Estimates Developed Using Labor Standards

Labor Standard. A labor standard is a measure of the time it should take for a qualified worker to perform a particular operation. Labor standards are commonly grouped into two types:

- **Engineered Standards** are developed using recognized principles of industrial engineering and work measurement. The standards developed define the time necessary for a qualified worker, working at a pace ordinarily used, under capable supervision, and experiencing normal fatigue and delays, to do a defined amount of work of specified quality when following the prescribed method.
- **Non-engineered Standards** are developed using the best information available without performing the detailed analysis required to develop an engineered standard. Historical costs are commonly used standards that are often a measure of the hours that have been required to complete a task rather than the hours that should be required.

Determine If Labor Standard Use Is Appropriate. To determine whether use of a labor standard is appropriate for the estimating situation, ask questions such as the following:

- ***Does the offeror commonly use labor standards in similar estimating situations?***

If the offeror does not use labor standards for other contracts, the proposed contract or a group of similar contracts will likely be required to cover the entire expense for standard development and maintenance. Prospective benefits may not warrant the cost involved.

- ***Is the offeror using non-engineered labor standards, when projected costs appear to warrant use of engineered labor standards?***

As described above, historical costs are commonly used to develop non-engineered standards. As a result, non-engineered standards do not benefit from an assessment of what the cost should be. Such analysis is invaluable for identifying inefficiencies in contractor operations.

- ***Does the cost involved warrant use of an engineered labor standard?***

While they typically provide more insight into offeror procedures and analysis of Government requirements, engineered labor standards are time consuming and costly to develop. For a small dollar amount, a comparison estimate may be more desirable, because of the faster and less expensive analysis required.

Determine If The Labor Standard Was Properly Developed And Applied. To determine if the labor standard was properly developed and applied, ask questions such as the following:

- ***Did the estimator consider the issues and concerns related to labor standard development and application?***

Whenever an estimator uses a labor standard in estimate development, the proposal and related data should consider the issues and concerns related to standard development and use.

- ***If the estimator used a non-engineered standard based on historical data, did the estimator consider the questions related to developing and applying an estimate based on comparison estimates?***

A non-engineered estimate based on historical cost is really a form of comparison estimate. If there has been no engineering analysis of what the task completion time should be, the estimate should be analyzed like any other comparison estimates.

7.3 Analyzing Labor-Rate Estimates

This section identifies points to consider as you analyze direct labor labor-rate estimates.

- 7.3.1 - [Considering Government Labor-Rate Requirements](#)

- 7.3.2 - [Considering The Skill Mix Of Labor Effort](#)
- 7.3.3 - [Considering The Time Period Of Labor Effort](#)
- 7.3.4 - [Considering Company-Unique Factors](#)

Consider Preliminary Review Results. As you analyze offeror-proposed labor rates, give special attention to any direct labor rate concerns identified during your preliminary review of direct labor cost estimates.

Obtain Available Audit and ACO Analysis Support ([FAR 15.404-2\(c\)](#) and [15.407-3](#)). As you evaluate offeror labor rates, remember that employee compensation includes more than just wages. Many elements of compensation (e.g., pensions, savings plan benefits, incentive bonuses, and health insurance) typically appear in indirect cost accounts. As a result, compensation analysis is a complex task that requires in-depth understanding of the firm's compensation package and accounting procedures.

In most cases, the Government auditor and the administrative contracting officer (ACO) are the two Government Acquisition Team members who have the most in-depth knowledge of a firm's compensation package and accounting procedures. The auditor is the only Government Acquisition Team member with general access to the offeror's accounting records. The ACO is responsible for negotiating Forward Pricing Rate Agreements (FPRAs), including labor-rate agreements.

Honor ACO Recommendations and Agreements ([FAR 15.407-3\(b\)](#) and [DFARS 215.407-3\(b\)](#)). If the ACO has issued a written forward pricing rate recommendation (FPRR), do not deviate from the ACO-recommended rates without first contacting the ACO. The ACO should be able to provide detailed support for the current recommendation. After that contact, if you feel that the recommended rate is not reasonable and you can document why an alternative rate is more reasonable, you may use the alternative rate as a basis developing your position on contract price.

If the offeror and the ACO have negotiated a forward pricing rate agreement (FPRA), the offeror is obligated to use FPRA rates in proposal preparation and Government contracting officers are obligated to use them as a basis for contract pricing. If you have information indicating that the FPRA rates are not reasonable, inform the ACO and request the ACO to negotiate an adjustment or terminate the

FPRA. However, unless the FPRA is terminated or you are authorized under agency procedures to develop your own rate position, use the current FPRA as a basis for contract pricing.

Bases for Determining Labor Rate Reasonableness ([FAR 31.205-6\(b\)](#)). Center your labor-rate analysis on the five questions below. If you can answer yes to one or more of these five questions, you should normally determine that the proposed labor rate is reasonable:

- *Is the proposed labor rate and related compensation reasonable based on comparisons with the compensation practices of other firms of the same size?*
- *Is the proposed labor rate and related compensation reasonable based on comparisons with the compensation practices of other firms in the same industry?*
- *Is the proposed labor rate and related compensation reasonable based on comparisons with the compensation practices of other firms in the same geographic area?*
- *Is the proposed labor rate and related compensation reasonable based on comparisons with the compensation practices of firms engaged in predominantly non-Government work?*
- *Is the proposed labor cost reasonable based on comparisons with the cost of comparable services from other sources?*

Factors to Consider in Labor Rate Comparisons. The questions above are straight-forward, but the related comparisons may not always be easy. As you make labor-rate comparisons, consider the effect of the following factors on those comparisons:

- Government labor-rate requirements;
- Skill mix of labor effort;
- Time period of labor effort; and
- Company-unique labor factors.

Develop and Document Your Prenegotiation Position. As you develop and document your prenegotiation position on labor rates:

- If you accept the offeror's labor-rate estimate, document that acceptance.
- If you do not accept the labor-rate estimate, document your concerns with the estimate and develop your own

prenegotiation position for costs covered by the estimate.

- If you can identify information that would permit you to perform a more accurate labor-rate analysis, use the available information. Your analysis is not bound by the estimating methods used by the offeror.

7.3.1 Considering Government Labor-Rate Requirements

Contracts and Labor Rate Requirements. The Government is concerned that firms may attempt to compete by lowering employee compensation. As a result, there are laws and Government labor policies that limit a firm's ability to lower compensation. The laws with the most obvious affect on labor rates pricing include the:

- Service Contract Act of 1965, as amended;
- Davis-Bacon Act;
- Walsh-Healey Public Contracts Act;

The Office of Federal Procurement [Policy Letter No. 78-2](#), provides additional guidance for professional employee labor rates for large service contracts.

Service Contract Act Requirements ([FAR 22.1001](#), [22.1002](#), and [22.1003](#)). As you analyze labor rate reasonableness, consider the following questions related to Service Contract Act of 1965, as amended:

- ***Does the Service Contract Act apply to this type of labor?***
 - The Service Contract Act applies to service employees under Government service contracts in excess of \$2,500.
 - A service employee is any person engaged in the performance of a service contract except those employed in a bona fide executive, administrative, or professional capacity.
 - To be a service contract, the principle purpose of the contract must be to provide services. For example, the Act does not apply to contracts for equipment that require incidental services to install the equipment.
 - By statute, the Act does not apply to any:
 - Contract performed outside the United States;

- Contract for construction, alteration, or repair of public buildings or public works, including painting and decorating;
- Work required to be performed in accordance with the provisions of the Walsh-Healey Public Contracts Act;
- Contract for transporting freight or personnel by vessel, aircraft, bus, truck, express, railroad, or oil or gas pipeline where published tariff rates are in effect;
- Contract for furnishing services by radio, telephone, or cable companies subject to the Communications Act of 1934;
- Contract for public utility services;
- Employment contract providing for direct services to a Federal agency by an individual or individuals; or
- Contract for operating postal contract stations for the U.S. Postal Service.
- In addition, the Secretary of Labor has exempted several types of contracts from all provisions of the Act. These include:
 - Most Government contracts with common carriers;
 - Certain contracts between U.S. Postal Service and individual owner-operators for mail service;
 - Contracts for the carriage of freight or personnel if such carriage is subject to rates covered by Section 10721 of the Interstate Commerce Act; and
 - Contracts principally for the maintenance, calibration, or repair of certain types of equipment.

- ***Do the proposed labor rate and related fringe benefits meet the minimum requirements established by any Department of Labor wage determination (for that class of employee) attached to the solicitation/contract?***

A contractor must pay the wages and fringe benefits required by the wage determination for that class of labor. Those requirements are based on Department of Labor's evaluation of the prevailing wage rates and fringe benefits in the locality.

- If a wage rate determination is attached to the solicitation/contract, the offeror must classify any class of service employee which is not listed

in the determination but is employed under the contract in a manner that provides a reasonable relationship between the unlisted classifications and the classifications listed in the wage determination. For example, a more skilled person in a similar class of work could not make less money than an employee covered by the wage determination.

- o However, you cannot require an offeror to comply with a wage determination when none is provided to the offeror. If there is no wage determination, the offeror must propose to pay at least the minimum wage established by the Fair Labor Standards Act (FAR 52.222-43).
- ***If the labor rate exceeds the appropriate Department of Labor wage determination, is the difference reasonable?***

The wage determination only sets the minimum wage that can be paid for a particular class of labor. The offeror may pay more than the minimum. However, remember that these wage determinations are based on the prevailing wage in the locality or the collective bargaining agreement negotiated by the contractor under any predecessor contract.

- ***Do proposed rate increases conflict with the Fair Labor Standards Act and Service Contract Act -- Price Adjustment (Multiple Year and Option Contracts) clause?***

If the contract is a multi-year contract or includes an option to extend the contract, remember that the Fair Labor Standards Act and Service Contract Act -- Price Adjustment (Multiple Year and Option Contracts) clause provides for price increases based on changes in the wage determination or minimum wage. Affected labor rates are based on the wage determination or minimum wage that is current on the contract anniversary or the beginning of each renewal option period.

- o The offeror cannot project a labor rate increase and also benefit from an additional adjustment due to a change in a related wage determination or the minimum wage. By submitting an offer under a solicitation that includes the above clause, the offeror certifies that the offer does not

include any allowance for any contingency covered by the clause.

- o The offeror can project labor rate increases that are not covered by the clause. For example, if the offeror's labor rate is \$7.25 and the wage determination is \$7.00, the labor rate would not be affected by an increase in the wage determination from \$7.00 to \$7.05. If the offeror projects an increase in the \$7.25 labor rate to \$7.30 after one year, that must be separately estimated. Still, remember that wage determinations are based on the prevailing wage in the locality, the collective bargaining agreement negotiated by the contractor under any predecessor contract (FAR 22.1008-3), or the minimum wage set forth in the Fair Labor Standards Act.
- ***Do the proposed labor rate and related fringe benefits meet the minimum requirements established by an applicable collective bargaining agreement negotiated by a predecessor contractor?***
- The Act provides that a successor contractor must pay wages and fringe benefits (including accrued wages and benefits and prospective increases) to service employees at least equal to those agreed upon by a predecessor contractor under the following conditions:
 - The services to be furnished under the proposed contract will be substantially the same as services being furnished by an incumbent contractor whose contract the proposed contract will succeed.
 - The services will be performed in the same locality.
 - The incumbent prime contractor or subcontractor is furnishing such services through the use of service employees whose wages and fringe benefits are the subject of one or more collective bargaining agreements.

The requirement above does not apply if:

- The incumbent contractor enters into a collective bargaining agreement for the first time and the agreement does not become

effective until after the expiration of the incumbent's contract.

- The incumbent contractor enters into a new or revised collective bargaining agreement during the incumbent's period of performance on the current contract, the terms of the new or revised agreement shall not be effective for the purposes of the Act when:
 - Either of the following is true:
 - In sealed bidding, the contracting agency receives notice of the terms of the collective bargaining agreement less than 10 days before bid opening and finds that there is not reasonable time still available to notify bidders; or
 - For contractual actions other than sealed bidding, the contracting agency receives notice of the terms of the collective bargaining agreement after award, provided that the start of performance is within 30 days of award; and
- The contracting officer has given both the incumbent contractor and its employees' collective bargaining agent timely written notification of the applicable acquisition dates.
- The Secretary of Labor determines:
 - After a hearing, that the wages and fringe benefits in the predecessor contractor's collective bargaining agreement are substantially at variance with those which prevail for services of a similar character in the locality, or
 - That the wages and fringe benefits in the predecessor contractor's collective bargaining agreement are not the result of arm's length negotiations.

Davis-Bacon Act Requirements ([FAR 22.401](#) and [22.403-1](#)). As you analyze labor rate reasonableness, consider the following questions related to the Davis-Bacon Act:

- ***Does the Davis-Bacon Act apply to this type of labor?***

The Davis-Bacon Act applies to laborers or mechanics at the site of work for any Government or District of Columbia

contract in excess of \$2,000 for construction, alteration, or repair (including painting and decorating) of public buildings or public works within the United States.

- The term "laborers or mechanics," includes:
- Those workers, utilized by a contractor or subcontractor at any tier, whose duties are manual or physical in nature (including those workers who use tools or who are performing the work of a trade), as distinguished from mental or managerial;
- Apprentices, trainees, helpers, and, in the case of contracts subject to the Contract Work Hours and Safety Standards Act, watchmen and guards.
- Working foremen who devote more than 20 percent of their time during a workweek performing duties of a laborer or mechanic, but do not meet the requirements for bona fide executive, administrative, or professional status; and
- Every person performing laborer or mechanic duties, regardless of any contractual relationship alleged to exist between the contractor and those individuals.
- The term "laborers or mechanics," does not include workers whose duties are primarily executive, supervisory (except the working foreman described above), administrative, or clerical, rather than manual. Persons employed in a bona fide executive, administrative, or professional capacity are not laborers or mechanics.
- The "site of the work" is the physical place or places where the construction called for in the contract will remain when work is completed, and nearby property.
- Except as provided in the next paragraph, the term includes fabrication plants, mobile factories, batch plants, borrow pits, job headquarters, and tool yards, provided these locations are dedicated exclusively, or nearly so, to performance of the contract or project, and are so located in proximity to the actual construction location that it is reasonable to include them.
- The term does not include permanent home offices, branch plant establishments, fabrication plants, or tool yards of a contractor or subcontractor

whose locations and continuance in operation are determined wholly without regard to a particular Government contract or project. In addition, fabrication plants, batch plants, borrow pits, job headquarters, yards, etc., of a commercial supplier or materialman which are established by a supplier of materials for the project before opening of bids and not on the project site, are not include.

- ***Do the proposed labor rate and related fringe benefits meet the minimum requirements established by any applicable Department of Labor wage determination (for the applicable rate schedule) attached to the solicitation/contract ([FAR 22.404](#))?***

A contractor must pay the wages and fringe benefits required by the wage determinations incorporated in the solicitation/ contract. The Department of Labor is responsible for issuing wage determinations reflecting prevailing wages, including fringe benefits. Those wage determinations apply only to those laborers and mechanics employed by a contractor upon the site of the work including drivers who transport to or from the site materials and equipment used in the course of contract operations. Determinations are issued for different types of construction, such as building, heavy, highway, and residential (referred to as rate schedules), and apply only to the types of construction designated in the determination.

- A general wage determination is used in contracts performed within a specified geographical area. It contains prevailing wage rates for the types of construction designated in the determination. There is no expiration date determinations remain valid until modified, superseded, or canceled by a notice in the Federal Register by the Department of Labor. Once incorporated in a contract, a general wage determination normally remains effective for the life of the contract.
- A project wage determination is issued at the specific request of a contracting agency. It is used only when no general wage determination applies, and is effective for 180 calendar days from the date of the determination. However, if a determination expires before contract award, it may be possible to obtain an extension to the

180-day life of the determination. Once incorporated in a contract, a project wage determination normally remains effective for the life of the contract.

- o You cannot require an offeror to comply with a wage determination when none is provided to the offeror. However, you may issue a solicitation before obtaining the appropriate rate schedule.
- o In sealed bidding, you must not open bids until a reasonable time after you have furnished the wage determination to all bidders.
- o In negotiated acquisitions, you may open proposals and conduct negotiations before obtaining the wage determination, but you must incorporate the wage determination before submission of final proposal revisions.

- ***If the labor rate exceeds the appropriate Department of Labor wage determination, is the difference reasonable?***

The wage determination only sets the minimum wage that can be paid for a particular class of labor. The offeror may pay more than the minimum. However, remember that these wage determinations are based on the prevailing wage in the locality.

Walsh-Healey Public Contract Act ([FAR 22.602](#), [22.603](#), and [22.604](#)). As you analyze labor rate reasonableness, consider the following questions related to the Walsh-Healey Public Contract Act:

- ***Does the Walsh-Healey Public Contract Act apply to this type of labor?***

The Walsh-Healey Public Contract Act applies to contracts (including, indefinite-delivery contracts, basic ordering agreements, and blanket purchase agreements) and subcontracts under Section 8(a) of the Small Business Act, for the manufacture or furnishing of supplies that are to be performed within the United States, Puerto Rico, or the Virgin Islands, and which exceed or may exceed \$10,000, unless exempted.

- o Statutory exemptions include contracts for any of the following:

- Any item acquired in a situation where you are authorized by the express language of a statute to purchase "in the open market" generally (e.g., commercial items); or where a specific purchase is made under a public exigency.
- Perishables, including dairy, livestock, and nursery products.
- Agricultural or farm products processed for first sale by the original producers.
- Agricultural commodities or the products thereof purchased under contract by the Secretary of Agriculture.
- Regulatory exemptions include the following:
- Contracts for the following requirements are fully exempt from the Act:
 - Public utility services;
 - Supplies manufactured outside the United States, Puerto Rico, or the Virgin Islands;
 - Purchases against the account of a defaulting contractor where the stipulations of the Act were not included in the defaulted contract; and
 - Newspapers, magazines, or periodicals, contracted for with sales agents or publisher representatives, which are to be delivered by the publishers thereof.
- The following are partially exempt from the Act:
 - Contracts with certain coal dealers;
 - Certain commodity exchange contracts;
 - Contracts with certain export merchants;
 - Contracts with small business defense production pools, and small business research and development pools;
 - Contracts with public utilities for the acquisition of certain uranium products.
- Upon the request of the agency head, the Secretary of Labor may exempt specific contracts or classes of contracts from the inclusion or application of one or more of the Act's stipulations; provided, that the request includes a finding by the agency head stating the reasons why the conduct of Government business will be seriously impaired unless the exemption is granted.

- ***Does the proposed labor rate meet the minimum requirements the Act?***

The offeror/contractor must pay the minimum wage rates specified by the Act.

As you analyze labor rate reasonableness, consider the following questions related to the Office of Federal Procurement Policy (OFPP) issued [Policy Letter No. 78-2](#), Preventing "Wage Busting" for Professionals, dated March 29, 1978:

- ***Does OFPP Policy Letter No. 78-2 apply to this type of labor?***

The Service Contract Act of 1965 was enacted to ensure that Government contractors compensate their blue-collar service workers and some white-collar service workers fairly, but it does not cover bona fide executive, administrative, or professional employees. The Office of Federal Procurement Policy issued Policy Letter No. 78-2 to provide policies and procedures for use in negotiated service contracts exceeding \$500,000 that involve meaningful numbers of professional employees.

- The term "professional employee" includes members of those professions having a recognized status based upon acquiring professional knowledge through prolonged study. Examples of these professions include accountancy, actuarial computation, architecture, dentistry, engineering, law, medicine, nursing, pharmacy, the sciences (such as biology, chemistry, and physics, and teaching) ([FAR 22.11](#)).
- To be a professional employee, a person must not only be a professional but must be involved essentially in discharging professional duties.

- ***Does the proposed labor rate meet the minimum requirements of OFPP Policy Letter No. 78-2?***

The offeror must propose labor rates and related compensation that compensates professional employees fairly and properly.

- Use the Evaluation of Compensation for Professional Employees provision in requests for proposals to require offerors to submit a total compensation plan for evaluation. The plan should set forth proposed salaries and fringe benefits

for professional employees working on the contract.

- o Supporting information will include data (e.g., recognized national and regional compensation surveys and studies of professional, public and private organizations) used in establishing the total compensation structure.
- o Evaluate the plan to assure that it reflects a sound management approach and understanding of contract requirements. Assess the offeror's ability to provide uninterrupted high-quality work. Evaluate the proposed professional compensation in terms of its impact upon recruiting and retention, its realism, and its consistency with a total plan for compensation. Proposed compensation levels should:
 - o Reflect a clear understanding of the work required under the contract.
 - o Indicate the capability of the proposed compensation structure to obtain and keep suitably qualified people to meet mission objectives.
 - o Take into account differences in skills, the complexity of various disciplines, and professional job difficulty.
 - o Evaluate proposals envisioning compensation levels lower than those of predecessor contractor for the same work considering the effect on program continuity, uninterrupted high-quality work, and availability of required competent professional service employees.

7.3.2 Considering The Skill Mix Of Labor Effort

Skill Mix. The labor rate for a top scientist is usually more than the labor rate for a technician. You would not accept a cost estimate that proposes only top scientists for routine equipment repair. At the same time, you would not accept a cost estimate that proposes only technicians for a complex research effort to advance the state of the art in nuclear physics.

Part of your task in evaluating proposed labor rates is to evaluate the labor mix. You will likely need technical support to develop a pricing position that represents an

effective and efficient mix of skills for contract performance.

- ***Is the proposed skill mix reasonable for the work required?***

Most contracts require a mix of skills. For example, top scientists would obviously play a key role in a contract to advance the state of the art in nuclear physics, but technicians would likely be more efficient and more effective at performing many tasks. Top scientists would cost more per hour and likely require more hours. Technicians may be able to do many of the tasks traditionally assigned to top scientists, but require much longer to complete them.

- ***Is the proposed skill mix reasonable based on the mix used in performing similar contracts?***

Comparisons are particularly important for follow-on contracts for similar products or services. Normally, higher level skills should not be employed on a follow-on contract unless there were identified labor problems or more complex work is required. Lower level skills may be appropriate as complex problems are solved and contract effort becomes more routine.

Calculating a Weighted-Average Labor-Rate. When pricing proposals, offerors usually find it impractical, if not impossible, to identify the exact labor rate for each individual projected to work on the contract. They likely do not know exactly who will work on which contract and how many hours they will work.

- ***Did the offeror use a weighted-average labor rate?***

The offeror may estimate labor rates by position class (e.g., senior engineer or principle analyst) or by department. Eitherway, they will likely use some form of weighted-average labor rate. A weighted average rate takes into account the rate and the number of workers working at that rate.

- ***Did the offeror calculate the weighted-average labor rate correctly?***

The following table demonstrates the weighted-average labor rate calculation for Engineering Department A. The department work force includes three engineering position classes: senior engineer, intermediate engineer, and entry-level engineer.

Calculating a Weighted-Average Labor Rate for Engineering Department A			
Engineering Labor Category	Engineers Employed	Labor-rate per Hour	Weighted Data Column
Senior	100	\$37.50	\$3,750.00
Intermediate	200	\$31.02	\$6,204.00
Entry-Level	300	\$29.90	\$8,970.00
Totals	Engineers Employed	Weighted Data	
Total From Dept. A	600	\$18,924.00	
Total From Dept. B	725	\$26,462.50	
Combined Total			
Combined weighted-average labor rate = \$45,386.50 ÷ 1,325 = \$34.25			

- o The offeror plans to divide this new department into two teams -- Competitive Production Contracts Team and Non-competitive Production Contracts. Everyone will be doing the same work as before the two departments were combined.
- o By combining these two departments with dissimilar work forces, the offeror can shift cost from the competitive production work to the non-competitive work.
- o Under the combined structure the workers on the non-competitive contracts in the old Department A would have a rate of \$34.25 an hour instead of \$31.54, even though the workers are the same.
- o Under the combined structure the workers on the competitive contracts in the old Department B would have a rate of \$34.25 an hour instead of \$36.50, even though the workers are the same.

Contract vs. Plant-Wide Averages. Many contracting officers question the use of plant-wide labor rates for contract pricing. They feel that the contract direct labor rate should reflect only the work required under the contract.

- ***Does the Government consistently accept the plant-wide labor rate for other contracts?***

Normally, you should use a plant-wide labor rate if the Government accepts the plant-wide rate for all other proposals. In other words, both you and the offeror must be consistent! Neither party should "cherry pick" rates by using the specific contract rate or the plant-wide average, depending on the relative pricing advantage involved. The offeror's estimating procedures should clearly spell out how labor rates will be applied.

- ***Is a plant-wide labor rate reasonable for the proposed contract?***

If the offeror estimates using plant-wide average rates but the work performed on your contract is substantially different than the other work performed by the offeror, the skill mix required on your contract may be substantially different. If the proposed contract effort is different than other work performed by the offeror, you may need to encourage the offeror to change the method used in labor-rate estimating. Contact the cognizant ACO or the cognizant Government contract auditor for assistance.

7.3.3 Considering The Time Period Of Labor Effort

Need to Evaluate Estimates of Time of Performance. Unless the proposed contract is going to be completed within a few weeks of contract award, the time period or periods when work will be performed becomes very important. Labor rates are not constant. To develop a realistic estimate of direct labor costs, the estimate must match the labor-hour estimate with a reasonable labor rate for the period when the work will take place. Remember, the objective of your analysis is to develop a pricing position that, as closely as possible, estimates what actual labor costs will be.

Labor-Loading Schedules ([FAR Table 15-2](#)). The offeror's proposal should include labor-loading schedule -- a time-phased (e.g., monthly or quarterly) breakdown of labor hours, rates, and costs by labor category.

- ***Does the labor-loading schedule provide a reasonable match of the labor hours required to complete the***

contract with the time period when the labor effort is projected to occur?

The proposal should include supporting rationale for the assignment of labor hours to future time periods and the pattern of labor-hour estimates in the schedule should match the pattern of work expected for contract performance. For a contract that will extend over many months, you should not expect that all work will be completed in the first month or the last. You should expect labor effort throughout the period, and the pattern should be reasonable (e.g., product design should be scheduled before product assembly).

For example: The two tables below present two different contract labor estimates from a company that revises labor-rate estimates annually. Work begins in August 19X1 and will continue at a relatively constant level of effort through April 19X2. Note that Labor Estimate 1 appears more reasonable, because the labor-hours are more logically identified with the period when they are projected to occur.

Labor Estimate 1			
Rate Period	Estimated Hours	Hourly Rate	Labor Estimate
19X1	5,000	\$10.38	\$51,900.00
19X2	5,000	\$10.99	\$54,950.00
TOTALS	10,000		\$106,850.00

Labor Estimate 2			
Rate Period	Estimated Hours	Hourly Rate	Labor Estimate
19X2	10,000	\$10.99	\$109,900.00

- ***Does the labor-rate proposal conform to the offeror's accounting and estimating practices?***

The offeror may estimate rates for each month, quarter, year, or some other period. Whatever estimating periods the offeror uses to estimate labor rates, the estimate should use the same periods.

Using Industry and Company Data to Estimate Future Rates. The offeror's labor rates must be reasonable for the work required and the time period when the work will be performed.

- ***Are future rate estimates reasonable considering the current rate and projected industry rate increases?***

There are two [U.S. Bureau of Labor Statistics](#) indexes that you may find useful as you analyze projected labor rate changes.

- The [Employment Cost Index](#) provides information on compensation changes over time with data presented by occupation, occupation within industry, regions, bargaining unit status, and metropolitan area status.
- The [Consumer Price Index](#) provides information on changes in consumer prices over time. While this index does not relate directly to labor rates, changes for many labor rates are tied to changes in the index.

The indexes above are historical indexes. You can use the data to estimate trends, but the indexes do not provide forecasts. However, there are commercial forecasting services (e.g., [DRI/ McGraw-Hill](#)) do provide such forecasts.

- ***Are future rate estimates reasonable considering the current rate and historical rate increases provided by the firm?***

Company labor-rate increases usually follow a trend over time. If you have three years of labor-rate data and you note that wages are increasing at a rate of five percent per year, you can use that information coupled with other data to estimate future rates.

However, remember that historical data reflect what happened in the past. You can use a quantitative technique (e.g., regression analysis) to project the trend, but such analysis will not be able to predict changes in the economy and other factors that will affect labor rates.

Labor-Management Agreement ([FAR 22.101-2](#) and [31.205-6\(c\)](#)). Rates must be reasonable considering any existing labor-

management agreement. However, you should question any rates that appear unwarranted or discriminatory.

- ***Do the proposed labor rates conform to any labor-management agreement on wages or salaries?***

Proposed labor rates should normally conform to any labor-management agreement on wages or salaries. However, contractor labor policies and compensation practices, whether or not included in labor-management agreements, are not acceptable bases for analyzing proposed labor rates if those policies and practices result in unreasonable costs to the Government.

- ***If there is a labor-management agreement on wages or salaries, should you use it as a basis for estimating future labor rates?***

You should consider costs of compensation established under "arm's length" negotiated labor-management agreements reasonable, if you do not determine that they are unwarranted by the character and circumstances of the work or discriminatory against the Government.

- A labor rate is unwarranted when the offeror applies the agreement provisions that were designed to apply to a given set of circumstances and conditions of employment (e.g., work involving extremely hazardous activities) to a Government contract involving significantly different circumstances and conditions of employment (e.g., work involving less hazardous activities).
- A labor rate is discriminatory against the Government if it results in employee compensation (in whatever form or name) in excess of that being paid for similar non-Government work under comparable circumstances.

7.3.4 Considering Company-Unique Factors

Differences Between Companies. There can be vast differences in the compensation policies and procedures of different firms -- even when the firms are in the same

industry and region. You must consider these differences as you perform your direct labor-rate analysis.

Uncompensated Overtime. ([DCAM 6-410](#), [FAR 31.201-4](#), [37.115](#), [52.237-10](#), [App B, 9904.401](#), and [App B, 9904.418](#)).

The term "uncompensated overtime" relates to any unpaid hours worked in excess of an average 40 hours per week by an employee who is exempt from requirements of the Fair Labor Standards Act (FLSA). Over the past few years, uncompensated has become a substantial concern in labor-rate analysis, particularly in service contracting. Increasingly, firms are encouraging or even requiring FLSA-exempt employees to work a 45 to 80 hour week - while paying them a salary based on 40 hours.

- ***How does the firm account for uncompensated overtime?***

All firms do not all treat uncompensated hours in the same way.

- Some firms only account for eight hours of work each day no matter how many hours are actually worked. This is known as "40-hour accounting." Of these firms, some distribute labor costs only to cost objectives worked during the first eight hours of the work day. Others permit employees to select the cost objectives to be charged for excess hours. These accounting methods provide opportunities for the firm to manipulate the allocation of direct labor costs and related indirect costs.
- Other firms require their employees to charge for every hour worked - compensated or not. This is known as "total time accounting". The [Defense Contract Audit Agency](#) (DCAA) and others contend that total time accounting is required for compliance with FAR and CAS requirements.

- ***How does the offeror's method of accounting for uncompensated overtime affect labor rates and product quality?***

Differences in accounting for uncompensated overtime can affect proposal evaluation. It can be a particular problem for technical or professional services contracts where the requirement is defined by the number of hours to be provided rather than by the task to be performed. For

example, Firm A may be able to offer a lower rate per hour than Firm B, because Firm A requires its employees to accept uncompensated overtime and Firm B does not.

- Insert the FAR Identification of Uncompensated overtime provision in any solicitation valued above the simplified acquisition threshold for professional or technical services to be acquired on the basis of the number of hours to be provided.
- When evaluating the realism of the proposed price for a professional or technical service contract where the requirement is defined on the basis of the number of hours to be provided, consider the probable effects of compensated overtime on contract performance. For example, one employee working 80 hours per week may not be able to contribute as much to contract performance as two employees who are both working 40 hours per week.

Paid Overtime and Shift Premiums ([FAR 22.103](#)).

- ***Does the proposal include paid overtime or shift premiums?***

Whenever possible, ascertain the extent that offers are based on payment of overtime or shift premiums.

- ***Is the paid overtime or shift premium reasonable?***

Do not negotiate prices that include overtime or shift premiums unless they are necessary for timely contract completion.

- Simply stated, the Government requirement must necessitate the need for premium charges.
- If the offeror is proposing overtime to compensate for poor scheduling, Government recognition of the overtime costs is clearly not reasonable.
- Approval of overtime use may be granted by an agency approving official after determining in writing that overtime is necessary to:
 - Meet essential delivery or performance schedules;
 - Make up for delays beyond the control and without the fault or negligence of the contractor; or

- Eliminate foreseeable extended production bottlenecks that cannot be eliminated in any other way.

Changes in Labor Demographics. Changing demographics can have a substantial affect on labor rates.

- ***Are labor rates affected by demographic changes related to business volume?***

Business volume changes can have a substantial affect on labor demographics, including: major personnel hiring, layoffs, recalls, and early retirement options.

- Layoffs are typically accomplished considering seniority. New lower-paid employees are usually the first to go with the more senior higher paid employees staying on. The result is an increase in average labor rates.
- Recalls and new hiring typically introduce additional employees at relatively lower pay levels. The result is a decrease in average labor rates.
- Early retirements typically allow higher paid senior employees to leave the company. Labor rates drop, but retirement expenses (indirect costs) may increase.
- ***Are labor rates affected by demographic changes related to production methods?***

Production method changes can have a disruptive effect on labor rates by shifting the number of employees in different skill levels and by eliminating or adding whole job categories. For example a shift from manual production to automated production may cause the firm to replace skilled craftsmen with lower-skilled machine operators.

Compensation Trade-Offs ([FAR 31.205-6\(b\)](#)). In most firms, wage rates are only part of a complex compensation package. Differences in these packages can significantly affect comparisons between firms.

- ***Do differences in other elements of compensation affect labor-rate comparisons?***

Your comparison of the labor rate of one firm with the rates of other firms may be affected by related

compensation package differences (e.g., lower labor rates but higher pension benefits). Only consider offsets between the allowable elements of an employee's (or a job class of employees') compensation package or between the compensation packages of employees in jobs within the same job grade or level.

- ***Do trade-offs between labor rates and other compensation elements appear to result in a compensation package that is reasonable overall?***

Consider measurable trade-offs between any of the following compensation elements:

- Wages and salaries;
- Incentive bonuses;
- Deferred compensation;
- Pension and savings plan benefits;
- Health insurance benefits;
- Life insurance benefits; and
- Compensated personal absence benefits.