



## Selected Acquisition Report (SAR)

RCS: DD-A&T(Q&A)823-503



### **Joint Direct Attack Munition (JDAM)**

As of FY 2017 President's Budget

Defense Acquisition Management  
Information Retrieval  
(DAMIR)

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## Common Acronyms and Abbreviations for MDAP Programs

Acq O&M - Acquisition-Related Operations and Maintenance  
ACAT - Acquisition Category  
ADM - Acquisition Decision Memorandum  
APB - Acquisition Program Baseline  
APPN - Appropriation  
APUC - Average Procurement Unit Cost  
\$B - Billions of Dollars  
BA - Budget Authority/Budget Activity  
Blk - Block  
BY - Base Year  
CAPE - Cost Assessment and Program Evaluation  
CARD - Cost Analysis Requirements Description  
CDD - Capability Development Document  
CLIN - Contract Line Item Number  
CPD - Capability Production Document  
CY - Calendar Year  
DAB - Defense Acquisition Board  
DAE - Defense Acquisition Executive  
DAMIR - Defense Acquisition Management Information Retrieval  
DoD - Department of Defense  
DSN - Defense Switched Network  
EMD - Engineering and Manufacturing Development  
EVM - Earned Value Management  
FOC - Full Operational Capability  
FMS - Foreign Military Sales  
FRP - Full Rate Production  
FY - Fiscal Year  
FYDP - Future Years Defense Program  
ICE - Independent Cost Estimate  
IOC - Initial Operational Capability  
Inc - Increment  
JROC - Joint Requirements Oversight Council  
\$K - Thousands of Dollars  
KPP - Key Performance Parameter  
LRIP - Low Rate Initial Production  
\$M - Millions of Dollars  
MDA - Milestone Decision Authority  
MDAP - Major Defense Acquisition Program  
MILCON - Military Construction  
N/A - Not Applicable  
O&M - Operations and Maintenance  
ORD - Operational Requirements Document  
OSD - Office of the Secretary of Defense  
O&S - Operating and Support  
PAUC - Program Acquisition Unit Cost

PB - President's Budget  
PE - Program Element  
PEO - Program Executive Officer  
PM - Program Manager  
POE - Program Office Estimate  
RDT&E - Research, Development, Test, and Evaluation  
SAR - Selected Acquisition Report  
SCP - Service Cost Position  
TBD - To Be Determined  
TY - Then Year  
UCR - Unit Cost Reporting  
U.S. - United States  
USD(AT&L) - Under Secretary of Defense (Acquisition, Technology and Logistics)

## Program Information

**Program Name**

Joint Direct Attack Munition (JDAM)

**DoD Component**

Air Force

**Joint Participants**

Navy

## Responsible Office

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**Date Assigned:** June 15, 2015

## References

**SAR Baseline (Production Estimate)**

Defense Acquisition Executive (DAE) Approved Acquisition Program Baseline (APB) dated March 23, 2001

**Approved APB**

Defense Acquisition Executive (DAE) Approved Acquisition Program Baseline (APB) dated June 30, 2015

## Mission and Description

The Joint Direct Attack Munition (JDAM) program is a joint Air Force/Navy program with the Air Force as the lead acquisition service. Designated Acquisition Category IC, this program upgrades the existing inventory of general purpose bombs (MK-84, BLU-109, MK-82 and MK-83) by integrating the bombs with a field installed guidance kit using a Global Positioning System Aided Inertial Navigation System. JDAM provides an accurate, adverse weather capability. JDAM is integrated with the B-52H, B-2A, B-1B, F-16C/D, F/A-18A+/C/D/E/F, F-15E, A-10C, AV-8B and F-22A aircraft. Follow-on integration with the MQ-9 and F-35 Joint Strike Fighter are in progress.

## Executive Summary

The Government reached a settlement with Boeing on a final contract price on November 6, 2015 for the Lot 18-22 Indefinite Delivery/Indefinite Quantity contract, and is now working to definitize the contract and increase the current production capacity ceiling from 15,000 tail kits per lot to 36,500 tail kits per lot.

An updated APB was approved on June 30, 2015, and is reflected in this document. The new APB cleared a breach for exceeding total Procurement dollars due to continued JDAM demand over the life of the program.

There are no significant software-related issues with the program at this time.

## Threshold Breaches

### APB Breaches

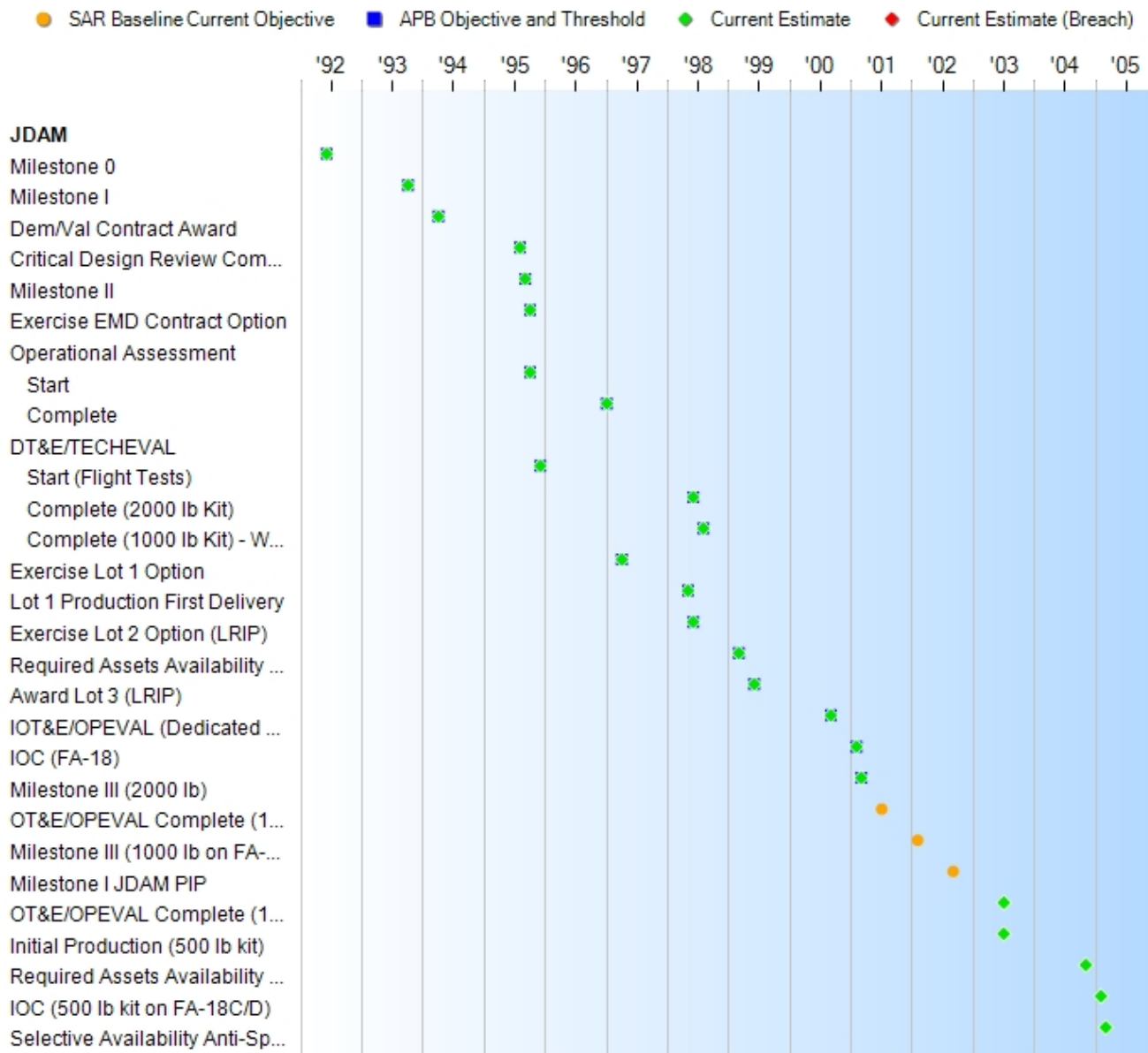
- Schedule
- Performance
- Cost
  - RDT&E
  - Procurement
  - MILCON
  - Acq O&M
- O&S Cost
- Unit Cost
  - PAUC
  - APUC

### Nunn-McCurdy Breaches

- Current UCR Baseline
  - PAUC None
  - APUC None
- Original UCR Baseline
  - PAUC None
  - APUC None



# Schedule



Schedule Events				
Events	SAR Baseline Production Estimate	Current APB Production Objective/Threshold		Current Estimate
Milestone 0	Jun 1992	Jun 1992	Jun 1992	Jun 1992
Milestone I	Oct 1993	Oct 1993	Oct 1993	Oct 1993
Dem/Val Contract Award	Apr 1994	Apr 1994	Apr 1994	Apr 1994
Critical Design Review Complete	Aug 1995	Aug 1995	Aug 1995	Aug 1995
Milestone II	Sep 1995	Sep 1995	Sep 1995	Sep 1995
Exercise EMD Contract Option	Oct 1995	Oct 1995	Oct 1995	Oct 1995
<b>Operational Assessment</b>				
Start	Oct 1995	Oct 1995	Oct 1995	Oct 1995
Complete	Mar 1997	Jan 1997	Jan 1997	Jan 1997
<b>DT&amp;E/TECHEVAL</b>				
Start (Flight Tests)	Oct 1995	Dec 1995	Dec 1995	Dec 1995
Complete (2000 lb Kit)	Dec 1997	Jun 1998	Jun 1998	Jun 1998
Complete (1000 lb Kit) - Weapon Only	Feb 1998	Aug 1998	Aug 1998	Aug 1998
Exercise Lot 1 Option	Apr 1997	Apr 1997	Apr 1997	Apr 1997
Lot 1 Production First Delivery	Apr 1998	May 1998	May 1998	May 1998
Exercise Lot 2 Option (LRIP)	Apr 1998	Jun 1998	Jun 1998	Jun 1998
Required Assets Availability (AF)	Mar 1999	Mar 1999	Mar 1999	Mar 1999
Award Lot 3 (LRIP)	Jun 1999	Jun 1999	Jun 1999	Jun 1999
IOT&E/OPEVAL (Dedicated 2000 lb Kit) Complete	Sep 2000	Sep 2000	Sep 2000	Sep 2000
IOC (FA-18)	Nov 2000	Feb 2001	Feb 2001	Feb 2001
Milestone III (2000 lb)	Nov 2000	Mar 2001	Mar 2001	Mar 2001
OT&E/OPEVAL Complete (1000 lb Kit/FA-18C/D)	Jul 2001	N/A	N/A	N/A
Milestone III (1000 lb on FA-18C/D)	Feb 2002	N/A	N/A	N/A
Milestone I JDAM PIP	Sep 2002	N/A	N/A	N/A
OT&E/OPEVAL Complete (1000 lb Kit/FA-18C/D)	N/A	Jul 2003	Jul 2003	Jul 2003
Initial Production (500 lb kit)	N/A	Jul 2003	Jul 2003	Jul 2003
Required Assets Availability (RAA) (500 lb on B-2)	N/A	Nov 2004	Nov 2004	Nov 2004
IOC (500 lb kit on FA-18C/D)	N/A	Feb 2005	Feb 2005	Feb 2005
Selective Availability Anti-Spoofing Module (SAASM)/GPS Anti-Jam Production Award	N/A	Mar 2005	Mar 2005	Mar 2005

### Change Explanations

None

## Acronyms and Abbreviations

AF - Air Force

Dem/Val - Demonstration/Validation

DT&E - Development Test and Evaluation

GPS - Global Positioning System

IOT&E - Initial Operational Test and Evaluation

lb - Pound

OPEVAL - Operational Evaluation

OT&E - Operational Test and Evaluation

PIP - Product Improvement Program

TECHEVAL - Technical Evaluation

## Performance

Performance Characteristics				
SAR Baseline Production Estimate	Current APB Production Objective/Threshold	Demonstrated Performance	Current Estimate	
<b>Weather Capability</b>				
Adverse	Adverse	(T=O) Adverse	Adverse	Adverse
<b>Accuracy (CEP) (Meters)</b>				
<b>GPS Available, Impact Angles &gt; 60 Deg</b>				
13 Horizontal Targets	5 Horizontal targets	13	4.3	5 Horizontal Targets
<b>Inflight Re-targeting Capability (captive carry)</b>				
Yes	Yes	(T=O) Yes	Yes	Yes
<b>Carrier Operability</b>				
Yes	Yes	(T=O) Yes	Yes	Yes
<b>Warhead Compatibility</b>				
MK-82/BLU-111, MK-83, Improved 1000-lbs, BLU-113/116/117	MK-82/BLU-111, MK-83, Improved 1000-lbs, BLU-113/116/117	BLU-109, MK-84, MK-83 (F-22)	BLU-109, MK-84, MK-83 (F-22), MK-82	BLU-109, MK-84, MK-83 (F-22), MK-82
<b>Aircraft Compatibility</b>				
<b>Bomber</b>				
B-1B, B-2	B-1B, B-2	B-52H	Yes	B-52H, B-1B, B-2
<b>Fighter Attack</b>				
F-16C/D, F/A-18E/F, F-117A, F-15E, F-14A/B/D, P-3, S-3, JSF, A-10	F-16C/D, F/A-18E/F, F-117A, F-15E, F-14A/B/D, P-3, S-3, JSF, A-10	F/A-18C/D, F-22 (MK-83), AV-8B & F/A-18C/D (MK-83)	Yes	F-16C/D, F-117, F/A-18A+/C/D/E/F, F-15E, AV-8B, A-10, F-22A
<b>Mission Reliability</b>				
.90	.90	(T=O) .90	.983	.90
<b>JDAM PIP Accuracy (CEP) (Meters)</b>				
3	N/A	N/A	N/A	N/A
<b>JDAM PIP Weather Capability</b>				
Adverse	N/A	N/A	N/A	N/A
<b>JDAM PIP Warhead Compatibility</b>				
MK-82, MK-83	N/A	N/A	N/A	N/A
<b>Interoperability</b>				
N/A	Satisfy 100% of critical IERs	(T=O) Satisfy 100% of critical IERs	Satisfied	Satisfied

**Requirements Reference**

ORD dated March 10, 2001

**Change Explanations**

None

**Acronyms and Abbreviations**

CEP - Circular Error Probable

Deg - Degree

GPS - Global Positioning System

IER - Information Exchange Requirement

JSF - Joint Strike Fighter

lbs - Pounds

PIP - Product Improvement Program

## Track to Budget

### RDT&E

Appn	BA	PE		
Navy	1319	05	0604618N	
	<b>Project</b>		<b>Name</b>	
	2137		JDAM	(Sunk)
Air Force	3600	05	0604618F	
	<b>Project</b>		<b>Name</b>	
	3890		JDAM	(Sunk)
Air Force	3600	04	0604618F	
	<b>Project</b>		<b>Name</b>	
	641200		JDAM Development & Prototyping	(Sunk)
Air Force	3600	07	0604618F	
	<b>Project</b>		<b>Name</b>	
	653891		M-Code Integration	
	674138		JDAM Development	

### Procurement

Appn	BA	PE		
Navy	1508	01	0204162N	
	<b>Line Item</b>		<b>Name</b>	
	0145		General Purpose Bombs	(Shared)
Navy	1508	01	0206138M	
	<b>Line Item</b>		<b>Name</b>	
	0148		JDAM	(Sunk)
Navy	1508	01	0204162N	
	<b>Line Item</b>		<b>Name</b>	
	0148		JDAM	(Sunk)
Air Force	3011	01	0207583F	
	<b>Line Item</b>		<b>Name</b>	
	353620		JDAM	

## Cost and Funding

### Cost Summary

Total Acquisition Cost							
Appropriation	BY 1995 \$M			BY 1995 \$M	TY \$M		
	SAR Baseline Production Estimate	Current APB Production Objective/Threshold		Current Estimate	SAR Baseline Production Estimate	Current APB Production Objective	Current Estimate
RDT&E	490.3	572.8	630.1	610.3	517.3	602.3	658.3
Procurement	1810.0	6091.9	6701.1	6347.4	2089.4	7861.2	8440.0
Flyaway	--	--	--	5924.4	--	--	7891.4
Recurring	--	--	--	5922.6	--	--	7888.7
Non Recurring	--	--	--	1.8	--	--	2.7
Support	--	--	--	423.0	--	--	548.6
Other Support	--	--	--	423.0	--	--	548.6
Initial Spares	--	--	--	0.0	--	--	0.0
MILCON	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Acq O&M	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total	2300.3	6664.7	N/A	6957.7	2606.7	8463.5	9098.3

#### Current APB Cost Estimate Reference

Procurement costs and RDT&E costs for this APB are based on the FY 2016 PB dated February 19, 2015 and the O&S cost are based on an ICE dated August 28, 2014

#### Confidence Level

Confidence Level of cost estimate for current APB: 50%

A mathematically derived confidence level was not computed for this Life-Cycle Cost Estimate (LCCE). This LCCE represents the expected value, taking into consideration relevant risks, including ordinary levels of external and unforeseen events. It aims to provide sufficient resources to execute the program under normal conditions encountering average levels of technical, schedule, and programmatic risk and external influence.

Total Quantity			
Quantity	SAR Baseline Production Estimate	Current APB Production	Current Estimate
RDT&E	630	804	804
Procurement	88435	321182	355445
Total	89065	321986	356249

## Cost and Funding

### Funding Summary

Appropriation Summary									
FY 2017 President's Budget / December 2015 SAR (TY\$ M)									
Appropriation	Prior	FY 2016	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021	To Complete	Total
RDT&E	602.3	0.0	9.9	14.9	31.2	0.0	0.0	0.0	658.3
Procurement	5669.5	559.5	777.2	256.0	346.0	423.2	408.6	0.0	8440.0
MILCON	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Acq O&M	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
PB 2017 Total	6271.8	559.5	787.1	270.9	377.2	423.2	408.6	0.0	9098.3
PB 2016 Total	6273.2	579.1	354.1	245.5	330.0	386.9	0.0	0.0	8168.8
Delta	-1.4	-19.6	433.0	25.4	47.2	36.3	408.6	0.0	929.5

Quantity Summary										
FY 2017 President's Budget / December 2015 SAR (TY\$ M)										
Quantity	Undistributed	Prior	FY 2016	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021	To Complete	Total
Development	804	0	0	0	0	0	0	0	0	804
Production	0	242380	23560	33953	9781	13559	16604	15608	0	355445
PB 2017 Total	804	242380	23560	33953	9781	13559	16604	15608	0	356249
PB 2016 Total	804	242024	20425	11649	7678	10127	11450	0	0	304157
Delta	0	356	3135	22304	2103	3432	5154	15608	0	52092



## Cost and Funding

### Annual Funding By Appropriation

Annual Funding							
1319   RDT&E   Research, Development, Test, and Evaluation, Navy							
Fiscal Year	Quantity	TY \$M					
		End Item Recurring Flyaway	Non End Item Recurring Flyaway	Non Recurring Flyaway	Total Flyaway	Total Support	Total Program
1993	--	--	--	--	--	--	23.2
1994	--	--	--	--	--	--	7.8
1995	--	--	--	--	--	--	23.0
1996	--	--	--	--	--	--	25.4
1997	--	--	--	--	--	--	22.1
1998	--	--	--	--	--	--	11.6
1999	--	--	--	--	--	--	6.1
2000	--	--	--	--	--	--	7.2
2001	--	--	--	--	--	--	23.0
2002	--	--	--	--	--	--	27.3
2003	--	--	--	--	--	--	15.5
2004	--	--	--	--	--	--	1.3
2005	--	--	--	--	--	--	0.5
2006	--	--	--	--	--	--	0.3
Subtotal	114	--	--	--	--	--	194.3

Annual Funding 1319   RDT&E   Research, Development, Test, and Evaluation, Navy							
Fiscal Year	Quantity	BY 1995 \$M					
		End Item Recurring Flyaway	Non End Item Recurring Flyaway	Non Recurring Flyaway	Total Flyaway	Total Support	Total Program
1993	--	--	--	--	--	--	23.8
1994	--	--	--	--	--	--	7.8
1995	--	--	--	--	--	--	22.7
1996	--	--	--	--	--	--	24.7
1997	--	--	--	--	--	--	21.2
1998	--	--	--	--	--	--	11.0
1999	--	--	--	--	--	--	5.7
2000	--	--	--	--	--	--	6.7
2001	--	--	--	--	--	--	21.0
2002	--	--	--	--	--	--	24.7
2003	--	--	--	--	--	--	13.8
2004	--	--	--	--	--	--	1.1
2005	--	--	--	--	--	--	0.4
2006	--	--	--	--	--	--	0.2
Subtotal	114	--	--	--	--	--	184.8

Annual Funding							
3600   RDT&E   Research, Development, Test, and Evaluation, Air Force							
Fiscal Year	Quantity	TY \$M					
		End Item Recurring Flyaway	Non End Item Recurring Flyaway	Non Recurring Flyaway	Total Flyaway	Total Support	Total Program
1993	--	--	--	--	--	--	21.5
1994	--	--	--	--	--	--	61.9
1995	--	--	--	--	--	--	62.9
1996	--	--	--	--	--	--	76.4
1997	--	--	--	--	--	--	32.7
1998	--	--	--	--	--	--	21.1
1999	--	--	--	--	--	--	28.7
2000	--	--	--	--	--	--	11.3
2001	--	--	--	--	--	--	9.7
2002	--	--	--	--	--	--	16.5
2003	--	--	--	--	--	--	17.0
2004	--	--	--	--	--	--	36.0
2005	--	--	--	--	--	--	--
2006	--	--	--	--	--	--	--
2007	--	--	--	--	--	--	7.3
2008	--	--	--	--	--	--	--
2009	--	--	--	--	--	--	--
2010	--	--	--	--	--	--	--
2011	--	--	--	--	--	--	--
2012	--	--	--	--	--	--	--
2013	--	--	--	--	--	--	--
2014	--	--	--	--	--	--	2.5
2015	--	--	--	--	--	--	2.5
2016	--	--	--	--	--	--	--
2017	--	--	--	--	--	--	9.9
2018	--	--	--	--	--	--	14.9
2019	--	--	--	--	--	--	31.2
Subtotal	690	--	--	--	--	--	464.0

Annual Funding							
3600   RDT&E   Research, Development, Test, and Evaluation, Air Force							
Fiscal Year	Quantity	BY 1995 \$M					
		End Item Recurring Flyaway	Non End Item Recurring Flyaway	Non Recurring Flyaway	Total Flyaway	Total Support	Total Program
1993	--	--	--	--	--	--	22.0
1994	--	--	--	--	--	--	62.1
1995	--	--	--	--	--	--	62.0
1996	--	--	--	--	--	--	74.0
1997	--	--	--	--	--	--	31.2
1998	--	--	--	--	--	--	20.0
1999	--	--	--	--	--	--	26.9
2000	--	--	--	--	--	--	10.4
2001	--	--	--	--	--	--	8.8
2002	--	--	--	--	--	--	14.9
2003	--	--	--	--	--	--	15.1
2004	--	--	--	--	--	--	31.3
2005	--	--	--	--	--	--	--
2006	--	--	--	--	--	--	--
2007	--	--	--	--	--	--	5.8
2008	--	--	--	--	--	--	--
2009	--	--	--	--	--	--	--
2010	--	--	--	--	--	--	--
2011	--	--	--	--	--	--	--
2012	--	--	--	--	--	--	--
2013	--	--	--	--	--	--	--
2014	--	--	--	--	--	--	1.8
2015	--	--	--	--	--	--	1.8
2016	--	--	--	--	--	--	--
2017	--	--	--	--	--	--	6.8
2018	--	--	--	--	--	--	10.0
2019	--	--	--	--	--	--	20.6
Subtotal	690	--	--	--	--	--	425.5

Annual Funding								
1508   Procurement   Procurement of Ammunition, Navy and Marine Corps								
Fiscal Year	Quantity	TY \$M						
		End Item Recurring Flyaway	Non End Item Recurring Flyaway	Non Recurring Flyaway	Total Flyaway	Total Support	Total Program	
1998	547	10.0	--	--	10.0	10.9	20.9	
1999	745	14.6	--	--	14.6	20.6	35.2	
2000	916	19.3	--	--	19.3	15.7	35.0	
2001	2325	50.2	--	--	50.2	15.4	65.6	
2002	14551	292.4	--	--	292.4	10.1	302.5	
2003	12280	242.4	--	--	242.4	8.5	250.9	
2004	12422	243.7	--	--	243.7	8.2	251.9	
2005	6876	142.5	--	--	142.5	8.6	151.1	
2006	3288	72.5	--	--	72.5	9.0	81.5	
2007	3324	73.9	--	--	73.9	12.7	86.6	
2008	1422	35.5	--	--	35.5	7.1	42.6	
2009	560	13.3	--	--	13.3	5.2	18.5	
2010	--	--	--	--	--	2.0	2.0	
2011	--	--	--	--	--	--	--	
2012	--	--	--	--	--	--	--	
2013	--	--	--	--	--	--	--	
2014	1137	23.8	--	--	23.8	--	23.8	
2015	876	18.7	--	--	18.7	--	18.7	
2016	1201	25.5	--	--	25.5	--	25.5	
2017	3289	70.1	--	--	70.1	--	70.1	
2018	2404	52.0	--	--	52.0	--	52.0	
2019	2356	52.0	--	--	52.0	--	52.0	
2020	2310	52.0	--	--	52.0	--	52.0	
2021	2265	52.0	--	--	52.0	--	52.0	
Subtotal	75094	1556.4	--	--	1556.4	134.0	1690.4	

Annual Funding								
1508   Procurement   Procurement of Ammunition, Navy and Marine Corps								
Fiscal Year	Quantity	BY 1995 \$M						
		End Item Recurring Flyaway	Non End Item Recurring Flyaway	Non Recurring Flyaway	Total Flyaway	Total Support	Total Program	
1998	547	9.4	--	--	9.4	10.2	19.6	
1999	745	13.5	--	--	13.5	19.1	32.6	
2000	916	17.6	--	--	17.6	14.4	32.0	
2001	2325	45.3	--	--	45.3	13.9	59.2	
2002	14551	261.2	--	--	261.2	9.0	270.2	
2003	12280	211.7	--	--	211.7	7.4	219.1	
2004	12422	207.3	--	--	207.3	7.0	214.3	
2005	6876	117.8	--	--	117.8	7.1	124.9	
2006	3288	58.5	--	--	58.5	7.2	65.7	
2007	3324	58.2	--	--	58.2	10.1	68.3	
2008	1422	27.6	--	--	27.6	5.5	33.1	
2009	560	10.2	--	--	10.2	4.0	14.2	
2010	--	--	--	--	--	1.5	1.5	
2011	--	--	--	--	--	--	--	
2012	--	--	--	--	--	--	--	
2013	--	--	--	--	--	--	--	
2014	1137	16.8	--	--	16.8	--	16.8	
2015	876	13.0	--	--	13.0	--	13.0	
2016	1201	17.4	--	--	17.4	--	17.4	
2017	3289	47.0	--	--	47.0	--	47.0	
2018	2404	34.2	--	--	34.2	--	34.2	
2019	2356	33.5	--	--	33.5	--	33.5	
2020	2310	32.8	--	--	32.8	--	32.8	
2021	2265	32.2	--	--	32.2	--	32.2	
Subtotal	75094	1265.2	--	--	1265.2	116.4	1381.6	

Annual Funding								
3011   Procurement   Procurement of Ammunition, Air Force								
Fiscal Year	Quantity	TY \$M						
		End Item Recurring Flyaway	Non End Item Recurring Flyaway	Non Recurring Flyaway	Total Flyaway	Total Support	Total Program	
1997	937	16.6	--	--	16.6	6.4	23.0	
1998	1828	33.5	--	--	33.5	5.7	39.2	
1999	3778	72.4	--	--	72.4	7.1	79.5	
2000	8725	180.1	--	--	180.1	9.1	189.2	
2001	8904	189.9	--	--	189.9	13.6	203.5	
2002	14392	285.9	--	--	285.9	14.5	300.4	
2003	23420	458.5	--	--	458.5	18.6	477.1	
2004	20476	404.2	--	--	404.2	20.3	424.5	
2005	22880	491.8	--	--	491.8	22.6	514.4	
2006	8205	200.8	--	--	200.8	24.4	225.2	
2007	7261	163.6	17.1	--	180.7	13.4	194.1	
2008	4319	102.1	--	--	102.1	22.0	124.1	
2009	6340	149.1	--	--	149.1	16.9	166.0	
2010	7488	169.5	7.6	--	177.1	21.3	198.4	
2011	14551	350.6	6.9	--	357.5	15.9	373.4	
2012	4637	111.5	--	--	111.5	15.7	127.2	
2013	4728	113.8	19.9	--	133.7	10.9	144.6	
2014	8604	191.9	47.0	--	238.9	11.6	250.5	
2015	9638	211.0	--	--	211.0	17.4	228.4	
2016	22359	482.2	29.4	2.7	514.3	19.7	534.0	
2017	30664	663.7	21.5	--	685.2	21.9	707.1	
2018	7377	162.1	21.9	--	184.0	20.0	204.0	
2019	11203	251.2	21.8	--	273.0	21.0	294.0	
2020	14294	326.9	22.3	--	349.2	22.0	371.2	
2021	13343	311.2	22.8	--	334.0	22.6	356.6	
Subtotal	280351	6094.1	238.2	2.7	6335.0	414.6	6749.6	

Annual Funding							
3011   Procurement   Procurement of Ammunition, Air Force							
Fiscal Year	Quantity	BY 1995 \$M					
		End Item Recurring Flyaway	Non End Item Recurring Flyaway	Non Recurring Flyaway	Total Flyaway	Total Support	Total Program
1997	937	15.5	--	--	15.5	6.0	21.5
1998	1828	30.9	--	--	30.9	5.2	36.1
1999	3778	66.1	--	--	66.1	6.5	72.6
2000	8725	162.3	--	--	162.3	8.2	170.5
2001	8904	168.0	--	--	168.0	12.1	180.1
2002	14392	247.9	--	--	247.9	12.6	260.5
2003	23420	388.5	--	--	388.5	15.7	404.2
2004	20476	332.8	--	--	332.8	16.7	349.5
2005	22880	394.0	--	--	394.0	18.1	412.1
2006	8205	157.8	--	--	157.8	19.1	176.9
2007	7261	126.7	13.2	--	139.9	10.4	150.3
2008	4319	78.0	--	--	78.0	16.8	94.8
2009	6340	112.0	--	--	112.0	12.7	124.7
2010	7488	125.1	5.6	--	130.7	15.7	146.4
2011	14551	254.5	5.0	--	259.5	11.6	271.1
2012	4637	79.4	--	--	79.4	11.2	90.6
2013	4728	80.0	13.9	--	93.9	7.7	101.6
2014	8604	132.8	32.5	--	165.3	8.0	173.3
2015	9638	143.1	--	--	143.1	11.8	154.9
2016	22359	320.7	19.6	1.8	342.1	13.1	355.2
2017	30664	432.8	14.0	--	446.8	14.3	461.1
2018	7377	103.7	14.0	--	117.7	12.8	130.5
2019	11203	157.5	13.6	--	171.1	13.2	184.3
2020	14294	200.9	13.8	--	214.7	13.5	228.2
2021	13343	187.5	13.7	--	201.2	13.6	214.8
Subtotal	280351	4498.5	158.9	1.8	4659.2	306.6	4965.8



FY 2016 includes Overseas Contingency Operations (OCO) funding of \$184.412M and OCO quantity of 8,511. FY 2017 includes OCO funding of \$403.126M and OCO quantity of 18,531.

Laser JDAM (LJDAM) costs are included under the Non End Item Related Recurring Flyaway costs. This includes 2,581 LJDAM kits for FY 2016 and 1,500 LJDAM kits per year from FY 2017 to FY 2021.

FY 2016 Nonrecurring Flyaway costs include investments in LJDAM facilitization, and a Life of Type Buy (LOTB) procurement. The LOTB cost is for the acquisition of one LJDAM component that is reaching obsolescence, and will allow for LJDAM production over the next four contract lots without causing schedule delays or cost increases.

## Low Rate Initial Production

Item	Initial LRIP Decision	Current Total LRIP
Approval Date	9/20/1995	1/21/2000
Approved Quantity	425	15998
Reference	Milestone II ADM	LRIP 4 ADM
Start Year	1997	1997
End Year	1998	2000

## Foreign Military Sales

Country	Date of Sale	Quantity	Total Cost \$M	Description
Belgium	11/20/2015	60	1.3	JDAM Kits
Canada	11/20/2015	350	7.9	JDAM Kits
Denmark	11/20/2015	50	1.2	JDAM Kits
Finland	11/20/2015	18	0.4	JDAM Kits
Israel	11/20/2015	100	2.4	JDAM Kits
Netherlands	11/20/2015	300	6.6	JDAM Kits
Singapore	11/20/2015	917	22.0	JDAM Kits
Taiwan	11/20/2015	1	0.0	JDAM Kit
Turkey	11/20/2015	400	9.4	JDAM Kits
Israel	10/31/2014	3000	65.5	JDAM kits
Norway	10/31/2014	238	4.9	JDAM kits
Morocco	10/30/2014	20	0.4	JDAM kits
United Arab Emirates	10/30/2014	3600	74.4	JDAM kits
Oman	7/1/2013		0.9	Fuzes
Belgium	5/15/2013		0.1	Fuzes
Norway	3/8/2013		2.8	Fuzes
Israel	3/7/2013	3113	88.8	JDAM Kits and Support
Korea	3/7/2013	210	7.8	JDAM Kits, Fuzes
Japan	3/1/2013	68	4.2	JDAM Kits
Poland	1/31/2013		1.1	JDAM Manpower
Turkey	12/19/2012	300	13.4	JDAM Kits, Fuzes
Korea	11/27/2012	140	5.1	JDAM Kits, Fuzes
Israel	11/21/2012	1500	40.8	JDAM Kits
Finland	7/15/2012		0.2	Repair and Return, Spares, Support
Korea	5/1/2012	106	3.6	JDAM Kits
Iraq	4/19/2012	358	2.0	Fuzes
Canada	4/17/2012	0	0.2	Fuzes
Saudi Arabia	2/22/2012	0	61.4	Engineering Support
Saudi Arabia	2/22/2012		5.4	Repair and Return, Spares, Support
Saudi Arabia	2/11/2012	600	154.5	JDAM Kits, PLGS, Fuzes
Japan	10/12/2011	16	0.7	JDAM Kits
Japan	10/12/2011	8	0.7	JDAM Kits
Belgium	9/8/2011	180	5.4	JDAM Kits, Fuzes
Malaysia	8/23/2011	0	1.8	JDAM Spares, Test Assets
Canada	8/11/2011	533	15.9	JDAM Kits, Integration Support
Japan	7/15/2011	0	2.7	Fuzes
Chile	6/10/2011	210	8.0	JDAM Kits, Fuzes
Norway	4/26/2011	254	9.5	JDAM Kits
Denmark	4/11/2011	210	8.9	JDAM Kits
Belgium	2/2/2011	30	0.8	Spares
Brazil	1/28/2011	0	0.3	Fuzes
Morocco	9/8/2010	10	6.0	JDAM Kits
Japan	2/9/2010	96	4.9	JDAM Kits, Fuzes

Japan	1/29/2010	31	1.7	JDAM Kits, Fuzes
Singapore	1/27/2010	670	35.5	JDAM Kits
Israel	1/22/2010	150	2.1	Precision Laser Guidance Set
Israel	1/12/2010	150	3.5	JDAM Kits
Netherlands	12/4/2009	0	2.8	Fuzes
South Korea	11/30/2009	0	3.8	JDAM Integration on F-16
Malaysia	9/28/2009	50	5.8	JDAM Kits
Norway	6/10/2009	30	5.2	JDAM Kits, Support
Kuwait	3/31/2009	51	5.9	JDAM Kits, Support
United Arab Emirates	3/24/2009	0	1.1	Repair and Return, Spares, Support
Japan	3/12/2009	120	9.2	JDAM Kits
Finland	2/25/2009	96	7.0	JDAM Kits
Singapore	2/11/2009	35	4.1	JDAM Kits
Japan	2/3/2009	36	3.1	JDAM Kits, Fuzes
Oman	2/2/2009	0	0.8	Repair and Return, Spares, Support
Israel	1/12/2009	500	14.9	JDAM Kits
Israel	1/12/2009	2950	71.6	JDAM Kits
South Korea	12/29/2008		0.4	Fuzes
South Korea	12/16/2008	4	0.5	JDAM Kits
Germany	10/28/2008		0.2	Fuzes
South Korea	9/3/2008		0.2	Fuzes
Israel	7/21/2008		0.6	Engineering Support
Saudi Arabia	7/2/2008	900	44.2	JDAM Kits, Support
South Korea	3/11/2008		2.2	Fuzes
Japan	3/7/2008	36	2.1	JDAM Kits, Fuzes
United Arab Emirates	2/21/2008	300	70.6	JDAM Kits
South Korea	2/19/2008		4.3	Fuzes, Global Positioning System (GPS) Security
South Korea	12/28/2007		0.4	Fuzes
South Korea	12/28/2007		0.4	Fuzes
Australia	12/11/2007		2.6	Engineering Support
Greece	11/20/2007	100	21.9	JDAM Kits, Integration Support
Netherlands	10/24/2007		2.8	Fuzes
Israel	10/2/2007	1000	28.0	JDAM Kits
Israel	9/26/2007	650	17.3	JDAM Kits
Israel	7/13/2007	300	8.3	JDAM Kits
Turkey	5/29/2007		0.4	Fuzes
Israel	3/5/2007	500	12.9	JDAM Kits
Japan	12/18/2006	42	1.8	JDAM Kits
Spain	12/14/2006	40	2.5	JDAM Kits
Pakistan	9/30/2006	500	23.6	JDAM Kits
Israel	7/25/2006		0.1	Engineering Support
Japan	3/27/2006	44	3.5	JDAM Kits
Japan	3/17/2006		0.1	Engineering Support
Turkey	12/28/2005	398	9.9	JDAM Kits
Turkey	12/28/2005		6.9	Integration
Greece	12/13/2005		2.3	Integration Support
Netherlands	10/7/2005	56	1.7	JDAM Kits
Turkey	4/26/2005		4.7	Integration Support

Australia	4/5/2005		0.3	Integration Support
Netherlands	3/1/2005	360	8.7	JDAM Kits, Support
Japan	1/25/2005	27	8.5	JDAM Kits, Integration, Test Assets
Belgium	12/22/2004	300	7.9	JDAM Kits
Israel	8/16/2004		17.6	F-15 Integration
Israel	7/14/2004	840	18.1	JDAM Kits, Integration
Portugal	4/15/2004	50	3.7	JDAM Kits, Support
Netherlands	2/23/2004	350	13.8	JDAM Kits, Support
Oman	2/15/2004	20	0.5	JDAM Kits
Israel	7/3/2003	1000	21.5	JDAM Kits
Poland	4/18/2003	272	10.6	JDAM Kits, Integration, Test Assets
Denmark	12/20/2002	274	11.0	JDAM Kits, Support
United Arab Emirates	8/20/2002	300	9.0	JDAM Kits
South Korea	6/12/2002	14	1.1	JDAM Kits
Oman	5/2/2002	80	3.2	JDAM Kits
Belgium	2/11/2002		0.8	Fuzes
Chile	2/1/2002	12	3.0	JDAM Kits, Integration, Test Assets
Australia	11/28/2000		3.2	Fuzes
Australia	11/28/2000		6.8	Fuzes
United Arab Emirates	8/8/2000		1.3	Integration, Test Assets
Israel	2/9/2000	700	31.5	JDAM Kits, Integration

## Notes

## Nuclear Costs

None

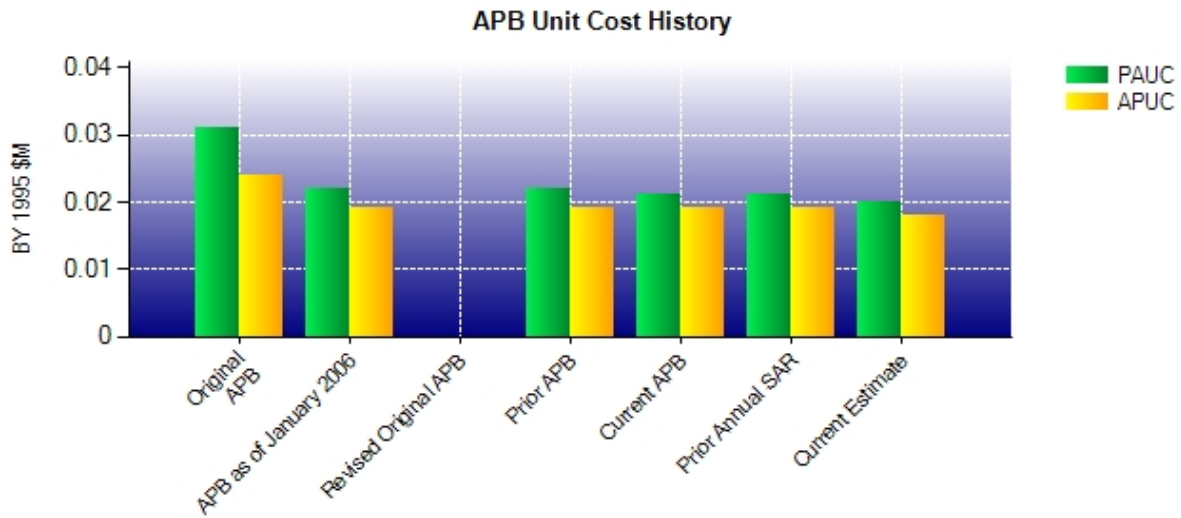
## Unit Cost

### Unit Cost Report

Item	BY 1995 \$M	BY 1995 \$M	% Change
	Current UCR Baseline (Jun 2015 APB)	Current Estimate (Dec 2015 SAR)	
<b>Program Acquisition Unit Cost</b>			
Cost	6664.7	6957.7	
Quantity	321986	356249	
Unit Cost	0.021	0.020	-4.76
<b>Average Procurement Unit Cost</b>			
Cost	6091.9	6347.4	
Quantity	321182	355445	
Unit Cost	0.019	0.018	-5.26

Item	BY 1995 \$M	BY 1995 \$M	% Change
	Original UCR Baseline (Sep 1995 APB)	Current Estimate (Dec 2015 SAR)	
<b>Program Acquisition Unit Cost</b>			
Cost	2720.4	6957.7	
Quantity	88126	356249	
Unit Cost	0.031	0.020	-35.48
<b>Average Procurement Unit Cost</b>			
Cost	2090.6	6347.4	
Quantity	87496	355445	
Unit Cost	0.024	0.018	-25.00

**Unit Cost History**



Item	Date	BY 1995 \$M		TY \$M	
		PAUC	APUC	PAUC	APUC
Original APB	Sep 1995	0.031	0.024	0.038	0.033
APB as of January 2006	Oct 2002	0.022	0.019	0.025	0.023
Revised Original APB	N/A	N/A	N/A	N/A	N/A
Prior APB	Oct 2002	0.022	0.019	0.025	0.023
Current APB	Jun 2015	0.021	0.019	0.026	0.024
Prior Annual SAR	Dec 2014	0.021	0.019	0.027	0.025
Current Estimate	Dec 2015	0.020	0.018	0.026	0.024

**SAR Unit Cost History**

Initial SAR Baseline to Current SAR Baseline (TY \$M)									
Initial PAUC Development Estimate	Changes								PAUC Production Estimate
	Econ	Qty	Sch	Eng	Est	Oth	Spt	Total	
0.038	-0.002	-0.005	0.002	0.001	-0.005	0.000	0.000	-0.009	0.029

Current SAR Baseline to Current Estimate (TY \$M)									
PAUC Production Estimate	Changes								PAUC Current Estimate
	Econ	Qty	Sch	Eng	Est	Oth	Spt	Total	
0.029	0.001	-0.006	0.000	0.000	0.001	0.000	0.001	-0.003	0.026

Initial SAR Baseline to Current SAR Baseline (TY \$M)									
Initial APUC Development Estimate	Changes								APUC Production Estimate
	Econ	Qty	Sch	Eng	Est	Oth	Spt	Total	
0.033	-0.002	-0.003	0.002	0.000	-0.006	0.000	0.000	-0.009	0.024

Current SAR Baseline to Current Estimate (TY \$M)									
APUC Production Estimate	Changes								APUC Current Estimate
	Econ	Qty	Sch	Eng	Est	Oth	Spt	Total	
0.024	0.001	-0.003	0.000	0.000	0.001	0.000	0.001	0.000	0.024

SAR Baseline History				
Item	SAR Planning Estimate	SAR Development Estimate	SAR Production Estimate	Current Estimate
Milestone I	Oct 1993	Oct 1993	Oct 1993	Oct 1993
Milestone II	Oct 1995	Sep 1995	Sep 1995	Sep 1995
Milestone III	Jul 1999	Nov 2000	Nov 2000	Mar 2001
IOC	Sep 1999	Sep 1999	Nov 2000	Feb 2001
Total Cost (TY \$M)	681.5	3392.3	2606.7	9098.3
Total Quantity	378	88126	89065	356249
PAUC	1.803	0.038	0.029	0.026

IOC of February 2001 is specifically for the F/A-18C/D.



## Cost Variance

Summary TY \$M				
Item	RDT&E	Procurement	MILCON	Total
SAR Baseline (Production Estimate)	517.3	2089.4	--	2606.7
Previous Changes				
Economic	+3.5	+78.3	--	+81.8
Quantity	--	+4160.8	--	+4160.8
Schedule	--	-86.4	--	-86.4
Engineering	+15.5	--	--	+15.5
Estimating	+66.0	+986.6	--	+1052.6
Other	--	--	--	--
Support	--	+337.8	--	+337.8
Subtotal	+85.0	+5477.1	--	+5562.1
Current Changes				
Economic	-0.1	+135.2	--	+135.1
Quantity	--	+1525.7	--	+1525.7
Schedule	--	-34.5	--	-34.5
Engineering	+56.0	--	--	+56.0
Estimating	+0.1	-797.1	--	-797.0
Other	--	--	--	--
Support	--	+44.2	--	+44.2
Subtotal	+56.0	+873.5	--	+929.5
Total Changes	+141.0	+6350.6	--	+6491.6
CE - Cost Variance	658.3	8440.0	--	9098.3
CE - Cost & Funding	658.3	8440.0	--	9098.3

Summary BY 1995 \$M				
Item	RDT&E	Procurement	MILCON	Total
SAR Baseline (Production Estimate)	490.3	1810.0	--	2300.3
Previous Changes				
Economic	--	--	--	--
Quantity	--	+3015.2	--	+3015.2
Schedule	--	-7.5	--	-7.5
Engineering	+12.5	--	--	+12.5
Estimating	+70.0	+825.6	--	+895.6
Other	--	--	--	--
Support	--	+260.7	--	+260.7
Subtotal	+82.5	+4094.0	--	+4176.5
Current Changes				
Economic	--	--	--	--
Quantity	--	+945.6	--	+945.6
Schedule	--	--	--	--
Engineering	+37.4	--	--	+37.4
Estimating	+0.1	-527.9	--	-527.8
Other	--	--	--	--
Support	--	+25.7	--	+25.7
Subtotal	+37.5	+443.4	--	+480.9
Total Changes	+120.0	+4537.4	--	+4657.4
CE - Cost Variance	610.3	6347.4	--	6957.7
CE - Cost & Funding	610.3	6347.4	--	6957.7

Previous Estimate: December 2014

RDT&E	\$M	
Current Change Explanations	Base Year	Then Year
Revised escalation indices. (Economic)	N/A	-0.1
Adjustment for current and prior escalation. (Estimating)	+0.1	+0.1
Additional funding was provided for Global Positioning System M-Code integration efforts. (Engineering)	+37.4	+56.0
<b>RDT&amp;E Subtotal</b>	<b>+37.5</b>	<b>+56.0</b>

Procurement	\$M	
Current Change Explanations	Base Year	Then Year
Revised escalation indices. (Economic)	N/A	+135.2
Adjustment for current and prior escalation. (Estimating)	-94.2	-118.4
Quantity variance resulting from an increase of 8,829 tail kits from 66,265 to 75,094 (Navy). (Quantity)	+160.2	+251.4
Quantity variance resulting from an increase of 43,263 tail kits from 237,088 to 280,351 (Air Force). (Quantity)	+785.4	+1274.3
Acceleration of procurement buy profile from FY 2015 to FY 2021 due to increased production capacity based on urgent operational need by the Warfighter (Navy). (Schedule)	0.0	-3.2
Acceleration of procurement buy profile from FY 2015 to FY 2021 due to increased production capacity based on urgent operational need by the Warfighter (Air Force). (Schedule)	0.0	-31.3
Lower unit pricing due to contract negotiations and increased quantities procured; funds reinvested internally to procure additional tail kits (Navy). (Estimating) (QR)	-65.3	-99.7
Lower unit pricing due to contract negotiations and increased quantities procured; funds reinvested internally to procure additional tail kits (Air Force). (Estimating) (QR)	-367.7	-577.9
Revised estimate to reflect actuals (Air Force). (Estimating)	-0.7	-1.1
Adjustment for current and prior escalation. (Support)	-6.3	-7.6
Increase in Other Support to align with engineering efforts for software updates and M-Code integration (Air Force). (Support)	+32.0	+51.8
<b>Procurement Subtotal</b>	<b>+443.4</b>	<b>+873.5</b>

(QR) Quantity Related

## Contracts

### General Notes

Ongoing strategy change requiring Certified Cost or Pricing data has put pressure on the procurement schedule for Lots 18 through 22; risk mitigated with an Undefinitized Contract Action (UCA).

### Contract Identification

**Appropriation:** Procurement  
**Contract Name:** JDAM Lot 18 UCA  
**Contractor:** Boeing  
**Contractor Location:** 6200 JS McDonnell Blvd  
 Saint Louis, MO 63134  
**Contract Number:** FA8213-15-D-0002/1  
**Contract Type:** Firm Fixed Price (FFP)  
**Award Date:** October 30, 2014  
**Definitization Date:**

Contract Price							
Initial Contract Price (\$M)			Current Contract Price (\$M)			Estimated Price At Completion (\$M)	
Target	Ceiling	Qty	Target	Ceiling	Qty	Contractor	Program Manager
213.9	N/A	9202	204.2	N/A	9202	204.2	204.2

### Target Price Change Explanation

The difference between the Initial Contract Price Target and the Current Contract Price Target is due to lower unit prices resulting from contract negotiations.

### Cost and Schedule Variance Explanations

Cost and Schedule Variance reporting is not required on this (FFP) contract.

### Notes

Data includes Air Force and Navy only. Foreign Military Sales data is not included in the contract price or quantity.

**Contract Identification**

**Appropriation:** Procurement  
**Contract Name:** JDAM Lot 19 UCA  
**Contractor:** Boeing  
**Contractor Location:** 6200 JS McDonnell Blvd  
 Saint Louis, MO 63134  
**Contract Number:** FA8213-15-D-0002/2  
**Contract Type:** Firm Fixed Price (FFP)  
**Award Date:** November 20, 2015  
**Definitization Date:**

Contract Price								
Initial Contract Price (\$M)			Current Contract Price (\$M)			Estimated Price At Completion (\$M)		
Target	Ceiling	Qty	Target	Ceiling	Qty	Contractor	Program Manager	
286.7	N/A	13127	286.7	N/A	13127	286.7	286.7	

**Cost and Schedule Variance Explanations**

Cost and Schedule Variance reporting is not required on this (FFP) contract.

**Notes**

This is the first time this contract is being reported.

Data includes Air Force and Navy only. Foreign Military Sales data is not included in the contract price or quantity.

## Deliveries and Expenditures

Deliveries				
Delivered to Date	Planned to Date	Actual to Date	Total Quantity	Percent Delivered
Development	804	804	804	100.00%
Production	226796	226104	355445	63.61%
Total Program Quantity Delivered	227600	226908	356249	63.69%

Expended and Appropriated (TY \$M)			
Total Acquisition Cost	9098.3	Years Appropriated	24
Expended to Date	5847.5	Percent Years Appropriated	82.76%
Percent Expended	64.27%	Appropriated to Date	6831.3
Total Funding Years	29	Percent Appropriated	75.08%

The above data is current as of February 09, 2016.

Deliveries and Expenditures include both U.S. Air Force (USAF) and U.S. Navy (USN).

This SAR report does not include quantities or costs paid for with Defense Emergency Response Funds (DERF). DERF funds acquired 6,348 USAF tail kits and 7,890 USN tail kits. The previous SAR report had included these quantities.

## Operating and Support Cost

### Cost Estimate Details

<b>Date of Estimate:</b>	August 28, 2014
<b>Source of Estimate:</b>	POE
<b>Quantity to Sustain:</b>	356249
<b>Unit of Measure:</b>	Total Quantity
<b>Service Life per Unit:</b>	35.00 Years
<b>Fiscal Years in Service:</b>	FY 1998 - FY 2049

The JDAM O&S cost estimate was based on the Joint Munitions Operations & Support Model which was tailored to reflect specific JDAM program attributes. This model estimated Air Force and Navy O&S costs for the JDAM tail kits only. The ground rules used in the O&S cost estimate are as follows: The total JDAM inventory that had been expended was 88,569 tail kits. JDAM uses a 20 year extended warranty to cover all tail kit repairs except for government induced failures. In the model, one half of a percent of the total JDAM failures were assumed to be induced out-of-warranty failures. The base year of the estimate was FY 2015 (all sunk costs from FY 1998 to FY 2014 are excluded from the estimate). The estimate included calculations for 35 years (FY 2015 to FY 2049) to cover unwarranted failures for 15 years after the warranty period ended. The fiscal years in service is stated to end in FY 2049; however, the actual program complete date is indefinite as long as there is continued demand for JDAM.

### Sustainment Strategy

The JDAM system support strategy is a 20-year warranty that includes both the guidance kit and container. Boeing is the Source of Repair (SOR) under the warranty. Non-warranty repairs and sustaining engineering support are covered under separate technical support contracts with Boeing.

### Antecedent Information

No Antecedent

Cost Element	Annual O&S Costs BY1995 \$M	
	JDAM Average Annual Cost Per Total Quantity	No Antecedent (Antecedent)
Unit-Level Manpower	0.647	--
Unit Operations	15.671	--
Maintenance	0.001	--
Sustaining Support	3.562	--
Continuing System Improvements	--	--
Indirect Support	0.477	--
Other	--	--
<b>Total</b>	<b>20.358</b>	<b>--</b>

Item	Total O&S Cost \$M			
	JDAM			No Antecedent (Antecedent)
	Current Production APB Objective/Threshold		Current Estimate	
Base Year	712.5	783.8	712.5	N/A
Then Year	1494.9	N/A	1494.9	N/A

**Equation to Translate Annual Cost to Total Cost**

Total O&S Cost = Average Annual Cost x Assumed Life in Years = \$20.358M x 35 years = \$712.5M (BY 1995\$)

O&S Cost Variance		
Category	BY 1995 \$M	Change Explanations
Prior SAR Total O&S Estimates - Dec 2014 SAR	712.5	
Programmatic/Planning Factors	0.0	
Cost Estimating Methodology	0.0	
Cost Data Update	0.0	
Labor Rate	0.0	
Energy Rate	0.0	
Technical Input	0.0	
Other	0.0	
Total Changes	0.0	
Current Estimate	712.5	

**Disposal Estimate Details**

**Date of Estimate:** August 28, 2014  
**Source of Estimate:** POE  
**Disposal/Demilitarization Total Cost (BY 1995 \$M):** Total costs for disposal of all Total Quantity are 51.3