AGENDA

• Importance of having an Acceptable Estimating System

• Reconciling DCAA vs DFARS

• Elements of an Estimating System

• Estimating System Audit Process
Importance of an Estimating System
ESTIMATING SYSTEM IMPORTANCE

PURPOSE (from FAR Part 15.407-5 -- Estimating Systems)
An acceptable estimating system benefits both the Government and the contractor by increasing the accuracy and reliability of individual proposals. It also reduces the scope of reviews to be performed on individual proposals, expedites the negotiation process, and increases the reliability of proposals. Significant deficiencies not corrected by the contractor shall be a consideration in subsequent proposal analyses and negotiations. (CO will get info from PPIRS).

POTENTIAL WITHHOLDING BY CO PER DFARS
Contracting Officer (CO) will withhold 5% of amounts due from progress payments and performance-based payments, and direct the contractor, in writing, to withhold 5% from its billings on interim cost vouchers on Cost Reimbursement, Labor Hour, and Time and Materials contracts until the CO has determined that the contractor has corrected all significant deficiencies as directed by the CO’s final determination.
Reconciling DCAA vs DFARS
DEFINITION:

“Acceptable estimating system” means an estimating system that complies with the system criteria, and provides for a system that—

1. Is maintained, reliable, and consistently applied;
2. Produces verifiable, supportable, documented, and timely cost estimates that are an acceptable basis for negotiation of fair and reasonable prices;
3. Is consistent with and integrated with the Contractor’s related management systems; and
4. Is subject to applicable financial control systems.
**DFARS BUSINESS SYSTEMS RULE**

**DEFINITION:**

“Estimating system” means the Contractor's policies, procedures, and practices for budgeting and planning controls, and generating estimates of costs and other data included in proposals submitted to customers in the expectation of receiving contract awards. Estimating system includes the Contractor's—

1. Organizational structure;
2. Established lines of authority, duties, and responsibilities;
3. Internal controls and managerial reviews;
4. Flow of work, coordination, and communication; and
5. Budgeting, planning, estimating methods, techniques, accumulation of historical costs, and other analyses used to generate cost estimates.
**ESTIMATING SYSTEM 17 CRITERIA:**

1. Establish clear responsibility for preparation, review, and approval of cost estimates and budgets.
2. Provide a written description of the organization and duties of the personnel responsible for preparing, reviewing, and approving cost estimates and budgets.
3. Ensure that relevant personnel have sufficient training, experience, and guidance to perform estimating and budgeting tasks in accordance with the Contractor's established procedures.
4. Identify and document the sources of data and the estimating methods and rationale used in developing cost estimates and budgets.
5. Provide for adequate supervision throughout the estimating and budgeting process.
ESTIMATING SYSTEM 17 CRITERIA (cont.)

6. Provide for consistent application of estimating and budgeting techniques.
7. Provide for detection and timely correction of errors.
8. Protect against cost duplication and omissions.
9. Provide for the use of historical experience, including historical vendor pricing data, where appropriate.
10. Require use of appropriate analytical methods.
11. Integrate data and information available from other management systems.
12. Require management review, including verification of compliance with the company's estimating and budgeting policies, procedures, and practices.
13. Provide for internal review of, and accountability for, the acceptability of the estimating system, including the budgetary data supporting indirect cost estimates and comparisons of projected results to actual results, and an analysis of any differences.
ESTIMATING SYSTEM 17 CRITERIA (cont.)

14. Provide procedures to update cost estimates and notify the Contracting Officer in a timely manner throughout the negotiation process.

15. Provide procedures that ensure subcontract prices are reasonable based on a documented review and analysis provided with the prime proposal, when practicable.

16. Provide estimating and budgeting practices that consistently generate sound proposals that are compliant with the provisions of the solicitation and are adequate to serve as a basis to reach a fair and reasonable price.

17. Have an adequate system description, including policies, procedures, and estimating and budgeting practices that comply with the Federal Acquisition Regulation and Defense Federal Acquisition Regulation Supplement
**DCAA COST ACCOUNTING AUDIT PROGRAM**

1. C-01 Monitoring and Management Reviews
2. E-01 Estimating Direct Labor Rates
3. F-01 Estimating Direct Labor Hours
5. I-01 Estimating Interdivisional Work Orders (IWO)
7. N-01 Estimating Indirect Expenses
8. O-01 Other Direct Costs (ODC)
10. S-01 Estimating Subcontract Costs
11. T-01 Estimating Cost of Money (COM)
12. Z-01 Proposal Updates
## DFARS BUSINESS SYSTEMS RULE vs DCAA

<table>
<thead>
<tr>
<th>DCAA ESTIMATING SYSTEM CRITERIA</th>
<th>DFARS 252.215-7002(d)(4) Criteria</th>
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<tbody>
<tr>
<td></td>
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<tr>
<td>C-01  Monitoring and Management Reviews: Determine if the contractor’s estimating system provides for periodic monitoring (e.g., management reviews) of the system, as appropriate.</td>
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<tr>
<td>E-01  Estimating Direct Labor Rates: Based on your understanding of the policies and procedures obtained during the demonstrations, determine whether the policies comply with the DFARS criteria and whether the actual practices (using the proposals selected) comply with the policies.</td>
<td>X</td>
</tr>
<tr>
<td>F-01  Estimating Direct Labor Hours: Based on your understanding of the policies and procedures obtained during the demonstrations, determine whether the policies comply with the DFARS criteria and whether the actual practices (using the proposals selected) comply with the policies</td>
<td>X</td>
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<tr>
<td>G-01  Estimating Using Standards: Based on your understanding of the policies and procedures obtained during the demonstrations, determine whether the policies comply with the DFARS criteria and whether the actual practices (using the proposals selected) comply with the policies</td>
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<tr>
<td>I-01</td>
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<tr>
<td>Estimating Interdivisional Work Orders (IWO): Based on your understanding of the policies and procedures obtained during the demonstrations, determine whether the policies comply with the DFARS criteria and whether the actual practices (using the proposals selected) comply</td>
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<td>M-01</td>
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<td>Estimating Direct Material: Based on your understanding of the policies and procedures obtained during the demonstrations, determine whether the policies comply with the DFARS criteria and whether the actual practices (using the proposals selected) comply</td>
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<td>N-01</td>
<td>X X X X X X X X X X X X X X X</td>
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<tr>
<td>Estimating Indirect Expenses: Based on your understanding of the policies and procedures obtained during the demonstrations, determine whether the policies comply with the DFARS criteria and whether the actual practices (using the proposals selected) comply</td>
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<td>O-01</td>
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<tr>
<td>Other Direct Costs: Based on your understanding of the policies and procedures obtained during the demonstrations, determine whether the policies comply with the DFARS criteria and whether the actual practices (using the proposals selected) comply with the policy</td>
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<tr>
<td>P-01 Estimating Using Cost Estimating Relationships (CER) or Parametric Estimating: Based on your understanding of the policies and procedures obtained during the demonstrations, determine whether the policies comply with the DFARS criteria and whether the actual practices (using the proposals selected) comply</td>
<td>X</td>
</tr>
<tr>
<td>S-01 Estimating Subcontract Costs: Based on your understanding of the policies and procedures obtained during the demonstrations, determine whether the policies comply with the DFARS criteria and whether the actual practices (using the proposals selected) comply</td>
<td>X</td>
</tr>
<tr>
<td>T-01 Estimating Cost of Money (COM): Based on your understanding of the policies and procedures obtained during the demonstrations, determine whether the policies comply with the DFARS criteria and whether the actual practices (using the proposals selected) comply</td>
<td>X</td>
</tr>
<tr>
<td>Z-01 Proposal Updates: Verify that significant estimates in the sampled proposals were based on a set of data and assumptions reasonably current given the date of actual negotiations. If not current, verify that the Contracting Officer was subsequently furnished a proper update prior to concluding negotiations</td>
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Elements of an Estimating System
ESTIMATING SYSTEM ELEMENTS

ESTIMATING SYSTEM:

1. Policy and Procedures
   - Address DFARS and DCAA requirements
   - Provide for Management Reviews and Oversight

2. Training
   - Appropriate for types of costs that are to be estimated
   - Minimum of annual training

3. Documentation
   - Provides documentation of price/cost in response to solicitations
   - Provides details on where price/cost was obtained and why it was used

4. Internal Review/Audit
   - Ensures system is working and provides reliable estimates
ESTIMATING SYSTEM INTEGRATES WITH:

- Accounting System
  - Historical pricing data from previous contracts
  - Historical and projected overhead and G&A rates
- Purchasing System
  - Historical pricing from subcontractors and suppliers
  - Price/cost analysis of pricing from subcontractors and suppliers
- Budgeting Process
  - Accuracy of historical budgets vs. proposals
  - Tracking proposal against current budgets
Policy and Procedures
THE 4 PHASES OF ESTIMATING

Phase 1
Initiation and Research

Phase 2
Assessment

Phase 3
Analysis

Phase 4
Presentation
PHASE 1: INITIATION AND RESEARCH

DEFINE PURPOSE OF ESTIMATE
- Determine estimate’s purpose, required level of detail, overall scope
- Bid/No-Bid determinations are made at this time
- Market Research is conducted and Price to Win strategies are determined

DEVELOP ESTIMATE PLAN (C-01)
- Pull together estimating team and develop master schedule
- Assign estimating responsibilities and ensure estimators have appropriate training and background
- Outline estimate approach
PHASE 2: ASSESSMENT

BASIS OF ESTIMATE (BOE)

ESTIMATING METHODOLOGIES
- ESTIMATING USING STANDARDS (G-01)
- ESTIMATING USING COST ESTIMATING RELATIONSHIPS (CER) (P-01)
- PARAMETRIC ESTIMATING (P-01)

OBTAIN COST/PRICE DATA
- DIRECT LABOR RATES (E-01)
- DIRECT LABOR HOURS AND SKILL MIX PREPARATION AND REVIEW (F-01)
- DIRECT MATERIAL (M-01)
- OTHER DIRECT COSTS (ODCs)(O-01)
- SUBCONTRACT COST PREPARATION AND REVIEW (S-01)
- INDIRECT EXPENSES PREPARATION AND REVIEW (N-01)
- INTERDIVISIONAL WORK ORDER (IWO) COST PREPARATION AND REVIEW (I-01)
- ESTIMATING COST OF MONEY (COM)(T-01)
PHASE 3: ANALYSIS

- PROPOSAL VOLUME DRAFT REVIEW STAGE (C-01)
- FINAL PRICING REVIEW (Z-01)
- CERTIFICATION OF COSTS/PRICES
- PRE-SUBMISSION PROPOSAL UPDATES AND TRUTHFUL COST OR PRICING DATA (old TINA SWEEP) (Z-01)
CERTIFIED COST OR PRICING DATA

• Per FAR 2.101, “Certified cost or pricing data” means “cost or pricing data” that were required to be submitted in accordance with FAR 15.403-4 and 15.403-5 and have been certified, or are required to be certified, in accordance with 15.406-2. This certification states that, to the best of the person’s knowledge and belief, the cost or pricing data are accurate, complete, and current as of a date certain before contract award. Cost or pricing data are required to be certified in certain procurements (10 U.S.C. 2306a and 41 U.S.C. Chapter 35).
• Cost or pricing data are **factual, not judgmental, and are verifiable.** While they do not indicate the accuracy of the prospective contractor’s judgment about estimated future costs or projections, they do include the data forming the basis for that judgment.
CERTIFIED COST OR PRICING DATA

Cost or pricing data are more than historical accounting data; they are all the facts that can be reasonably expected to contribute to the soundness of estimates of future costs and to the validity of determinations of costs already incurred. They can include such factors as:

- **Vendor quotations**
- Non-recurring costs
- Changes in production methods
- **Data supporting projections of business prospects**
- **Unit cost trends**
- Make/buy decisions
- **Management decisions that could have a significant bearing on costs**
CERTIFIED COST OR PRICING DATA

EXAMPLES OF POTENTIAL DEFECTIVE COST OR PRICING DATA

• Labor hour estimates, other than estimates based on pure judgment, not complete, current, or accurate.
• Valuation of contractor inventory erroneously computed or latest valuation not reflected in contractor’s proposal.
• Contractor pricing personnel or negotiators failure to follow contractor internal pricing policy or estimating and/or purchasing manual instructions and updates.
• Contractor failure to reveal evaluation of vendor or subcontractor quotes and failure to reveal changes to the contractor evaluations.
• Canceled purchase order not disclosed to Government.
• Duplication of costs included in contractor’s proposals.
• Change in make-or-buy decisions by prime contractor or subcontractor not disclosed (may be related to new or revised manufacturing processes not disclosed).
• Contractor distortion of time periods, especially for labor hours, when computing averages for purpose of proposal to Government.
• Contractor failure to disclose vendor quotes, voluntarily reduced at request of prime.
CERTIFIED COST OR PRICING DATA

SIGNIFICANT PENALTIES FOR DEFECTIVE PRICING

- Truthful Cost or Pricing Data (formerly TINA)
  - Refund of overstated amount, penalty if knowingly submitted
- Civil False Claims Statute
  - Triple damages plus a $5K to $10K penalty for each claim (actual damages need not be proven)
- Program Fraud Civil Remedies
  - Max $5K per false statement and $5K per false claim, plus up to twice amount if government has already paid the contractor
- Criminal False Statement Statute
  - Max $1Million penalty for contractor (Max $250K with up to 5 years imprisonment for individuals)
- Criminal False Claims Statute
  - Max $1Million penalty for contractor (Max $250K with up to 5 years imprisonment for individuals)
PHASE 4: PRESENTATION

- CUSTOMER QUESTIONS
- POST-SUBMISSION PROPOSAL UPDATES (Z-01)
- CONTRACT AWARD
- POST CONTRACT COMPLETION COMPARISON TO PROPOSAL
Training
TRAINING

- At least Annually
- Must include training on Policy and Procedures
- Must include training on Estimating Methodologies used by Company
- All company personnel involved in estimating process should receive training (including management)
- Can include training from outside resources
RETENTION
Cost and pricing data will be maintained for 7 years from the close of the project. No-bid cost documentation will be kept for a minimum of 1 year.
STORED DOCUMENTATION

- Copy of Solicitation or Modification
- Bid/No-Bid or Gate Review Form
- Initial Basis of Estimate (BOE)
- Price Review Form with Approval Signature
- Final, Updated BOE
- Final Cost Submission with supporting documentation, including:
  - Price Summary Schedule (by cost element)
  - Direct Labor (in FAR Table 15-2 format and mapped to solicitation format)
    - Rates and hours summarized by employee classification by period
    - Support for labor rates by labor classification
    - Support for hours by labor classification or task
    - Support for escalation of rates
    - Support of complexity factors
STORED DOCUMENTATION

- Subcontracts
  - Consolidated schedule of subcontracts by period (year)
  - Three quotes for each subcontractor with justification of subcontractor(s) selected when competed or include the single-/sole-source documentation, where applicable
  - Subcontractors cost and pricing data if subcontract is >$750,000 and if the subcontract is negotiated
- Direct Materials
  - Consolidated bill of materials by period (year)
  - Quote matrix for large buy-outs
  - Three quotes for each supplier or other pricing source if not quoted (i.e., NECA, GSA schedule, etc.)
- Other Direct Costs
  - Consolidated list of other direct costs by period (year)
  - Quotes or other support for each category of other direct costs
- Indirect Rates
  - Payroll burden by year
  - Overhead by year
  - Program Management Office (PMO) Center of Excellence (COE) expense by year
  - General and Administrative (G&A) expense by year
  - Materials and Handling (M&H) expenses by year
Internal Controls
INTERNAL CONTROLS

MANAGEMENT REVIEWS
Appropriate management personnel will periodically conduct internal management reviews of the estimating system, including verification of compliance with the Company’s estimating and budgeting policies, procedures, and practices. These reviews will be documented to indicate, but may not be limited to, the acceptability of estimating system practices and compliance, including comparisons of projected results to actual results, and an analysis of any differences.
INTERNAL CONTROLS

SUPERVISION
Throughout the estimating process, adequate supervision will be provided, including but not limited to, development of estimated direct labor rates, direct labor hours and skill mix, cost/price analysis, etc. Errors, if any, will be detected and corrected in a timely manner. If no errors are identified, supervisory personnel will determine if errors would likely have been detected considering the extent of supervision/management review.
INTERNAL CONTROLS

Internal Audit/Review Process
- Spot checking of estimating files to ensure they are complete and follow policy and procedures
- Check on estimator training and ensure it lines up with the types of estimates that they are performing
- Ensure that proper approvals were timely obtained
Estimating System Audit Process
DCAA ESTIMATING SYSTEM REVIEW (ESR)

WHY IS AN ESR CONDUCTED?

ESR: A special review conducted by the DCAA or other Government authorized Auditor of estimating processes and activities across an organization.

Purpose: To evaluate the adequacy of an estimating system and make recommendations for improvement, if necessary.

Objective: To evaluate the efficiency and effectiveness with which a contractor estimates the value of proposed goods and services and its compliance with Government estimating policy and requirements.
BASICS OF ESR PROCESS

PRE-AUDIT/PLANNING PROCESS

Auditor will:

• Notify contractor of planned audit of the estimating system
• Review prior work done by auditors and any flash estimating system reports
• Contact Contracting Officer (CO) about any known concerns
• Request a list of proposals for the previous 12 months
  o Summarized by customer, contract type, and dollar value
• Submit report to Administrative Contracting Officer (ACO) or CO for non-DoD contracts
• ACO or CO determines estimating system compliance
ENTRANCE CONFERENCE

• Contractor will be asked:
  o To provide a system orientation or briefing
  o Outline any changes to the estimating system since the last review
  o Discuss the contractor’s risk assessment process
  o Discuss the contractor’s monitoring process
  o Discuss any prior weaknesses and actions or improvement steps taken to address these weaknesses

• Auditor will prepare an internal risk assessment
BASICS OF ESR PROCESS

CONTROL ENVIRONMENT/INFORMATION AND COMMUNICATIONS

DCAA will:

• Evaluate internal controls, including looking at Internal Control Audit Planning Summary (ICAPS), integrity and ethical values, competence, board/audit committee participation, management philosophy, authority and structure, HR policies, and financial capability

• Assess overall accounting controls, IT systems, files, and recent related changes; query contractor staff on estimating system and processes
BASICS OF ESR PROCESS

CONTRACTOR MONITORING PROCESS/INTERNAL AUDIT/SYSTEM DESCRIPTION

DCAA/Auditor will:

• Evaluate the contractor’s ongoing monitoring process, including internal audit, external reviews, and in-place controls
• Evaluate contractor compliance with previous review recommendations and review frequency
• Review the contractor’s estimating system description
  o Organization charts, written policy, procedures and directives, flowcharts, lines of authority, review and approval, written instructions, and integration with other management systems
TRAINING

DCAA/Auditor will evaluate if:

• Regular training was provided for those responsible for preparing estimates
• Training includes the use of statistical aids and advanced estimating techniques
• Training covers estimating system policy and procedures
• Contractor maintains adequate training records
BASICS OF ESR PROCESS

COST ESTIMATE DEVELOPMENT

DCAA/Auditor will:

• Evaluate if estimates are developed using appropriate methods; compliance with CAS 401 and 402
• Evaluate if contractor uses historical data, escalation methods, forward pricing factors, formula pricing methods, catalog pricing, proposal format (FAR Table 15-2), certified cost or pricing data (TINA), and subcontractor policies
• Select and evaluate recent pricing proposals for compliance with established procedures
• Determine if the following characteristics are in place:
  - Adequate supervision, management reviews of both interim and final proposals that address soundness of estimates and compliance with policy
DCAA ESTIMATING AUDIT

SELECTED AREAS OF GOVERNMENT FOCUS

• Internal Audits of Estimating System
  o Too infrequent
  o Lack adequate scope
  o Inadequately documented corrective action

• Independent Management Review
  o Insufficient management oversight concerning high-risk proposal
  o Unclear lines of authority for proposal approval
  o Lack of documentation of review/approval process

• Continuous System Maintenance/Improvement
  o Use internal audits to identify weaknesses and implement corrective actions; document improvements
  o Comprehensive training plan
  o Timely policy revisions/distribution of updates
AUDIT CONCLUSION

DCAA/Auditor will:

• Prepare an assessment of the contractor
• Conduct an exit conference
• Prepare a draft audit report
• Finalize the audit report, incorporating the contractor’s responses
• Make a recommendation of adequacy to ACO or CO
IMPACT OF AN INADEQUATE ESTIMATING SYSTEM

- Increase the scope and frequency of Government reviews of individual contractor proposals
- Prolong the proposal negotiation process
- Decrease the reliability of contractor’s proposals
- It will be part of your contractor review in FAPIIS

IN OTHER WORDS, MAKE YOUR LIFE MORE MISERABLE!
IMPACT OF AN INADEQUATE ESTIMATING SYSTEM

SIGNIFICANT DEFICIENCY

DFARS definition:

“Shortcomings in the system that materially affect the ability of officials of the DoD to rely upon information produced by the system that is needed for management purposes.”
IMPACT OF AN INADEQUATE ESTIMATING SYSTEM

POTENTIAL WITHHOLDING BY CO PER DFARS
Contracting Officer (CO) will withhold 5% of amounts due from progress payments and performance-based payments, and direct the contractor, in writing, to withhold 5% from its billings on interim cost vouchers on Cost Reimbursement, Labor Hour, and Time and Materials contracts until the CO has determined that the contractor has corrected all significant deficiencies as directed by the CO’s final determination.
**TIMELINE FOR POTENTIAL WITHHOLD**

1. **DCAA Notifies CO of Significant Deficiency**
2. **CO notifies the contractor of DCAA findings**
3. **CO requests response from contractor**
   - **Within 30 days**
4. **CO “Promptly evaluates” Contractor Response**
5. If it is determined that there are significant deficiencies, the contractor is required to correct or give the CO a corrective action plan.
   - **Within 45 days**
6. **CO responds as to their findings**
   - Within 90 days

**Within 90 days**

1. Can lift withhold if deficiency corrected
2. Reduce withhold by 50% and monitor corrective action plan
3. Continue withholding if not corrected and corrective action plan not sufficient.

**= Time requirements for contractor response. Nonresponsiveness will most likely result in a significant deficiency.**
CLOSING THOUGHTS

• Be proactive and get management support
• The proposal you are preparing now will likely be evaluated during the ESR – be compliant now
• Establish and document a training and communication plan
• Any single failure can result in an inadequacy determination, so don’t create a hurdle you can’t clear
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