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Exhibit P-40, Budget Line Item Justification: PB 2021 Navy **Date:** February 2020

Appropriation / Budget Activity / Budget Sub Activity: 1506N: Aircraft Procurement, Navy / BA 05: Modification of Aircraft / BSA 1: Modification of Aircraft	P-1 Line Item Number / Title: 0515 / Infrared Search and Track (IRST)
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ID Code (A=Service Ready, B=Not Service Ready): A	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 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	To Complete	Total
Procurement Quantity (<i>Units in Each</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost (<i>\$ in Millions</i>)	0.000	0.000	0.000	158.055	0.000	158.055	209.592	193.459	203.338	21.634	53.618	839.696
Less PY Advance Procurement (<i>\$ in Millions</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) (<i>\$ in Millions</i>)	0.000	0.000	0.000	158.055	0.000	158.055	209.592	193.459	203.338	21.634	53.618	839.696
Plus CY Advance Procurement (<i>\$ in Millions</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Total Obligation Authority (<i>\$ in Millions</i>)	0.000	0.000	0.000	158.055	0.000	158.055	209.592	193.459	203.338	21.634	53.618	839.696

(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>)	-	-	-	-	-	-	-	-	-	-	-	-

Description:

LI 0515 was established in FY2021 in order to provide greater transparency of Infrared Search and Track (IRST) modernization efforts. OSIP 04-14 can be found in LI-0525 for FY20 and prior remain while FY21-out now reside in LI-0515.

This line item funds modifications to the F/A-18 E/F aircraft.

The F/A-18 Naval Strike Fighter is a twin-engine, mid-wing, multi-mission tactical aircraft. The F/A-18 can be missionized through selected use of external equipment to accomplish specific fighter or attack missions. This commonality provides the Operational Commander more flexibility in employing tactical aircraft in a dynamic scenario. The Infrared Search and Track (IRST) will provide the F/A-18E/F (Lot 26 and up) with an Alternative Fire Control System in a high electronic attack/radar denied environment.

Current aircraft inventory and Flight hours flown for Lot 26 and up as of 26 August 2019:

F/A-18E - 240 (Active): service life 6,000 hours (current); 10,000 hours (extended); average service life remaining 3,076 (current); 7,076 (extended)

F/A-18F - 186 (Active): service life 6,000 hours (current); 10,000 hours (extended); average service life remaining 4,893 (current); 8,893 (extended)

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Appropriation / Budget Activity / Budget Sub Activity: 1506N: Aircraft Procurement, Navy / BA 05: Modification of Aircraft / BSA 1: Modification of Aircraft	P-1 Line Item Number / Title: 0515 / Infrared Search and Track (IRST)
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ID Code (A=Service Ready, B=Not Service Ready): A	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

Exhibits Schedule					Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 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-3a	1 / Infrared Search and Track (IRST) (04-14) (CAPABILITY IMPROVEMENTS)				- / 0.000	- / 0.000	- / 0.000	- / 158.055	- / 0.000	- / 158.055
P-40	Total Gross/Weapon System Cost				- / 0.000	- / 0.000	- / 0.000	- / 158.055	- / 0.000	- / 158.055
Exhibits Schedule					FY 2022	FY 2023	FY 2024	FY 2025	To Complete	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-3a	1 / Infrared Search and Track (IRST) (04-14) (CAPABILITY IMPROVEMENTS)				- / 209.592	- / 193.459	- / 203.338	- / 21.634	- / 53.618	- / 839.696
P-40	Total Gross/Weapon System Cost				- / 209.592	- / 193.459	- / 203.338	- / 21.634	- / 53.618	- / 839.696

*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:

The overall goal of the modifications budgeted in FY 2021 is to implement IRST. OSIP 04-14 can be found in LI-0525 for FY20 and prior remain while FY21-out now reside in LI-0515.

OSIP 04-14 Infrared Search and Track (IRST) provides the F/A-18E/F (Lot 26 and up) with an Alternative Fire Control System in a high electronic attack/radar denied environment.

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Exhibit P-3a, Individual Modification: PB 2021 Navy		Date: February 2020
Appropriation / Budget Activity / Budget Sub Activity: 1506N / 05 / 1	P-1 Line Item Number / Title: 0515 / Infrared Search and Track (IRST)	Modification Number / Title: 1 / Infrared Search and Track (IRST) (04-14)

ID Code (A=Service Ready, B=Not Service Ready) :	MDAP/MAIS Code:
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Resource Summary	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	To Complete	Total
Procurement Quantity (<i>Units in Each</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost (<i>\$ in Millions</i>)	0.000	0.000	0.000	158.055	0.000	158.055	209.592	193.459	203.338	21.634	53.618	839.696
Less PY Advance Procurement (<i>\$ in Millions</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) (<i>\$ in Millions</i>)	0.000	0.000	0.000	158.055	0.000	158.055	209.592	193.459	203.338	21.634	53.618	839.696
Plus CY Advance Procurement (<i>\$ in Millions</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Total Obligation Authority (<i>\$ in Millions</i>)	0.000	0.000	0.000	158.055	0.000	158.055	209.592	193.459	203.338	21.634	53.618	839.696

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

Initial Spares (<i>\$ in Millions</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Unit Cost (<i>\$ in Dollars</i>)	-	-	-	-	-	-	-	-	-	-	-	-

Description:

Description:

The Infrared Search and Track (IRST) will provide the F/A-18E/F (Lot 26 and up) with an Alternative Fire Control System in a high electronic attack/radar denied environment. IRST is an evolutionary program using a block approach. This Operational, Safety and Improvement Program (OSIP) is used to procure Block I IRST systems [Low Rate Initial Production (LRIP) lots 1 and 2], Infrared Optimized Configuration (IROC) and AV6+ modifications, Block II Engineering Change Proposal (ECP) modifications and incorporation including retrofit and forward fit [LRIP lots 3 through 6 and FRP] as well as all initial integrated logistics support activities to include special tooling, support equipment, production test equipment, I Level stand-up, reliability, maintainability, obsolescence and reliability growth activities in support of system Block II modification.

DEVELOPMENT STATUS/MAJOR DEVELOPMENT MILESTONES:

IRST development began in FY2008. IRST Block I Milestone B occurred on 17 June 2011 and the Acquisition Decision Memorandum was signed 12 July 2011. Block I Milestone C occurred on 02 December 2014 and the Acquisition Decision Memorandum (ADM) was signed 24 March 2015. IRST was reclassified as an Acquisition Category IC Major Defense Acquisition Program (P510) on 5 November 2016. The ACAT IC APB was signed 13 February 2017. A successful MS-C review was conducted 4 December 2018. The Full Rate Production milestone decision review is scheduled for 3rd Quarter FY 2021 with Initial Operational Capability scheduled for 4th Quarter FY 2021.

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Exhibit P-3a, Individual Modification: PB 2021 Navy		Date: February 2020
Appropriation / Budget Activity / Budget Sub Activity: 1506N / 05 / 1	P-1 Line Item Number / Title: 0515 / Infrared Search and Track (IRST)	Modification Number / Title: 1 / Infrared Search and Track (IRST) (04-14)

ID Code (A=Service Ready, B=Not Service Ready) :	MDAP/MAIS Code:
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Models of Systems Affected: F/A-18 E/F	Modification Type: CAPABILITY IMPROVEMENTS	Related RDT&E PEs:
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Financial Plan <small>(*) Indicates the modification is being installed organically and no installation funds are required.</small>	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	To Complete	Total
	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)

Procurement												
2.1.1) IRST B-kits (Block II) - Organic ^{(*) (1)}	- / -	- / -	- / -	25 / 86.259	- / -	25 / 86.259	40 / 149.462	40 / 144.525	29 / 108.402	- / -	8 / 29.920	142 / 518.568
2.1.2) IRST B-Kits (Block I to Block II) - Organic ^{(*) (2)}	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	9 / 6.003	9 / 6.123	- / -	18 / 12.126
2.2.1) Installation Equipment N/R - Organic ^{(*) (3)}	- / -	- / -	- / -	- / 23.250	- / -	- / 23.250	- / -	- / 4.009	- / 6.683	- / 4.050	- / -	- / 37.992
Subtotal: Procurement	- / 0.000	- / -	- / -	- / 109.509	- / -	- / 109.509	- / 149.462	- / 148.534	- / 121.088	- / 10.173	- / 29.920	- / 568.686

Support												
3.1) Data	- / -	- / -	- / -	- / 0.073	- / -	- / 0.073	- / 0.921	- / 2.199	- / 1.324	- / 2.268	- / 4.987	- / 11.772
3.2) Training Equipment	- / -	- / -	- / -	- / 3.400	- / -	- / 3.400	- / 0.464	- / -	- / -	- / 0.280	- / -	- / 14.144
3.3) Support Equipment ⁽⁴⁾	- / -	- / -	- / -	- / 36.148	- / -	- / 36.148	- / 49.400	- / 33.296	- / 71.277	- / -	- / -	- / 190.121
3.4) ILS	- / -	- / -	- / -	- / 12.147	- / -	- / 12.147	- / 2.431	- / 2.378	- / 2.456	- / 1.576	- / 3.141	- / 14.129
3.5) Other Support	- / -	- / -	- / -	- / 16.778	- / -	- / 16.778	- / 6.914	- / 7.052	- / 7.193	- / 7.337	- / 15.570	- / 50.844
Subtotal: Support	- / 0.000	- / -	- / -	- / 48.546	- / -	- / 48.546	- / 60.130	- / 44.925	- / 82.250	- / 11.461	- / 23.698	- / 271.010

Installation												
Subtotal: Installation	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -

Total												
Total Cost (Procurement + Support + Installation)	0.000	0.000	0.000	158.055	0.000	158.055	209.592	193.459	203.338	21.634	53.618	839.696

Footnotes:

(1) 2.1.1 LRIP III, IV and V quantities account for the production ramp up of the IRST Block II systems as required to meet a Full Rate Production (FRP) of 40 per year. IRST Block II production lead time is 24 to 27 months and Full Operational Capability (FOC) is 1st QTR FY2026.

(2) Quantity of 18 "Block I to Block II" kits will convert Block I kits to Block II kits.

(3) Funding increases in FY21 due to NRE required for ramp up of Block I retrofit security enhancements (Block I to Block II).

(4) Support Equipment increases in FY21 in order to modify the existing Electronic Consolidated Automated Support System (eCASS) to support I-Level Standup for the IRST system.