



Selected Acquisition Report (SAR)

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



Joint Direct Attack Munition (JDAM)

As of FY 2016 President's Budget

Defense Acquisition Management
Information Retrieval
(DAMIR)

Table of Contents

Common Acronyms and Abbreviations for MDAP Programs	3
Program Information	5
Responsible Office	5
References	5
Mission and Description	6
Executive Summary	7
Threshold Breaches	8
Schedule	9
Performance	12
Track to Budget	14
Cost and Funding	15
Low Rate Initial Production	26
Foreign Military Sales	27
Nuclear Costs	29
Unit Cost	30
Cost Variance	33
Contracts	36
Deliveries and Expenditures	38
Operating and Support Cost	39

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 1, 2012

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 October 7, 2002

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.

Executive Summary

JDAM Lot 17 production of 5,708 tail kits was awarded in December 2012 with deliveries starting in April 2014. Final tail kit deliveries are scheduled for 2nd quarter of FY 2015. JDAM Lot 18-22 Indefinite Delivery, Indefinite Quantity (IDIQ) Undefined Contract Action (UCA) and Lot 18 Delivery Order for production of 16,060 tail kits (includes 8,140 USAF tail kits) was signed on October 28, 2014. The Lot 18 Delivery Order was modified on November 24, 2014 to add 3,000 JDAMs in support of Israel Air Force Urgent Operational Need. Definitization for the UCA is estimated for May 29, 2015.

The Air Force received funding to acquire 3,500 Laser JDAM sensors with an Adjustable Proximity Sensor capability. The U.S. Navy put this requirement on contract in February 2014 and deliveries started November 2014.

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

Threshold Breaches

APB Breaches		Explanation of Breach
Schedule	<input type="checkbox"/>	FY 2018 added 2,689 tail kits and \$109.0M to the funding profile causing the total procurement funding to exceed the APB threshold by \$34.2M. Breach was reported in the December 2013 SAR submission. An APB update is in progress.
Performance	<input type="checkbox"/>	
Cost	RDT&E <input type="checkbox"/>	
	Procurement <input checked="" type="checkbox"/>	
	MILCON <input type="checkbox"/>	
	Acq O&M <input type="checkbox"/>	
O&S Cost	<input type="checkbox"/>	
Unit Cost	PAUC <input type="checkbox"/>	
	APUC <input type="checkbox"/>	

Nunn-McCurdy Breaches

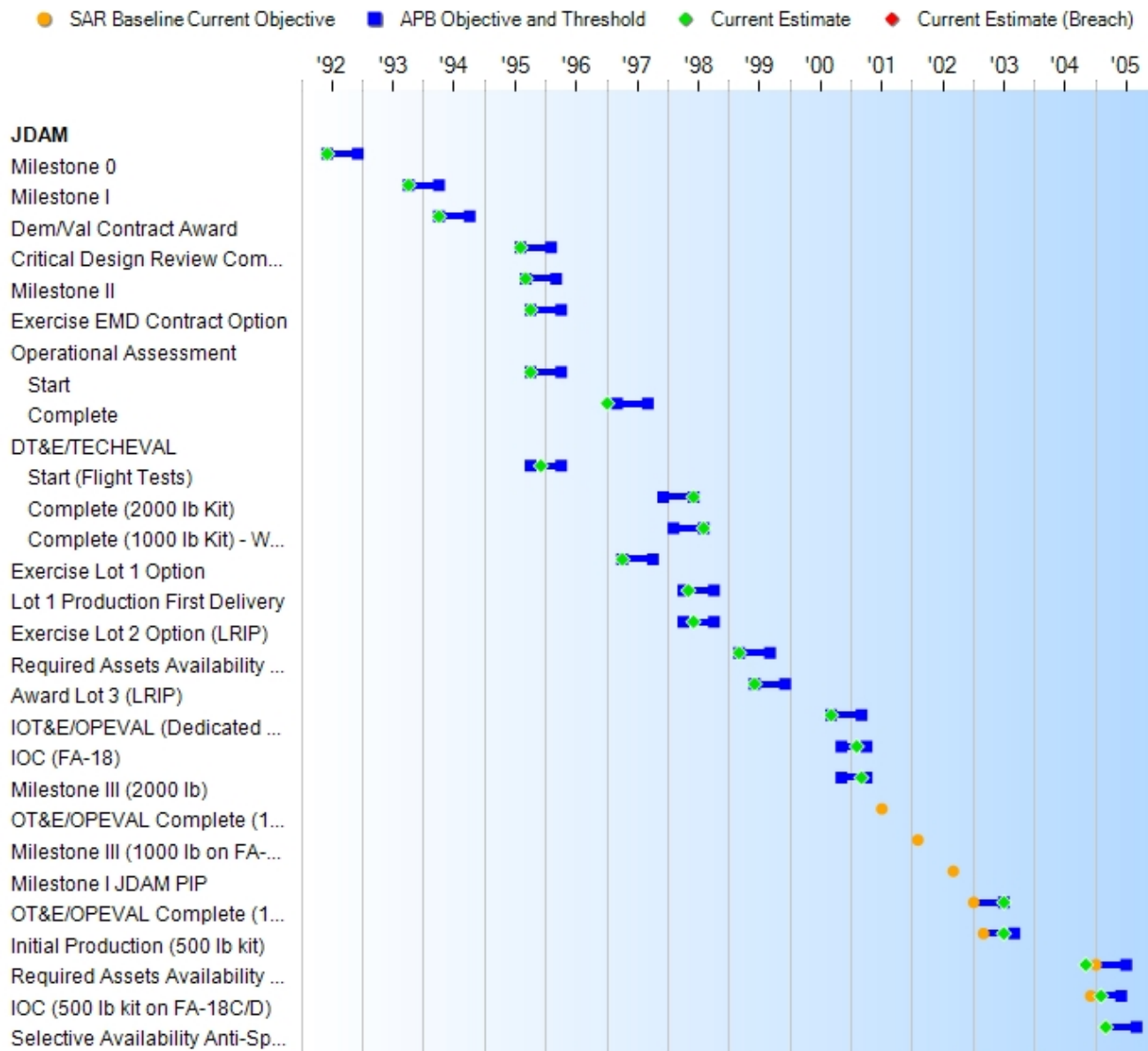
Current UCR Baseline

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	Dec 1992	Jun 1992
Milestone I	Oct 1993	Oct 1993	Apr 1994	Oct 1993
Dem/Val Contract Award	Apr 1994	Apr 1994	Oct 1994	Apr 1994
Critical Design Review Complete	Aug 1995	Aug 1995	Feb 1996	Aug 1995
Milestone II	Sep 1995	Sep 1995	Mar 1996	Sep 1995
Exercise EMD Contract Option	Oct 1995	Oct 1995	Apr 1996	Oct 1995
Operational Assessment				
Start	Oct 1995	Oct 1995	Apr 1996	Oct 1995
Complete	Mar 1997	Mar 1997	Sep 1997	Jan 1997
DT&E/TECHEVAL				
Start (Flight Tests)	Oct 1995	Oct 1995	Apr 1996	Dec 1995
Complete (2000 lb Kit)	Dec 1997	Dec 1997	Jun 1998	Jun 1998
Complete (1000 lb Kit) - Weapon Only	Feb 1998	Feb 1998	Aug 1998	Aug 1998
Exercise Lot 1 Option	Apr 1997	Apr 1997	Oct 1997	Apr 1997
Lot 1 Production First Delivery	Apr 1998	Apr 1998	Oct 1998	May 1998
Exercise Lot 2 Option (LRIP)	Apr 1998	Apr 1998	Oct 1998	Jun 1998
Required Assets Availability (AF)	Mar 1999	Mar 1999	Sep 1999	Mar 1999
Award Lot 3 (LRIP)	Jun 1999	Jun 1999	Dec 1999	Jun 1999
IOT&E/OPEVAL (Dedicated 2000 lb Kit) Complete	Sep 2000	Sep 2000	Mar 2001	Sep 2000
IOC (FA-18)	Nov 2000	Nov 2000	Apr 2001	Feb 2001
Milestone III (2000 lb)	Nov 2000	Nov 2000	Apr 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	Jan 2003	Jul 2003	Jul 2003
Initial Production (500 lb kit)	N/A	Mar 2003	Sep 2003	Jul 2003
Required Assets Availability (RAA) (500 lb on B-2)	N/A	Jan 2005	Jul 2005	Nov 2004
IOC (500 lb kit on FA-18C/D)	N/A	Dec 2004	Jun 2005	Feb 2005
Selective Availability Anti-Spoofing Module (SAASM)/GPS Anti-Jam Production Award	N/A	Mar 2005	Sep 2005	Mar 2005

Change Explanations

None

Acronyms and Abbreviations

AF - Air Force
Dem/Val - Demonstration/Validation
DT&E - Development Test and Evaluation
EMD - Engineering, Manufacturing and Development
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	
Weather Capability				
Adverse	Adverse	Adverse	Adverse	Adverse
Accuracy (CEP) (Meters)				
GPS Available, Impact Angles > 60 Deg				
13 Horizontal Targets	5 Horizontal targets	13	4.3	5 Horizontal Targets
Inflight Re-targeting Capability (captive carry)				
Yes	Yes	Yes	Yes	Yes
Carrier Operability				
Yes	Yes	Yes	Yes	Yes
Warhead Compatibility				
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
Aircraft Compatibility				
Bomber				
B-1B, B-2	B-1B, B-2	B-52H	Yes	B-52H, B-1B, B-2
Fighter Attack				
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
Mission Reliability				
.90	.90	.90	.983	.90
JDAM PIP Accuracy (CEP) (Meters)				
3	N/A	N/A	N/A	N/A
JDAM PIP Weather Capability				
Adverse	N/A	N/A	N/A	N/A
JDAM PIP Warhead Compatibility				
MK-82, MK-83	N/A	N/A	N/A	N/A
Interoperability				
N/A	Satisfy 100% of critical IERs	Satisfy 100% of critical IERs	Satisfied	Satisfied

Requirements Reference

Joint Operational Requirements Document (JORD) 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
	Project	Name	
	2137	JDAM (Sunk)	
Air Force	3600	05	0604618F
	Project	Name	
	3890	JDAM (Sunk)	
Air Force	3600	07	0604618F
	Project	Name	
	674138	JDAM Development	

Procurement

Appn	BA	PE	
Navy	1508	01	0204162N
	Line Item	Name	
	0145	General Purpose Bombs (Shared)	
	0148	JDAM (Sunk)	
Navy	1508	01	0206138M
	Line Item	Name	
	0148	JDAM (Sunk)	
Air Force	3011	01	0207583F
	Line Item	Name	
	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	575.1	661.4	572.8	517.3	604.3	602.3
Procurement	1810.0	4307.5	4738.3	5904.0¹	2089.4	5026.5	7566.5
Flyaway	--	--	--	5506.7	--	--	7069.7
Recurring	--	--	--	5506.7	--	--	7069.7
Non Recurring	--	--	--	0.0	--	--	0.0
Support	--	--	--	397.3	--	--	496.8
Other Support	--	--	--	397.3	--	--	496.8
Initial Spares	--	--	--	0.0	--	--	0.0
MILCON	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
Total	2300.3	4882.6	N/A	6476.8	2606.7	5630.8	8168.8

¹ APB Breach

Cost Notes

Laser JDAM quantities increased in FY 2016 - FY 2020 from 500 units/year to 1,500 units/year.

Total Quantity			
Quantity	SAR Baseline Production Estimate	Current APB Production	Current Estimate
RDT&E	630	778	804
Procurement	88435	221091	303353
Total	89065	221869	304157

Cost and Funding

Funding Summary

Appropriation Summary									
FY 2016 President's Budget / December 2014 SAR (TY\$ M)									
Appropriation	Prior	FY 2015	FY 2016	FY 2017	FY 2018	FY 2019	FY 2020	To Complete	Total
RDT&E	599.8	2.5	0.0	0.0	0.0	0.0	0.0	0.0	602.3
Procurement	5422.4	248.5	579.1	354.1	245.5	330.0	386.9	0.0	7566.5
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 2016 Total	6022.2	251.0	579.1	354.1	245.5	330.0	386.9	0.0	8168.8
PB 2015 Total	5998.4	103.9	295.4	308.9	160.1	363.1	0.0	0.0	7229.8
Delta	23.8	147.1	283.7	45.2	85.4	-33.1	386.9	0.0	939.0

Quantity Summary										
FY 2016 President's Budget / December 2014 SAR (TY\$ M)										
Quantity	Undistributed	Prior	FY 2015	FY 2016	FY 2017	FY 2018	FY 2019	FY 2020	To Complete	Total
Development	804	0	0	0	0	0	0	0	0	804
Production	0	233150	8874	20425	11649	7678	10127	11450	0	303353
PB 2016 Total	804	233150	8874	20425	11649	7678	10127	11450	0	304157
PB 2015 Total	804	228921	2852	11058	11224	5064	12725	0	0	272648
Delta	0	4229	6022	9367	425	2614	-2598	11450	0	31509

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
Subtotal	690	--	--	--	--	--	408.0

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	--	--	--	--	--	--	21.9
1994	--	--	--	--	--	--	62.1
1995	--	--	--	--	--	--	62.0
1996	--	--	--	--	--	--	73.9
1997	--	--	--	--	--	--	31.2
1998	--	--	--	--	--	--	20.0
1999	--	--	--	--	--	--	26.9
2000	--	--	--	--	--	--	10.5
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
Subtotal	690	--	--	--	--	--	388.0

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	873	23.8	--	--	23.8	--	23.8	
2015	734	20.0	--	--	20.0	--	20.0	
2016	761	20.0	--	--	20.0	--	20.0	
2017	1773	48.0	--	--	48.0	--	48.0	
2018	1258	40.0	--	--	40.0	--	40.0	
2019	1158	34.0	--	--	34.0	--	34.0	
2020	452	13.0	--	--	13.0	--	13.0	
Subtotal	66265	1409.1	--	--	1409.1	134.0	1543.1	

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	873	16.7	--	--	16.7	--	16.7
2015	734	13.8	--	--	13.8	--	13.8
2016	761	13.6	--	--	13.6	--	13.6
2017	1773	31.9	--	--	31.9	--	31.9
2018	1258	26.1	--	--	26.1	--	26.1
2019	1158	21.7	--	--	21.7	--	21.7
2020	452	8.1	--	--	8.1	--	8.1
Subtotal	66265	1170.2	--	--	1170.2	116.4	1286.6

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	180.7	--	--	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	177.1	--	--	177.1	21.3	198.4	
2011	14551	357.5	--	--	357.5	15.9	373.4	
2012	4600	111.5	--	--	111.5	15.7	127.2	
2013	4502	133.7	--	--	133.7	10.9	144.6	
2014	10415	239.0	--	--	239.0	11.5	250.5	
2015	8140	211.9	--	--	211.9	16.6	228.5	
2016	19664	514.2	29.8	--	544.0	15.1	559.1	
2017	9876	262.8	28.3	--	291.1	15.0	306.1	
2018	6420	162.4	28.4	--	190.8	14.7	205.5	
2019	8969	252.1	28.5	--	280.6	15.4	296.0	
2020	10998	329.2	28.6	--	357.8	16.1	373.9	
Subtotal	237088	5517.0	143.6	--	5660.6	362.8	6023.4	

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	15.7	--	--	15.7	6.1	21.8
1998	1828	31.4	--	--	31.4	5.3	36.7
1999	3778	67.0	--	--	67.0	6.6	73.6
2000	8725	164.8	--	--	164.8	8.4	173.2
2001	8904	171.9	--	--	171.9	12.3	184.2
2002	14392	254.6	--	--	254.6	12.9	267.5
2003	23420	403.5	--	--	403.5	16.4	419.9
2004	20476	348.1	--	--	348.1	17.5	365.6
2005	22880	411.9	--	--	411.9	18.9	430.8
2006	8205	163.5	--	--	163.5	19.8	183.3
2007	7261	143.5	--	--	143.5	10.6	154.1
2008	4319	79.6	--	--	79.6	17.2	96.8
2009	6340	114.6	--	--	114.6	13.0	127.6
2010	7488	134.2	--	--	134.2	16.2	150.4
2011	14551	265.4	--	--	265.4	11.8	277.2
2012	4600	81.3	--	--	81.3	11.5	92.8
2013	4502	94.9	--	--	94.9	7.8	102.7
2014	10415	166.7	--	--	166.7	8.0	174.7
2015	8140	145.0	--	--	145.0	11.4	156.4
2016	19664	345.1	20.0	--	365.1	10.1	375.2
2017	9876	172.9	18.6	--	191.5	9.9	201.4
2018	6420	104.7	18.3	--	123.0	9.5	132.5
2019	8969	159.4	18.1	--	177.5	9.7	187.2
2020	10998	204.1	17.7	--	221.8	10.0	231.8
Subtotal	237088	4243.8	92.7	--	4336.5	280.9	4617.4

FY 2016 - FY 2020 Non End Item Related Recurring Flyaway costs include 1,500 Laser JDAM units.

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

The LRIP quantities approved in the ADM at Milestone II, September 20, 1995, were 425 units for Lot 1. Subsequent FY 1997 budget cycle decisions approved a buy-to-budget approach for determining annual quantities and Lot 1 became 937 units. With the lower than expected unit costs and a higher demand for JDAM Guidance Kits, a second, third and fourth LRIP were added making LRIP a total quantity of 15,998. The additional LRIP quantities, required to replenish JDAM inventories depleted during Operation Allied Force, caused the Air Force to exceed the 10% LRIP limit. However, all four Congressional Defense committees concurred with the Air Force's plan before the Lot 4 contract was awarded on February 24, 2000.

Foreign Military Sales

Country	Date of Sale	Quantity	Total Cost \$M	Description
Israel	10/31/2014	3000	82.0	JDAM kits
Norway	10/31/2014	238	5.5	JDAM kits
Morocco	10/30/2014	20	0.5	JDAM kits
United Arab Emirates	10/30/2014	3600	96.6	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	2950	71.6	JDAM Kits
Israel	1/12/2009	500	14.9	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		6.9	Integration
Turkey	12/28/2005	398	9.9	JDAM Kits
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

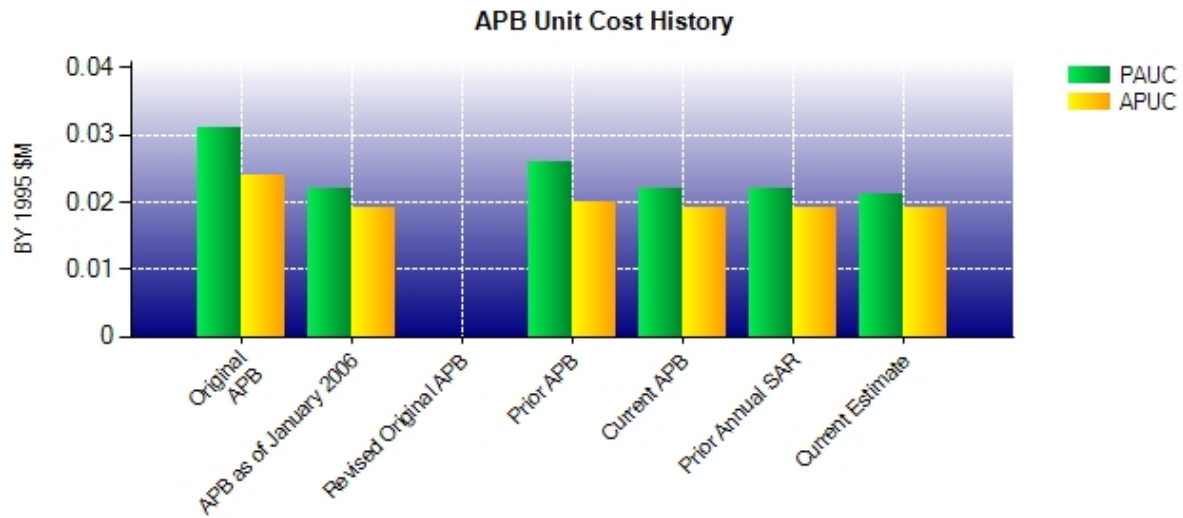
Unit Cost

Unit Cost Report

Item	BY 1995 \$M	BY 1995 \$M	% Change
	Current UCR Baseline (Oct 2002 APB)	Current Estimate (Dec 2014 SAR)	
Program Acquisition Unit Cost			
Cost	4882.6	6476.8	
Quantity	221869	304157	
Item	0.022	0.021	-4.55
Average Procurement Unit Cost			
Cost	4307.5	5904.0	
Quantity	221091	303353	
Unit Cost	0.019	0.019	0.00

Item	BY 1995 \$M	BY 1995 \$M	% Change
	Original UCR Baseline (Sep 1995 APB)	Current Estimate (Dec 2014 SAR)	
Program Acquisition Unit Cost			
Cost	2720.4	6476.8	
Quantity	88126	304157	
Unit Cost	0.031	0.021	-32.26
Average Procurement Unit Cost			
Cost	2090.6	5904.0	
Quantity	87496	303353	
Unit Cost	0.024	0.019	-20.83

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	Mar 2001	0.026	0.020	0.029	0.024
Current APB	Oct 2002	0.022	0.019	0.025	0.023
Prior Annual SAR	Dec 2013	0.022	0.019	0.027	0.024
Current Estimate	Dec 2014	0.021	0.019	0.027	0.025

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	0.000	-0.006	0.000	0.000	0.003	0.000	0.001	-0.002	0.027

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	0.000	-0.003	0.000	0.000	0.003	0.000	0.001	0.001	0.025

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	8168.8
Total Quantity	378	88126	89065	304157
PAUC	1.803	0.038	0.029	0.027

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	--	+3142.6	--	+3142.6
Schedule	--	-84.1	--	-84.1
Engineering	+15.5	--	--	+15.5
Estimating	+66.0	+1068.8	--	+1134.8
Other	--	--	--	--
Support	--	+332.5	--	+332.5
Subtotal	+85.0	+4538.1	--	+4623.1
Current Changes				
Economic	--	--	--	--
Quantity	--	+1018.2	--	+1018.2
Schedule	--	-2.3	--	-2.3
Engineering	--	--	--	--
Estimating	--	-82.2	--	-82.2
Other	--	--	--	--
Support	--	+5.3	--	+5.3
Subtotal	--	+939.0	--	+939.0
Total Changes	+85.0	+5477.1	--	+5562.1
CE - Cost Variance	602.3	7566.5	--	8168.8
CE - Cost & Funding	602.3	7566.5	--	8168.8

Summary BY 1995 \$M				
Item	RDT&E	Procurement	MILCON	Total
SAR Baseline (Production Estimate)	490.3	1810.0	--	2300.3
Previous Changes				
Economic	--	--	--	--
Quantity	--	+2366.2	--	+2366.2
Schedule	--	-6.1	--	-6.1
Engineering	+12.5	--	--	+12.5
Estimating	+70.0	+863.4	--	+933.4
Other	--	--	--	--
Support	--	+257.8	--	+257.8
Subtotal	+82.5	+3481.3	--	+3563.8
Current Changes				
Economic	--	--	--	--
Quantity	--	+649.0	--	+649.0
Schedule	--	-1.4	--	-1.4
Engineering	--	--	--	--
Estimating	--	-37.8	--	-37.8
Other	--	--	--	--
Support	--	+2.9	--	+2.9
Subtotal	--	+612.7	--	+612.7
Total Changes	+82.5	+4094.0	--	+4176.5
CE - Cost Variance	572.8	5904.0	--	6476.8
CE - Cost & Funding	572.8	5904.0	--	6476.8

Previous Estimate: December 2013

Procurement	\$M	
	Base Year	Then Year
Quantity variance resulting from an increase of 7,009 JDAM Tailkits from 59,256 to 66,265 (Navy). (Subtotal)	+130.6	+196.6
Quantity variance resulting from an increase of 7,009 JDAM Tailkits from 59,256 to 66,265 (Navy). (Quantity)	(+127.2)	(+191.7)
Allocation to Schedule resulting from Quantity change. (Schedule) (QR)	(-0.3)	(-0.6)
Allocation to Estimating resulting from Quantity change. (Estimating) (QR)	(+3.7)	(+5.5)
Quantity variance resulting from an increase of 24,500 JDAM tail kits from 212,588 to 237,088 (Air Force). (Subtotal)	+457.0	+726.6
Quantity variance resulting from an increase of 24,500 JDAM tail kits from 212,588 to 237,088 (Air Force). (Quantity)	(+445.3)	(+708.0)
Allocation to Schedule resulting from Quantity change. (Schedule) (QR)	(-1.1)	(-1.7)
Allocation to Estimating resulting from Quantity change. (Estimating) (QR)	(+12.8)	(+20.3)
Adjustment for current and prior escalation. (Estimating)	+1.3	+2.2
Adjustment to procurement due to receipt of additional dollars. (Estimating)	-66.0	-126.1
Adjustment to Non End Item Recurring Flyaway (Airborn Test Equipment). (Estimating)	+10.4	+15.9
Adjustment due to Laser JDAM quantity change. (Quantity)	+76.5	+118.5
Increase in Other Support due to program extension into FY 2020 (Air Force). (Support)	+2.9	+5.3
Procurement Subtotal	+612.7	+939.0

(QR) Quantity Related

Contracts

General Notes

Ongoing switch to strategy requiring Certified Cost or Pricing data has put pressure on procurement schedule for Lots 18 through 22; risk mitigated with Undefined Contract Action (UCA) definitization award in May 2015.

Contract Identification

Appropriation: Procurement
Contract Name: JDAM Lot 17
Contractor: Boeing
Contractor Location: 6200 JS McDonnell Blvd
 St. Louis, MO 63166
Contract Number: FA8681-13-C-0063
Contract Type: Firm Fixed Price (FFP)
Award Date: December 21, 2012
Definitization Date: December 21, 2012

Contract Price							
Initial Contract Price (\$M)			Current Contract Price (\$M)			Estimated Price At Completion (\$M)	
Target	Ceiling	Qty	Target	Ceiling	Qty	Contractor	Program Manager
118.0	N/A	4501	142.0	N/A	5708	142.0	142.0

Target Price Change Explanation

The difference between the Initial Contract Price Target and the Current Contract Price Target is due to the purchase of additional guidance kits.

Cost and Schedule Variance Explanations

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

Notes

This contract is more than 90% complete; therefore, this is the final report for this contract.

Contract Identification

Appropriation: Procurement
Contract Name: JDAM Lot 18 UCA Production Contract FY14
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: April 28, 2015

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	213.9	N/A	9202	213.9	213.9	

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.

Quantity includes U.S. Navy procurement quantities.
 All data included for Lot 18 does not include Foreign Military Sales price and quantities.

Deliveries and Expenditures

Deliveries				
Delivered to Date	Planned to Date	Actual to Date	Total Quantity	Percent Delivered
Development	804	804	804	100.00%
Production	230891	236037	303353	77.81%
Total Program Quantity Delivered	231695	236841	304157	77.87%

Expended and Appropriated (TY \$M)			
Total Acquisition Cost	8168.8	Years Appropriated	23
Expended to Date	5690.1	Percent Years Appropriated	82.14%
Percent Expended	69.66%	Appropriated to Date	6273.2
Total Funding Years	28	Percent Appropriated	76.79%

The above data is current as of February 23, 2015.

Expenditures include both U.S. Navy and Air Force.

Operating and Support Cost

Cost Estimate Details

Date of Estimate: August 28, 2014
Source of Estimate: POE
Quantity to Sustain: 294564
Unit of Measure: Total Quantity
Service Life per Unit: 20.00 Years
Fiscal Years in Service: FY 1995 - 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. Assumptions used in the O&S cost estimate are as follows: The total JDAM inventory used was 88,569 tail kits. The warranty assumed was 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 Milestone III estimate included calculations for 35 years. This was an increase of five years from the previous Milestone estimate. The model also included new assumptions to calculate unwarranted failures for 15 years after the warranty period ended.

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	--	--
Total	20.358	--

Item	Total O&S Cost \$M				
	JDAM			No Antecedent (Antecedent)	
	Current Production APB Objective/Threshold		Current Estimate		
Base Year	N/A	N/A	712.5	N/A	
Then Year	N/A	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 (BY95\$)

O&S Cost Variance		
Category	BY 1995 \$M	Change Explanations
Prior SAR Total O&S Estimates - Dec 2013 SAR	180.9	
Programmatic/Planning Factors	531.6	Increased WSEP (Weapon System Evaluation Program) requirements
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	531.6	
Current Estimate	712.5	

Increase in annual O&S cost result from update to 2001 estimate with increased quantities at various depot storage locations.

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