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

Appropriation / Budget Activity / Budget Sub Activity: 1507N: Weapons Procurement, Navy / BA 02: Other Missiles / BSA 2: Tactical Missiles	P-1 Line Item Number / Title: 2248 / Joint Air Ground Missile (JAGM)
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ID Code (A=Service Ready, B=Not Service Ready): B	Program Elements for Code B Items: N/A	Other Related Program Elements: N/A
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Line Item MDAP/MAIS Code: N/A

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>)	104	-	75	-	382	382	481	195	322	312	4,435	6,306
Gross/Weapon System Cost (<i>\$ in Millions</i>)	21.922	3.789	24.109	0.000	90.966	90.966	114.371	50.418	76.246	77.770	1,204.238	1,663.829
Less PY Advance Procurement (<i>\$ in Millions</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) (<i>\$ in Millions</i>)	21.922	3.789	24.109	0.000	90.966	90.966	114.371	50.418	76.246	77.770	1,204.238	1,663.829
Plus CY Advance Procurement (<i>\$ in Millions</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Total Obligation Authority (<i>\$ in Millions</i>)	21.922	3.789	24.109	0.000	90.966	90.966	114.371	50.418	76.246	77.770	1,204.238	1,663.829

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

Initial Spares (<i>\$ in Millions</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Flyaway Unit Cost (<i>\$ in Dollars</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Unit Cost (<i>\$ in Dollars</i>)	210,788.46	-	321,453.33	-	238,130.89	238,130.89	237,777.55	258,553.85	236,788.82	249,262.82	271,530.55	263,848.56

Description:

The Joint Air-to-Ground Missile (JAGM) is an air-launched missile system that will incorporate multi-mode seeker technology thus providing advanced Line-of-Sight and Beyond-Line-of-Sight precision fire and-forget seeker targeting capabilities resulting in increased lethality against soft, hardened, moving, stationary, land and maritime threats. JAGM improves the warfighter's capability in adverse weather, day or night, and in obscured/countermeasure environments. The JAGM Increment 1 system will replace aviation-launched, Tube-launched, Optically-tracked, Wire-guided (TOW) missile, and Helicopter Launched Fire-&-Forget (HELLFIRE) Missile Systems. JAGM is an Army-led joint program that addresses rotary wing and unmanned aerial vehicle requirements. The Department of Navy threshold platform is the AH-1Z. The JAGM system includes missile, trainers, containers, support equipment, and software modifications to the M-299 launcher. Missile configurations include the JAGM Tactical Missile, Captive Air Training Missile and Air Training Missile.

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

Appropriation / Budget Activity / Budget Sub Activity:
1507N: Weapons Procurement, Navy / BA 02: Other Missiles / BSA 2: Tactical Missiles

P-1 Line Item Number / Title:
2248 / Joint Air Ground Missile (JAGM)

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

Line Item MDAP/MAIS Code: N/A

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	1 / Joint Air Ground Missile (JAGM)	P-5a, P-21			104 / 21.922	- / 3.789	75 / 24.109	- / 0.000	382 / 90.966	382 / 90.966
P-40	Total Gross/Weapon System Cost				104 / 21.922	- / 3.789	75 / 24.109	- / 0.000	382 / 90.966	382 / 90.966

*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:

OCO:
FY2020 funding supports the procurement of JAGM All Up Rounds (AURs) to replace Hellfire inventory that has been expended in support of Operation Inherent Resolve (OIR) and enduring efforts. The assets are replacing expenditures that occurred from October 1, 2012 through December 2, 2016. There is currently no Hellfire variant in production that is integrated with DoN platforms and since JAGM is the successor to Hellfire, the combat expenditures are being replaced with the JAGM.

Funding is also to support 4 Captive Air Training Missiles (CATMs), Other Production Support (OPS), and production related engineering and logistics support.

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Exhibit P-5, Cost Analysis: PB 2020 Navy											Date: March 2019				
Appropriation / Budget Activity / Budget Sub Activity: 1507N / 02 / 2						P-1 Line Item Number / Title: 2248 / Joint Air Ground Missile (JAGM)					Item Number / Title [DODIC]: 1 / Joint Air Ground Missile (JAGM)				
ID Code (A=Service Ready, B=Not Service Ready) :						MDAP/MAIS Code:									
Resource Summary				Prior Years		FY 2018		FY 2019		FY 2020 Base		FY 2020 OCO		FY 2020 Total	
Procurement Quantity (Units in Each)				104		-		75		-		382		382	
Gross/Weapon System Cost (\$ in Millions)				21.922		3.789		24.109		0.000		90.966		90.966	
Less PY Advance Procurement (\$ in Millions)				-		-		-		-		-		-	
Net Procurement (P-1) (\$ in Millions)				21.922		3.789		24.109		0.000		90.966		90.966	
Plus CY Advance Procurement (\$ in Millions)				-		-		-		-		-		-	
Total Obligation Authority (\$ in Millions)				21.922		3.789		24.109		0.000		90.966		90.966	
<i>(The following Resource Summary rows are for informational purposes only. The corresponding budget requests are documented elsewhere.)</i>															
Initial Spares (\$ in Millions)				-		-		-		-		-		-	
Gross/Weapon System Unit Cost (\$ in Dollars)				210,788.46		-		321,453.33		-		238,130.89		238,130.89	

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 (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)
Hardware Cost																		
Recurring Cost																		
1.1.1) (JG010) JAGM All-Up-Round (AUR) ⁽¹⁾	180,320.00	100	18.032	-	-	-	220,871.00	71	15.682	-	-	0.000	213,973.00	382	81.738	213,973.00	382	81.738
1.1.3) (JG300) Training Missiles ⁽²⁾	196,000.00	4	0.784	-	-	-	220,871.00	4	0.883	-	-	-	-	-	-	-	-	-
1.1.4) (JG301) Captive Air Training Missile ⁽³⁾	-	-	-	-	-	-	-	-	-	-	-	0.000	188,042.00	4	0.752	188,042.00	4	0.752
<i>Subtotal: Recurring Cost</i>	-	-	18.816	-	-	-	-	-	16.565	-	-	0.000	-	-	82.490	-	-	82.490
<i>Subtotal: Hardware Cost</i>	-	-	18.816	-	-	-	-	-	16.565	-	-	0.000	-	-	82.490	-	-	82.490
Support - JAGM Support Costs Cost																		
2.1) (JG860) Integrated Logistics Support	-	-	0.224	-	-	0.300	-	-	0.575	-	-	0.000	-	-	0.586	-	-	0.586
2.2) (JG850) Production Engineering Support	-	-	1.076	-	-	1.558	-	-	2.906	-	-	0.000	-	-	2.965	-	-	2.965
2.3) (JG410) Containers ⁽⁴⁾	-	-	0.197	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2.5) (JG851) Other Production Support ⁽⁵⁾	-	-	1.609	-	-	1.931	-	-	4.063	-	-	0.000	-	-	4.925	-	-	4.925
<i>Subtotal: Support - JAGM Support Costs Cost</i>	-	-	3.106	-	-	3.789	-	-	7.544	-	-	0.000	-	-	8.476	-	-	8.476

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Exhibit P-5, Cost Analysis: PB 2020 Navy		Date: March 2019
Appropriation / Budget Activity / Budget Sub Activity: 1507N / 02 / 2	P-1 Line Item Number / Title: 2248 / Joint Air Ground Missile (JAGM)	Item Number / Title [DODIC]: 1 / Joint Air Ground Missile (JAGM)
ID Code (A=Service Ready, B=Not Service Ready) :		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 (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$)	Qty (Each)	Total Cost (\$ M)
Gross/Weapon System Cost	210,788.46	104	21.922	-	-	3.789	321,453.33	75	24.109	-	-	0.000	238,130.89	382	90.966	238,130.89	382	90.966

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

Footnotes:

- (1) (JG001) All Up Round (AUR) unit costs will fluctuate according to total procurement between all services.
- (2) (JG002) Training Missiles are for procurement of Air Training Missiles (ATMs) required for fleet training and quantities count towards the total program quantity requirement. Training Missiles unit costs will fluctuate according to total procurement between all services.
- (3) (JG301) Captive Air Training Missiles (CATM's): The JAGM program will commence procurement of CATM's in FY 2020 based on fleet training requirements.
- (4) (JG005) Starting in FY 2020 Container cost will be rolled up into the All Up Round unit cost.
- (5) (JG007) Other Production Support fluctuates based on Army requirements and is dependent on total procurement buy per year.

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

Appropriation / Budget Activity / Budget Sub Activity: 1507N / 02 / 2	P-1 Line Item Number / Title: 2248 / Joint Air Ground Missile (JAGM)	Item Number / Title [DODIC]: 1 / Joint Air Ground Missile (JAGM)
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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>(\$)</i>	Specs Avail Now?	Date Revision Available	RFP Issue Date
1.1.1) (JG010) JAGM All-Up-Round (AUR) ^(†)		2017	Lockheed Martin / Orlando, FL	C / FPIF	Huntsville	Sep 2018	Jan 2020	100	180,320.00	Y		Feb 2015
1.1.1) (JG010) JAGM All-Up-Round (AUR) ^(†)		2019 ⁽⁶⁾	Lockheed Martin / Orlando, FL	C / FPIF	Huntsville	Sep 2019	Dec 2021	71	220,871.00	Y		May 2017
1.1.1) (JG010) JAGM All-Up-Round (AUR) ^(†)	✓	2020 ⁽⁷⁾	Lockheed Martin / Orlando, FL	C / FPIF	Huntsville	Sep 2020	Oct 2022	382	213,973.00	Y		Jan 2019
1.1.3) (JG300) Training Missiles ^(†)		2017	Lockheed Martin ⁽⁸⁾ / Orlando, FL	C / FPIF	Huntsville	Sep 2018	Dec 2018	4	196,000.00	Y		Feb 2015
1.1.3) (JG300) Training Missiles ^(†)		2019	Lockheed Martin ⁽⁸⁾ / Orlando, FL	C / FPIF	Huntsville	Sep 2019	Dec 2021	4	220,871.00	Y		Feb 2015
1.1.4) (JG301) Captive Air Training Missile	✓	2020	Lockheed Martin / Orlando, FL	C / FPIF	Huntsville	Sep 2020	Sep 2022	4	188,042.00	Y		Jan 2019

^(†) indicates the presence of a P-21

Footnotes:

⁽⁶⁾ FY 2019 Contract award date is September 2019 to align with the Army led contracting timeline. The contract awards in September each fiscal year in order to include other service and FMS procurements into one economical procurement.

⁽⁷⁾ FY 2020 Contract award date is September 2020 to align with the Army led contracting timeline. The contract awards in September each fiscal year in order to include other service and FMS procurements into one economical procurement.

⁽⁸⁾ Annual Production rates for All Up Rounds and Training Missiles represent combined rates.

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

Appropriation / Budget Activity / Budget Sub Activity: 1507N / 02 / 2 **P-1 Line Item Number / Title:** 2248 / Joint Air Ground Missile (JAGM) **Item Number / Title [DODIC]:** 1 / Joint Air Ground Missile (JAGM)

Cost Elements <i>(Units in Each)</i>				Fiscal Year 2020														Fiscal Year 2021														BALANCE			
OCO #	MFR #	FY	SERVICE	PROC QTY	ACCEPT PRIOR TO 1 OCT 2019	BAL DUE AS OF 1 OCT	Calendar Year 2020														Calendar Year 2021														
							OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP					
1.1.1) (JG010) JAGM All-Up-Round (AUR) ⁽¹⁾																																			
1		2017	NAVY	100	0	100	-	-	-	50	50	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0						
1		2017	ARMY ⁽⁺⁾	373	0	373	-	-	-	32	32	32	32	32	30	30	30	30	31	31	31								0						
1		2017	Total	473	0	473	-	-	-	82	82	32	32	32	30	30	30	30	31	31	31							0							
1		2019	NAVY	71	0	71	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	71							
1		2019	ARMY ⁽⁺⁾	1,046	0	1,046	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1,046							
1		2019	Total	1,117	0	1,117	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1,117							
✓ 1		2020	NAVY	382	0	382													A -	-	-	-	-	-	-	-	-	382							
✓ 1		2020	ARMY ⁽⁺⁾	621	0	621													A -	-	-	-	-	-	-	-	-	621							
✓ 1		2020	Total OCO	1,003	0	1,003													-	-	-	-	-	-	-	-	-	1,003							
1.1.3) (JG300) Training Missiles ⁽²⁾																																			
2		2017	NAVY	4	4	0																						0							
2		2019	NAVY	4	0	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	4							
							OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP					

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

Appropriation / Budget Activity / Budget Sub Activity: 1507N / 02 / 2 **P-1 Line Item Number / Title:** 2248 / Joint Air Ground Missile (JAGM) **Item Number / Title [DODIC]:** 1 / Joint Air Ground Missile (JAGM)

Cost Elements <i>(Units in Each)</i>						Fiscal Year 2022												Fiscal Year 2023												BALANCE	
OCO #	MFR #	FY	SERVICE	PROC QTY	ACCEPT PRIOR TO 1 OCT 2021	BAL DUE AS OF 1 OCT	Calendar Year 2022												Calendar Year 2023												
							OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG		SEP
1.1.1) (JG010) JAGM All-Up-Round (AUR) ⁽¹⁾																															
1		2017	NAVY	100	100	0																							0		
1		2017	ARMY (+)	373	373	0																							0		
1		2017	Total	473	473	0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0		
1		2019	NAVY	71	0	71	-	-	6	6	6	6	6	6	7	7	7	7	7	-									0		
1		2019	ARMY (+)	1,046	0	1,046	-	-	88	88	87	87	87	87	87	87	88	87	87	86									0		
1		2019	Total	1,117	0	1,117	-	-	94	94	93	93	93	93	94	94	95	94	94	86	-	-	-	-	-	-	-	-	0		
✓ 1		2020	NAVY	382	0	382	-	-	-	-	-	-	-	-	-	-	-	-	31	31	32	32	32	32	32	32	32	32	0		
✓ 1		2020	ARMY (+)	621	0	621	-	-	-	-	-	-	-	-	-	-	-	-	13	14	59	59	59	59	59	59	60	60	0		
✓ 1		2020	Total OCO	1,003	0	1,003	-	-	-	-	-	-	-	-	-	-	-	44	45	91	91	91	91	91	91	91	92	92	0		
1.1.3) (JG300) Training Missiles ⁽²⁾																															
2		2017	NAVY	4	4	0																						0			
2		2019	NAVY	4	0	4	-	-	4																			0			
							OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	

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Exhibit P-21, Production Schedule: PB 2020 Navy	Date: March 2019
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Appropriation / Budget Activity / Budget Sub Activity: 1507N / 02 / 2	P-1 Line Item Number / Title: 2248 / Joint Air Ground Missile (JAGM)	Item Number / Title [DODIC]: 1 / Joint Air Ground Missile (JAGM)
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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	Lockheed Martin - Orlando, FL	420	1,200	2,400	0	12	24	36	0	12	24	36
2	Lockheed Martin ⁽⁸⁾ - Orlando, FL	420	1,200	1,200	0	12	24	36	0	12	24	36

(‡) 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:

⁽⁸⁾ Annual Production rates for All Up Rounds and Training Missiles represent combined rates.