RCS: DD-A&T(Q&A)823-429

VH-92A Presidential Helicopter (VH-92A)

As of FY 2021 President's Budget

Defense Acquisition Management
Information Retrieval
(DAMIR)

Table of Contents

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)
USD(A&S) - Under Secretary of Defense (Acquisition and Sustainment)

Program Information

Program Name
VH-92A Presidential Helicopter (VH-92A)

DoD Component
Navy

Responsible Office

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PMA274 Presidential Helicopters Program
Program Executive Office - Air, Anti-Submarine Warfare, Assault & Special Mission
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Date Assigned: March 22, 2018

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References

SAR Baseline (Development Estimate)

Defense Acquisition Executive (DAE) Approved Acquisition Program Baseline (APB) dated April 17, 2014

Approved APB

Assistant Secretary of the Navy (Research, Development & Acquisition) (ASN(RDA)) Approved Acquisition Program Baseline (APB) dated June 7, 2019

Mission and Description

The VH-92A Presidential Helicopter (VH-92A) program mission is to provide safe, reliable, and timely transportation for the President, Vice President, Foreign Heads of State, and other official parties as directed by the Director of the White House Military Office. Presidential helicopter transportation requirements are executed by Marine Helicopter Squadron One (HMX-1) and support the President worldwide and the Vice President primarily inside the National Capital Region. Mission tasking encompasses two (2) main types of missions, administrative lift (Mission Tasking 1) and contingency operations (Mission Tasking 2). The VH-92A platform will replace both In-Service aircraft (VH-3D and VH-60N) and is based on Sikorsky's commercial S-92A helicopter. The acquisition strategy for the VH-92A program involves integration of mature government-defined mission systems and an executive interior into the existing S-92A air vehicle while maintaining the existing Federal Aviation Administration certification throughout the life cycle of the program. The program has no critical technology elements. Twenty three aircraft will be procured, of which 21 will be operational aircraft and two will remain test aircraft.

Executive Summary

Program Highlights Since Last Report

Engineering Development Model (EDM)-1, EDM-2, System Demonstration Test Article (SDTA)-1, SDTA-2 and SDTA-3 aircraft have been transferred to the Government for testing. SDTA-4 is undergoing modifications at Owego, NY, and is planned to be transferred to the Government in May 2020. Mission Communications System (MCS) development and integration efforts will continue throughout the EMD phase. Cadre training commenced in April 2019, and will continue through June 2020. Operational Assessment in support of Milestone C (MS C) was completed in March 2019. MS C Decision review was conducted on May 30, 2019, and the MS C Acquisition Decision Memorandum was approved on June 7, 2019. LRIP Lot I Option (6 aircraft, initial spares and support equipment) was awarded on June 10, 2019. Initial Operational Test and Evaluation is planned to start June 2020, and Initial Operational Capability is planned for second quarter FY 2021.

The Capability Development Document Update to support MS C was approved on June 4, 2019, and the VH-92A program has met or is on track to meet all APB parameters and is fully funded within the FYDP. Requirements have remained stable since program initiation. Risks have been identified and mitigation plans are in place. The Government Accountability Office has been reporting on the VH-92A program annually since CY 2011 with no significant findings.

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

History of Significant Developments Since Program Initiation

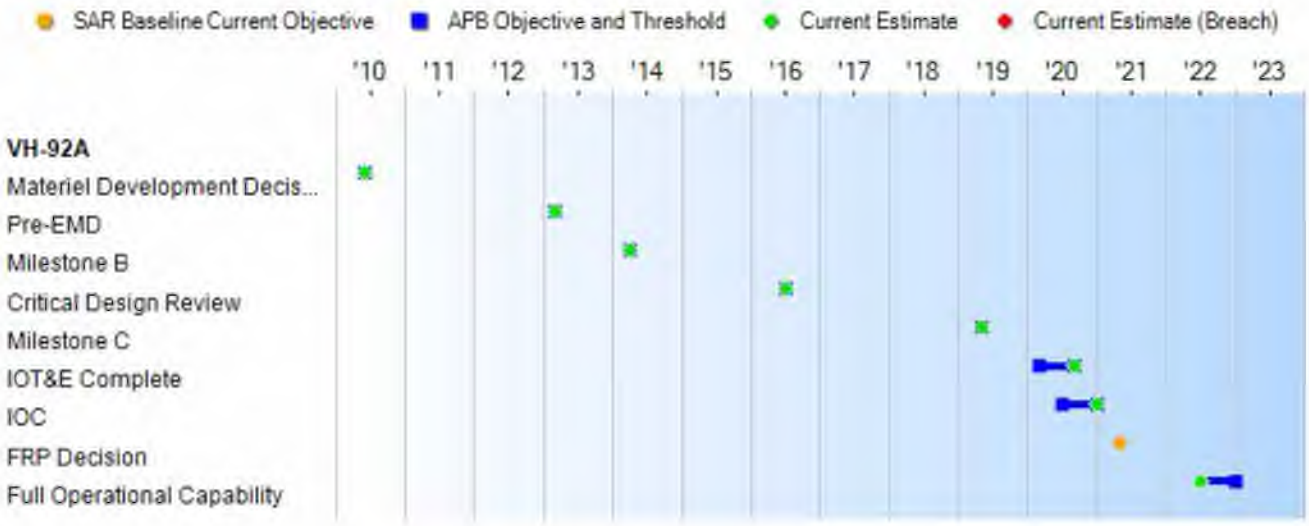
History of Significant Developments Since Program Initiation	
Date	**Significant Development Description**
March 2014	The VH-92A program was initiated at a Milestone B DAB review.
May 2014	A Fixed Price Incentive contract was competitively awarded to Sikorsky Aircraft Corporation, with three fixed priced production options.
August 2015	The VH-92A program conducted a System Level Preliminary Design Review (PDR).
July 2016	The VH-92A program conducted a System Level Critical Design Review (CDR).
July 2017	Engineering Development Model (EDM) -1 completed first flight at Stratford, CT.
July 2018	EDM-1 was transferred to the government to conduct government-led integrated testing.
May 2019	VH-92A Milestone C Review
June 2019	VH-92A Milestone C ADM approval
June 2019	LRIP Lot I Exercised.
June 2019	LRIP Lot I Exercised.

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 Development Estimate	Current APB Production Objective/Threshold		Current Estimate	
Materiel Development Decision	Jun 2010	Jun 2010	Jun 2010	Jun 2010	
Pre-EMD	Mar 2013	Mar 2013	Mar 2013	Mar 2013	
Milestone B	Mar 2014	Apr 2014	Apr 2014	Apr 2014	
Critical Design Review	Jul 2016	Jul 2016	Jul 2016	Jul 2016	
Milestone C	Jan 2019	May 2019	May 2019	May 2019	(Ch-1)
IOT&E Complete	Mar 2020	Mar 2020	Sep 2020	Sep 2020	(Ch-2)
IOC	Jul 2020	Jul 2020	Jan 2021	Jan 2021	(Ch-3)
FRP Decision	May 2021	N/A	N/A	N/A	(Ch-4)
Full Operational Capability	Jul 2022	Jul 2022	Jan 2023	Jul 2022	

Change Explanations

(Ch-1) When APB was updated for Milestone C, date was changed to reflect the date the Milestone C review was held.
(Ch-2) The IOT&E Complete current estimate has changed from May 2020 to September 2020 due to non-CDD requirements affecting the Mission Communications System.
(Ch-3) The IOC current estimate has changed from September 2020 to January 2021 due to revised IOT&E Complete date.
(Ch-4) The VH-92A Acquisition Strategy of April 16, 2019, and approved by ASN(RD&A) on May 2, 2019, deleted the FRP Decision milestone and renamed the FRP Lot to LRIP Lot III.

Acronyms and Abbreviations

IOT&E - Initial Operational Test & Evaluation

Performance

Performance Characteristics					
SAR Baseline Development Estimate	**Current APB Production Objective/Threshold**		**Demonstrated Performance**	**Current Estimate**	
Passenger Seating and Lift Capacity					
(Objective= Threshold) MT-1: 14 passengers MT-2	(Objective= Threshold) MT-1: 14 passengers MT-2	MT-1: 12 passengers MT-2: 14 passengers	TBD	MT-1: 12 passengers MT-2: 14 passengers	
Range (Operational Day)					
MT-1 NCR, NCR Return: >100 NM MT-1 CONUS/OCONUS: >200 NM MT-2: >300 NM	MT-1 NCR, NCR Return: >100 NM MT-1 CONUS/OCONUS: >200 NM MT-2: >300 NM	MT-1 NCR, NCR Return: >50 NM MT-1 CONUS/OCONUS: >150 NM MT-2: >250 NM	TBD	MT-1 NCR, NCR Return: ≥50 NM MT-1 CONUS/OCONUS: ≥150 NM MT-2: ≥250 NM	
Hover Performance					
HOGE with mission payload and other required equipment (High Hot Day)	HOGE with mission payload and other required equipment (High Hot Day)	HOGE with mission payload and other required equipment (Operational Day)	TBD	HOGE with mission payload and other required equipment (Operational Day)	
Transportability					
(Objective= Threshold) MT-2: (1) MT-2 aircraft and all required equipment, personnel (29), and SE necessary to execute deployed maintenance and mission requirements shall be transportable using (1) C-17.	(Objective= Threshold) MT-2: (1) MT-2 aircraft and all required equipment, personnel (29), and SE necessary to execute deployed maintenance and mission requirements shall be transportable using (1) C-17.	MT-2: (1) MT-2 aircraft and all required equipment, personnel (29), and SE necessary to execute deployed maintenance and mission requirements shall be transportable using (1) C-17.	TBD	MT-2: (1) MT-2 aircraft and all required equipment, personnel (29), and SE necessary to execute deployed maintenance and mission requirements shall be transportable using (1) C-17.	
Landing Zone Suitability					
(Objective= Threshold) Maintain at least a 50 foot obstacle clearance during all phases of approach, landing, take-off, and departure from the existing White House South Lawn.	(Objective= Threshold) Maintain obstacle clearance during all phases of approach, landing, take-off, and departure from the existing White House South Lawn.	Maintain obstacle clearance during all phases of approach, landing, take-off, and departure from the existing White House South Lawn.	TBD	Maintain obstacle clearance during all phases of approach, landing, take-off, and departure from the existing White House South Lawn.	(Ch-1)
Sustainment: Materiel Availability - Am, Operational Availability -Ao					

Am ≥ 59% MT-1: Ao ≥ 85% MT-2: Ao ≥ 85%	Am ≥ 59% MT-1: Ao ≥ 85% MT-2: Ao ≥ 85%	Am ≥ 57% MT-1: Ao ≥ 80% MT-2: Ao ≥ 83%	TBD	Am ≥ 57% MT-1: Ao ≥ 80% MT-2: Ao ≥ 83%
Training				
(Objective= Threshold) Reduce the overall time to train for pilots and crew chiefs from current In-Service aircraft time to train utilizing a Systems Approach to Training.	(Objective= Threshold) Reduce the overall time to train for pilots and crew chiefs from current In-Service aircraft time to train utilizing a Systems Approach to Training.	Reduce the overall time to train for pilots and crew chiefs from current In-Service aircraft time to train utilizing a Systems Approach to Training.	TBD	Reduce the overall time to train for pilots and crew chiefs from current In-Service aircraft time to train utilizing a Systems Approach to Training.
Net-Ready				
(Objective= Threshold) Support net-centric military operations Enter and be managed on the network Exchanges information.	(Objective= Threshold) Support net-centric military operations Enter and be managed on the network Exchanges information.	Support net-centric military operations Enter and be managed on the network Exchanges information.	TBD	Support net-centric military operations Enter and be managed on the network Exchanges information.

Classified Performance information is provided in the classified annex to this submission.

Requirements Reference

VH-92A CDD Update June 4, 2019

Change Explanations

(Ch-1) The updated CDD which was validated and approved by the JROC on June 4, 2019 removed the 50 foot clearance requirement.

Notes

With Joint Staff (J-4) concurrence and as documented in the CDD, the Energy KPP required by the Joint Capabilities Integration Development System Manual is not applicable to VH-92A.

Net Ready KPP Products are detailed in the CDD, Appendix A.

The VH-92A program was planned and budgeted to the performance threshold.

Acronyms and Abbreviations

Am - Materiel Availability
Ao - Operational Availability
CONUS - Continental United States
HOGE - Hover out of Ground Effect
MT-1 - Mission Tasking 1 (administrative lift)
MT-2 - Mission Tasking 2 (contingency operations)
NCR - National Capital Region
NM - Nautical Mile
OCONUS - Outside the Continental United States
SE - Support Equipment

Track to Budget

RDT&E

Appn	BA	PE
Navy 1319	05	0604273M

Project	Name
3300	Presidential Helicopter (VH-92A)
3390	VH-92A Improvements

Appn	BA	PE
Navy 1319	05	0604273N

Project	Name	
3300	Presidential Helicopter (VH-92A)	(Sunk)

Procurement

Appn	BA	PE
Navy 1506	04	0901212M

Line Item	Name
0455	VH-92A Executive Helo

Appn	BA	PE
Navy 1506	06	0901212M

Line Item	Name
0605	Spares and Repair Parts

Cost and Funding

Cost Summary

Total Acquisition Cost							
Appropriation	BY 2014 $M			BY 2014 $M	TY $M		
	SAR Baseline Development Estimate	Current APB Production Objective/Threshold		Current Estimate	SAR Baseline Development Estimate	Current APB Production Objective	Current Estimate
RDT&E	2606.1	2463.5	2709.9	2481.0	2805.7	2648.9	2675.7
Procurement	2043.6	1956.6	2152.3	1946.7	2379.0	2246.4	2229.5
Flyaway	--	--	--	1375.1	--	--	1573.0
Recurring	--	--	--	1366.2	--	--	1562.7
Non Recurring	--	--	--	8.9	--	--	10.3
Support	--	--	--	571.6	--	--	656.5
Other Support	--	--	--	285.4	--	--	327.3
Initial Spares	--	--	--	286.2	--	--	329.2
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	4649.7	4420.1	N/A	4427.7	5184.7	4895.3	4905.2

Current APB Cost Estimate Reference

Component Cost Position dated April 18, 2019

Cost Notes

CAPE Cost Risks:

The CAPE assessed additional risk above the Independent Cost Estimate in RDT&E for a six-month delay to IOC due to a schedule risk associated with the Mission Communications System. The impact was assessed at $15.3M (BY14), less than 1% difference to the Component Cost Position. The Program Office continues to mitigate this risk through the formal steps outlined in the "MCS 3.1 Software Schedule to Support IOT&E" Risk and preserve the current IOC date.

The CAPE assessed a cost risk in Procurement due to a lost opportunity to negotiate lower basic aircraft cost because all three production lots were negotiated prior to cost data being available. The impact was assessed as a lower Procurement cost by $67.3M (BY14), a -3.6% difference to the Component Cost Position. The impact would result in additional profit to the contractor of $46M (TY). The Program Office assesses this risk as no impact to the Program because all three lots were negotiated at the time of the estimate.

A comprehensive cost estimate was conducted as part of Milestone C and was included in the approved APB update, dated June 7, 2019.

Total Quantity			
Quantity	SAR Baseline Development Estimate	Current APB Production	Current Estimate
RDT&E	6	6	6
Procurement	17	17	17
Total	23	23	23

Cost and Funding

Funding Summary

Appropriation Summary FY 2021 President's Budget / December 2019 SAR (TY$ M)									
Appropriation	Prior	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	FY 2025	To Complete	Total
RDT&E	2132.6	176.2	99.3	39.3	25.1	25.6	26.1	151.5	2675.7
Procurement	730.0	729.0	770.5	0.0	0.0	0.0	0.0	0.0	2229.5
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 2021 Total	2862.6	905.2	869.8	39.3	25.1	25.6	26.1	151.5	4905.2
PB 2020 Total	2875.0	933.4	870.7	38.9	24.6	25.1	26.5	140.3	4934.5
Delta	-12.4	-28.2	-0.9	0.4	0.5	0.5	-0.4	11.2	-29.3

Quantity Summary FY 2021 President's Budget / December 2019 SAR (TY$ M)										
Quantity	Undistributed	Prior	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	FY 2025	To Complete	Total
Development	6	0	0	0	0	0	0	0	0	6
Production	0	6	6	5	0	0	0	0	0	17
PB 2021 Total	6	6	6	5	0	0	0	0	0	23
PB 2020 Total	6	6	6	5	0	0	0	0	0	23
Delta	0	0	0	0	0	0	0	0	0	0

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
2010	--	--	--	--	--	--	23.0
2011	--	--	--	--	--	--	73.9
2012	--	--	--	--	--	--	58.9
2013	--	--	--	--	--	--	46.2
2014	--	--	--	--	--	--	92.7
2015	--	--	--	--	--	--	356.2
2016	--	--	--	--	--	--	490.7
2017	--	--	--	--	--	--	327.8
2018	--	--	--	--	--	--	425.9
2019	--	--	--	--	--	--	237.3
2020	--	--	--	--	--	--	176.2
2021	--	--	--	--	--	--	99.3
2022	--	--	--	--	--	--	39.3
2023	--	--	--	--	--	--	25.1
2024	--	--	--	--	--	--	25.6
2025	--	--	--	--	--	--	26.1
2026	--	--	--	--	--	--	27.0
2027	--	--	--	--	--	--	30.3
2028	--	--	--	--	--	--	30.9
2029	--	--	--	--	--	--	31.4
2030	--	--	--	--	--	--	31.9
Subtotal	6	--	--	--	--	--	2675.7

Annual Funding 1319 | RDT&E | Research, Development, Test, and Evaluation, Navy							
Fiscal Year	Quantity	BY 2014 $M					
		End Item Recurring Flyaway	Non End Item Recurring Flyaway	Non Recurring Flyaway	Total Flyaway	Total Support	Total Program
2010	--	--	--	--	--	--	24.2
2011	--	--	--	--	--	--	76.0
2012	--	--	--	--	--	--	59.6
2013	--	--	--	--	--	--	46.3
2014	--	--	--	--	--	--	91.5
2015	--	--	--	--	--	--	347.4
2016	--	--	--	--	--	--	470.2
2017	--	--	--	--	--	--	308.5
2018	--	--	--	--	--	--	391.5
2019	--	--	--	--	--	--	213.9
2020	--	--	--	--	--	--	155.7
2021	--	--	--	--	--	--	86.0
2022	--	--	--	--	--	--	33.4
2023	--	--	--	--	--	--	20.9
2024	--	--	--	--	--	--	20.9
2025	--	--	--	--	--	--	20.9
2026	--	--	--	--	--	--	21.2
2027	--	--	--	--	--	--	23.3
2028	--	--	--	--	--	--	23.3
2029	--	--	--	--	--	--	23.2
2030	--	--	--	--	--	--	23.1
Subtotal	6	--	--	--	--	--	2481.0

For RDT&E aircraft, the first two will support contractor and government led testing and will remain as test and evaluation assets. The remaining four will support the completion of government led testing and will be utilized for Initial Operational Test & Evaluation. These four aircraft will then transition to operational status.

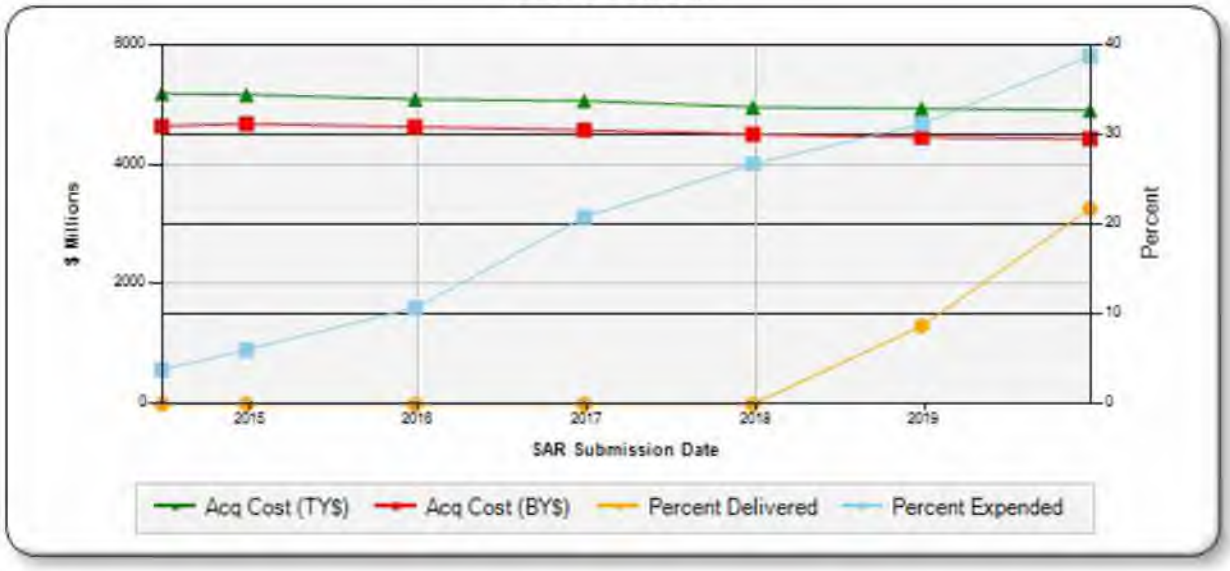
Annual Funding 1506 | Procurement | Aircraft Procurement, Navy							
Fiscal Year	Quantity	TY $M					
		End Item Recurring Flyaway	Non End Item Recurring Flyaway	Non Recurring Flyaway	Total Flyaway	Total Support	Total Program
2019	6	549.8	--	--	549.8	180.2	730.0
2020	6	536.6	--	3.0	539.6	189.4	729.0
2021	5	476.3	--	7.3	483.6	286.9	770.5
Subtotal	17	1562.7	--	10.3	1573.0	656.5	2229.5

Annual Funding 1506 | Procurement | Aircraft Procurement, Navy							
Fiscal Year	Quantity	BY 2014 $M					
		End Item Recurring Flyaway	Non End Item Recurring Flyaway	Non Recurring Flyaway	Total Flyaway	Total Support	Total Program
2019	6	489.8	--	--	489.8	160.5	650.3
2020	6	468.6	--	2.6	471.2	165.5	636.7
2021	5	407.8	--	6.3	414.1	245.6	659.7
Subtotal	17	1366.2	--	8.9	1375.1	571.6	1946.7

Charts

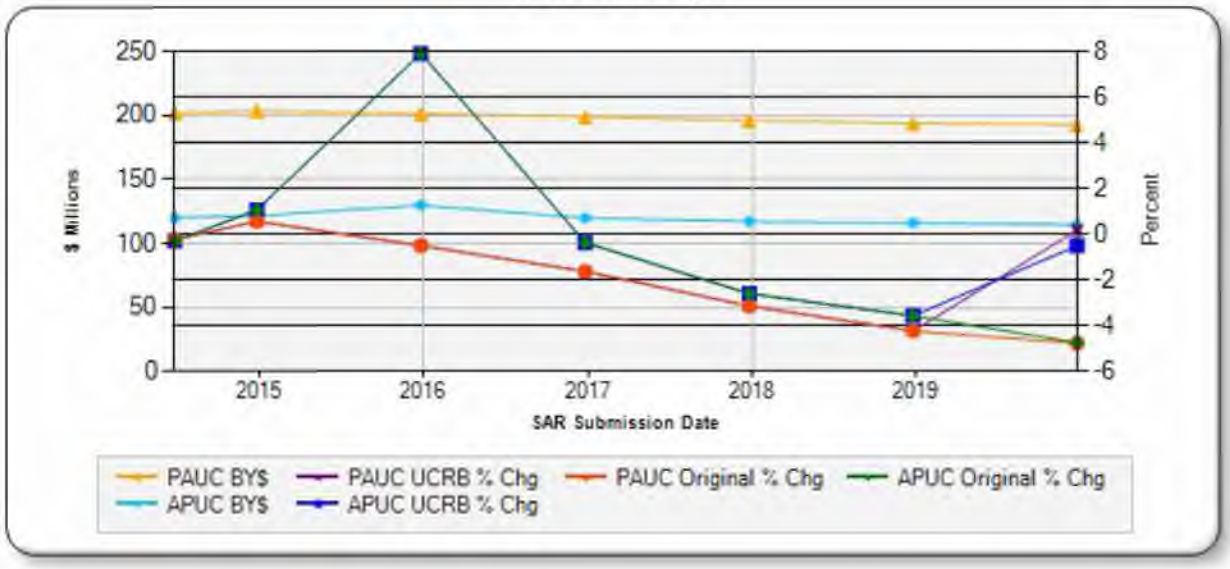
VH-92A first began SAR reporting in June 2014

Program Acquisition Cost - VH-92A
Base Year 2014 $M



Quantity - VH-92A

Unit Cost - VH-92A
Base Year 2014 $M



Risks

Significant Schedule and Technical Risks

Significant Schedule and Technical Risks	
Milestone B (April 2014)	
1.	Reliability of Government defined Commercial off the Shelf equipment could impact supportability.
2.	High altitude electromagnetic pulse (EMP) requirement (KPP) may not be achievable.
3.	Weight growth during EMD or post IOC could result in reduced performance.
Current Estimate (December 2019)	
1.	Combined Landing Zone Exhaust Impacts (KSA) - If the VH-92A exhaust damages the landing zone during normal mission execution, then procedures, landing zone material or aircraft design may require a change.
2.	MCS 3.1 Software Schedule to Support IOT&E - Delays to integration of MCS 3.1 Software into the aircraft could slide IOT&E beyond the milestone threshold.

Risks

Risk and Sensitivity Analysis

Risks and Sensitivity Analysis	
Current Baseline Estimate (June 2019)	
1.	See Original Baseline.
Original Baseline Estimate (April 2014)	
1.	The CAPE conducted an Independent Cost Estimate (ICE) for MS B and a memo was provided on 20 March 2014. The CAPE identified the following for risks and sensitivity analysis: CAPE assessed additional risk for Development in air vehicle design, avionics hardware and software development, systems engineering and program management, and system test and evaluation. CAPE assessed additional risk for Procurement in systems engineering and program management, manufacturing labor, and support costs related to ground support and training equipment. CAPE assessed additional risk for O&S in hardware modification cost, depot overhaul, and maintenance costs.
Revised Original Estimate (N/A)	
None	
Current Procurement Cost (December 2019)	
1.	The CAPE assessed additional risk above the Independent Cost Estimate in RDT&E for a six-month delay to IOC due to a schedule risk associated with the Mission Communications System. The impact was assessed at $15.3M (BY14), less than 1% difference to the Component Cost Position. The Program Office continues to mitigate this risk through the formal steps outlined in the "MCS 3.1 Software Schedule to Support IOT&E" Risk and preserve the current IOC date. The CAPE assessed a cost risk in Procurement due to a lost opportunity to negotiate lower basic aircraft cost because all three production lots were negotiated prior to cost data being available. The impact was assessed as a lower Procurement cost by $67.3M (BY14), a -3.6% difference to the Component Cost Position. The impact would result in additional profit to the contractor of $46M (TY). The Program Office assesses this risk as no impact to the Program because all three lots were negotiated at the time of the estimate.

Low Rate Initial Production

Item	Initial LRIP Decision	Current Total LRIP
Approval Date	4/17/2014	6/7/2019
Approved Quantity	12	17
Reference	Milestone B ADM	Milestone C ADM
Start Year	2019	2019
End Year	2020	2021

The Current Total LRIP Quantity is more than 10% of the total production quantity due to the low quantity requirement, all aircraft are designated LRIP aircraft as documented in the Milestone C ADM.

Foreign Military Sales

None

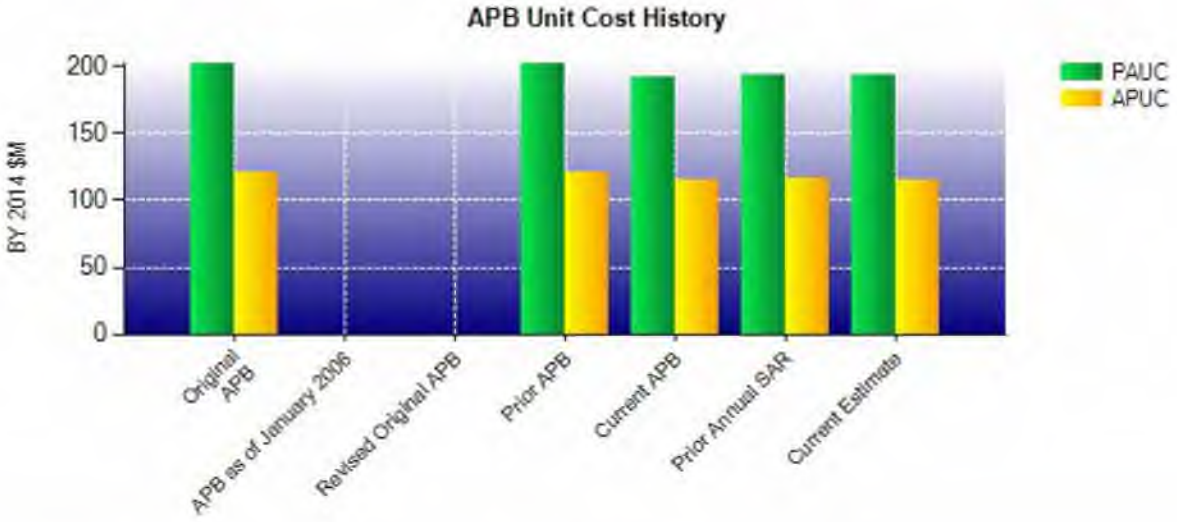
Nuclear Costs

None

Unit Cost

Current UCR Baseline and Current Estimate (Base-Year Dollars)			
Item	BY 2014 $M Current UCR Baseline (Jun 2019 APB)	BY 2014 $M Current Estimate (Dec 2019 SAR)	% Change
Program Acquisition Unit Cost			
Cost	4420.1	4427.7	
Quantity	23	23	
Unit Cost	192.178	192.509	+0.17
Average Procurement Unit Cost			
Cost	1956.6	1946.7	
Quantity	17	17	
Unit Cost	115.094	114.512	-0.51

Original UCR Baseline and Current Estimate (Base-Year Dollars)			
Item	BY 2014 $M Original UCR Baseline (Apr 2014 APB)	BY 2014 $M Current Estimate (Dec 2019 SAR)	% Change
Program Acquisition Unit Cost			
Cost	4649.7	4427.7	
Quantity	23	23	
Unit Cost	202.161	192.509	-4.77
Average Procurement Unit Cost			
Cost	2043.6	1946.7	
Quantity	17	17	
Unit Cost	120.212	114.512	-4.74



APB Unit Cost History					
Item	Date	BY 2014 $M		TY $M	
		PAUC	APUC	PAUC	APUC
Original APB	Apr 2014	202.161	120.212	225.422	139.941
APB as of January 2006	N/A	N/A	N/A	N/A	N/A
Revised Original APB	N/A	N/A	N/A	N/A	N/A
Prior APB	Apr 2014	202.161	120.212	225.422	139.941
Current APB	Jun 2019	192.178	115.094	212.839	132.141
Prior Annual SAR	Dec 2018	193.613	115.924	214.543	133.112
Current Estimate	Dec 2019	192.509	114.512	213.270	131.147

SAR Unit Cost History

Current SAR Baseline to Current Estimate (TY $M)									
PAUC Development Estimate	Changes								PAUC Current Estimate
	Econ	Qty	Sch	Eng	Est	Oth	Spt	Total	
225.422	-3.196	0.000	0.000	0.000	-9.447	0.000	0.491	-12.152	213.270

Current SAR Baseline to Current Estimate (TY $M)									
Initial APUC Development Estimate	Changes								APUC Current Estimate
	Econ	Qty	Sch	Eng	Est	Oth	Spt	Total	
139.941	-2.224	0.000	0.000	0.000	-7.235	0.000	0.665	-8.794	131.147

SAR Baseline History				
Item	SAR Planning Estimate	SAR Development Estimate	SAR Production Estimate	Current Estimate
Milestone A	N/A	N/A	N/A	N/A
Milestone B	N/A	Mar 2014	N/A	Apr 2014
Milestone C	N/A	Jan 2019	N/A	May 2019
IOC	N/A	Jul 2020	N/A	Jan 2021
Total Cost (TY $M)	N/A	5184.7	N/A	4905.2
Total Quantity	N/A	23	N/A	23
PAUC	N/A	225.422	N/A	213.270

Cost Variance

Summary TY $M				
Item	RDT&E	Procurement	MILCON	Total
SAR Baseline (Development Estimate)	2805.7	2379.0	--	5184.7
Previous Changes				
Economic	-38.9	-32.3	--	-71.2
Quantity	--	--	--	--
Schedule	--	--	--	--
Engineering	--	--	--	--
Estimating	-95.2	-73.4	--	-168.6
Other	--	--	--	--
Support	--	-10.4	--	-10.4
Subtotal	-134.1	-116.1	--	-250.2
Current Changes				
Economic	+3.2	-5.5	--	-2.3
Quantity	--	--	--	--
Schedule	--	--	--	--
Engineering	--	--	--	--
Estimating	+0.9	-49.6	--	-48.7
Other	--	--	--	--
Support	--	+21.7	--	+21.7
Subtotal	+4.1	-33.4	--	-29.3
Adjustments	--	--	--	--
Total Changes	-130.0	-149.5	--	-279.5
Current Estimate	2675.7	2229.5	--	4905.2

Summary BY 2014 $M				
Item	RDT&E	Procurement	MILCON	Total
SAR Baseline (Development Estimate)	2606.1	2043.6	--	4649.7
Previous Changes				
Economic	--	--	--	--
Quantity	--	--	--	--
Schedule	--	--	--	--
Engineering	--	--	--	--
Estimating	-123.7	-64.7	--	-188.4
Other	--	--	--	--
Support	--	-8.2	--	-8.2
Subtotal	-123.7	-72.9	--	-196.6
Current Changes				
Economic	--	--	--	--
Quantity	--	--	--	--
Schedule	--	--	--	--
Engineering	--	--	--	--
Estimating	-1.4	-43.2	--	-44.6
Other	--	--	--	--
Support	--	+19.2	--	+19.2
Subtotal	-1.4	-24.0	--	-25.4
Adjustments	--	--	--	--
Total Changes	-125.1	-96.9	--	-222.0
Current Estimate	2481.0	1946.7	--	4427.7

Previous Estimate: December 2018

RDT&E	$M	
Current Change Explanations	Base Year	Then Year
Revised escalation indices. (Economic)	N/A	+3.2
Adjustment for current and prior escalation. (Estimating)	-2.2	-2.5
Revised estimate to align with FY 2021 PB. (Estimating)	+0.8	+3.4
RDT&E Subtotal	-1.4	+4.1

Procurement	$M	
Current Change Explanations	Base Year	Then Year
Revised escalation indices. (Economic)	N/A	-5.5
Adjustment for current and prior escalation. (Estimating)	+2.4	+2.7
Revised estimates for Airframe, Mission Equipment, and Engine Equipment based on the Milestone C Estimate. (Estimating)	-45.6	-52.3
Adjustment for current and prior escalation. (Support)	+0.8	+0.9
Revised estimate for Government Furnished Equipment, Cockpit Procedures Trainer, and Government Staffing based on Milestone C Assessment. (Support)	-55.7	-65.8
Increase initial spares based on part level demand based estimate. (Support)	+74.1	+86.6
Procurement Subtotal	-24.0	-33.4

Contracts

Contract Identification

Appropriation: Procurement
Contract Name: Low Rate Initial Production
Contractor: Sikorsky
Contractor Location: 6900 Main Street
Stratford, CT 06614
Contract Number: N00019-14-C-0050/2
Contract Type: Firm Fixed Price (FFP)
Award Date: June 10, 2019
Definitization Date: June 10, 2019

Contract Price							
Initial Contract Price ($M)			Current Contract Price ($M)			Estimated Price At Completion ($M)	
Target	Ceiling	Qty	Target	Ceiling	Qty	Contractor	Program Manager
542.0	N/A	6	542.0	N/A	6	542.0	542.0

Cost and Schedule Variance Explanations

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

Contract Identification

Appropriation: RDT&E
Contract Name: Presidential Helicopter Replacement Program (EMD)
Contractor: Sikorsky Aircraft Corp.
Contractor Location: 6900 Main Street PO Box 9731
Stratford, CT 06615-9131
Contract Number: N00019-14-C-0050
Contract Type: Fixed Price Incentive(Firm Target) (FPIF)
Award Date: May 07, 2014
Definitization Date: May 07, 2014

Contract Price							
Initial Contract Price ($M)			Current Contract Price ($M)			Estimated Price At Completion ($M)	
Target	Ceiling	Qty	Target	Ceiling	Qty	Contractor	Program Manager
1244.7	1326.7	6	1238.2	1315.4	6	1297.6	1313.8

Target Price Change Explanation

The difference between the Initial Contract Price Target and the Current Contract Price Target is due to the following contract modifications: Test Spares moved to a Firm Fixed Price CLIN (-$33.6M), addition of Formation Lights ($7.8M), Wide Band Line of Sight ($3.3M), Defense Information Assurance Certification and Accreditation Process to Risk Management Framework ($.7M), Wi-Fi Installation ($2.1M), Network Equipment Enclosures ($.3M), Mission Control System (MCS) Hardware Changes ($9.5M), Engineering Supporting Documents ($.4M), Program Protection Plan ($1.0M), and the Mission Tasking (MT) -2 Kit Modification ($1.9M)

Contract Variance		
Item	Cost Variance	Schedule Variance
Cumulative Variances To Date (12/18/2019)	-119.4	-3.7
Previous Cumulative Variances	-99.3	-24.6
Net Change	-20.1	+20.9

Cost and Schedule Variance Explanations

The unfavorable net change in the cost variance is due to the following overrun/underrun drivers during the time period: Increased labor associated with Air Vehicle Integration and Test (-$10.9M); Identification and resolution of complex design issues in the Airframe (-$4.2M) and Furnishings and Equipment (-$4.3M) and associated Systems Engineering (-$1.3M); and General and Administrative Rate Increase due to the 2019 Forward Pricing Rate Proposal (-$5.1M). These overruns were offset by underruns in Supportability due to personnel efficiencies ($1.3M), less personnel required for Security Management ($2.9M), and efficiencies in Development Test and Evaluation ($2.1M).

The favorable net change in the schedule variance is due to the receipt and recovery of parts that were previously late to schedule, the close out of System Development Test Article #1 through #3, and the recovery of the remaining work on System Development Test Article #4 that was previously late to schedule.

Deliveries and Expenditures

Deliveries				
Delivered to Date	Planned to Date	Actual to Date	Total Quantity	Percent Delivered
Development	6	5	6	83.33%
Production	17	0	17	0.00%
Total Program Quantity Delivered	23	5	23	21.74%

Expended and Appropriated (TY $M)			
Total Acquisition Cost	4905.2	Years Appropriated	11
Expended to Date	1898.7	Percent Years Appropriated	52.38%
Percent Expended	38.71%	Appropriated to Date	3767.8
Total Funding Years	21	Percent Appropriated	76.81%

The above data is current as of February 10, 2020.

Operating and Support Cost

Cost Estimate Details

Date of Estimate:	January 22, 2020
Source of Estimate:	POE
Quantity to Sustain:	21
Unit of Measure:	Aircraft
Service Life per Unit:	40.00 Years
Fiscal Years in Service:	FY 2021 - FY 2062

Aircraft Attrition: 1 aircraft over the life of the program
Aircraft Pipeline Factor: 19% of Total Aircraft Inventory (TAI)
Squadrons: Marine Helicopter Squadron One (HMX-1) Helicopters per (active) squadron: 16
Steady State Monthly Flight Hours per Helicopter (TAI): 24.0
Steady State Monthly Flight Hours per Helicopter (Primary Authorized Aircraft (PAA)): 31.5
Total TAI Helicopter Years: 840
Total PAA Helicopter Years: 649

Total program acquisition quantity of 23 aircraft is comprised of two test aircraft and 21 operational aircraft. The quantity to sustain encompasses the 21 operational aircraft.

Sustainment Strategy

The VH-92 program will utilize Organizational, limited Intermediate and Depot level maintenance capabilities. Contractor maintenance will be employed as support for depot level repairables. Aircraft rework will be performed via an organic depot level Integrated Maintenance Program. During sustainment, some in-service engineering support will be provided by the contractor.

Antecedent Information

The antecedent system is VH-3D/VH-60N. The Antecedent VH-3D/VH-60N data is representative of FY 2013 to FY 2015 average of Naval Visibility And Management of Operating and Support Cost (VAMOSC) reported cost data adjusted to reflect VH-92A Planned Flight Hour Utilization and the VH-92A manning.

Total Antecedent O&S Costs = Average annual antecedent O&S Cost per aircraft * total aircraft operating years = $12.639M * 840 = $10,616.8M BY 2014

Annual O&S Costs BY2014 $M		
Cost Element	**VH-92A Average Annual Cost Per Aircraft**	**VH-3D/VH-60N (Antecedent) Average Annual Cost Per Aircraft**
Unit-Level Manpower	1.588	1.588
Unit Operations	0.549	0.587
Maintenance	3.529	5.196
Sustaining Support	1.550	0.407
Continuing System Improvements	2.288	4.193
Indirect Support	0.668	0.668
Other	0.000	0.000
Total	10.172	12.639

Item	Total O&S Cost $M			
	VH-92A			VH-3D/VH-60N (Antecedent)
	Current Production APB Objective/Threshold		Current Estimate	
Base Year	8691.0	9560.1	8544.3	10616.8
Then Year	15641.9	N/A	15548.5	N/A

Equation to Translate Annual Cost to Total Cost

Total VH-92A O&S costs = Average annual VH-92A O&S Cost per aircraft * total aircraft operating years = $10.172M * 840 = $8,544.3M BY 2014

O&S Cost Variance		
Category	**BY 2014 $M**	**Change Explanations**
Prior SAR Total O&S Estimates - Dec 2018 SAR	8686.7	
Programmatic/Planning Factors	-78.3	Decreasing flight hours through FY2025 based on latest budget controls and aligning aircraft delivery dates with Initial Operational Capability.
Cost Estimating Methodology	66.9	Aviation depot level repairables and aviation fleet maintenance consumable methodology and government rate calculations methodology updates.
Cost Data Update	-157.5	Updates for program office staffing, antecedent analogous data, modification kit cost, OSD Inflation Guidance, and material pricing.
Labor Rate	1.9	Update in labor rates for contractor, government, and military personnel.
Energy Rate	0.0	Updated fuel price per gallon with FY 2020 PB rates
Technical Input	24.6	Updated Integrated Maintenance Concept labor and material, and VH-92A parts data.
Other	0.0	

Total Changes	-142.4
Current Estimate	8544.3

Disposal Estimate Details

Date of Estimate: January 22, 2020
Source of Estimate: POE
Disposal/Demilitarization Total Cost (BY 2014 $M): 4.2

The disposal estimate was refined at MS C to reflect the current demilitarization plan.