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Exhibit P-40, Budget Line Item Justification: PB 2020 Air Force **Date:** March 2019

Appropriation / Budget Activity / Budget Sub Activity: 3020F: Missile Procurement, Air Force / BA 02: Other Missiles / BSA 2: Tactical **P-1 Line Item Number / Title:** MAMRA0 / AMRAAM

ID Code (A=Service Ready, B=Not Service Ready): A **Program Elements for Code B Items:** N/A **Other Related Program Elements:** 0207163F

Line Item MDAP/MAIS Code: 185

Resource Summary	Prior Years	FY 2018	FY 2019	FY 2020 Base	FY 2020 OCO	FY 2020 Total	FY 2021	FY 2022	FY 2023	FY 2024	To Complete	Total
Procurement Quantity (<i>Units in Each</i>)	9,783	185	187	220	-	220	388	391	425	425	847	12,851
Gross/Weapon System Cost (<i>\$ in Millions</i>)	9,380.055	264.327	307.486	332.250	0.000	332.250	461.724	438.070	470.882	455.956	1,203.122	13,313.872
Less PY Advance Procurement (<i>\$ in Millions</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) (<i>\$ in Millions</i>)	9,380.055	264.327	307.486	332.250	0.000	332.250	461.724	438.070	470.882	455.956	1,203.122	13,313.872
Plus CY Advance Procurement (<i>\$ in Millions</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Total Obligation Authority (<i>\$ in Millions</i>)	9,380.055	264.327	307.486	332.250	0.000	332.250	461.724	438.070	470.882	455.956	1,203.122	13,313.872
<i>(The following Resource Summary rows are for informational purposes only. The corresponding budget requests are documented elsewhere.)</i>												
Initial Spares (<i>\$ in Millions</i>)	84.700	2.067	2.023	0.529	-	0.529	2.094	3.052	3.091	2.214	4.571	104.341
Flyaway Unit Cost (<i>\$ in Millions</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Unit Cost (<i>\$ in Millions</i>)	0.959	1.429	1.644	1.510	-	1.510	1.190	1.120	1.108	1.073	1.420	1.036

Description:

The Advanced Medium Range Air-to-Air Missile (AMRAAM) is the premier all-weather, all-environment radar guided missile developed jointly by the Air Force and Navy. The Air Force is the lead service. AMRAAM is a small, light, fast missile with improved capabilities against very low and high-altitude targets in an Electronic Attack (EA) environment. Funding also used to address Diminishing Manufacturing Sources (DMS) issues.

FY20: Due to parts limitations with Processor Replacement Program (PRP) missile configuration and a delay in the Form, Fit, Function Refresh (F3R) effort, the program office has adjusted FY20 production quantities to ensure a smooth production cut-in of F3R design. There is a difference between USAF and USN All Up Round Unit Cost due to the different ratios of each missile type for each service.

CY funding totals include \$2.600M appropriated for Overseas Contingency Operations.

Funding for this exhibit is contained in PE 0207163F.

As directed in the FY 2018 NDAA, Sec 825, amendment to PL 114-92 FY 2016 NDAA, Sec 828 Penalty for Cost Overruns, the FY 2018 Air Force penalty total is \$14.373M. The calculated percentage reduction to each research, development, test and evaluation and procurement account will be allocated proportionally from all programs, projects, or activities under such account.

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Exhibit P-40, Budget Line Item Justification: PB 2020 Air Force **Date:** March 2019

Appropriation / Budget Activity / Budget Sub Activity: 3020F: Missile Procurement, Air Force / BA 02: Other Missiles / BSA 2: Tactical **P-1 Line Item Number / Title:** MAMRA0 / AMRAAM

ID Code (A=Service Ready, B=Not Service Ready): A **Program Elements for Code B Items:** N/A **Other Related Program Elements:** 0207163F

Line Item MDAP/MAIS Code: 185

Exhibits Schedule					Prior Years	FY 2018	FY 2019	FY 2020 Base	FY 2020 OCO	FY 2020 Total
Exhibit Type	Title*	Subexhibits	ID CD	MDAP/MAIS Code	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)
P-5	AMRAAM	P-5a, P-21	A		9,783 / 9,380.055	185 / 264.327	187 / 307.486	220 / 332.250	- / 0.000	220 / 332.250
P-40	Total Gross/Weapon System Cost				9,783 / 9,380.055	185 / 264.327	187 / 307.486	220 / 332.250	- / 0.000	220 / 332.250

*Title represents 1) the Number / Title for Items; 2) the Number / Title [DODIC] for Ammunition; and/or 3) the Number / Title (Modification Type) for Modifications.

Note: Totals in this Exhibit P-40 set may not be exact or sum exactly due to rounding.

Justification:
 FY20 continues procurement and support of AMRAAM for the Air Force and Navy in Lot 34. USAF funds will procure 220 AIM-120D missiles in support of warfighter requirements. Quantity and funding in FY20 is limited due to ramp rate of Form, Fit, Function (F3R) missile production; therefore, FY20 funding request was adjusted to align funding with maximum FY20 production ramp rates for the F3R production line.

The program will modify existing and build additional tooling and test equipment to support production of the AIM-120D. Continue to update the AMRAAM Technical Data Package to ensure a viable, producible design through the expected production life of the AMRAAM program. Maintain a robust supplier base capable of sustaining AMRAAM production for the life of the program, while continuing to develop second source suppliers for critical items. Resolve production Diminishing Manufacturing Sources/Material Shortages/Obsolescence issues through studies, bridge buys, life of type buys, supplier/parts replacement and qualification activities to preserve future production capabilities and capacities. Continue to procure Telemetry (TM) Instrumentation Units for Weapon System Evaluation Program (WSEP).

Note: Procurement quantities can change based on negotiated options/pricing bands and available funding, in accordance with Title 10, US Code Section 2308 BUY-TO-BUDGET ACQUISITION.

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Exhibit P-5, Cost Analysis: PB 2020 Air Force		Date: March 2019
Appropriation / Budget Activity / Budget Sub Activity: 3020F / 02 / 2	P-1 Line Item Number / Title: MAMRA0 / AMRAAM	Item Number / Title [DODIC]: AMRAAM

ID Code (A=Service Ready, B=Not Service Ready) : A	MDAP/MAIS Code:
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Resource Summary	Prior Years	FY 2018	FY 2019	FY 2020 Base	FY 2020 OCO	FY 2020 Total
Procurement Quantity (Units in Each)	9,783	185	187	220	-	220
Gross/Weapon System Cost (\$ in Millions)	9,380.055	264.327	307.486	332.250	0.000	332.250
Less PY Advance Procurement (\$ in Millions)	-	-	-	-	-	-
Net Procurement (P-1) (\$ in Millions)	9,380.055	264.327	307.486	332.250	0.000	332.250
Plus CY Advance Procurement (\$ in Millions)	-	-	-	-	-	-
Total Obligation Authority (\$ in Millions)	9,380.055	264.327	307.486	332.250	0.000	332.250

(The following Resource Summary rows are for informational purposes only. The corresponding budget requests are documented elsewhere.)

Initial Spares (\$ in Millions)	84.700	2.067	2.023	0.529	-	0.529
Gross/Weapon System Unit Cost (\$ in Millions)	0.959	1.429	1.644	1.510	-	1.510

Note: Subtotals or Totals in this Exhibit P-5 may not be exact or sum exactly due to rounding.

Cost Elements	Prior Years			FY 2018			FY 2019			FY 2020 Base			FY 2020 OCO			FY 2020 Total		
	Unit Cost (\$ M)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ M)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ M)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ M)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ M)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ M)	Qty (Each)	Total Cost (\$ M)
Hardware - Hardware End Item Cost																		
Recurring Cost																		
AIM-120 Missile All Up Round (AUR) ⁽¹⁾	1.033	1,598	1,650.788	1.033	185	191.161	1.171	187	218.888	1.201	220	264.196	-	-	-	1.201	220	264.196
AIM-120 Missile Captive Air Training Missile (CATM)	0.635	444	281.823	-	-	0.000	-	-	0.000	-	-	0.000	-	-	-	-	-	0.000
Warranty	-	-	70.328	-	-	0.000	-	-	0.000	-	-	0.000	-	-	-	-	-	0.000
Diminishing Manufacturing Sources/Material Shortages (DMS/MS)	-	-	395.895	-	-	34.899	-	-	30.042	-	-	23.400	-	-	-	-	-	23.400
Tooling and Test Equipment	-	-	99.525	-	-	0.000	-	-	14.651	-	-	4.143	-	-	-	-	-	4.143
Engineering Change Orders	-	-	2.755	-	-	0.975	-	-	1.469	-	-	1.500	-	-	-	-	-	1.500
Total Prior Years Costs	0.846	7,741	6,545.560	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
<i>Subtotal: Recurring Cost</i>	-	-	9,046.674	-	-	227.035	-	-	265.050	-	-	293.239	-	-	-	-	-	293.239
<i>Subtotal: Hardware - Hardware End Item Cost</i>	-	-	9,046.674	-	-	227.035	-	-	265.050	-	-	293.239	-	-	-	-	-	293.239
Ancillary Equipment - Ancillary Equipment End Item Cost																		
Recurring Cost																		
Containers and Cables	-	-	7.872	-	-	1.250	-	-	1.250	-	-	1.275	-	-	-	-	-	1.275

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Exhibit P-5, Cost Analysis: PB 2020 Air Force												Date: March 2019					
Appropriation / Budget Activity / Budget Sub Activity: 3020F / 02 / 2						P-1 Line Item Number / Title: MAMRA0 / AMRAAM						Item Number / Title [DODIC]: AMRAAM					
ID Code (A=Service Ready, B=Not Service Ready) : A												MDAP/MAIS Code:					

Note: Subtotals or Totals in this Exhibit P-5 may not be exact or sum exactly due to rounding.

Cost Elements	Prior Years			FY 2018			FY 2019			FY 2020 Base			FY 2020 OCO			FY 2020 Total		
	Unit Cost (\$ M)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ M)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ M)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ M)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ M)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ M)	Qty (Each)	Total Cost (\$ M)
<i>Subtotal: Recurring Cost</i>	-	-	7.872	-	-	1.250	-	-	1.250	-	-	1.275	-	-	-	-	-	1.275
<i>Subtotal: Ancillary Equipment - Ancillary Equipment End Item Cost</i>	-	-	7.872	-	-	1.250	-	-	1.250	-	-	1.275	-	-	-	-	-	1.275
Support - Support End Item Cost																		
Production Test/Support	-	-	116.099	-	-	7.388	-	-	11.485	-	-	11.713	-	-	-	-	-	11.713
PMA Other Government Costs	-	-	12.130	-	-	1.768	-	-	1.823	-	-	1.859	-	-	-	-	-	1.859
PMA Contractor Services	-	-	18.040	-	-	2.503	-	-	2.522	-	-	2.573	-	-	-	-	-	2.573
Training Equipment	-	-	179.240	-	-	24.383	-	-	25.356	-	-	21.591	-	-	-	-	-	21.591
<i>Subtotal: Support - Support End Item Cost</i>	-	-	325.509	-	-	36.042	-	-	41.186	-	-	37.736	-	-	-	-	-	37.736
Gross/Weapon System Cost	0.959	9,783	9,380.055	1.429	185	264.327	1.644	187	307.486	1.510	220	332.250	-	-	0.000	1.510	220	332.250

Remarks:

- 1) The Total Prior Years Weapon System Cost Element, Prior Years column entries are composite numbers for all AIM-120 variants.
- 2) The Production/Test Support cost element includes costs such as engineering studies, technical support, network security, and modification of special test assets.
- 3) The Training Equipment cost element includes telemetry instrumentation units to support Weapon System Evaluation Program (WSEP) and modification of telemetry components to maintain compatibility with F-22, F-35 and test range infrastructure.

(t) indicates the presence of a P-5a

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Exhibit P-5a, Procurement History and Planning: PB 2020 Air Force **Date:** March 2019

Appropriation / Budget Activity / Budget Sub Activity: 3020F / 02 / 2	P-1 Line Item Number / Title: MAMRA0 / AMRAAM	Item Number / Title [DODIC]: AMRAAM
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Cost Elements	O C O	FY	Contractor and Location	Method/Type or Funding Vehicle	Location of PCO	Award Date	Date of First Delivery	Qty <i>(Each)</i>	Unit Cost <i>(\$ M)</i>	Specs Avail Now?	Date Revision Available	RFP Issue Date
AIM-120 Missile All Up Round (AUR) ^(t)		2015	Raytheon Missile Systems / Tucson, AZ	SS / FPIF	Eglin AFB	Mar 2015	Apr 2017	223	0.982	Y		Jul 2013
AIM-120 Missile All Up Round (AUR) ^(t)		2016	Raytheon Missile Systems / Tucson, AZ	SS / FPIF	Eglin AFB	Mar 2016	Oct 2018	281	0.940	Y		Jul 2013
AIM-120 Missile All Up Round (AUR) ^(t)		2017	Raytheon Missile Systems / Tucson, AZ	SS / FPIF	Eglin AFB	Dec 2017	Oct 2019	256	1.000	Y		Mar 2016
AIM-120 Missile All Up Round (AUR) ^(t)		2018	Raytheon Missile Systems / Tucson, AZ	SS / FPIF	Eglin AFB	Mar 2018	Jul 2020	185	1.033	Y		Mar 2017
AIM-120 Missile All Up Round (AUR) ^(t)		2019	Raytheon Missile Systems / Tucson, AZ	SS / FPIF	Eglin AFB	Aug 2019	Apr 2021	187	1.171	Y		Mar 2018
AIM-120 Missile All Up Round (AUR) ^(t)		2020	Raytheon Missile Systems / Tucson, AZ	SS / FPIF	Eglin AFB	Aug 2020	Aug 2022	220	1.201	Y		Jul 2018

^(t) indicates the presence of a P-21

Remarks:

1) Unit Cost calculations for Air Force, Navy, and other requirements.

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Exhibit P-21, Production Schedule: PB 2020 Air Force **Date:** March 2019

Appropriation / Budget Activity / Budget Sub Activity: 3020F / 02 / 2	P-1 Line Item Number / Title: MAMRA0 / AMRAAM	Item Number / Title [DODIC]: AMRAAM
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Cost Elements <i>(Units in Each)</i>					Fiscal Year 2015													Fiscal Year 2016													B A L A N C E		
O C C O	M F R #	FY	SERVICE	PROC QTY	ACCEP T P R I O R T O 1 O C T 2 0 1 4	BAL D U E A S O F 1 O C T	Calendar Year 2015													Calendar Year 2016													
							O C T	N O V	D E C	J A N	F E B	M A R	A P R	M A Y	J U N	J U L	A U G	S E P	O C T	N O V	D E C	J A N	F E B	M A R	A P R	M A Y	J U N	J U L	A U G	S E P			
AIM-120 Missile All Up Round (AUR)																																	
Prior Years Deliveries: 838																																	
1	2015	AF ⁽¹⁾	223	0	223																									223			
1	2015	FMS ^(‡) (2)	334	0	334																									334			
1	2015	Total	557	0	557																									557			
1	2016	AF	281	0	281																									281			
1	2016	FMS ^(‡)	212	0	212																									212			
1	2016	NAVY ^(‡)	117	0	117																									117			
1	2016	Total	610	0	610																									610			
1	2017	AF	256	0	256																									256			
1	2017	FMS ^(‡)	306	0	306																									306			
1	2017	NAVY ^(‡)	144	0	144																									144			
1	2017	Total	706	0	706																									706			
1	2018	AF	185	0	185																									185			
1	2018	FMS ^(‡)	245	0	245																									245			
1	2018	NAVY ^(‡)	120	0	120																									120			
1	2018	Total	550	0	550																									550			
1	2019	AF	187	0	187																									187			
1	2019	FMS ^(‡)	210	0	210																									210			
1	2019	NAVY ^(‡)	141	0	141																									141			
1	2019	Total	538	0	538																									538			
1	2020	AF	220	0	220																									220			
1	2020	FMS ^(‡)	252	0	252																									252			
1	2020	NAVY ^(‡)	169	0	169																									169			
1	2020	Total	641	0	641																									641			
						O C T	N O V	D E C	J A N	F E B	M A R	A P R	M A Y	J U N	J U L	A U G	S E P	O C T	N O V	D E C	J A N	F E B	M A R	A P R	M A Y	J U N	J U L	A U G	S E P				

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Exhibit P-21, Production Schedule: PB 2020 Air Force **Date:** March 2019

Appropriation / Budget Activity / Budget Sub Activity: 3020F / 02 / 2	P-1 Line Item Number / Title: MAMRA0 / AMRAAM	Item Number / Title [DODIC]: AMRAAM
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Cost Elements <i>(Units in Each)</i>				Fiscal Year 2017														Fiscal Year 2018														BALANCE			
O C O	M F R #	FY	SERVICE	PROC QTY	ACCEPT PRIOR TO 1 OCT 2016	BAL DUE AS OF 1 OCT	Calendar Year 2017														Calendar Year 2018														
							O C T	N O V	D E C	J A N	F E B	M A R	A P R	M A Y	J U N	J U L	A U G	S E P	O C T	N O V	D E C	J A N	F E B	M A R	A P R	M A Y	J U N	J U L	A U G	S E P					
AIM-120 Missile All Up Round (AUR)																																			
Prior Years Deliveries: 838																																			
1	2015	AF ⁽¹⁾	223	0	223	-	-	-	-	-	-	45	-	-	-	-	-	89	-	-	-	-	-	-	-	-	-	-	-	0					
1	2015	FMS ^(‡) (2)	334	0	334	-	-	-	-	-	-	181	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	33	-	43					
1	2015	Total	557	0	557	-	-	-	-	-	-	226	-	-	-	-	-	89	-	-	-	-	-	-	-	-	33	-	43						
1	2016	AF	281	0	281	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	281						
1	2016	FMS ^(‡)	212	0	212	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	6	-	182						
1	2016	NAVY ^(‡)	117	0	117	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	41	-	36						
1	2016	Total	610	0	610	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	47	-	64	499						
1	2017	AF	256	0	256																								256						
1	2017	FMS ^(‡)	306	0	306																								306						
1	2017	NAVY ^(‡)	144	0	144																								144						
1	2017	Total	706	0	706																								706						
1	2018	AF	185	0	185																								185						
1	2018	FMS ^(‡)	245	0	245																								245						
1	2018	NAVY ^(‡)	120	0	120																								120						
1	2018	Total	550	0	550																								550						
1	2019	AF	187	0	187																								187						
1	2019	FMS ^(‡)	210	0	210																								210						
1	2019	NAVY ^(‡)	141	0	141																								141						
1	2019	Total	538	0	538																								538						
1	2020	AF	220	0	220																								220						
1	2020	FMS ^(‡)	252	0	252																								252						
1	2020	NAVY ^(‡)	169	0	169																								169						
1	2020	Total	641	0	641																								641						
						O C T	N O V	D E C	J A N	F E B	M A R	A P R	M A Y	J U N	J U L	A U G	S E P	O C T	N O V	D E C	J A N	F E B	M A R	A P R	M A Y	J U N	J U L	A U G	S E P						

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Exhibit P-21, Production Schedule: PB 2020 Air Force **Date:** March 2019

Appropriation / Budget Activity / Budget Sub Activity: 3020F / 02 / 2 **P-1 Line Item Number / Title:** MAMRA0 / AMRAAM **Item Number / Title [DODIC]:** AMRAAM

Cost Elements <i>(Units in Each)</i>					Fiscal Year 2019													Fiscal Year 2020													BALANCE		
O C O	M F R #	FY	SERVICE	PROC QTY	ACCEPT PRIOR TO 1 OCT 2018	BAL DUE AS OF 1 OCT	Calendar Year 2019													Calendar Year 2020													
							O C T	N O V	D E C	J A N	F E B	M A R	A P R	M A Y	J U N	J U L	A U G	S E P	O C T	N O V	D E C	J A N	F E B	M A R	A P R	M A Y	J U N	J U L	A U G	S E P			
AIM-120 Missile All Up Round (AUR)																																	
Prior Years Deliveries: 838																																	
1	2015	AF ⁽¹⁾	223	223	0	-																							0				
1	2015	FMS ^(‡) (2)	334	291	43	43																							0				
1	2015	Total	557	514	43	43	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0				
1	2016	AF	281	0	281	64	-	-	72	-	-	72	-	-	73														0				
1	2016	FMS ^(‡)	212	30	182	34	-	-	55	-	-	52	-	-	41														0				
1	2016	NAVY ^(‡)	117	81	36	-	-	-	36	-	-	-	-	-	-														0				
1	2016	Total	610	111	499	98	-	-	163	-	-	124	-	-	114	-	-	-	-	-	-	-	-	-	-	-	-	-	0				
1	2017	AF	256	0	256	-	-	-	-	-	-	-	-	-	-														0				
1	2017	FMS ^(‡)	306	0	306	-	-	-	-	-	-	-	-	-	-														0				
1	2017	NAVY ^(‡)	144	0	144	-	-	-	-	-	-	-	-	-	-														0				
1	2017	Total	706	0	706	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0				
1	2018	AF	185	0	185	-	-	-	-	-	-	-	-	-	-														0				
1	2018	FMS ^(‡)	245	0	245	-	-	-	-	-	-	-	-	-	-														0				
1	2018	NAVY ^(‡)	120	0	120	-	-	-	-	-	-	-	-	-	-														0				
1	2018	Total	550	0	550	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0				
1	2019	AF	187	0	187																								0				
1	2019	FMS ^(‡)	210	0	210																								0				
1	2019	NAVY ^(‡)	141	0	141																								0				
1	2019	Total	538	0	538																								0				
1	2020	AF	220	0	220																								0				
1	2020	FMS ^(‡)	252	0	252																								0				
1	2020	NAVY ^(‡)	169	0	169																								0				
1	2020	Total	641	0	641																								0				

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Exhibit P-21, Production Schedule: PB 2020 Air Force **Date:** March 2019

Appropriation / Budget Activity / Budget Sub Activity: 3020F / 02 / 2 **P-1 Line Item Number / Title:** MAMRA0 / AMRAAM **Item Number / Title [DODIC]:** AMRAAM

Cost Elements <i>(Units in Each)</i>						Fiscal Year 2021													Fiscal Year 2022													BALANCE	
O C O	M F R #	FY	SERVICE	PROC QTY	ACCEPT PRIOR TO 1 OCT 2020	BAL DUE AS OF 1 OCT	Calendar Year 2021													Calendar Year 2022													
							O C T	N O V	D E C	J A N	F E B	M A R	A P R	M A Y	J U N	J U L	A U G	S E P	O C T	N O V	D E C	J A N	F E B	M A R	A P R	M A Y	J U N	J U L	A U G	S E P			
AIM-120 Missile All Up Round (AUR)																																	
Prior Years Deliveries: 838																																	
1	2015	AF ⁽¹⁾	223	223	0																								0				
1	2015	FMS ⁽²⁾	334	334	0																								0				
1	2015	Total	557	557	0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0				
1	2016	AF	281	281	0																								0				
1	2016	FMS ⁽²⁾	212	212	0																								0				
1	2016	NAVY ⁽²⁾	117	117	0																								0				
1	2016	Total	610	610	0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0				
1	2017	AF	256	256	0																								0				
1	2017	FMS ⁽²⁾	306	306	0																								0				
1	2017	NAVY ⁽²⁾	144	144	0																								0				
1	2017	Total	706	706	0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0				
1	2018	AF	185	103	82	-	-	-	82																				0				
1	2018	FMS ⁽²⁾	245	104	141	-	-	-	141																				0				
1	2018	NAVY ⁽²⁾	120	51	69	-	-	-	69																				0				
1	2018	Total	550	258	292	-	-	-	292	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0				
1	2019	AF	187	0	187	-	-	-	-	-	-	48	-	-	48	-	-	46	-	-	45								0				
1	2019	FMS ⁽²⁾	210	0	210	-	-	-	-	-	-	52	-	-	52	-	-	53	-	-	53								0				
1	2019	NAVY ⁽²⁾	141	0	141	-	-	-	-	-	-	35	-	-	35	-	-	35	-	-	36								0				
1	2019	Total	538	0	538	-	-	-	-	-	-	135	-	-	135	-	-	134	-	-	134	-	-	-	-	-	-	-	0				
1	2020	AF	220	0	220	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	55	-	165				
1	2020	FMS ⁽²⁾	252	0	252	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	63	-	189				
1	2020	NAVY ⁽²⁾	169	0	169	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	43	-	126				
1	2020	Total	641	0	641	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	161	-	480				
						O C T	N O V	D E C	J A N	F E B	M A R	A P R	M A Y	J U N	J U L	A U G	S E P	O C T	N O V	D E C	J A N	F E B	M A R	A P R	M A Y	J U N	J U L	A U G	S E P				

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Exhibit P-21, Production Schedule: PB 2020 Air Force **Date:** March 2019

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Cost Elements <i>(Units in Each)</i>						Fiscal Year 2023													Fiscal Year 2024													BALANCE	
O C C O	M F R #	FY	SERVICE	PROC QTY	ACCEPT PRIOR TO 1 OCT 2022	BAL DUE AS OF 1 OCT	Calendar Year 2023													Calendar Year 2024													
							O C T	N O V	D E C	J A N	F E B	M A R	A P R	M A Y	J U N	J U L	A U G	S E P	O C T	N O V	D E C	J A N	F E B	M A R	A P R	M A Y	J U N	J U L	A U G	S E P			
AIM-120 Missile All Up Round (AUR)																																	
Prior Years Deliveries: 838																																	
	1	2015	AF ⁽¹⁾	223	223	0																											
	1	2015	FMS ^{(‡)(2)}	334	334	0																											
	1	2015	Total	557	557	0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0				
	1	2016	AF	281	281	0																											
	1	2016	FMS ^(‡)	212	212	0																											
	1	2016	NAVY ^(‡)	117	117	0																											
	1	2016	Total	610	610	0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0				
	1	2017	AF	256	256	0																											
	1	2017	FMS ^(‡)	306	306	0																											
	1	2017	NAVY ^(‡)	144	144	0																											
	1	2017	Total	706	706	0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0				
	1	2018	AF	185	185	0																											
	1	2018	FMS ^(‡)	245	245	0																											
	1	2018	NAVY ^(‡)	120	120	0																											
	1	2018	Total	550	550	0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0				
	1	2019	AF	187	187	0																											
	1	2019	FMS ^(‡)	210	210	0																											
	1	2019	NAVY ^(‡)	141	141	0																											
	1	2019	Total	538	538	0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0				
	1	2020	AF	220	55	165	-	55	-	-	55	-	-	55																			
	1	2020	FMS ^(‡)	252	63	189	-	63	-	-	63	-	-	63																			
	1	2020	NAVY ^(‡)	169	43	126	-	43	-	-	43	-	-	40																			
	1	2020	Total	641	161	480	-	161	-	-	161	-	-	158	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0				
							O C T	N O V	D E C	J A N	F E B	M A R	A P R	M A Y	J U N	J U L	A U G	S E P	O C T	N O V	D E C	J A N	F E B	M A R	A P R	M A Y	J U N	J U L	A U G	S E P			

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Exhibit P-21, Production Schedule: PB 2020 Air Force	Date: March 2019
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Appropriation / Budget Activity / Budget Sub Activity: 3020F / 02 / 2	P-1 Line Item Number / Title: MAMRA0 / AMRAAM	Item Number / Title [DODIC]: AMRAAM
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MFR Ref #	Manufacturer Name - Location	Production Rates (Each / Year)			Procurement Leadtime (Months)							
		MSR For 2020	1-8-5 For 2020	MAX For 2020	Initial				Reorder			
					ALT Prior to Oct 1	ALT After Oct 1	Manufacturing PLT	Total After Oct 1	ALT Prior to Oct 1	ALT After Oct 1	Manufacturing PLT	Total After Oct 1
1	Raytheon Missile Systems - Tucson, AZ	400 ⁽³⁾	400	960	6	11	24	35	0	0	0	0

(‡) Delivery rows marked with this symbol indicate that they are funded through a separate Line Item. See the respective components' exhibits for details, including the full delivery schedule. "A" in the Delivery Schedule indicates the Contract Award Date.

Note: Due to space limitations, quantities in the Exhibit P-21 delivery calendar are truncated and rounded based on the maximum quantity in the calendar as follows. If the maximum quantity is less than or equal to than 9,999, all quantities are shown as each. If the maximum quantity is between 10,000 and 999,999 all quantities are shown in thousands. If the maximum quantity is between 1,000,000 and 999,999,999 all quantities are shown in millions (rounded to the nearest thousand). If the maximum quantity is equal or greater than 1,000,000,000 all quantities are shown in billions (rounded to the nearest million).

Footnotes:

(1) Prior Year contracts with undelivered assets have all deliveries occurring before Oct 2017 loaded in the month of first delivery.

(2) Prior Year contracts with undelivered assets have all deliveries occurring before Oct 2017 loaded in the month of first delivery.

(3) MSR for 2020: AIM-120 MSR is 400 missiles per year, consisting of the sum of USAF, USN, and approved FMS procurement for the year with no less than 100 of a particular variant. MAX for 2020: Factory capacity enables production of 960 missiles. FY20 production capacity is constrained to 632 missiles, of which at least 242 are FMS missiles, due to ramp rate of Form, Fit, Function Refresh (F3R).