**SUMMARY OF MAJOR CHANGES TO
DOD 7000.14-R, VOLUME 2B, CHAPTER 5
"RESEARCH, DEVELOPMENT, TEST, AND
EVALUATION APPROPRIATIONS"**

All changes are denoted by blue font

**Substantive revisions are denoted by a * preceding the section,
Paragraph, table or figure that includes the revision**

Hyperlinks are denoted by _underlined, bold, italic, blue font_

PARA	EXPLANATION OF CHANGE/REVISION	PURPOSE
0503	Submissions using XML Formats	Change
050302	Research, Development, Test and Evaluation Production Delivery Schedules.	Addition
0505	Combined with Section 0504	Update
Overall	Annual updates	Refresh

TABLE OF CONTENTS

RESEARCH, DEVELOPMENT, TEST, AND EVALUATION APPROPRIATIONS

CHAPTER 5

RESEARCH, DEVELOPMENT, TEST, AND EVALUATION APPROPRIATIONS

0501   GENERAL

    050101.   Purpose

        This chapter provides instructions on budget formulation and congressional justification for Research, Development, Test, and Evaluation (RDT&E) appropriations. The following appropriations are included in RDT&E:

            - RDT&E, Army (2040A)
            - RDT&E, Navy (1319N)
            - RDT&E, Air Force (3600F)
            - RDT&E, Defense Wide (0400D)
            - Operational Test and Evaluation, Defense (0460D)

    050102.   Submission Requirements

        General guidance on submission requirements is in ***Volume 2A, Chapter 1***. Chapter 5 of this Volume provides additional specific requirements on justification material for the above appropriations. Other chapters in the Financial Management Regulation require additional exhibits. The Components will also submit any exhibits required by the Office of Management and Budget ***(OMB) Circular A-11***, Preparation and Submission of Budget Estimates.

        Military Departments and Defense Agencies will be responsible for clearing the justification material with the Washington Headquarters Services, Directorate for Office of Security Review, prior to transmittal to OMB and the congressional committees.

    050103.   Not Used

    050104.   Preparation of Material

        General guidance on format and preparation of material is presented in Volume 2A, Chapter 1. Chapter 5 of this Volume provides additional specific requirements on justification material required for RDT&E appropriations.

    050105.   References

        Volume 2A, Chapter 1, Section 010210 provides policies and definitions concerning costs that are to be financed in RDT&E.

0502   UNIFORM BUDGET AND FISCAL ACCOUNTING CLASSIFICATION

050201.   RDT&E Budget Activities

A.   The RDT&E budget activities are broad categories reflecting different types of RDT&E efforts. The definitions are provided below.

B.   Budget Activity 1, Basic Research. Basic research is systematic study directed toward greater knowledge or understanding of the fundamental aspects of phenomena and of observable facts without specific applications towards processes or products in mind. It includes all scientific study and experimentation directed toward increasing fundamental knowledge and understanding in those fields of the physical, engineering, environmental, and life sciences related to long-term national security needs. It is farsighted high payoff research that provides the basis for technological progress. Basic research may lead to: (a) subsequent applied research and advanced technology developments in Defense-related technologies, and (b) new and improved military functional capabilities in areas such as communications, detection, tracking, surveillance, propulsion, mobility, guidance and control, navigation, energy conversion, materials and structures, and personnel support. Program elements in this category involve pre-Milestone A efforts.

C.   Budget Activity 2, Applied Research. Applied research is systematic study to understand the means to meet a recognized and specific need. It is a systematic expansion and application of knowledge to develop useful materials, devices, and systems or methods. It may be oriented, ultimately, toward the design, development, and improvement of prototypes and new processes to meet general mission area requirements. Applied research may translate promising basic research into solutions for broadly defined military needs, short of system development. This type of effort may vary from systematic mission-directed research beyond that in Budget Activity 1 to sophisticated breadboard hardware, study, programming and planning efforts that establish the initial feasibility and practicality of proposed solutions to technological challenges. It includes studies, investigations, and non-system specific technology efforts. The dominant characteristic is that applied research is directed toward general military needs with a view toward developing and evaluating the feasibility and practicality of proposed solutions and determining their parameters. Applied Research precedes system specific technology investigations or development. Program control of the Applied Research program element is normally exercised by general level of effort. Program elements in this category involve pre-Milestone B efforts, also known as Concept and Technology Development phase tasks, such as concept exploration efforts and paper studies of alternative concepts for meeting a mission need.

D.   Budget Activity 3, Advanced Technology Development (ATD). This budget activity includes development of subsystems and components and efforts to integrate subsystems and components into system prototypes for field experiments and/or tests in a simulated environment. ATD includes concept and technology demonstrations of components and subsystems or system models. The models may be form, fit and function prototypes or scaled models that serve the same demonstration purpose. The results of this type of effort are

proof of technological feasibility and assessment of subsystem and component operability and producibility rather than the development of hardware for service use. Projects in this category have a direct relevance to identified military needs. Advanced Technology Development demonstrates the general military utility or cost reduction potential of technology when applied to different types of military equipment or techniques. Program elements in this category involve pre-Milestone B efforts, such as system concept demonstration, joint and Service-specific experiments or Technology Demonstrations and generally have Technology Readiness Levels of 4, 5, or 6. Projects in this category do not necessarily lead to subsequent development or procurement phases, but should have the goal of moving out of Science and Technology (S&T) and into the acquisition process within the future years defense program (FYDP). Upon successful completion of projects that have military utility, the technology should be available for transition.

       E.   <u>Budget Activity 4, Advanced Component Development and Prototypes (ACD&P).</u> Efforts necessary to evaluate integrated technologies, representative modes or prototype systems in a high fidelity and realistic operating environment are funded in this budget activity. The ACD&P phase includes system specific efforts that help expedite technology transition from the laboratory to operational use. Emphasis is on proving component and subsystem maturity prior to integration in major and complex systems and may involve risk reduction initiatives. Program elements in this category involve efforts prior to Milestone B and are referred to as advanced component development activities and include technology demonstrations. Completion of Technology Readiness Levels 6 and 7 should be achieved for major programs. Program control is exercised at the program and project level. A logical progression of program phases and development and/or production funding must be evident in the FYDP.

       F.   <u>Budget Activity 5, System Development and Demonstration (SDD)</u>. SDD programs have passed Milestone B approval and are conducting engineering and manufacturing development tasks aimed at meeting validated requirements prior to full-rate production. This budget activity is characterized by major line item projects and program control is exercised by review of individual programs and projects. Prototype performance is near or at planned operational system levels. Characteristics of this budget activity involve mature system development, integration and demonstration to support Milestone C decisions, and conducting live fire test and evaluation and initial operational test and evaluation of production representative articles. A logical progression of program phases and development and production funding must be evident in the FYDP consistent with the Department's full funding policy.

       G.   <u>Budget Activity 6, RDT&E Management Support.</u> This budget activity includes research, development, test and evaluation efforts and funds to sustain and/or modernize the installations or operations required for general research, development, test and evaluation. Test ranges, military construction, maintenance support of laboratories, operation and maintenance of test aircraft and ships, and studies and analyses in support of the RDT&E program are funded in this budget activity. Costs of laboratory personnel, either in-house or contractor operated, would be assigned to appropriate projects or as a line item in the Basic

Research, Applied Research, or ATD program areas, as appropriate. Military construction costs directly related to major development programs are included.

        H.   Budget Activity 7, Operational System Development. This budget activity includes development efforts to upgrade systems that have been fielded or have received approval for full rate production and anticipate production funding in the current or subsequent fiscal year. All items are major line item projects that appear as RDT&E Costs of Weapon System Elements in other programs. Program control is exercised by review of individual projects. Programs in this category involve systems that have received Milestone C approval. A logical progression of program phases and development and production funding must be evident in the FYDP, consistent with the Department's full funding policy.

        050202.   Establishing RDT&E Program Elements

        A.   The program element is the primary data element in the FYDP and is the major aggregation, at which RDT&E efforts are organized, budgeted and reviewed. All funding associated with a major system new start should be identified in a unique program element. Requests to establish program elements should be forwarded to Office of the Secretary of Defense (OSD) Cost Assessment and Program Evaluation (CAPE) for coordination and approval. Instructions are contained in DoD 7045.7-H, "The FYDP Program Structure Handbook."

        B.   In general, the coding symbology identifies the RDT&E budget activity for the program element. Program elements in RDT&E budget activities 1 through 6 will have "06" in the first two positions; "06"indicates it is part of Major Force Program 6, Research and Development. The third and fourth position will identify the specific budget activity (e.g., 0602 is an RDT&E budget activity 2 program element). Program elements in RDT&E budget activity 7 reflect the Major Program of the fielded system in the first two positions (e.g., "01" indicates a strategic system).

0503   INTEGRATED PROGRAM/BUDGET REVIEW SUBMISSION AND PRESIDENT'S BUDGET JUSTIFICATION SUBMISSION

        050301.   Purpose

        This section prescribes instructions for the preparation and submission of the budget estimates and the President's Budget justification materials for the RDT&E appropriations. Unless otherwise specified, these instructions apply to all RDT&E appropriations and to all budgets. See Volume 2A, Chapter 1, Section 0104, of this Regulation for specific printing requirements.

        050302.   Submission Requirements

        A.   Administrative Requirements.

1.   Classification.   Information contained in the budget requests should be unclassified. Where classified information is required in order to explain the program, the classified material will be provided under separate cover and appropriately marked.

2.   Exhibits will display the actual fiscal years (i.e., prior year (PY), fiscal year (FY) 2010, FY 2011, FY 2012, FY 2013, FY 2014, FY 2015, and FY 2016) rather than the template entries (i.e., PY, current year (CY), budget year (BY), BY+1, BY+2, BY+3, BY+4).

3.   If an amended budget is submitted, identify the revised budget exhibits accordingly.

4.   All pages will be annotated with the applicable R-1 line item number and page number within the line item (Item 1-1 of 5, 1-2 of 5, 2-1 of 1, 3-1 of 20, etc.) at the bottom center or bottom right of each page. Be consistent for all pages of the backup book.

5.   If printing the RDT&E material in one volume is impractical, the justification material can be submitted by budget activity with the S&T budget activities (BA 1 through BA 3) printed in one volume and the remaining budget activities printed in a separate volume or in individual volumes. Each volume should include an R-1 listing and a table of contents indicating the volume and page where the applicable program element can be found.

6.   Each backup book will include a discussion of performance metrics in support of requests for program resources, as prescribed in Volume 2A, Chapter 1, Section 010109. Where programs have participated with OMB in the completion of the Program Assessment Rating Tool (PART), the PART summary may be included to fulfill this requirement. Components may also use existing performance measures or create new ones in compliance with this requirement.

7.   All Service generated and Defense Agency generated budget exhibits will be created via an extended Markup Language (XML) process. The XML process will result in a PDF file with an XML file attached. The process steps are: (1) Components will create an XML file for each Program Element, based on data definitions provided in an OUSD(C) defined XML schema, (2) OUSD(C) validates the XML file via the same XML schema to ensure compliance, (3) OUSD(C) creates the final PDF version with the original XML file attached, and (4) Components review and submit directly to the OUSD(C) BES/PB site (https://bes.ousdc.osd.mil/index2.asp).   The XML schema defines the data, data format, legitimate values, and business rules.

8.   The process of creating a PDF file from a valid XML file is accomplished via the use of an OUSD(C) defined XML Style sheet. The process steps are: (1) submit an XML file to the Preview section of the OUSD(C) XML Exhibits web site (for Components capable of building an XML file from an internal system, and (2) create an R-2 exhibit manually within the Create/Edit Exhibit R-2s section of the OUSD(C) XML Exhibits website. Components are permitted to build PDF files within their internal systems using the

OUSD(C) XML Style sheet. Detail instructions, including the XML schema and XML Style sheet can be located at http://www.dtic.mil/R2.

B.   The exhibits will be aggregated in the following order for each R-1 line item and submitted in R-1 line item order. The required exhibits shall be packaged in the following order, as applicable: R-2 (PE 1), R-2a (PE 1, Project or Future Naval Capability A), R-3 (PE 1, Project or Future Naval Capability A), R-4 (PE 1, Project or Future Naval Capability A), R-2a (PE 1, Project or Future Naval Capability B), R-3 (PE 1, Project or Future Naval Capability B), R-4 (PE 1, Project or Future Naval Capability B), etc.

Arrangement of Exhibits – General
R-1   RDT&E Programs
R-2   RDT&E Budget Item Justification
R-2a   RDT&E Project Justification
R-3   RDT&E Project Cost Analysis
R-4   RDT&E Program Schedule Profile
R-4A   RDT&E Program Schedule Detail
R-5   Termination Liability in Major Acquisition Program RDT&E Contracts DD 1391
                Military Construction Project Data

Submit separately from the justification materials
R-1C   RDT&E Programs - Comparison Report

C.   Production Delivery Schedules.   For RDT&E Program Elements where a Component is requesting funding to procure incrementally funded end items (e.g., the Missile Defense Agency), Components must provide production delivery schedules for each incrementally funded end item detailed displaying each fiscal year to include the prior years, the budget years, and each outyear reflected in the Future Years Defense Program (FYDP). The **dollars** and **quantities** shall be **reflected individually** by fiscal year. Quantities shall be broken out individually and by variants, by fiscal year and month, and then cumulatively. Individual quantities and dollars must track to the R-2 and R-2a quantities and funding, procured, and requested.

D.   Facilities Exhibit. For improvements to and construction of government-owned facilities funded in RDT&E, a DD Form 1391, Military Construction Project Data, will be provided separately for each budget year project and any PY or CY projects not previously reported. These exhibits will be included with the program element justification. In addition, a copy of all DD Forms 1391 should be packaged together and a copy provided to the Office of the Under Secretary of Defense (Comptroller) (OUSD(C)) Program/Budget (P/B) Investment Directorate and to the Military Personnel and Construction Directorate. A copy of the form and the instructions are in Volume 2B, Chapter 6.

E.   MAX Schedule C.   OMB Circular No. A-11 has incorporated the requirements for this research and development exhibit into the automated MAX schedule C.

Subsequent instructions will be provided by the Office of the Director, Defense Research and Engineering, Plans and Programming Division regarding the specific requirements for this submission to OMB's MAX system.

0504   RDT&E APPROPRIATION SUBMISSION FORMATS

    050401.   Purpose

    The formats provided on the following pages reflect requirements presented in previous sections of this chapter.

    050402.   Exhibits – Program/Budget Review Submission

    050403.   Exhibits – President's Budget Request Justification

Exhibit R-1, RDT&E Programs

Department of the _____

Appropriation: _____   **Date:** _____

					TOA, $ in Millions		
	Program				Prior	Current	Budget
R-1 Line	Element			Budget	Year	Year	Year
Item No	Number	Item		Activity	Cost	Cost	Cost

Instructions - Exhibit R-1, RDT&E Programs

I. General.

   A. Unless otherwise specified, this format will be used to present the Research, Development, Test and Evaluation (RDT&E) program to:

      1. The Office of the Under Secretary of Defense (Comptroller) in support of the OSD/OMB budget review and,

      2. The Congress in support of the President's budget request.

II. RDT&E Line Item Content.

   A. The basic document for presenting RDT&E requirements is the Exhibit R-1, RDT&E Programs. The R-1 line items are program elements, which define a development effort with specific design, cost, schedule and capability parameters. All costs of basic and applied scientific research, development, test, and evaluation, including maintenance, rehabilitation, and lease/operation of facilities and equipment will be included in appropriate R-1 line items.

   B. The R-1 exhibit will contain the following information:

      1. Program element title and number. Appropriate security classification coding should be included as part of each program element title listed. All classified material should be bracketed.

      2.   Line items will be arranged in ascending program element order within each budget activity.

      3. Approved funding for the prior year (PY), the current year (CY), and budget year (BY).

      4. Summaries by (1) Budget Activities and (2) FYDP Programs.

Exhibit R-1C, RDT&E Programs - Comparison Report

The R-1C Comparison Report will provide a comparison between the last President's budget request and the current program budget review submission. The comparison should identify the changes for each RDT&E appropriation by R-1 line item.   The report should also identify appropriation and budget activity totals for each fiscal year for the PY through BY+4 timeframe. If it is necessary to submit classified data, then it should be submitted in a separate report. The unclassified report must match the total for the appropriation/account being submitted. This report will not be included in the justification material provided to the Congress.

Exhibit R-2, RDT&E Budget Item Justification: BES/PB 20xx Service/Agency											DATE: Month/Year	
APPROPRIATION/BUDGET ACTIVITY Appropriation Code: Appropriation Name BA Number: Budget Activity Title							**R-1 ITEM NOMENCLATURE** Program Element Number: Program Element Title					
COST ($ in Millions)	**FY PY**	**FY CY**	**FY BY Base**	**FY BY OCO**	**FY BY Total**	**FY BY+1**	**FY BY+2**	**FY BY+3**	**FY BY+4**	**Cost to Complete**	**Total Cost**	
Total Program Element												
Project Number: Project Title 1												
Project Number: Project Title N												

Note

Identify when a Program Element or a Project: 1) is a new start, 2) was terminated/completed, 3) was previously funded, or will be funded, in a different Program Element, or 4) has had a Title change.
For Program Element or Project transfers, include the current and previous Program Element number and title, and Project number and title, if applicable.

A. Mission Description and Budget Item Justification

The R-2 shall include a general decription and justification of the efforts included in the program element.
The R-2A shall include a detailed description and justification of the efforts included in the specific project.Every Project shall include an R-2A exhibit; including where a Project is an aggregate of Congressional Adds.
*   *An exception may be to create an R-2 without an R-2A for Single Project PEs.*
For ACAT 1D programs, identify Cost to Complete and Total Cost for the program and all projects; otherwise, the appropriate value shall be "Continuing".
An R-3 Exhibit must be provided for Budget Activity 4, 5, and 7 Programs.

			Base	OCO	Total
B. Program Change Summary ($ in Millions)	**FY PY**	**FY CY**	**FY BY**	**FY BY**	**FY BY**
Previous President's Budget					
Current President's Budget					
Total Adjustments					
Congressional General Reductions					
Congressional Directed Reductions					
Congressional Rescissions					
Congressional Adds (appropriated)					
Congressional Directed Transfers					
Reprogrammings					
SBIR/STTR Transfer					
Other Adjustment Title 1					
Other Adjustment Title N					

Congressional Add Details ($ in Millions, and includes General Reductions)	**FY PY**	**FY CY**
Project Number, Project Title 1		
Congressional Add Title:		
Congressional Add Title:		
Subtotal for Project 1		
Project Number, Project Title N		
Congressional Add Title:		
Subtotal for Project N		
Total for all Projects		

Change Summary Explanation

R-2 Schema 3.4 Template as of 5-19-2010

Exhibit R-2A, RDT&E Project Justification: BES/PB 20xx Service/Agency									DATE: Month/Year	
APPROPRIATION/BUDGET ACTIVITY					**R-1 ITEM NOMENCLATURE**				**PROJECT**	
Appropriation Code/ BA Number					Program Element Number: Program Element Title				Project Number: Project Title	
COST ($ in Millions)	**FY PY Actual**	**FY CY Estimate**	**Base FY BY Estimate**	**OCO FY BY Estimate**	**Total FY BY Estimate**	**FY BY+1 Estimate**	**FY BY+2 Estimate**	**FY BY+3 Estimate**	**FY BY+4 Estimate**	**Cost to Complete**	**Total Cost**
Project Number: Project Title											
Quantity of RDT&E Articles											

Project Articles are optional. If none are included, the Articles row is not required.

Article Quantities can be included at the Project level and/or Accomplishments/Planned Programs level.

Note

Identify when a Project: 1) is a new start, 2) was terminated/completed, 3) was previously funded, or will be funded, in a different Program Element, or 4) has had a Title change.

For Project transfers, include the current and previous Program Element number and title, and Project number and title, if applicable.

A. Mission Description and Budget Item Justification

Provide a Project overview. For BAs 1, 2 and 3, specify the technology area as defined in annual budget guidance.

Provide a description and justification. Identify the military requirement(s) that this Project will meet. Identify new start efforts for the budget year(s) within the Program Element and new start efforts since the previous President's budget. New start details shall be displayed on the R-2A rather than the R-2.

B. Accomplishments/Planned Program ($ in Millions, Article in Whole Units)".	**FY PY**	**FY CY**	**Base FY BY**	**OCO FY BY**	**Total FY BY**
Title: Accomplishment/Planned Program Title 1					
Articles					
Description:					
FY PY Accomplishments:					
FY CY Plans:					
Base FY BY1 Plans:					
OCO FY BY1 Plans:					
Total FY BY1 Plans:					
Title: Accomplishment/Planned Program Title N					
Articles					
Description:					
FY PY Accomplishments:					
FY CY Plans:					
Base FY BY1 Plans:					
OCO FY BY1 Plans:					
Total FY BY1 Plans:					

Provide a brief description using key terms of the Accomplishment and/or Planned Program. Include objectives, output or end product, and specific program name or major technology effort.

For BAs 1, 2, and 3 also include specific technology terms as defined in budget guidance or provided by the DDR&E.

Accomplishments/Planned Programs Articles are optional. If none are included, the row is not required.

Accomplishments/Planned Programs Descriptions are optional.

Congressional Add Details ($ in Millions, and includes General Reductions)	**FY PY**	**FY CY**
Congressional Add: Title 1		
FY PY Accomplishments:		
FY CY Plans:		
Congressional Add: Title N		
FY PY Accomplishments:		
FY CY Plans:		
Congressional Add Subtotal		

C. Other Program Funding Summary ($ in Millions)

Line Item	FYPY	FYCY	Base FYBY	OCO FYBY	Total FYBY	FYBY+1	FYBY+2	FYBY+3	FYBY+4	Cost to Complete	Total Cost
Line Item #/Title											

Note: P-1 Procurement Line Item No./Name; C-1 MilCon Project No./Name; Related RDTE: PE Number/Name (it is not necessary to include the related RDT&E funding profile unless there is a funding dependency between the RDT&E programs).

D. Acquisition Strategy

Note: Acquisition Strategy is NOT required for BA 1, 2, 3, and 6.

E. Performance Metrics

Narrative description

F. Major Performers

Narrative description

Name	Description	Location	Award Date	Funding
Name	Description	Location	YYYY/MM	
Name	Description	Location	YYYY/MM	
Name	Description	Location	YYYY/MM	
Name	Description	Location	YYYY/MM	

Major Performers is required for the BES cycle only.

List major contractors, universities, colleges, government facilities, federally funded research and development centers, laboratories, centers, or other organizations contributing to this effort through BY 1.

List only those who were primary recipients of funds (e.g., received 15% or over $10 million, whichever is less).

Include name or titles, locations, and brief description of work performed. Include actual or projected award date (month/year).

Tabular data is optional, and can be included in addition to a general description.

Instructions
Exhibit R-2, RDT&E Budget Item Justification
Exhibit R-2a, RDT&E Budget Item Justification (Project)

General. An Exhibit R-2 shall be prepared for each program element. An Exhibit R-2a shall be prepared for each project, even if there is only one project and even if a project is funded only in a Prior Year (PY) and/or a Current Year (CY), regardless of funding amount. To provide full funding visibility, every program, project, and activity **specifically added by Congress** to the President's Budget Request (a.k.a. Congressional Adds) shall be identified within an Exhibit R-2a. The programs, projects, and activities may be treated as individual projects, grouped, but separately identified, in one or more "Congressional Adds" projects, and/or included within "core" projects. Classified material will be submitted separately.

All funding within any R-exhibit will be expressed in millions, with three decimal places, unless specifically noted otherwise.

Care should be taken to see that exhibits are clear and concise. Abbreviations shall be identified on the page on which they occur.

These pages shall be printed on 8 1/2 by 11-inch paper in landscape format.

Date. Include the month and year of submission of the exhibit. If an Amended Budget is submitted, identify the date of the revised submission.

Exhibit R-2 RDT&E Budget Item Justification. Identify the Budget Cycle/Budget Year/Service Agency Name. Identify BES or PB for Budget Cycle, the Budget Year, and Service Agency Name. Information must match the PRCP (R-1) data base lock position.

Appropriation/Budget Activity. Identify Appropriation Code (Treasury Account Symbol) and Name/Budget Activity Number and Title.   Identify the appropriation and budget activity. Information must match the RDT&E PRCP (R-1) data base lock position.

R-1 Item Nomenclature/Title (Program Element Name). Identify the name of the R-1 line item. Information must match the RDT&E PRCP (R-1) data base lock position.

Program Element Number. Identify the program element. Information must match the RDT&E PRCP (R-1) data base lock position.

Project Number and Nomenclature. Identify the project number and nomenclature.

Resource Summary. The Exhibit R-2 shall include a fiscal resource summary total for the total program element and, if there is more than one project in that program element, a fiscal resource summary for each project in that program element. Ensure the funding matches the RDT&E PRCP (R-1) data base lock position and that total costs for Acquisition Category 1 programs are consistent with Selected Acquisition Reports.

For ACAT 1D programs, identify Cost to Complete and Total Cost for the program and all projects; otherwise, the appropriate value shall be "Continuing". The XML process will automatically insert "Continuing" if no data is submitted.

RDT&E Articles (R-2a only). Identify the test articles (engineering development models, test articles, low rate initial production test article, government furnished equipment articles, etc.) that are

being procured and why. Test Articles can be identified for a project and/or for activities identified in Accomplishments/Planned Programs.

Program Element and Project Notes. Identify when a program element or project is: (1) a new start, (2) was terminated/completed, (3) was previously funded, or (4) will be funded in a different program element, or Title changes.

For program element or project transfers, include the current and previous program element number and names, and projected number and name if applicable.

Mission Description and Budget Item Justification. The R-2 will include a description and justification of the efforts included in the program element. The R-2a will include a description and justification of the efforts included in the specific project.

Program Change Summary. If there have been changes to the total funding, schedule, or technical parameters since the previous President's budget submission, the Exhibit R-2 shall include a concise narrative summary explaining the changes in the total program element for PY, CY, and BY. Further adjustments will be broken out into the following categories:

Congressional General Reductions
Congressional Directed Reductions
Congressional Rescissions
Congressional Adds
Congressional Directed Transfers
Reprogrammings
SBIR/STTR Transfers
Total Other Adjustments – (unique titles may be added to describe the change)

Instructions - Exhibits R-2 and R-2a (Continued)

Congressional Add Details (Exhibit R-2). Each Congressional Add will be identified separately by project and may be included as: (1) an individual project, (2) as groups in one or more "Congressional Add" projects, and/or (3) within "core" projects. The title (provided by Congress) and the funding for PY and CY will be listed in a bullet format. Congressional Adds should include only funding provided by Congress.

Change Summary Explanation. Provide a concise narrative summary explaining the changes in the total program element.

Accomplishments/Planned Programs (Exhibit R-2a). Provide a concise narrative summary and associated funding for each project for PY, CY, and BY in a bullet format. The total funding reflected should match the total project funding.

Other Program Funding Summary (Exhibit R-2a). Development projects often lead to subsequent development phases, production, and military construction. Also, some projects may depend on concurrent development in other projects. These related efforts and the funding profiles for other appropriation efforts shall be identified by appropriation, budget activity, R-1 line item and program element, and P-1 line item title and number. If there are funding dependencies among related research, development, test, and evaluation programs, then the funding profiles for these related programs shall be included.

Acquisition Strategy (Exhibit R-2a). An explanation of acquisition, management, and contracting strategies shall be provided for each project. This section is not required for Program Elements in Budget Activities 1, 2, 3 and 6.

Major Performers (Exhibit R-2a). This data is required for the program budget review submission only.

Performance Metrics: See sections 010109 and 050302.A.6

Exhibit R-3, RDT&E Project Cost Analysis: BES/PB 20xx Service/Agency | **DATE:** Month/Year

APPROPRIATION/BUDGET ACTIVITY	R-1 ITEM NOMENCLATURE	PROJECT NAME AND NUMBER
Appropriation Code/BA Number	Program Element Number: Program Element Name	Project Number: Project Title

Product Development ($in Millions)

	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	FY CY Cost	FY CY Award Date	FY BY Base Cost	FY BY Base Award Date	FY BY OCO Cost	FY BY OCO Award Date	FY BY Total Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Cost Category Item 1	See notes below	Activity/Location			Mon/Year		Mon/Year		Mon/Year				
Cost Category Item N	See notes below	Activity/Location			Mon/Year		Mon/Year		Mon/Year				
Subtotal:													

Remarks: Typical Cost Categories are: Primary Hardware Development, Ancillary Hardware Development, Systems Engineering, Licenses, Tooling, GFE, and Award Fees.

Support ($in Millions)

	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	FY CY Cost	FY CY Award Date	FY BY Base Cost	FY BY Base Award Date	FY BY OCO Cost	FY BY OCO Award Date	FY BY Total Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Cost Category Item 1	See notes below	Activity/Location			Mon/Year		Mon/Year		Mon/Year				
Cost Category Item N	See notes below	Activity/Location			Mon/Year		Mon/Year		Mon/Year				
Subtotal:													

Remarks: Typical Cost Categories are: Development Support, Software Development, Training Development, Integrated Logistics Support, Configuration Management, Technical Data, and GFE.

Test & Evaluation ($in Millions)

	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	FY CY Cost	FY CY Award Date	FY BY Base Cost	FY BY Base Award Date	FY BY OCO Cost	FY BY OCO Award Date	FY BY Total Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Cost Category Item 1	See notes below	Activity/Location			Mon/Year		Mon/Year		Mon/Year				
Cost Category Item N	See notes below	Activity/Location			Mon/Year		Mon/Year		Mon/Year				
Subtotal:													

Remarks: Typical Cost Categories are: Developmental Test & Evaluation, Operational Test & Evaluation, Tooling, and GFE.

Management ($in Millions)

	Contract Method & Type	Performing Activity & Location	Total Prior Years Cost	FY CY Cost	FY CY Award Date	FY BY Base Cost	FY BY Base Award Date	FY BY OCO Cost	FY BY OCO Award Date	FY BY Total Total Cost	Cost To Complete	Total Cost	Target Value of Contract
Cost Category Item 1	See notes below	Activity/Location			Mon/Year		Mon/Year		Mon/Year				
Cost Category Item N	See notes below	Activity/Location			Mon/Year		Mon/Year		Mon/Year				
Subtotal:													

Remarks: Typical Cost Categories are: Contractor Engineering Support, Government Engineering Support, Program Management Support, Program Management Personnel, Travel, Labor (Research Personnel), and Overhead.

	CY Cost		Cost		Total Cost	Cost	Total Cost	Cost To Complete	Total Cost	
Project Total Cost:										

Remarks:

An R-3 Exhibit shall be provided for BudgetActivityNumber 4, 5, or 7 PEs.
The Project Total Cost shall equal the Project Cost on the R-2A.
Contract Method may be any one of: C, SS, TBD, or Various.
Contract Type may be any one of: CPAF, DPFF, DPIF, FP, FFP, FPI, TBD, or Various.
Funding Vehicle may be any one of: Allot, BPA, FFRDC, MIPR, PO, Reqn, RO, TM, or Various.

Instructions - Exhibit R-3, RDT&E Project Cost Analysis

General: The R-3 exhibit is required for ACAT 1D programs funded in budget activities 4, 5, and 7 only, regardless of funding amount.   A separate R-3 exhibit shall be prepared for each project in an applicable R-1 line item.

These exhibits shall be printed on 8 1/2 by 11 inch paper in landscape format.   Classified material shall be submitted separately.

All funding within any R-exhibit will be expressed in millions, with three decimal places.

Date: Identify the month and year of submission of the exhibit. If an Amended Budget is submitted, identify the date of the revised submission.

Appropriation Code (Treasury Account Symbol)/ and Name/Budget Activity Number and Title. Identify the appropriation and budget activity. This information must match the PRCP (R-1) lock position.

R-1 Item Nomenclature/Title (Program Element Name): Identify the name of the R-1 line item as identified in PRCP (R-1) lock position.

Program Element Number: The Program Element must be unique. An R-2 Exhibit with a Budget Activity Number that is different from the previous years should include PY and CY information within the current R-2 Exhibit.

Project Number and Nomenclature: Identify the project number and nomenclature as identified in PRCP (R-1) lock position.

Project Cost Categories. Cost information shall be provided for each project regardless of funding amount, with project costs broken down into cost categories. Total of all project costs shall equal the project funding for any funding years. Sample cost categories shown are typical of various types of defense research and development efforts. Costs shall be distributed among categories in accordance with the project work breakdown structure (WBS) or other categories used by the project office in project execution. The illustrated sample cost categories may be used if these correspond to the project's structure; however, there is no requirement to use cost categories other than those used by the project office in project execution. Sample cost categories not used in project execution need not be included in the exhibit for that project. If the program office tracks efforts by major contract, then display the information accordingly. The cost categories shall be separated into 4 information categories as follows:

Product Development. Efforts associated with the delivery of a fully integrated system that are in direct support of the system and essential to the development, training, operation, and maintenance of the system. Include all efforts directly supporting system development and delivery to include primary contracts, major component contracts, contracted services, in-house support, and government furnished property. Contracts or government efforts greater than $1 million in any displayed budget year shall be reported individually.

Support Costs. Efforts not directly associated with the delivery of the primary product, including technical engineering services, research studies, and technical support not related directly to product development or to testing and evaluation. Contracts or government efforts greater than $1 million in any displayed budget year shall be reported individually.

Instructions - Exhibit R-3, RDT&E Project Cost Analysis (Continued)

Test and Evaluation. Efforts (other than those included within contracts or government efforts included above) associated with engineering or support activities to determine the acceptability of a system, subsystem, or component. Contracts or government efforts greater than $1 million in any displayed budget year shall be reported individually.

Management Services. Efforts associated with services provided in support of program office management and administration processes such as: program oversight, resource justification, budget and programming, milestone and schedule tracking. Federally Funded Research and Development Centers (FFRDCs) are in this category. Contracts or government efforts greater than $1 million in any displayed budget year shall be reported individually.

Government Furnished Property. Property, such as hardware, software, or information, which the government is contractually obligated to furnish a contractor or government performing activity shall be identified. Provide a brief identification of the item to be provided, and the contractor or government activity providing the item. Provide estimated date that the government furnished property will be provided to the requiring contractor or activity. Provide the name of the requiring contractor or activity.

Award Fees. Identify amounts budgeted for award fees and indicate contractor performance and percentage of award fees actually awarded in past award fee periods.

Contract Method/Type or Funding Vehicle. The following codes shall be used to identify the contract method, contract type, and funding vehicle:

Contract Type   Contract Method
FP   - Fixed Price   SS   -Sole Source
CPIF   - Cost Plus Incentive Fee   C   -Competitive
FPI   - Fixed Price Incentive   TBD – To Be Determined
CPAF - Cost Plus Award Fee
CPFF - Cost Plus Fixed Fee
FFP   - Firm Fixed Price
TBD   -To Be Determined
VAR   -Various

Funding Vehicle (when a government agency is the performing activity)
MIPR   - Military Interdepartmental Purchase Request
PO   - Project Order
WR   - Work Request
Allot   - Allotment
Reqn   - Requisition
BPA   - Blanket Purchase Agreement
FFDC   - Federally Funded Research and Development Center
VAR   -Various

Performing Organizations. Identify each contractor and government or performing activity and the location for each effort greater than $1 million in any of the displayed years.

Total PY Cost. Provide actual amounts for the total of all years before the current year (CY).

CY - BY. Provide actual or budget amounts for each year for current year (CY), budget year (BY).

Award or Obligation Date. Provide actual or estimated date of contract award or the estimated date that funds will be obligated to government performing activities.

To Complete. Provide the amount required to complete this effort beyond.

Total Cost. Provide the cumulative total of all budgeted funds for the program (including funds obligated/budgeted for PY, CY, BY and to complete). Provide a comment in the Remarks section when the Project Office Estimate at Completion (EAC) differs from the total cost. Also provide a comment when the Performing Activity EAC differs from the Project Office EAC.

Target Value of Contract. Identify the target value of the contract and explain those cases where total cost differs significantly. For example, if the budget is at ceiling value of the contract vice target value or if budget is "program manager's best estimate" vice target value, then explain.

Exhibit R-4, RDT&E Program Schedule Profile	Date: (Month and Year)

Appropriation/Budget Activity	Program Element Number and Name	Project Number and Name

Fiscal Year	PY				CY				BY				BY+1				BY+2				BY+3				BY+4					
	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4		

MS II   MS C   FRP

Acquisition Milestones

Prototype Phase

First Deployment

Radar System Development

ABC Radar Delivery

Sample Format – Agency Unique

Software Delivery
  1XXSW
  2XXSW

(U) T&E Milestones

Flight Test Developmt Test Continuous DT

DT IIA   DT IIBI   DT IIB2   DT IIC   TECHEVAL

Production Milestones
  LRIP I   FY BY2
  LRIP II   FY BY2+1
  FRP   FY BY2+2

LRIP I   OT IIC OPEVAL

OT I   LRIP II   OT BI

FRP   FRP Start

Deliveries

Lot 24 (36)   Lot 25 (42)   Lot 26 (42)   Lot 27 (42)   Lot 28 (42)   Lot 29 (42)   Lot 30 (42)

R-1 Line Item No. XX

(Page X of X)   **R-4 Program Schedule Profile**

Exhibit R-4A, RDT&E Project Cost Analysis: BES/PB 20xx Service/Agency			**DATE:** Month/Year		
APPROPRIATION/BUDGET ACTIVITY	**R-1 ITEM NOMENCLATURE**		**PROJECT NUNBER AND Title**		
Appropriation Code/BA Number	Program Element Number: Program Element Title		Project Number: Project Title		
	Schedule Details				
		Start		**End**	
Event	**Quarter**	**Year**	**Quarter**	**Year**
Event Title	Q	YYYY	Q	YYYY
Event Title	Q	YYYY	Q	YYYY
Event Title	Q	YYYY	Q	YYYY
Event Title	Q	YYYY	Q	YYYY
Event Title	Q	YYYY	Q	YYYY
Event Title	Q	YYYY	Q	YYYY
Event Title	Q	YYYY	Q	YYYY
Event Title	Q	YYYY	Q	YYYY
Event Title	Q	YYYY	Q	YYYY
Event Title	Q	YYYY	Q	YYYY
Event Title	Q	YYYY	Q	YYYY
Event Title	Q	YYYY	Q	YYYY
Event Title	Q	YYYY	Q	YYYY
Event Title	Q	YYYY	Q	YYYY
Event Title	Q	YYYY	Q	YYYY
Event Title	Q	YYYY	Q	YYYY

Within a Schedule Detail, the Start and End elements must be chronologically correct (value of Start <= value of End).
Within a Schedule Detail, the Start and End elements cannot refer to years before the PriorYear and after the last budget year (BudgetYear 5).

Instructions -
Exhibit R-4, RDT&E Schedule Profile
Exhibit R-4a, RDT&E Schedule Detail

General: The R-4 and R-4a exhibits are required only for all programs or projects funded **in budget activities 4, 5, and 7 only**. Separate R-4 and R-4a exhibits shall be prepared for each project in an applicable R-1 line item.

These exhibits shall be printed on 8 1/2 by 11 inch paper in landscape format. If a program element is not divided into projects, then the program element itself is defined as a project for purposes of submitting R-4 and R-4a exhibits, and the exhibits and instructions apply to the entire program element. Classified material shall be submitted separately.

Date: Identify the month and year of submission of the exhibit. If an Amended Budget is submitted, identify the date of the revised submission.

Appropriation Code (Treasury Account Symbol) and Name/Budget Activity Number and Title. Identify the appropriation and budget activity. The budget activity must match the RDT&E service annex and data base lock position.

R-1 Item Nomenclature: Identify the name of the R-1 line item as identified in PRCP (R-1) lock position.

Program Element Number and Name: Identify the number and nomenclature of the program element as identified in PRCP (R-1) lock position.

Project Number and Nomenclature: Identify the project number and nomenclature on each page as identified in PRCP (R-1) lock position.

For the R-4, Schedule Profile, provide a schematic display of major program milestones that reflect engineering milestones, acquisition approvals, test and evaluation events, and other key milestones for the program events. Cover the program years not just the budget year. Stub entries should be tailed to the events and activities of the reported program. Congressional 'staffer day' briefing formats are acceptable. Software for this display should be embedded for web site formatting.

For the R-4a, Schedule Detail, provide a tabular display of the major program milestones identified on the R-4 as well as any additional programmatic events that contribute to and support the schedule profile identified on the R-4.

Exhibit R-5, RDT&E Budget Item Justification: BES/PB 20xx Service/Agency				**DATE:** Month/Year		
APPROPRIATION/BUDGET ACTIVITY Appropriation Code/ BA Number				**R-1 ITEM NOMENCLATURE** Program Element Number: Program Element Name		
COST ($ in Millions)	**FY PY Actual**	**FY CY**	**FY BY**	**FY BY+1**	**FY BY+2**	**FY BY+3**	**FY BY+4**
Program Termination Liability							
Remarks:							

For all ACAT I programs with RDT&E funding, indicate the funds, by year, budgeted for termination liability

If not budgeted, provide the appropriate waiver authority.

For programs with waiver authority, identify the amounts on the contract, by year.

This exhibit is to be submitted for the Budget Estimates Submission only and is not required for the congressional justification materials.

Note: Statutory Waivers. The Department is not required to budget for, or obligate funds sufficient to cover, termination liability in connection with an incrementally-funded RDT&E contract if Congress has expressed exempted the program or contract from that requirement. When this situation arises, however, the budget exhibits for the program shall clearly indicate the value of the unfunded termination liability by year for the current year, budget year, and the out years covered by the FYDP. (DoD Financial Management Regulation Volume 2A, Chapter 1, October 2008)

Instructions –

Exhibit R-5: Termination Liability in Major Acquisition Program RDT&E Contracts
General: Components will report the funds budgeted for termination liability within ACAT I RDT&E programs.   Guidance for budgeting for termination liability on incrementally funded RDT&E contracts is found in Volume 2A, Chapter 1, Section 010214.   As applicable, identify the funded levels specified in the contract by year. If termination liability funding is <u>not</u> budgeted, provide a copy of the appropriate waiver authority