

DATA ITEM DESCRIPTION (DID)

Title: COST BREAKDOWN STRUCTURE (CBS) DETAILED REPORT (DI-FNCL-80166A)

Number: DI-FNCL- 80166A

Approval Date: 27 May 03

AMSC NUMBER: G7499

Limitation: N/A

DTIC Applicable: N/A

GIDEP Applicable: N/A

Office of Primary Responsibility: G/DA14

Applicable Forms: N/A

Use/Relationship:

The Cost Breakdown Structure (CBS) Detail Report identifies the contractor's cost associated with an Acquisition, or Product Improvement Program, Project, or System.

The CBS Detailed Report consists of two formats containing cost and technical data elements. Format 1 (see "Sample Format 1" below) provides data to measure costs by CBS elements, while Format 2 (see "Sample Format 2" below) provides technical data on software and hardware elements. Both Formats of the CBS Detailed Report shall be submitted on the schedule dates listed in Format 2, Section B, and also 60 days after the contracted work effort has ended.

When this DID is placed on contract along with the Cost Data Summary Report (CDR) DID (DI-FNCL-81565), Cost Performance Report (CPR) DID (DI-MGMT-81466), or the Cost/Schedule Status Report (C/SSR) DID (DI-MGMT-81467), the Format 1 report depicted in this DID (DI-FNCL-80166A) is no longer required. The information contained in the report formats from any of these other three DIDs is acceptable as a substitute for a Format 1 report. However, Format 2 reports shall be submitted at the previously specified intervals.

This DID is applicable to limited Firm Fixed Price, all cost-reimbursement, and all incentive based Research, Development, Test, and Evaluation (RDT&E) and Procurement funded contracts over \$6 million in total value. Firm Fixed Price contract use of this DID applies only to those parts of the Firm-Fixed Price contracts that are considered un-priced portions of such contracts, that are estimated to be at least 20 percent of the initial contract value, and are Firm-Fixed Price contracts representing major system acquisitions or major high dollar components thereof. Costs shall be reported through cost to the contractor including General & Administrative (G&A) cost, but shall not include cost of money or Fee.

Requirements:

1. Reference documents. None
2. General instructions.
 - a. Automated techniques. Use of automated techniques of accumulation, storage, and delivery of the data is encouraged.
 - b. Non-standard presentation styles. Diagrams, tables, matrices, and other presentation styles are acceptable substitutes for text when data required by this DID can be made more readable using these styles rather than text.
3. Format.

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The Cost Breakdown Structure contained in report Format 1 is analogous to a generic, or general Work Breakdown Structure (WBS). Contractor established Work Breakdown Structure (WBS) formats are permitted in lieu of Format 1 if the contractor's WBS is acceptable to the Government Program Office as compatible to the CBS, and contain all information categories found on Format 1. This applies also when Format 1 reports are replaced by formats and forms from the other specified acceptable DIDs. In such cases, the contractor must provide an acceptable, easy-to-follow, mapping to the Format 1 elements. Where contractor WBS elements map to more than one Format 1 element, the contractor is required to provide an allocation scheme and a brief justification of it in the remarks block. Substituting contractor formats in place of Format 2 is permitted if all information categories are included and an acceptable mapping is provided.

4. Content.

4.1 Level of detail. Cost and technical data shall be reported and compatible down to at least the 3rd level of the CBS. Lower levels shall be reported as requested to cover critical high-interest items designated by the responsible Government Program Office. Although the Format 1 samples in this DID depict the complete Lifecycle of a product, only fill in Format 1 entries for those CBS indented items pertinent to the Program, Project, or System phase supported by this contract.

4.2 Deviation. Deviation from the definitions provided in 4.3 Definitions below shall be fully explained.

4.3 Definitions.

4.3.1 Format 1, Section A (Section A replicates on top of all Format 1&2 reports)

1. Contractor: Contractor's name in 1A, and primary work location in 1B.
2. Contract: Name as assigned to the contract by the procuring agency in 2A, Contract designated number from the procuring agency in 2B, and Type (as CPIF, CPAF, etc.) in 2C.
3. Program: Name of the program, project, or system, if different from the name entered in 2A, shall be entered into block 3A, otherwise enter "same". Place in block 3B a designation for the milestone event listed in Format 2, blocks 7a through 7i, to which this submission corresponds.
4. Report Period: Enter in 4A and 4B year, day, and month of the time interval covered by this report.
5. Dollars in: Specify the year the dollar costs are reported in on the Format 1 reports in Section a block 5. The block 5 entry on Format 2 reports in Section A require a constant dollar year be entered to describe the type of dollars found below in the block for the Estimate-At-Complete (EAC), and the block for the Actual cost entry at contract completion. Denote entries that are factored down by thousands (K) or millions (M). For all types of contracts, costs shall be reported through costs to the contractor, including G&A, but not including the cost of money (COM) or Fee. In the Format 1 report, block 8, place the factor that brings the contractor's cost up to the total contract sell price. Format 2 does not require the cost to sell factor.
6. Date Submitted: Actual date of report completion and release of information to the Government Program Office.

4.3.2 Format 1, Section B Block 7,

Breakdown Structure descriptions are as follows:

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0.0 Program / Project / System. Shall include the top-level summary of all product Lifecycle phases. This includes hardware, software, data, services, and facilities costs required in developing, producing, upgrading and sustaining a product system. The cost assigned to this CBS element is the total rollup of the costs of the complex of equipment (hardware/software), data, services, and facilities required to develop and produce an electronic, automated, or software system capability such as a communications system, information system, analysis system, support system, etc. It includes CBS items 1.1 to 1.2, 2.1 to 2.11, 3.1 to 3.11, 4.1 to 4.11, 5.1 to 5.7, 6.1 to 6.11, and 7.0. This CBS item shall not double count, or collect after rollup the costs summed at CBS items 1.0, 2.0, 3.0, 5.0, or 6.0. The latter are Lifecycle phase summations of their individual sub elements collected for the sole purpose of capturing in isolation the each phase's total cost less program management and systems engineering costs.

1.0 Program Management and System Engineering. Shall include the business, management, administrative, and engineering costs in planning, organizing, directing, coordinating, controlling, and approving actions designated to accomplish overall program objectives for all Lifecycle phases. Roll-up cost shall include the costs of lower level sub elements.

1.1 Program Management Shall include for all Lifecycle phases the costs of business and administrative planning, organizing, directing, coordinating, controlling, and approval actions designated to accomplish overall program objectives that are not associated with specific hardware or software elements and are not included under systems engineering. The following are included: 1.) Cost, schedule, performance measurement management, warranty administration, contract management, data management, vendor liaison, subcontract management, etc. 2.) Support element management, defined as the logistics tasks management effort and technical control, and the business management of the support elements. The logistics management function encompasses the support evaluation and supportability assurance required to produce an affordable and supportable system. 3.) Planning and management of all the functions of logistics such as maintenance support planning and support facilities planning; other support requirements determination; support equipment; supply support; packaging, handling, storage, and transportation; provisioning requirements determination and planning; training system requirements determination; computer resource determination; organizational, intermediate, and depot maintenance determination management; and data management.

1.2 System Engineering. Shall Include for all Lifecycle phase 1.) Effort to define the system and the integrated planning and control of the technical program efforts of design engineering, specialty engineering, production engineering, integrated software engineering, and integrated test planning. 2.) Effort to transform an operational need or statement of deficiency into a description of system requirements and a preferred system configuration. 3.) Technical planning and control effort for planning, monitoring, measuring, evaluating, directing, and replanning the management of the technical program. 4.) Where applicable - value engineering, configuration management, human factors, maintainability, reliability, survivability/vulnerability, system safety, environmental protection, standardization, system analysis, logistic support analysis, etc.

Developmental CBS descriptions follow for CBSs 2.0, 3.0, 4.0, and 6.0. Their common sub element descriptions follow after the description below for 6.0.

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2.0 Concept and Technology Development Shall include all costs associated with study, analysis, design development, and test involved in investigating alternative methods of delivering prototype or end items to fulfill a requirement. Cost shall include rollup of costs of all sub elements. See the Common CBS Sub elements portion of this document above for description of these sub elements.

3.0 System Development and Demonstration Shall include Development of a system to ensure operational supportability, design for producibility, and demonstration of system integration, interoperability and utility. Include all cost associated with development of the operational and prototype system(s). Cost shall include the rollup of costs of all sub elements. See the Common CBS Sub elements portion of this document above for description of these sub elements.

4.0 Production and Deployment Shall include acquisition of all elements (hardware, software, equipment, facilities and initial support) and initiation of the system for use by the functional user. Includes training and testing required to transition the system to users. Costs shall include the rollup of costs of all sub elements. See the Common CBS Sub elements portion of this document above for description of these sub elements.

6.0 Preplanned Product Improvement (P³I) Shall include all product improvement upgrade costs after initial Development and Production of the system. It also includes development of all P³I costs throughout system life for hardware and software as a result of changes in the Target Environment. Includes hardware and software development to accommodate changing technology. Costs shall include the rollup of costs of all sub elements. See the Common CBS Sub elements portion of this document above for description of these sub elements.

Common CBS Sub elements to 2.0 Concept and Technology Development, 3.0 System Development & Demonstration, 4.0 Production & Deployment, and 6.0 Preprogrammed Product Improvement are explained below as:

2.1, 3.1, 4.1 & 6.1 Prime Mission Product (PMP) Shall include the hardware and software used to accomplish the primary mission of the program, project, or system. This includes 1.) All integration, assembly, test and checkout, as well as all technical and management activities associated with individual hardware/software elements; 2.) The integration, assembly, test and checkout associated with the overall PMP, and when the electronic/automated software system comprises several PMPs, each shall be listed separately at level 2; 3.) Any whole and partial prime contractor, subcontractor, and vendor breadboards, brass boards, and qualification test units; 3.) The design, development and production of complete units (i.e., the prototype or operationally configured units that satisfy the requirements of their applicable specification(s), regardless of end use); and 4.) All factory special test equipment, including test software, special tooling, and production planning required fabricating the PMP.

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2.1.1a, 3.1.1a, 4.1.1a, & 6.1.1a Subsystem a...w (Specify Names) Shall include the hardware and software components of each specific electronic/automated software subsystem (as CBS designator a through w). Included are 1.) All associated special test equipment, including test software, special tooling, production planning, and all technical and management activities; 2.) The software components, consisting of the applications and system software required to direct and maintain the specific electronic/automated software subsystem; 3) all in-plant integration, assembly, test, and checkout of hardware components and software into an electronic/automated software subsystem, including the subsystem hardware and software integration and test; 4.) Interface materials and parts required for the in-plant integration and assembly of other level 4 components into the electronic/automated software subsystem and all materials and parts or other mating equipments furnished by/to an integrating agency or contractor; 5.) Cables, conduits, connectors, shelters, and other devices associated with the operational electronic/automated software subsystem; and 6.) Design, development, production, and assembly efforts to provide each electronic/automated software subsystem as an entity.

2.1.1.a.x, 3.1.1.a.x, 4.1.1.a.x, & 6.1.1.a.x HardWare Configuration Item (HWCI) 1...n in each Sub-System a...w (Replicate as required for each HWCI comprising the sub system a...w – the number of the HWCI as 1,2,3 ... replaces the x in the CBS) If actual hardware is generated for this phase of the program it shall be broken down to HWCI's. This element refers to those major HWCI's in each subsystem. Shall include all hardware units and components required to have functioning HWCI's, and conform to the planned configuration. Includes commercial-off-the-shelf (COTS) and government-off-the shelf (GOTS) hardware incorporated into the design. Any integration, assembly, test, and checkout of hardware within the HWCI is included. Also, includes internal HWCI interface materials and parts required for the integration and assembly of hardware components. Element captures all engineering design, development, prototype/brass board manufacturing, and assembly efforts to provide each HWCI as an entity.

2.1.1.x.z, 3.1.1.x.z, 4.1.1.x.z, & 6.1.1.x.z Integration, Assembly, and checkout of the previous HardWare Configuration Items (HWCI's) Includes all effort directly associated with the hardware subsystem HWCI's integration, assembly, test and checkout as they are brought together in the total system.

2.1.2, 3.1.2, 4.1.2, & 6.1.2 Prime Mission Product Applications Software Shall include software that is specifically produced for the functional use by a computer. This includes 1.) Mathematical analysis and data base management. 2.) All effort required to design, develop, integrate, and check out the PMP applications computer software configuration items (CSCI's), not including the non-software portion of PMP firmware development and production.

2.1.2a, 3.1.2a, 4.1.2a, & 6.1.2a Software Build a...w (Specify Name for Build) Shall include in each software build an aggregate of one or more CSCI's that satisfies a specific set or subset of requirements. When incremental, spiral, or other software development method is used, multiple builds are often necessary to meet program requirements. A build is a separately tested and delivered product. Within builds are CSCI's. For a build to be complete, a portion or all of one or more CSCI's shall be completed. Therefore, when a CSCI appears in more than one build, it shall be successively more functional as each build is completed, in accordance with the system design.

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2.1.2a.y, 3.1.2a.y, 4.1.2a.y, & 6.1.2a.y CSCI 1..n (Specify Name for CSCI y) Shall include the aggregation of software or any of its discrete portions that satisfies an end use function and has been designated by the government for configuration management. CSCIs are the major software products of a system acquisition and are developed in accordance with standard DoD or commercial practices and process. This includes 1.) Reusable software components, such as commercial off-the-shelf software, government furnished software, or software specifically developed for reuse. 2.) Computer Software Components (CSCs) that are functionally or logically a distinct part of a CSCI, distinguished for convenience in designing and specifying a complex CSCI as an assembly of subordinate elements. 2.) Effort associated with requirements analysis, design, coding and testing, CSC integration and testing, CSCI formal qualification testing, and software problem resolution of each CSCI.

2.1.2a.z, 3.1.2a.z, 4.1.2a.z, & 6.1.2a.z CSCI to CSCI Integration and Checkout (integration of Build a...w CSCIs) Shall include integration and test, verification and validation and the systems engineering and technical control of the CSCIs.

2.1.2z, 3.1.2z, 4.1.2z, & 6.1.2z Integration, Assembly, Test & Checkout of Builds In those instances in which an integration, assembly, test, and checkout element is needed, this element shall include all effort of technical and functional activities associated with design, development, and production of software required to assemble this level of equipment hardware & software elements into the next higher level of equipment as a whole and not directly part of any other individual level 3 element.

2.1.3, 3.1.3, 4.1.3, & 6.1.3 Prime Mission Product System Software Shall include the software designed for a specific computer system or family of computer systems to facilitate operation and maintenance of the computer system and associated programs. Includes 1.) Operating systems, compilers, and utilities. 2.) All effort required to design, develop, integrate, and checkout PMP system software, including all software developed to support PMP-Applications-Software Development. 3.) PMP system software required to enable development, integration, and maintenance of any PMP software build and CSCI.

2.1.4, 3.1.4, 4.1.4, & 6.1.4 Integration, Assembly, Test, & Checkout of Subsystems a...w In those instances in which an integration, assembly, test, and checkout element is used, this element shall include all effort of technical and functional activities associated with design, development, and production of mating surfaces, structures, equipment, parts, materials, and software required to assemble equipment (hardware/software) elements into the next higher level mission equipment (hardware/software) as a whole, and not directly part of any other individual level.

2.2. 3.2, 4.2, & 6.2 Platform Integration Shall include effort involved in providing technical and engineering services to the host developer, manufacturer or integrator during installation and integration of PMP into the host's system.

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2.3, 3.3, 4.3, & 6.3 System Test and Evaluation Shall include use of prototype, production, or specifically fabricated hardware/software to obtain or validate engineering data on performance of the system during the development phase (normally funded from RDT&E) of the program. It includes detailed planning, conduct, support, data reduction and reports (excluding Contract Data Requirements List data) from such testing, and all hardware/software items that are consumed or planned to be consumed in the conduct of such testing, as well as all effort associated with design and production of models, specimens, fixtures, and instrumentation in support of the system level test program. Please note that test articles that are complete units (i.e., functionally configured as required by specifications) are excluded from this work breakdown structure element.

2.3.1, 3.3.1, 4.3.1, & 6.3.1 Development Test and Evaluation Shall include effort that is planned, conducted and monitored by the developing organization. It includes test and evaluation conducted to demonstrate that engineering design and development process is complete, design risks have been minimized, the system shall meet specifications, as well as estimate the system's military utility when introduced, determine whether the engineering design is supportable (practical, maintainable, safe, etc.) for operational use, provide test data with which to examine and evaluate trade-offs against specification requirements, life cycle cost, & schedule, and perform logistics testing efforts to evaluate the achievement of supportability goals, adequacy of the support package for the system.

2.3.2, 3.3.2, 4.3.2, 6.3.2 Operational Acceptance Test and Evaluation Shall include test and evaluation conducted by user elements other than the developing activity to assess the prospective system's utility, operational effectiveness, operational suitability, logistics supportability (including compatibility, inter-operability, reliability, maintainability, logistic requirements, etc.), cost of ownership, need for any modifications, and complete acceptance testing. Included also are Test and Evaluation Support and Test Facilities.

2.3.3, 3.3.3, 4.3.3, & 6.3.3 Test and Evaluation Support. The support elements necessary to operate and maintain, during test and evaluation, systems and subsystems that are not consumed during the testing phase and are not allocated to a specific phase of testing. Also includes repairable spares, repair of repairable, repair parts, warehousing and distribution of spares and repair parts, test and support equipment, test bed vehicles, drones, surveillance aircraft, tracking vessels, contractor technical support, etc.

2.3.4, 3.3.4, 4.3.4, & 6.3.4 Test Facilities Shall include special test facilities required for performance of the various developmental tests necessary to prove design and reliability of the system or subsystem. Also includes test tank test fixtures, propulsion test fixtures, white rooms, test chambers.

2.4, 3.4, 4.4, & 6.4 Training Shall include deliverable training services, devices, accessories, aids, equipment, and parts used to facilitate instruction through which personnel shall learn to operate and maintain the system with maximum efficiency. Includes also Equipment, Services, and Facilities devoted solely to training.

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2.5, 3.5, 4.5, & 6.5 Data Shall include the deliverable data required as listed on a Contract Data Requirements List, DD Form 1423. It includes acquiring, writing, assembling, reproducing, packaging and shipping the data, as well as transforming it into government-appropriate format. Subcategories included are creation and production of Technical Publications, Engineering Data related to scientific or technical information and computer software documentation, Management Data covering configuration management, cost, schedule, contractual data management, program management, etc., required by the government, Support Data related to data items designed to document support planning in accordance with functional categories selected, and operation of a Data Depository as custodian to maintain a master engineering specification and establish a drawing depository service for government approved documents that are property of the U.S. Government.

2.6, 3.6, 4.6, & 6.6 Peculiar Support Equipment Shall include design, development, and production of those deliverable items and associated software required to support and maintain the system or portions of the system while the system is not directly engaged in performance of its mission, and which are not "common support equipment" (as defined below). Also includes peculiar or unique testing and measurement equipment and peculiar Support and Handling Equipment.

2.7, 3.7, 4.7, & 6.7 Common Support Equipment Shall include the items required to support and maintain the system or portions of the system while not directly engaged in performance of its mission, and which are presently in the DoD inventory for support of other systems. This includes DoD inventory items of Test and Measurement Equipment, as well as DoD inventory Support and Handling Equipment.

2.8, 3.8, 4.8, & 6.8 Operational Site Activation Shall include real estate, construction, conversion, utilities, and equipment to provide all facilities required to house and service prime mission equipment at the organizational and intermediate level. Includes 1.) Conversion of site, ship, or vehicle. 2.) System assembly, checkout, and installation (of mission and support equipment) into site facility or ship to achieve operational status. 3.) Contractor support in relation to operational/site activation. It also includes System Assembly, Installation, and Checkout on Site, Contractor Technical Support, Site Construction, and Site/Ship/Vehicle Conversion).

2.9, 3.9, 4.9, & 6.9 Industrial Facilities Shall include the construction, conversion, or expansion of industrial facilities for production, inventory, and contractor depot maintenance required when that service is for the specific system. Includes equipment acquisition or modernization, where applicable, maintenance of these facilities or equipment, and industrial facilities for hazardous waste management to satisfy environmental standards.

2.10, 3.10, 4.10, & 6.10 Initial Spares and Repair Parts Shall include deliverable spare components, assemblies and subassemblies used for initial replacement purposes in the materiel system equipment end item. It includes any repairable spares and repair parts required as initial stockage to support and maintain newly fielded systems or subsystems during the initial phase of service, including pipeline and war reserve quantities, at all levels of maintenance and support. Note it does not include development test spares and spares provided specifically for use during installation, assembly, and checkout on site. These elements also do not include anything that can be categorized as software maintenance.

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2.11, 3.11, 4.11, & 6.11 Other Includes any items not incorporated above, each of which must be accompanied by a detailed explanation of specific reasons for inclusion under this CBS item.

End of the Common Element descriptions–5.0 Operations & Support descriptions follow:

5.0 Operations and Support. Shall include the costs of Operations and Support (O&S) activities for a system at all sites. Includes management and maintenance of all hardware and software elements throughout the O&S portion of the life cycle. Costs shall include the rollup of costs of all sub elements.

5.1 Hardware Maintenance Shall include all costs to maintain and repair system hardware including costs for labor, materials, and contracts.

5.1.1 Licenses/Vendor Maintenance Agreements (COTS/GOTS). Shall include costs of licenses/vendor maintenance agreements associated with maintenance and repair of system hardware.

5.1.2 Repair Parts Shall include costs of parts that contribute to repair of system hardware.

5.1.3 Spares Shall include costs of spares that contribute to maintenance and repair of system hardware.

5.1.4 Fixes/Repairs. Shall include costs of fixes/repairs to system hardware, as well as showing costs for labor, materials, and contracts.

5.1.5 Minor Enhancements. Shall include costs of minor enhancements to system hardware.

5.2 Software Maintenance. Shall include all costs for software maintenance, including a breakout of costs for labor, materials, and contracts. Any test costs shall be included here.

5.2.1 Licenses & Vendor Maintenance Agreements (COTS & GOTS) Shall include costs of licenses/vendor maintenance agreements associated with maintenance and repair of system software. Include costs of retesting and re-integrating upgrades of COTS & GOTS software packages.

5.2.2 Fixes (Software). Shall include costs of fixes to system software and depict costs for labor, materials, and contracts. Any associated testing costs shall be included.

5.2.3 Minor Enhancements Shall include costs of minor enhancements to system software.

5.2.4 Security Testing and Integration. Shall include costs of integration and testing of COTS/GOTS software-based security capabilities developed for a system, in order to operate and support a system.

5.3 Data Maintenance Shall include all costs to keep system data current and depict costs for labor, materials, and contracts.

5.4 Unit/Site Operations Shall include all costs to operate the system. Shall include such costs as personnel, training, security, communications, fuel, and facilities maintenance.

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5.4.1 Personnel Shall include costs chargeable to the Program/Project/System for personnel required to operate the system.

5.4.2 Infrastructure Maintenance Shall include costs of maintenance required to operate and support the infrastructures communications, facilities, etc.

5.4.3 System Security Shall include all security related costs involved in operating the system that can be separately identified and are not a discrete end item (HWCI or CSCI).

5.4.4 Recurring Training Shall include costs related to training/retraining on system specific tasks after fielding of the operating system.

5.5 Replenishment Spares. Shall include components, assemblies and subassemblies required to stock the maintenance warehouse in support of the operation and maintenance of the system. These costs include the transportation and storage of these supplies and spares.

5.6 Consumables. Shall include costs for all expendable material or supply items (excluding replenishment spares and items included in Site Operations) consumed in operating and maintaining a system.

6.0 Elements and sub elements are described above.

7.0 Decommission and Disposal Shall include all costs required to terminate commission and dispose of the system at the end of its life cycle. Includes any costs for demilitarization and decommission. Costs shall include the rollup of costs of all sub elements

4.3.3 Format 1, Section B, Block 7 Sub elements

a. Labor Hours. Shall enter actual or allocated number of staff-hours to date devoted to each CBS item, and note whether "actual" or "allocated".

b. Labor Costs. Shall enter the actual or allocated direct fully burdened labor cost to date for each CBS item, and note whether "actual" or "allocated". An entry shall be made in block 8 ("Remarks") to state the composition of the labor \$, whether in-plant overhead, direct costs, G&A, etc, are included. Do not enter values that include cost of money or Fee.

c. Materials Costs. Shall enter the materials cost to date for each CBS element. This includes the cost of all COTS products purchased or licensed to develop this system. Please state in block 8 ("Remarks"), the assumptions associated with the material dollars, including those associated with burdens and allocations. Do not enter values that include cost of money or Fee.

d. Other Direct Costs (ODCs). Shall enter the total "other direct costs" to date for each CBS element. Please identify the ODCs in the block 8 ("Remarks"), including burdens. Do not enter values that include cost of money or Fee.

e. Total Costs. Shall enter the total costs to date for items "b" through "d". Block 8 remarks shall capture the information in b through d above and be continued on additional sheets if necessary. Do not enter values that include cost of money or Fee.

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4.3.4 Format 2, Section B (block) 7

General instructions. Separate sheets shall be delivered with completed Sections A, B, and C for each CSCI. Enter the name of the CSCI and its corresponding CBS number into Section B's initial block. If no CSCIs are designated, then enter the program name and fill out only one complete sheet.

7a (Contract Award or Date Started) to 7i (Full Operational Capability (FOC)): Shall enter the planned and actual dates of each milestone (month and year). Shall enter the estimated Functional Points or Source Lines of Code (SLOC) of each software module at contract award, software specification review (SSR), preliminary design review (PDR), critical design review (CDR), test and readiness review (TRR) #1, software-to hardware complete, and estimated and actual FP or SLOC for formal qualification test (FQT), Initial operational capability (IOC), and full operational capability (FOC).

4.3.5 Format 2, Section C

8. Software Development Standard. Shall provide the development standard that was used for developing this project.

9. Application Type. Shall describe the primary generic function of the software project as a whole.

10. Software Function. Shall describe the function that best identifies the particular CSCI.

11. Development Method. Shall describe the development methods that were used.

12. Code Designed for Reuse. Shall indicate whether the code was developed with a requirement to be reused in the future on other systems. Use in subsequent releases on the existing system shall not be considered reuse.

Average Years of Team Experience. Shall enter the average number of years (per team member) the development team has with similar types of applications. An application is considered similar if it has similar types, functions, goals, or inherent problems and the experience is applicable to the project.

13. Program Language. Shall represent the programming team's average experience with the language being used. Experience is credited for similar languages. The parameter is closely linked to language type complexity.

14. Practices and Methods. Shall represent the programming team's average experience with development practices and methods. Examples are Object Oriented Programming and Design or Evolutionary Development. Rate the experience level at the start of the project.

15. Similar Development Hardware. Shall represent the programming team's average experience with the development "virtual machine", or the combination of development environment, hardware, operating systems, job control languages, and other tools.

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16. Similar Deployed Hardware. Shall represent the programming team's average experience with the target (operational or final) environment on which this application executes, including both the hardware environment and the resident operating system, if any.
17. Primary Language. Shall identify the primary programming language used in the development of this system. Estimate the size parameters in either SLOC or function points (FPs).
18. Secondary Language. Shall identify the secondary programming language used in the development of this system. Estimate the size parameters in either SLOC or FPs for items "a – i" below.

Size Parameters. The primary size parameter is thousands of logical source lines of code (SLOC). Shall describe any other sizing metric used. Description of Size Parameter items "a – i" to support column 17 Primary Language, and column 18 Secondary Language are as follows:

17.Primary Language, and column 18. Secondary Language

- a. Percent of Total Code. Shall list the approximate percentages of the total lines of code or Function Points (FPs) that comprise each of the two most prominent languages present.
- b. Gross Total Sources Lines of Code (SLOC) or unadjusted Function Points (FPs). When using SLOC, shall include executable source lines such as all control, conditional, mathematical, declaration, input, and output statements, as well as formatting statements, deliverable job control, debug and test code that is delivered in the final product. Does not include blank lines, comments, machine generated or instantiated code, undelivered test code, undelivered debugging code, or begin statements from begin-end pairs. Shall include SLOC defined above, excluding Automated Code Generation (auto generated) and Commercial off the Shelf (COTs). When using Function Points (FPs), shall use International Function Point User Group (IFPUG) counting rules or standards. The six categories of functions include External Inputs (EI), External Outputs (EO), External Inquiries (EQ), External Interface Files (EIF), Internal Logical Files (ILF), and, Internal Functions (IF).
- c. New Manually Developed SLOC or Function Points (FPs). Shall include SLOC or function points newly developed. Excludes Automated Code Generation (auto generated) SLOC.
- d. Re-Used SLOC or Function Points. Shall include SLOC or FPs that were used from pre-existing software.
- e. Percent Re-Design effort for Re-Used Code or Function Points (FPs). Shall include the percentage of redesign performed to make pre-existing software functional within the program or changes to the overall design or system architecture required to reuse the existing design. Shall include amounts of code learned or reverse engineered, re-documented, or revalidated, as well as the actual amount of redesign work. (Percentage can exceed 100 percent if design work involves severe reverse engineering of the existing code.

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- f. Percent Re-Implementation for Re-Used Code or Function Points (FPs). Shall include re-implementation (code and unit testing) of the pre-existing software to make the software functional within the Program, or any actual source code that is rewritten and retested at the unit level. Shall include amounts that must be learned or reverse engineered, as well as the actual amount of code to be re-implemented.
- g. Percent Re-Test Effort for Re-Used Code or Function Points (FPs). Shall include integration testing, component testing, and program testing performed to ensure the software functions within performance, reliability, and other criteria after changes.
- h. COTS – Number of Packages or Products. Shall include the number of Commercial off the Shelf (COTS) packages or products in the program. Enter number in column 17 and leave column 18 blank.
- i. GOTS – Number of Packages or Products. Shall include the number of Government off the Shelf (GOTS) packages or products in the program. Enter number in column 17 and leave column 18 blank.

Cost - CSCI or Project Shall be one, and only one, entry in either the Estimated, or the Actual blocks, but not both. These dollar amounts shall be in a constant year as stated in block 5 of section A on the format 2. Put N/A in the unused block. Estimates shall be the best projection at the time of report submittal for the expected cost at completion of the respective CSCI, or if submitted at Project level, the expected cost of all contract delivered project software. When an entry is made in the actual block, it shall be an auditable actual cost converted to a constant year entry for the respective CSCI, or Project if submitted at that level.

Format 2, Section D Major Hardware Configuration Items

19. Major HWCI Contract Breakdown Structure. Shall enter the contract breakdown structure for each major hardware configuration item (HWCI). These HWCIs are upper level assemblies only.
20. Project Name. Shall enter the name of each major HWCI. Provide the model number if available.
21. Total Weight. Shall enter total weight of each major hardware item. Specify if in pounds and kilograms.
22. Total Cubic Volume. Shall enter total volume of each major item. Specify if in cubic feet and meters.
23. Electronics Weight. Shall enter the electronics weight, or the remainder of "Total Weight minus Structure (Mechanical) Weight" for each major hardware item. Electronics weight includes printed circuit boards and electronic components.
24. Electronics Percent of Total Volume. Shall calculate percent of total volume devoted to the electronics for each major hardware item. Express as a percentage.

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25. Projected Direct Cost or Actual Cost if Purchased. Shall enter the direct cost before Cost Of Money (COM), and FEE of each major hardware configuration item. If the HWCI is 100% COTS, then report the item at the delivered COTS cost to the development or production prime contractor before markup. For items that contain COTS within the HWCI, the COTS cost shall be folded into the top-level cost of the HWCI along with other fabrication costs for the purposes of this format.

26. Dollars In. Shall specify the year the hardware dollars are expressed in.

27. Remarks. Shall provide any amplifying comments for Format 2. _Continue on additional blank sheets if necessary to satisfy items above.

Report Formats 1 & 2 follow as:

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COST BREAKDOWN REPORT Format 1			
SECTION A			
1. CONTRACTOR	2. CONTRACT	3. PROGRAM	4. REPORT PERIOD
A. NAME	A. NAME	A. NAME	A. FROM (YYMMDD)
B. LOCATION (Address and Zip Code)	B. NUMBER	B. MILESTONE EVENT	B. TO (YYMMDD)
	C. TYPE	5. DOLLARS IN	6. DATE SUBMITTED (YYMMDD)

7. SECTION B

WBS # & Level					NOMENCLATURE	LABOR HRS	LABOR \$	MATERIALS \$	ODC \$	TOTAL \$
1	2	3	4	5						
0.0					Program/Project/System					
1.0					Program Management/System Engineering					
	1.1				Program Management					
	1.2				System Engineering					
2.0					Concept and Technology Development					
	2.1				Prime Mission Product (PMP)					
		2.1.1a			Subsystem a...w (Specify Name)					
			2.1.1a.1		HWCI l..n (Specify Name for HWCI a)					
			2.1.1a.2		Integration, Assembly, & Checkout of subsystem a...w HWCI's					
		2.1.2			PMP Applications Software					
			2.1.2a		Software Build a...w (Specify Name for Build)					
				2.1.2a.y	CSCI l..n (Specify Name for CSCI y)					
				2.1.2a.z	Integration & Checkout of Build a...w CSCI's					
			2.1.2z		Integration, Assembly, Test & Checkout of All Builds					
		2.1.3			PMP Systems Software					
			2.1.3a		Software Build a...w (Specify Name for Build)					
				2.1.3a.y	CSCI l..n (Specify Name for CSCI y)					
				2.1.3a.z	Integration & Checkout of Build a...w CSCI's					
			2.1.3z		Integration, Assembly, Test & Checkout of All Builds					
			2.1.4		Integration, Assembly, Test & Checkout of Subsystems a...w					
	2.2				Platform Integration					
	2.3				System Test & Evaluation					
		2.3.1			D T & E					
		2.3.2			OAT & E					
		2.3.3			Test & Eval Support					
		2.3.4			Test Facilities					
	2.4				Training					
	2.5				Data					
	2.6				Peculiar Support Equipment					
	2.7				Common Support Equipment					
	2.8				Operational Site Activation					
	2.9				Industrial Facilities					
	2.10				Initial Spares & Repair Parts					
	2.11				Other					

8. REMARKS

9. NAME OF PERSON TO CONTACT	10. PHONE #	11. SIGNATURE	12. DATE
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COST BREAKDOWN REPORT Format 1 (Continued)

SECTION A			
1. CONTRACTOR	2. CONTRACT	3. PROGRAM	4. REPORT PERIOD
A. NAME	A. NAME	A. NAME	A. FROM (YYMMDD)
B. LOCATION (Address and Zip Code)	B. NUMBER	B. MILESTONE EVENT	B. TO (YYMMDD)
	C. TYPE	5. DOLLARS IN	6. DATE SUBMITTED (YYMMDD)

7. SECTION B

WBS # & Level					NOMENCLATURE	LABOR HRS	LABOR \$	MATERIALS \$	ODC \$	TOTAL \$
1	2	3	4	5		a.	b.	c.	d.	e.
3.0					System Development & Demonstration					
	3.1				Prime Mission Product (PMP)					
		3.1.1a			Subsystem a...w (Specify Name)					
			3.1.1ax		HWCI 1..n (Specify Name for HWCI s)					
			3.1.1az		Integration, Assembly, & Checkout of subsystems a...w HWCI's					
		3.1.2			PMP Applications Software					
			3.1.2a		Software Build a...w (Specify Name for Build)					
				3.1.2ay	CSCI 1..n (Specify Name for CSCI y)					
				3.1.2az	Integration & Checkout of Build a...w CSCI's					
			3.1.2z		Integration, Assembly, Test & Checkout of Builds					
		3.1.3			PMP Systems Software					
			3.1.3a		Software Build a...w (Specify Name for Build)					
				3.1.3ay	CSCI 1..n (Specify Name for CSCI y)					
				3.1.3az	Integration & Checkout of Build a...w CSCI's					
			3.1.3z		Integration, Assembly, Test & Checkout of Builds					
			3.1.4		Integration, Assembly, Test & Checkout of Subsystems a...w					
	3.2				Platform Integration					
	3.3				System Test & Evaluation					
		3.3.1			D T & E					
		3.3.2			OAT & E					
		3.3.3			Test & Eval Support					
		3.3.4			Test Facilities					
	3.4				Training					
	3.5				Data					
	3.6				Peculiar Support Equipment					
	3.7				Common Support Equipment					
	3.8				Operational Site Activation					
	3.9				Industrial Facilities					
	3.10				Initial Spares & Repair Parts					
	3.11				Other					

8. REMARKS

9. NAME OF PERSON TO CONTACT	10. PHONE #	11. SIGNATURE	12. DATE
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COST BREAKDOWN REPORT Format 1 (Continued)

SECTION A

1. CONTRACTOR		2. CONTRACT		3. PROGRAM		4. REPORT PERIOD	
A. NAME		A. NAME		A. NAME		A. FROM (YYMMDD)	
B. LOCATION (Address and Zip Code)		B. NUMBER		B. MILESTONE EVENT		B. TO (YYMMDD)	
		C. TYPE		5. DOLLARS IN		6. DATE SUBMITTED (YYMMDD)	

7. SECTION B

WBS # & Level					NOMENCLATURE	LABOR HRS	LABOR \$	MATERIALS \$	ODC \$	TOTAL \$
1	2	3	4	5						
4.0					Production & Deployment					
	4.1				Prime Mission Product (PMP)					
		4.1.1a			Subsystem a...w (Specify Name)					
			4.1.1ax		HWCI l...n (Specify Name for HWCI x)					
			4.1.1az		Integration, Assembly, & Checkout of subsystems a...w HWCI's					
		4.1.2			PMP Applications Software					
			4.1.2a		Software Build a...w (Specify Name for Build)					
				4.1.2ay	CSCI l...n (Specify Name for CSCI y)					
				4.1.2az	Integration & Checkout of Build a...w CSCI's					
			4.1.2z		Integration, Assembly, Test & Checkout of Builds					
		4.1.3			PMP Systems Software					
			4.1.3a		Software Build a...w (Specify Name for Build)					
				4.1.3ay	CSCI l...n (Specify Name for CSCI y)					
				4.1.3az	Integration & Checkout of Build a...w CSCI's					
			4.1.3z		Integration, Assembly, Test & Checkout of Builds					
				4.1.4	Integration, Assembly, Test & Checkout of Subsystems a...w					
	4.2				Platform Integration					
	4.3				System Test & Evaluation					
		4.3.1			D T & E					
		4.3.2			OAT & E					
		4.3.3			Test & Eval Support					
		4.3.4			Test Facilities					
	4.4				Training					
	4.5				Data					
	4.6				Peculiar Support Equipment					
	4.7				Common Support Equipment					
	4.8				Operational Site Activation					
	4.9				Industrial Facilities					
	4.10				Initial Spares & Repair Parts					
	4.11				Other					

8. REMARKS

9. NAME OF PERSON TO CONTACT			10. PHONE #		11. SIGNATURE		12. DATE	
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COST BREAKDOWN REPORT Format 1 (Continued)

SECTION A

1. CONTRACTOR	2. CONTRACT	3. PROGRAM	4. REPORT PERIOD
A. NAME	A. NAME	A. NAME	A. FROM (YYMMDD)
B. LOCATION (Address and Zip Code)	B. NUMBER	B. MILESTONE EVENT	B. TO (YYMMDD)
	C. TYPE	5. DOLLARS IN	6. DATE SUBMITTED (YYMMDD)

7. SECTION B

WBS # & Level					NOMENCLATURE	LABOR HRS	LABOR \$	MATERIALS \$	ODC \$	TOTAL \$
1	2	3	4	5						
5.0					Operations & Support					
	5.1				Hardware Maintenance					
		5.1.1			Licenses/ Vendor Maintenance Agreements (COTS/SGS)					
		5.1.2			Repair Parts					
		5.1.3			Spares					
		5.1.4			Fees/Repairs					
		5.1.5			Minor Enhancements					
	5.2				Software Maintenance					
		5.2.1			Licenses/ Vendor Maintenance Agreements (COTS/SGS)					
		5.2.2			Fees					
		5.2.3			Minor Enhancements					
		5.2.4			Security Testing and Integration					
	5.3				Data Maintenance					
	5.4				Unit/Site Operations					
		5.4.1			Personnel					
		5.4.2			Infrastructure Maintenance					
		5.4.3			System Security					
		5.4.4			Recurring Training					
	5.5				Replenishment Spares					
	5.6				Consumables					
	5.7				Other					

8. REMARKS

9. NAME OF PERSON TO CONTACT	10. PHONE #	11. SIGNATURE	12. DATE
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COST BREAKDOWN REPORT Format 1 (Continued)**SECTION A**

1. CONTRACTOR	2. CONTRACT	3. PROGRAM	4. REPORT PERIOD
A. NAME	A. NAME	A. NAME	A. FROM (YYMMDD)
B. LOCATION (Address and Zip Code)	B. NUMBER	B. MILESTONE EVENT	B. TO (YYMMDD)
	C. TYPE	5. DOLLARS IN	6. DATE SUBMITTED (YYMMDD)

7. SECTION B

WBS # & Level					NOMENCLATURE	LABOR HRS	LABOR \$	MATERIALS \$	ODC \$	TOTAL \$
1	2	3	4	5						
6.0					Preprogrammed Product Improvement					
	6.1				Prime Mission Product (PMP)					
		6.1.1a			Subsystem a...w (Specify Name)					
			6.1.1ax		HWCI 1...x (Specify Name for HWCI x)					
			6.1.1az		Integration, Assembly, & Checkout of subsystems a...w HWCI's					
		6.1.2			PMP Applications Software					
			6.1.2a		Software Build a...w (Specify Name for Build)					
				6.1.2ay	CSCI 1...y (Specify Name for CSCI y)					
				6.1.2az	Integration & Checkout of Build a...w CSCI's					
			6.1.2z		Integration, Assembly, Test & Checkout of Builds					
		6.1.3			PMP Systems Software					
			6.1.3a		Software Build a...w (Specify Name for Build)					
				6.1.3ay	CSCI 1...y (Specify Name for CSCI y)					
				6.1.3az	Integration & Checkout of Build a...w CSCI's					
				6.1.3z	Integration, Assembly, Test & Checkout of Builds					
		6.1.4			Integration, Assembly, Test & Checkout of Subsystems a...w					
	6.2				Platform Integration					
	6.3				System Test & Evaluation					
	6.4				Training					
	6.5				Data					
	6.6				Peculiar Support Equipment					
	6.7				Common Support Equipment					
	6.8				Site & Facilities Mods					
	6.9				Initial Spares & Repair Parts					
	6.10				Other					
7.0					Decommission and Disposal					

8. REMARKS

9. NAME OF PERSON TO CONTACT	10. PHONE #	11. SIGNATURE	12. DATE
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FORMAT 2 - TECHNICAL REPORT						
SECTION A						
1. CONTRACTOR	2. CONTRACT	3. PROGRAM	4. REPORT PERIOD			
a. NAME	A. NAME	A. NAME	A. FROM (YY/MM/DD)			
B. LOCATION (Address and Zip Code)	B. NUMBER	B. MILESTONE EVENT	B. TO (YY/MM/DD)			
	C. TYPE	5. Dollars In:	6. DATE SUBMITTED (YY/MM/DD)			
SECTION B Computer Software Configuration Item (CSCI) or Project Name:						
7. OVERALL SCHEDULE	Date		Total Software Lines of Code (SLOC)		Total Function Points (FPs)	
	Planned	Actual	Estimated	Actual	Estimated	Actual
a. Contract Award or Date Started						
b. Software Specification Review (SSR)						
c. Preliminary Design Review (PDR)						
d. Critical Design Review (CDR)						
e. Test Readiness Review (TRR) # 1						
f. SW-to-HW Integration Completed						
g. Formal Qualification Test						
h. Initial Operational Capability (IOC)						
i. Full Operational Capability (FOC)						
SECTION C – SOFTWARE INFORMATION						
8. SW Development Std (IEEE 12207, NSA 81-1/2, etc.)	9. Application Type (Signal Proc, Database, etc.)		10. SW Function (Sensor, Processing, etc.)			
a.	a.		a.			
11. Development Method (Waterfall, Spiral, etc.)			12. Code Designed for Reuse (Yes/No)			
a.			a.			
AVERAGE YEARS OF TEAM EXPERIENCE IN:						
13. Program Language	14. Practices & Methods	15. Similar Development HW	16. Similar Deployed HW			
a.	a.	a.	a.			
SIZE PARAMETERS – Estimate at Completion		17. PRIMARY LANGUAGE (C+, PL1, etc.) {_____}	18. SECONDARY LANGUAGE (ADA, JOVIAL, etc.,) {_____}			
a. Percent of Total Code or FPs		%	%			
b. Gross Total Sources Lines of Code (SLOC) (excluding auto generated, COTS or FPs)		#	#			
c. New Manually Developed SLOC or FPs		#	#			
d. Re-Used SLOC or FPs		#	#			
e. Percent Re-Design effort for Re-Used Code or FPs		%	%			
f. Percent Re-Implementation for Re-Used Code or FPs		%	%			
g. Percent Re-Test Effort for Re-Used Code or FPs		%	%			
h. COTS - Packages or Products		#	N/A			
i. GOTS - Packages or Products		#	N/A			
Cost - CSCI or Project		Estimate	Actual			
To the right enter either the most current Estimate At Complete for this submission, or enter the actual if this is the last Contract submission. Put N/A in remaining cell.						

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FORMAT 2 SECTION D – HARDWARE INFORMATION							
All Top level Major Hardware Configuration Items (HWCI)							
19. Major HWCI CBS #	20. Nomenclature	21. Total Weight	22. Total Cubic Volume	23. Electronics Weight	24. Electronics Percent of Total Volume	25. Projected Direct Cost with G&A, or Actual Cost if Purchased Annotate actual cost as (AC) in parentheses after \$ amt.	26. Dollars In
SAMPLE							
27. REMARKS							
28. NAME OF PERSON TO CONTACT			29. PHONE #		30. SIGNATURE		31. DATE

End of DI-FNCL-80166A.