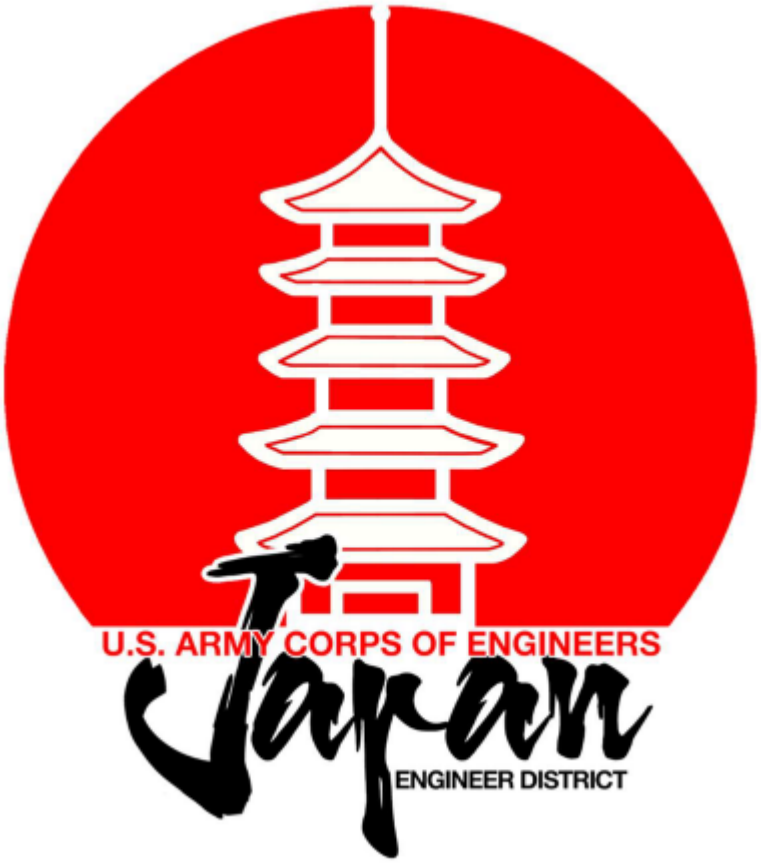
US Army Corps of Engineers ®

Japan Engineer District Cost Estimating Guide



NOV 2024

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01 OVERVIEW

01.1 Purpose

The purpose of this document is to provide specific guidance to users for the preparation of cost estimates for construction projects. Estimates are prepared for programming, controlling costs during design, evaluating bids, assisting in negotiations, and to serve as a guide in establishing a schedule of payments. Often these estimates are also used to evaluate the reasonableness of the Contractor's proposal for negotiated procurement contracts. As such, estimates must be current, complete, and accurate.

The primary intent of this guide is not to establish basic core estimating methods. It is written with the assumption that the reader has a working knowledge of general construction cost estimating. It provides specific guidance to facilitate cost engineering services and promote estimate uniformity using adopted tools and requirements specific to USACE.

01.2 Function, Mission, and POC

The Cost Engineering Section is responsible for cost estimates for all military, civil works and environmental restoration projects assigned to the Japan Engineer District. This Section reviews all prepared cost estimates submitted by A-E firms, contractors, installation support groups, and others. The Cost Engineering section provides a wide variety of support as cost consultants to the District for contractor proposal analyses, VE workshops, etc.

Cost Engineering questions or estimating requests can be directed to:

Cost Estimating Section

CEPOJ-EDS-V

DSN 315-263-8847

CEPOJ-EDS-V@usace.army.mil

01.3 Software Packages

PACES Version 1.5 with Cost Book: 2023 DoD Cost Book or newer.

(MII) MCACES 2nd Generation Version 4.4.4 or newer.

WBS: Approved TRACES MII Template

01.4 Obtaining Software

A-E firms or others under contract or providing services to POJ may request software installation packages from CEPOJ-EDS-V Cost Section Chief. Primary estimating software is generally

distributed to A-E's free of charge, however accompanying database licenses must be purchased and licensed as appropriate by the user. Other software may be purchased from the vendor.

01.4.1 PACES Purchase and Training

The current version of PACES can be obtained directly from the software vendor via the following:

Sales/Support Phone: 1-800-499-2919

Sales/Support Email: paces@aecom.com

The requestor will receive a current License pricing list, order form and contractor verification form. The contractor verification form shall be filled and signed by the USACE design manager associated with the project that requires the use of PACES.

01.4.2 MCACES (MII) Purchase and Training

The current version of MII (MCACES Second Generation) can be obtained via request through POJ-EDS-V. The installation and setup software is distributed directly to the requestor. User must also register the software at https://miisoftware.azurewebsites.us/ .

01.5 Terms and Definitions

Programmed Amount (PA): The Programmed Amount represents the total funds, excluding design, which are available for the project. The PA is for cost of construction in place, cost of supervision and administration during construction, contingencies, cost of communications over and above the basic contract, cost of as-built drawings, cost of energy monitoring and control system connections and other costs required to complete the construction scope of work. The PA is set by law for most projects and cannot be changed except by Congress (except for O&M). However, the Office of Chief of Engineers and the Secretary of the Army, Air Force, or DLA have limited authority to fund projects in excess of the PA provided funds are available in their departments.

Construction Cost Limit (CCL): The maximum cost of construction allowable within appropriated fund amounts for a complete and usable project. The CCL is defined as the expected cost to construct a project inclusive of all construction labor, materials, and equipment, site development, utility fees, permits, design fees, design or estimating contingency, escalation, contractor markups and other costs directly associated with the construction of the project that a reasonable and prudent contractor would incur during construction. The CCL does not include real estate, other appropriations, S&A (or SIOH) or construction contingency and thus is directly comparable to contractor's proposal or bid.

Estimated Contract Cost (ECC): The ECC represents the direct costs (material, labors, and

equipment) and the indirect costs (overhead, profit, taxes, and bonds) associated in the construction of a building or a facility. The ECC would typically be referred to as the estimated bid or proposal cost expected for a project.

Construction Contingency: An estimated amount or cost to account for unforeseen problems beyond interpretation at the time of or after contract award. This is typically added as a markup along with S&A (or SIOH) to a project estimate to form the project cost. For MILCON projects, new construction contingency is typically 5% and for renovation is 10%, however the appropriate contingency is determined by the project manager.

Supervision and Administration (S&A) or Supervision, Inspection, and Overhead (SIOH): An estimated amount or cost to account for for supervision and administration. Application of S&A rate will be in accordance with cognizant design agency guidance.

Design Contingency: An amount or cost added to a project estimate that covers costs that will likely be incurred, but are not precisely known or designed at the time of estimation. Typically this is applied during the early stages of project and is reduced or eliminated as the project develops. This amount is determined by the estimator based on his prior experience and judgment.

Design during Construction (DDC): An amount or cost added to a project estimate that covers costs for engineering and design services during construction. Those activities or services represent a continuation of the design process or effort subsequent to award of the construction phase contract. DDC is used to fund activities that are well beyond what could be considered a normal and routine S&A cost.

Current Working Estimate (CWE): In accordance with ER 1110-3-1300, the CWE is the latest construction cost estimate, which includes the estimated contract cost, construction contingency, POJ S&A, and any applicable DDC costs. The CWE should reflect the latest design data and must be updated at each design phase or submittal. The CWE will be used as a working tool to analyze costs and to control design decisions in constructing the project within the approved funding levels and scopes. If the CWE exceeds the PA, inform the project manager or PDT.

Independent Government Estimate (IGE): The construction cost estimate prepared by the government for cost control and bid evaluation. The IGE is comprised of two parts: 1) The independent government estimate of construction cost (protective cover page, title and signature pages, and CLIN schedule) routed through multiple levels of approval and signature and 2) detailed estimate reports that comprise its basis (basis of estimate and backup data). The term "fair and reasonable cost estimate" is used when referring to the IGE. Access to the IGE and its contents will be limited to personnel whose duties require knowledge of the suject and the IGE preparer shall mark the IGE as Controlled Unclassified Information (CUI). The IGE is a formal document. FAR 36.203 requires that every Government estimate be prepared as though the Government were a prudent and well-equipped contractor competing for the contract award.

01.6 References and Guidance

The following publications provide guidance and/or policy for construction cost estimating. The

following list is provided for reference, however the most current edition of each publication should be obtained from the USACE repository.

- ER 1110-1-1300 Cost Engineering Policy and General Requirements
- ER 1110-2-1302 Civil Works Cost Engineering
- ER 1110-3-1300 Military Programs Cost Engineering
- ER 1110-3-1301 Environmental Remediation and Removal Programs Cost Engineering
- UFC 3-701-01 DoD Facilities Pricing Guide
- UFC 3-730-01 Programming Cost Estimates for Military Construction
- UFC 3-740-05 Handbook: Construction Cost Estimating
- EM 1110-2-1304 Civil Works Construction Cost Index System (CWCCIS)
- EP 1110-1-8 Construction Equipment Ownership and Operting Expense Schedule
- ECB 2024-02 Submittal of MILCON Construction Award Data via the Historical Analysis Generator (HII)
- USACE Acquisition Instruction (UAI Deskguide)

01.7 Other References and Web Resources

01.7.1 Guidance and Policy

USACE publications such as ER, EC, EM and other official public documents from HQ USACE can be found at:

http://www.publications.usace.army.mil/

UFC's can be found at the Whole Building Design Guide site at:

http://www.wbdg.org/ffc/dod/unified-facilities-criteria-ufc

01.7.2 Programming Information

PAX Newsletter: Army Facilities Pricing Guide and DoD Area Cost Factors

https://www.usace.army.mil/Cost-Engineering/Programming-Administration-and-Execution-System-Ne/

01.7.3 Wage Rates

The Japan Ministry of Land, Infrastructure, Transport and Tourism (MLIT) annual publication on construction labor unit price report.

https://www.mlit.go.jp/report/press/

01.7.4 Travel Expense Cost Source

GSA Per Diem Rates:

https://www.gsa.gov/travel/plan-book/per-diem-rates

01.8 Cost Sources and Pricing Data

All cost sources and pricing information used by the estimator must be documented, traceable, and reproducible by the government estimator. The estimator will employ a wide range of cost and pricing data to produce an accurate estimate. This data may be obtained from vendor quotations, historical bid results, or widely recognized cost databases. Regardless of source, the data must be fully documented or annotated such that the source can be identified, traced, and/or reproduced if necessary.

Vendor quotations provide the most accurate pricing available, but must be documented. Annotation for vendor quotes should include company name or website, POC, phone number or email address, identifying information such as quote number, and the date the quotation was obtained such that a third party estimator can verify the quote or receive updates in the event of delayed project development.

Where vendor quotations are not available, the use of widely recognized construction cost databases, such as Sekisan Shiryo published by Keizai Chosa Kai, Kensetsu Bukka published by Kensetsu Bukka Chosa Kai, or others, is highly encouraged. While it is recognized that database costs are occasionally subject to error or inaccuracy, the estimator can correct (and note) as necessary. Database cost information shall be the default cost source in the absence of more accurate information such as a vendor quote. Additionally, cost database items shall be unaltered by default, unless the estimator has sufficient basis for modification and annotates accordingly.

Historical cost information may also be used but the supporting data used must accompany the estimate submittal. Historical costs must be supported with documentation that denotes general scope, location, date, etc. such that the applicability of such information can be accurately assessed by a third party estimator. Historical cost must also be escalated and adjusted per location accordingly with documented information.

In the unlikely event no cost information is available for a construction task, the estimator's judgment should be employed. However, all judgmental costs should be noted and supported by a sound logical basis, such as comparison to a similar task or product, simple reasoning, proportional relations, weight basis, etc. such that the costs are fully explained for a third party reviewer.

01.9 Estimator's Role

The project estimate and the estimator play an integral role to project development. The

importance of an accurate and well developed estimate cannot be understated. The project estimate provides valuable feedback to the PDT as design choices are encountered and changes are made in response to funding and other project constraints.

In comparison to the typical disciplines such as structural, electrical, and mechanical, the successful cost engineer or estimator often applies a much wider degree of judgment and professional opinion in the generation of an estimate, especially early in the project design.

While design disciplines have defined criteria that defines correct and incorrect design inclusions and calculations, there are no such equivalent for the construction cost estimate. All estimates comprise an opinion of probable project cost and take into account many variables such as bidding climate, strategy, history, local market factors, construction techniques and prime-sub contractor structures to name only a few.

With the multitude of variables that affect project cost in mind, estimates must be prepared in a detailed manner, commensurate with the detail available for the project. Tasks and quantities shall be based on project drawings where available and based on the estimator's judgment and prior experience otherwise. All estimates should be self-evident and formed upon a solid basis in the form of detailed quantity takeoff, construction tasking, and standard estimating procedures.

01.10 Estimator's Background and Qualifications

Estimates must be prepared and reviewed by personnel competent in construction cost estimating. The cost estimator must possess a working knowledge of construction, ability to make professional determinations based on experience, and capability of applying sound judgment on construction methodology. An A-E firm may hire cost consultants for this role if not adequately staffed to prepare the required cost estimate.

01.11 Estimate Accuracy and Cost Control

The estimator is responsible for providing timely and accurate estimates and estimating products during design development in order to provide a successful and executable project within funding limits. Military construction projects may utilize a variety of appropriated funding streams for certain features of work and it is imperative that the estimate structure reflects these funding constraints. The estimator shall provide feedback to the designer if and when funding limits are approached for the related features of work. ***Pursuant to FAR 52.236-22, the A-E firm is responsible for project design within funding limits regardless if estimating services are self-performed or hired.***

01.12 Estimating Tools

Unless otherwise negotiated and approved by POJ-EDS-V, estimates shall be prepared utilizing standard estimating practices within the appropriate software packages listed in Software

Section. Complete estimates shall be formed in the appropriate software package. Estimate components and other estimating products may be calculated in other software packages, such as Excel, and imported into the approved software program, however, imported or manually entered estimate components must be accompanied by the file(s) or documents that comprise their elemental basis. Under no circumstances should proprietary software or algorithms be used in formulation of the estimate in part or whole. The prepared estimate must be fully usable by government estimators in formulation of the IGE. As such, the estimate file(s) must be compatible with approved software packages and allow full manipulation and reproduction by the government.

01.13 Excel and Other Tools

In general, Excel may not be used for estimate generation except for partial or basic estimating products or portions in which the native functions of the approved software packages are not sufficient or in the best interest of the government. Usage of Excel or other software tools, in full or part, for estimating a project shall be pre-approved by POJ-EDS-V. All estimates and estimate portions prepared via other software means shall mirror the elemental construction and mathematics of the approved software packages. Each estimated task shall be composed of labor, labor output, material, and equipment cost basis along with a complete description of the task item. Additionally the source of such cost basis shall be identified for each task, i.e. “RSM 260533135000,” “Judgmental,” “Quote #21315 dated…” such that the cost basis is traceable and fully reproducible.

02 ESTIMATE GENERATION & BEST PRACTICES

02.1 Basis of Estimate (BOE)

With each project estimate, documentation of the Basis of Estimate shall be provided with each submittal. If using MII, this documentation may be embedded in the Notes tab of the project properties for simple or small scope projects. If the BOE is a lengthy document or formatting is unmanageable within the author notes section of MII, the BOE shall be compiled externally as Report Summary document. If the BOE is a separate document it shall accompany the estimate submittal at all stages and an author note in the MII native file shall identify the title, date and other necessary identifying information such that the reviewer is alerted to its existence and can locate this document.

02.1.1 BOE Part I - General Information

The following should be included:

a) Project title
b) Location or Installation
c) P2#
d) Delivery method: Design-Bid-Build (DBB) or Design-Build (DB)
e) Acquisition method: MATOC, Sole-source, etc.
f) Fiscal Year
g) Exchange Rate:
h) Solicitation # (if known)
i) Program Amount (PA) (required)
j) Construction Cost Limit (CCL) (required)
k) Description of project scope and assignment of base bid and option items
l) Significant assumptions and/or risks
m) Period of Performance (PoP) and/or Contract duration
    i. Contract Begin Date.
    ii. Construction Begin Date.
    iii. Duration of Construction.
    iv. Mid-Point of Construction Date.
    v. Completion of Project Date.

n) Direct Cost Markups (as applicable)
   i. Adjustments
   ii. Productivity
   iii. Overtime
   iv. Sales tax
   v. Other
o) Prime Contractor Markups (as applicable)
   i. JOOH – Calculated
   ii. HOOH
   iii. Profit - Profit Weighted Guideline
   iv. Bond
   v. Excise Tax / Gross Receipts Tax
   vi. Other
p) Sub-contractor markup (as applicable)
   i. JOOH
   ii. HOOH
   iii. Profit
q) Other Markups
r) Project or Owners Markups (as applicable)
   i. Construction Contingency
   ii. S&A or SIOH
   iii. DDC
   iv. Other
s) Other pertinent information

02.1.2 BOE Part II – Cost Progression Summary

The Cost Progression Summary items should be printed on separate page from Part I:

t) Cost Progression Summary
u) Construction Cost Change Explanation

02.1.3 Critical BOE Information

Item i. Program Amount or PA above, shall be assessed and listed in the BOE. The term PA is as applicable for military projects, but this line is intended to cover the total amount congress has appropriated for the project, on non-military projects and may be identified by other acronyms. The requirement is that the total funding allocated for the project is identified for direct comparison to project total cost, regardless of title.

Item j. Similar to the PA, CCL or Construction Cost Limit shall assessed and listed in the BOE. The CCL for each funding type shall be listed. This represents the upper limit for construction within each fund type that must not be exceeded as set forth by project management. The CCL is a limit for the estimator to be aware of, not a goal to reach. The estimator shall not increase cost or "back-in" to a CCL. The estimate shall represent the tasks required to build the scope as intended by the designer, regardless of CCL. It is absolutely critical that the estimator is aware of these limits for each funding type and assesses, considers, and communicates to the PDT when a limit is approached, and especially when it's exceeded. CCL shall be clearly identified for all applicable cost accounts, such as K (Repair Work), L (New Work), and M (Equipment) funds, on projects with overlapping renovation and new work. Estimate inclusions for each funding account should be closely coordinated with the appropriate end customer personnel and the Design Manager.

Item t. The purpose is to document how the estimate has evolved since the formulation of the DD1391. At every stage, the information in the spreadsheet shall be updated. If a cost submittal is rejected, or a resubmittal of a design phase is requested, the revised cost estimate shall be included. The summary should be cumulative, not separated as DD1391 vs current submittal.

Item u. As the estimate submittal stages progress, major updates and changes shall be documented. A general summary of cost and updates with detailed explanation should be provided. The explanation should state the reason for the change, the impacted design and cost items, as well as the dollar amount changed. See below for the detail explanation requirement threshold.

Construction Cost Estimate (in $ USD)	Threshold
0 to 5 million	10% net change
5 to 20 million	5% net change
20 to 50 million	2 % net change
50 million and above	1% net change

Note: BOE Part II containing Item t and u should be printed on separate pages from BOE Part I since it contains pricing data.

02.2 Estimating in MCACES 2nd Generation (MII)

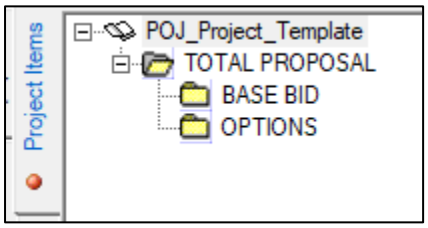
This section specifies the requirement on the preparation of cost estimates when using the TRACES application, MII. These requirements remain applicable for any construction cost

estimate developed using other USACE approved estimating software.

02.2.1 Organization

02.2.1.1 Estimate Structure

The estimate structure shall match the CLIN schedule and shall require no manipulation of totals to populate the CLIN schedule fields. There shall be at least one highest level folder representing the base bid, or two if options are identified. One highest level folder should contain all base bid CLIN items and a second highest level folder for all option CLINs. Each CLIN schedule CLIN should correspond to a single sub-folder containing all tasks and costs associated with that CLIN. Do not create separate files for each option.

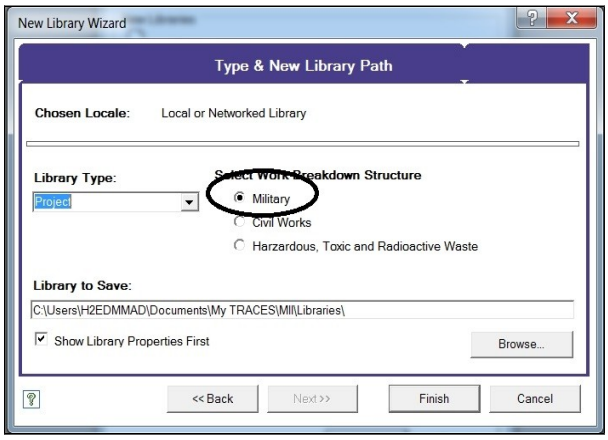


If the estimate contains cost items for project tracking purposes but are unrelated to the construction contract, such as FF&E or real estate, they shall be located in highest level folders (equal to base bid and option folders) such that the estimator can un-assign contractors or omit the folder entirely for completion of the CLIN schedule. If the estimate contains these items, the estimator shall ensure the extra items are not assigned to the same prime contract as the work items of the construction contract. Doing so will distribute JOOH over this other “tracked” work and falsely decrease costs on the primary contract work accordingly.

02.2.1.2 Work Breakdown Structure

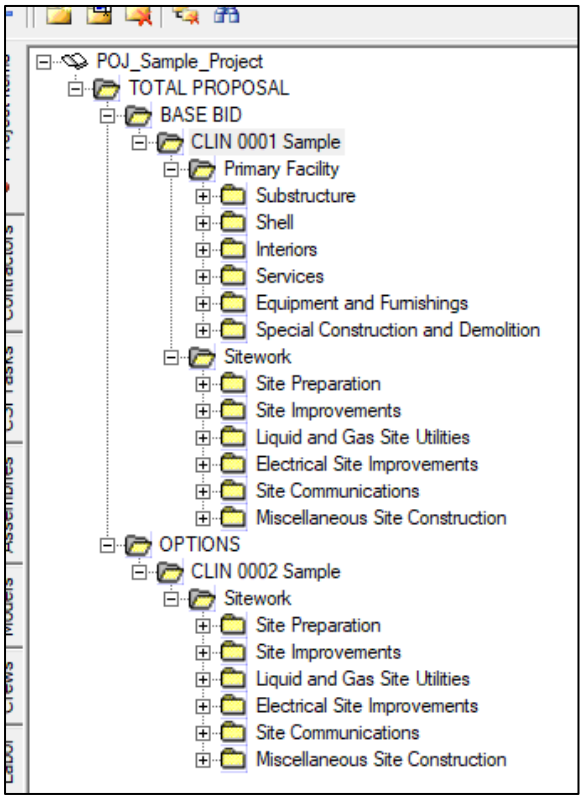
All military construction estimates shall use the approved TRACES work breakdown structure template. This WBS templates are included in MII and are selected by the estimator upon initial setup of the estimate. Also refer to Military Work Breakdown Structure (MWBS) document for guidance or UFC 3-740-05 Chapter 2-7.

While the top level CLIN folder shall match the CLIN schedule listed unit of measure (UOM), the sub-folders following the CLIN folder shall also utilize the appropriate UOM. For complex projects, at least the top two level or parent folder of each work category shall match the content or type of work.



For projects where CLINS involve work across several divisions for multiple CLINS, the estimator shall copy and paste the necessary template folders from the basic template into the folder corresponding to each CLIN as shown below such that each CLIN has a complete WBS.

It is important that the WBS is completed BEFORE estimating the project. It provides an organized road map of the project and allows portions to be neatly severed in the event a project is estimated by a team. Upon substantial completion of the estimate, the estimator shall remove unused folders. It is also good practice to use the repair and compact tool after unused folders have been pruned.



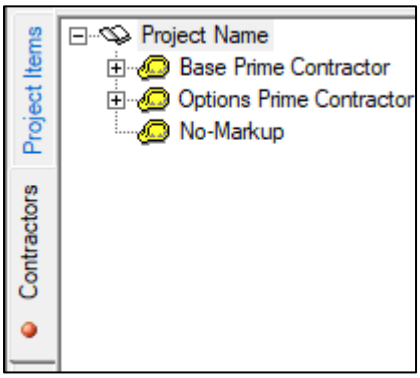
02.2.1.3 Contractor Structure

02.2.1.3.1 Contractor Hierarchy

The contractor tab shall be structured according to anticipated contractor structure. While this is not precisely known prior to award, the estimator shall apply prior experience to order contractors and subs according to general practice. Contractor structure may have more than two levels of subcontractors and this structure is important to capture all appropriate markups.

02.2.1.3.2 Option Contractor Hierarchy

It is common to include options for the project. It is recommended practice to arrange a second contractor structure from the Prime down for application to option items. This allows assignment of options to option subs to appropriately capture secondary markups, while maintaining proper distribution of JOOH items to the base bid project items. Bidders often do not distribute Prime JOOH costs to option.



02.2.2 Exchange Rate

02.2.2.1 Budget Exchange Rate

The foreign currency exchange rates for budget execution are applicable for appropriated fund projects, such as Operations and Maintenance (O&M), Military Construction (MILCON), Family Housing, or Defense Health Appropriation. This budget exchange rate is set and released by the Office of the Secretary of Defense (OSD) annually and revised occasionally based on the global economies. Exchange rate information is reported in the Foreign Currency Fluctuation Report by the OSD Comptroller.

https://comptroller.defense.gov/Financial-Management/Reports/fcfr/

02.2.2.2 Local Exchange Rate

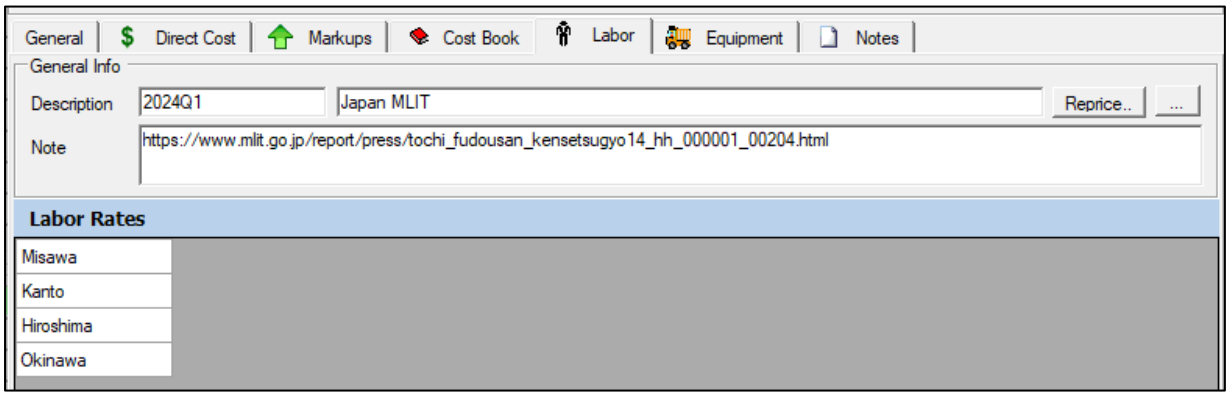
The local exchange rates are applicable for non-appropriated fund projects, such as Revolving Funds; Working Capital Funds; Defense Commissary Agency (DeCA) Surcharge; DeCA Working Capital Funds; Defense Logistics Agency (DLA) Working Capital Funds; Non-Appropriated Funds (NAF); Research, Development, Testing, and Evaluation (RDTE); Other Procurement, Army (OPA) / Procurement Appropriation

02.2.3 Labor

02.2.3.1 Craft Labor

Federal projects are subject to prevailing wage rates in the locality of construction as a minimum, however appropriate wage rates may be higher in certain locales. The corresponding wage rate information can be found at the Japan MLIT website or other widely recognized construction cost databases. Japan's Labor Standards Act sets the minimum working conditions and establishes mandatory employee benefits. The benefits required by the government of Japan are statutory minimums, employers may offer additional benefits above the minimums.

In the MII estimate, the labor source year should be entered in the description field on the left with the labor source description in the field to the right. For example, the Japan MLIT wage rate utilized in the estimate should be noted as follows:



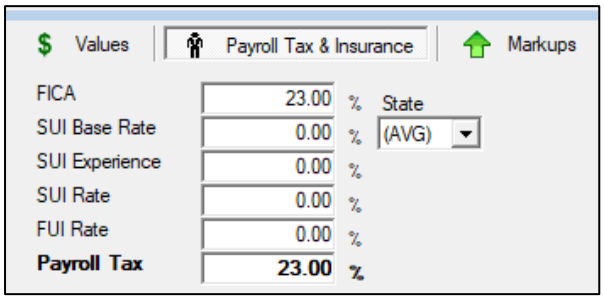
If an estimate or portion of estimate is performed outside of the approved estimating platforms (i.e. Excel), it is essential that each task have fundamental labor and output basis and attached craft labor rate to allow for wage rate changes. It is extremely common for wage rates to change after the project has advertised (and thus A-E or estimator involvement has materially concluded) but before award. Often the government estimator will make these modifications rather than re-engaging the A-E chain, however estimates must be structured to facilitate such a change.

02.2.3.2 Field Personnel and Salaried Professional Wages

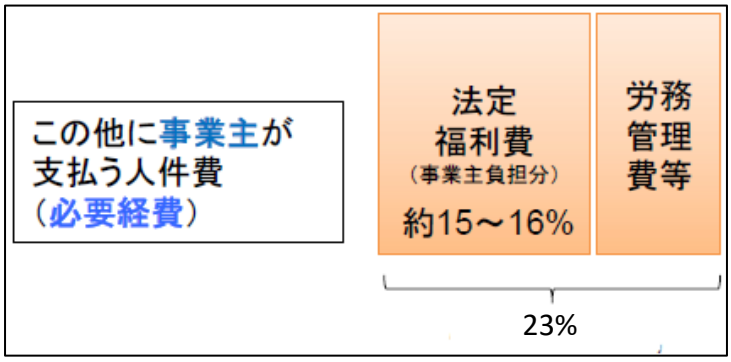
In absence of current contract information such as prior proposals or certified payroll, the preferred method for establishing a salaried professional's wage rate is to base them on information available at Japan MLIT website or other widely recognized construction cost databases. Please note that Unit Price Book (UPB) site supervision and project field personnel items may contain labor as a sub bid entry and do not have complete and proper makeup. This results in many field personnel items not appropriately adding on labor markups such as payroll tax and WCI.

02.2.3.3 Contractor Payroll Tax & Insurance

The MII software contains entries and selection for Contractor Payroll Tax & Insurance, which resembles the United States taxation system. This tax type is not equivalent to personal income tax of the employee or laborer. In Japan, the tax system is different and includes legal welfare expenses paid and labor management costs paid by the employer. To account for the contractor entitled taxation and paid benefit for each laborer in the Japan construction market, the MII set up should be revised. Based on the Japan MLIT publication, the following rates are recommended when determining the contractor's Payroll Tax & Insurance:



The percentage was determined from the Japan MLIT publication diagram and it is subject to change. Cost estimator should utilize the latest value in the most recent publication.



Cost estimator may select the appropriate contractor class for the assigned work. If used, the WCI Rate should be verified and updated for the class selection.

02.2.4 Materials

The estimator may use a wide variety of sources or vendor quotes for material costs associated with construction task. Quotes are to be obtained for significant materials with unit cost greater than USD $10,000 and for specialized or not readily available items. The source information must be included into the project item or CSI task notes field. For "spot" updates, notation should be included in the project item notes. For new CSI task

generation or items that are used in multiple places, the notes or citation should be placed in the CSI task notes field.

02.2.5 Equipment

The estimator may use a wide variety of sources or vendor quotes for equipment costs associated with construction task. Quotes are to be obtained for specialized or not readily available items. The source information must be included into the equipment item notes field.

02.2.6 Markups

02.2.6.1 Direct Cost Markups

02.2.6.1.1 Productivity

The estimator may choose to alter the default productivity of 100% for projects that include adverse conditions that hinder task performance or differing production rates in relation to the project location. A common application of this factor occurs on military construction contracts in high security areas to account for site badging and close supervision or for common overtime productivity losses. For regular losses of productive time, the native factor provided is the preferred method for adjustment, rather than additional estimator created markups. If a productivity is chosen, the reason for such shall be documented by the estimator, preferably via notation in the project properties or BOE.

The productivity factor is DEFINED in the project properties Markups tab, however the estimator must APPLY the markup in the Project Items view either broadly through folder assignment on individual tasks as needed.

02.2.6.1.2 Overtime

Military construction projects may incur varying work schedules including weekend or after hours work. However, it is important to note that Japanese government began work style reforms which targeted to reduce the working day for work-life balance. When overtime is applicable or expected to be needed, the native method for calculating overtime shall be used wherever possible and blanket percentage markups elsewhere are not recommended unless the schedule for the project cannot be represented accurately via the native method.

Note: The estimator should be aware that using the built-in OT calculation only accounts the cost aspect of abnormal working hours. From a scheduling perspective, the total man hours are not adjusted to account for recognized productivity losses due to working longer hours for lengthy periods of time.

The estimator shall also account for standard productivity losses associated with

overtime. If using multiple productivity factors, i.e one for security and one for OT, they shall be aptly named and denoted in the project properties or BOE. See the table below.

Suggested Efficiency Rates from Studies

Days / Wk	Hrs / Day	Efficiency Factor
5	8	100.0%
5	9	95.0%
5	10	92.0%
5	11	88.0%
5	12	86.0%
6	8	96.0%
6	9	87.5%
6	10	82.5%
6	11	78.0%
6	12	75.0%
7	8	92.0%
7	9	83.0%
7	10	78.0%
7	11	75.0%
7	12	72.0%

02.2.6.1.3 Sales Tax or Consumption Tax

The estimator shall determine the applicability of sales tax for each project when materials are to be purchased from the United States. Sales tax exemptions exist for federal projects within the US, however implementation of the exemption by the bidder is subject to estimator's interpretation. In many states, exemptions exist only for direct purchases by the government, which may not be applicable for military construction projects. In some areas a simple, easily obtained exemption certificate may be issued to the contractor by the State DOR and may be transferrable to sub-contractors as well. On military installations, the sales tax exemption means and methods may be well known and commonly implemented. However, in other areas forms and documentation must be filed with each purchase or may not be transferrable to subcontractors making material purchases. Therefore, sales tax application must be assessed by the estimator for each project with final determination and application noted in the project properties notes or BOE. The appropriate state Dept. of Revenue may be contacted for tax rates and other information.

Similarly in Japan, construction projects for military installation are eligible for tax exemption. However, contractors may be required to pay the consumption tax at the

time of purchase and submit request for tax reimbursement. Certain items, such as small tools and parts, may or may not be reimbursable.

The sales tax rate is DEFINED in the project properties Markups tab, however the estimator must APPLY the markup in the Project Items view either broadly through folder assignment or on individual tasks as needed.

02.2.6.2 Contractor Markups

02.2.6.2.1 General

The estimator shall order all default or created markups in the fashion they are typically calculated as follows:

1. JOOH (Job Office or Field Overhead)
2. HOOH (Home Office Overhead)
3. Profit
4. Bond
5. Others

In the case of created markups for subs or other contractors, the relative order shall follow that above and the markup may appear before or after the corresponding Prime markup. Failure to follow this markup order can cause inaccurate calculation of the estimate total. Contractor markups should be set up for the Base Bid and Options separately when the project includes Options. The same set up order should be utilize under Base Bid Contractor as well as under Options Contractor.

All default and created markups shall have an appropriate category assigned, i.e. HOOH = HOOH, Profit = profit, etc. created markups may be categorized as “Allowance” or “Misc” if appropriate. Although mis-categorization does not affect estimate total calculation, column addition in reports may be affected.

02.2.6.2.2 Job or Field Office Overhead & General Conditions (JOOH)

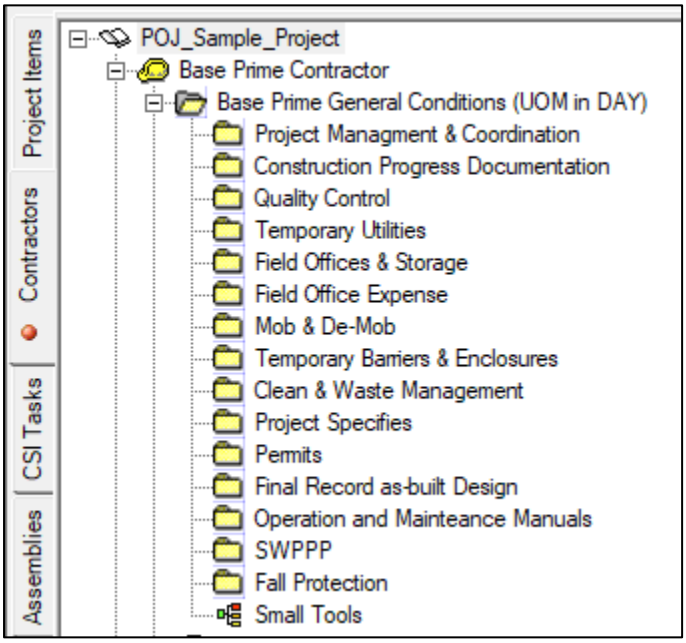
By default, prime contractor field overhead (JOOH) should be calculated and itemized per contract and project requirements, rather than applied as general percentage. JOOH typically includes, but is not limited to, job supervision personnel, temporary project office, temporary storage, temporary utilities, quality control, schedules, etc. The District preferred method is to itemize JOOH requirements per contract and project requirements. Unless contract duration is extended due to exercise of Options, the itemized JOOH should only be included under Base Bid Contractor. If exercise of Options results in extended period of performance, JOOH should be calculated and itemized under Option contractor’s General Conditions.

For sub-contractor JOOH markups, a percentage may be used instead of calculated.

The default method of calculation is “running” and is encouraged. The estimator is free to deviate from this if necessary, but shall provide basis explaining the need for modification.

By default, each prime contractor shall have only one JOOH folder. The use of multiple sub folders shall be avoided wherever possible. Sub folders with a single CSI task are not permitted, this disables list view and makes review difficult. If linking is used, personnel shall be grouped in to one sub folder and other tasks such a field trailers, port-a-johns, storage boxes, etc. shall be grouped in another.

An example of a typical General Conditions (JOOH) breakdown:



02.2.6.2.2.1 JOOH Personnel

Generally the dominant cost for JOOH or field overhead, personnel wage rates shall be made up properly and completely.

02.2.6.2.2.2 Mobilization and De-Mobilization

Lump sums for mob or de-mob shall be avoided. Mob or de-mob shall be itemized per the equipment required to construct the project. For example, if roof top HVAC equipment is involved, a crane item complete with crew and labor makeup is more appropriate than a single lump sum cost. Mob/de-mob itemization shall include the estimator’s best judgment on what equipment will need to be mobilized to complete the project based on estimate details.

If lump sum is utilized, calculation and explanation must be provided to

demonstrate the source and basis of the lump sum value or percentage used. The calculation can be included in the notes section, report summary, or in the support documentation of the estimate report.

02.2.6.2.3 Home Office Overhead (HOOH)

The preferred method of calculation is “running”. The estimator is free to deviate from this if necessary, but shall provide basis explaining the need for modification Typically for construction firms, this markup accounts for corporate office overhead, executive salaries, etc.

02.2.6.2.4 Profit

The estimator is required to use the Profit Weighted Guideline Method of prime profit calculation. This is a widely accepted, methodical approach for determining fair and reasonable profit amounts. The PWG wizard in MII calculates factors based on the guidance criteria and may be used in lieu of manual calculation.

It is the locally accepted practice to assign the government assistance factor to 0.12 (below average) by default since it is highly unlikely the government will assist the contractor with construction. All other factors shall be assigned using data given and the estimator’s judgment.

This method may also be employed for sub-contractor profit calculation, however a basic percentage may be applied. Calculation method should be “Running” by default but may be altered if appropriate notation of basis is given.

02.2.6.2.5 Bond

Use of the bond tables for the prime contractor is encouraged, but a general percentage may also be applied. Generally, the prime contractor’s bond covers that of sub contracted work, thus bond markups for subs are unnecessary.

02.2.6.3 Owner Markups

02.2.6.3.1 Construction Contingency

This owner markup represents the construction contingency cited in cost engineering guidance. It is an allowance for unexpected conditions or circumstances encountered post award of the project during construction. For military construction projects the appropriate contingency amount is determined by the project manager, however 5% and 10% are default values for new construction and renovation work, respectively.

02.2.6.3.2 S&A or SIOH

This markup is the allowance for construction administration of USACE projects. It represents a sum to allow for quality assurance activities of USACE construction personnel such as field inspection, submittal review, etc. Applicable rates are set annually by HQ USACE in the internal Consolidated Command Guidance. Contact CEPOJ-EDS-V@usace.army.mil to obtain the current applicable rates info.

02.2.6.3.3 DDC

This markup is the allowance for engineering and design service during construction of USACE projects. It represents a sum to allow for services and activities of USACE construction personnel such as shop drawing review, approval of changes, etc.

(Source: DPM MP 2020-01)

Contract Size	Benchmark DDC Rate
Up to $5 million	1%
$5 million up to $20 million	(0.50% x CCE*) + $40,000
$20 million up to $50 million	(0.25% x CCE*) + $110,000
$50 million up to $100 million	(0.10% x CCE*) + $190,000
$100 million and greater	Detailed budget required

*CCE -- Current Construction Estimate

02.2.6.4 Other Markups

02.2.6.4.1 Escalation

Escalation shall be included in estimates as appropriate, especially for large projects with a long construction period. Escalation is incurred as general cost increases occur affecting all three of the fundamental bases: labor, material, and equipment. Escalation shall be computed from the date of current estimate through the mid-point of construction. One possible such source for escalation rates is the PAX Newsletter.

Other sources for escalation rates may be utilized, but underlying data and/or basis must be provided such that applicability can be determined.

02.2.6.4.2 Other Contingency

For large or specially designated projects, a design or risk contingency may be included to cover known costs that are not yet well-defined in the project. The contingency should be determined using reliable data and assumption should be documented in the BOE or estimate. If Cost and Schedule Risk Analysis (CSRA) is the method used to establish such contingency, the result from the exercise shall be

included in the estimate. Additionally, the BOE shall denote the filename and date or revision level of the CSRA such that the external analysis file can be located or retrieved for updates, changes, and further revision as the project progresses.

02.2.6.5 User Defined Markups

The estimator may create any markups needed for direct cost adjustments but is reminded to categorize and choose calculation method accordingly. Documentation or explanation for created markups is required. An accurate estimate may employ a variety of user created markups, such as design or contractor premiums. The estimator may create markups as needed, but is reminded to categorize them appropriately so as not to affect reports and to document why the markup was applied.

02.2.6.5.1 Material Adjustment

The estimator shall employ a material cost adjustment to account for material inflation occurring between the publish date of the cost database and the time of estimate generation or local material market effects. Such a markup should be created as a direct cost markup applicable to material costs only and categorized other than “Productivity” or “Overtime.”

The estimator is reminded that once the markup is defined, it must be applied in the project items view broadly via folder assignment or by individual tasks to become effective. The estimator shall consider the effect of such markups in estimates with significant numbers of task level material overrides or other user created costs.

02.2.6.5.2 Labor Adjustment

In general, labor adjustment or inflation markups shall be avoided as appropriate labor costs should be computed via accurate wage rates. However, in certain circumstances, such as localities hosting large municipal projects, labor shortages or other local labor market effects, a labor premium may be appropriate. If needed, labor adjustment shall be defined as a direct cost markup applicable to labor costs and applied to necessary task items.

02.2.6.5.3 Equipment Adjustment

In general equipment adjustment or inflation markups should also be avoided as equipment rates should be appropriately calculated using the correct equipment library. For military construction projects, equipment typically comprises a small portion of project cost, however local market effects may be captured via this method. This markup should also be defined as a direct cost markup applicable to equipment cost only.

02.2.6.5.4 Other User Defined Markups

The estimator may define other markups to adjust task items or overall cost as necessary to account for various market conditions. These may be employed as direct cost or contractor markups as appropriate, however, all user defined markups require explanation of basis in the way of project notes such that applicability can be determined and verified.

02.2.7 User Manipulations

02.2.7.1 Overrides

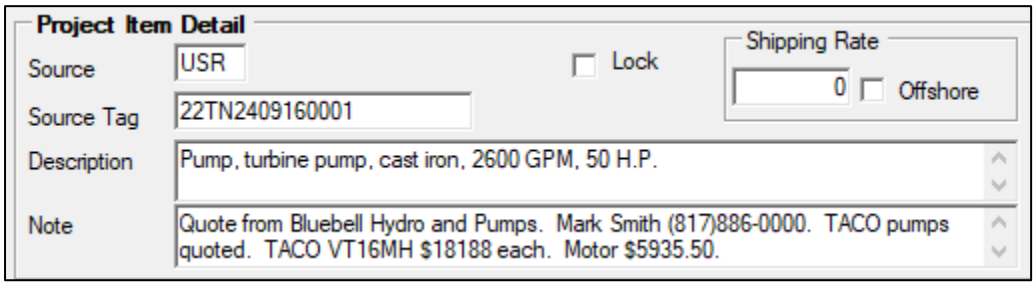
In general, manual overrides of output, labor, material, equipment, or sub-bid should be avoided. Manual overrides of output or sub-bid may be permitted if more accurate and substantial information is known. All overrides must be accompanied by an explanation of basis and specific supporting information. If an override's basis is historical information, that information or data must be included with the estimate such that it is verifiable and its applicability can be assessed. Refer to Appendices on M-II Overrides for common error examples.

Manual overrides should only be made for spot or minor adjustments. Where a task is of high value due to attached L, M or E costs or through its applied quantity, more robust changes of the underlying CSI task or crew makeup should made. If significant modifications are needed, the estimator should consider creating a unique USR cost with the appropriate labor, crew and material component makeups. All USR items shall include a unique source tag. Refer to User Adjustment Section for additional guidance

General, non-specific override notation of "based on prior bids" or "estimator's experience" are not acceptable. Additionally, estimates comprised of significant manual overrides without adequate explanation or substantiation are not acceptable. Significant manual overrides make estimates cumbersome or impossible to update, verify or corroborate. Un-explained overrides do not provide the self-evident basis required in cases of dispute, modification, or negotiation.

The estimator should choose the method and location (project task level or CSI task level) wisely considering the effect of the override given the task item makeup hierarchy. If the override is to be made on a single or few tasks, project level override may be most appropriate and is generally preferred because the accompanying notation is immediately apparent to the reviewer. However if the same task is used in multiple places throughout the estimate, changes at the underlying CSI task level with accompanying notation there may be more appropriate.

Project task level overrides of output or sub bids should be accompanied by explanation in the notes field directly below the task description. An example is illustrated below:



02.2.7.2 Output Overrides

If labor costs must be adjusted on individual or low value tasks, the preferred method is via adjusting task output. This provides capability to update wage rates appropriately. If the task is of high value due to labor component or quantity, more proper adjustments of the crew and labor makeup should be made.

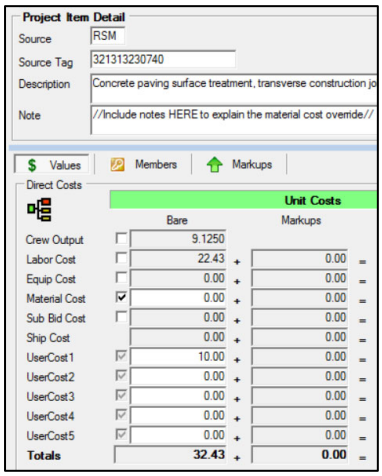
02.2.7.3 Labor Overrides

Manual override of labor cost shall be avoided since the labor cost will not reflect subsequent wage rate changes. Estimator shall update the labor cost of the laborer in the Labor tab. Labor override in the project item view individual item is not prohibited.

User should be cautious that the Crew Output (O), Labor Cost (L), and Equip Cost (E) are tied to each other. Changing the Labor cost to zero will zero out the other two components.

02.2.7.4 Material Overrides

When material overrides are needed to address material price fluctuations, estimator shall utilize UserCost1 input and zero out the cost book material cost. This will avoid excessive mark-ups when project level material mark-up or adjustment is applied. As with other overrides, explanation (cost source, date, POC, etc.) is needed.



02.2.7.5 Equipment and Sub-bid Overrides

As with other overrides, manual override of equipment cost shall be avoided. Estimator shall update the equipment cost of the equipment in the Equipment tab. Sub-bid override in the project item view individual item is not prohibited.

User should be cautious that the Crew Output (O), Labor Cost (L), and Equip Cost (E) are tied to each other. Changing the Equipment cost to zero will zero out the other two components. As with other overrides, explanation (cost source, date, POC, etc) is needed for equipment or sub-bid overrides.

02.2.8 User Adjustments

02.2.8.1 CSI Task Level Adjustments

The estimator shall alter the source tag of all modified CSI tasks. This is typically done via appending to the source tag with the estimators initials, dated, type letter, and estimator assigned number. The format shall be ##NNYYMMDD####,

– Two digital Division Number. The first two digital shall match the Spec division of the work item, ex. 31 for Earthwork, 22 for Plumbing, 33 for Utilities, etc.

NN – Two letters initial, such as company name or estimator's first & last name.

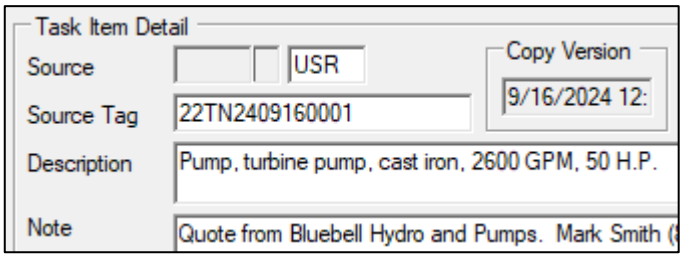
YY – Two digit year, 19 for 2019.

MM – Two digit month, 01 for January.

DD – Two digital day, 02 for second.

– Estimator assigned four digital number. The alteration shall be unique such that the item can be readily identified via sorting and differentiated from similar tasks. Source tags representing more than one task are not permitted.

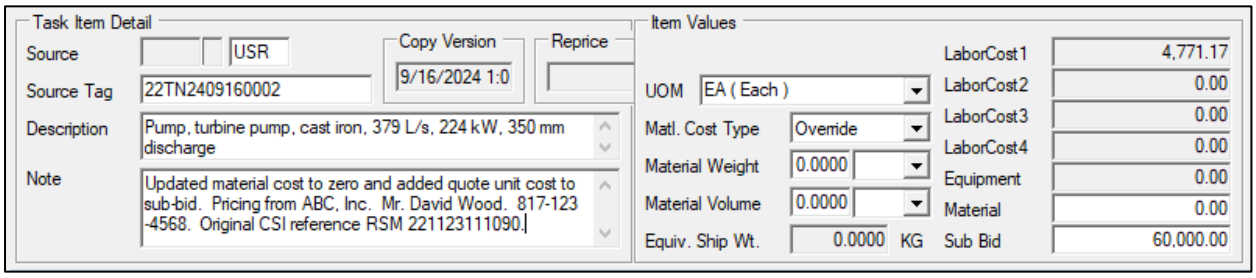
For example:



02.2.8.2 CSI Task Material and Sub-bid Adjustments

The estimator may choose to modify the default attached material or sub-bid cost at the CSI task level. This method is more appropriate and expedient if the CSI task is used in many places throughout the estimate and allows the modification to be made in one place instead of many. As always, notation explaining the nature of the change is required. User should be cautious that the update material cost is subject to material adjustment applied at the project level.

An example is shown below for notation:



02.2.8.3 Output Adjustments

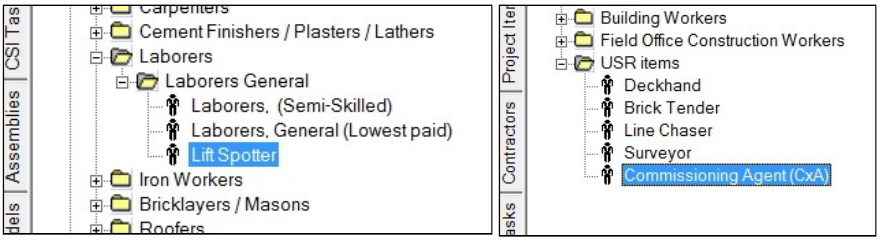
Under no circumstances shall output be modified at the CSI task level. For spot adjustments and minor corrections, this change shall be made at the project level. However, if the value of the task or frequency of use requires modification of the CSI task, the estimator shall make a copy of the CSI task, modify the output as required and provide notes detailing the change as required.

02.2.9 User Creations

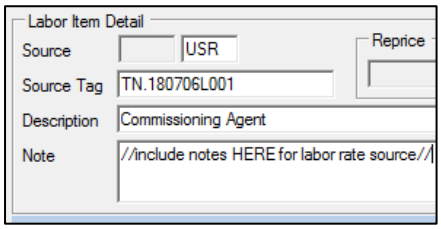
The estimator is often tasked with generating cost data for unique or summarized construction tasks. User created tasks shall be created from elemental basis in a similar fashion to standard task items. Task items begin by defining required labor and equipment and associating them via crew makeup. The created crew is attached to a CSI task where appropriate materials cost and output rate are assigned before use as a project task.

02.2.9.1 Labor Items

Labor items may be created as needed. Sufficient notation and description of the labor item shall be included. If only a few labor items are created they can be arranged in the appropriate folder of similar labor crafts as shown on the left below. If many labor crafts are created, they should be grouped into a user created folder to facilitate review as shown on the right below.



Generally it is preferred that items are created rather than copied and edited. If a labor item is copied and then edited, the estimator shall ensure the source code is edited to USR as shown.



The estimator shall provide explanation of the wage rate and fringe used.

02.2.9.2 Equipment

Creation of equipment items shall follow the general tenets of equivalent labor, crew, and CSI task items. Makeup shall be self-evident, complete and noted as necessary. USR created equipment items shall be similarly located in a USR folder in order to facilitate review.

02.2.9.3 Crew Makeup

Crews may be copied and edited or created by the estimator. The estimator shall take care in assigning crew labor, labor type, and equipment assignment. Similar to assemblies, crew makeup errors can result in significant estimating error. All user created or edited crews shall be located in a USR folder.

02.2.9.3 Material or Sub Bid

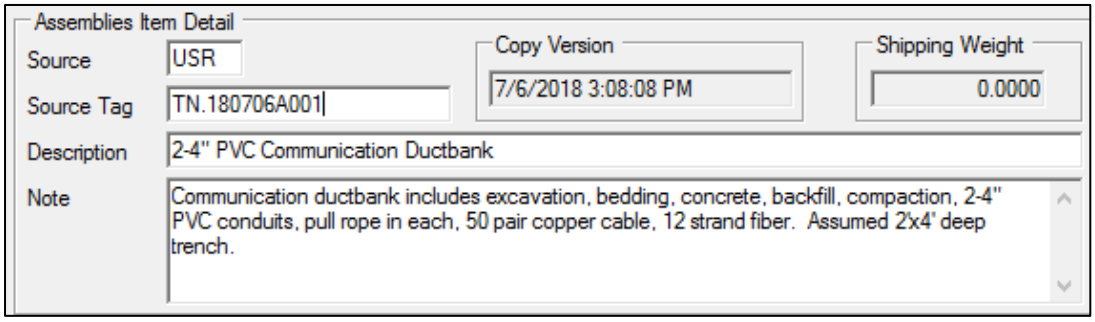
A detailed backup or vendor quotation as pricing support is required for any user input material or sub bid cost of over USD value $10,000.

02.2.9.4 CSI Tasks

CSI tasks may be created or copied and edited as needed, similar to crews. The estimator should take care in assigning material, sub bid, and crew output fields. If the CSI task is user created it shall include a complete description with explanatory notes in the notes field as necessary. If a CSI task is copied and subsequently edited, the estimator shall provide notation explaining edits and must change the description of the item to suit. This is necessary to easily distinguish the edited CSI task from the original and understand intent.

02.2.9.5 Assemblies

Assemblies can expedite estimate development by arranging common or frequently used tasks in a summarized manner. User created assemblies must be noted sufficiently to explain their basis and makeup such that a third party reviewer can understand and verify the assembly's contents and content relations. For assemblies comprised of five items or less, a titular description will usually suffice. Where the assembly contents are more complex or not obvious, the estimator shall provide a more complete description in the notes sections as shown.



The estimator shall take extreme care in creating assembly and defining quantity relationships. Simple math or typographical errors can be heavily multiplied and result in significant estimate error. Assembly items unit of measure should also be in metric.

02.3 PACES

For estimate utilize PACES, the changes made to each iteration shall be documented, submitted along with each estimate review, and notified POJ Cost. Details of the change, such as but not limited to, material updates or assemblies creation, shall be documented and provide reasoning for the change made.

02.4 On Screen Take-off (OST)

02.4.1 Image Page Naming

When importing sheets into OST, page names shall correspond to the sheet names as shown in the drawing title block. For large drawing sets, this can be a time consuming process, but the larger the drawing set, the more necessary the requirement.

02.4.1.1 Condition Units and Naming

Condition units shall match the corresponding expected line item in the estimate wherever possible. For items that require external calculation and manipulations, such as HVAC ductwork, the condition unit may be LF and shown as a line in the OST image. However the external excel sheet for computing SF, weight, and surface area must be submitted with the estimate, just as the native OST file. Similar requirements exist for other externally calculated or manipulated items such as excavations or other work. Naming of fields in calculation sheets or other manipulations shall be obvious and represent a clear line of traceability from the point of origin (OST image, form, or excel sheet) to the qty field in MII.

Conditions shall be named as identified in the sheet image showing it most clearly, particularly for any scheduled item such as HVAC equipment, light fixtures, etc. All conditions representing scheduled items such as HVAC equipment, plumbing fixtures, lighting fixtures, footings, slabs, roofing systems, wall types, etc that are identified with a tag in drawings or project documents shall be use the tag for its name. If no tag is given, a common sense name shall be made that eases traceability from the sheet in which the quantity is recorded to the corresponding line item in the estimate. For example, a steel member should be named “W8x21” such that it corresponds to a line item with similar description in the estimate. If a condition will be represented by an assembly (or linked folder) in the estimate, they shall be named the same. With exception of takeoff sub-totaling (for piping of same size on different floors, for example) or scrap, waste, and overage amounts, the qty for a specific condition in the takeoff tab should have complete calculation traceability and reproducibility through the submitted documents to the estimate file.

Condition grouping and structure shall follow that of the estimate WBS wherever possible.

02.5 Bluebeam or BIM Quantity Take-off

BIM models are encouraged for use as basis of QTO. However, the quality and resolution of the BIM model must be considered. Many components of the estimate may not be modeled, such a small piping or other details. The estimator must be cognizant of the level of detail the BIM model represents and shall not blindly rely on BIM qty's as a complete representation of item takeoff for the estimate. Where BIM models are used, the estimator shall include descriptions of items or systems that are completely modeled and reliable for use, as well as items that are not modeled. A general narrative of what portions of QTO are reliant on BIM and what is not shall be included in the Basis of Estimate. A quantity report generated from the BIM model shall be included in the Estimate report under support documentation if it is the source of the quantities used in the estimate.

03 SUBMITTAL PROCESSES AND REQUIREMENTS

03.1 General

Project specific submittal requirements of the estimate shall be in accordance with the A-E contract scope. The Design Manager can provide specific addresses, number of copies, formats, and distribution lists as needed.

The following sections define general expectations of CEPOJ-EDS-V for submittal contents. Which submittals are required or appropriate is as defined by contract documents or directed by the Design Manager.

03.2 Quantity Take-off

All estimates shall be based on a detailed quantity takeoff of construction tasks unless the project is a Design-Build procurement. If quantity takeoff is documented outside the estimating software package, files shall be maintained in an organized and retrievable manner such that examination or recalculation can be performed if necessary. The final quantity shall be recorded in the quantity field of the appropriate software package. In the event the QTO for an item is materially different from that shown in the project documents, such as a adding a 10% waste factor, the difference of recorded and apparent quantity shall be noted appropriately within the estimate file.

QTO forms and sheets are required for submittal with the estimate if in electronic form, which is preferred. Manual forms, sheets, and notes in hard copy need not be submitted with the estimate submittal. However, they shall be retained, organized and retrievable by the estimator in the event a change needs implemented or review inquiry is made.

External QTO software such as On-screen Takeoff or BIM models may be used for generating or recording QTO's. It provides easy and convenient method for displaying scope of takeoffs and calculating totals. Although use of these methods is not currently required, it is recommended.

When external QTO software or electronic means are used, the associated QTO files become a required part of the estimate submittal.

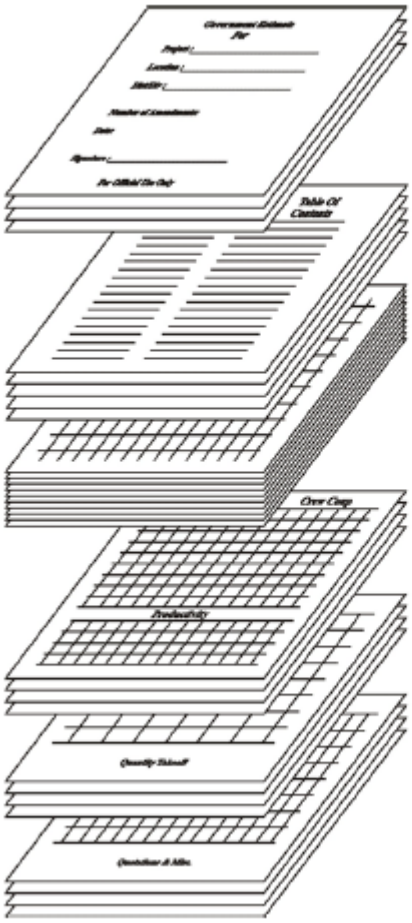
03.3 Estimate Distribution

In general, the estimate report(s) shall be distributed in PDF format by District Cost Estimator only for project personnel in roles other than estimating. All estimates should be reviewed by POJ Cost Estimator prior to releasing the CWE project cost information to any project personnel. All A-E submissions shall be in accordance with submittal requirements defined in the A-E contract. While the submission of PDF format cost estimate is not required, A-E shall still submit the Basis of Estimate (BOE) and Support Document in PDF or MS Word format for review and distribution. BOE shall not contain any project cost information except for PA and CCL amount.

Record copies of the estimate shall be in accordance with contract documents.

The native estimate file(s) shall be distributed to only the Design Manager for forwarding to government estimators.

Estimate Report Package shall be composed of, but not limited to, the following:



A. Gov't Estimate of Contract Cost

- Cover with CUI label
- Title Page
- Signature Page
  (District to prepare PDF)
- CLIN Schedule

B. Cost Estimate Report

- Report Summary (BOE)
- Estimate (A-E to submit M-II only)
- Estimate (District to prepare PDF)
  - Title
  - Table of Contents
  - Library (Project) Notes
  - Summaries
  - Direct Cost Details
- Contractor Markups Summary

C. Support Documentation

- Estimate Support Documents
- Quotations
- Quantity Computations
- Completed District QC Checklist
- Market Survey

03.4 Filename Convention

The estimate files shall be named as appropriate using identifying characteristics of the project. All estimate files shall include the P2#, project title, submittal description (35%, interim, 100%, RTA, etc), and date (YY-MM-DD) in that order. The file name shall not exceed 50 characters with space included. An example filename is as follows:

457861_FtHood_B2006_HVAC_Rpr_95pct_CWE_18-07-06.mlp.

03.5 File Structure

For most submittals, the contents will consist of the native estimate file, report package, and evidence of QC. However, for projects complex enough to require multiple estimate files, the following file structure shall be used to organize the components of the submittal. The estimator is free to expand the file structure further down as needed. However the example below should cover most cases. If a wholly different structure is needed to organize submittal files, present the matter to POJ-EDS-V, prior to submittal. For very large or complex projects, the file organization shall be agreed upon prior to generation of any files:

Cost Engineering Submittal

1. Native Files
   A. Estimate Native File(s) – *.mlp
   B. Estimate Supporting File(s) - *.mll
2. Report Package (PDF)
   A. General – Cover with CUI
   B. Report Summaries
   C. Estimate
   D. Estimate Support Documentation and Backup
   E. Market Survey
3. QC Evidence
   A. Completed POJ District QC Review checklists
   B. Additional QC documentation, if available.

Contents descriptions:

1.A – Native estimate software files only.

1.B – Native Labor and Equipment software files only.

2.A – Cover page with “For Official Use Only” label.

2.B – A report summary of the estimate shall contain Basis of the Estimate, it may include, but not limited to, Project Information, Project Scope and Background, Estimating Methodology, Cost Basis (Mark-ups, Contingency, Assumptions, and Exclusions), Project Cost Risk Analysis, List of Attachments, References.

2.C – Native report files, one for each native estimate file. Utilize District Current Working Estimate (CWE) report template for all interim submittal and utilize District Independent Government Estimate (IGE) report template for Final submittals and revision after project advertisement.

2.D – Any supporting documentation to the Basis of Estimate may include, but not limited to, excavation calculation sheets, ductwork calcs, electrical takeoff, etc. All files

related to QTO and manipulations of QTO belong in this folder. This folder to include OST files. If there are many files, they shall be organized into subfolders via primary estimate divisions (building), or via subsystem such as structural, architectural, mechanical, electrical, etc. All backup to the Basis of Estimate may include, but not limited to, calculation, quantity take-off summary, quotations, phone quote forms, cut sheets denoting costs, catalogue sheets. All such constituent files should be complied into a single PDF file, enabling searching. Scanned files shall have Optical Character Recognition (OCR) conversion performed before compiling. If the file is small (~20 pages or less) it may be appended to the back of the BOE. If the file is large, it shall be separate. It is not necessary to PDF print webpages in this file. The URL link can be referenced in the project or CSI task item in MII.

2.E – Market survey as required by contract documents.

3.A – Completed District QC Review Checklists, one for each native MII file and collector/summary sheet

3.B – Any additional QC Review documentation used, if available.

03.6 Pre-Submittal Process

The following process shall be performed for all MII files just prior to submittal or resubmittal.

a. Affirm QC review has been performed.
b. Affirm evidence of QC process (including POJ checklists) is located in proper folder for submittal.
c. Apply zero QTY filter. Populate QTY field or remove items as appropriate.
d. Ensure there are no zero cost items.
e. Apply no contractor assigned filter. Correct as necessary.
f. Apply unused member cleanup tool.
g. Update wage rates using established labor library for the project.
h. Ensure current labor library is in a proper folder with file submittal.
i. Update Equipment fuel and factors as necessary.
j. Verify markup rates and application at highest folder level.
k. Verify correct information and duration in project properties tab.

03.7 File Transmittal

File transmittal, regardless of method, shall preserve submittal file structure commensurate with complexity.

03.7.1 Safeguarding Cost Estimates

Cost estimate based on less than completed design must be handled in a discretionary manner. Access to cost estimate (both CWE and IGE) will be limited to personnel whose duties require the knowledge of the subject. Architect-Engineer (A-E) contracts must provide a letter of transmittal that includes the following statement: “To the best of my knowledge the confidential nature of this cost estimate has been maintained.” for each cost estimate submitted to the Government. This statement must be signed, dated, and maintained until the official markings have been removed. See UFC 3-740-05 Chapter 2 for additional details. For internal release of CWEs/IGEs within the Government, refer to the internal POD policies memo. (The referenced POD policy memo is not to be released to general public or non-government entities.)

03.7.2 Email

Distribution of estimates via email should be done with caution due to attachment limitations and document control issues. However, files distributed via email can be accepted if they are compressed or file extensions are altered. Estimate files may be compressed (ZIP) to reduce file size. The attachment file size limit is approximately 10Mb. If the file is small enough, it may be sent uncompressed, but the file extension (native files only) must be changed to “.txt” to circumvent email filters for database files. When sending a native file, the email must include information regarding the original native file extension type (.mlp, .mla, .mrp, .mdb, etc.) so it can be reverted correctly when received. All e-mail containing the estimate are considered Controlled Unclassified Information (CUI), the e-mail shall be marked accordingly and be encrypted when sent.

03.7.3 FTP

FTP utilizing SAFE is the preferred method of file transfer. A request may be sent to POJ-EDS-V to set up SAFE files drop-off.

Alternate FTP methods including A-E firm sites, can be used for transmittal of Controlled Unclassified Information (CUI), however FTP sites must be project specific, password protected, and require specific login. Peripheral communication (email, phone call, etc.) between the transmitter and receiver should be made to ensure complete transmittal and receipt of files, particularly if compressed into a single file.

03.7.4 Sensitive or Secure UNCLASSIFIED Projects

File transmittal for sensitive or secure projects shall be in strict accordance with contract requirements and applicable security procedures. Consult with the Design Manager for proper file transmission procedures.

03.8 General Submittal Expectations

03.8.1 Pre-concept and Other Estimate Derivatives

There are generally no requirements for estimates prior to concept definition, however basic estimate products such as SF comparisons, charts, etc. may be needed. If the estimate product will be reviewed by the government or must be manipulated in anyway, the native file used to create such is required.

Preliminary schedule of construction should be included if available.

03.8.2 Concept Submittal (Code B)

At the concept submittal either software package may be used. If the project is a standard facility, PACES is probably is more expedient, however MII may be used as well. Concept level estimates in MII must have summarized costs noted and explained. Assemblies, SF costs, and general allowances must be explained and noted in detail sufficient to verify applicability. The estimator may employ the use of design contingencies at this submittal commensurate with project detail.

No CLIN schedule is required at the concept submittal.

03.8.3 Interim Submittal

MII is the preferred software package for this submittal. At this stage sufficient detail should be available to create a detailed, task oriented estimate utilizing fewer summarized costs than at the concept submittal. The MII estimate may be an import from PACES or original creation. At this stage, the estimator should be migrating from primarily aggregate, summarized costs to detailed task analysis with more significant quantity takeoff. Additionally, design contingencies should be of diminished value from the concept submittal for design-bid-build (DBB) projects.

Inclusion of editable draft CLIN schedule is encouraged with this submittal. The estimate structure shall reflect that of the CLIN schedule.

Detail construction schedule should be included at this stage. The schedule shall reflect compatibility with the cost estimate in the application of crew hours, equipment, material resources, and the project work breakdown structure. The schedule shall list the major work items, respective start-stop times, and duration.

03.8.4 Final Submittal (Code C)

For final DBB project submittals, all estimates should be complete using MII and based on detailed quantity takeoff and task analysis. At this stage, remnants of PACES import or summarized costs should be eliminated, as well as the use of design contingencies.

For final DB projects, all estimates should be complete using MII. If PACES was used from project beginning, it is expected that basic model assumptions have been verified and edited as necessary to reflect project development. When utilizing MII, some aggregate or summarized costs may be appropriate, but should not comprise the primary basis of the estimate. All lump sum, user created, or PACES imported pricing shall include explanation of the source and justification for the use.

An editable and completed CLIN schedule is required for this submittal. The estimate structure shall reflect that of the CLIN schedule.

The estimates shall incorporate comments and changes from the interim review.

03.8.5 Subsequent Submittal

For post-final submittals, such as corrected, certified, RTA, etc, the submittal expectations are the same as for final.

The CLIN schedule shall be finalized, filled, and editable. The estimate structure shall match the CLIN schedule such that the estimator has pulled CLIN schedule values from the corresponding estimate report with no manipulation.

The estimate should require no manipulation by the government other than wage rate updates during the advertisement period and incorporate all comments and changes made to date.

In accordance with the A-E contract documents, the estimator shall provide estimating services for cost impacting amendments. The re-submitted estimate shall incorporates all the changes required due to the amendments. Only one file shall be submitted reflecting the total contract cost with all amendments change; do not submit one estimate file with amount changed per amendment. All cost estimating principles stated within this document shall apply to the development of the cost estimate changes due to amendment.

04 QUALITY CONTROL

The lead estimator and team are responsible for adhering to quality control processes denoted in the applicable QCP. All estimates must be peer reviewed prior to submittal, and the reviewer shall possess applicable estimating experience and familiarity with the software package used. Under no circumstances will the un-reviewed product of a single estimator be accepted by POJ-EDS-V.

In absence of a developed quality control process covering the estimate generation, the appended QC checklist may be used as a minimum. If an internal quality control process exists, the QC checklist must be utilized in addition. Any questions regarding scope of the QC checklist can be directed to the CEPOJ-EDS-V POC.

All documentation of quality control processes and procedures including the pre-submittal process are a required part of each submittal and shall be located accordingly in the file structure.

04.1 General

All estimates received by CEPOJ-EDS-V will be reviewed for quality assurance in accordance with standard estimating process and procedures outlined in this document. The reviewer will provide written comments usually in the designated review in ProjNet, but may be in the form of a word document or email sent to the estimator or A-E firm representative.

The estimator is strongly encouraged to begin dialogue with the reviewer to address and alleviate concerns. As mentioned throughout this document the reviewer will seek to fully understand the estimator's intent and application of items in the estimate. The overwhelming majority of review concerns or comments are typically related to lack of understanding of the estimator's method or basis information by the reviewer.

04.2 Review Process

04.2.1 Step One

The government estimator will confirm the inclusion of QC evidence in the estimate submittal prior to further review of the estimate. The reviewer will confirm peer review was performed and comments or other evidence of comment resolution was included in the submitted estimate.

All projects estimates will be reviewed according to estimator's judgment as necessary, but will basically follow the general direction of the QC Checklist. A version of this checklist is included in the Appendix for reference. This is a living document subject to change and improvement and the most current edition can be obtained via request to the CEPOJ-EDS-V POC. Estimators are encouraged to develop estimates with this checklist in mind for all projects, the use of the QC Checklist by the government reviewer is mandatory.

In addition to the items and limits set forth in the checklist, the reviewer may use additional means or methods of review as applicable. Some of these general methods are described below.

04.2.2 80/20 Rule

Estimates may be reviewed in accordance with the general 80/20 rule observation that 80% of project costs are associated with 20% of tasks. Tasks comprising a high dollar value due to unit costs or large quantity will be scrutinized for accuracy. The complete task list in the estimate may be exported to excel for calculation and analysis of general rules of thumb.

Single line items comprising more than 0.5% of contract cost, will be reviewed and or verified.

04.2.3 Contractor Markups

Contractor markups will be assessed for structure and reasonableness base on prior experience and project particulars. Profit will be assessed in accordance with methods suggested in this document and the reviewer's judgment as necessary. Field office overhead will be reviewed in light of project requirements and methods previously suggested.

04.2.4 Quantity Take-off

Quantity takeoff for high value components will be thoroughly reviewed as reflected in project documents and drawings. Depending on complexity of the estimate, varying degrees of spot checking may be employed by the reviewer.

04.2.5 USR Items and Overrides

All significant USR items and overrides will be reviewed thoroughly. The estimator shall thoroughly explain basis of creation or edit of user created items and overrides for the reviewer. User created assemblies, crews, and CSI tasks will be reviewed for proper makeup and math relations. Application of the procedures recommended in this document will facilitate review.

04.2.6 Wage Rates

Wage rates will be compared with the most current wage decision or other criteria if applicable.

04.2.7 General Proportional Analysis

Labor, material, and equipment proportions will be examined by comparison to prior experience for similar projects. Additionally systems proportions may be examined for typical

military construction project estimates.

04.2.8 Specially Designated Projects

In addition to the aforementioned review processes, large or complex projects designated as “Super”, “Mega”, or “Giga” based on cost will incur additional review process including Agency Technical Review, Cost certification, etc. While these processes will generally be enabled for projects over $40M, they may be utilized for any project based on complexity, political sensitivity or other factors.

04.3 Estimate Submittal Rejection

Submittals will be wholly rejected by CEPOJ-EDS-V for the following reasons:

1. Broad in adherence to this guide & wide scale use of unexplained USR costs, adjustments and overrides.
2. Omission of QC evidence in submittal
3. Prior submittal comments
    a. Un-responded comments
    b. Numerous non-specific comment responses
    c. Unincorporated prior responses
4. Estimate and design level mismatch
5. Omission of pre-submittal process

Rejections for the aforementioned reasons will be reflected in CPARS evaluations.

04.4 Comment Response and Resolution

Comments from prior submittals may not have closure in ProjNet, but dialogue and discussion between the estimator and reviewer must establish some forward path to resolution prior to the current submittal. For example, if a comment is in regard to a quote and the estimator is awaiting response from a vendor for comment closure, this is acceptable as the path toward closure is known and has been established.

It is preferred practice to have the estimator enabling changes to respond to comments with specific details on how the comment will be resolved, and only after that resolution has actually taken place (but not submitted). An example below:

Comment: Please review PWG factors IAW with UFC 3-740-05 Chap 11 section 2-2.

Acceptable response (from estimator):

1. Size factor changed from 0.07 to 0.04, Assistance changed from 0.07 to 0.12. (BEST)

2. These changes have been incorporated and will be evident in next submittal†.

† Some comments are complex and require complex or multiple solutions. In this case, the response is not specific, but may be the most expedient and appropriate response. However, if non-specific responses such as this indicating the correction is “in the next submittal” are widely used and the next submittal does not contain the corrections in multiple cases, the submittal will be rejected.

Unacceptable responses:

1. Will review. (from anyone)
2. Adjusted markups. (from anyone)
3. Will address at next submission. (from Design Manager)

It is understood that design managers or design AE PM’s must have purview of all comments generated and may need to respond to some, however, if responses are handled by anyone not directly involved with estimate manipulation, it is preferred that the response be crafted by the responsible estimator and relayed by the responder.

05 FEEDBACK

05.1 CPARS Evaluation

Government reviewers will provide input to the COR with respect to cost estimate products for overall cost control and quality for CPARS evaluation at the conclusion of AE contracts or annually as needed. Submittal rejections are of particular note for the evaluation process.

05.2 Revisions

Revisions to this document can be requested or suggested in writing via email through the CEPOJ-EDS-V. This document serves as a collection of best practices, SOP's, and lessons learned in order to continually improve the estimating process to better serve POJ's customers directly and ultimately the taxpayer, by providing accurate, timely, and current cost information to design and project management teams.

06 APPENDICES

06.1 USACE Japan Engineer District Quality Control Review Checklist

06.2 USACE Japan Engineer District Sample Report Summary (BOE)

06.3 M-II Report: Sample CWE Report and Template

06.4 M-II Report: Sample IGE Report and Template

06.5 M-II Overrides: Common Error on O, L, E overrides

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US Army Corps of Engineers ®

U.S. ARMY CORPS OF ENGINEERS Japan ENGINEER DISTRICT

Appendices

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06.1 USACE Japan Engineer District Quality Control Review Checklist

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U.S. ARMY CORPS OF ENGINEERS
JAPAN ENGINEER DISTRICT

BUILDING STRONG®

Project Name: ENTER PROJECT NAME HERE
Project Location: ENTER PROJECT LOCATION HERE

Estimator / QC Reviewer Name: ENTER REVIEWER NAME HERE
Review Date: Click here to enter a date.

ID No.	Deliverables	YES	NO	N/A	REMARKS
1-01	Electronic copy of MII files (Project *.mlp and Labor *.mll).	☐	☐	☐	Click here to enter text.
1-02	Electronic copy of Estimate Report package.	☐	☐	☐	Click here to enter text.
1-03	Report includes the following items in this order:				
1-04	Cover page(s) with “Controlled Unclassified Information (CUI)” marking. (AE’s can provide cover page with “Controlled Unclassified Information (CUI)” on letterhead).	☐	☐	☐	Click here to enter text.
1-05	Completed District Front Pages and Signature Page. (District Front Pages and Signature Page for District Cost Engineers Only.) (AE to provide page with Project Info and Cost Estimator Info & signature, can be combined on Cover Page if prefer.)	☐	☐	☐	Click here to enter text.
1-06	Completed CLIN schedule. (Required at Final Stages: 95%, 100%, etc.)	☐	☐	☐	Click here to enter text.
1-07	Basis of Estimate: Estimate descriptive narrative with project information, assumption, etc. (See Appendix for report summary template)	☐	☐	☐	Click here to enter text.
1-08	MII estimate. (District cost estimators to utilize District Report Template for printing.) (MII estimate report in PDF or Word format is not required for A-E submittal.)	☐	☐	☐	Click here to enter text.
1-09	Contractor Markups Report. (printed from MII into PDF format)	☐	☐	☐	Click here to enter text.
1-10	Support documentation. Electronic copy of quotations, quantity take-off sheets, etc.	☐	☐	☐	Click here to enter text.
1-11	Electronic copy of this completed Estimate Quality Review Checklist.	☐	☐	☐	Click here to enter text.
1-12	Electronic copy of Drawings and Specs (PDF).	☐	☐	☐	Click here to enter text.

ID No.	M-II Library (Project) Properties	YES	NO	N/A	REMARKS
2-01	Library Detail				
2-02	Does it include proper title in Title Block?	☐	☐	☐	Click here to enter text.
2-03	Does it include Notes in the Notes Block? *If report summary with mark-up detail and methodologies are included in the deliverables, mark-ups information doesn't need to be provided again here. Detailed scope and assumption should not be included here. Refer to Notes Tab or Report Summary Template.*	☐	☐	☐	Click here to enter text.
2-04	General Tab				
2-05	Design Company Name provided?	☐	☐	☐	Click here to enter text.
2-06	Estimator's Name and Phone Number provided?	☐	☐	☐	Click here to enter text.
2-07	Preparer's Name and Phone Number provided?	☐	☐	☐	Click here to enter text.
2-08	Contract Number provided?	☐	☐	☐	Click here to enter text.
2-09	Design Document used for the estimate and Design phase provided?	☐	☐	☐	Click here to enter text.
2-10	Design Document Date provided?	☐	☐	☐	Click here to enter text.
2-11	District Name provided?	☐	☐	☐	Click here to enter text.
2-12	District Cost Contact's Name and Phone Number provided?	☐	☐	☐	Click here to enter text.
2-13	Estimate Preparation Dates entered or updated in the Timeline?	☐	☐	☐	Click here to enter text.
2-14	Escalation Index Data entered or updated in the Timeline? *(This should match the BOE Escalation date used for Escalation Calculation)*	☐	☐	☐	Click here to enter text.
2-15	Effective Pricing Date entered or updated in the Timeline?	☐	☐	☐	Click here to enter text.
2-16	Estimated total contract duration entered in the Timeline? *For Design-Build projects, Design duration and Construction duration shall be listed separately in the Notes Block.*	☐	☐	☐	Click here to enter text.
2-17	Is Budget Year current and correct?	☐	☐	☐	Click here to enter text.
2-18	Is Currency selection correct?	☐	☐	☐	Click here to enter text.
2-19	Is Exchange Rate correct?	☐	☐	☐	Click here to enter text.
2-20	Notes Tab				
2-21	Are Notes provided to include Scope and Assumption? (If descriptive narrative or additional notes with scope and assumptions are included in the report summary as part of the estimate package, scope and assumptions aren't needed in this note tab.)	☐	☐	☐	Click here to enter text.
2-22	Are Revision Notes provided and Estimator Initial included? (Any revision made from the previously submitted version shall include notes to identify the changes.)	☐	☐	☐	Click here to enter text.
2-23	Labor Tab				
2-24	Is the proper Labor Library (Wage Rates) applied to the estimate? *Verify Location and Labor Wage Year.*	☐	☐	☐	Click here to enter text.

2-25	Does the notes provide source information and/or does it correctly reflect the source?	☐	☐	☐	Click here to enter text.
2-26	Is the Labor Library (Wage Rates) current and updated within the past twelve months?	☐	☐	☐	Click here to enter text.
2-27	Does the Labor Library used (or provided) matches the actual labor rates used?	☐	☐	☐	Click here to enter text.
2-28	Equipment Tab				
2-29	Is the correct and latest Equipment Library used? *Latest USACE Region 08 MLE may be used.*	☐	☐	☐	Click here to enter text.
2-30	Are the correct Equipment Factors used?	☐	☐	☐	Click here to enter text.
2-31	Are Land Fuel rate updated for project location?	☐	☐	☐	Click here to enter text.
2-32	Markups Tab				
2-33	Are the mark-ups group by category and in the correct order?	☐	☐	☐	Click here to enter text.
2-34	Are the categories correct?	☐	☐	☐	Click here to enter text.

ID No.	Labor Wage Rate	YES	NO	N/A	REMARKS
3-01	Project Items View				
3-02	Is the intended Labor Rate selected?	☐	☐	☐	Click here to enter text.
3-03	Labor View				
3-04	Are notes included to indicate the source of the labor wage rate?	☐	☐	☐	Click here to enter text.
3-05	If Labor Cost 2, 3, or 4 is used in the estimate, does the Labor Cost 2, 3, or 4 laborer entries have cost value (hourly rate and taxable fringe)? Check for zero value.	☐	☐	☐	Click here to enter text.
3-06	Are custom labor item under correct folder or apprentice / foreman rate set up?	☐	☐	☐	Click here to enter text.

ID No.	M-II Project Items View	YES	NO	N/A	REMARKS
4-01	Does Estimate Work Breakdown Structure reflect the existing or expected CLIN Schedule Structure?	☐	☐	☐	Click here to enter text.
4-02	Are the CLIN and OPTION folders using JOB as the unit of measure?	☐	☐	☐	Click here to enter text.
4-03	If the CLIN Schedule contains CLINs or OPTIONs units other than JOB, does the unit on the estimate match the CLIN Schedule?	☐	☐	☐	Click here to enter text.
4-04	Does subfolders UOM matches the content or type of work? Utilize TRACES WBS UOM? *(At least the top two level or parent folder of each work category should match using SF, LF, CY, etc.)*	☐	☐	☐	Click here to enter text.
4-05	For Design-Build Projects, has break-out of design cost been included? *Design Cost shall be itemized, except for parametric estimate.* *If Lump Sum Design Cost is used, include justification and computation for arriving at the LS value.*	☐	☐	☐	Click here to enter text.
4-06	For Design-Build Projects, has break-out of non-design cost been included? *Non-Design Cost shall be itemized, except for parametric estimate.* *If Lump Sum Non-Design Cost is used, include justification and computation for arriving at the LS value.*	☐	☐	☐	Click here to enter text.
4-07	Do all USR items have unique Source Tag numbers? *Refer to the District's Cost Estimating Guide for USR item source tag guidance.*	☐	☐	☐	Click here to enter text.
4-08	Do all USR items and/or User Cost input items include pricing source in the item note? *Refer to the District's Cost Estimating Guide for acceptable USR item pricing source note and justification notes.*	☐	☐	☐	Click here to enter text.
4-09	Verify that labor and equipment cost has not been overridden.	☐	☐	☐	Click here to enter text.
4-10	Verify that material cost has not been overridden, except for using zero value.	☐	☐	☐	Click here to enter text.
4-11	Are applicable mark-up applied to the project?				
4-12	Material Adjustment – If needed, is it included properly and with explanation?	☐	☐	☐	Click here to enter text.
4-13	Other Adjustment – If needed, is it included properly and with explanation?	☐	☐	☐	Click here to enter text.
4-14	If Labor adjustment factor is needed, is it properly applied? *Recent payroll, recent project bid, latest wage report shall be used. Data shall not exceed 12 months.*	☐	☐	☐	Click here to enter text.
4-15	Productivity – Is it properly used and adjusted for project location and type?	☐	☐	☐	Click here to enter text.
4-16	Sales Tax – Is it removed for all federal projects? If included, is reasoning provided?	☐	☐	☐	Click here to enter text.
4-17	Design / Risk Contingency				
4-18	Does the design/risk contingency amount reflect the level of design and impact from cost?	☐	☐	☐	Click here to enter text.
4-19	Is proper construction contingency included (except for IGE)?	☐	☐	☐	Click here to enter text.
4-20	Escalation				
4-21	Is the calculation demonstrated with source and justification provided?	☐	☐	☐	Click here to enter text.
4-22	Does the escalation calculate from preparation date to the mid-point of construction?	☐	☐	☐	Click here to enter text.
4-23	Are all work items assigned to the appropriate contractor?	☐	☐	☐	Click here to enter text.

4-24	Have zero quantity items been removed or corrected?	☐	☐	☐	Click here to enter text.
4-25	Have all omitted folders and/or empty folders been removed?	☐	☐	☐	Click here to enter text.
4-26	Are notes and justification included in Notes Tab regarding the use of Design or Risk Contingency?	☐	☐	☐	Click here to enter text.
4-27	If links are used for item quantities, are all items linked properly? (Run M-II link listing)	☐	☐	☐	Click here to enter text.
4-30	Are all project items in the same currency? (USD vs. Yen)	☐	☐	☐	Click here to enter text.

ID No.	Contractors View	YES	NO	N/A	REMARKS
5-01	Prime Contractor				
5-02	Is Prime Contractor included?	☐	☐	☐	Click here to enter text.
5-03	Does the Prime Contractor assignment align with the procurement method? (Verify percentage assigned)	☐	☐	☐	Click here to enter text.
5-04	Is Option Prime Contractor included for proper JOOH Calc Duration?	☐	☐	☐	Click here to enter text.
5-05	If Option Prime is used, is the option contractors' assignment correct?	☐	☐	☐	Click here to enter text.
5-06	Subcontractor				
5-07	Does the Sub-contractor assignment align with the procurement method?	☐	☐	☐	Click here to enter text.
5-08	Are subcontractors with zero percent work assigned removed?	☐	☐	☐	Click here to enter text.
5-09	Is second tier subcontractor included if it is needed for the work type?	☐	☐	☐	Click here to enter text.
5-10	Payroll Tax & Insurance				
5-11	Is "AVG" selected as State?	☐	☐	☐	Click here to enter text.
5-12	Is the proper values updated for Japan region?	☐	☐	☐	Click here to enter text.
5-13	If Contractor Class is selected, are the source of those values explained in BOE?	☐	☐	☐	Click here to enter text.
5-14	Markups				
5-15	JOOH (Calc /Running) / (Small Tools)				
5-16	Itemize JOOH costs in folder under contractor unless it is listed as Bid CLIN.	☐	☐	☐	Click here to enter text.
5-17	HOOH				
5-18	Has Home Office Overhead been included?	☐	☐	☐	Click here to enter text.
5-19	Has Home Office Overhead for prime and sub been checked?	☐	☐	☐	Click here to enter text.
5-20	Profit				
5-21	Has profit for the prime been calculated using Profit Weighted Guidelines? (Check PWG wizard selection and values)	☐	☐	☐	Click here to enter text.
5-22	Has profit for the sub-contractors been checked?	☐	☐	☐	Click here to enter text.
5-23	Bond				
5-24	Has Bond value for Prime been reviewed?	☐	☐	☐	Click here to enter text.
5-25	Has Bond value for sub-contractors been reviewed?	☐	☐	☐	Click here to enter text.
5-26	Other				
5-27	Are other markups included? If so, is proper value used and explained?	☐	☐	☐	Click here to enter text.

ID No.	Technical Review	YES	NO	N/A	REMARKS
6-01	Have the quantity take-offs been checked for top 20% of dollar value items and top 20% of quantity items and spot checked for others?	☐	☐	☐	Click here to enter text.
6-02	Do the technical requirements in the estimate match the requirements in the plans, specifications, and design analysis?	☐	☐	☐	Click here to enter text.
6-03	Has the latest changes in design (65%, 95%, 100%, etc.) been captured in the estimate and such changes are documented in the estimate notes tab or BOE for each revision and update?	☐	☐	☐	Click here to enter text.
6-04	Do the quantity take-off sheets clearly demonstrate the calculation of items and assumptions made?	☐	☐	☐	Click here to enter text.
6-05	Are all options identified in the plans & specifications and are options included in estimate?	☐	☐	☐	Click here to enter text.
6-06	Are detailed assumptions related to quantities included in the project item detail notes under each project item and on the quantity take off sheets?	☐	☐	☐	Click here to enter text.
6-07	Does the general conditions duration match the project schedule? *Verify design-build duration.*	☐	☐	☐	Click here to enter text.
6-08	Has the project delivery type (DB or DBB) and procurement method been identified in the BOE?	☐	☐	☐	Click here to enter text.
6-09	Does the contractor set up matches the project delivery type and procurement method?	☐	☐	☐	Click here to enter text.
6-10	Has a unit cost analysis or comparison been performed?	☐	☐	☐	Click here to enter text.
6-11	Has cost driving material pricing been studied, altered, and updated per local market conditions?	☐	☐	☐	Click here to enter text.
6-12	Has those User Cost Items using the latest quotes and market pricing been place in the correct User Cost entry to avoid redundancy mark-ups?	☐	☐	☐	Click here to enter text.
6-13	Have applied general factors been noted such as loss, waste, shrink, swell, BCY, LCY, etc.?	☐	☐	☐	Click here to enter text.
6-14	Has shipping cost been included or considered for US sourced material?	☐	☐	☐	Click here to enter text.

ID No.	Estimate Report PDF (This section is for District Cost Estimators use only)	YES	NO	N/A	REMARKS
7-01	Is Date of Estimate and Effective Pricing Date current?	☐	☐	☐	Click here to enter text.
7-02	Does the printed PDF report includes the Project Number (W9126G…) and Project Name at the top?	☐	☐	☐	Click here to enter text.
7-03	Does the report include Title Page	☐	☐	☐	Click here to enter text.
7-04	Does the report include Table of Contents Page?	☐	☐	☐	Click here to enter text.
7-05	Does the report include Library (Project) Notes Page?	☐	☐	☐	Click here to enter text.
7-06	Have all the RFIs been reviewed and RFIs concerns been considered?	☐	☐	☐	Click here to enter text.
7-07	Are all the Amendments acknowledge and Estimate is updated per the changes?				
7-08	Does the report include Base Bid and Options Summary Page?	☐	☐	☐	Click here to enter text.
7-09	CLIN XXX, Quantity, UOM, Contract Cost. For CWE, also include: Escalation, SIOH, Construction Contingency, Misc Owners Mark-up, Project Cost.				
7-10	Does the report include Contract Cost Summary pages?	☐	☐	☐	Click here to enter text.
7-11	Quantity, UOM, Cost to Prime, JOOH_PRM, HOOH_PRM, Profit_PRM, Bond_PRM, Contract Cost.				
7-12	Does the report include Direct Costs Detail pages?	☐	☐	☐	Click here to enter text.
7-13	Quantity, UOM, Direct Labor, Direct Equipment, Direct Material, Direct Sub Bid, Sub contractor Markups, Cost to Prime, Contract Cost.				
7-14	Include User Cost or additional columns if needed.	☐	☐	☐	Click here to enter text.
7-15	Are selected level of folders displayed?	☐	☐	☐	Click here to enter text.
7-16	Are selected folder details shown (SysCode, Tags, Totals, Notes, Unit $/ Markup %)?	☐	☐	☐	Click here to enter text.
7-17	Are selected Item Details shown?	☐	☐	☐	Click here to enter text.
7-18	Does the top row on each section front page add up to the total on right column?				
7-19	Does the report include Contractor Markups Report?	☐	☐	☐	Click here to enter text.
7-20	Does the support documentation include, but not limited to, documents required from UFC 3-740-05 Chapter 4 Section 4-4?	☐	☐	☐	Click here to enter text.
7-21	Cost Risk Analysis Summary Sheet				
7-22	Mobilization and Demobilization Work Sheet				
7-23	Quantity Computations				
7-24	Quotations				

06.2 USACE Japan Engineer District Sample Report Summary (BOE)

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ESTIMATE REPORT SUMMARY (BASIS OF ESTIMATE)

PART I – GENERAL INFORMATION

PROJECT INFORMATION

Project Title:	Enter name
Location or Installation:	Enter name
P2 Number:	Enter number
Project Delivery Type:	Design-Bid-Build / Design-Build
Project Design Type:	New Construction / Renovation / ……
Project Phase:	1391 / 30% / 60% / 95% / 100% / RTA Revision # / Post-Award Modification
Acquisition Method:	MATOC / SATOC / Small Business / POCA / ….
Fiscal Year:	Enter year
Exchange Rate:	1 US Dollars = ###.#### Yen
Program Amount:	Enter amount
Construction Cost Limit:	Enter amount
Estimate Methodology:	AACE Class # / ……
Cost Estimator:	Enter name
Estimating Team Lead:	Enter name
QAQC Reviewer:	Enter name
Date of Report	Enter Date
Estimate Software:	Enter Version and Build
Special Requirement:	LEED Silver / ….

PROJECT SCOPE & BACKGROUND

[Provide project background and scope. Reference project drawings / design narrative / communications / etc.]

ESTIMATING METHODOLOGY

[Provide applicable information]

COST BASIS

Material Costs:	Enter relevant notes.
Labor Costs:	Enter relevant notes.
Productivity:	Enter rate used and justification.
Equipment Costs:	Enter relevant notes.
Escalation:	
	Estimate Date: Enter Date
	Construction Contract Award Date: Enter Date
	Construction Begin Date: Enter Date
	Estimated Construction Duration (Calendar Days): Enter Date
	Estimated Construction Mid-point Date: Enter Date
	Estimated Construction Completion Date: Enter Date
	Escalation = Enter source information.
Contractor Costs:	
Prime	Provide notes for the number of Prime and related overhead cost used in this estimate.
	Job Office Overhead (JOOH) = Enter source information.
	Home Office Overhead (HOOH) = Enter source information.
	Profit = Enter source information.
	Bonds and Insurance = Enter source information.
Subcontractor	Provide notes for the number of Sub-contractor and related overhead cost used in this estimate.
	Job Office Overhead (JOOH) = Enter source information.
	Home Office Overhead (HOOH) = Enter source information.
	Profit (Profit) = Enter source information.
Design or Risk Contingency:	Enter percentage used, provide notes for justification.
Assumptions:	Enter notes for major assumptions used in this estimate. Specific assumption for line item including pricing source, quote date, source contact information shall be provided in the individual line item.
Exclusions:	Enter notes for items excluded in this estimate.

PROJECT COST RISK ANALYSIS

[Provide applicable information. Risks could include bidding climate, labor shortage, contract type.]

ATTACHMENTS

[Provide applicable information]

REFERENCES

[Provide applicable information]

[Any quote and pricing information from outside of MCACES shall be documented here with company name, contact name and contact phone number, if such information is not already provided in the line item notes.]

ESTIMATE REPORT SUMMARY (BASIS OF ESTIMATE)

PART II – GENERAL INFORMATION

COST PROGRESSION SUMMARY

COST	DD1391	Charette	Concept CWE (Base Bid)	Intermediate (Base Bid)	Final (Base Bid)	Backcheck/RTA (Base Bid)
PRIMARY FACILITIES						
Feature 1 as given in DD1391						
Feature 2 as given in DD1391						
…						
SUPPORTING FACILITIES						
Feature 1 as given in DD1391						
…						
TOTAL CONTRACT COST						
OWNER'S CONSTRUCTIONCONTINGENCY (5% or 10%)						
SUPERVISION, INSPECTION AND OVERHEAD (SIOH)						
DESIGN DURING CONSTRUCTION (DDC)						
TOTAL PROJECT COST						
Percent of Program Amount (PA)						
Difference between Estimated and PA						
BID OPTIONS						
Option #1						
…						
TOTAL BASE & OPTIONS						
Percent of PA						
Difference between Estimate and PA						

[Provide applicable data in the summary. Provide a summary in USD and a separate summary in Yen.]

CONSTRUCTION COST CHANGE EXPLANATION

[Provide applicable information]

06.3 M-II Report:

Sample CWE Report

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Estimated by	CDE Estimator
Designed by	ABC Designer
Prepared by	CDE Estimator
Preparation Date	9/23/2024
Effective Date of Pricing	9/23/2024
Estimated Construction Time	365 Days

Date	Author	Note
9/23/2024 2:02:11 PM	CREATE NEW NOTE	*[Utilize this note section or fill out the BOE Report Summary]* **PROJECT INFORMATION** **Project Title**: Enter name. **Location or Installation**: Enter name. **P2 Number**: Enter number. **Project Delivery Type**: Design-Bid-Build / Design-Build **Project Design Type**: New Construction / Renovation / …… **Project Phase**: 1391 / 30% / 60% / 95% / 100% / RTA Revision # / Post-Award Modification **Acquisition Method**: MATOC / SATOC / Small Business / POCA / …. **Program Amount (PA)**: Enter amount. **Construction Cost Limit (CCL)**: Enter amount. **Duration:** Total Contract Duration = ### Calendar Days Design Duration = ### Calendar Days Construction Duration = ### Calendar Days. **Escalation:** *Construction Contract Award Date*: YYYY/MM/DD *Construction Begin Date*: YYYY/MM/DD *Estimated Construction Mid-point Date*: YYYY/MM/DD *Escalation* = Enter source information.
9/23/2024 2:02:52 PM	COPY & PASTE	**PROJECT SCOPE & BACKGROUND** Enter scope information here. **GENERAL NOTES & ASSUMPTION** Enter notes here.
9/23/2024 2:03:32 PM	CONTENT W/NAME	**AMENDMENTS** AMD ## - Date DD-MMM-YYYY - Notes.

Date	Author	Note
9/24/2024 11:47:21 AM	Profit_PWG	**Degree of Risk:** 0.12 **Relative Difficulty of Work:** 0.12 **Size of Job:** 0.12 **Period of Performance:** 0.12 **Contractor's Investment:** 0.12 **Assistance by Government:** 0.12 **Subcontracting:** 0.12

Description	Quantity	UOM	ContractCost	Contingency	SIOH	MiscOwner	ProjectCost
Level 1: PROJECT COSTS SUMMARY			**2,400**	**0**	**0**	**0**	**2,400**
			2,400				*2,400*
1 TOTAL PROPOSAL	**1.00**	**JOB**	**2,400**	**0**	**0**	**0**	**2,400**
			900				*900*
1.1 BASE BID	**1.00**	**JOB**	**900**	**0**	**0**	**0**	**900**
			900				*900*
1.1.1 CLIN 0001	**1.00**	**JOB**	**900**	**0**	**0**	**0**	**900**
			1,500				*1,500*
1.2 OPTIONS	**1.00**	**JOB**	**1,500**	**0**	**0**	**0**	**1,500**
			1,500				*1,500*
1.2.1 CLIN 0002 Option 1	**1.00**	**JOB**	**1,500**	**0**	**0**	**0**	**1,500**

Description	Quantity	UOM	CostToPrime	JOOH_PRM	HOOH_PRM	Profit_PRM	Bond_PRM	ContractCost
Level 2: CONTRACT COSTS SUMMARY			**0**	**0**	**0**	**0**	**0**	**2,400**
			0					*2,400*
1 TOTAL PROPOSAL	**1.00**	**JOB**	**0**	**0**	**0**	**0**	**0**	**2,400**
			0					*900*
1.1 BASE BID	**1.00**	**JOB**	**0**	**0**	**0**	**0**	**0**	**900**
			0					*900*
1.1.1 CLIN 0001	**1.00**	**JOB**	**0**	**0**	**0**	**0**	**0**	**900**
			0					*1,500*
1.2 OPTIONS	**1.00**	**JOB**	**0**	**0**	**0**	**0**	**0**	**1,500**
			0					*1,500*
1.2.1 CLIN 0002 Option 1	**1.00**	**JOB**	**0**	**0**	**0**	**0**	**0**	**1,500**

Description	Quantity	UOM	DirectLabor	DirectEQ	DirectMatl	DirectSubBid	DirectUserCost	SubCMU	CostToPrime
Level 3: DIRECT COSTS DETAIL			**0**	**0**	**0**	**0**	**2,400**	**0**	**0**
			0	*0*	*0*	*0*			*0*
1 TOTAL PROPOSAL	**1.00**	**JOB**	**0**	**0**	**0**	**0**	**2,400**	**0**	**0**
			0	*0*	*0*	*0*			*0*
1.1 BASE BID	**1.00**	**JOB**	**0**	**0**	**0**	**0**	**900**	**0**	**0**
			0	*0*	*0*	*0*			*0*
1.1.1 CLIN 0001	**1.00**	**JOB**	**0**	**0**	**0**	**0**	**900**	**0**	**0**
			0	*0*	*0*	*0*			*0*
1.1.1.1 USR ##TN2409160001 New Project Item (Note: Pricing Source from XYZ, Inc. Mr. David Wong, 817-123-4569.)	1.00	EA	0	0	0	0	900	0	0
			0	*0*	*0*	*0*			*0*
1.2 OPTIONS	**1.00**	**JOB**	**0**	**0**	**0**	**0**	**1,500**	**0**	**0**
			0	*0*	*0*	*0*			*0*
1.2.1 CLIN 0002 Option 1	**1.00**	**JOB**	**0**	**0**	**0**	**0**	**1,500**	**0**	**0**
			0	*0*	*0*	*0*			*0*
1.2.1.1 USR ##TN2409160002 New Project Item (Note: Pricing Source from XYZ, Inc. Mr. David Wong, 817-123-4569.)	1.00	EA	0	0	0	0	1,500	0	0

	Description	Quantity	UOM
Level 4: GENERAL CONDITIONS DETAIL			
1.2 Base Prime General Conditions (UOM in DAY)		**1.00**	**DAY**
(Note: Enter Base Bid Duration.)			
1.2.1 USR ST Small Tools		1.00	EA

Contractor Markups Report

[] POJ_Sample_Project

Base Prime

Markup		Own Work		Sub Work
JOOH_Calc (Small Tools) [Small Tools]		2.00%		0.00%
JOOH_Calc [JOOH]		0.00%		0.00%
HOOH_Running% [Running %]		8.00%		8.00%
Profit_PWG [Profit]		12.00%		12.00%
	Desc	**Value**	**Weight**	**Percentage**
	Risk	0.12	20	2.40%
	Difficulty	0.12	15	1.80%
	Size	0.12	15	1.80%
	Period	0.12	15	1.80%
	Invest (Contractor's)	0.12	5	0.60%
	Assist (Assistance by)	0.12	5	0.60%
	SubContracting	0.12	25	3.00%
		Total	100	12.00%
Bond_Running% [Running %]		2.00%		2.00%

Base Sub

Markup	Own Work	Sub Work
JOOH_Running% [Running %]	2.00%	0.00%
HOOH_Running% [Running %]	10.00%	0.00%
Profit_Running% [Running %]	8.00%	0.00%

No Markup

Markup	Own Work	Sub Work

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06.4 M-II Report:

Sample IGE Report

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Estimated by	CDE Estimator
Designed by	ABC Designer
Prepared by	CDE Estimator
Preparation Date	9/23/2024
Effective Date of Pricing	9/23/2024
Estimated Construction Time	365 Days

Date	Author	Note
9/23/2024 2:02:11 PM	CREATE NEW NOTE	*[Utilize this note section or fill out the BOE Report Summary]* **PROJECT INFORMATION** **Project Title**: Enter name. **Location or Installation**: Enter name. **P2 Number**: Enter number. **Project Delivery Type**: Design-Bid-Build / Design-Build **Project Design Type**: New Construction / Renovation / …… **Project Phase**: 1391 / 30% / 60% / 95% / 100% / RTA Revision # / Post-Award Modification **Acquisition Method**: MATOC / SATOC / Small Business / POCA / …. **Program Amount (PA)**: Enter amount. **Construction Cost Limit (CCL)**: Enter amount. **Duration:** Total Contract Duration = ### Calendar Days Design Duration = ### Calendar Days Construction Duration = ### Calendar Days. **Escalation:** *Construction Contract Award Date*: YYYY/MM/DD *Construction Begin Date*: YYYY/MM/DD *Estimated Construction Mid-point Date*: YYYY/MM/DD *Escalation* = Enter source information.
9/23/2024 2:02:52 PM	COPY & PASTE	**PROJECT SCOPE & BACKGROUND** Enter scope information here. **GENERAL NOTES & ASSUMPTION** Enter notes here.
9/23/2024 2:03:32 PM	CONTENT W/NAME	**AMENDMENTS** AMD ## - Date DD-MMM-YYYY - Notes.

Date	Author	Note
9/24/2024 11:47:21 AM	Profit_PWG	**Degree of Risk:** 0.12 **Relative Difficulty of Work:** 0.12 **Size of Job:** 0.12 **Period of Performance:** 0.12 **Contractor's Investment:** 0.12 **Assistance by Government:** 0.12 **Subcontracting:** 0.12

	Description	Quantity	UOM	ContractCost
Level 2: CONTRACT COSTS SUMMARY				**2,400**
1 TOTAL PROPOSAL		**1.00**	**JOB**	*2,400* **2,400**
1.1 BASE BID		**1.00**	**JOB**	*900* **900**
1.1.1 CLIN 0001		**1.00**	**JOB**	*900* **900**
1.2 OPTIONS		**1.00**	**JOB**	*1,500* **1,500**
1.2.1 CLIN 0002 Option 1		**1.00**	**JOB**	*1,500* **1,500**

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06.5 M-II Overrides:

Common Error on O, L, E overrides

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This example uses RSM 098413100200.

Cost Book: 2016 Labor: National Labor Library – Seattle 2016 Equipment: 2016 Region 08

	Original		Override Labor Cost		Labor Wage Change		
		UOM= 12.50 SF		UOM=12.50 SF		UOM=12.50 SF	
	Bare	**Direct**	**Bare**	**Direct**	**Bare**	**Direct**	
Crew Output	12.50		6.2523		7.3681		
Labor Cost	4.32	54.02	8.64	108.00	8.64	108.00	<--It hasn't changed
Equip Cost	0.00	0.00	0.00	0.00	0.00	0.00	
Material Cost	8.90	111.25	8.90	111.25	8.90	111.25	
Total	13.22	165.27	17.54	219.25	17.54	219.25	<-- Total Direct Cost remains unchange
Carpenter w/Fringes	54.02		54.02		63.66		
Carpenter Base	40.36		40.36		50.00		

	Original		Override Output		Labor Wage Change		
		UOM= 12.50 SF		UOM=12.50 SF		UOM=12.50 SF	
	Bare	**Direct**	**Bare**	**Direct**	**Bare**	**Direct**	
Crew Output	12.50		6.2523		6.2523		
Labor Cost	4.32	54.02	8.64	108.00	10.18	127.27	
Equip Cost	0.00	0.00	0.00	0.00	0.00	0.00	
Material Cost	8.90	111.25	8.90	111.25	8.90	111.25	
Total	13.22	165.27	17.54	219.25	19.08	238.52	<-- As expected, increase labor wage increase total cost
Carpenter w/Fringes	54.02		54.02		63.66		
Carpenter Base	40.36		40.36		50.00		

M-II screen shots are on the following pages for illustration.

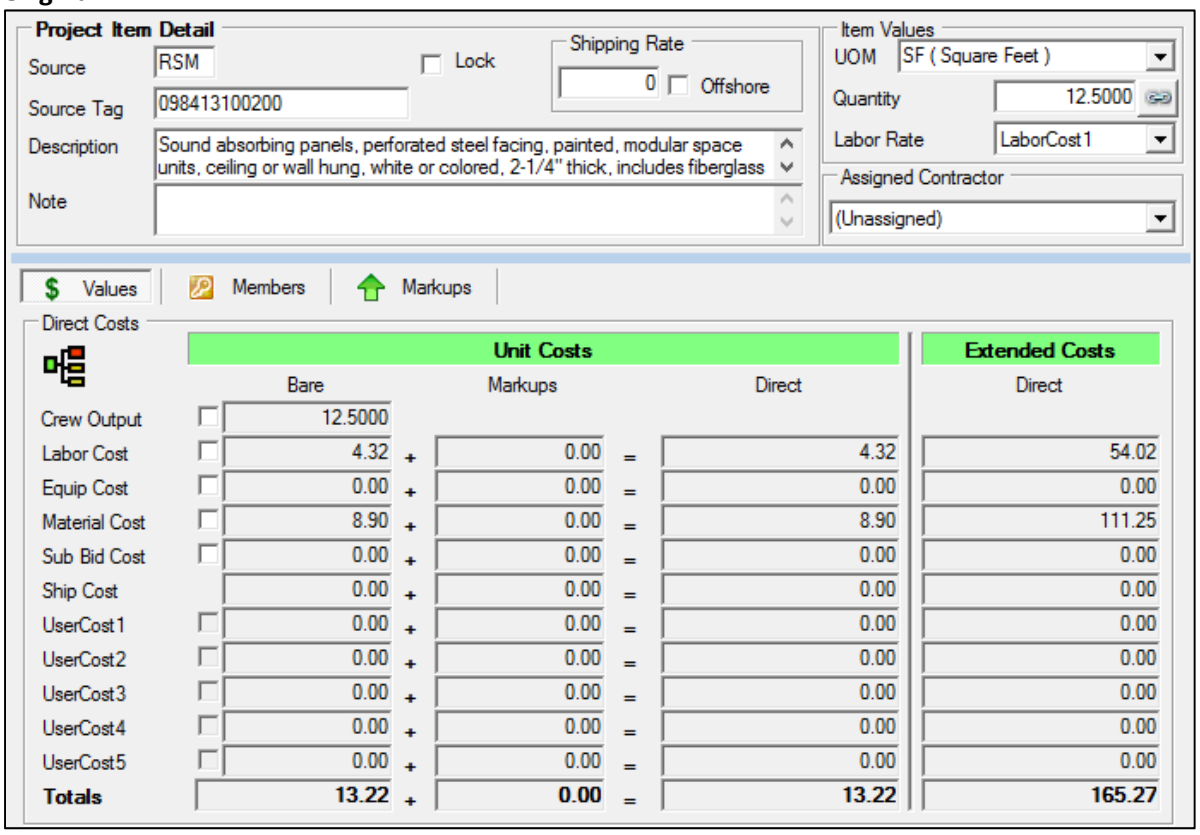
This justify the comment on avoid using overrides on Labor and Equipment.

When using overrides on Output and Material, include notes and assumption. See Page 5 of this PDF.

This example uses RSM 098413100200.

Cost Book: 2016 Labor: National Labor Library – Seattle 2016 Equipment: 2016 Region 08

Original:



Project Item Detail

Source: RSM | Lock | Shipping Rate: 0 Offshore

Source Tag: 098413100200

Description: Sound absorbing panels, perforated steel facing, painted, modular space units, ceiling or wall hung, white or colored, 2-1/4" thick, includes fiberglass

Note:

Item Values: UOM: SF (Square Feet) | Quantity: 12.5000 | Labor Rate: LaborCost1

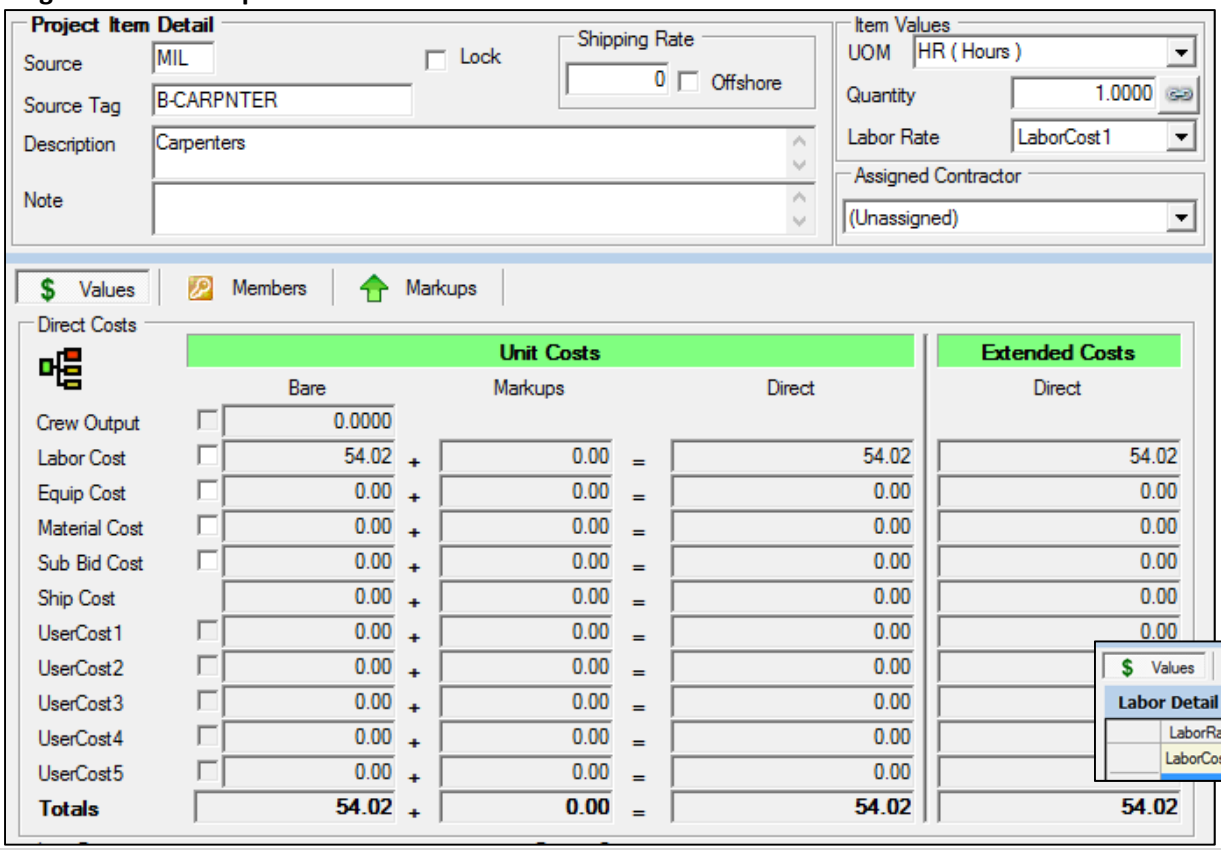
Assigned Contractor: (Unassigned)

Values | Members | Markups

Direct Costs

	Unit Costs: Bare		Unit Costs: Markups		Unit Costs: Direct	Extended Costs: Direct
Crew Output	12.5000					
Labor Cost	4.32	+	0.00	=	4.32	54.02
Equip Cost	0.00	+	0.00	=	0.00	0.00
Material Cost	8.90	+	0.00	=	8.90	111.25
Sub Bid Cost	0.00	+	0.00	=	0.00	0.00
Ship Cost	0.00	+	0.00	=	0.00	0.00
UserCost1	0.00	+	0.00	=	0.00	0.00
UserCost2	0.00	+	0.00	=	0.00	0.00
UserCost3	0.00	+	0.00	=	0.00	0.00
UserCost4	0.00	+	0.00	=	0.00	0.00
UserCost5	0.00	+	0.00	=	0.00	0.00
Totals	**13.22**	+	**0.00**	=	**13.22**	**165.27**

Original Labor – Carpenter:



Project Item Detail

Source: MIL | Lock | Shipping Rate: 0 Offshore

Source Tag: B-CARPNTER

Description: Carpenters

Note:

Item Values: UOM: HR (Hours) | Quantity: 1.0000 | Labor Rate: LaborCost1

Assigned Contractor: (Unassigned)

Values | Members | Markups

Direct Costs

	Unit Costs: Bare		Unit Costs: Markups		Unit Costs: Direct	Extended Costs: Direct
Crew Output	0.0000					
Labor Cost	54.02	+	0.00	=	54.02	54.02
Equip Cost	0.00	+	0.00	=	0.00	0.00
Material Cost	0.00	+	0.00	=	0.00	0.00
Sub Bid Cost	0.00	+	0.00	=	0.00	0.00
Ship Cost	0.00	+	0.00	=	0.00	0.00
UserCost1	0.00	+	0.00	=	0.00	0.00
UserCost2	0.00	+	0.00	=	0.00	
UserCost3	0.00	+	0.00	=	0.00	
UserCost4	0.00	+	0.00	=	0.00	
UserCost5	0.00	+	0.00	=	0.00	
Totals	**54.02**	+	**0.00**	=	**54.02**	**54.02**

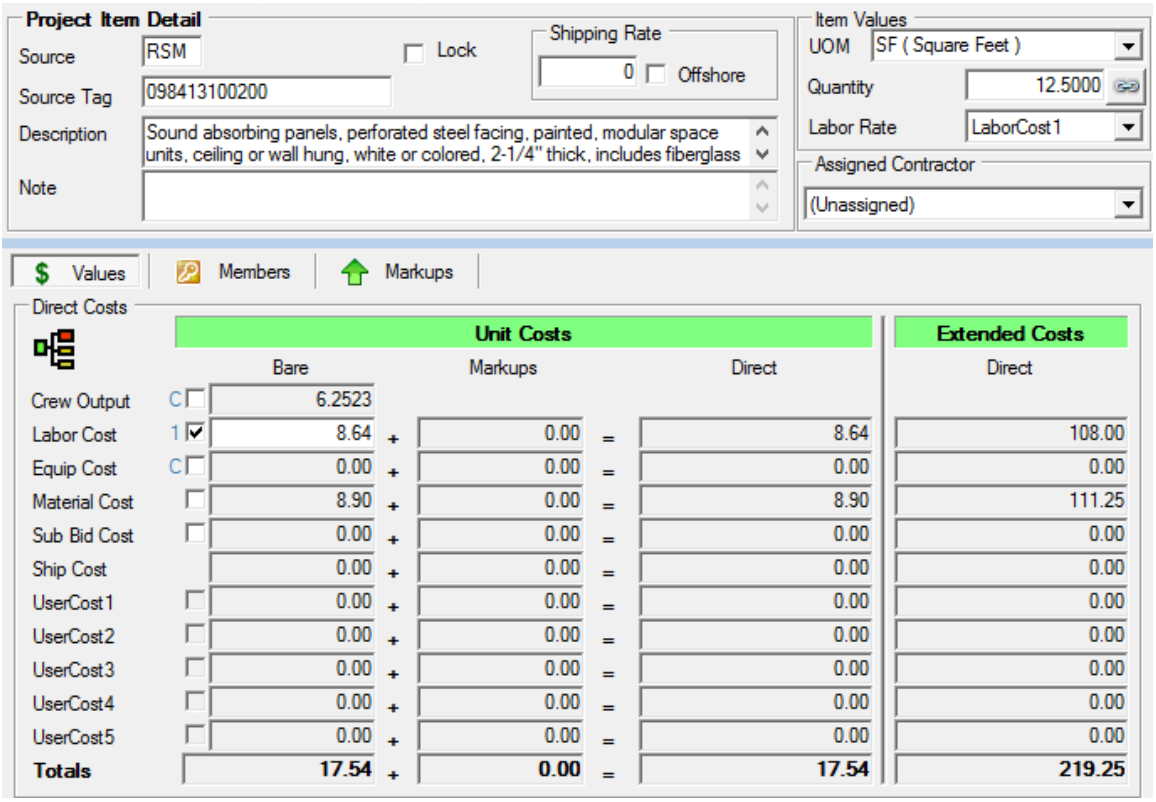
Values | Usage

Labor Detail <Change Columns>

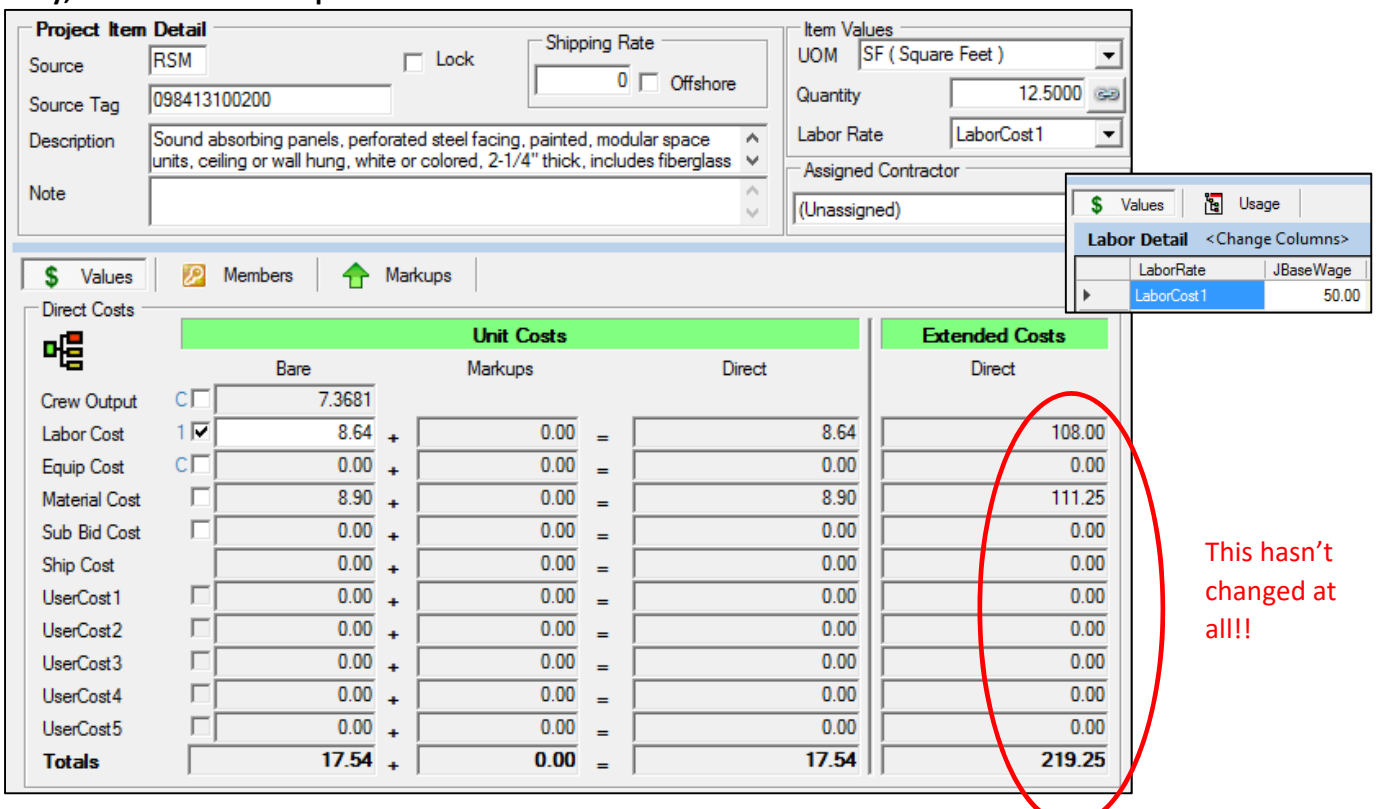
LaborRate	JBaseWage
LaborCost1	40.36

This example uses RSM 098413100200.
Cost Book: 2016 Labor: National Labor Library – Seattle 2016 Equipment: 2016 Region 08

Override Labor Cost (Box Checked):



Okay, Now Labor rate is updated from 40.36 to 50.00



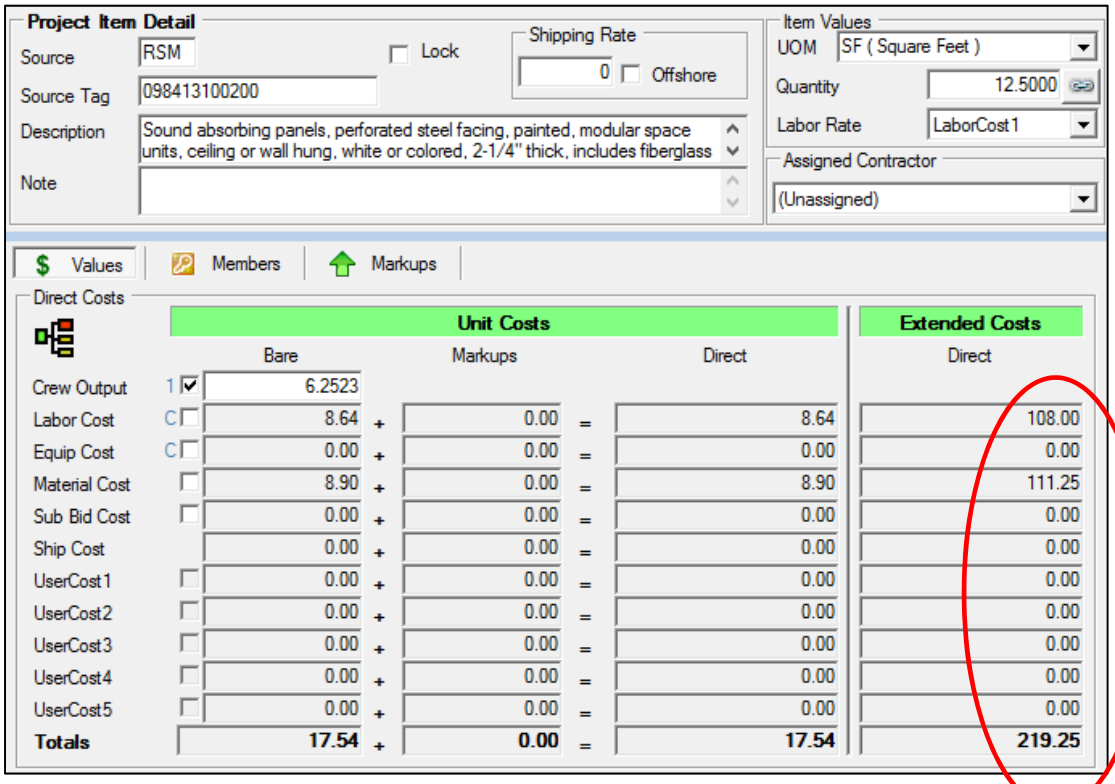
This hasn't changed at all!!

This example uses RSM 098413100200.

Cost Book: 2016 Labor: National Labor Library – Seattle 2016 Equipment: 2016 Region 08

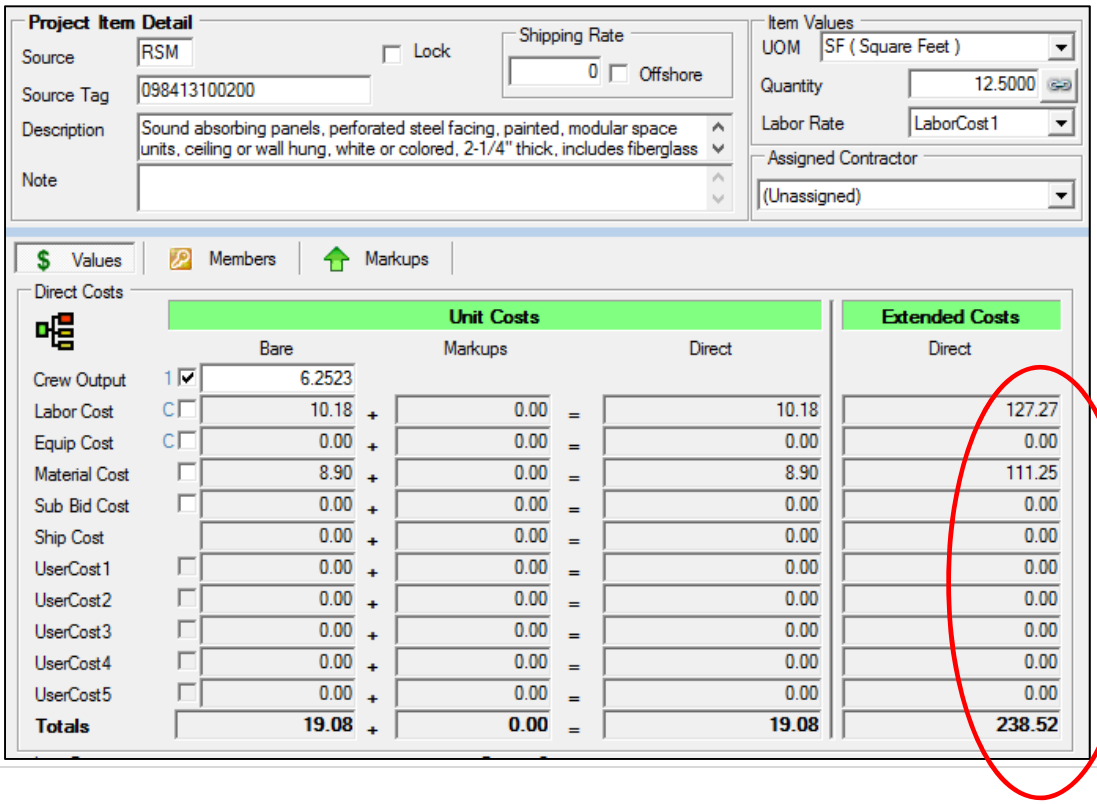
One way to adjust using override - Output (Box Checked):

If the intend is that the labor cost is double for doing this task,
with the original output is 12.50 SF/Hr and labor rate is $4.32 (which is $54.02/Hr divided by 12.50 SF/Hr = $4.32 rate),
then to double the labor cost for this task, double the rate from $4.32 to $8.64,
which then the output is $54.02/Hr divided by $8.64 = 6.2523 SF/Hr



This still yields the original estimated direct value, however….

When the Labor rate increase from 40.36 to 50.00:

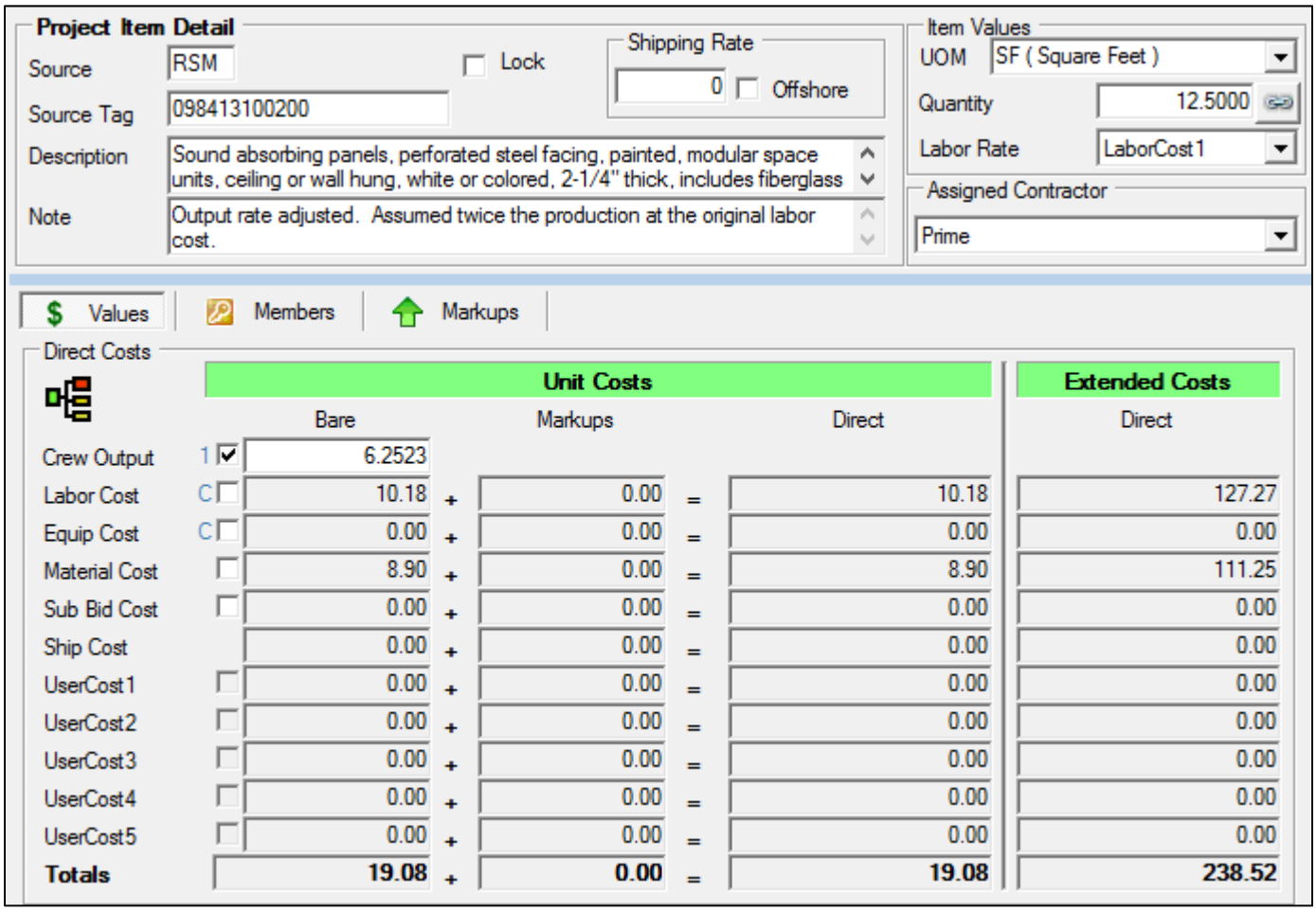


Ta-Da!

The Total Bare Cost and the Total Direct Cost also increase as expected.

This example uses RSM 098413100200.
Cost Book: 2016 Labor: National Labor Library – Seattle 2016 Equipment: 2016 Region 08

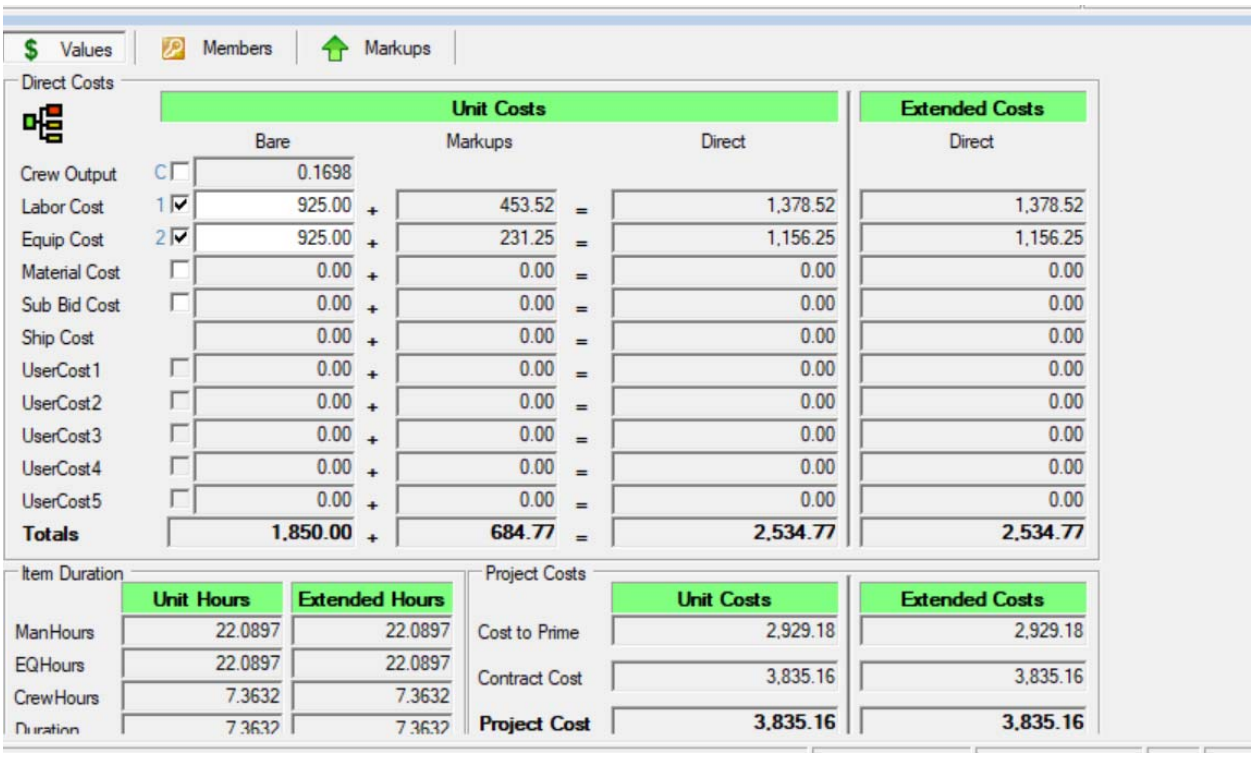
The M-II Item should look like this with Note for justification and Assign to the correct contractor or sub-contractor:



*** However, be caution that adjusting the output rate will change the duration. If the duration in M-II is used for any scheduling purposes, the total duration will be affected. **

Double Cost Override – Why is it invalid and should not be used.
Drafted by technical support.

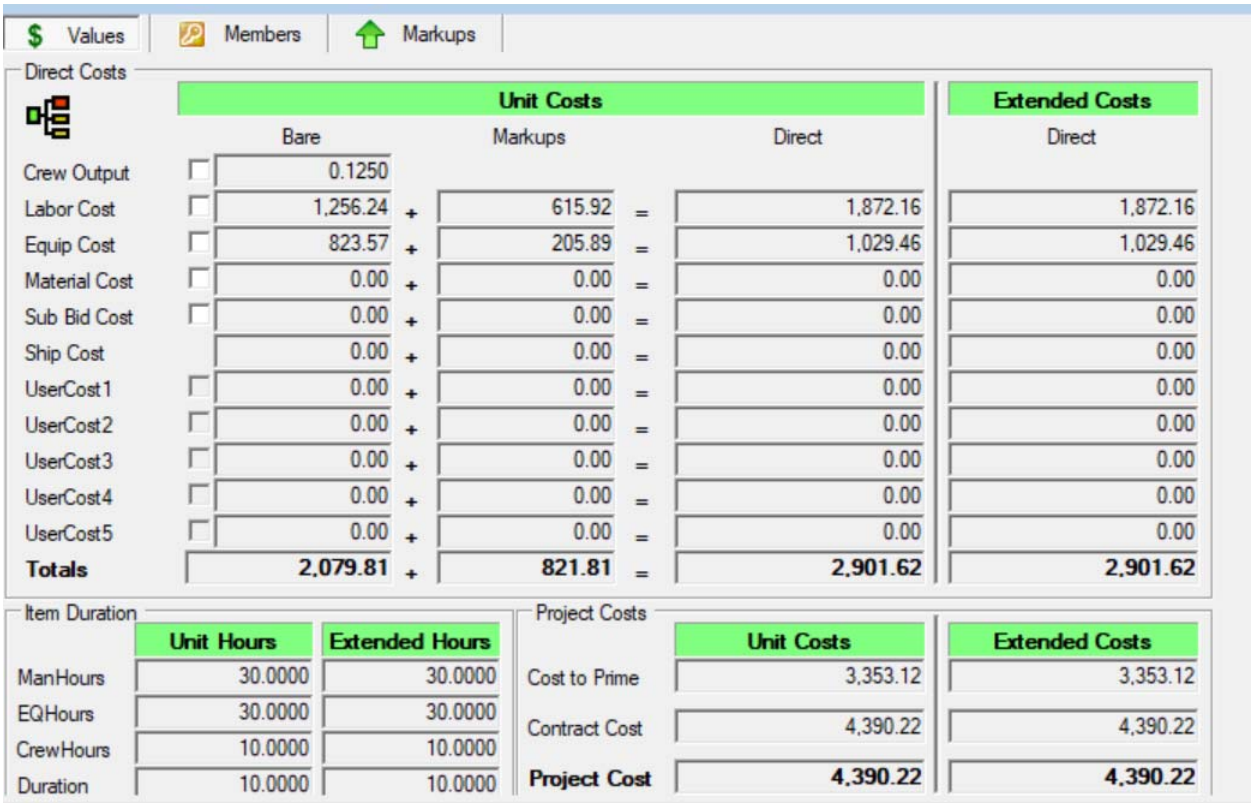
Screenshot from one of the override:



Double Cost Override – Why is it invalid and should not be used.
Drafted by technical support.

The following is an example, the user has overridden 1st the labor cost and then followed it with an override of equipment.

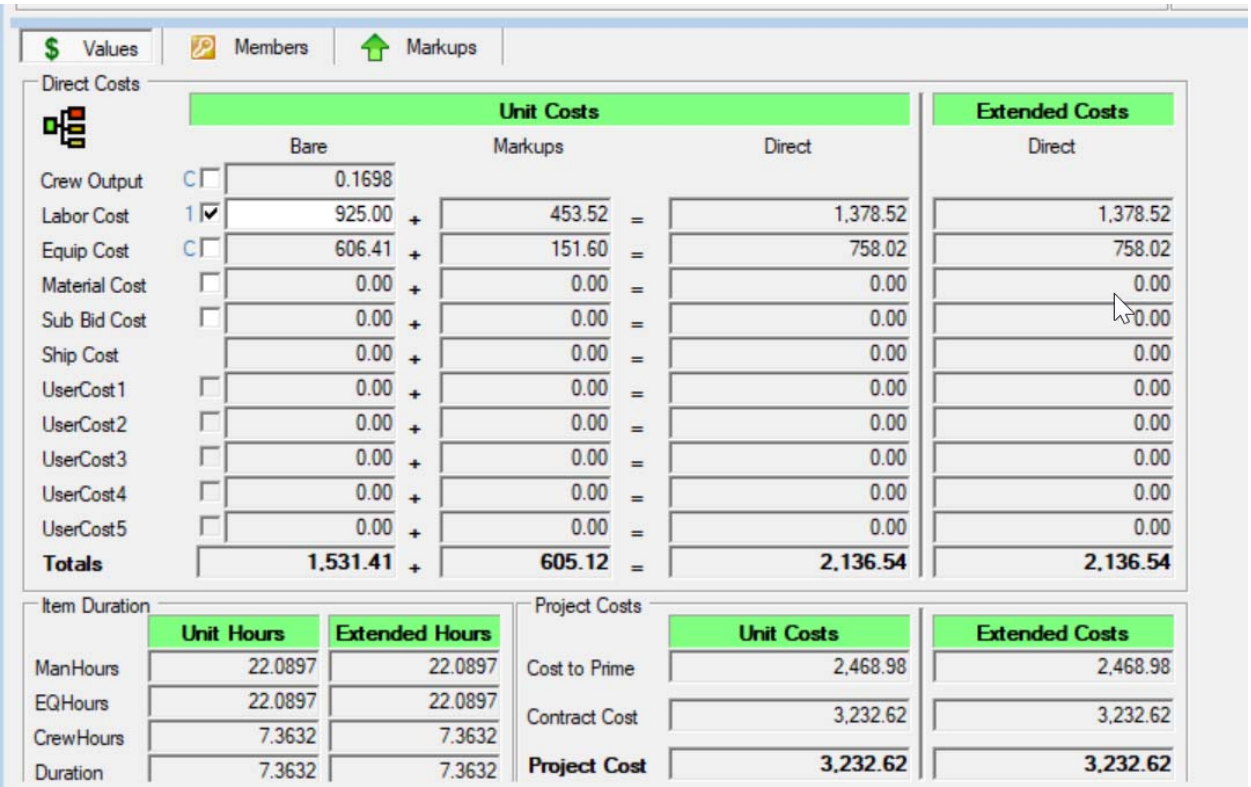
The original item he used was



Please note that the Item duration for this item was 30.00 for both Manhours and EQ Hours resulting in a duration of 10.

Double Cost Override – Why is it invalid and should not be used.
Drafted by technical support.

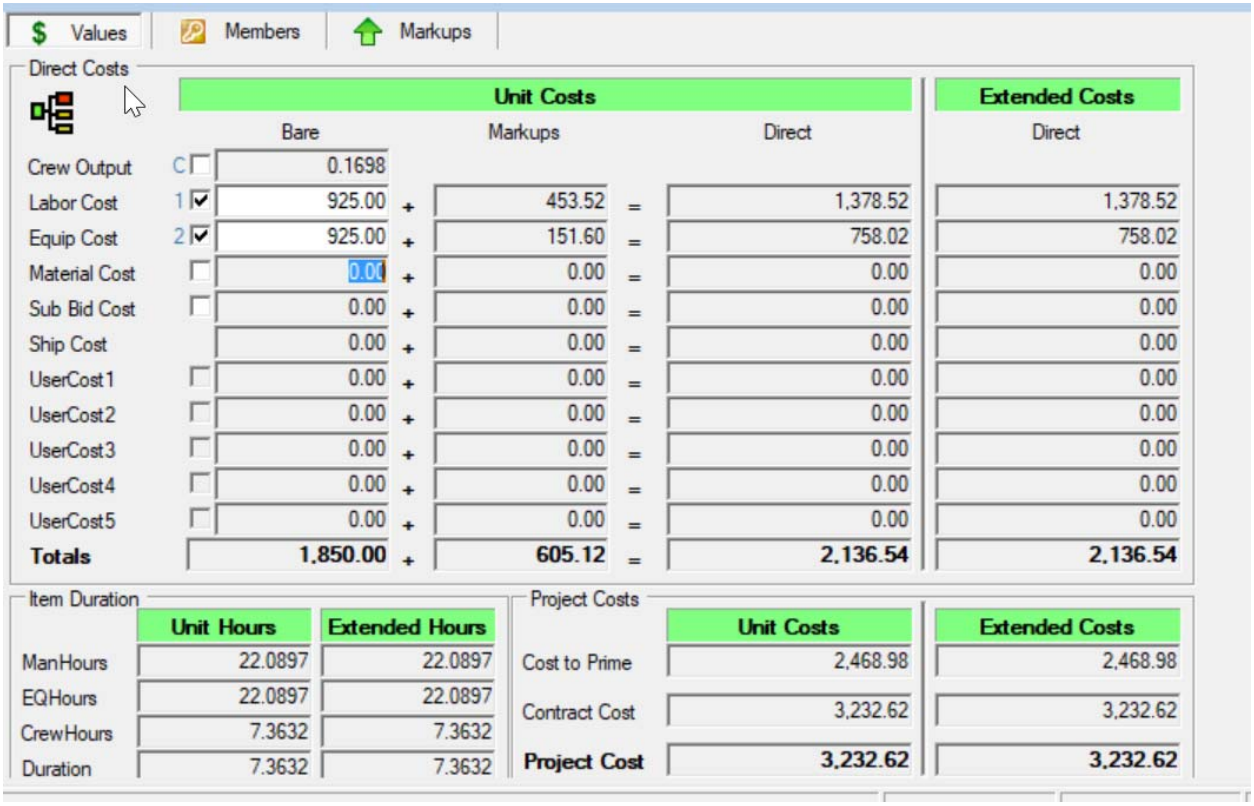
Then the override of the labor (1)



Mii didn’t change the labor cost it backed into what the crew output needed to be to arrive at that cost.

Double Cost Override – Why is it invalid and should not be used.
Drafted by technical support.

The next thing that was done was the equipment cost was overridden.



As you can see in this final example the manhours, equipment hours and crew hours did not change with the second adjustment. This is a Unit cost with no backup for Labor/Equipment/Duration. Those hours mean nothing now as they are not tied to the item, the crew or the labor and equipment.

Why user should not just take a Cost Book CSI Task item, change the Source Tag & Description in Project Items view, then call it good and use it in the estimate?

Scenario:
User imported CB item HNC 271116100500 (Terminal cabinet, public phone, 24”x30”x6”) to the estimate.
User changed the item source tag and description to USR 271116000000 (2-Post Racks in each IDF Rooms), cost remains the same.
In Project Items View, the item appears as USR 271116000000 and in CSI Task View the item appears as USR 271116100500.
User perform Cost Book update and repriced with CB 2022. Report shows 271116100500 as User Tasks are not Repriced.
User moved on without updating the pricings.

For demonstration purpose, we will assume the two items are equivalent in description and will focus on the cost here. Here’s the cost comparison:

	CB 2016	**Estimate**	**CB 2022**	**Potential**
Source	HNC	USR	HNC	USR
Source Tag	271116100500	271116000000	271116100500	27 SW220712C001
Description	Terminal cabinet, public phone, 24”x30”x6”	2-Post Racks in each IDF Rooms	Terminal cabinet, public phone, 24”x30”x6”	2-Post Racks in each IDF Rooms
Labor Bare Cost	206.17	263.21	308.94	263.21
Material Bare Cost	485	470	1625.66	1625.66
QTY	1 EA	1 EA	1 EA	1 EA
Total Contract Cost		1,847		4,573

If the original item is the same as user intended item, the cost should have been $4573 after project markups applied. However, the item cost remains at $1847 because the reprice was not performed due to user overrides (on source tag and description). This item cost is under-estimated.

In the above chart, the Estimate Material bare cost is actually lower than the original Cost Book 2016 item. One possible reason is that this item is originated from the even older 2015 Cost Book. User may have created the USR item in past estimate and brought this item into the current Estimate for use. The item was never repriced, and pricing never got updated. The source tag did not follow SWF Cost guide and reviewer cannot determine the date the USR item was set up.