Department of Defense
Fiscal Year (FY) 2020 Budget Estimates

March 2019

Air Force

Justification Book Volume 2 of 2

Aircraft Procurement, Air Force

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Department of the Air Force
FY 2020 President's Budget
Exhibit P-1 FY 2020 President's Budget
Total Obligational Authority
(Dollars in Thousands)

19 Feb 2019

Appropriation: Aircraft Procurement, Air Force

Budget Activity	FY 2018 (Base + OCO)	FY 2019 Base Enacted	FY 2019 OCO Enacted	FY 2019 Total Enacted
01. Combat Aircraft	6,504,984	5,392,021		5,392,021
02. Airlift Aircraft	4,857,712	4,007,506	89,000	4,096,506
04. Other Aircraft	775,735	1,224,127	279,200	1,503,327
05. Modification of Inservice Aircraft	3,703,231	3,930,656	441,019	4,371,675
06. Aircraft Spares and Repair Parts	1,161,839	820,508	91,500	912,008
07. Aircraft Supt Equipment & Facilities	1,887,026	1,737,519	54,529	1,792,048
Total Aircraft Procurement, Air Force	18,890,527	17,112,337	955,248	18,067,585

Department of the Air Force
FY 2020 President's Budget
Exhibit P-1 FY 2020 President's Budget
Total Obligational Authority
(Dollars in Thousands)

19 Feb 2019

Appropriation: Aircraft Procurement, Air Force

Budget Activity	FY 2020 Base	FY 2020 OCO for Base Requirements	FY 2020 OCO for Direct War and Enduring Costs	FY 2020 Total OCO
01. Combat Aircraft	5,979,859			
02. Airlift Aircraft	3,157,892			
04. Other Aircraft	1,482,139		184,390	184,390
05. Modification of Inservice Aircraft	3,854,227		73,135	73,135
06. Aircraft Spares and Repair Parts	708,230		44,560	44,560
07. Aircraft Supt Equipment & Facilities	1,601,932		7,025	7,025
Total Aircraft Procurement, Air Force	16,784,279		309,110	309,110

Department of the Air Force
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Total Obligational Authority
(Dollars in Thousands)

19 Feb 2019

Appropriation: Aircraft Procurement, Air Force

Budget Activity	FY 2020 Total (Base + OCO)
01. Combat Aircraft	5,979,859
02. Airlift Aircraft	3,157,892
04. Other Aircraft	1,666,529
05. Modification of Inservice Aircraft	3,927,362
06. Aircraft Spares and Repair Parts	752,790
07. Aircraft Supt Equipment & Facilities	1,608,957
Total Aircraft Procurement, Air Force	17,093,389

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Department of the Air Force
FY 2020 President's Budget
Exhibit P-1 FY 2020 President's Budget
Total Obligational Authority
(Dollars in Thousands)

19 Feb 2019

Appropriation: 3010F Aircraft Procurement, Air Force

Line No	Item Nomenclature	Ident Code	FY 2018 (Base + OCO) Quantity	FY 2018 (Base + OCO) Cost	FY 2019 Base Enacted Quantity	FY 2019 Base Enacted Cost	FY 2019 OCO Enacted Quantity	FY 2019 OCO Enacted Cost	FY 2019 Total Enacted Quantity	FY 2019 Total Enacted Cost	Sec
	Budget Activity 01: Combat Aircraft										
	Tactical Forces										
1	F-35	A	56	(6,129,184)	56	(5,469,121)			56	(5,469,121)	U
	Less: Advance Procurement (PY)			(-404,500)		(-608,100)				(-608,100)	U
				5,724,684		4,861,021				4,861,021	
2	F-35										
	Advance Procurement (CY)			780,300		406,000				406,000	U
	C (FY 2018 for FY 2019) (M)			(608,100)							
	C (FY 2018 for FY 2020) (M)			(172,200)							
	C (FY 2019 for FY 2020) (M)					(406,000)				(406,000)	
	C (FY 2020 for FY 2021) (M)										
	C (FY 2020 for FY 2022) (M)										
3	F-15e	A									U
	Other Combat Aircraft										
4	C-135B	A			1	125,000			1	125,000	U
	Total Combat Aircraft			6,504,984		5,392,021				5,392,021	
	Budget Activity 02: Airlift Aircraft										
	Tactical Airlift										
5	KC-46A MDAP	A	18	2,927,129	15	2,290,932			15	2,290,932	U
	Other Airlift										
6	C-130J	A	6	639,708	8	675,858			8	675,858	U

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Department of the Air Force
FY 2020 President's Budget
Exhibit P-1 FY 2020 President's Budget
Total Obligational Authority
(Dollars in Thousands)

19 Feb 2019

Appropriation: 3010F Aircraft Procurement, Air Force

Line No	Item Nomenclature	Ident Code	FY 2020 Base Quantity	FY 2020 Base Cost	FY 2020 OCO for Base Requirements Quantity	FY 2020 OCO for Base Requirements Cost	FY 2020 OCO for Direct War and Enduring Costs Quantity	FY 2020 OCO for Direct War and Enduring Costs Cost	FY 2020 Total OCO Quantity	FY 2020 Total OCO Cost	Sec
	Budget Activity 01: Combat Aircraft										
	Tactical Forces										
1	F-35	A	48	(4,852,559)							U
	Less: Advance Procurement (PY)			(-578,200)							U
				4,274,359							
2	F-35										
	Advance Procurement (CY)			655,500							U
	C (FY 2018 for FY 2019) (M)										
	C (FY 2018 for FY 2020) (M)										
	C (FY 2019 for FY 2020) (M)										
	C (FY 2020 for FY 2021) (M)			(570,500)							
	C (FY 2020 for FY 2022) (M)			(85,000)							
3	F-15e	A	8	1,050,000							U
	Other Combat Aircraft										
4	C-135B	A									U
	Total Combat Aircraft			5,979,859							
	Budget Activity 02: Airlift Aircraft										
	Tactical Airlift										
5	KC-46A MDAP	A	12	2,234,529							U
	Other Airlift										
6	C-130J	A		12,156							U

Department of the Air Force
FY 2020 President's Budget
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Total Obligational Authority
(Dollars in Thousands)

19 Feb 2019

Appropriation: 3010F Aircraft Procurement, Air Force

Line No	Item Nomenclature	Ident Code	Quantity	FY 2020 Total (Base + OCO) Cost	Sec
	Budget Activity 01: Combat Aircraft				
	Tactical Forces				
1	F-35	A	48	(4,852,559)	U
	Less: Advance Procurement (PY)			(-578,200)	U
				4,274,359	
2	F-35				
	Advance Procurement (CY)			655,500	U
	C (FY 2018 for FY 2019) (M)				
	C (FY 2018 for FY 2020) (M)				
	C (FY 2019 for FY 2020) (M)				
	C (FY 2020 for FY 2021) (M)			(570,500)	
	C (FY 2020 for FY 2022) (M)			(85,000)	
3	F-15e	A	8	1,050,000	U
	Other Combat Aircraft				
4	C-135B	A			U
	Total Combat Aircraft			5,979,859	
	Budget Activity 02: Airlift Aircraft				
	Tactical Airlift				
5	KC-46A MDAP	A	12	2,234,529	U
	Other Airlift				
6	C-130J	A		12,156	U

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(Dollars in Thousands)

19 Feb 2019

Appropriation: 3010F Aircraft Procurement, Air Force

Line No	Item Nomenclature	Ident Code	FY 2018 (Base + OCO) Quantity	FY 2018 (Base + OCO) Cost	FY 2019 Base Enacted Quantity	FY 2019 Base Enacted Cost	FY 2019 OCO Enacted Quantity	FY 2019 OCO Enacted Cost	FY 2019 Total Enacted Quantity	FY 2019 Total Enacted Cost	Sec
7	HC-130J	A	3	(301,502)		(94,837)	2	(89,000)	2	(183,837)	U
	Less: Advance Procurement (PY)			(-20,000)							U
				281,502		94,837		89,000		183,837	
8	MC-130J	A	11	(1,053,373)	6	(757,879)			6	(757,879)	U
	Less: Advance Procurement (PY)			(-74,000)		(-30,000)				(-30,000)	U
				979,373		727,879				727,879	
9	MC-130J										
	Advance Procurement (CY)			30,000		218,000				218,000	U
	C (FY 2018 for FY 2019) (M)			(30,000)							
	C (FY 2019 for FY 2020) (M)					(182,000)				(182,000)	
	C (FY 2019 for FY 2021) (M)					(16,000)				(16,000)	
	C (FY 2019 for FY 2022) (M)					(16,000)				(16,000)	
	C (FY 2019 for FY 2023) (M)					(4,000)				(4,000)	
	C (FY 2020 for FY 2021) (M)										
Total Airlift Aircraft				4,857,712		4,007,506		89,000		4,096,506	
Budget Activity 04: Other Aircraft											
Helicopters											
10	Combat Rescue Helicopter	A			10	660,358			10	660,358	U
Mission Support Aircraft											
11	C-37A	A	2	130,000							U
12	Civil Air Patrol A/C	A	19	10,600	17	10,800			17	10,800	U
Other Aircraft											
13	Pale Ale	A	1	28,500							U
14	Target Drones	A	42	105,841	37	100,953			37	100,953	U

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19 Feb 2019

Appropriation: 3010F Aircraft Procurement, Air Force

Line No	Item Nomenclature	Ident Code	FY 2020 Base Quantity	FY 2020 Base Cost	FY 2020 OCO for Base Requirements Quantity	FY 2020 OCO for Base Requirements Cost	FY 2020 OCO for Direct War and Enduring Costs Quantity	FY 2020 OCO for Direct War and Enduring Costs Cost	FY 2020 Total OCO Quantity	FY 2020 Total OCO Cost	Sec
7	HC-130J	A									U
	Less: Advance Procurement (PY)										U
				----------		----------		----------		----------	
8	MC-130J	A	8	(1,053,207)							U
	Less: Advance Procurement (PY)			(-182,000)							U
				----------		----------		----------		----------	
				871,207							
9	MC-130J										
	Advance Procurement (CY)			40,000							U
	C (FY 2018 for FY 2019) (M)										
	C (FY 2019 for FY 2020) (M)										
	C (FY 2019 for FY 2021) (M)										
	C (FY 2019 for FY 2022) (M)										
	C (FY 2019 for FY 2023) (M)										
	C (FY 2020 for FY 2021) (M)			(40,000)							
				----------		----------		----------		----------	
Total Airlift Aircraft				3,157,892							
Budget Activity 04: Other Aircraft											
Helicopters											
10	Combat Rescue Helicopter	A	12	884,235							U
Mission Support Aircraft											
11	C-37A	A	2	161,000							U
12	Civil Air Patrol A/C	A	4	2,767							U
Other Aircraft											
13	Pale Ale	A									U
14	Target Drones	A	37	130,837							U

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Appropriation: 3010F Aircraft Procurement, Air Force

Line No	Item Nomenclature	Ident Code	Quantity	FY 2020 Total (Base + OCO) Cost	Sec
7	HC-130J	A			U
	Less: Advance Procurement (PY)				U

8	MC-130J	A	8	(1,053,207)	U
	Less: Advance Procurement (PY)			(-182,000)	U

				871,207	
9	MC-130J				
	Advance Procurement (CY)			40,000	U
	C (FY 2018 for FY 2019) (M)				
	C (FY 2019 for FY 2020) (M)				
	C (FY 2019 for FY 2021) (M)				
	C (FY 2019 for FY 2022) (M)				
	C (FY 2019 for FY 2023) (M)				
	C (FY 2020 for FY 2021) (M)			(40,000)	

Total Airlift Aircraft				3,157,892	
Budget Activity 04: Other Aircraft					
Helicopters					
10	Combat Rescue Helicopter	A	12	884,235	U
Mission Support Aircraft					
11	C-37A	A	2	161,000	U
12	Civil Air Patrol A/C	A	4	2,767	U
Other Aircraft					
13	Pale Ale	A			U
14	Target Drones	A	37	130,837	U

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Line No	Item Nomenclature	Ident Code	FY 2018 (Base + OCO) Quantity	FY 2018 (Base + OCO) Cost	FY 2019 Base Enacted Quantity	FY 2019 Base Enacted Cost	FY 2019 OCO Enacted Quantity	FY 2019 OCO Enacted Cost	FY 2019 Total Enacted Quantity	FY 2019 Total Enacted Cost	Sec
15	Compass Call	A	1	111,573	2	216,113			2	216,113	U
16	Observation Attack Replacement (OA-X)	A				100,000				100,000	U
17	MQ-9	A	16	389,221		135,903	24	265,700	24	401,603	U
18	RQ-20B Puma	A			20			13,500	20	13,500	U
Total Other Aircraft				775,735		1,224,127		279,200		1,503,327	
Budget Activity 05: Modification of Inservice Aircraft											
	Strategic Aircraft										
19	B-2A	A		94,552		60,301				60,301	U
20	B-1B	A		121,634		35,690		4,000		39,690	U
21	B-52	A		98,125		95,830		21,400		117,230	U
22	Large Aircraft Infrared Countermeasures	A		4,046				149,778		149,778	U
	Tactical Aircraft										
23	A-10	A		109,010		157,710		10,350		168,060	U
24	E-11 BACN/HAG	A									U
25	F-15	A		430,273		446,647				446,647	U
26	F-16	A		243,864		303,413				303,413	U
27	F-16	A				11				11	U

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(Dollars in Thousands)

19 Feb 2019

Appropriation: 3010F Aircraft Procurement, Air Force

Line No	Item Nomenclature	Ident Code	FY 2020 Base Quantity	FY 2020 Base Cost	FY 2020 OCO for Base Requirements Quantity	FY 2020 OCO for Base Requirements Cost	FY 2020 OCO for Direct War and Enduring Costs Quantity	FY 2020 OCO for Direct War and Enduring Costs Cost	FY 2020 Total OCO Quantity	FY 2020 Total OCO Cost	Sec
15	Compass Call	A	1	114,095							U
16	Observation Attack Replacement (OA-X)	A									U
17	MQ-9	A	3	189,205			9	172,240	9	172,240	U
18	RQ-20B Puma	A					18	12,150	18	12,150	U
Total Other Aircraft				1,482,139				184,390		184,390	
Budget Activity 05: Modification of Inservice Aircraft											
	Strategic Aircraft										
19	B-2A	A		9,582							U
20	B-1B	A		22,111							U
21	B-52	A		69,648							U
22	Large Aircraft Infrared Countermeasures	A		43,758				53,335		53,335	U
	Tactical Aircraft										
23	A-10	A		132,069							U
24	E-11 BACN/HAG	A		70,027							U
25	F-15	A		481,073							U
26	F-16	A		234,782							U
27	F-16	A									U

Department of the Air Force
FY 2020 President's Budget
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Appropriation: 3010F Aircraft Procurement, Air Force

Line No	Item Nomenclature	Ident Code	FY 2020 Total (Base + OCO) Quantity	Cost	Sec
15	Compass Call	A	1	114,095	U
16	Observation Attack Replacement (OA-X)	A			U
17	MQ-9	A	12	361,445	U
18	RQ-20B Puma	A	18	12,150	U
Total Other Aircraft				1,666,529	
Budget Activity 05: Modification of Inservice Aircraft					
	Strategic Aircraft				
19	B-2A	A		9,582	U
20	B-1B	A		22,111	U
21	B-52	A		69,648	U
22	Large Aircraft Infrared Countermeasures	A		97,093	U
	Tactical Aircraft				
23	A-10	A		132,069	U
24	E-11 BACN/HAG	A		70,027	U
25	F-15	A		481,073	U
26	F-16	A		234,782	U
27	F-16	A			U

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19 Feb 2019

Appropriation: 3010F Aircraft Procurement, Air Force

Line No	Item Nomenclature	Ident Code	FY 2018 (Base + OCO) Quantity	FY 2018 (Base + OCO) Cost	FY 2019 Base Enacted Quantity	FY 2019 Base Enacted Cost	FY 2019 OCO Enacted Quantity	FY 2019 OCO Enacted Cost	FY 2019 Total Enacted Quantity	FY 2019 Total Enacted Cost	Sec
28	F-22A	A		(144,830)		(268,210)				(268,210)	U
	Less: Advance Procurement (PY)					(-7,500)				(-7,500)	U
				144,830		260,710				260,710	
29	F-22A										
	Advance Procurement (CY)			7,500							U
	C (FY 2018 for FY 2019) (M)			(7,500)							
30	F-35 Modifications	A		23,270		237,271				237,271	U
31	F-15 EPAW	A				214,885				214,885	U
32	Increment 3.2b	A		(104,907)		(2,007)				(2,007)	U
	Less: Advance Procurement (PY)			(-2,000)							U
				102,907		2,007				2,007	
33	KC-46A MDAP	A		1,213		8,547				8,547	U
	Airlift Aircraft										
34	C-5	A		21,742		67,909				67,909	U
35	C-5M	A		3,305							U
36	C-17A	A		96,352		77,221				77,221	U
37	C-21	A		13,253		17,516				17,516	U
38	C-32A	A		79,449		4,537				4,537	U
39	C-37A	A		15,423		419				419	U
	Trainer Aircraft										
40	Glider Mods	A		136		137				137	U
41	T-6	A		14,606		22,550				22,550	U

Department of the Air Force
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(Dollars in Thousands)

19 Feb 2019

Appropriation: 3010F Aircraft Procurement, Air Force

Line No	Item Nomenclature	Ident Code	FY 2020 Base Quantity	FY 2020 Base Cost	FY 2020 OCO for Base Requirements Quantity	FY 2020 OCO for Base Requirements Cost	FY 2020 OCO for Direct War and Enduring Costs Quantity	FY 2020 OCO for Direct War and Enduring Costs Cost	FY 2020 Total OCO Quantity	FY 2020 Total OCO Cost	Sec
28	F-22A	A		(323,597)							U
	Less: Advance Procurement (PY)										U
				323,597							
29	F-22A										
	Advance Procurement (CY)										U
	C (FY 2018 for FY 2019) (M)										
30	F-35 Modifications	A		343,590							U
31	F-15 EPAW	A		149,047							U
32	Increment 3.2b	A		(20,213)							U
	Less: Advance Procurement (PY)										U
				20,213							
33	KC-46A MDAP	A		10,213							U
	Airlift Aircraft										
34	C-5	A		73,550							U
35	C-5M	A									U
36	C-17A	A		60,244							U
37	C-21	A		216							U
38	C-32A	A		11,511							U
39	C-37A	A		435							U
	Trainer Aircraft										
40	Glider Mods	A		138							U
41	T-6	A		11,826							U

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Exhibit P-1 FY 2020 President's Budget
Total Obligational Authority
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19 Feb 2019

Appropriation: 3010F Aircraft Procurement, Air Force

Line No	Item Nomenclature	Ident Code	FY 2020 Total (Base + OCO) Quantity	Cost	Sec
28	F-22A	A		(323,597)	U
	Less: Advance Procurement (PY)				U
				323,597	
29	F-22A				
	Advance Procurement (CY)				U
	C (FY 2018 for FY 2019) (M)				
30	F-35 Modifications	A		343,590	U
31	F-15 EPAW	A		149,047	U
32	Increment 3.2b	A		(20,213)	U
	Less: Advance Procurement (PY)				U
				20,213	
33	KC-46A MDAP	A		10,213	U
	Airlift Aircraft				
34	C-5	A		73,550	U
35	C-5M	A			U
36	C-17A	A		60,244	U
37	C-21	A		216	U
38	C-32A	A		11,511	U
39	C-37A	A		435	U
	Trainer Aircraft				
40	Glider Mods	A		138	U
41	T-6	A		11,826	U

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Line No	Item Nomenclature	Ident Code	FY 2018 (Base + OCO) Quantity	FY 2018 (Base + OCO) Cost	FY 2019 Base Enacted Quantity	FY 2019 Base Enacted Cost	FY 2019 OCO Enacted Quantity	FY 2019 OCO Enacted Cost	FY 2019 Total Enacted Quantity	FY 2019 Total Enacted Cost	Sec
42	T-1	A		21,477		21,952				21,952	U
43	T-38	A		51,641		70,623				70,623	U
	Other Aircraft										
44	U-2 Mods			32,177		48,774		7,900		56,674	U
45	KC-10A (ATCA)	A		4,243		11,104				11,104	U
46	C-12	A		5,846		4,900				4,900	U
47	VC-25A Mod	A		52,107		27,238				27,238	U
48	C-40	A		31,119		251				251	U
49	C-130	A		210,310		181,094				181,094	U
50	C-130J Mods	A		177,516		127,434				127,434	U
51	C-135	A		69,428		91,410				91,410	U
52	OC-135B	A		23,091		5,913				5,913	U
53	Compass Call	A		125,788		135,885		36,400		172,285	U
54	combat flight inspection - CFIN	A		495		499				499	U
55	RC-135	A		204,559		394,532				394,532	U
56	E-3	A		119,908		116,865				116,865	U
57	E-4	A		25,914		67,858				67,858	U
58	E-8	A		16,232		24,807		13,000		37,807	U
59	Airborne Warning and Cntrl Sys (AWACS) 40/45	A		142,886		57,780				57,780	U
60	Family of Beyond Line-of-Sight Terminals	A		15,017		14,293				14,293	U

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19 Feb 2019

Appropriation: 3010F Aircraft Procurement, Air Force

Line No	Item Nomenclature	Ident Code	FY 2020 Base Quantity	FY 2020 Base Cost	FY 2020 OCO for Base Requirements Quantity	FY 2020 OCO for Base Requirements Cost	FY 2020 OCO for Direct War and Enduring Costs Quantity	FY 2020 OCO for Direct War and Enduring Costs Cost	FY 2020 Total OCO Quantity	FY 2020 Total OCO Cost	Sec
42	T-1	A		26,787							U
43	T-38	A		37,341							U
	Other Aircraft										
44	U-2 Mods			86,896							U
45	KC-10A (ATCA)	A		2,108							U
46	C-12	A		3,021							U
47	VC-25A Mod	A		48,624							U
48	C-40	A		256							U
49	C-130	A		52,066							U
50	C-130J Mods	A		141,686							U
51	C-135	A		124,491							U
52	OC-135B	A									U
53	Compass Call	A		110,754							U
54	combat flight inspection - CFIN	A		508							U
55	RC-135	A		227,673							U
56	E-3	A		216,299							U
57	E-4	A		58,477							U
58	E-8	A		28,778							U
59	Airborne Warning and Cntrl Sys (AWACS) 40/45	A		36,000							U
60	Family of Beyond Line-of-Sight Terminals	A		7,910							U

P-120PB: FY 2020 President's Budget (Published Version), as of February 19, 2019 at 15:31:27

Department of the Air Force
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Total Obligational Authority
(Dollars in Thousands)

19 Feb 2019

Appropriation: 3010F Aircraft Procurement, Air Force

Line No	Item Nomenclature	Ident Code	FY 2020 Total (Base + OCO) Quantity	Cost	Sec
42	T-1	A		26,787	U
43	T-38	A		37,341	U
	Other Aircraft				
44	U-2 Mods			86,896	U
45	KC-10A (ATCA)	A		2,108	U
46	C-12	A		3,021	U
47	VC-25A Mod	A		48,624	U
48	C-40	A		256	U
49	C-130	A		52,066	U
50	C-130J Mods	A		141,686	U
51	C-135	A		124,491	U
52	OC-135B	A			U
53	Compass Call	A		110,754	U
54	combat flight inspection - CFIN	A		508	U
55	RC-135	A		227,673	U
56	E-3	A		216,299	U
57	E-4	A		58,477	U
58	E-8	A		28,778	U
59	Airborne Warning and Cntrl Sys (AWACS) 40/45	A		36,000	U
60	Family of Beyond Line-of-Sight Terminals	A		7,910	U

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Total Obligational Authority
(Dollars in Thousands)

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Appropriation: 3010F Aircraft Procurement, Air Force

Line No	Item Nomenclature	Ident Code	FY 2018 (Base + OCO) Quantity	FY 2018 (Base + OCO) Cost	FY 2019 Base Enacted Quantity	FY 2019 Base Enacted Cost	FY 2019 OCO Enacted Quantity	FY 2019 OCO Enacted Cost	FY 2019 Total Enacted Quantity	FY 2019 Total Enacted Cost	Sec
61	H-1	A		3,730		11,824				11,824	U
62	H-60	A		75,989		51,466		40,560		92,026	U
63	RQ-4 Mods	A		78,435		123,715				123,715	U
64	HC/MC-130 Modifications	A		200,454		37,754		87,900		125,654	U
65	Other Aircraft	A		69,449		57,410		53,731		111,141	U
66	MQ-9 Mods	A		253,940		171,548				171,548	U
67	MQ-9 UAS Payloads	A		5,000				16,000		16,000	U
68	CV-22 Mods	A		60,990		60,416				60,416	U
Total Modification of Inservice Aircraft				3,703,231		3,930,656		441,019		4,371,675	
Budget Activity 06: Aircraft Spares and Repair Parts											
Aircraft Spares and Repair Parts											
69	Initial Spares/Repair Parts	A		1,161,839		729,008		91,500		820,508	U
70	MQ-9	A				84,000				84,000	U
71	MQ-9 UAS PAYLOADS					7,500				7,500	U
Total Aircraft Spares and Repair Parts				1,161,839		820,508		91,500		912,008	
Budget Activity 07: Aircraft Supt Equipment & Facilities											
Common Support Equipment											
72	Aircraft Replacement Support Equip	A		102,005		81,241		32,529		113,770	U

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Appropriation: 3010F Aircraft Procurement, Air Force

Line No	Item Nomenclature	Ident Code	FY 2020 Base Quantity	FY 2020 Base Cost	FY 2020 OCO for Base Requirements Quantity	FY 2020 OCO for Base Requirements Cost	FY 2020 OCO for Direct War and Enduring Costs Quantity	FY 2020 OCO for Direct War and Enduring Costs Cost	FY 2020 Total OCO Quantity	FY 2020 Total OCO Cost	Sec
61	H-1	A		3,817							U
62	H-60	A		20,879							U
63	RQ-4 Mods	A		1,704							U
64	HC/MC-130 Modifications	A		51,482							U
65	Other Aircraft	A		50,098							U
66	MQ-9 Mods	A		383,594							U
67	MQ-9 UAS Payloads	A						19,800		19,800	U
68	CV-22 Mods	A		65,348							U
Total Modification of Inservice Aircraft				3,854,227				73,135		73,135	
Budget Activity 06: Aircraft Spares and Repair Parts											
	Aircraft Spares and Repair Parts										
69	Initial Spares/Repair Parts	A		708,230				44,560		44,560	U
70	MQ-9	A									U
71	MQ-9 UAS PAYLOADS										U
Total Aircraft Spares and Repair Parts				708,230				44,560		44,560	
Budget Activity 07: Aircraft Supt Equipment & Facilities											
	Common Support Equipment										
72	Aircraft Replacement Support Equip	A		84,938				7,025		7,025	U

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Line No	Item Nomenclature	Ident Code	FY 2020 Total (Base + OCO) Quantity	Cost	Sec
61	H-1	A		3,817	U
62	H-60	A		20,879	U
63	RQ-4 Mods	A		1,704	U
64	HC/MC-130 Modifications	A		51,482	U
65	Other Aircraft	A		50,098	U
66	MQ-9 Mods	A		383,594	U
67	MQ-9 UAS Payloads	A		19,800	U
68	CV-22 Mods	A		65,348	U
	Total Modification of Inservice Aircraft			3,927,362	
	Budget Activity 06: Aircraft Spares and Repair Parts				
	Aircraft Spares and Repair Parts				
69	Initial Spares/Repair Parts	A		752,790	U
70	MQ-9	A			U
71	MQ-9 UAS PAYLOADS				U
	Total Aircraft Spares and Repair Parts			752,790	
	Budget Activity 07: Aircraft Supt Equipment & Facilities				
	Common Support Equipment				
72	Aircraft Replacement Support Equip	A		91,963	U

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	Post Production Support										
73	B-2A	A		447		1,763				1,763	U
74	B-2B	A		38,509		35,861				35,861	U
75	B-52	A		199		12,819				12,819	U
76	C-17A	A		12,028		10,114				10,114	U
77	CV-22 Post Production Support			4,500							U
78	RC-135	A		29,700							U
79	F-15	A		20,000		2,545				2,545	U
80	F-15	A		2,524							U
81	F-16	A		8,151		4,918				4,918	U
82	F-22A	A		119,566		64,489				64,489	U
83	Other Aircraft	A		81,600		9,928				9,928	U
84	RQ-4 Post Production Charges	A		84,325		40,641				40,641	U
85	T-53A Trainer	A		501							U
	Industrial Preparedness										
86	Industrial Responsiveness	A		30,739		17,378				17,378	U
	War Consumables										
87	War Consumables	A		137,647		29,342				29,342	U
	Other Production Charges										
88	Other Production Charges	A		1,158,179		1,398,202		22,000		1,420,202	U

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	Post Production Support										
73	B-2A	A		1,403							U
74	B-2B	A		42,234							U
75	B-52	A		4,641							U
76	C-17A	A		124,805							U
77	CV-22 Post Production Support										U
78	RC-135	A									U
79	F-15	A		2,589							U
80	F-15	A									U
81	F-16	A		15,348							U
82	F-22A	A									U
83	Other Aircraft	A									U
84	RQ-4 Post Production Charges	A		47,246							U
85	T-53A Trainer	A									U
	Industrial Preparedness										
86	Industrial Responsiveness	A		17,705							U
	War Consumables										
87	War Consumables	A		32,102							U
	Other Production Charges										
88	Other Production Charges	A		1,194,728							U

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Line No	Item Nomenclature	Ident Code	FY 2020 Total (Base + OCO) Quantity	FY 2020 Total (Base + OCO) Cost	Sec
	Post Production Support				
73	B-2A	A		1,403	U
74	B-2B	A		42,234	U
75	B-52	A		4,641	U
76	C-17A	A		124,805	U
77	CV-22 Post Production Support				U
78	RC-135	A			U
79	F-15	A		2,589	U
80	F-15	A			U
81	F-16	A		15,348	U
82	F-22A	A			U
83	Other Aircraft	A			U
84	RQ-4 Post Production Charges	A		47,246	U
85	T-53A Trainer	A			U
	Industrial Preparedness				
86	Industrial Responsiveness	A		17,705	U
	War Consumables				
87	War Consumables	A		32,102	U
	Other Production Charges				
88	Other Production Charges	A		1,194,728	U

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90	Spectrum Relocation Fund	A		3,194							U
999	Classified Programs			53,212		28,278				28,278	U
	Total Aircraft Supt Equipment & Facilities			1,887,026		1,737,519		54,529		1,792,048	
	Total Aircraft Procurement, Air Force			18,890,527		17,112,337		955,248		18,067,585	

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Line No	Item Nomenclature	Ident Code	FY 2020 Base Quantity	FY 2020 Base Cost	FY 2020 OCO for Base Requirements Quantity	FY 2020 OCO for Base Requirements Cost	FY 2020 OCO for Direct War and Enduring Costs Quantity	FY 2020 OCO for Direct War and Enduring Costs Cost	FY 2020 Total OCO Quantity	FY 2020 Total OCO Cost	Sec
90	Spectrum Relocation Fund	A									U
999	Classified Programs			34,193							U
	Total Aircraft Supt Equipment & Facilities			1,601,932				7,025		7,025	
	Total Aircraft Procurement, Air Force			16,784,279				309,110		309,110	

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Line No	Item Nomenclature	Ident Code	FY 2020 Total (Base + OCO) Quantity	Cost	Sec
90	Spectrum Relocation Fund	A			U
999	Classified Programs			34,193	U
	Total Aircraft Supt Equipment & Facilities			1,608,957	
	Total Aircraft Procurement, Air Force			17,093,389	

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16	04	05	OAX000	Observation Attack Replacement (OA-X)	Volume 1 - 123
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25	05	02	F01500	F-15	Volume 2 - 97
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29	05	02	F02200	F-22A, Advance Procurement	Volume 2 - 187
30	05	02	F03500	F-35 Modifications	Volume 2 - 191
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33	05	02	KC046A	KC-46A MDAP	Volume 2 - 233
34	05	03	C00500	C-5	Volume 2 - 239
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44	05	05	11U200	U-2 Mods	Volume 2 - 301
45	05	05	C01000	KC-10A (ATCA)	Volume 2 - 309
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64	05	05	HCMC00	HC/MC-130 Modifications	Volume 2 - 527
65	05	05	OTHACF	Other Aircraft	Volume 2 - 563
66	05	05	PRDTB2	MQ-9 Mods	Volume 2 - 573
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79	07	02	F01500	F-15	Volume 1 - 211
80	07	02	F0150P	F-15	Volume 1 - 213
81	07	02	F0160P	F-16	Volume 1 - 215
82	07	02	F02200	F-22A	Volume 1 - 219
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Compass Call	CALL00	53	05	05	Volume 2 - 383
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Glider Mods	GLID00	40	05	04	Volume 2 - 281
H-1	H00100	61	05	05	Volume 2 - 465
H-60	H06000	62	05	05	Volume 2 - 467
HC-130J	C130JH	7	02	03	Volume 1 - 47
HC/MC-130 Modifications	HCMC00	64	05	05	Volume 2 - 527
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Initial Spares/Repair Parts	000999	69	06	10	Volume 1 - 143

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KC-10A (ATCA)	C01000	45	05	05	Volume 2 - 309
KC-46A MDAP	KC046A	5	02	02	Volume 1 - 25
KC-46A MDAP	KC046A	33	05	02	Volume 2 - 233
Large Aircraft Infrared Countermeasures	LAIRCM	22	05	01	Volume 2 - 39
MC-130J	C130JM	8	02	03	Volume 1 - 57
MC-130J, Advance Procurement	C130JM	9	02	03	Volume 1 - 69
MQ-9	PRDTB1	17	04	05	Volume 1 - 125
MQ-9 Mods	PRDTB2	66	05	05	Volume 2 - 573
MQ-9 UAS Payloads	PRDTB3	67	05	05	Volume 2 - 605
OC-135B	C135BO	52	05	05	Volume 2 - 381
Observation Attack Replacement (OA-X)	OAX000	16	04	05	Volume 1 - 123
Other Aircraft	OTHACF	83	07	02	Volume 1 - 221
Other Aircraft	OTHACF	65	05	05	Volume 2 - 563
Other ProductionCharges	000075	88	07	05	Volume 1 - 247
Pale Ale	10PALE	13	04	05	Volume 1 - 93
RC-135	DARP01	78	07	02	Volume 1 - 209
RC-135	DARP01	55	05	05	Volume 2 - 393
RQ-20B Puma	Q020BR	18	04	05	Volume 1 - 137
RQ-4 Mods	HAWK00	63	05	05	Volume 2 - 477
RQ-4 Post Production Charges	RQ4DIS	84	07	02	Volume 1 - 223

Line Item Title	Line Item Number	Line #	BA	BSA	Page
Spectrum Relocation Fund	11SPEC	90	07	05	Volume 1 - 269
T-1	T00100	42	05	04	Volume 2 - 289
T-38	T03800	43	05	04	Volume 2 - 295
T-53A Trainer	T053A0	85	07	02	Volume 1 - 235
T-6	JPAT00	41	05	04	Volume 2 - 283
Target Drones	10TRGT	14	04	05	Volume 1 - 95
U-2 Mods	11U200	44	05	05	Volume 2 - 301
VC-25A Mod	C02500	47	05	05	Volume 2 - 313
War Consumables	000074	87	07	04	Volume 1 - 241
combat flight inspection - CFIN	CFIN00	54	05	05	Volume 2 - 391

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Exhibit P-1M, Procurement Programs - Modification Summary
(Listing by Model)

Lookup Matrix by Model

Model:	B-2	
Modification P-40a Aggregated Items Title:	B-2A	
Item Number	**Item Title**	**Applies to Multiple Models**
Uncategorized		
110031	B-2 Trainer System Upgrade	No
110032	LINK 16/CID/IFR	No
110035	LOW OBSERVABLE SIGNATURE AND SUPPORTABILITY MODS	No
110043	B-2 Adaptable Communications Suite (ACS)	No
110054	B-2 Flex Strike Phase 1	No
110056	B61-12 Integration	No
110057	MGUE	No
8882	Common Very Low Frequency Terminal	No
99999U	B-2 Low Cost Engine Modifications	No
99999X	Low Cost Modifications	No

Model:	B-2A	
Modification P-40a Aggregated Items Title:	B-2A	
Item Number	**Item Title**	**Applies to Multiple Models**
Uncategorized		
110061	IFF Mode 5/S	No
110062	Crash Survivable Memory Unit (CSMU)	No
110064	Rotary Launcher Assembly (RLA) Service Life Extension Program	No
110065	B-2 GBU-57 MOP Integration	No

Model:	B-1B	
Modification P-40a Aggregated Items Title:	**B-1B**	
Item Number	**Item Title**	**Applies to Multiple Models**
Uncategorized		
4284	CITS UPGRADE	No
4291	B-1 TRAINING SUPPORT	No
8423	B-1 Link 16 Crypto	No
8971	VERTICAL SITUATION DISPLAYS	No
92294	LAPTOP CONTROLLED TARGETING POD	No
92318	BRU-56	No
99999X	Low Cost Modifications	No
P-3a Individual Modifications		
Modification Number	**Modification Title**	**Applies to Multiple Models**
4280	Fully Integrated Data Links	No

Model:	B-1	
Modification P-40a Aggregated Items Title:	**B-1B**	
Item Number	**Item Title**	**Applies to Multiple Models**
Uncategorized		
92314	MIDS-JTRS	No
92315	Fully Integrated Targeting Pod	No
92316	Radio Crypto Compliance	No
P-3a Individual Modifications		
Modification Number	**Modification Title**	**Applies to Multiple Models**
92317	IFF Mode 5/S ADS-B	No

Model:	B-1	
P-3a Individual Modifications		
Modification Number	**Modification Title**	**Applies to Multiple Models**
8674	ATP upgrade Legacy to SE	Yes
8675	ATP-SE Technology Insertion	Yes

Model:	B-52H	
Modification P-40a Aggregated Items Title:	**B-52**	
Item Number	**Item Title**	**Applies to Multiple Models**
Uncategorized		
3265	B-52 Anti-Skid Replacement	No
6884	B-52 Internal Weapons Bay Upgrade	No
6885	AETC Trainers (B-52)	No
6890	B-52 Radar Modernization	No
6895	Advanced Targeting Pod MFCD	No
6896	B-52 VLF/LF Modernization	No
6898	B-52 IR Missile Warning System	No
99999X	B-52 Low Cost Mods	No
P-3a Individual Modifications		
Modification Number	**Modification Title**	**Applies to Multiple Models**
3310	B-52 Combat Network Communications Technology	No
6889	Bomber Tactical Data link	No
6893	GPS-IU Replacement	No
6894	B-52 Crypto Modernization	No

Model:	B-52	
Modification P-40a Aggregated Items Title:	**B-52**	
Item Number	**Item Title**	**Applies to Multiple Models**
Uncategorized		
6891	B-52 WST AR Upgrade Trainer	No
6892	B-52 Low Cost Improvements	No
P-3a Individual Modifications		
Modification Number	**Modification Title**	**Applies to Multiple Models**
8674	ATP upgrade Legacy to SE	Yes
8675	ATP-SE Technology Insertion	Yes

Model:	C-130	
Modification P-40a Aggregated Items Title:	**Large Aircraft Infrared Countermeasures**	
Item Number	**Item Title**	**Applies to Multiple Models**
Uncategorized		
8629C130	LARGE AIRCRAFT INFRARED COUNTERMEASURES C-130	No
Modification P-40a Aggregated Items Title:	**C-130**	
Item Number	**Item Title**	**Applies to Multiple Models**
Uncategorized		
99999M	MISC SIMULATOR UPDATES	No
99999S	SERVICE BULLETINS	No
99999X	Low Cost Modifications	No

Model:	C130J	
P-3a Individual Modifications		
Modification Number	**Modification Title**	**Applies to Multiple Models**
1	LARGE AIRCRAFT INFRARED COUNTERMEASURES C-130J	No

Model:	C-17	
Modification P-40a Aggregated Items Title:	**C-17A**	
Item Number	**Item Title**	**Applies to Multiple Models**
Uncategorized		
_2000	Pylon Stub FFLZ, FF, Translating Fairing	No
_2590	ELT Frequency Change	No
_2633	MFOQA	No
1508	IFF GATM	No
2901	Automatic Dependent Surveillance - Broadcast Out (ADS-B Out)	No
6403	Filter Fire Mitigation	No
9740	Fixed Installation Satellite Antenna (FISA)	No
9742	C-17 Simulator Lateral Motion Maneuver Enhancement	No
9744	C-17 Visual System Field of View	No
9747	C-17 Training System (Other Mods)	No
99999X	Low Cost Modifications	No
P-3a Individual Modifications		
Modification Number	**Modification Title**	**Applies to Multiple Models**
2	LARGE AIRCRAFT INFRARED COUNTERMEASURES C-17	No
3080	Replacement Heads Up Display (RHUD)	No

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Exhibit P-1M, Procurement Programs - Modification Summary
(Listing by Model)

Model:	C-17	
P-3a Individual Modifications		
Modification Number	**Modification Title**	**Applies to Multiple Models**
9741	Beyond Line of Sight (BLOS)	No

Model:	C-5B	
Modification P-40a Aggregated Items Title:	**C-5**	
Item Number	**Item Title**	**Applies to Multiple Models**
Uncategorized		
8965	C-5 Fleet Blk Upgrade 01	Yes
P-3a Individual Modifications		
Modification Number	**Modification Title**	**Applies to Multiple Models**
3	LARGE AIRCRAFT INFRARED COUNTERMEASURES C-5	Yes

Model:	C-5C	
Modification P-40a Aggregated Items Title:	**C-5**	
Item Number	**Item Title**	**Applies to Multiple Models**
Uncategorized		
8965	C-5 Fleet Blk Upgrade 01	Yes
P-3a Individual Modifications		
Modification Number	**Modification Title**	**Applies to Multiple Models**
3	LARGE AIRCRAFT INFRARED COUNTERMEASURES C-5	Yes

Model:	C-5M	
Modification P-40a Aggregated Items Title:	**C-5**	
Item Number	**Item Title**	**Applies to Multiple Models**
Uncategorized		
8965	C-5 Fleet Blk Upgrade 01	Yes
8969	C-5 Training Systems (Training Mods)	No
99999X	Low Cost Modifications	No
P-3a Individual Modifications		
Modification Number	**Modification Title**	**Applies to Multiple Models**
3	LARGE AIRCRAFT INFRARED COUNTERMEASURES C-5	Yes
8966	C-5 Mission Systems Equipment- Lavatory	No
8967	Mission Computer and Weather Radar	No
8968	C-5M Communication Navigation Surveillance/Air Traffic Management (CNS/ATM)	No

Model:	A-10C	
Modification P-40a Aggregated Items Title:	**A-10**	
Item Number	**Item Title**	**Applies to Multiple Models**
Uncategorized		
7856	MODE S/5	No
9836	3-Dimensional Audio (3DA)	No
P-3a Individual Modifications		
Modification Number	**Modification Title**	**Applies to Multiple Models**
9831	ARC-210	No
9832	2ND GIGABIT ETHERNET SWITCH (2GES)	No
9834	A-10 High Resolution Display System (HRDS)	No

Model:	A-10C	
P-3a Individual Modifications		
Modification Number	**Modification Title**	**Applies to Multiple Models**
9839	SDB-1	No

Model:	A-10	
Modification P-40a Aggregated Items Title:	**A-10**	
Item Number	**Item Title**	**Applies to Multiple Models**
Uncategorized		
9601	ONBOARD OXYGEN GENERATING SYSTEM (OBOGS)	No
9806	A-10 Helmet Mounted Cueing System	No
9808	Covert/Overt Landing Light Requirement (COLA)	No
9809	ADS-B Out	No
9810	LARS-CSEL	No
P-3a Individual Modifications		
Modification Number	**Modification Title**	**Applies to Multiple Models**
9804	A-10 Wing Replacement Program	No
8674	ATP upgrade Legacy to SE	Yes
8675	ATP-SE Technology Insertion	Yes

Model:	A01000A	
Modification P-40a Aggregated Items Title:	**A-10**	
Item Number	**Item Title**	**Applies to Multiple Models**
Uncategorized		
9811	A-10 J-Hook System	No

Model:	A01000A	
Modification P-40a Aggregated Items Title:	A-10	
Item Number	**Item Title**	**Applies to Multiple Models**
9816	A-10 Conversion Fuel Tanks	No

Model:	E-11A	
P-3a Individual Modifications		
Modification Number	**Modification Title**	**Applies to Multiple Models**
1	E-11 Mods	No

Model:	F-15C	
Modification P-40a Aggregated Items Title:	F-15	
Item Number	**Item Title**	**Applies to Multiple Models**
Uncategorized		
1203	F-15 C/D Secondary Power System (SPS)	Yes
1206	F-15C Infrared Search and Track (IRST)	Yes
1209	F-15 C/D Flight Data Recorder (FDR)	Yes
8756	F-15C/D Link 16 Cryptographic Modernization	Yes
8794	F-15C/D Beyond Line Of Sight Communications	No
8797	F-15C Passive Attack Sensor System	No
8803	F-15 C/D/MUOS	No
8815	F-15C Simulator Upgrade	No
8816	F-15C/D APG-63(V)3 Common Config	Yes
99999X	Low Cost Modifications	Yes

Model:	F-15C	
P-3a Individual Modifications		
Modification Number	**Modification Title**	**Applies to Multiple Models**
1205	:Advanced Display Core Processor, ADCP II-C	Yes
6158	F-15C/D APG-63(V)3 radar upgrade	Yes
8754	F-15C/D IFF Mode 5	Yes
8755	F-15E IFF MODE 5	Yes
8799	F-15C MIDS JTRS	No
8801	F-15 C/D SLEP Longerons	Yes
8795	EPAWSS F-15C/D	No
8674	ATP upgrade Legacy to SE	Yes
8675	ATP-SE Technology Insertion	Yes

Model:	F-15D	
Modification P-40a Aggregated Items Title:	**F-15**	
Item Number	**Item Title**	**Applies to Multiple Models**
Uncategorized		
1203	F-15 C/D Secondary Power System (SPS)	Yes
1206	F-15C Infrared Search and Track (IRST)	Yes
1209	F-15 C/D Flight Data Recorder (FDR)	Yes
8756	F-15C/D Link 16 Cryptographic Modernization	Yes
8816	F-15C/D APG-63(V)3 Common Config	Yes
99999X	Low Cost Modifications	Yes

Model: **F-15D**

P-3a Individual Modifications

Modification Number	Modification Title	Applies to Multiple Models
1205	:Advanced Display Core Processor, ADCP II-C	Yes
6158	F-15C/D APG-63(V)3 radar upgrade	Yes
8754	F-15C/D IFF Mode 5	Yes
8755	F-15E IFF MODE 5	Yes
8801	F-15 C/D SLEP Longerons	Yes

Model: **F-15E**

Modification P-40a Aggregated Items Title: **F-15**

Item Number	Item Title	Applies to Multiple Models
Uncategorized		
1210	F-15E Flight Data Recorder (FDR)	No
8353	F-15E -JOINT HELMET-MOUNTED CUEING SYSTEM	No
8662	AETC MTD UPGRADES-FIELD TRAINING DETACHMENTS	No
8756	F-15C/D Link 16 Cryptographic Modernization	Yes
8804	F-15 F-15 E/MUOS	No
8811	F-15E SATCOM UON	No
8812	F-15 E Integrated Aircrew Trainer	No
8813	F-15E B61 A/C Umbilical	No
8817	F-15E DTM II	No
8820	F-15E Digital Color Display	No
99999U	LOW COST RETROFIT MODS	No

Model:	F-15E	
P-3a Individual Modifications		
Modification Number	**Modification Title**	**Applies to Multiple Models**
1202	F-15E Radar Modernization Program APG-82(V)1	No
1	Advanced Display Core Processor, ADCP II-E	No
8755	F-15E IFF MODE 5	Yes
8800	F-15E MIDS JTRS	No
8810	F-15E APG-82(V)1 Common Config	No
8796	EPAWSS F-15E	No
8674	ATP upgrade Legacy to SE	Yes
8675	ATP-SE Technology Insertion	Yes

Model:	F15CD	
Modification P-40a Aggregated Items Title:	**F-15**	
Item Number	**Item Title**	**Applies to Multiple Models**
Uncategorized		
8806	F-15 C/D Cabin Pressure Indicator	No

Model:	F15E	
Modification P-40a Aggregated Items Title:	**F-15**	
Item Number	**Item Title**	**Applies to Multiple Models**
Uncategorized		
8807	F-15 E Cabin Pressure Indicator	No

Model:	F-15A	
Modification P-40a Aggregated Items Title:	F-15	
Item Number	**Item Title**	**Applies to Multiple Models**
Uncategorized		
99999X	Low Cost Modifications	Yes

Model:	F-15B	
Modification P-40a Aggregated Items Title:	F-15	
Item Number	**Item Title**	**Applies to Multiple Models**
Uncategorized		
99999X	Low Cost Modifications	Yes

Model:	F-16	
Modification P-40a Aggregated Items Title:	F-16	
Item Number	**Item Title**	**Applies to Multiple Models**
Uncategorized		
633030	Aggressors Update	No
633041	Anti Jam	No
633042	Missile Warning Systems	No
661652	Link 16 Crypto	No
661653	MIDS-JTRS	No
704050	Digital Radar Warning Receiver (RWR)	No
8662	AETC MTD UPGRADES-FIELD TRAINING DETACHMENTS	No
866250	F-16 TRAINING SYSTEMS	No
866251	Full Combat Mission Training	No

Model:	F-16	
Modification P-40a Aggregated Items Title:	**F-16**	
Item Number	**Item Title**	**Applies to Multiple Models**
99999X	Low Cost Modifications	No
Modification P-40a Aggregated Items Title:	**Other Aircraft**	
Item Number	**Item Title**	**Applies to Multiple Models**
Uncategorized		
8669	Full Combat Mission Training	No
P-3a Individual Modifications		
Modification Number	**Modification Title**	**Applies to Multiple Models**
602148	MMC and Display Generator Upgrade	No
602600	F-16 LEGACY STRUCTURAL SLEP	No
618250	Comm Suite Upgrade	No
633031	HFLCC AGCAS	No
633032	AIFF MODE 5	No
694050	AESA Radars	No
8674	ATP upgrade Legacy to SE	Yes
8675	ATP-SE Technology Insertion	Yes

Model:	F-22	
Modification P-40a Aggregated Items Title:	**F-22A**	
Item Number	**Item Title**	**Applies to Multiple Models**
Uncategorized		
F22001	COMMON CONFIGURATION	No
F22003	INCREMENT 3.1	No

Model: F-22

Modification P-40a Aggregated Items Title: F-22A

Item Number	Item Title	Applies to Multiple Models
F22007	Pilot Systems Hardware	No
F22022	Structures Retrofit Plan	No
F22024	Trainers Modernization	No
F22027	Crypto Modernization	No
F22030	Mode 5 Identification Friend or Foe (IFF)	No
F22031	Mid-Life Updates	No
F22034	Navigation Systems Hardware	No
F22035	Pylon	No

P-3a Individual Modifications

Modification Number	Modification Title	Applies to Multiple Models
1	Reliability and Maintainability Program	No
2	Link 16	No
3	F119 Engine Modifications	No
4	Sensor Enhancement	No
11100	INCREMENT 3.2B	No

Model: F-35A

P-3a Individual Modifications

Modification Number	Modification Title	Applies to Multiple Models
1	Block 3i LRIP 2-5 Upgrade	No
2	Block 3F LRIP 2-5 Upgrade	No
3	Block 3F LRIP 6-8 Upgrade	No

Model:	F-35A	
P-3a Individual Modifications		
Modification Number	**Modification Title**	**Applies to Multiple Models**
4	Concurrency	No
5	Correction of Deficiencies	No
6	Block 4 Modifications	No

Model:	KC-46	
Modification P-40a Aggregated Items Title:	**KC-46A MDAP**	
Item Number	**Item Title**	**Applies to Multiple Models**
Uncategorized		
4601	R&M Safety Mods	No
4602	Pegasus Advanced Communications Suite (PACS)	No
99999X	Low Cost Modifications	No
P-3a Individual Modifications		
Modification Number	**Modification Title**	**Applies to Multiple Models**
1	Airworthiness Directives	No

Model:	C-5	
Modification P-40a Aggregated Items Title:	**C-5**	
Item Number	**Item Title**	**Applies to Multiple Models**
Uncategorized		
8964	C-5 Replace Multifunctional Co	No

Model:	No text provided.	
Modification P-40a Aggregated Items Title:	**C-17A**	
Item Number	**Item Title**	**Applies to Multiple Models**
Uncategorized		
9748	C-17 Training System (Training Mods)	No
Modification P-40a Aggregated Items Title:	**C-130**	
Item Number	**Item Title**	**Applies to Multiple Models**
Uncategorized		
9141	C-130 CRASHWORTHY LOADMASTER SEAT	No
Modification P-40a Aggregated Items Title:	**E-8**	
Item Number	**Item Title**	**Applies to Multiple Models**
Uncategorized		
38204	JSTARS OCO Requirements	No
Modification P-40a Aggregated Items Title:	**HC/MC-130 Modifications**	
Item Number	**Item Title**	**Applies to Multiple Models**
Uncategorized		
8760	Trainers	No
P-3a Individual Modifications		
Modification Number	**Modification Title**	**Applies to Multiple Models**
38203	Distributed Mission Ops Center (DMOC)	No

Model:	C-32A	
Modification P-40a Aggregated Items Title:	**C-32A**	
Item Number	**Item Title**	**Applies to Multiple Models**
Uncategorized		

Model:	C-32A	
Modification P-40a Aggregated Items Title:	**C-32A**	
Item Number	**Item Title**	**Applies to Multiple Models**
1110	Nitrogen Generation System	No
1116	WIDEBAND SATCOM	No
1117	CNS/ATM Compliance	No
99999S	SERVICE BULLETINS	No
99999X	Low Cost Modifications	No
P-3a Individual Modifications		
Modification Number	**Modification Title**	**Applies to Multiple Models**
1119	Crew Rest Seats	No

Model:	C-32B	
Modification P-40a Aggregated Items Title:	**C-32A**	
Item Number	**Item Title**	**Applies to Multiple Models**
Uncategorized		
99999SG	99999SG - Service Bulletins - C-32B	No
99999XG	99999XG - Low Cost Mods - C-32B	No

Model:	T-6A	
Modification P-40a Aggregated Items Title:	**T-6**	
Item Number	**Item Title**	**Applies to Multiple Models**
Uncategorized		
9871	COCKPIT UPGRADES	No
9873	Canopy Fracture Initiation System	No

Model:	T-6A	
Modification P-40a Aggregated Items Title:	T-6	
Item Number	**Item Title**	**Applies to Multiple Models**
9878	Aircrew Training Device (ATD) Modernization	No
9890	Controlled Flight Into Terrain Avoidance	No
9893	Crew System Modernization Program	No
99999S	SERVICE BULLETINS	No
99999X	Low Cost Modifications	No
P-3a Individual Modifications		
Modification Number	**Modification Title**	**Applies to Multiple Models**
9877	Avionics Upgrades FAA Compliance	No

Model:	T-6	
Modification P-40a Aggregated Items Title:	T-6	
Item Number	**Item Title**	**Applies to Multiple Models**
Uncategorized		
9892	Reliability & Maintainability (R&M) Safety Mods	No

Model:	T-1A	
Modification P-40a Aggregated Items Title:	T-1	
Item Number	**Item Title**	**Applies to Multiple Models**
Uncategorized		
8998	Crew Relief Station Replacement	No
99999X	Low Cost Modifications	No

Model:	T-1A	
P-3a Individual Modifications		
Modification Number	**Modification Title**	**Applies to Multiple Models**
8997	Avionics Modification	No

Model:	T-38	
Modification P-40a Aggregated Items Title:	**T-38**	
Item Number	**Item Title**	**Applies to Multiple Models**
Uncategorized		
6090	T-38 Avionics	No
6092	T-38 A/B ADS-B Out	No
99999A	LOW COST SAFETY MODIFICATIONS	No
99999X	Low Cost Modifications	No
P-3a Individual Modifications		
Modification Number	**Modification Title**	**Applies to Multiple Models**
6088	Pacer Classic III	No

Model:	T03800	
Modification P-40a Aggregated Items Title:	**T-38**	
Item Number	**Item Title**	**Applies to Multiple Models**
Uncategorized		
6091	Talon Repair, Inspection and Maintenance	No
6093	T-38 Canopy	No

Model:	U-2	
P-3a Individual Modifications		
Modification Number	**Modification Title**	**Applies to Multiple Models**
4494	U-2 Mod	No
4496	ASARS-2B Procurement for U-2	No

Model:	VC-25A	
Modification P-40a Aggregated Items Title:	**VC-25A Mod**	
Item Number	**Item Title**	**Applies to Multiple Models**
Uncategorized		
99999S	SERVICE BULLETINS	No
99999X	Low Cost Modifications	No
P-3a Individual Modifications		
Modification Number	**Modification Title**	**Applies to Multiple Models**
9715	VC-25 Block Upgrade	No

Model:	C-130H	
Modification P-40a Aggregated Items Title:	**C-130**	
Item Number	**Item Title**	**Applies to Multiple Models**
Uncategorized		
3773	C-130 8-Bladed Propeller Upgrade	No
8221	C-130 ALR-69A Radar Warning Receiver (RWR)	No
8518	C-130H Avionics Modernization Program (AMP) Increment 2	No
9139	MOD V IFF	No
9149	C-130 Aux Hyd Pump	Yes

Model:	C-130H	
Modification P-40a Aggregated Items Title:	C-130	
Item Number	**Item Title**	**Applies to Multiple Models**
92308	T-56 3.5 Engine Mod	No
92311	Electronic Propeller Control System (EPCS)	No
92312	In-Flight Propeller Balancing System (IPBS)	No
92315	C-130H Simulator	No
99999A	LOW COST SAFETY MODIFICATIONS	No
P-3a Individual Modifications		
Modification Number	**Modification Title**	**Applies to Multiple Models**
8578	C-130 SYSTEMS/STRUCTURE (PHASE II MODERNIZATION)	Yes
92302	C-130H Avionics Modernization Program (AMP) Increment 1	No

Model:	MC-130W	
Modification P-40a Aggregated Items Title:	C-130	
Item Number	**Item Title**	**Applies to Multiple Models**
Uncategorized		
9149	C-130 Aux Hyd Pump	Yes

Model:	MC-130H	
Modification P-40a Aggregated Items Title:	C-130	
Item Number	**Item Title**	**Applies to Multiple Models**
Uncategorized		
9149	C-130 Aux Hyd Pump	Yes

Model:	MC-130H	
P-3a Individual Modifications		
Modification Number	**Modification Title**	**Applies to Multiple Models**
8578	C-130 SYSTEMS/STRUCTURE (PHASE II MODERNIZATION)	Yes
92316	AFSOC C-130 Mods	No

Model:	HC-130H	
Modification P-40a Aggregated Items Title:	**C-130**	
Item Number	**Item Title**	**Applies to Multiple Models**
Uncategorized		
92309	Onboard Fire Incident Response Equipment	No

Model:	HC-130	
Modification P-40a Aggregated Items Title:	**C-130**	
Item Number	**Item Title**	**Applies to Multiple Models**
Uncategorized		
92310	HC-130P/N Variable Speed Drogue (VSD)	No
99999C	HC-130 Low Cost Mods	No

Model:	HC-130P	
P-3a Individual Modifications		
Modification Number	**Modification Title**	**Applies to Multiple Models**
8578	C-130 SYSTEMS/STRUCTURE (PHASE II MODERNIZATION)	Yes

Model:	HC-130N	
P-3a Individual Modifications		
Modification Number	**Modification Title**	**Applies to Multiple Models**
8578	C-130 SYSTEMS/STRUCTURE (PHASE II MODERNIZATION)	Yes

Model:	EC-130H	
Modification P-40a Aggregated Items Title:	**Compass Call**	
Item Number	**Item Title**	**Applies to Multiple Models**
Uncategorized		
1001	COMPASS CALL	No
P-3a Individual Modifications		
Modification Number	**Modification Title**	**Applies to Multiple Models**
8578	C-130 SYSTEMS/STRUCTURE (PHASE II MODERNIZATION)	Yes

Model:	AC-130U	
P-3a Individual Modifications		
Modification Number	**Modification Title**	**Applies to Multiple Models**
8578	C-130 SYSTEMS/STRUCTURE (PHASE II MODERNIZATION)	Yes

Model:	C-130J	
Modification P-40a Aggregated Items Title:	**C-130J Mods**	
Item Number	**Item Title**	**Applies to Multiple Models**
Uncategorized		
_2612	Avionics System and Structural Modifications	No
_5296	Wind Gust Brake	No

Model:	C-130J	
Modification P-40a Aggregated Items Title:	**C-130J Mods**	
Item Number	**Item Title**	**Applies to Multiple Models**
8668	WST Threat Generators	No
99999X	Low Cost Modifications	No
P-3a Individual Modifications		
Modification Number	**Modification Title**	**Applies to Multiple Models**
5222	BLOCK 8.1	No
8646	C-130J Center Wing Replacement	No

Model:	KC-135	
Modification P-40a Aggregated Items Title:	**C-135**	
Item Number	**Item Title**	**Applies to Multiple Models**
Uncategorized		
9818	VOR/ILS ANTENNAE	No
9824	ADS-B	No
99999A	LOW COST SAFETY MODIFICATIONS	No
99999X	Low Cost Modifications	No
Modification P-40a Aggregated Items Title:	**Other Aircraft**	
Item Number	**Item Title**	**Applies to Multiple Models**
Uncategorized		
8670	MAF Training	No
8735	DAS000 (ROBE)	Yes

Model:	KC-135	
P-3a Individual Modifications		
Modification Number	**Modification Title**	**Applies to Multiple Models**
8653	BLOCK 45	No
9826	Rudder Position Indicator (RPI)	No
9827	KC-135 AERO-I SATCOM replacement	No
9828	Real Time in the Cockpit (RTIC)	No

Model:	EC-37B	
P-3a Individual Modifications		
Modification Number	**Modification Title**	**Applies to Multiple Models**
1003	COMPASS CALL Baseline 3	No

Model:	RC-135S	
P-3a Individual Modifications		
Modification Number	**Modification Title**	**Applies to Multiple Models**
2504	COBRA BALL	Yes

Model:	TC-135W	
P-3a Individual Modifications		
Modification Number	**Modification Title**	**Applies to Multiple Models**
2504	COBRA BALL	Yes
4263	RIVET JOINT	Yes

Model:	RC-135V	
P-3a Individual Modifications		
Modification Number	**Modification Title**	**Applies to Multiple Models**
4263	RIVET JOINT	Yes

Model:	RC-135W	
P-3a Individual Modifications		
Modification Number	**Modification Title**	**Applies to Multiple Models**
4263	RIVET JOINT	Yes

Model:	RC-135U	
P-3a Individual Modifications		
Modification Number	**Modification Title**	**Applies to Multiple Models**
4265	COMBAT SENT	No

Model:	WC-135R	
P-3a Individual Modifications		
Modification Number	**Modification Title**	**Applies to Multiple Models**
4266	CONSTANT PHOENIX	No

Model:	E-3	
Modification P-40a Aggregated Items Title:	**E-3**	
Item Number	**Item Title**	**Applies to Multiple Models**
Uncategorized		
50001P	TSI	No
50001T	BLOCK 40/45 UPGRADE	No

Model:	E-3	
Modification P-40a Aggregated Items Title:	**E-3**	
Item Number	**Item Title**	**Applies to Multiple Models**
7225	NEXT GENERATION IDENTIFICATION FRIEND OR FOE (IFF)	No
8662	AETC MTD UPGRADES-FIELD TRAINING DETACHMENTS	No
9707	RM&A Mod	No
9716	VERTICAL STABILIZER AND RUDDER	No
9717	ELECTRONIC PROTECTION	No
9719	Combat ID Diminishing Manufacturing Sources	No
99999XA	LOW COST MOD - AIRFRAME	No
99999XB	LOW COST MOD - AVIONICS & MISSION SYSTEMS	No
P-3a Individual Modifications		
Modification Number	**Modification Title**	**Applies to Multiple Models**
50002	Communication Networking Upgrade (CNU)	No
9718	IP-enabled Capability (IPEC)	No
1	BLOCK 40/45 BLOCK UPGRADE	No

Model:	E-3B	
Modification P-40a Aggregated Items Title:	**E-3**	
Item Number	**Item Title**	**Applies to Multiple Models**
Uncategorized		
50002T	AWACS Mode 5 Acceleration	Yes

Model:	E-3B	
P-3a Individual Modifications		
Modification Number	**Modification Title**	**Applies to Multiple Models**
9709	E-3 DRAGON	Yes

Model:	E-3C	
Modification P-40a Aggregated Items Title:	**E-3**	
Item Number	**Item Title**	**Applies to Multiple Models**
Uncategorized		
50002T	AWACS Mode 5 Acceleration	Yes
P-3a Individual Modifications		
Modification Number	**Modification Title**	**Applies to Multiple Models**
9709	E-3 DRAGON	Yes

Model:	NATO AWACS Modernization Projects	
Modification P-40a Aggregated Items Title:	**E-3**	
Item Number	**Item Title**	**Applies to Multiple Models**
Uncategorized		
NATO	US Contribution to NATO AWACS Modernization Projects	No

Model:	E-4B	
Modification P-40a Aggregated Items Title:	**E-4**	
Item Number	**Item Title**	**Applies to Multiple Models**
Uncategorized		
3410	NPES (NC2AIS) E-4B	No

Model:	E-4B	
Modification P-40a Aggregated Items Title:	**E-4**	
Item Number	**Item Title**	**Applies to Multiple Models**
3411	Survivable SHF	No
4406A	SHF Modernization	No
4406B	AEHF Compatible Terminal/PNVC	No
9709F	CNS/ATM(ADS-B OUT)	No
P-3a Individual Modifications		
Modification Number	**Modification Title**	**Applies to Multiple Models**
4409	Low Frequency Transmit System (LFTS)	No
1	SERVICE BULLETINS	No

Model:	E-4	
Modification P-40a Aggregated Items Title:	**E-4**	
Item Number	**Item Title**	**Applies to Multiple Models**
Uncategorized		
99999X	Low Cost Modifications	No
P-3a Individual Modifications		
Modification Number	**Modification Title**	**Applies to Multiple Models**
4380	MUOS	No
1	Family of Beyond Line-of-Sight Terminals	Yes

Model:	E-8C	
Modification P-40a Aggregated Items Title:	E-8	
Item Number	**Item Title**	**Applies to Multiple Models**
Uncategorized		
38198	Prime Mission Equipment - Diminishing Manufacturing Sources	No
38199	Emergency Locator Transmitter (ELT)	No
38201	COMBINED ENTERPRISE REGIONAL INFORMATION EXHANGE SYSTEM (CENTRIXs)	No
P-3a Individual Modifications		
Modification Number	**Modification Title**	**Applies to Multiple Models**
38202	Common Data Link	No

Model:	E-6	
P-3a Individual Modifications		
Modification Number	**Modification Title**	**Applies to Multiple Models**
1	Family of Beyond Line-of-Sight Terminals	Yes

Model:	HH-60G	
Modification P-40a Aggregated Items Title:	H-60	
Item Number	**Item Title**	**Applies to Multiple Models**
Uncategorized		
8254	ALTITUDE HOLD AND HOVER SYSTEM (AHHS)	No
8563	LIGHTWEIGHT AIRBORNE RECOVERY SYSTEM V12 UPGRADE	No
8564	Control Display Unit (CDU)	No
8565	Navigation System Upgrade (NSU)	No
8840	Vibration Monitoring System (VMS)	No

Model:	HH-60G	
Modification P-40a Aggregated Items Title:	**H-60**	
Item Number	**Item Title**	**Applies to Multiple Models**
8844	Multi-function Color Display	No
8850	MODE 5	No
8851	Gun Replacement	No
8852	CSAR Avionics/Electrical Upgrade	No
8853	DEFENSIVE SYSTEM UPGRADE	No
8856	Block 162	No
8857	Rotor Brake	No
8859	DVE Sensor	No
8861	HH-60 DATALINKS	No
8862	HH-60G Communication Suite Control Integration	No
99999S	SERVICE BULLETINS	No
99999X	Low Cost Modifications	No
P-3a Individual Modifications		
Modification Number	**Modification Title**	**Applies to Multiple Models**
8854	HH-60 OLR Mission Modifications	No

Model:	RQ-4	
Modification P-40a Aggregated Items Title:	**RQ-4 Mods**	
Item Number	**Item Title**	**Applies to Multiple Models**
Uncategorized		
470018	CSMP	No

Model:	RQ-4	
P-3a Individual Modifications		
Modification Number	**Modification Title**	**Applies to Multiple Models**
470001	GH Aircraft Mods	No
470003	GH Ground Station Mods	No
470008	Enhanced Weather Capability	No
470009	ASIP Increment I	No
470010	SAR	No
470011	ASIP Install/Calibration	No
470012	MODE 5/ADS-B	No
470013	Sensor Enhancements	No
470016	ADC/AFS Refresh	No
470019	Communication Interoperability/Enhancements	No
470020	EISS Enhancements	No
1	Low Cost Modifications	No

Model:	HC-130J	
Modification P-40a Aggregated Items Title:	**HC/MC-130 Modifications**	
Item Number	**Item Title**	**Applies to Multiple Models**
Uncategorized		
99999X	Low Cost Modifications	Yes
P-3a Individual Modifications		
Modification Number	**Modification Title**	**Applies to Multiple Models**
5222	HC/MC-130J Block 8.1	Yes
8634	HC-130J Common Configuration	No

Model:	HC-130J	
P-3a Individual Modifications		
Modification Number	**Modification Title**	**Applies to Multiple Models**
8635	HC-130J Personnel Locator System	No
8636	HC-130J Situational Awareness	No
8639	Wireless Intercom	No
8652	(RFCM) Radio Frequency Countermeasures	No
8658	Paratroop Door	No

Model:	MC-130J	
Modification P-40a Aggregated Items Title:	**HC/MC-130 Modifications**	
Item Number	**Item Title**	**Applies to Multiple Models**
Uncategorized		
99999X	Low Cost Modifications	Yes
P-3a Individual Modifications		
Modification Number	**Modification Title**	**Applies to Multiple Models**
5222	HC/MC-130J Block 8.1	Yes
8632	MC-130J Increment 2	No
8642	(AbMN) Air borne Mission Networking	No
8648	ADS-B out Acceleration	No
8659	Broadband Antenna	No

Model:	AC-130J	
P-3a Individual Modifications		
Modification Number	**Modification Title**	**Applies to Multiple Models**
5222	HC/MC-130J Block 8.1	Yes

Model:	MULTI	
Modification P-40a Aggregated Items Title:	**Other Aircraft**	
Item Number	**Item Title**	**Applies to Multiple Models**
Uncategorized		
8733	Battlefield ABN Comm Node (BACN)	No

Model:	KC-46A	
Modification P-40a Aggregated Items Title:	**Other Aircraft**	
Item Number	**Item Title**	**Applies to Multiple Models**
Uncategorized		
8735	DAS000 (ROBE)	Yes

Model:	E-9	
Modification P-40a Aggregated Items Title:	**Other Aircraft**	
Item Number	**Item Title**	**Applies to Multiple Models**
Uncategorized		
99999J	MISCELLANEOUS LOW COSTS MODS (Combat Developments)	No

Model:	HH-60U	
Modification P-40a Aggregated Items Title:	Other Aircraft	
Item Number	**Item Title**	**Applies to Multiple Models**
Uncategorized		
HH-60U	HH-60U	No

Model:	MQ-9	
Modification P-40a Aggregated Items Title:	MQ-9 Mods	
Item Number	**Item Title**	**Applies to Multiple Models**
Uncategorized		
9171	MQ-9 SLAM	No
P-3a Individual Modifications		
Modification Number	**Modification Title**	**Applies to Multiple Models**
9151	Block 5	No
9152	MQ-9 Field	No
9154	Lynx SAR	No
9155	GCS Blk 30	No
9159	R&M enhancements	No
9164	Extended Range MQ-9	No
9167	MQ-9 Upgrade	No
1	MQ-9 Low Cost Mods	No
9169	Gorgon Stare	No

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Exhibit P-1M, Procurement Programs - Modification Summary
(Listing by Model)

Model:	CV-22	
P-3a Individual Modifications		
Modification Number	**Modification Title**	**Applies to Multiple Models**
8790	Block 20 Upgrade	No
1	Low Cost Modifications	No

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Exhibit P-1M, Procurement Programs - Modification Summary
(Funding for Modifications)

Funding ($ M)

Modification P-40a Item Title P-3a Modification Title	PYS	FY 2018	FY 2019	FY 2020 Base	FY 2020 OCO	FY 2020 Total	FY 2021	FY 2022	FY 2023	FY 2024
Exhibit P-40a										
B-2 Trainer System Upgrade	35.830	9.082	7.800	0.000	-	0.000	8.080	8.242	8.392	16.481
LINK 16/CID/IFR	0.889	1.718	2.296	0.200	-	0.200	0.204	0.208	0.211	0.214
LOW OBSERVABLE SIGNATURE AND SUPPORTABILITY MODS	48.104	9.083	14.831	0.276	-	0.276	19.878	24.009	26.244	21.017
B-2 Adaptable Communications Suite (ACS)	21.334	1.364	0.724	0.296	-	0.296	0.300	0.306	0.312	0.318
B-2 Flex Strike Phase 1	10.231	5.629	7.959	4.894	-	4.894	0.000	-	-	-
B61-12 Integration	-	39.549	-	0.000	-	0.000	-	-	-	-
MGUE	4.034	15.625	1.281	0.990	-	0.990	-	0.320	0.480	-
IFF Mode 5/S	-	-	-	-	-	-	7.239	15.420	15.894	97.723
Crash Survivable Memory Unit (CSMU)	-	-	-	-	-	-	3.273	1.601	1.631	1.660
Rotary Launcher Assembly (RLA) Service Life Extension Program	-	-	-	-	-	-	-	7.537	7.675	7.813
B-2 GBU-57 MOP Integration	-	3.038	18.787	-	-	-	-	-	-	-
Common Very Low Frequency Terminal	42.856	9.464	6.623	2.376	-	2.376	-	-	-	-
B-2 Low Cost Engine Modifications	18.186	0.000	0.000	0.236	-	0.236	0.751	0.966	1.080	0.794
Low Cost Modifications	19.878	0.000	0.000	0.314	-	0.314	0.641	0.873	0.966	0.678
CITS UPGRADE	101.042	15.993	6.712	1.652	-	1.652	1.893	0.109	0.111	-
B-1 TRAINING SUPPORT	2.981	0.448	0.450	0.458	-	0.458	0.467	0.476	0.485	0.494
B-1 Link 16 Crypto	2.614	0.100	-	-	-	-	-	-	-	-
VERTICAL SITUATION DISPLAYS	232.931	47.260	12.595	-	-	-	17.622	4.000	1.923	-
LAPTOP CONTROLLED TARGETING POD	77.171	6.401	4.397	0.397	-	0.397	0.397	0.198	0.202	-

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Exhibit P-1M, Procurement Programs - Modification Summary
(Funding for Modifications)

Modification P-40a Item Title P-3a Modification Title	PYS	FY 2018	FY 2019	FY 2020 Base	FY 2020 OCO	FY 2020 Total	FY 2021	FY 2022	FY 2023	FY 2024
MIDS-JTRS	-	-	-	-	-	-	-	15.521	16.084	8.925
Fully Integrated Targeting Pod	-	-	-	-	-	-	20.547	15.159	7.970	0.000
Radio Crypto Compliance	-	-	-	-	-	-	9.588	15.492	20.732	9.635
BRU-56	-	-	-	-	-	-	0.000	8.330	44.122	45.702
Low Cost Modifications	5.173	1.400	0.198	0.249	-	0.249	1.487	0.099	0.101	-
B-52 Anti-Skid Replacement	19.549	0.909	0.916	0.932	-	0.932	0.949	-	-	-
B-52 Internal Weapons Bay Upgrade	26.009	26.934	24.176	-	-	-	-	-	0.001	0.002
AETC Trainers (B-52)	7.000	2.460	2.480	2.524	-	2.524	2.568	2.620	2.668	2.716
B-52 Radar Modernization	-	-	-	0.000	-	0.000	-	12.861	69.114	193.655
B-52 WST AR Upgrade Trainer	-	1.608	-	-	-	-	-	-	-	-
B-52 Low Cost Improvements	2.331	2.378	17.362	7.412	-	7.412	2.461	2.511	2.557	2.603
Advanced Targeting Pod MFCD	-	-	-	-	-	-	-	22.907	16.216	16.508
B-52 VLF/LF Modernization	-	-	-	-	-	-	8.410	33.557	19.523	8.076
B-52 IR Missile Warning System	-	-	16.400	-	-	-	-	-	-	-
B-52 Low Cost Mods	1.919	0.425	0.452	0.460	-	0.460	0.470	0.480	0.489	0.498
LARGE AIRCRAFT INFRARED COUNTERMEASURES C-130	14.301	-	-	-	-	-	-	-	-	-
MODE S/5	11.000	0.000	0.000	0.000	-	0.000	1.000	-	-	-
ONBOARD OXYGEN GENERATING SYSTEM (OBOGS)	17.000	-	-	-	-	-	-	-	-	-
A-10 Helmet Mounted Cueing System	6.500	-	0.900	3.050	-	3.050	3.030	4.880	4.560	-
Covert/Overt Landing Light Requirement (COLA)	0.850	-	-	-	-	-	-	-	-	-
ADS-B Out	-	6.010	13.520	-	-	-	-	-	-	-
LARS-CSEL	27.000	-	-	-	-	-	-	-	-	-

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Exhibit P-1M, Procurement Programs - Modification Summary
(Funding for Modifications)

Modification P-40a Item Title P-3a Modification Title	PYS	FY 2018	FY 2019	FY 2020 Base	FY 2020 OCO	FY 2020 Total	FY 2021	FY 2022	FY 2023	FY 2024
A-10 J-Hook System	-	-	0.750	-	-	-	-	-	-	-
A-10 Conversion Fuel Tanks	-	-	8.700	-	-	-	-	-	-	-
3-Dimensional Audio (3DA)	-	-	-	1.000	-	1.000	7.300	8.900	3.700	2.500
F-15 C/D Secondary Power System (SPS)	7.492	-	-	-	-	-	-	-	-	-
F-15C Infrared Search and Track (IRST)	-	65.133	51.889	-	-	-	-	-	-	-
F-15 C/D Flight Data Recorder (FDR)	24.505	0.303	0.020	-	-	-	-	-	-	-
F-15E Flight Data Recorder (FDR)	140.025	2.421	0.027	-	-	-	-	-	-	-
F-15E -JOINT HELMET-MOUNTED CUEING SYSTEM	102.724	1.200	0.600	-	-	-	-	-	-	-
AETC MTD UPGRADES-FIELD TRAINING DETACHMENTS	6.171	1.119	1.128	1.147	-	1.147	1.167	1.190	1.212	1.234
F-15C/D Link 16 Cryptographic Modernization	0.002	-	-	-	-	-	-	-	-	-
F-15C/D Beyond Line Of Sight Communications	54.339	0.088	-	-	-	-	-	-	-	-
F-15C Passive Attack Sensor System	28.577	-	-	-	-	-	-	-	-	-
F-15 C/D/MUOS	-	-	-	0.630	-	0.630	-	-	-	-
F-15 F-15 E/MUOS	-	-	-	0.630	-	0.630	8.050	8.680	30.952	31.509
F-15 C/D Cabin Pressure Indicator	1.977	0.076	0.120	-	-	-	-	-	-	-
F-15 E Cabin Pressure Indicator	3.332	0.126	0.180	-	-	-	-	-	-	-
F-15E SATCOM UON	17.700	-	-	-	-	-	-	-	-	-
F-15 E Integrated Aircrew Trainer	-	-	4.959	-	-	-	-	-	-	-
F-15E B61 A/C Umbilical	0.542	-	-	-	-	-	-	-	-	-
F-15C Simulator Upgrade	-	15.000	-	-	-	-	-	-	-	-
F-15C/D APG-63(V)3 Common Config	-	-	4.330	4.352	-	4.352	1.526	-	-	-
F-15E DTM II	-	-	-	-	-	-	-	7.540	9.920	11.010

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Modification P-40a Item Title P-3a Modification Title	PYS	FY 2018	FY 2019	FY 2020 Base	FY 2020 OCO	FY 2020 Total	FY 2021	FY 2022	FY 2023	FY 2024
F-15E Digital Color Display	-	-	-	-	-	-	-	15.159	17.619	24.674
LOW COST RETROFIT MODS	5.764	0.001	0.001	0.001	-	0.001	0.001	-	-	-
Low Cost Modifications	5.787	0.001	0.001	0.001	-	0.001	0.001	-	-	-
Aggressors Update	6.925	5.306	1.154	1.524	0.000	1.524	1.990	0.000	-	-
Anti Jam	5.000	-	-	-	-	-	-	-	-	-
Missile Warning Systems	12.000	-	-	-	-	-	-	-	-	-
Link 16 Crypto	0.139	-	-	-	-	-	-	-	-	-
MIDS-JTRS	11.099	118.029	176.888	1.469	-	1.469	31.904	0.000	0.000	-
Digital Radar Warning Receiver (RWR)	-	-	-	4.315	-	4.315	161.615	28.037	49.626	224.793
AETC MTD UPGRADES-FIELD TRAINING DETACHMENTS	103.219	3.716	5.335	5.431	-	5.431	5.529	5.639	5.742	5.845
F-16 TRAINING SYSTEMS	6.125	5.524	4.286	4.342	-	4.342	60.233	4.458	3.039	4.842
Full Combat Mission Training	-	-	5.665	1.960	-	1.960	2.400	2.034	0.052	0.054
Low Cost Modifications	11.075	0.003	2.000	0.010	-	0.010	0.010	0.772	0.785	0.799
COMMON CONFIGURATION	669.208	-	-	-	-	-	-	-	-	-
INCREMENT 3.1	252.649	-	-	-	-	-	-	-	-	-
Pilot Systems Hardware	-	-	-	0.000	-	0.000	-	0.000	-	16.378
Structures Retrofit Plan	263.589	10.689	8.809	2.218	-	2.218	-	-	-	-
Trainers Modernization	88.610	4.215	3.036	3.300	-	3.300	3.540	3.500	3.595	3.693
Crypto Modernization	3.704	-	0.760	0.720	-	0.720	1.275	-	-	-
Mode 5 Identification Friend or Foe (IFF)	-	-	13.485	-	-	-	34.800	35.900	31.900	3.350
Mid-Life Updates	-	-	-	-	-	-	-	-	-	-
Navigation Systems Hardware	-	-	-	-	-	-	-	35.600	13.418	34.260

Modification P-40a Item Title P-3a Modification Title	PYS	FY 2018	FY 2019	FY 2020 Base	FY 2020 OCO	FY 2020 Total	FY 2021	FY 2022	FY 2023	FY 2024
Pylon	-	-	-	-	-	-	-	-	30.630	-
R&M Safety Mods	-	-	-	0.000	-	0.000	0.000	17.222	20.938	0.000
Pegasus Advanced Communications Suite (PACS)	-	-	-	0.000	-	0.000	0.000	0.000	0.000	0.000
Low Cost Modifications	-	-	2.000	2.000	-	2.000	2.000	2.000	2.000	0.000
C-5 Replace Multifunctional Co	-	-	-	-	-	-	-	-	20.740	24.077
C-5 Fleet Blk Upgrade 01	13.093	-	-	-	-	-	-	-	-	-
C-5 Training Systems (Training Mods)	-	-	-	-	-	-	-	-	2.639	-
Low Cost Modifications	0.000	0.000	0.000	0.000	0.000	0.000	1.999	0.000	0.000	-
Pylon Stub FFLZ, FF, Translating Fairing	89.697	3.765	1.200	-	-	-	1.618	-	-	-
ELT Frequency Change	3.062	2.120	-	-	-	-	-	-	-	-
MFOQA	14.070	-	-	-	-	-	-	-	-	-
IFF GATM	96.453	26.830	0.015	-	-	-	-	-	-	-
Automatic Dependent Surveillance - Broadcast Out (ADS-B Out)	43.186	40.649	2.000	-	-	-	-	-	-	-
Filter Fire Mitigation	-	-	-	0.389	-	0.389	0.374	2.190	2.693	2.727
Fixed Installation Satellite Antenna (FISA)	-	13.543	12.317	-	-	-	-	-	-	-
C-17 Simulator Lateral Motion Maneuver Enhancement	-	-	1.438	-	-	-	-	-	-	-
C-17 Visual System Field of View	-	-	1.008	0.100	-	0.100	-	-	-	-
C-17 Training System (Other Mods)	-	-	6.554	1.290	-	1.290	8.457	0.880	1.097	1.183
C-17 Training System (Training Mods)	-	-	-	11.270	-	11.270	2.483	-	10.556	-
Low Cost Modifications	3.217	0.024	0.100	0.100	-	0.100	0.100	0.100	0.101	0.100
Nitrogen Generation System	20.106	2.046	-	-	-	-	-	-	-	-
WIDEBAND SATCOM	107.689	53.425	-	-	-	-	-	-	-	-

Modification P-40a Item Title P-3a Modification Title	PYS	FY 2018	FY 2019	FY 2020 Base	FY 2020 OCO	FY 2020 Total	FY 2021	FY 2022	FY 2023	FY 2024
CNS/ATM Compliance	4.821	20.220	1.968	-	-	-	-	-	-	-
SERVICE BULLETINS	0.962	0.000	0.005	0.005	-	0.005	0.005	0.005	0.005	0.005
99999SG - Service Bulletins - C-32B	3.795	2.000	1.000	1.000	0.000	1.000	1.000	1.000	2.000	0.000
Low Cost Modifications	0.003	0.008	0.005	0.005	-	0.005	0.005	0.005	0.005	0.005
99999XG - Low Cost Mods - C-32B	3.418	1.748	0.893	0.908	-	0.908	0.941	0.980	0.016	-
COCKPIT UPGRADES	-	-	-	-	-	-	25.736	7.342	-	-
Canopy Fracture Initiation System	0.867	0.264	-	-	-	-	-	-	-	-
Aircrew Training Device (ATD) Modernization	25.962	9.369	2.210	3.601	-	3.601	4.323	3.200	2.922	2.914
Controlled Flight Into Terrain Avoidance	-	-	-	-	-	-	-	3.219	2.835	-
Reliability & Maintainability (R&M) Safety Mods	-	-	-	0.100	-	0.100	0.100	0.100	0.100	0.100
Crew System Modernization Program	-	-	-	0.100	-	0.100	0.100	0.100	0.100	0.100
SERVICE BULLETINS	-	-	-	0.100	-	0.100	0.100	0.100	0.100	0.100
Low Cost Modifications	0.893	1.148	1.191	1.700	-	1.700	1.700	0.100	0.100	0.000
Crew Relief Station Replacement	-	-	-	1.500	0.000	1.500	1.500	-	-	-
Low Cost Modifications	1.365	0.305	0.310	0.316	-	0.316	0.300	0.300	0.300	0.300
T-38 Avionics	43.817	24.960	29.530	0.126	-	0.126	1.586	1.587	1.579	1.607
Talon Repair, Inspection and Maintenance	-	-	0.600	3.841	-	3.841	8.200	23.174	33.295	40.415
T-38 A/B ADS-B Out	-	4.193	8.390	-	-	-	-	-	-	-
T-38 Canopy	-	-	-	0.181	-	0.181	1.576	1.576	1.576	1.604
LOW COST SAFETY MODIFICATIONS	0.029	0.005	0.005	0.005	-	0.005	0.005	0.005	0.005	0.005
Low Cost Modifications	0.031	0.006	0.006	0.006	-	0.006	0.006	0.006	0.006	0.006
SERVICE BULLETINS	1.002	0.993	0.893	0.567	-	0.567	0.885	0.906	0.923	0.924
Low Cost Modifications	2.199	0.000	0.100	0.100	-	0.100	0.100	0.100	0.100	0.118

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Modification P-40a Item Title P-3a Modification Title	PYS	FY 2018	FY 2019	FY 2020 Base	FY 2020 OCO	FY 2020 Total	FY 2021	FY 2022	FY 2023	FY 2024
C-130 8-Bladed Propeller Upgrade	82.000	55.000	55.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
C-130 ALR-69A Radar Warning Receiver (RWR)	36.080	0.000	-	-	-	-	-	-	-	-
C-130H Avionics Modernization Program (AMP) Increment 2	-	-	0.000	0.000	-	0.000	61.297	164.524	229.971	165.000
MOD V IFF	39.223	1.550	1.050	-	-	-	-	-	-	-
C-130 CRASHWORTHY LOADMASTER SEAT	1.853	-	-	-	-	-	-	-	-	-
C-130 Aux Hyd Pump	14.967	0.522	-	-	-	-	-	-	-	-
T-56 3.5 Engine Mod	113.000	74.000	74.000	-	-	-	-	-	-	-
Onboard Fire Incident Response Equipment	66.606	8.300	30.000	-	-	-	-	-	-	-
HC-130P/N Variable Speed Drogue (VSD)	1.410	-	-	-	-	-	-	-	-	-
Electronic Propeller Control System (EPCS)	140.500	15.000	-	-	-	-	-	-	-	-
In-Flight Propeller Balancing System (IPBS)	3.000	0.000	-	-	-	-	-	-	-	-
C-130H Simulator	-	25.000	-	15.675	-	15.675	-	22.720	35.461	0.000
LOW COST SAFETY MODIFICATIONS	3.389	1.499	-	1.999	-	1.999	-	-	-	-
HC-130 Low Cost Mods	1.907	-	-	-	-	-	-	-	-	-
MISC SIMULATOR UPDATES	0.723	0.606	-	1.999	-	1.999	-	-	-	-
SERVICE BULLETINS	1.101	1.024	-	1.106	-	1.106	-	-	-	-
Low Cost Modifications	13.559	1.449	1.926	1.500	-	1.500	1.982	1.979	1.896	1.999
Avionics System and Structural Modifications	26.843	3.200	0.288	0.649	-	0.649	-	-	-	-
Wind Gust Brake	36.855	1.500	0.250	-	-	-	-	-	-	-
WST Threat Generators	-	-	1.567	-	-	-	5.950	-	-	-
Low Cost Modifications	10.940	1.443	0.500	0.560	-	0.560	2.000	0.500	0.460	-
VOR/ILS ANTENNAE	9.392	-	0.001	0.001	-	0.001	0.001	0.001	0.001	-

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ADS-B	-	11.500	3.200	0.000	-	0.000	-	-	-	-
LOW COST SAFETY MODIFICATIONS	0.025	0.025	0.025	0.025	-	0.025	0.025	0.025	0.025	0.025
Low Cost Modifications	11.018	1.111	1.995	1.995	-	1.995	1.995	1.995	1.995	1.995
COMPASS CALL	-	38.120	36.400	-	-	-	-	-	-	-
TSI	19.007	-	0.000	0.000	-	0.000	0.000	-	-	-
BLOCK 40/45 UPGRADE	658.246	-	0.000	0.000	-	0.000	0.000	0.000	-	-
AWACS Mode 5 Acceleration	-	-	-	2.343	-	2.343	4.017	3.729	-	-
NEXT GENERATION IDENTIFICATION FRIEND OR FOE (IFF)	56.833	0.000	-	-	-	-	-	-	-	-
AETC MTD UPGRADES-FIELD TRAINING DETACHMENTS	6.998	0.701	0.707	0.719	-	0.719	0.732	0.748	0.762	0.776
RM&A Mod	21.599	0.620	0.075	0.328	-	0.328	0.320	0.000	-	-
VERTICAL STABILIZER AND RUDDER	2.904	0.135	0.018	-	-	-	-	-	-	-
ELECTRONIC PROTECTION	-	-	-	-	-	-	-	-	-	24.321
Combat ID Diminishing Manufacturing Sources	-	-	-	-	-	-	-	-	0.560	8.490
LOW COST MOD - AIRFRAME	0.450	1.999	1.999	1.999	-	1.999	1.999	1.999	1.999	1.999
LOW COST MOD - AVIONICS & MISSION SYSTEMS	0.450	1.999	1.999	1.999	-	1.999	1.999	1.999	1.999	1.999
US Contribution to NATO AWACS Modernization Projects	-	-	-	87.307	-	87.307	71.398	65.448	46.615	47.454
NPES (NC2AIS) E-4B	2.730	-	-	-	-	-	-	-	-	-
Survivable SHF	-	-	-	-	-	-	29.749	29.749	29.754	30.290
SHF Modernization	109.088	-	11.000	-	-	-	-	-	-	-
AEHF Compatible Terminal/PNVC	0.017	-	8.107	3.472	-	3.472	13.991	14.651	1.078	2.743
CNS/ATM(ADS-B OUT)	5.118	4.860	0.000	0.000	-	0.000	-	-	-	-
Low Cost Modifications	8.412	1.938	1.990	1.990	-	1.990	1.990	1.990	1.990	1.990

Modification P-40a Item Title P-3a Modification Title	PYS	FY 2018	FY 2019	FY 2020 Base	FY 2020 OCO	FY 2020 Total	FY 2021	FY 2022	FY 2023	FY 2024
Prime Mission Equipment - Diminishing Manufacturing Sources	150.628	10.732	-	-	-	-	-	-	-	-
Emergency Locator Transmitter (ELT)	-	3.000	-	-	-	-	-	-	-	-
COMBINED ENTERPRISE REGIONAL INFORMATION EXHANGE SYSTEM (CENTRIXs)	-	2.500	0.000	-	-	-	-	-	-	-
JSTARS OCO Requirements	-	-	13.000	-	-	-	-	-	-	-
ALTITUDE HOLD AND HOVER SYSTEM (AHHS)	35.783	-	-	-	-	-	-	-	-	-
LIGHTWEIGHT AIRBORNE RECOVERY SYSTEM V12 UPGRADE	24.052	-	-	-	-	-	-	-	-	-
Control Display Unit (CDU)	20.834	10.800	0.110	-	-	-	-	-	-	-
Navigation System Upgrade (NSU)	61.562	2.720	1.210	1.298	-	1.298	0.010	-	-	-
Vibration Monitoring System (VMS)	40.913	-	-	-	-	-	-	-	-	-
Multi-function Color Display	36.491	3.330	3.480	2.610	-	2.610	0.010	-	-	-
MODE 5	22.423	7.354	2.485	2.148	-	2.148	-	-	-	-
Gun Replacement	25.394	-	-	-	-	-	-	-	-	-
CSAR Avionics/Electrical Upgrade	16.397	0.860	0.780	0.324	0.000	0.324	-	-	-	-
DEFENSIVE SYSTEM UPGRADE	15.029	-	40.560	-	-	-	-	-	-	-
Block 162	45.265	3.125	0.030	3.370	-	3.370	3.210	0.010	-	-
Rotor Brake	3.010	-	-	-	-	-	-	-	-	-
DVE Sensor	0.700	1.240	23.740	3.186	-	3.186	36.656	6.066	17.557	30.226
HH-60 DATALINKS	7.700	2.661	17.478	0.550	-	0.550	8.165	9.865	11.842	4.790
HH-60G Communication Suite Control Integration	-	4.490	1.000	0.540	-	0.540	5.693	3.120	3.540	2.040
SERVICE BULLETINS	0.091	-	-	-	-	-	-	-	-	-
Low Cost Modifications	6.099	0.920	0.753	0.210	-	0.210	1.410	1.340	1.470	2.000

Modification P-40a Item Title P-3a Modification Title	PYS	FY 2018	FY 2019	FY 2020 Base	FY 2020 OCO	FY 2020 Total	FY 2021	FY 2022	FY 2023	FY 2024
CSMP	-	-	-	-	-	-	-	-	-	-
Trainers	-	-	3.000	-	-	-	-	-	-	-
Low Cost Modifications	8.147	-	1.435	1.000	-	1.000	2.000	1.000	1.000	0.916
Full Combat Mission Training	62.527	13.877	-	-	-	-	-	-	-	-
MAF Training	32.514	1.172	0.000	0.100	0.000	0.100	16.527	0.099	0.101	0.103
Battlefield ABN Comm Node (BACN)	-	-	28.906	-	-	-	-	-	-	-
DAS000 (ROBE)	-	10.381	10.400	-	-	-	-	-	-	-
MISCELLANEOUS LOW COSTS MODS (Combat Developments)	142.525	0.162	0.148	4.616	-	4.616	0.154	0.157	0.160	0.163
HH-60U	3.608	-	0.000	1.900	0.000	1.900	1.900	1.900	1.900	1.900
MQ-9 SLAM	-	-	-	0.100	-	0.100	0.100	0.100	26.793	-
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Fully Integrated Data Links	370.969	50.032	15.338	10.202	0.000	10.202	17.596	0.404	0.412	0.000
IFF Mode 5/S ADS-B	-	0.000	0.000	9.153	0.000	9.153	12.689	14.348	14.609	0.000
B-52 Combat Network Communications Technology	491.345	63.411	55.444	13.576	0.000	13.576	22.261	10.569	5.678	0.000
Bomber Tactical Data link	0.000	0.000	0.000	15.925	0.000	15.925	30.214	24.917	25.372	0.000
GPS-IU Replacement	0.000	0.000	0.000	11.097	0.000	11.097	23.904	22.359	0.000	0.000
B-52 Crypto Modernization	0.000	0.000	0.000	17.722	0.000	17.722	21.059	12.188	2.500	0.000
LARGE AIRCRAFT INFRARED COUNTERMEASURES C-130J	121.467	4.046	53.335	0.000	53.335	53.335	91.136	91.200	0.000	0.000
LARGE AIRCRAFT INFRARED COUNTERMEASURES C-17	145.091	0.000	69.868	35.581	0.000	35.581	12.645	0.000	0.000	0.000
LARGE AIRCRAFT INFRARED COUNTERMEASURES C-5	22.782	0.000	26.575	8.177	0.000	8.177	0.000	0.000	0.000	0.000

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A-10 Wing Replacement Program	21.289	103.000	144.190	100.000	0.000	100.000	100.000	100.000	100.000	60.000
ARC-210	-	0.000	0.000	8.769	0.000	8.769	18.350	7.580	5.000	5.000
2ND GIGABIT ETHERNET SWITCH (2GES)	-	0.000	0.000	5.000	0.000	5.000	4.900	0.000	0.000	0.000
A-10 High Resolution Display System (HRDS)	-	0.000	0.000	6.250	0.000	6.250	1.400	7.587	21.742	18.731
SDB-1	-	0.000	0.000	8.000	0.000	8.000	0.000	0.000	0.000	0.000
E-11 Mods	-	0.000	0.000	70.027	0.000	70.027	33.691	25.347	53.133	89.719
F-15E Radar Modernization Program APG-82(V)1	1,162.072	171.764	186.781	179.525	0.000	179.525	313.356	85.019	84.324	84.930
Advanced Display Core Processor, ADCP II-E	3.780	82.477	10.520	49.187	0.000	49.187	72.212	74.483	75.842	51.517
:Advanced Display Core Processor, ADCP II-C	1.859	47.399	58.091	75.100	0.000	75.100	69.886	0.000	0.000	0.000
F-15C/D APG-63(V)3 radar upgrade	1,359.205	5.723	11.908	23.681	0.000	23.681	40.540	0.000	0.000	0.000
F-15C/D IFF Mode 5	-	0.000	8.000	29.656	0.000	29.656	0.548	0.000	0.000	0.000
F-15E IFF MODE 5	28.035	8.006	26.455	15.257	0.000	15.257	2.080	0.190	0.200	0.000
F-15C MIDS JTRS	0.000	7.430	21.600	41.640	0.000	41.640	46.118	0.000	0.000	0.000
F-15E MIDS JTRS	0.000	14.983	19.040	27.844	0.000	27.844	41.918	43.769	19.962	33.051
F-15 C/D SLEP Longerons	-	7.023	5.900	24.627	0.000	24.627	40.082	33.024	32.765	0.000
F-15E APG-82(V)1 Common Config	0.000	0.000	35.097	7.795	0.000	7.795	24.012	4.967	5.056	5.147
MMC and Display Generator Upgrade	0.000	0.000	0.000	14.530	0.000	14.530	39.453	45.181	47.424	43.050
F-16 LEGACY STRUCTURAL SLEP	3.517	10.454	36.676	45.050	0.000	45.050	71.993	108.410	133.627	117.490
Comm Suite Upgrade	0.000	29.916	20.968	29.171	0.000	29.171	82.190	47.309	48.169	112.161
HFLCC AGCAS	-	13.118	14.060	18.153	0.000	18.153	15.829	18.699	9.080	0.358
AIFF MODE 5	-	9.009	36.381	7.937	0.000	7.937	22.045	16.524	18.752	0.000
AESA Radars	220.577	48.789	0.000	100.890	0.000	100.890	270.425	317.629	286.141	173.049
Reliability and Maintainability Program	1,238.022	121.822	131.217	78.512	0.000	78.512	91.978	83.345	87.173	106.621

Modification P-40a Item Title P-3a Modification Title	PYS	FY 2018	FY 2019	FY 2020 Base	FY 2020 OCO	FY 2020 Total	FY 2021	FY 2022	FY 2023	FY 2024
Link 16	-	7.500	94.914	77.600	0.000	77.600	107.400	74.700	7.500	0.000
F119 Engine Modifications	74.573	8.104	8.489	9.547	0.000	9.547	9.069	5.174	0.976	14.508
Sensor Enhancement	-	-	-	151.700	0.000	151.700	166.385	291.399	389.650	291.181
Block 3i LRIP 2-5 Upgrade	201.420	5.098	2.117	8.171	0.000	8.171	0.000	0.000	0.000	0.000
Block 3F LRIP 2-5 Upgrade	6.796	0.540	2.005	0.250	0.000	0.250	0.000	0.000	0.000	0.000
Block 3F LRIP 6-8 Upgrade	0.000	0.056	0.000	2.800	0.000	2.800	0.000	0.000	0.000	0.000
Concurrency	362.718	17.576	233.149	130.650	0.000	130.650	121.886	109.503	292.860	298.710
Correction of Deficiencies	0.000	0.000	0.000	187.719	0.000	187.719	159.634	177.597	0.000	0.000
Block 4 Modifications	-	-	-	14.000	0.000	14.000	0.000	0.000	0.000	0.000
EPAWSS F-15C/D	-	-	67.200	0.000	0.000	0.000	0.000	0.000	0.000	0.000
EPAWSS F-15E	-	-	147.684	149.047	0.000	149.047	179.087	308.818	337.777	266.100
INCREMENT 3.2B	171.235	102.907	2.007	20.213	0.000	20.213	5.963	0.000	0.000	-
Airworthiness Directives	-	1.213	6.547	8.213	0.000	8.213	25.394	39.419	65.611	0.000
C-5 Mission Systems Equipment- Lavatory	3.332	6.129	10.943	8.742	0.000	8.742	12.866	3.838	0.000	0.000
Mission Computer and Weather Radar	20.839	15.613	28.353	32.422	0.000	32.422	15.365	6.928	1.007	0.000
C-5M Communication Navigation Surveillance/Air Traffic Management (CNS/ATM)	0.000	0.000	28.613	32.386	0.000	32.386	32.743	22.745	9.718	2.398
Replacement Heads Up Display (RHUD)	0.000	9.421	51.991	34.425	0.000	34.425	41.735	38.521	34.060	43.446
Beyond Line of Sight (BLOS)	-	-	0.598	12.670	0.000	12.670	49.636	54.339	59.824	32.052
Crew Rest Seats	-	0.000	0.666	9.593	0.000	9.593	0.000	0.000	0.000	0.000
Avionics Upgrades FAA Compliance	0.000	3.825	19.149	6.225	0.000	6.225	0.000	0.000	-	-
Avionics Modification	14.409	21.172	21.642	24.971	0.000	24.971	35.406	33.923	5.532	37.844
Pacer Classic III	122.455	22.477	32.092	33.181	0.000	33.181	34.853	36.450	35.323	35.958

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U-2 Mod	58.169	32.177	56.674	54.443	0.000	54.443	62.566	57.127	53.908	54.878
ASARS-2B Procurement for U-2	-	-	-	32.453	0.000	32.453	48.204	72.340	28.108	15.880
VC-25 Block Upgrade	186.217	51.114	26.245	47.957	0.000	47.957	0.000	0.000	0.000	0.000
C-130 SYSTEMS/STRUCTURE (PHASE II MODERNIZATION)	666.871	8.160	3.546	14.512	0.000	14.512	14.773	15.068	15.343	15.551
C-130H Avionics Modernization Program (AMP) Increment 1	70.000	7.200	7.637	7.338	0.000	7.338	3.846	0.000	0.000	-
AFSOC C-130 Mods	0.000	11.000	7.935	7.937	0.000	7.937	0.000	0.000	0.000	0.000
BLOCK 8.1	183.903	141.059	106.004	110.987	0.000	110.987	105.490	162.992	166.003	11.888
C-130J Center Wing Replacement	69.099	30.314	18.825	29.490	0.000	29.490	13.398	0.510	10.520	0.529
BLOCK 45	200.604	54.157	53.865	52.082	0.000	52.082	60.311	73.710	74.559	55.271
Rudder Position Indicator (RPI)	4.903	2.635	6.124	18.807	0.000	18.807	9.770	8.779	8.999	8.119
KC-135 AERO-I SATCOM replacement	-	-	0.000	28.581	0.000	28.581	32.281	23.682	24.580	1.330
Real Time in the Cockpit (RTIC)	-	-	26.200	23.000	0.000	23.000	0.000	0.000	0.000	0.000
COMPASS CALL Baseline 3	227.457	87.668	135.885	110.754	0.000	110.754	41.954	38.461	39.159	39.864
COBRA BALL	12.469	6.959	6.776	12.177	0.000	12.177	12.414	12.656	12.902	13.154
RIVET JOINT	343.123	187.807	169.664	197.574	0.000	197.574	183.060	180.795	182.242	62.392
COMBAT SENT	27.361	9.793	9.802	9.985	0.000	9.985	9.966	10.191	10.375	10.562
CONSTANT PHOENIX	-	-	208.290	7.937	0.000	7.937	0.000	-	-	-
Communication Networking Upgrade (CNU)	0.000	0.000	0.000	10.423	0.000	10.423	11.447	14.128	14.537	12.920
E-3 DRAGON	31.402	91.324	91.058	94.770	0.000	94.770	117.312	160.300	220.011	252.837
IP-enabled Capability (IPEC)	53.887	23.130	21.009	16.411	0.000	16.411	16.360	7.392	3.890	0.000
MUOS	-	-	0.000	5.700	0.000	5.700	2.400	0.000	0.000	0.000
Low Frequency Transmit System (LFTS)	21.100	15.854	41.281	41.748	0.000	41.748	20.046	0.000	0.000	0.000

Modification P-40a Item Title P-3a Modification Title	PYS	FY 2018	FY 2019	FY 2020 Base	FY 2020 OCO	FY 2020 Total	FY 2021	FY 2022	FY 2023	FY 2024
SERVICE BULLETINS	22.261	3.262	5.480	5.567	0.000	5.567	5.729	5.903	6.046	6.190
Common Data Link	-	-	24.807	23.778	0.000	23.778	13.883	5.950	0.000	0.000
Distributed Mission Ops Center (DMOC)	-	0.000	0.000	5.000	0.000	5.000	0.000	0.000	0.000	0.000
BLOCK 40/45 BLOCK UPGRADE	581.925	142.886	57.780	36.000	0.000	36.000	46.148	42.454	0.000	0.000
Family of Beyond Line-of-Sight Terminals	52.339	15.017	14.293	7.910	0.000	7.910	1.576	0.000	0.000	0.000
HH-60 OLR Mission Modifications	415.526	38.489	0.400	6.643	0.000	6.643	4.450	4.190	-	-
GH Aircraft Mods	392.563	39.600	101.176	0.000	0.000	0.000	10.578	30.117	35.420	106.561
GH Ground Station Mods	15.523	-	-	-	-	-	-	-	-	-
Enhanced Weather Capability	44.016	0.000	0.000	-	-	-	-	-	-	-
ASIP Increment I	34.108	0.000	0.000	-	-	-	-	-	-	-
SAR	3.640	0.000	0.000	0.000	0.000	0.000	0.000	-	-	-
ASIP Install/Calibration	4.834	0.000	-	-	-	-	-	-	-	-
MODE 5/ADS-B	0.000	6.361	2.687	0.000	0.000	0.000	0.000	-	-	-
Sensor Enhancements	-	30.474	0.000	0.000	0.000	0.000	21.543	0.000	-	-
ADC/AFS Refresh	-	0.000	0.000	0.000	0.000	0.000	0.000	0.000	36.100	11.700
Communication Interoperability/Enhancements	3.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	-	-
EISS Enhancements	-	0.000	17.852	0.000	0.000	0.000	0.000	0.000	0.000	-
Low Cost Modifications	0.000	2.000	2.000	1.704	0.000	1.704	2.000	2.000	2.000	2.000
HC/MC-130J Block 8.1	-	-	32.109	16.632	0.000	16.632	0.966	3.099	3.375	3.537
MC-130J Increment 2	37.393	14.681	1.190	0.000	0.000	0.000	0.000	0.000	0.000	0.000
HC-130J Common Configuration	31.607	10.626	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
HC-130J Personnel Locator System	16.044	88.400	0.000	0.000	0.000	0.000	0.000	-	-	-
HC-130J Situational Awareness	33.341	14.895	35.900	12.411	0.000	12.411	0.000	0.000	0.000	0.000

Air Force • Budget Estimates FY 2020 • Procurement
Exhibit P-1M, Procurement Programs - Modification Summary
(Funding for Modifications)

Modification P-40a Item Title P-3a Modification Title	PYS	FY 2018	FY 2019	FY 2020 Base	FY 2020 OCO	FY 2020 Total	FY 2021	FY 2022	FY 2023	FY 2024
Wireless Intercom	0.700	0.000	11.100	0.000	0.000	0.000	0.000	0.000	0.000	0.000
(AbMN) Air borne Mission Networking	-	14.692	0.000	19.500	0.000	19.500	34.500	16.000	0.000	0.000
ADS-B out Acceleration	-	1.780	2.530	1.939	0.000	1.939	0.000	0.000	0.000	0.000
(RFCM) Radio Frequency Countermeasures	0.000	55.380	4.490	0.000	0.000	0.000	0.000	0.000	0.000	-
Paratroop Door	0.000	0.000	24.500	0.000	0.000	0.000	1.049	0.000	0.000	0.000
Broadband Antenna	0.000	0.000	9.400	0.000	0.000	0.000	0.000	0.000	0.000	0.000
ATP upgrade Legacy to SE	41.179	28.735	36.303	29.861	0.000	29.861	30.563	0.987	1.005	1.023
ATP-SE Technology Insertion	36.954	15.122	35.386	13.621	0.000	13.621	13.865	14.142	14.879	51.845
Block 5	73.247	1.505	13.711	1.757	0.000	1.757	0.874	1.575	7.504	0.000
MQ-9 Field	204.472	40.027	49.163	39.925	0.000	39.925	24.124	1.604	0.000	-
Lynx SAR	82.482	13.655	14.776	1.096	0.000	1.096	0.000	0.000	0.000	-
GCS Blk 30	103.667	18.205	20.842	22.590	0.000	22.590	6.842	0.000	0.000	0.000
R&M enhancements	71.433	0.541	1.704	2.609	0.000	2.609	8.051	10.030	19.168	0.000
Extended Range MQ-9	176.514	67.159	53.531	33.669	0.000	33.669	44.558	23.778	5.177	0.000
MQ-9 Upgrade	129.334	112.848	15.821	280.848	0.000	280.848	102.097	122.186	103.968	11.897
MQ-9 Low Cost Mods	13.020	0.000	2.000	1.000	0.000	1.000	2.000	2.000	2.000	0.000
Gorgon Stare	22.905	5.000	16.000	0.000	19.800	19.800	19.800	0.000	0.000	0.000
Block 20 Upgrade	244.935	58.991	58.417	63.349	0.000	63.349	120.474	162.228	149.552	144.865
Low Cost Modifications	17.407	1.999	1.999	1.999	0.000	1.999	1.999	1.999	1.999	1.999
Totals (Total Obligation Authority)										
Total Obligation Authority	**16,567.385**	**3,602.588**	**4,319.102**	**3,843.727**	**73.135**	**3,916.862**	**4,688.274**	**4,444.777**	**4,567.721**	**4,027.775**

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ACRONYMS

GENERAL ACRONYMS

A&AS	- Advisory & Assistance Services
ABIDES	- Automated Budget Interactive Data Environment System
ACAT	- Acquisition Category
ACTD	- Advanced Concept Technology Demonstration
AGM	- Air-to-Ground Missile
AIM	- Air Intercept Missile
AIS	- Avionics Intermediate Shop
ACMI	- Aircraft Combat Maneuvering Instrumentation
AMRAAM	- Advanced Medium-Range Air-to-Air Missile
APPN	- Appropriation
ATD	- Advanced Technology Development
BA	- Budget Activity
BLSS	- Base Level Self-Sufficiency Spares
BY	- Budget Year
C3	- Command, Control, and Communication System
CFE	- Contractor Furnished Equipment
CONOPS	- Concept of Operation
CONUS	- Continental United States
CPMS	- Comprehensive Power Management System
CPT	- Cockpit Procedures Trainer
CRA	- Continuing Resolution Authority
CTS	- Countermeasures Test Set
CY	- Current Year
ECCM	- Electronic Counter Counter-Measures
ECM	- Electronic Counter Measures
ECO	- Engineering Change Orders
EOQ	- Economic Order Quantity
ECP	- Engineering Change Proposal
EPA	- Economic Price Adjustment
EW	- Electronic Warfare
EWAISP	- Electronic Warfare Avionics Integration Support Facility
FLIR	- Forward Looking Infra Red

FOT&E	- Follow-on Test and Evaluation
FOC	- Fully Operational Capability
FLTS	- Flight Line Test Set
FPIF	- Fixed Price Incentive Firm
FPIS	- Fixed Price Incentive Fee, Successive Targets
FY	- Fiscal Year
GANS	- Global Access Navigation & Safety
GATM	- Global Air Traffic Management
GFE	- Government Furnished Equipment
GFP	- Government Furnished Property
GPS	- Global Positioning System
GSE	- Ground Support Equipment
ICS	- Interim Contractor Support
IOC	- Initial Operating Capability
IPE	- Increased Performance Engine
JPALS	- Joint Precision Approach and Landing System
MAIS	- Major Automated Information System Program
MDAP	- Major Defense Acquisition Program
METS	- Mobile Electronic Test Stations
MYP	- Multiyear Procurement
MSIP	- Multi-Stage Improvement Program
NAVWAR	- Navigation Warfare
NMC Rate	- Not Mission Capable Rate
OFP	- Operational Flight Program
OT&E	- Operational Test and Evaluation
OWRM	- Other War Reserve Material
PAGEL	- Priced Aerospace Ground Equipment List
PB	- President's Budget
PGSE	- Peculiar Ground Support Equipment
PMA	- Program Management Administration
PMC	- Procurement Method Code
PNO	- Acquisition Program Number (MDAP Codes)
PR	- Purchase Request
PRCP	- Program Resource Collection Process
PTT	- Part Task Trainer
PY	- Prior Year

R&M	- Reliability and Maintainability
RAA	- Required Asset Availability
RDT&E	- Research, Development, Test and Evaluation
RWR	- Radar Warning Receiver
ROM	- Rough Order of Magnitude
SS	- Sole Source
SOF	- Special Operation Force
TAF	- Tactical Air Force
TCAS	- Traffic Collision Alert and Avoidance System
TEWS	- Tactical Electronic Warfare System
TISS	- TEWS Intermediate Support System
TOA	- Total Obligation Authority
WCF	- Working Capital Fund
WRM	- War Reserve Material
WST	- Weapon System Trainer
UAV	- Unmanned Aerial Vehicle
XML	- Extensible Markup Language

BASE / ORGANIZATIONAL ACRONYMNS

ACC	- Air Combat Command
AETC	- Air Education & Training Command
AFCAO	- Air Force Computer Acquisition Office
AFCESA	- Air Force Civil Engineering Support Agency
AFCIC	- AF Communications & Information Center
AFCSC	- Air Force Cryptologic Service Center
AFESC	- Air Force Engineering Services Center
AFGWC	- Air Force Global Weather Central
AFIT	- Air Force Institute of Technology
AFLCMC	- Air Force Life Cycle Management Center
AFMC	- Air Force Materiel Command
AFMETCAL	- Air Force Metrology and Calibration Office
AFMLO	- Air Force Medical Logistics Office
AFOSI	- Air Force Office of Special Investigation
AFOTEC	- Air Force Operational Test & Evaluation Center
AFPC	- Air Force Personnel Center

AFPSL	- AF Primary Standards Lab
AFR	- Air Force Reserve
AFSOC	- AF Special Operations Command
AFSPC	- Air Force Space Command
AIA	- Air Intelligence Agency
ALC	- Air Logistics Center
AMC	- Air Mobility Command
ANG	- Air National Guard
ASC	- Aeronautical Systems Center
AETC	- Air Education Training Command
AU	- Air University
AWS	- Air Weather Service
CIA	- Central Intelligence Agency
DGSC	- Defense General Support Center
DLA	- Defense Logistics Center
DOE	- Department of Energy
DPSC	- Defense Personnel Support Center
DSCC	- Defense Supply Center, Columbus
DTIC	- Defense Technical Information Center
ER	- Eastern Range
ESC	- Electronic Systems Center
FAA	- Federal Aviation Agency
FBI	- Federal Bureau of Investigation
GSA	- General Services Administration
JCS	- Joint Chiefs of Staff
NATO	- North Atlantic Treaty Organization
OSD	- Office of the Secretary of Defense
PACAF	- Pacific Air Forces
USAF	- United States Air Force
USAFA	- United States Air Force Academy
USAFE	- United States Air Force Europe
USCENTCOM	- United States Central Command
USEUCOM	- United States European Command
USMC	- United States Marine Corps
USSTRATCOM	- United States Strategic Command
WP AFB	- Wright-Patterson AFB, OH

CONTRACT METHOD / TYPE ACRONYMNS

C	- Competitive
BA	- Basic Agreement
BOA	- Basic Ordering Agreement
BPA	- Blanket Purchasing Agreement
CS	- Cost Sharing
IDDQ	- Indefinite Delivery, Definite Quantity
IDIQ	- Indefinite Delivery, Indefinite Quantity
IDRT	- Indefinite Delivery, Requirements
Letter	- Letter
LH	- Labor-hour
MIPR	- Military Interdepartmental Purchase Request
MIPR-C	- Military Interdepartmental Purchase Request - Competitive
MIPR-OPT	- Military Interdepartmental Purchase Request - Option
MIPR-OTH	- Military Interdepartmental Purchase Request – Other
MIPR-SS	- Military Interdepartmental Purchase Request - Sole Source
OPT	- Option
OTH	- Other
PO	- Project Order
REQN	- Requisition
SS	- Sole Source
T&M	- Time and Materials
UCA	- Undefinitized Contract Action
WP	- Work Project

CONTRACTED BY ACRONYMNS

11 WING	- 11th Support Wing, Washington, DC
ACC	- Air Combat Command, Langley AFB, VA
AEDC	- Arnold Engineering Development Center, Arnold AFB, TN
AAC	- Air Armament Center, Eglin AFB, FL
AEDC	- Arnold Engineering Development Center, Arnold AFB, TN
AETC	- Air Education and Training Command, Randolph AFB, TX
AFCIC	- Air Force Communications and Information Center, Washington, DC
AFCESA	- Air Force Civil Engineering Support Agency, Tyndall AFB, FL
AFFTC	- Air Force Flight Test Center, Edwards AFB, CA

AFLCMC	- Air Force Life Cycle Management Center, Wright-Patterson AFB, OH
AFMC	- Air Force Materiel Command, Wright-Patterson AFB, OH
AFMETCAL	- Air Force Metrology and Calibration Office, Heath, Ohio
AFMLO	- Air Force Medical Logistics Office, Ft Detrick, MD
AIA	- Air Intelligence Agency, Kelly AFB, TX
AMC	- Air Mobility Command, Scott AFB, IL
ASC	- Aeronautical Systems Center, Wright-Patterson AFB, OH & Eglin AFB, FL
AFWA	- Air Force Weather Agency, Offutt AFB, NE
DGSC	- Defense General Support Center, Richmond, VA
DPSC	- Defense Personnel Support Center, Philadelphia, PA
ER	- Eastern Range, Patrick AFB, FL
ESC	- Electronic Systems Center, Hanscom AFB, MA
HSC	- Human Services Center, Brook AFB, TX
OC-ALC	- Oklahoma City Air Logistics Center, Tinker AFB, OK
OO-ALC	- Ogden Air Logistics Center, Hill AFB, UT
SMC	- Space & Missile Systems Center, Los Angeles AFB, CA
US STRATCOM	- US Strategic Command, Offutt AFB, NE
WACC	- Washington Area Contracting Center, Washington DC
WR	- Western Range, Vandenberg AFB, CA
WR-ALC	- Warner-Robins Air Logistics Center, Robins AFB, GA
AFSPC	- Air Force Space Command, Peterson AFB, CO
HQ ANG	- Headquarters, Air National Guard, Washington, DC
USAFE	- United States Air Force Europe, Ramstein AB, GE
USAFA	- United States Air Force Academy, Colorado Springs, CO

IDENTIFICATION CODES

Code “A”	- Line items of material which have been approved for Air Force service use.
Code “B”	- Line items of material that have not been approved for Service use
OBAN	- Operating Budget Account Number, 2-digit code for unit allocated funds

Exhibit P-40, Budget Line Item Justification: PB 2020 Air Force	Date: March 2019
Appropriation / Budget Activity / Budget Sub Activity: 3010F: Aircraft Procurement, Air Force / BA 05: Modification of Inservice Aircraft / BSA 1: Strategic Aircraft	**P-1 Line Item Number / Title:** B00200 / B-2A

ID Code (A=Service Ready, B=Not Service Ready): B	Program Elements for Code B Items: 0101125F, 0101127F	Other Related Program Elements: 0101127F

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 *(Units in Each)*	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost *($ in Millions)*	201.342	94.552	60.301	9.582	-	9.582	40.366	59.482	62.885	146.698	-	675.208
Less PY Advance Procurement *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) *($ in Millions)*	201.342	94.552	60.301	9.582	-	9.582	40.366	59.482	62.885	146.698	-	675.208
Plus CY Advance Procurement *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Total Obligation Authority *($ in Millions)*	**201.342**	**94.552**	**60.301**	**9.582**	**-**	**9.582**	**40.366**	**59.482**	**62.885**	**146.698**	**-**	**675.208**
(The following Resource Summary rows are for informational purposes only. The corresponding budget requests are documented elsewhere.)												
Initial Spares *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Flyaway Unit Cost *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Unit Cost *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-

Description:

The B-2 is a multi-engine, long range bomber incorporating low-observable ('stealth') technology that enables the B-2 to penetrate enemy air defenses and strike high-value targets. Specific modifications, budgeted and programmed, are below.

Funding for the exhibit is primarily in PE 0101127F (B-2 Squadrons). Some trainer efforts are funded in PE 0809731F (Training Support to Units), and other efforts are funded under PE 0207446F (Bomber Tactical Data Link).

All Trainer funding removed in FY20 as early to need, and re-phased to 2024.

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.

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

Appropriation / Budget Activity / Budget Sub Activity:
3010F: Aircraft Procurement, Air Force / BA 05: Modification of Inservice Aircraft / BSA 1: Strategic Aircraft

P-1 Line Item Number / Title:
B00200 / B-2A

ID Code (A=Service Ready, B=Not Service Ready): B | **Program Elements for Code B Items:** 0101125F, 0101127F | **Other Related Program Elements:** 0101127F

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-40a***	110031 / B-2 Trainer System Upgrade (Capability Improvement)				- / 35.830	- / 9.082	- / 7.800	- / 0.000	- / -	- / 0.000
P-40a***	110032 / LINK 16/CID/IFR (Capability Improvement)				- / 0.889	- / 1.718	- / 2.296	- / 0.200	- / -	- / 0.200
P-40a***	110035 / LOW OBSERVABLE SIGNATURE AND SUPPORTABILITY MODS (Reliability & Maintainability)				- / 48.104	- / 9.083	- / 14.831	- / 0.276	- / -	- / 0.276
P-40a***	110043 / B-2 Adaptable Communications Suite (ACS) (Capability Improvement)				- / 21.334	- / 1.364	- / 0.724	- / 0.296	- / -	- / 0.296
P-40a***	110054 / B-2 Flex Strike Phase 1 (Capability Improvement)				- / 10.231	- / 5.629	- / 7.959	- / 4.894	- / -	- / 4.894
P-40a***	110056 / B61-12 Integration (Capability Improvement)				- / -	- / 39.549	- / -	- / 0.000	- / -	- / 0.000
P-40a***	110057 / MGUE (Capability Improvement)				- / 4.034	- / 15.625	- / 1.281	- / 0.990	- / -	- / 0.990
P-40a***	110061 / IFF Mode 5/S (Capability Improvement)				- / -	- / -	- / -	- / -	- / -	- / -
P-40a***	110062 / Crash Survivable Memory Unit (CSMU) (Capability Improvement)				- / -	- / -	- / -	- / -	- / -	- / -
P-40a***	110064 / Rotary Launcher Assembly (RLA) Service Life Extension Program (Service Life Extension)				- / -	- / -	- / -	- / -	- / -	- / -
P-40a***	110065 / B-2 GBU-57 MOP Integration (Capability Improvement)				- / -	- / 3.038	- / 18.787	- / -	- / -	- / -
P-40a***	8882 / Common Very Low Frequency Terminal (Capability Improvement)				- / 42.856	- / 9.464	- / 6.623	- / 2.376	- / -	- / 2.376
P-40a***	99999U / B-2 Low Cost Engine Modifications (Reliability & Maintainability)				- / 18.186	- / 0.000	- / 0.000	- / 0.236	- / -	- / 0.236
P-40a***	99999X / Low Cost Modifications (Capability Improvement)				- / 19.878	- / 0.000	- / 0.000	- / 0.314	- / -	- / 0.314
P-40	**Total Gross/Weapon System Cost**				**- / 201.342**	**- / 94.552**	**- / 60.301**	**- / 9.582**	**- / -**	**- / 9.582**

Exhibits Schedule					FY 2021	FY 2022	FY 2023	FY 2024	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-40a***	110031 / B-2 Trainer System Upgrade (Capability Improvement)				- / 8.080	- / 8.242	- / 8.392	- / 16.481	- / -	- / 93.907
P-40a***	110032 / LINK 16/CID/IFR (Capability Improvement)				- / 0.204	- / 0.208	- / 0.211	- / 0.214	- / -	- / 5.940
P-40a***	110035 / LOW OBSERVABLE SIGNATURE AND SUPPORTABILITY MODS (Reliability & Maintainability)				- / 19.878	- / 24.009	- / 26.244	- / 21.017	- / -	- / 163.442
P-40a***	110043 / B-2 Adaptable Communications Suite (ACS) (Capability Improvement)				- / 0.300	- / 0.306	- / 0.312	- / 0.318	- / -	- / 24.954
P-40a***	110054 / B-2 Flex Strike Phase 1 (Capability Improvement)				- / 0.000	- / -	- / -	- / -	- / -	- / 28.713
P-40a***	110056 / B61-12 Integration (Capability Improvement)				- / -	- / -	- / -	- / -	- / -	- / 39.549
P-40a***	110057 / MGUE (Capability Improvement)				- / -	- / 0.320	- / 0.480	- / -	- / -	- / 22.730
P-40a***	110061 / IFF Mode 5/S (Capability Improvement)				- / 7.239	- / 15.420	- / 15.894	- / 97.723	- / -	- / 136.276
P-40a***	110062 / Crash Survivable Memory Unit (CSMU) (Capability Improvement)				- / 3.273	- / 1.601	- / 1.631	- / 1.660	- / -	- / 8.165

Exhibit P-40, Budget Line Item Justification: PB 2020 Air Force	Date: March 2019
Appropriation / Budget Activity / Budget Sub Activity: 3010F: Aircraft Procurement, Air Force / BA 05: Modification of Inservice Aircraft / BSA 1: Strategic Aircraft	**P-1 Line Item Number / Title:** B00200 / B-2A

ID Code (A=Service Ready, B=Not Service Ready): B | **Program Elements for Code B Items:** 0101125F, 0101127F | **Other Related Program Elements:** 0101127F

Line Item MDAP/MAIS Code: N/A

Exhibits Schedule					FY 2021	FY 2022	FY 2023	FY 2024	To Complete	Total
Exhibit Type	Title*	Subexhibits	ID CD	MDAP/ MAIS Code	Quantity / Total Cost *(Each) I ($ M)*	Quantity / Total Cost *(Each) I ($ M)*	Quantity / Total Cost *(Each) I ($ M)*	Quantity / Total Cost *(Each) I ($ M)*	Quantity / Total Cost *(Each) I ($ M)*	Quantity / Total Cost *(Each) I ($ M)*
P-40a***	110064 / Rotary Launcher Assembly (RLA) Service Life Extension Program (Service Life Extension)				- / -	- / 7.537	- / 7.675	- / 7.813	- / -	- / 23.025
P-40a***	110065 / B-2 GBU-57 MOP Integration (Capability Improvement)				- / -	- / -	- / -	- / -	- / -	- / 21.825
P-40a***	8882 / Common Very Low Frequency Terminal (Capability Improvement)				- / -	- / -	- / -	- / -	- / -	- / 61.319
P-40a***	99999U / B-2 Low Cost Engine Modifications (Reliability & Maintainability)				- / 0.751	- / 0.966	- / 1.080	- / 0.794	- / -	- / 22.013
P-40a***	99999X / Low Cost Modifications (Capability Improvement)				- / 0.641	- / 0.873	- / 0.966	- / 0.678	- / -	- / 23.350
P-40	**Total Gross/Weapon System Cost**				**- / 40.366**	**- / 59.482**	**- / 62.885**	**- / 146.698**	**- / -**	**- / 675.208**

*** Although this is an Exhibit P-40a item, the actual exhibit is not included since all of the required information for this item is already being shown here.

*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:
Where applicable, justification for individual modifications is provided in the P-3A exhibits.

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Exhibit P-40, Budget Line Item Justification: PB 2020 Air Force	Date: February 2019
Appropriation / Budget Activity / Budget Sub Activity: 3010F: Aircraft Procurement, Air Force / BA 05: Modification of Inservice Aircraft / BSA 1: Strategic Aircraft	**P-1 Line Item Number / Title:** B01B00 / B-1B

ID Code (A=Service Ready, B=Not Service Ready): B	**Program Elements for Code B Items:** 0101126F	**Other Related Program Elements:** 0101126F

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 *(Units in Each)*	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost *($ in Millions)*	792.881	121.634	39.690	22.111	0.000	22.111	82.286	74.136	106.751	64.756	0.861	1,305.106
Less PY Advance Procurement *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) *($ in Millions)*	792.881	121.634	39.690	22.111	0.000	22.111	82.286	74.136	106.751	64.756	0.861	1,305.106
Plus CY Advance Procurement *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Total Obligation Authority *($ in Millions)*	**792.881**	**121.634**	**39.690**	**22.111**	**0.000**	**22.111**	**82.286**	**74.136**	**106.751**	**64.756**	**0.861**	**1,305.106**
(The following Resource Summary rows are for informational purposes only. The corresponding budget requests are documented elsewhere.)												
Initial Spares *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Flyaway Unit Cost *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Unit Cost *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-

Description:

The B-1B Lancer is a swing-wing, supersonic, long-range, conventional bomber. It carries the largest payload of both guided and unguided weapons in the Air Force inventory. The multi-mission B-1B is the backbone of America's long-range bomber force and can rapidly deliver massive quantities of precision and non-precision weapons against any adversary, anywhere in the world, at any time. The Air Force maintains 62 B-1B's in its inventory. The B-1B averages 9,503 airframe hours as of August, 2018 (Source LIMS-EV). The current service life extends beyond 2040. Funding may be used to address Diminishing Manufacturing Sources (DMS) issues. The specific modifications budgeted and programmed are below.

This line item funds modifications to the B-1B aircraft and associated simulators and equipment. Funding for this exhibit contained in PE 0101126F.

FY18 Change Summary: Decrease of $34.0M for congressional mark for engine SLEP

FY19 Change Summary: Decrease of $15.6M consists of congressional marks of: B-1 Comm Crypto (-$1.2M); B-1 ADS-B (-$1.3M); B1-MIDS-JTRS (-$3.7M) and B-1 Integrated Battle Station (-$9.4M)

FY20 Change Summary: Decrease of $64.2M for early to need from: B-1 Com Crypto (-$6.5M); B-1 BRU-56 (-$2.7M); B1-MIDS-JTRS (-$11.8M); B-1 IBS (-$22.0M); B-1 FITP (-$21.2M)

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.

Secondary Distribution		FY 2018	FY 2019	FY 2020 Base	FY 2020 OCO	FY 2020 Total	FY 2021	FY 2022	FY 2023	FY 2024
AF	Quantity	-	-	-	-	-	-	-	-	-
	Total Obligation Authority	121.634	39.690	22.111	-	22.111	82.286	74.136	106.751	64.756
Total:	**Quantity**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**

Exhibit P-40, Budget Line Item Justification: PB 2020 Air Force			Date: February 2019
Appropriation / Budget Activity / Budget Sub Activity: 3010F: Aircraft Procurement, Air Force / BA 05: Modification of Inservice Aircraft / BSA 1: Strategic Aircraft		P-1 Line Item Number / Title: B01B00 / B-1B	
ID Code (A=Service Ready, B=Not Service Ready): B	Program Elements for Code B Items: 0101126F	Other Related Program Elements: 0101126F	
Line Item MDAP/MAIS Code: N/A			

Secondary Distribution		FY 2018	FY 2019	FY 2020 Base	FY 2020 OCO	FY 2020 Total	FY 2021	FY 2022	FY 2023	FY 2024
Secondary Distribution	Total Obligation Authority	121.634	39.690	22.111	-	22.111	82.286	74.136	106.751	64.756

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

Appropriation / Budget Activity / Budget Sub Activity:
3010F: Aircraft Procurement, Air Force / BA 05: Modification of Inservice Aircraft / BSA 1: Strategic Aircraft

P-1 Line Item Number / Title:
B01B00 / B-1B

ID Code (A=Service Ready, B=Not Service Ready): B | **Program Elements for Code B Items:** 0101126F | **Other Related Program Elements:** 0101126F

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-40a***	4284 / CITS UPGRADE (Service Life Extension)				- / 101.042	- / 15.993	- / 6.712	- / 1.652	- / -	- / 1.652
P-40a***	4291 / B-1 TRAINING SUPPORT (Capability Improvement)				- / 2.981	- / 0.448	- / 0.450	- / 0.458	- / -	- / 0.458
P-40a***	8423 / B-1 Link 16 Crypto (Other)				- / 2.614	- / 0.100	- / -	- / -	- / -	- / -
P-40a***	8971 / VERTICAL SITUATION DISPLAYS (Service Life Extension)				- / 232.931	- / 47.260	- / 12.595	- / -	- / -	- / -
P-40a***	92294 / LAPTOP CONTROLLED TARGETING POD (Capability Improvement)				- / 77.171	- / 6.401	- / 4.397	- / 0.397	- / -	- / 0.397
P-40a***	92314 / MIDS-JTRS (Capability Improvement)				- / -	- / -	- / -	- / -	- / -	- / -
P-40a***	92315 / Fully Integrated Targeting Pod (Capability Improvement)				- / -	- / -	- / -	- / -	- / -	- / -
P-40a***	92316 / Radio Crypto Compliance (Capability Improvement)				- / -	- / -	- / -	- / -	- / -	- / -
P-40a***	92318 / BRU-56 (Capability Improvement)				- / -	- / -	- / -	- / -	- / -	- / -
P-40a***	99999X / Low Cost Modifications (Capability Improvement)				- / 5.173	- / 1.400	- / 0.198	- / 0.249	- / -	- / 0.249
P-3a	4280 / Fully Integrated Data Links (Capability Improvement)		B		- / 370.969	- / 50.032	- / 15.338	- / 10.202	- / 0.000	- / 10.202
P-3a	92317 / IFF Mode 5/S ADS-B (Capability Improvement)		B		- / -	- / 0.000	- / 0.000	- / 9.153	- / 0.000	- / 9.153
P-40	**Total Gross/Weapon System Cost**				**- / 792.881**	**- / 121.634**	**- / 39.690**	**- / 22.111**	**- / 0.000**	**- / 22.111**

Exhibits Schedule					FY 2021	FY 2022	FY 2023	FY 2024	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-40a***	4284 / CITS UPGRADE (Service Life Extension)				- / 1.893	- / 0.109	- / 0.111	- / -	- / -	- / 127.512
P-40a***	4291 / B-1 TRAINING SUPPORT (Capability Improvement)				- / 0.467	- / 0.476	- / 0.485	- / 0.494	- / -	- / 6.259
P-40a***	8423 / B-1 Link 16 Crypto (Other)				- / -	- / -	- / -	- / -	- / -	- / 2.714
P-40a***	8971 / VERTICAL SITUATION DISPLAYS (Service Life Extension)				- / 17.622	- / 4.000	- / 1.923	- / -	- / -	- / 316.331
P-40a***	92294 / LAPTOP CONTROLLED TARGETING POD (Capability Improvement)				- / 0.397	- / 0.198	- / 0.202	- / -	- / -	- / 89.163
P-40a***	92314 / MIDS-JTRS (Capability Improvement)				- / -	- / 15.521	- / 16.084	- / 8.925	- / 0.861	- / 41.391
P-40a***	92315 / Fully Integrated Targeting Pod (Capability Improvement)				- / 20.547	- / 15.159	- / 7.970	- / 0.000	- / 0.000	- / 43.676
P-40a***	92316 / Radio Crypto Compliance (Capability Improvement)				- / 9.588	- / 15.492	- / 20.732	- / 9.635	- / -	- / 55.447
P-40a***	92318 / BRU-56 (Capability Improvement)				- / 0.000	- / 8.330	- / 44.122	- / 45.702	- / -	- / 98.154
P-40a***	99999X / Low Cost Modifications (Capability Improvement)				- / 1.487	- / 0.099	- / 0.101	- / -	- / -	- / 8.707
P-3a	4280 / Fully Integrated Data Links (Capability Improvement)		B		- / 17.596	- / 0.404	- / 0.412	- / 0.000	- / -	- / 464.953
P-3a	92317 / IFF Mode 5/S ADS-B (Capability Improvement)		B		- / 12.689	- / 14.348	- / 14.609	- / 0.000	- / 0.000	- / 50.799
P-40	**Total Gross/Weapon System Cost**				**- / 82.286**	**- / 74.136**	**- / 106.751**	**- / 64.756**	**- / 0.861**	**- / 1,305.106**

*** Although this is an Exhibit P-40a item, the actual exhibit is not included since all of the required information for this item is already being shown here.

*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.

Exhibit P-40, Budget Line Item Justification: PB 2020 Air Force		Date: February 2019
Appropriation / Budget Activity / Budget Sub Activity: 3010F: Aircraft Procurement, Air Force / BA 05: Modification of Inservice Aircraft / BSA 1: Strategic Aircraft	**P-1 Line Item Number / Title:** B01B00 / B-1B	
ID Code (A=Service Ready, B=Not Service Ready): B	**Program Elements for Code B Items:** 0101126F	**Other Related Program Elements:** 0101126F
Line Item MDAP/MAIS Code: N/A		
Note: Totals in this Exhibit P-40 set may not be exact or sum exactly due to rounding.		

Justification:
Where applicable, justification for individual modifications is provided in the P-3A exhibits.

Exhibit P-3a, Individual Modification: PB 2020 Air Force		Date: February 2019
Appropriation / Budget Activity / Budget Sub Activity: 3010F / 05 / 1	**P-1 Line Item Number / Title:** B01B00 / B-1B	**Modification Number / Title:** 4280 / Fully Integrated Data Links
ID Code (A=Service Ready, B=Not Service Ready) : B	**MDAP/MAIS Code:**	

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 *(Units in Each)*	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost *($ in Millions)*	370.969	50.032	15.338	10.202	0.000	10.202	17.596	0.404	0.412	0.000	-	464.953
Less PY Advance Procurement *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) *($ in Millions)*	370.969	50.032	15.338	10.202	0.000	10.202	17.596	0.404	0.412	0.000	-	464.953
Plus CY Advance Procurement *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Total Obligation Authority *($ in Millions)*	**370.969**	**50.032**	**15.338**	**10.202**	**0.000**	**10.202**	**17.596**	**0.404**	**0.412**	**0.000**	**-**	**464.953**
(The following Resource Summary rows are for informational purposes only. The corresponding budget requests are documented elsewhere.)												
Initial Spares *($ in Millions)*	26.262	-	-	-	-	-	-	-	-	-	-	26.262
Gross/Weapon System Unit Cost *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-

Description:

Fully Integrated Data Link (FIDL) is a net-centric warfare upgrade enabling full B-1B participation in joint combat and time-critical targeting operations. FIDL adds line-of-sight and beyond line-of-sight command and control (C2) connectivity through the addition of Link 16 and Joint Range Extension (JRE) data link. Modification funds will procure and install Group A and B kits for the FIDL upgrade to the B-1B. This modification provides two tactical data processors and five multi-function displays for the B-1B aft crew stations. This modification also adds an Ethernet infrastructure enabling rapid airborne re-targeting by high-speed transfer of aircraft information to all four crew stations and on-board weapons. FIDL installations are scheduled concurrently with Central Integrated Test System (CITS) and Vertical Situation Display Upgrade (VSDU) to reduce installation costs, aircraft downtime, and to keep fielded aircraft configurations to a minimum for aircrew training, maintenance, and operational deployment efficiencies. Modification funding is being used to alleviate Diminishing Manufacturing Sources (DMS) and Material Shortages (DMSMS) issues. DMSMS activities can include, but are not limited to, life of type buy or minor redesign. Procurement modification funding will be used to establish depot repair capability and for Interim Contractor Support (ICS). Activities comprised in the equipment non-recurring line include, but are not limited to, production test equipment and tooling. Group B non-recurring also includes Systems Engineering Program Management (SEPM).

Requirement list in ORD: B-1B Conventional Mission Upgrade Program (26 Jan 05) (ORD CAF-357-92 (SAC 007-92) I/II-A, Rev 2, Annex A).

In the FY 2019 budget, Fully Integrated Datalink (as part of Integrated Battle Station) received a Congressional rescission of $28.000M The correct total for FY18 is $22.032M which will fund final installs in FY19.

Funding:
FY20:
- OTHER GOVT includes Depot Activation cost.
- PMA includes Travel cost.

Milestone/Development Status

Engineering & Manufacturing Development (EMD) phase completed (Oct 2011)

Secondary Distribution		FY 2018	FY 2019	FY 2020 Base	FY 2020 OCO	FY 2020 Total	FY 2021	FY 2022	FY 2023	FY 2024
AF	Quantity	-	-	-	-	-	-	-	-	-
	Total Obligation Authority	50.032	15.338	10.202	-	10.202	17.596	0.404	0.412	0.000
Total:	**Quantity**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**

Exhibit P-3a, Individual Modification: PB 2020 Air Force		Date: February 2019
Appropriation / Budget Activity / Budget Sub Activity: 3010F / 05 / 1	**P-1 Line Item Number / Title:** B01B00 / B-1B	**Modification Number / Title:** 4280 / Fully Integrated Data Links
ID Code (A=Service Ready, B=Not Service Ready) : B	**MDAP/MAIS Code:**	

Secondary Distribution		FY 2018	FY 2019	FY 2020 Base	FY 2020 OCO	FY 2020 Total	FY 2021	FY 2022	FY 2023	FY 2024
Secondary Distribution	Total Obligation Authority	50.032	15.338	10.202	0.000	10.202	17.596	0.404	0.412	0.000

Exhibit P-3a, Individual Modification: PB 2020 Air Force		Date: February 2019
Appropriation / Budget Activity / Budget Sub Activity: 3010F / 05 / 1	**P-1 Line Item Number / Title:** B01B00 / B-1B	**Modification Number / Title:** 4280 / Fully Integrated Data Links
ID Code (A=Service Ready, B=Not Service Ready) : B	**MDAP/MAIS Code:**	
Models of Systems Affected: B-1B	**Modification Type:** Capability Improvement	**Related RDT&E PEs:** 0101126F

Financial Plan	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
	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)*
RDT&E PE #												
0101126F	2 / 162.988	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	2 / 162.988
Procurement												
Modification Item 1 of 1: IBS												
A Kits												
Recurring												
IBS:INSTALL KITS Group A (Active)	60 / 26.375	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	60 / 26.375
Subtotal: Recurring	*- / 26.375*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / 26.375*
B Kits												
Recurring												
IBS:EQUIPMENT Group B (Active)	60 / 136.174	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	60 / 136.174
Subtotal: Recurring	*- / 136.174*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / 136.174*
Subtotal: IBS	*- / 162.549*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / 162.549*
Subtotal: Procurement, All Modification Items	*- / 162.549*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / 162.549*
Support *(All Modification Items)*												
GROUP B: TOTAL NONRECURRING	- / 40.371	- / 2.052	- / -	- / 0.140	- / -	- / 0.140	- / 0.000	- / 0.000	- / 0.000	- / 0.000	- / -	- / 42.563
Change Orders	- / 23.739	- / 0.011	- / 3.747	- / 1.350	- / -	- / 1.350	- / 7.807	- / -	- / -	- / -	- / -	- / 36.654
Data	- / 2.447	- / 0.011	- / 0.235	- / 0.160	- / -	- / 0.160	- / -	- / -	- / -	- / -	- / -	- / 2.853
SIM/TRAINER	6 / 9.233	- / -	- / -	0 / 0.000	- / -	0 / 0.000	- / -	- / -	- / -	- / -	- / -	6 / 9.233
SUPPORT-EQUIP	- / 41.583	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 41.583
ICS-Material	- / 17.259	- / 2.140	- / 3.850	- / 4.370	- / -	- / 4.370	- / 7.389	- / -	- / -	- / -	- / -	- / 35.008
OTHER GOVT	- / 13.432	- / 28.000	- / 5.874	- / 4.182	- / -	- / 4.182	- / 2.310	- / 0.404	- / 0.412	- / -	- / -	- / 54.614
A&AS	- / 7.725	- / 1.672	- / 1.532	- / -	- / -	- / -	- / 0.080	- / -	- / -	- / -	- / -	- / 11.009
PMA - Other Gov't Costs	- / 0.468	- / 0.100	- / 0.100	- / -	- / -	- / -	- / 0.010	- / -	- / -	- / -	- / -	- / 0.678
Subtotal: Support	*6 / 156.257*	*- / 33.986*	*- / 15.338*	*0 / 10.202*	*- / -*	*0 / 10.202*	*- / 17.596*	*- / 0.404*	*- / 0.412*	*- / 0.000*	*- / -*	*6 / 234.195*
Installation												
Modification Item 1 of 1: IBS	48 / 52.163	12 / 16.046	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	60 / 68.209
Subtotal: Installation	*48 / 52.163*	*12 / 16.046*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*60 / 68.209*
Total												
Total Cost (Procurement + Support + Installation)	**370.969**	**50.032**	**15.338**	**10.202**	**0.000**	**10.202**	**17.596**	**0.404**	**0.412**	**0.000**	**-**	**464.953**

Exhibit P-3a, Individual Modification: PB 2020 Air Force		Date: February 2019
Appropriation / Budget Activity / Budget Sub Activity: 3010F / 05 / 1	**P-1 Line Item Number / Title:** B01B00 / B-1B	**Modification Number / Title:** 4280 / Fully Integrated Data Links
ID Code (A=Service Ready, B=Not Service Ready) : B	**MDAP/MAIS Code:**	

Modification Item 1 of 1: IBS

Manufacturer Information

Manufacturer Name: Boeing	Manufacturer Location: Oklahoma City, OK
Administrative Leadtime *(in Months)*: 4	Production Leadtime *(in Months)*: 20

Dates	FY 2018	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024
Contract Dates							
Delivery Dates							

Installation Information

Method of Implementation: Depot

Installation Cost	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
	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)*
Prior Years	48 / 52.163	12 / 16.046	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	60 / 68.209
FY 2018	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2019	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2020	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2021	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2022	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2023	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2024	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
To Complete	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
Total	48 / 52.163	12 / 16.046	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	60 / 68.209

Installation Schedule

	PYS	FY 2018				FY 2019				FY 2020				FY 2021				FY 2022				FY 2023				FY 2024				TC	Tot
		Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4		
In	40	2	3	2	3	2	3	2	3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0	60
Out	33	4	1	2	3	2	3	2	3	2	3	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0	60

Exhibit P-3a, Individual Modification: PB 2020 Air Force		Date: February 2019
Appropriation / Budget Activity / Budget Sub Activity: 3010F / 05 / 1	**P-1 Line Item Number / Title:** B01B00 / B-1B	**Modification Number / Title:** 92317 / IFF Mode 5/S ADS-B
ID Code (A=Service Ready, B=Not Service Ready) : B	**MDAP/MAIS Code:**	

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 *(Units in Each)*	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost *($ in Millions)*	-	0.000	0.000	9.153	0.000	9.153	12.689	14.348	14.609	0.000	0.000	50.799
Less PY Advance Procurement *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) *($ in Millions)*	-	0.000	0.000	9.153	0.000	9.153	12.689	14.348	14.609	0.000	0.000	50.799
Plus CY Advance Procurement *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Total Obligation Authority *($ in Millions)*	**-**	**0.000**	**0.000**	**9.153**	**0.000**	**9.153**	**12.689**	**14.348**	**14.609**	**0.000**	**0.000**	**50.799**
(The following Resource Summary rows are for informational purposes only. The corresponding budget requests are documented elsewhere.)												
Initial Spares *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Unit Cost *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-

Description:

This program, P-3A Mod 92317, IFF Mode 5/S ADS-B, is a new start.
Funds for IFF Mode5/S ADS-B Out, P-3A 92317, are included to accommodate the FAA mandate for ADS-B as outlined throughout previous AF and DoD budget exhibits

The first phase of the program will give Mode 5 Level 1 capability to meet the 2020 NSA mandate. The second phase of the program will implement the full Mode 5 Level 2 ADS-B Out capability to meet the FAA mandate.

This modification includes procurement of 58 aircraft kits + 4 EMD kits that will be installed with contractor field teams.

OTHER GOVT - FY20 funding includes production for 18 aircraft for accelerated IFF effort, program withholds, and program management funding.

Funding may be used to address Diminishing Manufacturing Sources (DMS) issues.

Funding for this exhibit contained in PE 0101126F

Milestone/Development Status

Acquisition Strategy approved in 1QFY19

Secondary Distribution		FY 2018	FY 2019	FY 2020 Base	FY 2020 OCO	FY 2020 Total	FY 2021	FY 2022	FY 2023	FY 2024
AF	Quantity	-	-	-	-	-	-	-	-	-
	Total Obligation Authority	-	-	9.153	-	9.153	12.689	14.348	14.609	0.000
Total: Secondary Distribution	**Quantity**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**
	Total Obligation Authority	**0.000**	**0.000**	**9.153**	**0.000**	**9.153**	**12.689**	**14.348**	**14.609**	**0.000**

Exhibit P-3a, Individual Modification: PB 2020 Air Force		Date: February 2019
Appropriation / Budget Activity / Budget Sub Activity: 3010F / 05 / 1	**P-1 Line Item Number / Title:** B01B00 / B-1B	**Modification Number / Title:** 92317 / IFF Mode 5/S ADS-B
ID Code (A=Service Ready, B=Not Service Ready) : B	**MDAP/MAIS Code:**	
Models of Systems Affected: B-1	**Modification Type:** Capability Improvement	**Related RDT&E PEs:** 0101126F

Financial Plan	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
	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)*
RDT&E PE #												
0101126F	- / -	- / 13.546	4 / 17.065	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	4 / 30.611
Procurement												
Modification Item 1 of 2: APX-119-0531												
B Kits												
Recurring												
APX-119-0531:EQUIPMENT Group B (Active)	- / -	- / -	- / -	18 / 0.250	- / -	18 / 0.250	- / -	16 / 0.640	24 / 0.960	18 / 0.000	- / -	76 / 1.850
Subtotal: Recurring	*- / -*	*- / -*	*- / -*	*- / 0.250*	*- / -*	*- / 0.250*	*- / -*	*- / 0.640*	*- / 0.960*	*- / 0.000*	*- / -*	*- / 1.850*
Subtotal: APX-119-0531	*- / -*	*- / -*	*- / -*	*- / 0.250*	*- / -*	*- / 0.250*	*- / -*	*- / 0.640*	*- / 0.960*	*- / 0.000*	*- / -*	*- / 1.850*
Modification Item 2 of 2: Wiring (2)												
A Kits												
Recurring												
Wiring:INSTALL KITS Group A (Active)	- / -	- / -	- / -	- / -	- / -	- / -	- / -	16 / 2.880	24 / 4.320	18 / 0.000	- / -	58 / 7.200
Subtotal: Recurring	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / 2.880*	*- / 4.320*	*- / 0.000*	*- / -*	*- / 7.200*
Subtotal: Wiring (2)	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / 2.880*	*- / 4.320*	*- / 0.000*	*- / -*	*- / 7.200*
Subtotal: Procurement, All Modification Items	*- / -*	*- / -*	*- / -*	*- / 0.250*	*- / -*	*- / 0.250*	*- / -*	*- / 3.520*	*- / 5.280*	*- / 0.000*	*- / -*	*- / 9.050*
Support *(All Modification Items)*												
OTHER GOVT	- / -	- / -	- / -	- / 3.000	- / -	- / 3.000	- / 11.924	- / 2.680	- / 0.999	- / -	- / -	- / 18.603
Change Orders	- / -	- / -	- / -	- / 0.470	- / -	- / 0.470	- / -	- / 1.900	- / 1.600	- / -	- / -	- / 3.970
SUPPORT-EQUIP	- / -	- / -	- / -	- / 1.234	- / -	- / 1.234	- / -	- / 4.698	- / 0.480	- / -	- / -	- / 6.412
PMA - Contractor Services	- / -	- / -	- / -	- / 0.821	- / -	- / 0.821	- / -	- / 0.750	- / 0.750	- / -	- / -	- / 2.321
SIM/TRAINER	- / -	- / -	- / -	1 / 1.000	- / -	1 / 1.000	- / -	- / -	- / -	- / -	- / -	1 / 1.000
Data	- / -	- / -	- / -	- / 1.700	- / -	- / 1.700	- / -	- / -	- / -	- / -	- / -	- / 1.700
A&AS	- / -	- / -	- / -	- / 0.500	- / -	- / 0.500	- / -	- / 0.450	- / 0.500	- / -	- / -	- / 1.450
PMA - Other Gov't Costs	- / -	- / -	- / -	- / 0.178	- / -	- / 0.178	- / -	- / 0.350	- / -	- / -	- / -	- / 0.528
Subtotal: Support	*- / -*	*- / -*	*- / -*	*1 / 8.903*	*- / -*	*1 / 8.903*	*- / 11.924*	*- / 10.828*	*- / 4.329*	*- / -*	*- / -*	*1 / 35.984*
Installation												
Modification Item 1 of 2: APX-119-0531	- / -	- / -	- / -	- / -	- / -	- / -	18 / 0.765	- / -	16 / 5.000	24 / 0.000	18 / 0.000	76 / 5.765
Subtotal: Installation	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*18 / 0.765*	*- / -*	*16 / 5.000*	*24 / 0.000*	*18 / 0.000*	*76 / 5.765*
Total												
Total Cost (Procurement + Support + Installation)	**-**	**0.000**	**0.000**	**9.153**	**0.000**	**9.153**	**12.689**	**14.348**	**14.609**	**0.000**	**0.000**	**50.799**

Exhibit P-3a, Individual Modification: PB 2020 Air Force		Date: February 2019
Appropriation / Budget Activity / Budget Sub Activity: 3010F / 05 / 1	**P-1 Line Item Number / Title:** B01B00 / B-1B	**Modification Number / Title:** 92317 / IFF Mode 5/S ADS-B
ID Code (A=Service Ready, B=Not Service Ready) : B	**MDAP/MAIS Code:**	
Modification Item 1 of 2: APX-119-0531		

Manufacturer Information

Manufacturer Name: Raytheon	Manufacturer Location: Waltham, MA
Administrative Leadtime *(in Months)*: 0	Production Leadtime *(in Months)*: 12

Dates	FY 2018	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024
Contract Dates			Nov 2019		Feb 2022	Feb 2023	Feb 2024
Delivery Dates			Nov 2020		Feb 2023	Feb 2024	Feb 2025

Installation Information

Method of Implementation: Contract Field Team

Installation Cost	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
	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)*
Prior Years	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2018	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2019	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2020	- / -	- / -	- / -	- / -	- / -	- / -	18 / 0.765	- / -	- / -	- / -	- / -	18 / 0.765
FY 2021	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2022	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	16 / 5.000	- / -	- / -	16 / 5.000
FY 2023	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	24 / 0.000	- / -	24 / 0.000
FY 2024	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	18 / 0.000	18 / 0.000
To Complete	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
Total	- / -	- / -	- / -	- / -	- / -	- / -	18 / 0.765	- / -	16 / 5.000	24 / 0.000	18 / 0.000	76 / 5.765

Installation Schedule

	PYS	FY 2018				FY 2019				FY 2020				FY 2021				FY 2022				FY 2023				FY 2024				TC	Tot
		Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4		
In	0	-	-	-	-	-	-	-	-	-	-	-	-	9	9	-	-	-	-	-	-	-	4	6	6	6	6	6	6	18	76
Out	0	-	-	-	-	-	-	-	-	-	-	-	-	9	9	-	-	-	-	-	-	-	-	4	6	6	6	6	6	24	76

Exhibit P-3a, Individual Modification: PB 2020 Air Force		Date: February 2019
Appropriation / Budget Activity / Budget Sub Activity: 3010F / 05 / 1	**P-1 Line Item Number / Title:** B01B00 / B-1B	**Modification Number / Title:** 92317 / IFF Mode 5/S ADS-B

ID Code (A=Service Ready, B=Not Service Ready) : B | **MDAP/MAIS Code:**

Modification Item 2 of 2: Wiring (2)

Manufacturer Information

Manufacturer Name: N/A | Manufacturer Location: N/A

Administrative Leadtime *(in Months)*: | Production Leadtime *(in Months)*:

Dates	FY 2018	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024
Contract Dates							
Delivery Dates							

Installation Information

Method of Implementation (Organic): Org/Intermediate | **Installation Quantity:** 0

Exhibit P-40, Budget Line Item Justification: PB 2020 Air Force	Date: February 2019
Appropriation / Budget Activity / Budget Sub Activity: 3010F: Aircraft Procurement, Air Force / BA 05: Modification of Inservice Aircraft / BSA 1: Strategic Aircraft	**P-1 Line Item Number / Title:** B05200 / B-52

ID Code (A=Service Ready, B=Not Service Ready): B	Program Elements for Code B Items: 0101113F	Other Related Program Elements: 0101113F

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 *(Units in Each)*	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost *($ in Millions)*	548.153	98.125	117.230	69.648	-	69.648	112.296	144.969	144.118	224.058	0.000	1,458.597
Less PY Advance Procurement *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) *($ in Millions)*	548.153	98.125	117.230	69.648	-	69.648	112.296	144.969	144.118	224.058	0.000	1,458.597
Plus CY Advance Procurement *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Total Obligation Authority *($ in Millions)*	**548.153**	**98.125**	**117.230**	**69.648**	**-**	**69.648**	**112.296**	**144.969**	**144.118**	**224.058**	**0.000**	**1,458.597**
(The following Resource Summary rows are for informational purposes only. The corresponding budget requests are documented elsewhere.)												
Initial Spares *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Flyaway Unit Cost *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Unit Cost *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-

Description:

This line item funds modifications to the B-52H aircraft. The B-52H strategic bomber maintains nuclear and conventional taskings. The Air Force maintains 76 B-52Hs in its inventory. The B-52H averages 19,508 airframe hours as of August, 2018 (Source: LIMS-EV). The specific modifications budgeted and programmed are below.

In accordance with Section 1815 of the FY 2008 National Defense Authorization Act (P.L. 110-181), this item is necessary for use by the active and reserve components of the Armed Forces for homeland defense missions, domestic emergency responses, and providing military support to civil authorities.

Funding for the exhibit contained in PE 0101113F. Funding under this PE may be used to alleviate Diminishing Manufacturing Sources (DMS) issues.

GPS-IU, Crypto Modernization and Bomber Tactical Data Link are FY20 Production New Starts.

Funding Changes:

FY18: Decrease of $11.170M consists of: -$10.944M for CONECT and -$0.201M for WST AR

FY19: Increase of $11.711M consists of: -$1.954M for Airspace Compliance; -$2.976M for Bomber Tactical Data Link; -$14.759M for Crypto Mod; +$5.000M for Mission Data Recorder; +$10.000M for LRASM Certification +$16.400M for Infrared Threat Urgent Operational Need

FY20: Decrease of $54.335M consists of: -$19.694M for Airspace Compliance; -$8.500M for CONECT; -$14.343M for GPS-IU; -$5.800M for Radar Modernization Program; -$10.998M for Weapon System Trainer Air Refueling and +$5.0M for Mission Data Recorder

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.

Exhibit P-40, Budget Line Item Justification: PB 2020 Air Force	Date: February 2019
Appropriation / Budget Activity / Budget Sub Activity: 3010F: Aircraft Procurement, Air Force / BA 05: Modification of Inservice Aircraft / BSA 1: Strategic Aircraft	**P-1 Line Item Number / Title:** B05200 / B-52

ID Code (A=Service Ready, B=Not Service Ready): B	Program Elements for Code B Items: 0101113F	Other Related Program Elements: 0101113F

Line Item MDAP/MAIS Code: N/A

Secondary Distribution		FY 2018	FY 2019	FY 2020 Base	FY 2020 OCO	FY 2020 Total	FY 2021	FY 2022	FY 2023	FY 2024
AF	Quantity	-	-	-	-	-	-	-	-	-
	Total Obligation Authority	79.118	113.217	64.514	-	64.514	101.190	130.062	138.704	224.058
AFR	Quantity	-	-	-	-	-	-	-	-	-
	Total Obligation Authority	19.007	4.013	5.134	-	5.134	11.106	14.907	5.414	-
Total: Secondary Distribution	**Quantity**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**
	Total Obligation Authority	**98.125**	**117.230**	**69.648**	**-**	**69.648**	**112.296**	**144.969**	**144.118**	**224.058**

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

Appropriation / Budget Activity / Budget Sub Activity:
3010F: Aircraft Procurement, Air Force / BA 05: Modification of Inservice Aircraft / BSA 1: Strategic Aircraft

P-1 Line Item Number / Title:
B05200 / B-52

ID Code (A=Service Ready, B=Not Service Ready): B | **Program Elements for Code B Items:** 0101113F | **Other Related Program Elements:** 0101113F

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-40a***	3265 / B-52 Anti-Skid Replacement (Reliability & Maintainability)				- / 19.549	- / 0.909	- / 0.916	- / 0.932	- / -	- / 0.932
P-40a***	6884 / B-52 Internal Weapons Bay Upgrade (Capability Improvement)				- / 26.009	- / 26.934	- / 24.176	- / -	- / -	- / -
P-40a***	6885 / AETC Trainers (B-52) (Other)				- / 7.000	- / 2.460	- / 2.480	- / 2.524	- / -	- / 2.524
P-40a***	6890 / B-52 Radar Modernization (Capability Improvement)				- / -	- / -	- / -	- / 0.000	- / -	- / 0.000
P-40a***	6891 / B-52 WST AR Upgrade Trainer (Capability Improvement)				- / -	- / 1.608	- / -	- / -	- / -	- / -
P-40a***	6892 / B-52 Low Cost Improvements (Capability Improvement)				- / 2.331	- / 2.378	- / 17.362	- / 7.412	- / -	- / 7.412
P-40a***	6895 / Advanced Targeting Pod MFCD (Capability Improvement)				- / -	- / -	- / -	- / -	- / -	- / -
P-40a***	6896 / B-52 VLF/LF Modernization (Capability Improvement)				- / -	- / -	- / -	- / -	- / -	- / -
P-40a***	6898 / B-52 IR Missile Warning System (Safety)				- / -	- / -	- / 16.400	- / -	- / -	- / -
P-40a***	99999X / B-52 Low Cost Mods (Other)				- / 1.919	- / 0.425	- / 0.452	- / 0.460	- / -	- / 0.460
P-3a	3310 / B-52 Combat Network Communications Technology (Capability Improvement)		B		- / 491.345	- / 63.411	- / 55.444	- / 13.576	- / 0.000	- / 13.576
P-3a	6889 / Bomber Tactical Data link (Capability Improvement)		B		- / 0.000	- / 0.000	- / 0.000	- / 15.925	- / 0.000	- / 15.925
P-3a	6893 / GPS-IU Replacement (Capability Improvement)		B		- / 0.000	- / 0.000	- / 0.000	- / 11.097	- / 0.000	- / 11.097
P-3a	6894 / B-52 Crypto Modernization (Capability Improvement)		B		- / 0.000	- / 0.000	- / 0.000	- / 17.722	- / 0.000	- / 17.722
P-40	**Total Gross/Weapon System Cost**				**- / 548.153**	**- / 98.125**	**- / 117.230**	**- / 69.648**	**- / -**	**- / 69.648**

Exhibits Schedule					FY 2021	FY 2022	FY 2023	FY 2024	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-40a***	3265 / B-52 Anti-Skid Replacement (Reliability & Maintainability)				- / 0.949	- / -	- / -	- / -	- / -	- / 23.255
P-40a***	6884 / B-52 Internal Weapons Bay Upgrade (Capability Improvement)				- / -	- / -	- / 0.001	- / 0.002	- / -	- / 77.122
P-40a***	6885 / AETC Trainers (B-52) (Other)				- / 2.568	- / 2.620	- / 2.668	- / 2.716	- / -	- / 25.036
P-40a***	6890 / B-52 Radar Modernization (Capability Improvement)				- / -	- / 12.861	- / 69.114	- / 193.655	- / -	- / 275.630
P-40a***	6891 / B-52 WST AR Upgrade Trainer (Capability Improvement)				- / -	- / -	- / -	- / -	- / -	- / 1.608
P-40a***	6892 / B-52 Low Cost Improvements (Capability Improvement)				- / 2.461	- / 2.511	- / 2.557	- / 2.603	- / -	- / 39.615
P-40a***	6895 / Advanced Targeting Pod MFCD (Capability Improvement)				- / -	- / 22.907	- / 16.216	- / 16.508	- / -	- / 55.631
P-40a***	6896 / B-52 VLF/LF Modernization (Capability Improvement)				- / 8.410	- / 33.557	- / 19.523	- / 8.076	- / -	- / 69.566
P-40a***	6898 / B-52 IR Missile Warning System (Safety)				- / -	- / -	- / -	- / -	- / -	- / 16.400
P-40a***	99999X / B-52 Low Cost Mods (Other)				- / 0.470	- / 0.480	- / 0.489	- / 0.498	- / -	- / 5.193
P-3a	3310 / B-52 Combat Network Communications Technology (Capability Improvement)		B		- / 22.261	- / 10.569	- / 5.678	- / 0.000	- / -	- / 662.284
P-3a	6889 / Bomber Tactical Data link (Capability Improvement)		B		- / 30.214	- / 24.917	- / 25.372	- / 0.000	- / -	- / 96.428
P-3a	6893 / GPS-IU Replacement (Capability Improvement)		B		- / 23.904	- / 22.359	- / 0.000	- / 0.000	- / -	- / 57.360
P-3a	6894 / B-52 Crypto Modernization (Capability Improvement)		B		- / 21.059	- / 12.188	- / 2.500	- / 0.000	- / -	- / 53.469

Exhibit P-40, Budget Line Item Justification: PB 2020 Air Force		**Date:** February 2019
Appropriation / Budget Activity / Budget Sub Activity: 3010F: Aircraft Procurement, Air Force / BA 05: Modification of Inservice Aircraft / BSA 1: Strategic Aircraft	**P-1 Line Item Number / Title:** B05200 / B-52	
ID Code (A=Service Ready, B=Not Service Ready): B	**Program Elements for Code B Items:** 0101113F	**Other Related Program Elements:** 0101113F
Line Item MDAP/MAIS Code: N/A		

Exhibits Schedule					FY 2021	FY 2022	FY 2023	FY 2024	To Complete	Total
Exhibit Type	Title*	Subexhibits	ID CD	MDAP/ MAIS Code	Quantity / Total Cost *(Each) I ($ M)*	Quantity / Total Cost *(Each) I ($ M)*	Quantity / Total Cost *(Each) I ($ M)*	Quantity / Total Cost *(Each) I ($ M)*	Quantity / Total Cost *(Each) I ($ M)*	Quantity / Total Cost *(Each) I ($ M)*
P-40	Total Gross/Weapon System Cost				- / 112.296	- / 144.969	- / 144.118	- / 224.058	- / 0.000	- / 1,458.597

*** Although this is an Exhibit P-40a item, the actual exhibit is not included since all of the required information for this item is already being shown here.

*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:
Where applicable, justification for individual modifications is provided in the P-3A exhibits.

Exhibit P-3a, Individual Modification: PB 2020 Air Force		Date: February 2019
Appropriation / Budget Activity / Budget Sub Activity: 3010F / 05 / 1	**P-1 Line Item Number / Title:** B05200 / B-52	**Modification Number / Title:** 3310 / B-52 Combat Network Communications Technology
ID Code (A=Service Ready, B=Not Service Ready) : B	**MDAP/MAIS Code:**	

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 *(Units in Each)*	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost *($ in Millions)*	491.345	63.411	55.444	13.576	0.000	13.576	22.261	10.569	5.678	0.000	-	662.284
Less PY Advance Procurement *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) *($ in Millions)*	491.345	63.411	55.444	13.576	0.000	13.576	22.261	10.569	5.678	0.000	-	662.284
Plus CY Advance Procurement *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Total Obligation Authority *($ in Millions)*	**491.345**	**63.411**	**55.444**	**13.576**	**0.000**	**13.576**	**22.261**	**10.569**	**5.678**	**0.000**	**-**	**662.284**
(The following Resource Summary rows are for informational purposes only. The corresponding budget requests are documented elsewhere.)												
Initial Spares *($ in Millions)*	29.349	4.009	-	-	-	-	-	-	-	-	-	33.358
Gross/Weapon System Unit Cost *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-

Description:

The B-52H Combat Network Communication Technology (CONECT) acquisition project supports nuclear and conventional operations by upgrading the B-52H fleet with data and voice communications capabilities along with improved threat and situational awareness to support participation in network centric operations. This CONECT modification includes procurement of 74 aircraft kits + 2 EMD kits that will be installed in conjunction with Programmed Depot Maintenance (PDM). Ground station mission planning hardware, support equipment, initial spares, and Interim Contractor Support will be procured. Additional initial support/readiness efforts will develop and upgrade B-52H training devices with CONECT functionality. The CONECT training device upgrades provide full CONECT functionality to support aircrew training. The Aircrew Training Devices (ATDs) include three B-52H Weapon System Trainers (WST) and two Offensive Station Mission Trainers (OSMT), and the upgrades will also be installed in the Systems Integration Lab (SIL). The Other Government Cost line includes, but is not limited to, Diminishing Manufacturing Sources (DMS) costs to maintain the production configuration through the identification, review and monitoring of items with high obsolescence risk potential, classification of identified items according to criticality, identification of alternatives and implementation of resolutions. Resolutions may include non-recurring engineering (NRE) and/or replacement costs for DMS components, bridge buys of DMS components until NRE can be completed or Life of Type buys, whichever is most appropriate. Government Furnished Property (GFP) are the items that are part of the kit, but are procured by the government, directly through government supply or from other government agencies and provided directly to PDM. Included in the Support Equipment line is the planning for establishment of an organic Depot capability, stand-up of the depot, procurement of depot equipment and procurement of the CONECT ground station. Funds may be used to address emerging and short-notice Diminishing Manufacturing and Material Shortage (DMSMS) issues. DMS efforts to include removal of end-of-life software/hardware within simulators systems and move to a modular, common open system architecture that is sustainable and cyber-resilient. Implement requirements and standards defined under the Simulator Common Architecture Requirements and Standards (SCARS) initiative.

This program has associated Research Development Test and Evaluation (RDT&E) funding in PE 0101113F. Two EMD kits were purchased with RDT&E funding.

Funds may be used to resolve emerging safety of flight and diminishing manufacturing sources issues, accommodate technology insertion and fulfill FAA or other mandates necessary to ensure continued aircrew safety and mission effectiveness.

Funding:
FY21 GFP includes $21.751M for Depot activation

Milestone/Development Status

Exhibit P-3a, Individual Modification: PB 2020 Air Force		Date: February 2019
Appropriation / Budget Activity / Budget Sub Activity: 3010F / 05 / 1	**P-1 Line Item Number / Title:** B05200 / B-52	**Modification Number / Title:** 3310 / B-52 Combat Network Communications Technology

ID Code (A=Service Ready, B=Not Service Ready) : B

MDAP/MAIS Code:

Development began in FY05. CONECT Initial Operational Test & Evaluation (IOT&E) flight test completed November 2011. The Low Rate Initial Production (LRIP) Lot 1 contract was awarded in May 2013. The LRIP Lot 2 contract was awarded August 2014. Full Rate Production Lot 1a (10 units) was awarded February 2015. Full Rate Production Lot 1b (additional 7 units) was awarded 8 August 2015, Lot 2 (additional 16 units) was awarded 29 January 2016, Lot 3 (additional 13 units) 16 December 2016. Full Rate Production Lot 4, 10 units was awarded 16 Nov 17.

Secondary Distribution		FY 2018	FY 2019	FY 2020 Base	FY 2020 OCO	FY 2020 Total	FY 2021	FY 2022	FY 2023	FY 2024
AF	Quantity	-	-	-	-	-	-	-	-	-
	Total Obligation Authority	49.705	52.231	10.363	-	10.363	22.261	10.569	5.678	-
AFR	Quantity	-	-	-	-	-	-	-	-	-
	Total Obligation Authority	13.706	3.213	3.213	-	3.213	-	-	-	-
Total: Secondary Distribution	**Quantity**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**
	Total Obligation Authority	**63.411**	**55.444**	**13.576**	**0.000**	**13.576**	**22.261**	**10.569**	**5.678**	**0.000**

Exhibit P-3a, Individual Modification: PB 2020 Air Force		Date: February 2019
Appropriation / Budget Activity / Budget Sub Activity: 3010F / 05 / 1	**P-1 Line Item Number / Title:** B05200 / B-52	**Modification Number / Title:** 3310 / B-52 Combat Network Communications Technology
ID Code (A=Service Ready, B=Not Service Ready) : B	**MDAP/MAIS Code:**	
Models of Systems Affected: B-52H	**Modification Type:** Capability Improvement	**Related RDT&E PEs:** 0101113F

Financial Plan	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
	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)*
RDT&E PE #												
0101113F	2 / 10.000	- / 4.989	- / 11.138	- / 0.001	- / -	- / 0.001	- / -	- / 0.003	- / 0.002	- / -	- / -	2 / 26.133
Procurement												
Modification Item 1 of 1: CONECT Kit												
A Kits												
Recurring												
CONECT Kit:INSTALL KITS Group A (Active)	50 / 40.710	6 / 5.362	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	56 / 46.072
CONECT Kit:INSTALL KITS Group A (Reserve)	14 / 12.460	4 / 3.574	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	18 / 16.034
Subtotal: Recurring	*- / 53.170*	*- / 8.936*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / 62.106*
B Kits												
Recurring												
CONECT Kit:EQUIPMENT Group B (Active)	50 / 124.933	6 / 8.771	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	56 / 133.704
CONECT Kit:EQUIPMENT Group B (Reserve)	14 / 31.210	4 / 5.848	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	18 / 37.058
Subtotal: Recurring	*- / 156.143*	*- / 14.619*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / 170.762*
Subtotal: CONECT Kit	*- / 209.313*	*- / 23.555*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / 232.868*
Subtotal: Procurement, All Modification Items	*- / 209.313*	*- / 23.555*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / 232.868*
Support *(All Modification Items)*												
GROUP A: TOTAL NONRECURRING	- / 5.623	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 5.623
GROUP B: TOTAL NONRECURRING	- / 33.909	- / 6.104	- / 3.300	- / 0.040	- / -	- / 0.040	- / -	- / -	- / -	- / -	- / -	- / 43.353
Change Orders	- / 19.753	- / -	- / 2.200	- / -	- / -	- / -	- / 0.010	- / -	- / -	- / -	- / -	- / 21.963
Data	- / 0.465	- / -	- / -	- / 1.600	- / -	- / 1.600	- / -	- / -	- / -	- / -	- / -	- / 2.065
SIM/TRAINER	0 / 4.504	0 / 5.824	0 / 2.546	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	0 / 12.874
SUPPORT-EQUIP	- / 49.707	- / 2.472	- / 13.307	- / 2.158	- / -	- / 2.158	- / -	- / 8.569	- / 5.678	- / -	- / -	- / 81.891
OTHER GOVT	- / 61.486	- / 5.539	- / 0.000	- / 0.934	- / -	- / 0.934	- / -	- / 1.000	- / -	- / -	- / -	- / 68.959
GFP	- / 13.240	- / 0.400	- / 17.170	- / -	- / -	- / -	- / 21.751	- / -	- / -	- / -	- / -	- / 52.561
PMA - Other Gov't Costs	- / 39.384	- / 2.381	- / 7.282	- / 2.418	- / -	- / 2.418	- / 0.500	- / 1.000	- / -	- / -	- / -	- / 52.965
Subtotal: Support	*0 / 228.071*	*0 / 22.720*	*0 / 45.805*	*- / 7.150*	*- / -*	*- / 7.150*	*- / 22.261*	*- / 10.569*	*- / 5.678*	*- / -*	*- / -*	*0 / 342.254*
Installation												
Modification Item 1 of 1: CONECT Kit	43 / 53.961	16 / 17.136	9 / 9.639	6 / 6.426	- / -	6 / 6.426	- / -	- / -	- / -	- / -	- / -	74 / 87.162
Subtotal: Installation	*43 / 53.961*	*16 / 17.136*	*9 / 9.639*	*6 / 6.426*	*- / -*	*6 / 6.426*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*74 / 87.162*
Total												

Exhibit P-3a, Individual Modification: PB 2020 Air Force		Date: February 2019
Appropriation / Budget Activity / Budget Sub Activity: 3010F / 05 / 1	**P-1 Line Item Number / Title:** B05200 / B-52	**Modification Number / Title:** 3310 / B-52 Combat Network Communications Technology
ID Code (A=Service Ready, B=Not Service Ready) : B	**MDAP/MAIS Code:**	
Models of Systems Affected: B-52H	**Modification Type:** Capability Improvement	**Related RDT&E PEs:** 0101113F

Financial Plan	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
	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)*
Total Cost (Procurement + Support + Installation)	**491.345**	**63.411**	**55.444**	**13.576**	**0.000**	**13.576**	**22.261**	**10.569**	**5.678**	**0.000**	**-**	**662.284**

Exhibit P-3a, Individual Modification: PB 2020 Air Force		Date: February 2019
Appropriation / Budget Activity / Budget Sub Activity: 3010F / 05 / 1	**P-1 Line Item Number / Title:** B05200 / B-52	**Modification Number / Title:** 3310 / B-52 Combat Network Communications Technology

ID Code (A=Service Ready, B=Not Service Ready) : B

MDAP/MAIS Code:

Modification Item 1 of 1: CONECT Kit

Manufacturer Information

Manufacturer Name: Boeing

Manufacturer Location: Oklahoma City, OK

Administrative Leadtime *(in Months)*: 7

Production Leadtime *(in Months)*: 9

Dates	FY 2018	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024
Contract Dates	May 2018						
Delivery Dates	Feb 2019						

Installation Information

Method of Implementation: Depot

Installation Cost	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
	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)*
Prior Years	43 / 53.961	16 / 17.136	5 / 5.355	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	64 / 76.452
FY 2018	- / -	- / -	4 / 4.284	6 / 6.426	- / -	6 / 6.426	- / -	- / -	- / -	- / -	- / -	10 / 10.710
FY 2019	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2020	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2021	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2022	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2023	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2024	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
To Complete	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
Total	43 / 53.961	16 / 17.136	9 / 9.639	6 / 6.426	- / -	6 / 6.426	- / -	- / -	- / -	- / -	- / -	74 / 87.162

Installation Schedule

		FY 2018				FY 2019				FY 2020				FY 2021				FY 2022				FY 2023				FY 2024					
	PYS	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	TC	Tot
In	43	4	3	4	5	3	3	1	2	3	1	1	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0	74
Out	32	4	4	4	4	4	4	5	3	3	2	3	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0	74

Exhibit P-3a, Individual Modification: PB 2020 Air Force		Date: February 2019
Appropriation / Budget Activity / Budget Sub Activity: 3010F / 05 / 1	**P-1 Line Item Number / Title:** B05200 / B-52	**Modification Number / Title:** 6889 / Bomber Tactical Data link
ID Code (A=Service Ready, B=Not Service Ready) : B	**MDAP/MAIS Code:**	

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 *(Units in Each)*	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost *($ in Millions)*	0.000	0.000	0.000	15.925	0.000	15.925	30.214	24.917	25.372	0.000	-	96.428
Less PY Advance Procurement *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) *($ in Millions)*	0.000	0.000	0.000	15.925	0.000	15.925	30.214	24.917	25.372	0.000	-	96.428
Plus CY Advance Procurement *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Total Obligation Authority *($ in Millions)*	**0.000**	**0.000**	**0.000**	**15.925**	**0.000**	**15.925**	**30.214**	**24.917**	**25.372**	**0.000**	**-**	**96.428**
(The following Resource Summary rows are for informational purposes only. The corresponding budget requests are documented elsewhere.)												
Initial Spares *($ in Millions)*	-	-	-	2.381	-	2.381	2.499	-	-	-	-	4.880
Gross/Weapon System Unit Cost *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-

Description:

This program, P-3A Mod 6889, Bomber Tactical Data link, is a new start.
The Tactical Data Link (TDL) will provide low latency, jam-resistant situational awareness and command/control needed to support in-theater operations/missions via a Line-of-Sight (LOS) Link 16 capability.
The program consist of integrating an existing off-the-shelf Link 16 terminal into the B-52H. Integration includes Group A wiring, rack and antennas, and the Group B terminal, blanking unit and notch filter LRUs.
The terminals will be installed inside section 41 of the aircraft and two external antennas will be mounted on the top and bottom of the fuselage. The TDL terminal and LOS capability will be integrated with the rest of the COmbat Network Communications Technology (CONECT) subsystem. Updates to Common Link Integration Processing (CLIP) will be required to support both LOS and Beyond Line-of-Sight (BLOS) message processing.

This modification includes procurements of 74 aircraft kits + 2 EMD kits that will be installed via a contract field team. The two kits will be procured under the EMD contract to support on-aircraft developmental testing.

Funds may be used to resolve emerging safety of flight and diminishing manufacturing sources (DMS) issues, accommodate technology insertion and fulfill FAA or other mandates necessary to ensure continued aircrew safety and mission effectiveness.

DMS efforts to include removal of end-of-life software/hardware within simulators systems and move to a modular, common open system architecture that is sustainable and cyber-resilient. Implement requirements and standards defined under the Simulator Common Architecture Requirements and Standards (SCARS) initiative.

Milestone/Development Status

EMD Contract awarded 9 Sep 17

Secondary Distribution		FY 2018	FY 2019	FY 2020 Base	FY 2020 OCO	FY 2020 Total	FY 2021	FY 2022	FY 2023	FY 2024
AF	Quantity	-	-	-	-	-	-	-	-	-
	Total Obligation Authority	-	0.000	14.004	-	14.004	25.416	16.330	22.248	-
AFR	Quantity	-	-	-	-	-	-	-	-	-
	Total Obligation Authority	-	-	1.921	-	1.921	4.798	8.587	3.124	-
Total:	**Quantity**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**

Exhibit P-3a, Individual Modification: PB 2020 Air Force		Date: February 2019
Appropriation / Budget Activity / Budget Sub Activity: 3010F / 05 / 1	**P-1 Line Item Number / Title:** B05200 / B-52	**Modification Number / Title:** 6889 / Bomber Tactical Data link
ID Code (A=Service Ready, B=Not Service Ready) : B	**MDAP/MAIS Code:**	

Secondary Distribution		FY 2018	FY 2019	FY 2020 Base	FY 2020 OCO	FY 2020 Total	FY 2021	FY 2022	FY 2023	FY 2024
Secondary Distribution	Total Obligation Authority	0.000	0.000	15.925	0.000	15.925	30.214	24.917	25.372	0.000

Exhibit P-3a, Individual Modification: PB 2020 Air Force		Date: February 2019
Appropriation / Budget Activity / Budget Sub Activity: 3010F / 05 / 1	**P-1 Line Item Number / Title:** B05200 / B-52	**Modification Number / Title:** 6889 / Bomber Tactical Data link
ID Code (A=Service Ready, B=Not Service Ready) : B	**MDAP/MAIS Code:**	
Models of Systems Affected: B-52H	**Modification Type:** Capability Improvement	**Related RDT&E PEs:** 0101113F

Financial Plan	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
	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)*
RDT&E PE #												
0101113F	- / 10.398	- / 5.472	2 / 18.978	- / 2.878	- / -	- / 2.878	- / -	- / -	- / -	- / -	- / -	2 / 37.726
Procurement												
Modification Item 1 of 1: Link-16												
A Kits												
Recurring												
Link-16:INSTALL KITS Group A (Active)	- / -	- / -	- / -	10 / 0.915	- / -	10 / 0.915	22 / 2.013	24 / 2.190	- / -	- / -	- / -	56 / 5.118
Link-16:INSTALL KITS Group A (Reserve)	- / -	- / -	- / -	4 / 0.366	- / -	4 / 0.366	6 / 0.594	8 / 0.732	- / -	- / -	- / -	18 / 1.692
Subtotal: Recurring	*- / -*	*- / -*	*- / -*	*- / 1.281*	*- / -*	*- / 1.281*	*- / 2.607*	*- / 2.922*	*- / -*	*- / -*	*- / -*	*- / 6.810*
B Kits												
Recurring												
Link-16:EQUIPMENT Group B (Active)	- / -	- / -	- / -	10 / 3.880	- / -	10 / 3.880	22 / 8.550	24 / 9.330	- / -	- / -	- / -	56 / 21.760
Link-16:EQUIPMENT Group B (Reserve)	- / -	- / -	- / -	4 / 1.555	- / -	4 / 1.555	6 / 2.330	8 / 3.110	- / -	- / -	- / -	18 / 6.995
Subtotal: Recurring	*- / -*	*- / -*	*- / -*	*- / 5.435*	*- / -*	*- / 5.435*	*- / 10.880*	*- / 12.440*	*- / -*	*- / -*	*- / -*	*- / 28.755*
Subtotal: Link-16	*- / -*	*- / -*	*- / -*	*- / 6.716*	*- / -*	*- / 6.716*	*- / 13.487*	*- / 15.362*	*- / -*	*- / -*	*- / -*	*- / 35.565*
Subtotal: Procurement, All Modification Items	*- / -*	*- / -*	*- / -*	*- / 6.716*	*- / -*	*- / 6.716*	*- / 13.487*	*- / 15.362*	*- / -*	*- / -*	*- / -*	*- / 35.565*
Support *(All Modification Items)*												
GROUP B: TOTAL NONRECURRING	- / -	- / -	- / -	- / 3.874	- / -	- / 3.874	- / 0.000	- / -	- / -	- / -	- / -	- / 3.874
SIM/TRAINER	- / -	- / -	- / -	0 / 2.500	- / -	0 / 2.500	0 / 2.500	- / -	- / -	- / -	- / -	0 / 5.000
OTHER GOVT	- / -	- / -	- / 0.000	- / 1.585	- / -	- / 1.585	- / 9.103	- / -	- / 14.031	- / -	- / -	- / 24.719
PMA - Contractor Services	- / -	- / -	- / -	- / 1.200	- / -	- / 1.200	- / 1.200	- / 0.760	- / 1.217	- / -	- / -	- / 4.377
PMA - Other Gov't Costs	- / -	- / -	- / -	- / 0.050	- / -	- / 0.050	- / 0.050	- / 0.050	- / 1.000	- / -	- / -	- / 1.150
Subtotal: Support	*- / -*	*- / -*	*- / 0.000*	*0 / 9.209*	*- / -*	*0 / 9.209*	*0 / 12.853*	*- / 0.810*	*- / 16.248*	*- / -*	*- / -*	*0 / 39.120*
Installation												
Modification Item 1 of 1: Link-16	- / -	- / -	- / -	- / -	- / -	- / -	14 / 3.874	28 / 8.745	32 / 9.124	- / -	- / -	74 / 21.743
Subtotal: Installation	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*14 / 3.874*	*28 / 8.745*	*32 / 9.124*	*- / -*	*- / -*	*74 / 21.743*
Total												
Total Cost (Procurement + Support + Installation)	**0.000**	**0.000**	**0.000**	**15.925**	**0.000**	**15.925**	**30.214**	**24.917**	**25.372**	**0.000**	**-**	**96.428**

Exhibit P-3a, Individual Modification: PB 2020 Air Force		Date: February 2019
Appropriation / Budget Activity / Budget Sub Activity: 3010F / 05 / 1	**P-1 Line Item Number / Title:** B05200 / B-52	**Modification Number / Title:** 6889 / Bomber Tactical Data link
ID Code (A=Service Ready, B=Not Service Ready) : B	**MDAP/MAIS Code:**	

Modification Item 1 of 1: Link-16

Manufacturer Information

Manufacturer Name: TBD	Manufacturer Location: TBD
Administrative Leadtime *(in Months)*: 0	Production Leadtime *(in Months)*: 9

Dates	FY 2018	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024
Contract Dates			Sep 2020	Jan 2021	Jan 2022		
Delivery Dates			Jun 2021	Oct 2021	Oct 2022		

Installation Information

Method of Implementation: Contract Field Team

Installation Cost	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
	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)*
Prior Years	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2018	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2019	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2020	- / -	- / -	- / -	- / -	- / -	- / -	14 / 3.874	- / -	- / -	- / -	- / -	14 / 3.874
FY 2021	- / -	- / -	- / -	- / -	- / -	- / -	- / -	28 / 8.745	- / -	- / -	- / -	28 / 8.745
FY 2022	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	32 / 9.124	- / -	- / -	32 / 9.124
FY 2023	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2024	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
To Complete	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
Total	- / -	- / -	- / -	- / -	- / -	- / -	14 / 3.874	28 / 8.745	32 / 9.124	- / -	- / -	74 / 21.743

Installation Schedule

	PYS	FY 2018				FY 2019				FY 2020				FY 2021				FY 2022				FY 2023				FY 2024				TC	Tot
		Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4		
In	0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	7	7	7	7	7	7	8	8	8	8	-	-	-	-	0	74
Out	0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	7	7	7	7	7	7	8	8	8	8	-	-	-	-	0	74

Exhibit P-3a, Individual Modification: PB 2020 Air Force		Date: February 2019
Appropriation / Budget Activity / Budget Sub Activity: 3010F / 05 / 1	**P-1 Line Item Number / Title:** B05200 / B-52	**Modification Number / Title:** 6893 / GPS-IU Replacement
ID Code (A=Service Ready, B=Not Service Ready) : B	**MDAP/MAIS Code:**	

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 *(Units in Each)*	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost *($ in Millions)*	0.000	0.000	0.000	11.097	0.000	11.097	23.904	22.359	0.000	0.000	-	57.360
Less PY Advance Procurement *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) *($ in Millions)*	0.000	0.000	0.000	11.097	0.000	11.097	23.904	22.359	0.000	0.000	-	57.360
Plus CY Advance Procurement *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Total Obligation Authority *($ in Millions)*	**0.000**	**0.000**	**0.000**	**11.097**	**0.000**	**11.097**	**23.904**	**22.359**	**0.000**	**0.000**	**-**	**57.360**
(The following Resource Summary rows are for informational purposes only. The corresponding budget requests are documented elsewhere.)												
Initial Spares *($ in Millions)*	-	-	-	-	-	-	-	8.060	1.546	-	-	9.606
Gross/Weapon System Unit Cost *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-

Description:

This program, P-3A Mod 6893, GPS-IU Replacement, is a new start.
The Global Positioning System (GPS) Interface Unit (IU) acts as a controller for a MIL-STD-1553 data bus communications path between computer systems onboard the B-52H.

The GPS IU Upgrade program will provide increased throughput and memory capacity by replacing the current processor, static memory, and necessary associated electronics with a newer processor, more memory, and sustainable electronic packages. This program will replace six Circuit Card Assemblies (CCA) which include combining three Circuit Cards into one Input/Output (I/O) CCA. The Backplane and Motherboard will require an upgrade to integrate the new CCAs: the Central Processing Unit / 1553, the power supply CCA, and the video graphics cards. The Input/Output CCA will combine the Discrete Inputs Analog, Audio Video (DAAV), Discrete Outputs (DOA) and Serial Busses functionality. This upgrade will improve system reliability and address Diminishing Manufacturing Sources and Material Shortages (DMSMS) issues on subcomponents of the IU.

In addition the new GPS IU will retain the existing functions and interfaces of the legacy GPS IU, and provide additional interfaces to allow for future growth requirements: Which include two Ethernet Ports and two connectors on face-plate for future growth.

This program includes associated changes to training and support equipment, technical data, and procurement of initial spares. Requirements for GPS IU Replacement were validated by AF/A5R with an approved 1067 in June 2013. This program has associated Research Development Test and Evaluation (RDT&E) funding in PE 0101113F.

This modification includes procurement of 76 aircraft kits that will be installed via intermediate level maintenance.

FY20 funds for "Group B: Total Nonrecurring" are required for the procurement of long lead parts. Milestone decision authority approved procurement in June 2018.

Funds may be used to address emerging and short-notice Diminishing Manufacturing Sources (DMS) and Material Shortage (DMSMS) issues. Funds may be used to resolve emerging safety of flight and DMS issues, accommodate technology insertion and fulfill FAA or other mandates necessary to ensure continued aircrew safety and mission effectiveness.

Milestone/Development Status

Technical Maturation and Risk Reduction Contract Award (Feb 17)
Milestone A (Mar 17)
Milestone B (Jun 18)

Exhibit P-3a, Individual Modification: PB 2020 Air Force		Date: February 2019
Appropriation / Budget Activity / Budget Sub Activity: 3010F / 05 / 1	**P-1 Line Item Number / Title:** B05200 / B-52	**Modification Number / Title:** 6893 / GPS-IU Replacement
ID Code (A=Service Ready, B=Not Service Ready) : B	**MDAP/MAIS Code:**	

Early authorization for procurement of long lead items for production was granted by MDA in Jun 18 to award long lead part in FY20.

Secondary Distribution		FY 2018	FY 2019	FY 2020 Base	FY 2020 OCO	FY 2020 Total	FY 2021	FY 2022	FY 2023	FY 2024
AF	Quantity	-	-	-	-	-	-	-	-	-
	Total Obligation Authority	-	-	11.097	-	11.097	19.866	22.359	-	-
AFR	Quantity	-	-	-	-	-	-	-	-	-
	Total Obligation Authority	-	-	-	-	-	4.038	-	-	-
Total: Secondary Distribution	**Quantity**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**
	Total Obligation Authority	**0.000**	**0.000**	**11.097**	**0.000**	**11.097**	**23.904**	**22.359**	**0.000**	**0.000**

Exhibit P-3a, Individual Modification: PB 2020 Air Force		Date: February 2019
Appropriation / Budget Activity / Budget Sub Activity: 3010F / 05 / 1	**P-1 Line Item Number / Title:** B05200 / B-52	**Modification Number / Title:** 6893 / GPS-IU Replacement
ID Code (A=Service Ready, B=Not Service Ready) : B	**MDAP/MAIS Code:**	
Models of Systems Affected: B-52H	**Modification Type:** Capability Improvement	**Related RDT&E PEs:** 0101113F

Financial Plan	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
	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)*
RDT&E PE #												
0101113F	- / 9.896	- / 18.767	- / 37.030	- / 1.985	- / -	- / 1.985	- / -	- / -	- / -	- / -	- / -	- / 67.678
Procurement												
Modification Item 1 of 1: GPS IU Upgrade												
B Kits												
Recurring												
GPS IU Upgrade:EQUIPMENT Group B (Active)	- / -	- / -	- / -	- / -	- / -	- / -	26 / 5.830	32 / 7.170	- / -	- / -	- / -	58 / 13.000
GPS IU Upgrade:EQUIPMENT Group B (Reserve)	- / -	- / -	- / -	- / -	- / -	- / -	18 / 4.038	- / -	- / -	- / -	- / -	18 / 4.038
Subtotal: Recurring	- / -	- / -	- / -	- / -	- / -	- / -	- / 9.868	- / 7.170	- / -	- / -	- / -	- / 17.038
Subtotal: GPS IU Upgrade	- / -	- / -	- / -	- / -	- / -	- / -	- / 9.868	- / 7.170	- / -	- / -	- / -	- / 17.038
Subtotal: Procurement, All Modification Items	- / -	- / -	- / -	- / -	- / -	- / -	- / 9.868	- / 7.170	- / -	- / -	- / -	- / 17.038
Support *(All Modification Items)*												
GROUP B: TOTAL NONRECURRING	- / -	- / -	- / -	- / 3.929	- / -	- / 3.929	- / 11.882	- / 12.610	- / -	- / -	- / -	- / 28.421
PMA - Contractor Services	- / -	- / -	- / -	- / 0.230	- / -	- / 0.230	- / 0.200	- / 0.200	- / -	- / -	- / -	- / 0.630
Data	- / -	- / -	- / -	- / 0.194	- / -	- / 0.194	- / -	- / -	- / -	- / -	- / -	- / 0.194
OTHER GOVT	- / -	- / -	- / -	- / 6.294	- / -	- / 6.294	- / 1.154	- / 1.373	- / -	- / -	- / -	- / 8.821
Change Orders	- / -	- / -	- / -	- / 0.450	- / -	- / 0.450	- / 0.800	- / 1.006	- / -	- / -	- / -	- / 2.256
Subtotal: Support	- / -	- / -	- / -	- / 11.097	- / -	- / 11.097	- / 14.036	- / 15.189	- / -	- / -	- / -	- / 40.322
Installation												
Subtotal: Installation	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
Total												
Total Cost (Procurement + Support + Installation)	**0.000**	**0.000**	**0.000**	**11.097**	**0.000**	**11.097**	**23.904**	**22.359**	**0.000**	**0.000**	**-**	**57.360**

Exhibit P-3a, Individual Modification: PB 2020 Air Force		Date: February 2019
Appropriation / Budget Activity / Budget Sub Activity: 3010F / 05 / 1	**P-1 Line Item Number / Title:** B05200 / B-52	**Modification Number / Title:** 6893 / GPS-IU Replacement

ID Code (A=Service Ready, B=Not Service Ready) : B

MDAP/MAIS Code:

Modification Item 1 of 1: GPS IU Upgrade

Manufacturer Information

Manufacturer Name: Boeing

Manufacturer Location: OKlahoma City, Ok

Administrative Leadtime *(in Months)*: 6

Production Leadtime *(in Months)*: 12

Dates	FY 2018	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024
Contract Dates				Apr 2021	Apr 2022		
Delivery Dates				Apr 2022	Apr 2023		

Installation Information

Method of Implementation (Organic): Org/Intermediate

Installation Quantity: 76

Exhibit P-3a, Individual Modification: PB 2020 Air Force		Date: February 2019
Appropriation / Budget Activity / Budget Sub Activity: 3010F / 05 / 1	**P-1 Line Item Number / Title:** B05200 / B-52	**Modification Number / Title:** 6894 / B-52 Crypto Modernization
ID Code (A=Service Ready, B=Not Service Ready) : B	**MDAP/MAIS Code:**	

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 *(Units in Each)*	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost *($ in Millions)*	0.000	0.000	0.000	17.722	0.000	17.722	21.059	12.188	2.500	0.000	-	53.469
Less PY Advance Procurement *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) *($ in Millions)*	0.000	0.000	0.000	17.722	0.000	17.722	21.059	12.188	2.500	0.000	-	53.469
Plus CY Advance Procurement *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Total Obligation Authority *($ in Millions)*	**0.000**	**0.000**	**0.000**	**17.722**	**0.000**	**17.722**	**21.059**	**12.188**	**2.500**	**0.000**	**-**	**53.469**
(The following Resource Summary rows are for informational purposes only. The corresponding budget requests are documented elsewhere.)												
Initial Spares *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Unit Cost *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-

Description:

This program, P-3A Mod 6894, B-52 Crypto Modernization, is a new start.
B-52 Crypto Modernization P-3A Mod 6894 upgrades aircraft with Mobile User Objective System (MUOS) capable ARC-210 radio systems to prevent loss of BLOS voice and data communications capability. As MUOS channels are turned on, existing satellites will be removed from service. B-52 CONECT is at risk of losing its File Transfer Protocol (FTP), email, Beyond Line of Site (BLOS) voice, and BLOS data link communications without this modernization effort.

This modification includes procurement of 76 aircraft kits that will be installed by a contract field team.

FY20 Group B kits include long lead components for kits to include radios, HPAs, LNAs, RCUs and ancillaries

Funds may be used to address emerging and short-notice Diminishing Manufacturing and Material Shortage (DMSMS) issues.

Funds may be used to resolve emerging safety of flight and diminishing manufacturing sources issues, accommodate technology insertion and fulfill FAA or other mandates necessary to ensure continued aircrew safety and mission effectiveness.

Milestone/Development Status

MDD completed Dec 17
Acquisition Strategy approved Jan 18
Long Lead procurement approved Jan 18

Secondary Distribution		FY 2018	FY 2019	FY 2020 Base	FY 2020 OCO	FY 2020 Total	FY 2021	FY 2022	FY 2023	FY 2024
AF	Quantity	-	-	-	-	-	-	-	-	-
	Total Obligation Authority	-	-	17.722	-	17.722	18.789	8.738	2.500	0.000
AFR	Quantity	-	-	-	-	-	-	-	-	-
	Total Obligation Authority	-	-	-	-	-	2.270	3.450	-	-
Total:	**Quantity**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**

Exhibit P-3a, Individual Modification: PB 2020 Air Force		Date: February 2019
Appropriation / Budget Activity / Budget Sub Activity: 3010F / 05 / 1	**P-1 Line Item Number / Title:** B05200 / B-52	**Modification Number / Title:** 6894 / B-52 Crypto Modernization
ID Code (A=Service Ready, B=Not Service Ready) : B	**MDAP/MAIS Code:**	

Secondary Distribution		FY 2018	FY 2019	FY 2020 Base	FY 2020 OCO	FY 2020 Total	FY 2021	FY 2022	FY 2023	FY 2024
Secondary Distribution	Total Obligation Authority	0.000	0.000	17.722	0.000	17.722	21.059	12.188	2.500	0.000

Exhibit P-3a, Individual Modification: PB 2020 Air Force		Date: February 2019
Appropriation / Budget Activity / Budget Sub Activity: 3010F / 05 / 1	**P-1 Line Item Number / Title:** B05200 / B-52	**Modification Number / Title:** 6894 / B-52 Crypto Modernization
ID Code (A=Service Ready, B=Not Service Ready) : B	**MDAP/MAIS Code:**	
Models of Systems Affected: B-52H	**Modification Type:** Capability Improvement	**Related RDT&E PEs:** 0101113F

Financial Plan	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
	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)*
RDT&E PE #												
0101113F	- / 5.941	- / 11.919	- / 12.000	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 29.860
Procurement												
Modification Item 1 of 1: Crypto												
A Kits												
Recurring												
Crypto:INSTALL KITS Group A (Active)	- / -	- / -	- / -	- / -	- / -	- / -	10 / 2.520	29 / 7.320	19 / 0.000	- / -	- / -	58 / 9.840
Crypto:INSTALL KITS Group A (Reserve)	- / -	- / -	- / -	- / -	- / -	- / -	9 / 2.270	9 / 2.270	- / -	- / -	- / -	18 / 4.540
Subtotal: Recurring	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / 4.790*	*- / 9.590*	*- / 0.000*	*- / -*	*- / -*	*- / 14.380*
Subtotal: Crypto	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / 4.790*	*- / 9.590*	*- / 0.000*	*- / -*	*- / -*	*- / 14.380*
Subtotal: Procurement, All Modification Items	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / 4.790*	*- / 9.590*	*- / 0.000*	*- / -*	*- / -*	*- / 14.380*
Support *(All Modification Items)*												
GROUP B: TOTAL NONRECURRING	- / -	- / -	- / -	- / 12.932	- / -	- / 12.932	- / 11.469	- / -	- / -	- / -	- / -	- / 24.401
OTHER GOVT	- / -	- / -	- / -	- / 4.790	- / -	- / 4.790	- / 4.800	0 / 0.108	- / -	- / -	- / -	0 / 9.698
Subtotal: Support	*- / -*	*- / -*	*- / -*	*- / 17.722*	*- / -*	*- / 17.722*	*- / 16.269*	*0 / 0.108*	*- / -*	*- / -*	*- / -*	*0 / 34.099*
Installation												
Modification Item 1 of 1: Crypto	- / -	- / -	- / -	- / -	- / -	- / -	- / -	19 / 2.490	38 / 2.500	19 / 0.000	- / -	76 / 4.990
Subtotal: Installation	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*19 / 2.490*	*38 / 2.500*	*19 / 0.000*	*- / -*	*76 / 4.990*
Total												
Total Cost (Procurement + Support + Installation)	**0.000**	**0.000**	**0.000**	**17.722**	**0.000**	**17.722**	**21.059**	**12.188**	**2.500**	**0.000**	**-**	**53.469**

Exhibit P-3a, Individual Modification: PB 2020 Air Force		Date: February 2019
Appropriation / Budget Activity / Budget Sub Activity: 3010F / 05 / 1	**P-1 Line Item Number / Title:** B05200 / B-52	**Modification Number / Title:** 6894 / B-52 Crypto Modernization
ID Code (A=Service Ready, B=Not Service Ready) : B	**MDAP/MAIS Code:**	

Modification Item 1 of 1: Crypto

Manufacturer Information

Manufacturer Name: TBD	Manufacturer Location: TBD
Administrative Leadtime *(in Months)*: 1	Production Leadtime *(in Months)*: 12

Dates	FY 2018	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024
Contract Dates				Jun 2021	Jun 2022	Jun 2023	
Delivery Dates				Jun 2022	Jun 2023	Jun 2024	

Installation Information

Method of Implementation: Contract Field Team

Installation Cost	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
	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)*
Prior Years	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2018	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2019	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2020	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2021	- / -	- / -	- / -	- / -	- / -	- / -	- / -	19 / 2.490	- / -	- / -	- / -	19 / 2.490
FY 2022	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	38 / 2.500	- / -	- / -	38 / 2.500
FY 2023	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	19 / 0.000	- / -	19 / 0.000
FY 2024	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
To Complete	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
Total	- / -	- / -	- / -	- / -	- / -	- / -	- / -	19 / 2.490	38 / 2.500	19 / 0.000	- / -	76 / 4.990

Installation Schedule

	PYS	FY 2018				FY 2019				FY 2020				FY 2021				FY 2022				FY 2023				FY 2024				TC	Tot
		Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4		
In	0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	9	10	9	10	9	10	9	10	-	-	0	76
Out	0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	9	10	9	10	9	10	9	10	-	-	0	76

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Exhibit P-40, Budget Line Item Justification: PB 2020 Air Force	Date: February 2019
Appropriation / Budget Activity / Budget Sub Activity: 3010F: Aircraft Procurement, Air Force / BA 05: Modification of Inservice Aircraft / BSA 1: Strategic Aircraft	**P-1 Line Item Number / Title:** LAIRCM / Large Aircraft Infrared Countermeasures

ID Code (A=Service Ready, B=Not Service Ready): B	**Program Elements for Code B Items:** 0401134F	**Other Related Program Elements:** 0401134F

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 *(Units in Each)*	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost *($ in Millions)*	303.641	4.046	149.778	43.758	53.335	97.093	103.781	91.200	0.000	0.000	425.938	1,175.477
Less PY Advance Procurement *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) *($ in Millions)*	303.641	4.046	149.778	43.758	53.335	97.093	103.781	91.200	0.000	0.000	425.938	1,175.477
Plus CY Advance Procurement *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Total Obligation Authority *($ in Millions)*	**303.641**	**4.046**	**149.778**	**43.758**	**53.335**	**97.093**	**103.781**	**91.200**	**0.000**	**0.000**	**425.938**	**1,175.477**
(The following Resource Summary rows are for informational purposes only. The corresponding budget requests are documented elsewhere.)												
Initial Spares *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Flyaway Unit Cost *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Unit Cost *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-

Description:

The Large Aircraft Infrared Countermeasures (LAIRCM) system provides a significantly improved defensive capability for the Department of Defense to counter the proliferating infrared (IR) man-portable air defense systems (MANPADS) missile threats by detecting, tracking, and countering incoming IR missiles. This system is fully autonomous following power-up and consists of Group A aircraft modification kits and Group B hardware. Group B hardware for the LAIRCM system [AN/AQQ-24(V)] currently consists of missile warning sensors; laser transmitter assemblies; a control indicator unit; a system processor, and repeaters, as needed by the platform.

The production program maintains a robust reliability program which results in the incorporation of reliability enhancements improving overall producibility, while gaining the inherent benefit of improved long-term sustainment. There are numerous LAIRCM configurations installed on a variety of aircraft, however, all configurations include a processor and a control indicator unit. Configurations can be differentiated by the type of missile warning sensors and laser transmitter assemblies.

Funding supports efforts that include, but are not limited to, Hardware Procurement (Group A and Group B), Installation, Installation Support, Initial Spares, Support Equipment, Government Furnished Equipment (GFE) and GFE Repairs, Line Replaceable Unit (LRU) Repairs, Interim Contractor Support (ICS), Depot Standup, Systems Engineering and Program Management (SEPM), Failure Reporting and Corrective Analysis Support (FRACAS), Other Government Costs (OGCs), Pre-Planned Product Improvements, Program Management and Administration (PMA) costs, simulators, and data.

Like most programs, LAIRCM faces the challenges associated with resolving Diminishing Manufacturing Sources (DMS) issues and software errors/inefficiencies. The LAIRCM program office seeks to ensure continued production of LAIRCM components for all LAIRCM customers. Funding may be used to address (DMS) issues and software corrections or minor improvements. The LAIRCM DMS program includes all activities associated with monitoring and identifying DMS issues. It also includes all activities required to resolve DMS issues such as: 1) the use of existing material solutions which involves actions to secure availability of existing supply (i.e., life of type buy and extension of production or support); 2) implementing substitutes which includes engineering activities to qualify and implement the identified substitute (i.e., approved part; repair, refurbishment, or reclamation; simple substitute; and complex substitute); and 3) redesign which includes all aspects of engineering and qualification to implement new or highly modified equipment (i.e., development of a new item or source; redesign of a next higher assembly; and redesign of a complex/system replacement).

LAIRCM kit quantities purchased are dependent on the unit cost and/or the installation cost of the kits.

Funding for this exhibit contained in PE 0401134F.

Exhibit P-40, Budget Line Item Justification: PB 2020 Air Force	Date: February 2019
Appropriation / Budget Activity / Budget Sub Activity: 3010F: Aircraft Procurement, Air Force / BA 05: Modification of Inservice Aircraft / BSA 1: Strategic Aircraft	**P-1 Line Item Number / Title:** LAIRCM / Large Aircraft Infrared Countermeasures

ID Code (A=Service Ready, B=Not Service Ready): B	Program Elements for Code B Items: 0401134F	Other Related Program Elements: 0401134F

Line Item MDAP/MAIS Code: N/A

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.

Secondary Distribution		FY 2018	FY 2019	FY 2020 Base	FY 2020 OCO	FY 2020 Total	FY 2021	FY 2022	FY 2023	FY 2024
AF	Quantity	-	-	-	-	-	-	-	-	-
	Total Obligation Authority	4.046	149.778	43.758	53.335	97.093	103.781	91.200	0.000	0.000
Total: Secondary Distribution	**Quantity**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**
	Total Obligation Authority	**4.046**	**149.778**	**43.758**	**53.335**	**97.093**	**103.781**	**91.200**	**0.000**	**0.000**

Exhibit P-40, Budget Line Item Justification: PB 2020 Air Force	Date: February 2019
Appropriation / Budget Activity / Budget Sub Activity: 3010F: Aircraft Procurement, Air Force / BA 05: Modification of Inservice Aircraft / BSA 1: Strategic Aircraft	**P-1 Line Item Number / Title:** LAIRCM / Large Aircraft Infrared Countermeasures

ID Code (A=Service Ready, B=Not Service Ready): B	Program Elements for Code B Items: 0401134F	Other Related Program Elements: 0401134F

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-40a***	8629C130 / LARGE AIRCRAFT INFRARED COUNTERMEASURES C-130 (Capability Improvement)				- / 14.301	- / -	- / -	- / -	- / -	- / -
P-3a	1 / LARGE AIRCRAFT INFRARED COUNTERMEASURES C-130J (Capability Improvement)		B		- / 121.467	- / 4.046	- / 53.335	- / 0.000	- / 53.335	- / 53.335
P-3a	2 / LARGE AIRCRAFT INFRARED COUNTERMEASURES C-17 (Capability Improvement)		B		- / 145.091	- / 0.000	- / 69.868	- / 35.581	- / 0.000	- / 35.581
P-3a	3 / LARGE AIRCRAFT INFRARED COUNTERMEASURES C-5 (Capability Improvement)		B		- / 22.782	- / 0.000	- / 26.575	- / 8.177	- / 0.000	- / 8.177
P-40	**Total Gross/Weapon System Cost**				**- / 303.641**	**- / 4.046**	**- / 149.778**	**- / 43.758**	**- / 53.335**	**- / 97.093**

Exhibits Schedule					FY 2021	FY 2022	FY 2023	FY 2024	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-40a***	8629C130 / LARGE AIRCRAFT INFRARED COUNTERMEASURES C-130 (Capability Improvement)				- / -	- / -	- / -	- / -	- / -	- / 14.301
P-3a	1 / LARGE AIRCRAFT INFRARED COUNTERMEASURES C-130J (Capability Improvement)		B		- / 91.136	- / 91.200	- / 0.000	- / 0.000	- / 425.938	- / 840.457
P-3a	2 / LARGE AIRCRAFT INFRARED COUNTERMEASURES C-17 (Capability Improvement)		B		- / 12.645	- / 0.000	- / 0.000	- / 0.000	- / -	- / 263.185
P-3a	3 / LARGE AIRCRAFT INFRARED COUNTERMEASURES C-5 (Capability Improvement)		B		- / 0.000	- / 0.000	- / 0.000	- / 0.000	- / -	- / 57.534
P-40	**Total Gross/Weapon System Cost**				**- / 103.781**	**- / 91.200**	**- / 0.000**	**- / 0.000**	**- / 425.938**	**- / 1,175.477**

*** Although this is an Exhibit P-40a item, the actual exhibit is not included since all of the required information for this item is already being shown here.

*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:
Where applicable, justification for individual modifications is provided in the P-3A exhibits.

Exhibit P-3a, Individual Modification: PB 2020 Air Force		Date: February 2019
Appropriation / Budget Activity / Budget Sub Activity: 3010F / 05 / 1	**P-1 Line Item Number / Title:** LAIRCM / Large Aircraft Infrared Countermeasures	**Modification Number / Title:** 1 / LARGE AIRCRAFT INFRARED COUNTERMEASURES C-130J
ID Code (A=Service Ready, B=Not Service Ready) : B	**MDAP/MAIS Code:**	

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 *(Units in Each)*	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost *($ in Millions)*	121.467	4.046	53.335	0.000	53.335	53.335	91.136	91.200	0.000	0.000	425.938	840.457
Less PY Advance Procurement *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) *($ in Millions)*	121.467	4.046	53.335	0.000	53.335	53.335	91.136	91.200	0.000	0.000	425.938	840.457
Plus CY Advance Procurement *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Total Obligation Authority *($ in Millions)*	**121.467**	**4.046**	**53.335**	**0.000**	**53.335**	**53.335**	**91.136**	**91.200**	**0.000**	**0.000**	**425.938**	**840.457**
(The following Resource Summary rows are for informational purposes only. The corresponding budget requests are documented elsewhere.)												
Initial Spares *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Unit Cost *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-

Description:

The Large Aircraft Infrared Countermeasures (LAIRCM) system significantly improves defensive capability for the C-130J and EC-130J to counter the proliferating Infrared (IR) man-portable air defense systems (MANPADS) missile threats. The system is fully automatic following power-up. The LAIRCM kit is housed behind a turret assembly and functions using missile warning sensors (MWS), 2 Turret Assemblies, a control indicator unit (CIU), a colorless eye-safe multiband laser, and a system processor to detect, track, and counter incoming IR missiles. As Line Replaceable Units (LRUs) are updated, LAIRCM will be updated with the latest configuration of LRUs.

This program includes costs for the following C-130J aircraft variants: C-130J stretch aircraft, C-130J short aircraft.

This funding includes Rapid Global Mobility (RGM) platform related activities including but not limited to fielding actions such as kit buys, installation and support equipment.

This program includes efforts needed to procure and install retrofit kits for 134 aircraft and deploy the system and support LAIRCM. These efforts include, but not limited to, hardware procurement, installation, installation support, initial spares, support equipment, Government Furnished Equipment (GFE) and GFE repairs, Interim Contractor Support (ICS), depot stand up, mod-line repairs, Systems Engineering and Program Management (SEPM), Failure Reporting and Corrective Analysis Support (FRACAS), Technical Orders, Other Government Costs (OGCs), and Program Management and Administration (PMA) costs. Costs for the identification, review, monitoring, and mitigation of items impacted by diminishing manufacturing sources (DMS) are included. Additionally, "change orders" include NRE/replacement costs for equipment updates to increase reliability, availability, and maintainability of LAIRCM group B components as identified during the fiscal year. To date, 41 Block 20 to Block 30 installs are complete with the 7 remaining underway. FY19, FY20, and beyond will support upgrading all aircraft to Block 30.

Funding may be used to address (DMS) issues and software corrections or minor improvements. The LAIRCM DMS program includes all activities associated with monitoring and identifying DMS issues.

FY14 included procurement of NexGen capabilities for five EC-130Js (Guard) LAIRCM Group B kits, along with five Group A kits and installs. Funding will also include the use of on hand quantities of LAIRCM components with procurement of NexGen capability (MWS and processor from UV to IR).
LAIRCM kit quantities purchased are dependent on the unit cost and/or the installation cost of the kits. On hand quantities of excess LAIRCM components procured for other platforms will be utilized to complete Group B Kits.

FY19 OCO funding of $53.330M is planned for the C-130J (Short aircraft) LAIRCM Block 30 NRE & TKI efforts and the procurement of Group A and B production kits with installs.

Exhibit P-3a, Individual Modification: PB 2020 Air Force		Date: February 2019
Appropriation / Budget Activity / Budget Sub Activity: 3010F / 05 / 1	**P-1 Line Item Number / Title:** LAIRCM / Large Aircraft Infrared Countermeasures	**Modification Number / Title:** 1 / LARGE AIRCRAFT INFRARED COUNTERMEASURES C-130J
ID Code (A=Service Ready, B=Not Service Ready) : B	**MDAP/MAIS Code:**	

According to SAF-AQ on 03 Jan 2019, FY23 funds will be $0.00 regarding base dollars.

Milestone/Development Status

Development on the C-130J platform complete.

Secondary Distribution		FY 2018	FY 2019	FY 2020 Base	FY 2020 OCO	FY 2020 Total	FY 2021	FY 2022	FY 2023	FY 2024
AF	Quantity	-	-	-	-	-	-	-	-	-
	Total Obligation Authority	4.046	53.335	-	53.335	53.335	91.136	91.200	0.000	0.000
Total: Secondary Distribution	**Quantity**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**
	Total Obligation Authority	**4.046**	**53.335**	**0.000**	**53.335**	**53.335**	**91.136**	**91.200**	**0.000**	**0.000**

Exhibit P-3a, Individual Modification: PB 2020 Air Force		Date: February 2019
Appropriation / Budget Activity / Budget Sub Activity: 3010F / 05 / 1	**P-1 Line Item Number / Title:** LAIRCM / Large Aircraft Infrared Countermeasures	**Modification Number / Title:** 1 / LARGE AIRCRAFT INFRARED COUNTERMEASURES C-130J
ID Code (A=Service Ready, B=Not Service Ready) : B	**MDAP/MAIS Code:**	
Models of Systems Affected: C130J	**Modification Type:** Capability Improvement	**Related RDT&E PEs:** 0401134F

Financial Plan	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
	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												
Modification Item 1 of 3: Basic Js (Block 20)												
A Kits												
Recurring												
Basic Js (Block 20):INSTALL KITS Group A (Active)	32 / 13.275	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	32 / 13.275
Basic Js (Block 20):INSTALL KITS Group A (Guard)	- / 0.000	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 0.000
Subtotal: Recurring	*- / 13.275*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / 13.275*
B Kits												
Recurring												
Basic Js (Block 20):EQUIPMENT Group B (Active)	32 / 41.386	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	32 / 41.386
Basic Js (Block 20):EQUIPMENT Group B (Guard)	0 / 0.000	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	0 / 0.000
Subtotal: Recurring	*- / 41.386*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / 41.386*
Subtotal: Basic Js (Block 20)	*- / 54.661*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / 54.661*
Modification Item 2 of 3: Basic Js (Block 30)												
A Kits												
Recurring												
Basic Js (Block 30):INSTALL KITS Group A (Active)	1 / 0.688	- / -	6 / 6.515	- / -	12 / 9.610	12 / 9.610	12 / 15.738	12 / 18.184	0 / 0.000	- / -	87 / 48.804	130 / 99.539
Subtotal: Recurring	*- / 0.688*	*- / -*	*- / 6.515*	*- / -*	*- / 9.610*	*- / 9.610*	*- / 15.738*	*- / 18.184*	*- / 0.000*	*- / -*	*- / 48.804*	*- / 99.539*
B Kits												
Recurring												
Basic Js (Block 30):EQUIPMENT Group B (Active)	1 / 3.400	- / -	6 / 12.037	- / -	12 / 24.233	12 / 24.233	12 / 26.970	12 / 27.692	0 / 0.000	- / 0.000	86 / 183.651	129 / 277.983
Subtotal: Recurring	*- / 3.400*	*- / -*	*- / 12.037*	*- / -*	*- / 24.233*	*- / 24.233*	*- / 26.970*	*- / 27.692*	*- / 0.000*	*- / 0.000*	*- / 183.651*	*- / 277.983*
Subtotal: Basic Js (Block 30)	*- / 4.088*	*- / -*	*- / 18.552*	*- / -*	*- / 33.843*	*- / 33.843*	*- / 42.708*	*- / 45.876*	*- / 0.000*	*- / 0.000*	*- / 232.455*	*- / 377.522*
Modification Item 3 of 3: EC-130Js												
A Kits												
Recurring												
EC-130Js:INSTALL KITS Group A (Active)	5 / 3.800	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	5 / 3.800
Subtotal: Recurring	*- / 3.800*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / 3.800*
B Kits												
Recurring												

Exhibit P-3a, Individual Modification: PB 2020 Air Force		Date: February 2019
Appropriation / Budget Activity / Budget Sub Activity: 3010F / 05 / 1	**P-1 Line Item Number / Title:** LAIRCM / Large Aircraft Infrared Countermeasures	**Modification Number / Title:** 1 / LARGE AIRCRAFT INFRARED COUNTERMEASURES C-130J
ID Code (A=Service Ready, B=Not Service Ready) : B	**MDAP/MAIS Code:**	
Models of Systems Affected: C130J	**Modification Type:** Capability Improvement	**Related RDT&E PEs:** 0401134F

Financial Plan	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
	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)*
EC-130Js:EQUIPMENT Group B (Active)	5 / 11.900	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	5 / 11.900
Subtotal: Recurring	*- / 11.900*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / 11.900*
Subtotal: EC-130Js	*- / 15.700*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / 15.700*
Subtotal: Procurement, All Modification Items	*- / 74.449*	*- / -*	*- / 18.552*	*- / -*	*- / 33.843*	*- / 33.843*	*- / 42.708*	*- / 45.876*	*- / 0.000*	*- / 0.000*	*- / 232.455*	*- / 447.883*
Support *(All Modification Items)*												
GROUP A: TOTAL NONRECURRING	- / 11.626	- / 4.046	- / 8.001	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 23.673
GROUP B: TOTAL NONRECURRING	- / -	- / -	- / 19.187	- / -	- / -	- / -	- / -	- / 8.238	- / 0.000	- / 0.000	- / -	- / 27.425
Data	- / 0.892	- / -	- / 0.418	- / -	- / 0.315	- / 0.315	- / 0.718	- / 0.323	- / 0.000	- / -	- / 0.089	- / 2.755
SIM/TRAINER	- / -	- / -	- / -	- / -	- / 4.681	- / 4.681	- / 3.435	- / 3.473	- / -	- / -	- / -	- / 11.589
SUPPORT-EQUIP	- / 1.500	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 1.500
Change Orders	- / 2.283	- / -	- / 0.554	- / -	- / 0.492	- / 0.492	- / 2.178	- / 2.541	- / 0.000	- / -	- / 19.356	- / 27.404
ICS-Labor	- / 1.052	- / -	- / 0.287	- / -	- / 0.626	- / 0.626	- / 0.643	- / 0.661	- / -	- / -	- / 7.199	- / 10.468
PMA - Contractor Services	- / -	- / -	- / 4.012	- / -	- / 0.814	- / 0.814	- / 0.228	- / 0.234	- / 0.000	- / -	- / 3.968	- / 9.256
OTHER GOVT	- / 8.650	- / -	- / 1.214	- / -	- / 12.564	- / 12.564	- / 24.942	- / 7.395	- / 0.000	- / -	- / -	- / 54.765
PMA - Other Gov't Costs	- / 2.753	- / -	- / -	- / -	- / -	- / -	- / 1.526	- / 1.710	- / 0.000	- / -	- / 15.293	- / 21.282
Subtotal: Support	*- / 28.756*	*- / 4.046*	*- / 33.673*	*- / -*	*- / 19.492*	*- / 19.492*	*- / 33.670*	*- / 24.575*	*- / 0.000*	*- / 0.000*	*- / 45.905*	*- / 190.117*
Installation												
Modification Item 1 of 3: Basic Js (Block 20)	28 / 12.493	4 / 0.000	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	32 / 12.493
Modification Item 2 of 3: Basic Js (Block 30)	- / -	- / -	1 / 1.110	- / -	- / -	- / -	7 / 14.758	12 / 20.749	- / -	- / -	109 / 147.578	129 / 184.195
Modification Item 3 of 3: EC-130Js	5 / 5.769	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	5 / 5.769
Subtotal: Installation	*33 / 18.262*	*4 / 0.000*	*1 / 1.110*	*- / -*	*- / -*	*- / -*	*7 / 14.758*	*12 / 20.749*	*- / -*	*- / -*	*109 / 147.578*	*166 / 202.457*
Total												
Total Cost (Procurement + Support + Installation)	**121.467**	**4.046**	**53.335**	**0.000**	**53.335**	**53.335**	**91.136**	**91.200**	**0.000**	**0.000**	**425.938**	**840.457**

Exhibit P-3a, Individual Modification: PB 2020 Air Force		Date: February 2019
Appropriation / Budget Activity / Budget Sub Activity: 3010F / 05 / 1	**P-1 Line Item Number / Title:** LAIRCM / Large Aircraft Infrared Countermeasures	**Modification Number / Title:** 1 / LARGE AIRCRAFT INFRARED COUNTERMEASURES C-130J

ID Code (A=Service Ready, B=Not Service Ready) : B

MDAP/MAIS Code:

Modification Item 1 of 3: Basic Js (Block 20)

Manufacturer Information

Manufacturer Name: NORTHROP GRUMMAN

Manufacturer Location: ROLLING MEADOWS

Administrative Leadtime *(in Months)*: 6

Production Leadtime *(in Months)*: 16

Dates	FY 2018	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024
Contract Dates							
Delivery Dates							

Installation Information

Method of Implementation: Depot

Installation Cost	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
	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)*
Prior Years	28 / 12.493	4 / 0.000	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	32 / 12.493
FY 2018	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2019	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2020	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2021	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2022	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2023	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2024	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
To Complete	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
Total	28 / 12.493	4 / 0.000	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	32 / 12.493

Installation Schedule

	PYS	FY 2018				FY 2019				FY 2020				FY 2021				FY 2022				FY 2023				FY 2024				TC	Tot
		Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4		
In	28	1	1	1	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0	32
Out	27	1	1	1	1	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0	32

Exhibit P-3a, Individual Modification: PB 2020 Air Force		Date: February 2019
Appropriation / Budget Activity / Budget Sub Activity: 3010F / 05 / 1	**P-1 Line Item Number / Title:** LAIRCM / Large Aircraft Infrared Countermeasures	**Modification Number / Title:** 1 / LARGE AIRCRAFT INFRARED COUNTERMEASURES C-130J

ID Code (A=Service Ready, B=Not Service Ready) : B

MDAP/MAIS Code:

Modification Item 2 of 3: Basic Js (Block 30)

Manufacturer Information

Manufacturer Name: Northrop Grumman

Manufacturer Location: ROLLING MEADOWS

Administrative Leadtime *(in Months)*: 6

Production Leadtime *(in Months)*: 16

Dates	FY 2018	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024
Contract Dates		Apr 2019	Apr 2020	Apr 2021	Apr 2022		
Delivery Dates		Aug 2020	Aug 2021	Aug 2022	Aug 2023		

Installation Information

Method of Implementation: Contractor Facility

Installation Cost	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
	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)*
Prior Years	- / -	- / -	1 / 1.110	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	1 / 1.110
FY 2018	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2019	- / -	- / -	- / -	- / -	- / -	- / -	6 / 12.650	- / -	- / -	- / -	- / -	6 / 12.650
FY 2020	- / -	- / -	- / -	- / -	- / -	- / -	1 / 2.108	11 / 19.199	- / -	- / -	- / -	12 / 21.307
FY 2021	- / -	- / -	- / -	- / -	- / -	- / -	- / -	1 / 1.550	- / -	- / -	11 / 17.015	12 / 18.565
FY 2022	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	12 / 18.184	12 / 18.184
FY 2023	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2024	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
To Complete	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	86 / 112.379	86 / 112.379
Total	- / -	- / -	1 / 1.110	- / -	- / -	- / -	7 / 14.758	12 / 20.749	- / -	- / -	109 / 147.578	129 / 184.195

Installation Schedule

		FY 2018				FY 2019				FY 2020				FY 2021				FY 2022				FY 2023				FY 2024					
	PYS	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	TC	Tot
In	0	-	-	-	-	-	-	1	-	-	-	-	-	-	3	2	2	3	3	3	3	0	0	0	0	0	0	0	0	109	129
Out	0	-	-	-	-	-	-	1	-	-	-	-	-	-	3	2	2	3	3	3	3	0	0	0	0	0	0	0	0	109	129

Exhibit P-3a, Individual Modification: PB 2020 Air Force		Date: February 2019
Appropriation / Budget Activity / Budget Sub Activity: 3010F / 05 / 1	**P-1 Line Item Number / Title:** LAIRCM / Large Aircraft Infrared Countermeasures	**Modification Number / Title:** 1 / LARGE AIRCRAFT INFRARED COUNTERMEASURES C-130J

ID Code (A=Service Ready, B=Not Service Ready) : B

MDAP/MAIS Code:

Modification Item 3 of 3: EC-130Js

Manufacturer Information

Manufacturer Name: Northrop Grumman

Manufacturer Location: Rolling Meadows

Administrative Leadtime *(in Months)*: 6

Production Leadtime *(in Months)*: 12

Dates	FY 2018	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024
Contract Dates							
Delivery Dates							

Installation Information

Method of Implementation: Depot

Installation Cost	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
	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)*
Prior Years	5 / 5.769	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	5 / 5.769
FY 2018	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2019	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2020	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2021	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2022	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2023	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2024	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
To Complete	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
Total	5 / 5.769	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	5 / 5.769

Installation Schedule

	PYS	FY 2018				FY 2019				FY 2020				FY 2021				FY 2022				FY 2023				FY 2024				TC	Tot
		Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4		
In	5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0	5
Out	5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0	5

Exhibit P-3a, Individual Modification: PB 2020 Air Force		Date: February 2019
Appropriation / Budget Activity / Budget Sub Activity: 3010F / 05 / 1	**P-1 Line Item Number / Title:** LAIRCM / Large Aircraft Infrared Countermeasures	**Modification Number / Title:** 2 / LARGE AIRCRAFT INFRARED COUNTERMEASURES C-17
ID Code (A=Service Ready, B=Not Service Ready) : B	**MDAP/MAIS Code:**	

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 *(Units in Each)*	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost *($ in Millions)*	145.091	0.000	69.868	35.581	0.000	35.581	12.645	0.000	0.000	0.000	-	263.185
Less PY Advance Procurement *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) *($ in Millions)*	145.091	0.000	69.868	35.581	0.000	35.581	12.645	0.000	0.000	0.000	-	263.185
Plus CY Advance Procurement *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Total Obligation Authority *($ in Millions)*	**145.091**	**0.000**	**69.868**	**35.581**	**0.000**	**35.581**	**12.645**	**0.000**	**0.000**	**0.000**	**-**	**263.185**
(The following Resource Summary rows are for informational purposes only. The corresponding budget requests are documented elsewhere.)												
Initial Spares *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Unit Cost *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-

Description:

The Large Aircraft Infrared Countermeasures (LAIRCM) system provides a significantly improved defensive capability for the Department of Defense to counter the proliferating infrared (IR) man-portable air defense systems (MANPADS) missile threats by detecting, tracking, and countering incoming IR missiles. This system is fully autonomous following power-up and consists of Group A aircraft modification kits and Group B hardware. Group B hardware for the LAIRCM system [AN/AQQ-24(V)] currently consists of missile warning sensors; laser transmitter assemblies; a control indicator unit; a system processor, and repeaters, as needed by the platform.

LAIRCM enhancements and retrofits to the current configuration are planned for purchase and installation from FY16 and beyond. These enhancements include retrofits to bring the C-17 fleet to the LAIRCM Block 30 configuration and will continue to provide updates using new technology that would advance the system to further upcoming configurations. Other components are slated to be replaced with updated versions that address diminishing manufacturing sources (DMS) and reliability efforts and Life of Type Buys(LTB).

The "Change Orders" line in the funding table includes DMS costs for the identification, review, and monitoring of items with high DMS risk potential, classification of identified items according to criticality, identification of alternatives for items having high DMS risks, and non-recurring engineering (NRE)/replacement cost for DMS components. Additionally, "change orders" include NRE/replacement costs for equipment updates to increase reliability, availability, and maintainability of LAIRCM group B components as identified during the fiscal year.

This program includes all efforts needed to procure, field, and support LAIRCM. These efforts include, but are not limited to, Hardware procurement, installation, installation support, initial and readiness spares, support equipment, government furnished equipment (GFE) and GFE repairs, Interim Contractor Support (ICS), depot standup, Systems Engineering and Program Management (SEPM), Failure Reporting and Corrective Analysis Support (FRACAS), Other Government Costs (OGCs), Pre-planned Product Improvements (P3I), program management and administration (PMA) costs, simulators and data.

Training Systems: Support for Simulator upgrades to the current LAIRCM Block configuration will be preformed as part of this effort.

Milestone/Development Status

Development is complete.

Secondary Distribution		FY 2018	FY 2019	FY 2020 Base	FY 2020 OCO	FY 2020 Total	FY 2021	FY 2022	FY 2023	FY 2024
AF	Quantity	-	-	-	-	-	-	-	-	-

Exhibit P-3a, Individual Modification: PB 2020 Air Force		Date: February 2019
Appropriation / Budget Activity / Budget Sub Activity: 3010F / 05 / 1	**P-1 Line Item Number / Title:** LAIRCM / Large Aircraft Infrared Countermeasures	**Modification Number / Title:** 2 / LARGE AIRCRAFT INFRARED COUNTERMEASURES C-17
ID Code (A=Service Ready, B=Not Service Ready) : B	**MDAP/MAIS Code:**	

Secondary Distribution		FY 2018	FY 2019	FY 2020 Base	FY 2020 OCO	FY 2020 Total	FY 2021	FY 2022	FY 2023	FY 2024
	Total Obligation Authority	-	69.868	35.581	0.000	35.581	12.645	0.000	-	-
Total: Secondary Distribution	**Quantity**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**
	Total Obligation Authority	**0.000**	**69.868**	**35.581**	**0.000**	**35.581**	**12.645**	**0.000**	**0.000**	**0.000**

Exhibit P-3a, Individual Modification: PB 2020 Air Force		Date: February 2019
Appropriation / Budget Activity / Budget Sub Activity: 3010F / 05 / 1	**P-1 Line Item Number / Title:** LAIRCM / Large Aircraft Infrared Countermeasures	**Modification Number / Title:** 2 / LARGE AIRCRAFT INFRARED COUNTERMEASURES C-17
ID Code (A=Service Ready, B=Not Service Ready) : B	**MDAP/MAIS Code:**	
Models of Systems Affected: C-17	**Modification Type:** Capability Improvement	**Related RDT&E PEs:** 0401134F

Financial Plan	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
	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												
Modification Item 1 of 3: Block 20 to Block 30												
A Kits												
Recurring												
Block 20 to Block 30:INSTALL KITS Group A (Active)	22 / 0.573	- / -	22 / 0.279	22 / 0.279	- / 0.000	22 / 0.279	7 / 0.118	- / -	- / -	- / -	- / -	73 / 1.249
Subtotal: Recurring	*- / 0.573*	*- / -*	*- / 0.279*	*- / 0.279*	*- / 0.000*	*- / 0.279*	*- / 0.118*	*- / -*	*- / -*	*- / -*	*- / -*	*- / 1.249*
B Kits												
Recurring												
Block 20 to Block 30:EQUIPMENT Group B (Active)	91 / 86.791	- / -	54 / 56.626	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	145 / 143.417
Subtotal: Recurring	*- / 86.791*	*- / -*	*- / 56.626*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / 143.417*
Subtotal: Block 20 to Block 30	*- / 87.364*	*- / -*	*- / 56.905*	*- / 0.279*	*- / 0.000*	*- / 0.279*	*- / 0.118*	*- / -*	*- / -*	*- / -*	*- / -*	*- / 144.666*
Modification Item 2 of 3: Block 20 to Block 30/depot												
A Kits												
Recurring												
Block 20 to Block 30/depot:INSTALL KITS Group A (Active)	22 / 0.572	- / -	22 / 0.278	22 / 0.278	- / -	22 / 0.278	6 / 0.102	- / -	- / -	- / -	- / -	72 / 1.230
Subtotal: Recurring	*- / 0.572*	*- / -*	*- / 0.278*	*- / 0.278*	*- / -*	*- / 0.278*	*- / 0.102*	*- / -*	*- / -*	*- / -*	*- / -*	*- / 1.230*
Subtotal: Block 20 to Block 30/depot	*- / 0.572*	*- / -*	*- / 0.278*	*- / 0.278*	*- / -*	*- / 0.278*	*- / 0.102*	*- / -*	*- / -*	*- / -*	*- / -*	*- / 1.230*
Modification Item 3 of 3: Block 30- to Block 30												
A Kits												
Recurring												
Block 30- to Block 30:INSTALL KITS Group A (Active)	- / -	- / -	- / -	- / -	- / -	- / -	15 / 0.000	14 / 0.000	- / -	- / -	- / -	29 / 0.000
Subtotal: Recurring	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / 0.000*	*- / 0.000*	*- / -*	*- / -*	*- / -*	*- / 0.000*
B Kits												
Recurring												
Block 30- to Block 30:EQUIPMENT Group B (Active)	- / -	- / -	- / -	15 / 7.631	- / -	15 / 7.631	14 / 7.395	- / -	- / -	- / -	- / -	29 / 15.026
Subtotal: Recurring	*- / -*	*- / -*	*- / -*	*- / 7.631*	*- / -*	*- / 7.631*	*- / 7.395*	*- / -*	*- / -*	*- / -*	*- / -*	*- / 15.026*
Subtotal: Block 30- to Block 30	*- / -*	*- / -*	*- / -*	*- / 7.631*	*- / -*	*- / 7.631*	*- / 7.395*	*- / 0.000*	*- / -*	*- / -*	*- / -*	*- / 15.026*
Subtotal: Procurement, All Modification Items	*- / 87.936*	*- / -*	*- / 57.183*	*- / 8.188*	*- / 0.000*	*- / 8.188*	*- / 7.615*	*- / 0.000*	*- / -*	*- / -*	*- / -*	*- / 160.922*
Support *(All Modification Items)*												

Exhibit P-3a, Individual Modification: PB 2020 Air Force		Date: February 2019
Appropriation / Budget Activity / Budget Sub Activity: 3010F / 05 / 1	**P-1 Line Item Number / Title:** LAIRCM / Large Aircraft Infrared Countermeasures	**Modification Number / Title:** 2 / LARGE AIRCRAFT INFRARED COUNTERMEASURES C-17
ID Code (A=Service Ready, B=Not Service Ready) : B	**MDAP/MAIS Code:**	
Models of Systems Affected: C-17	**Modification Type:** Capability Improvement	**Related RDT&E PEs:** 0401134F

Financial Plan	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
	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)*
Change Orders	- / 4.243	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 4.243
Data	- / 4.453	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 4.453
SIM/TRAINER	0 / 0.390	- / -	- / -	0 / 19.100	- / -	0 / 19.100	- / -	- / -	- / -	- / -	- / -	0 / 19.490
SUPPORT-EQUIP	- / 0.080	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 0.080
Mod of Spares	- / 11.510	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 11.510
ICS-Labor	- / 4.164	- / -	- / 1.468	- / 1.000	- / -	- / 1.000	- / 1.045	- / -	- / -	- / -	- / -	- / 7.677
PMA - Contractor Services	- / 2.443	- / -	- / 0.346	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 2.789
OTHER GOVT	- / 24.890	- / -	- / 5.693	- / 1.897	- / -	- / 1.897	- / 2.342	- / -	- / -	- / -	- / -	- / 34.822
Subtotal: Support	*0 / 52.173*	*- / -*	*- / 7.507*	*0 / 21.997*	*- / -*	*0 / 21.997*	*- / 3.387*	*- / -*	*- / -*	*- / -*	*- / -*	*0 / 85.064*
Installation												
Modification Item 1 of 3: Block 20 to Block 30	0 / 2.491	- / -	5 / 2.589	21 / 2.698	- / -	21 / 2.698	24 / 0.822	23 / 0.000	- / -	- / -	- / -	73 / 8.600
Modification Item 2 of 3: Block 20 to Block 30/depot	0 / 2.491	- / -	4 / 2.589	22 / 2.698	- / -	22 / 2.698	24 / 0.821	22 / 0.000	- / -	- / -	- / -	72 / 8.599
Modification Item 3 of 3: Block 30- to Block 30	- / -	- / -	- / -	- / -	- / -	- / -	0 / 0.000	29 / 0.000	- / -	- / -	- / -	29 / 0.000
Subtotal: Installation	*- / 4.982*	*- / -*	*9 / 5.178*	*43 / 5.396*	*- / -*	*43 / 5.396*	*48 / 1.643*	*74 / 0.000*	*- / -*	*- / -*	*- / -*	*174 / 17.199*
Total												
Total Cost (Procurement + Support + Installation)	**145.091**	**0.000**	**69.868**	**35.581**	**0.000**	**35.581**	**12.645**	**0.000**	**0.000**	**0.000**	**-**	**263.185**

Exhibit P-3a, Individual Modification: PB 2020 Air Force		Date: February 2019
Appropriation / Budget Activity / Budget Sub Activity: 3010F / 05 / 1	**P-1 Line Item Number / Title:** LAIRCM / Large Aircraft Infrared Countermeasures	**Modification Number / Title:** 2 / LARGE AIRCRAFT INFRARED COUNTERMEASURES C-17

ID Code (A=Service Ready, B=Not Service Ready) : B

MDAP/MAIS Code:

Modification Item 1 of 3: Block 20 to Block 30

Manufacturer Information

Manufacturer Name: The Boeing Company

Manufacturer Location: Long Beach, Ca

Administrative Leadtime *(in Months)*: 6

Production Leadtime *(in Months)*: 12

Dates	FY 2018	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024
Contract Dates		May 2019	May 2020	May 2021	May 2022		
Delivery Dates		May 2020	May 2021	May 2022	May 2023		

Installation Information

Method of Implementation: Contractor Facility

Installation Cost	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
	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)*
Prior Years	0 / 2.491	- / -	5 / 0.000	17 / 0.000	- / -	17 / 0.000	- / -	- / -	- / -	- / -	- / -	22 / 2.491
FY 2018	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2019	- / -	- / -	0 / 2.589	4 / 0.000	- / -	4 / 0.000	18 / 0.000	- / -	- / -	- / -	- / -	22 / 2.589
FY 2020	- / -	- / -	- / -	0 / 2.698	- / -	0 / 2.698	6 / 0.000	16 / 0.000	- / -	- / -	- / -	22 / 2.698
FY 2021	- / -	- / -	- / -	- / -	- / -	- / -	0 / 0.822	7 / 0.000	- / -	- / -	- / -	7 / 0.822
FY 2022	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2023	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2024	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
To Complete	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
Total	0 / 2.491	- / -	5 / 2.589	21 / 2.698	- / -	21 / 2.698	24 / 0.822	23 / 0.000	- / -	- / -	- / -	73 / 8.600

Installation Schedule

	PYS	FY 2018				FY 2019				FY 2020				FY 2021				FY 2022				FY 2023				FY 2024				TC	Tot
		Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4		
In	0	-	-	-	-	-	-	-	5	5	5	5	6	6	6	6	6	6	6	6	5	-	-	-	-	-	-	-	-	0	73
Out	0	-	-	-	-	-	-	-	5	5	5	5	6	6	6	6	6	6	6	6	5	-	-	-	-	-	-	-	-	0	73

Exhibit P-3a, Individual Modification: PB 2020 Air Force		Date: February 2019
Appropriation / Budget Activity / Budget Sub Activity: 3010F / 05 / 1	**P-1 Line Item Number / Title:** LAIRCM / Large Aircraft Infrared Countermeasures	**Modification Number / Title:** 2 / LARGE AIRCRAFT INFRARED COUNTERMEASURES C-17

ID Code (A=Service Ready, B=Not Service Ready) : B

MDAP/MAIS Code:

Modification Item 2 of 3: Block 20 to Block 30/depot

Manufacturer Information

Manufacturer Name: The Boeing Company

Manufacturer Location: Robins AFB

Administrative Leadtime *(in Months)*: 6

Production Leadtime *(in Months)*: 12

Dates	FY 2018	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024
Contract Dates		May 2019	May 2020	May 2021	May 2022		
Delivery Dates		May 2020	May 2021	May 2022	May 2023		

Installation Information

Method of Implementation: Depot

Installation Cost	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
	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)*
Prior Years	0 / 2.491	- / -	4 / 0.000	18 / 0.000	- / -	18 / 0.000	- / -	- / -	- / -	- / -	- / -	22 / 2.491
FY 2018	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2019	- / -	- / -	0 / 2.589	4 / 0.000	- / -	4 / 0.000	18 / 0.000	- / -	- / -	- / -	- / -	22 / 2.589
FY 2020	- / -	- / -	- / -	0 / 2.698	- / -	0 / 2.698	6 / 0.000	16 / 0.000	- / -	- / -	- / -	22 / 2.698
FY 2021	- / -	- / -	- / -	- / -	- / -	- / -	0 / 0.821	6 / 0.000	- / -	- / -	- / -	6 / 0.821
FY 2022	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2023	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2024	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
To Complete	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
Total	0 / 2.491	- / -	4 / 2.589	22 / 2.698	- / -	22 / 2.698	24 / 0.821	22 / 0.000	- / -	- / -	- / -	72 / 8.599

Installation Schedule

	PYS	FY 2018				FY 2019				FY 2020				FY 2021				FY 2022				FY 2023				FY 2024				TC	Tot
		Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4		
In	0	-	-	-	-	-	-	-	4	4	6	6	6	6	6	6	6	6	6	6	4	-	-	-	-	-	-	-	-	0	72
Out	0	-	-	-	-	-	-	-	4	4	6	6	6	6	6	6	6	6	6	6	4	-	-	-	-	-	-	-	-	0	72

Exhibit P-3a, Individual Modification: PB 2020 Air Force		Date: February 2019
Appropriation / Budget Activity / Budget Sub Activity: 3010F / 05 / 1	**P-1 Line Item Number / Title:** LAIRCM / Large Aircraft Infrared Countermeasures	**Modification Number / Title:** 2 / LARGE AIRCRAFT INFRARED COUNTERMEASURES C-17

ID Code (A=Service Ready, B=Not Service Ready) : B

MDAP/MAIS Code:

Modification Item 3 of 3: Block 30- to Block 30

Manufacturer Information

Manufacturer Name: N/A

Manufacturer Location: N/A

Administrative Leadtime *(in Months)*: 0

Production Leadtime *(in Months)*: 0

Dates	FY 2018	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024
Contract Dates							
Delivery Dates							

Installation Information

Method of Implementation: Depot

Installation Cost	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
	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)*
Prior Years	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2018	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2019	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2020	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2021	- / -	- / -	- / -	- / -	- / -	- / -	0 / 0.000	15 / 0.000	- / -	- / -	- / -	15 / 0.000
FY 2022	- / -	- / -	- / -	- / -	- / -	- / -	- / -	14 / 0.000	- / -	- / -	- / -	14 / 0.000
FY 2023	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2024	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
To Complete	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
Total	- / -	- / -	- / -	- / -	- / -	- / -	0 / 0.000	29 / 0.000	- / -	- / -	- / -	29 / 0.000

Installation Schedule

	PYS	FY 2018				FY 2019				FY 2020				FY 2021				FY 2022				FY 2023				FY 2024				TC	Tot
		Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4		
In	0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	18	11	-	-	-	-	-	-	-	-	-	-	0	29
Out	0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	18	11	-	-	-	-	-	-	-	-	-	-	0	29

Exhibit P-3a, Individual Modification: PB 2020 Air Force		Date: February 2019
Appropriation / Budget Activity / Budget Sub Activity: 3010F / 05 / 1	**P-1 Line Item Number / Title:** LAIRCM / Large Aircraft Infrared Countermeasures	**Modification Number / Title:** 3 / LARGE AIRCRAFT INFRARED COUNTERMEASURES C-5
ID Code (A=Service Ready, B=Not Service Ready) : B	**MDAP/MAIS Code:**	

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 *(Units in Each)*	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost *($ in Millions)*	22.782	0.000	26.575	8.177	0.000	8.177	0.000	0.000	0.000	0.000	-	57.534
Less PY Advance Procurement *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) *($ in Millions)*	22.782	0.000	26.575	8.177	0.000	8.177	0.000	0.000	0.000	0.000	-	57.534
Plus CY Advance Procurement *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Total Obligation Authority *($ in Millions)*	**22.782**	**0.000**	**26.575**	**8.177**	**0.000**	**8.177**	**0.000**	**0.000**	**0.000**	**0.000**	**-**	**57.534**
(The following Resource Summary rows are for informational purposes only. The corresponding budget requests are documented elsewhere.)												
Initial Spares *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Unit Cost *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-

Description:

The Large Aircraft Infrared Counter Measure (LAIRCM) Block 30, increases aircrew/aircraft survivability against Infrared (IR) Man-Portable Air Defense (MANPAD) System Missile threats. The system is fully automatic following power-up and consists of Group 'A' aircraft modification Kits (full/open competition) and Group 'B' aircraft Modification Kits (sole sourced to Northrop Grumman). LAIRCM Block 30 modified aircraft will include NexGen Infrared (IR) Missile Warning System (MWS) infrared sensors and upgraded LRU's, resulting in a total of 52 aircraft modified into the LAIRCM Block 30 configuration. The program includes all efforts needed to procure, fabricate, test, integrate, field and support LAIRCM. The efforts include, hardware procurement, installation, installation support, initial spares, Support Equipment (SE), Government Furnished Equipment (GFE) and GFE repairs, Interim Contractor Support (ICS), depot stand up, mod-line repairs, System Engineering and Program Management (SE/PM), Failure Reporting and Corrective Analysis Support (FRACAS), Technical Orders, Other Government Costs (OGS), Program Management and Administration (PMA) costs, and Non-Recurring Engineering (NRE) costs for equipment updates to increase reliability, availability and maintainability. This funding request will support potential DMS and obsolescence solutions, to include if optimal, life of type buys or bridge buys limited to the program of record quantity.

FY17 OCO Block 30 funds $22.782M include the fabrication and integration of 12 LAIRCM Block 30 configured units.
FY19 OCO Block 30 funds $26.575M include the fabrication and integration of 15 LAIRCM Block 30 units as well as testing, installation, and delivery of 27 LAIRCM Block 30 configured aircraft.
FY20 Baseline Block 30 funds $8.177M include the fabrication, integration, installation, and delivery of 6 LAIRCM Block 30 configured aircraft.

Available funds in this modification are used for program management administration, change orders, and other government costs such as travel, directorate support, government furnished equipment (GFE), and over and above costs.

NOTE: LAIRCM Block 20 installations were completed 6 Jun 2016 on all C-5 aircraft.

Milestone/Development Status

Development is complete.

Secondary Distribution		FY 2018	FY 2019	FY 2020 Base	FY 2020 OCO	FY 2020 Total	FY 2021	FY 2022	FY 2023	FY 2024
AF	Quantity	-	-	-	-	-	-	-	-	-
	Total Obligation Authority	-	26.575	8.177	-	8.177	0.000	0.000	-	-

Exhibit P-3a, Individual Modification: PB 2020 Air Force		Date: February 2019
Appropriation / Budget Activity / Budget Sub Activity: 3010F / 05 / 1	**P-1 Line Item Number / Title:** LAIRCM / Large Aircraft Infrared Countermeasures	**Modification Number / Title:** 3 / LARGE AIRCRAFT INFRARED COUNTERMEASURES C-5

ID Code (A=Service Ready, B=Not Service Ready) : B

MDAP/MAIS Code:

Secondary Distribution		FY 2018	FY 2019	FY 2020 Base	FY 2020 OCO	FY 2020 Total	FY 2021	FY 2022	FY 2023	FY 2024
Total: Secondary Distribution	Quantity	-	-	-	-	-	-	-	-	-
	Total Obligation Authority	0.000	26.575	8.177	0.000	8.177	0.000	0.000	0.000	0.000

Exhibit P-3a, Individual Modification: PB 2020 Air Force		Date: February 2019
Appropriation / Budget Activity / Budget Sub Activity: 3010F / 05 / 1	**P-1 Line Item Number / Title:** LAIRCM / Large Aircraft Infrared Countermeasures	**Modification Number / Title:** 3 / LARGE AIRCRAFT INFRARED COUNTERMEASURES C-5
ID Code (A=Service Ready, B=Not Service Ready) : B	**MDAP/MAIS Code:**	
Models of Systems Affected: C-5B, C-5C, C-5M	**Modification Type:** Capability Improvement	**Related RDT&E PEs:** 0401134F

Financial Plan	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
	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												
Modification Item 1 of 1: C-5 Block 30												
A Kits												
Recurring												
C-5 Block 30:INSTALL KITS Group A (Active)	12 / 1.825	- / -	15 / 2.415	6 / 0.992	- / -	6 / 0.992	- / -	- / -	- / -	- / -	- / -	33 / 5.232
Subtotal: Recurring	*- / 1.825*	*- / -*	*- / 2.415*	*- / 0.992*	*- / -*	*- / 0.992*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / 5.232*
B Kits												
Recurring												
C-5 Block 30:EQUIPMENT Group B (Active)	12 / 10.493	- / -	15 / 13.770	6 / 5.362	- / -	6 / 5.362	- / -	- / -	- / -	- / -	- / -	33 / 29.625
Subtotal: Recurring	*- / 10.493*	*- / -*	*- / 13.770*	*- / 5.362*	*- / -*	*- / 5.362*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / 29.625*
Subtotal: C-5 Block 30	*- / 12.318*	*- / -*	*- / 16.185*	*- / 6.354*	*- / -*	*- / 6.354*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / 34.857*
Subtotal: Procurement, All Modification Items	*- / 12.318*	*- / -*	*- / 16.185*	*- / 6.354*	*- / -*	*- / 6.354*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / 34.857*
Support *(All Modification Items)*												
GROUP A: TOTAL NONRECURRING	- / 2.126	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 2.126
GROUP B: TOTAL NONRECURRING	- / 0.000	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 0.000
OCO INSTALLATIONS	- / 0.000	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 0.000
Change Orders	- / 1.950	- / -	- / 1.542	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 3.492
Data	- / 0.000	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 0.000
SUPPORT-EQUIP	- / 0.128	- / -	- / 0.231	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 0.359
Type 1 Training	- / 0.000	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 0.000
Mod of Spares	- / 2.565	- / -	- / 1.011	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 3.576
ICS-Labor	- / -	- / -	- / 0.705	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 0.705
PMA - Contractor Services	- / 1.821	- / -	- / 0.300	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 2.121
PMA - Other Gov't Costs	- / 0.045	- / -	- / 0.409	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 0.454
OTHER GOVT	- / 1.829	- / -	- / 1.965	- / 0.808	- / -	- / 0.808	- / -	- / -	- / -	- / -	- / -	- / 4.602
Subtotal: Support	*- / 10.464*	*- / -*	*- / 6.163*	*- / 0.808*	*- / -*	*- / 0.808*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / 17.435*
Installation												
Modification Item 1 of 1: C-5 Block 30	- / -	- / -	0 / 4.227	5 / 1.015	- / -	5 / 1.015	22 / 0.000	6 / 0.000	- / -	- / -	- / -	33 / 5.242
Subtotal: Installation	*- / -*	*- / -*	*- / 4.227*	*5 / 1.015*	*- / -*	*5 / 1.015*	*22 / -*	*6 / -*	*- / -*	*- / -*	*- / -*	*33 / 5.242*
Total												

Exhibit P-3a, Individual Modification: PB 2020 Air Force		Date: February 2019
Appropriation / Budget Activity / Budget Sub Activity: 3010F / 05 / 1	**P-1 Line Item Number / Title:** LAIRCM / Large Aircraft Infrared Countermeasures	**Modification Number / Title:** 3 / LARGE AIRCRAFT INFRARED COUNTERMEASURES C-5
ID Code (A=Service Ready, B=Not Service Ready) : B	**MDAP/MAIS Code:**	
Models of Systems Affected: C-5B, C-5C, C-5M	**Modification Type:** Capability Improvement	**Related RDT&E PEs:** 0401134F

Financial Plan	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
	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)*
Total Cost (Procurement + Support + Installation)	**22.782**	**0.000**	**26.575**	**8.177**	**0.000**	**8.177**	**0.000**	**0.000**	**0.000**	**0.000**	**-**	**57.534**

Exhibit P-3a, Individual Modification: PB 2020 Air Force		Date: February 2019
Appropriation / Budget Activity / Budget Sub Activity: 3010F / 05 / 1	**P-1 Line Item Number / Title:** LAIRCM / Large Aircraft Infrared Countermeasures	**Modification Number / Title:** 3 / LARGE AIRCRAFT INFRARED COUNTERMEASURES C-5

ID Code (A=Service Ready, B=Not Service Ready) : B

MDAP/MAIS Code:

Modification Item 1 of 1: C-5 Block 30

Manufacturer Information

Manufacturer Name: Northrup Gruman

Manufacturer Location: Rolling Meadows, IL

Administrative Leadtime *(in Months)*: 6

Production Leadtime *(in Months)*: 12

Dates	FY 2018	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024
Contract Dates		Apr 2019	Apr 2020				
Delivery Dates		Apr 2020	Apr 2021				

Installation Information

Method of Implementation: Depot

Installation Cost	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
	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)*
Prior Years	- / -	- / -	- / -	5 / 0.000	- / -	5 / 0.000	7 / 0.000	- / -	- / -	- / -	- / -	12 / 0.000
FY 2018	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2019	- / -	- / -	0 / 4.227	- / -	- / -	- / -	15 / 0.000	- / -	- / -	- / -	- / -	15 / 4.227
FY 2020	- / -	- / -	- / -	0 / 1.015	- / -	0 / 1.015	- / -	6 / 0.000	- / -	- / -	- / -	6 / 1.015
FY 2021	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2022	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2023	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2024	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
To Complete	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
Total	- / -	- / -	0 / 4.227	5 / 1.015	- / -	5 / 1.015	22 / 0.000	6 / 0.000	- / -	- / -	- / -	33 / 5.242

Installation Schedule

	PYS	FY 2018				FY 2019				FY 2020				FY 2021				FY 2022				FY 2023				FY 2024				TC	Tot
		Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4		
In	0	-	-	-	-	-	-	-	-	-	-	2	3	5	5	5	7	4	2	0	0	0	0	0	0	-	-	-	-	0	33
Out	0	-	-	-	-	-	-	-	-	-	-	1	1	3	5	5	5	5	4	4	0	-	-	-	-	-	-	-	-	0	33

Exhibit P-40, Budget Line Item Justification: PB 2020 Air Force	Date: February 2019
Appropriation / Budget Activity / Budget Sub Activity: 3010F: Aircraft Procurement, Air Force / BA 05: Modification of Inservice Aircraft / BSA 2: Tactical Aircraft	**P-1 Line Item Number / Title:** A01000 / A-10

ID Code (A=Service Ready, B=Not Service Ready): B	**Program Elements for Code B Items:** 0207131F	**Other Related Program Elements:** 0207131F
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 *(Units in Each)*	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost *($ in Millions)*	83.639	109.010	168.060	132.069	0.000	132.069	135.980	128.947	135.002	86.231	-	978.938
Less PY Advance Procurement *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) *($ in Millions)*	83.639	109.010	168.060	132.069	0.000	132.069	135.980	128.947	135.002	86.231	-	978.938
Plus CY Advance Procurement *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Total Obligation Authority *($ in Millions)*	**83.639**	**109.010**	**168.060**	**132.069**	**0.000**	**132.069**	**135.980**	**128.947**	**135.002**	**86.231**	**-**	**978.938**
(The following Resource Summary rows are for informational purposes only. The corresponding budget requests are documented elsewhere.)												
Initial Spares *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Flyaway Unit Cost *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Unit Cost *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-

Description:

This line item funds modifications and upgrades to the A-10 weapon system to ensure it remains combat effective. The A-10 is a twin engine, single seat aircraft capable of delivering a full range of air-to-ground munitions as well as self-defense air-to-air missiles. The A-10 provides persistent, effective and precise Close Air Support, Interdiction, Forward Air Controller (airborne), Combat Search & Rescue and Strike Control & Reconnaissance. Funding for this exhibit contained in PE 0207131F.

Wing Replacement Program (ATTACK) procures new wings to enable the A-10 Fleet to fly and fight into 2030+. A new wing procurement effort will provide flexibility in fleet size options and provides resiliency in the existing fleet.

Wing Replacement Program FY19 congressional plus up for $65M.
ADS-B Out a Congressional Mark for $6M.

Helmet Mounted Cueing System (HMCS0 Interim Contractor Support (ICS) - Interim Contract Support (ICS), is needed to repair critical components to keep units fully operational. The HMCS program is jointly managed by the A-10 and F-16 System Program Offices and provides extant A-10Cs and F-16C+ Block 30/32 aircraft with a Helmet Mounted Integrated Targeting (HMIT) System that will provide off-boresight cueing, targeting, and situational awareness capability.

Conversion Fuel Tanks (CFT) procurement - The Conversion Fuel Tank (CFT) program's intent is to convert excess F-15 external fuel tanks for utilization as A-10 external fuel tanks. These tanks, once converted, enhance combat operations.

J-Hook - The J-Hook system holds munition lanyards in place before and after the release of a munition; Validation/Verification of redesigned lanyard retention system and source data delivery.

ARC-210, (FY20 $8.77M) - Replace current ARC-210 Gen 4 radio(s) with Gen 6 to insure crypto compliance. Replace current Radio Control Unit (RCU) with C-12561B (required update for Gen 6). Maintain same functionality of the Gen 4. Continue using 1553 Bus controller vice an Ethernet connection. Replace ARC-164 with ARC-210 Gen 4 (Suite 11). Installs will be either CFT or DSL. Procurement funds are for the hardware purchases for the fleet FY20-22. Procurement funds after that will be used for installs. Suite 11 scheduled to field 3rd Qtr FY22. ARC-210 Gen 6 installs will follow soon after. Currently pursuing an integration contract via RDT&E dollars.

Exhibit P-40, Budget Line Item Justification: PB 2020 Air Force		Date: February 2019
Appropriation / Budget Activity / Budget Sub Activity: 3010F: Aircraft Procurement, Air Force / BA 05: Modification of Inservice Aircraft / BSA 2: Tactical Aircraft	**P-1 Line Item Number / Title:** A01000 / A-10	
ID Code (A=Service Ready, B=Not Service Ready): B	**Program Elements for Code B Items:** 0207131F	**Other Related Program Elements:** 0207131F
Line Item MDAP/MAIS Code: N/A		

3D Audio, (FY20 $9.0M) - This modification is to improve the spatial, battle space, and situational awareness (SA) of A-10C pilots through the addition of a digital intercom system upgrade, active and electronic noise reduction, three-dimensional spatial separation for up to four audio channels, and three-dimensional auditory threat cueing from the aircraft missile warning system and radar warning receiver.

Small Diameter Bomb-1 (SDB-1) - Support equipment - bomb lift adapters for loading the weapon, CMBRE testers for the back shop to verify software loads, BRU61 trainers for load barn

In accordance with Section 1815 of the FY 2008 National Defense Authorization Act (P.L. 110-181), this item is necessary for use by the active and reserve components of the Armed Forces for homeland defense missions, domestic emergency responses, and providing military support to civil authorities.

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.

Secondary Distribution		FY 2018	FY 2019	FY 2020 Base	FY 2020 OCO	FY 2020 Total	FY 2021	FY 2022	FY 2023	FY 2024
AF	Quantity	-	-	-	-	-	-	-	-	-
	Total Obligation Authority	109.010	167.689	128.069	-	128.069	127.980	124.947	132.002	86.231
AFNG	Quantity	-	-	-	-	-	-	-	-	-
	Total Obligation Authority	-	0.227	2.000	-	2.000	6.000	2.000	2.000	-
AFR	Quantity	-	-	-	-	-	-	-	-	-
	Total Obligation Authority	-	0.144	2.000	-	2.000	2.000	2.000	1.000	-
Total: Secondary Distribution	**Quantity**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**
	Total Obligation Authority	**109.010**	**168.060**	**132.069**	**-**	**132.069**	**135.980**	**128.947**	**135.002**	**86.231**

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

Appropriation / Budget Activity / Budget Sub Activity:
3010F: Aircraft Procurement, Air Force / BA 05: Modification of Inservice Aircraft / BSA 2: Tactical Aircraft

P-1 Line Item Number / Title:
A01000 / A-10

ID Code (A=Service Ready, B=Not Service Ready): B | **Program Elements for Code B Items:** 0207131F | **Other Related Program Elements:** 0207131F

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-40a***	7856 / MODE S/5 (Capability Improvement)				- / 11.000	- / 0.000	- / 0.000	- / 0.000	- / -	- / 0.000
P-40a***	9601 / ONBOARD OXYGEN GENERATING SYSTEM (OBOGS) (Reliability & Maintainability)				- / 17.000	- / -	- / -	- / -	- / -	- / -
P-40a***	9806 / A-10 Helmet Mounted Cueing System (Capability Improvement)				- / 6.500	- / -	- / 0.900	- / 3.050	- / -	- / 3.050
P-40a***	9808 / Covert/Overt Landing Light Requirement (COLA) (Capability Improvement)				- / 0.850	- / -	- / -	- / -	- / -	- / -
P-40a***	9809 / ADS-B Out (Capability Improvement)				- / -	- / 6.010	- / 13.520	- / -	- / -	- / -
P-40a***	9810 / LARS-CSEL (Capability Improvement)				- / 27.000	- / -	- / -	- / -	- / -	- / -
P-40a***	9811 / A-10 J-Hook System (Reliability & Maintainability)				- / -	- / -	- / 0.750	- / -	- / -	- / -
P-40a***	9816 / A-10 Conversion Fuel Tanks (Capability Improvement)				- / -	- / -	- / 8.700	- / -	- / -	- / -
P-40a***	9836 / 3-Dimensional Audio (3DA) (Capability Improvement)				- / -	- / -	- / -	- / 1.000	- / -	- / 1.000
P-3a	9804 / A-10 Wing Replacement Program (Reliability & Maintainability)		B		- / 21.289	- / 103.000	- / 144.190	- / 100.000	- / 0.000	- / 100.000
P-3a	9831 / ARC-210 (Capability Improvement)		B		- / -	- / 0.000	- / 0.000	- / 8.769	- / 0.000	- / 8.769
P-3a	9832 / 2ND GIGABIT ETHERNET SWITCH (2GES) (Capability Improvement)		B		- / -	- / 0.000	- / 0.000	- / 5.000	- / 0.000	- / 5.000
P-3a	9834 / A-10 High Resolution Display System (HRDS) (Capability Improvement)		B		- / -	- / 0.000	- / 0.000	- / 6.250	- / 0.000	- / 6.250
P-3a	9839 / SDB-1 (Capability Improvement)		B		- / -	- / 0.000	- / 0.000	- / 8.000	- / 0.000	- / 8.000
P-40	**Total Gross/Weapon System Cost**				**- / 83.639**	**- / 109.010**	**- / 168.060**	**- / 132.069**	**- / 0.000**	**- / 132.069**

Exhibits Schedule					FY 2021	FY 2022	FY 2023	FY 2024	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-40a***	7856 / MODE S/5 (Capability Improvement)				- / 1.000	- / -	- / -	- / -	- / -	- / 12.000
P-40a***	9601 / ONBOARD OXYGEN GENERATING SYSTEM (OBOGS) (Reliability & Maintainability)				- / -	- / -	- / -	- / -	- / -	- / 17.000
P-40a***	9806 / A-10 Helmet Mounted Cueing System (Capability Improvement)				- / 3.030	- / 4.880	- / 4.560	- / -	- / -	- / 22.920
P-40a***	9808 / Covert/Overt Landing Light Requirement (COLA) (Capability Improvement)				- / -	- / -	- / -	- / -	- / -	- / 0.850
P-40a***	9809 / ADS-B Out (Capability Improvement)				- / -	- / -	- / -	- / -	- / -	- / 19.530
P-40a***	9810 / LARS-CSEL (Capability Improvement)				- / -	- / -	- / -	- / -	- / -	- / 27.000
P-40a***	9811 / A-10 J-Hook System (Reliability & Maintainability)				- / -	- / -	- / -	- / -	- / -	- / 0.750
P-40a***	9816 / A-10 Conversion Fuel Tanks (Capability Improvement)				- / -	- / -	- / -	- / -	- / -	- / 8.700
P-40a***	9836 / 3-Dimensional Audio (3DA) (Capability Improvement)				- / 7.300	- / 8.900	- / 3.700	- / 2.500	- / -	- / 23.400
P-3a	9804 / A-10 Wing Replacement Program (Reliability & Maintainability)		B		- / 100.000	- / 100.000	- / 100.000	- / 60.000	- / -	- / 728.479
P-3a	9831 / ARC-210 (Capability Improvement)		B		- / 18.350	- / 7.580	- / 5.000	- / 5.000	- / -	- / 44.699

Exhibit P-40, Budget Line Item Justification: PB 2020 Air Force	Date: February 2019
Appropriation / Budget Activity / Budget Sub Activity: 3010F: Aircraft Procurement, Air Force / BA 05: Modification of Inservice Aircraft / BSA 2: Tactical Aircraft	**P-1 Line Item Number / Title:** A01000 / A-10

ID Code (A=Service Ready, B=Not Service Ready): B | **Program Elements for Code B Items:** 0207131F | **Other Related Program Elements:** 0207131F

Line Item MDAP/MAIS Code: N/A

Exhibits Schedule					FY 2021	FY 2022	FY 2023	FY 2024	To Complete	Total
Exhibit Type	Title*	Subexhibits	ID CD	MDAP/ MAIS Code	Quantity / Total Cost *(Each) I ($ M)*	Quantity / Total Cost *(Each) I ($ M)*	Quantity / Total Cost *(Each) I ($ M)*	Quantity / Total Cost *(Each) I ($ M)*	Quantity / Total Cost *(Each) I ($ M)*	Quantity / Total Cost *(Each) I ($ M)*
P-3a	9832 / 2ND GIGABIT ETHERNET SWITCH (2GES) (Capability Improvement)		B		- / 4.900	- / 0.000	- / 0.000	- / 0.000	- / -	- / 9.900
P-3a	9834 / A-10 High Resolution Display System (HRDS) (Capability Improvement)		B		- / 1.400	- / 7.587	- / 21.742	- / 18.731	- / -	- / 55.710
P-3a	9839 / SDB-1 (Capability Improvement)		B		- / 0.000	- / 0.000	- / 0.000	- / 0.000	- / -	- / 8.000
P-40	**Total Gross/Weapon System Cost**				**- / 135.980**	**- / 128.947**	**- / 135.002**	**- / 86.231**	**- / -**	**- / 978.938**

*** Although this is an Exhibit P-40a item, the actual exhibit is not included since all of the required information for this item is already being shown here.

*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:
Where applicable, justification for individual modifications is provided in the P-3A exhibits.

Exhibit P-3a, Individual Modification: PB 2020 Air Force		Date: February 2019
Appropriation / Budget Activity / Budget Sub Activity: 3010F / 05 / 2	**P-1 Line Item Number / Title:** A01000 / A-10	**Modification Number / Title:** 9804 / A-10 Wing Replacement Program
ID Code (A=Service Ready, B=Not Service Ready) : B	**MDAP/MAIS Code:**	

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 *(Units in Each)*	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost *($ in Millions)*	21.289	103.000	144.190	100.000	0.000	100.000	100.000	100.000	100.000	60.000	-	728.479
Less PY Advance Procurement *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) *($ in Millions)*	21.289	103.000	144.190	100.000	0.000	100.000	100.000	100.000	100.000	60.000	-	728.479
Plus CY Advance Procurement *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Total Obligation Authority *($ in Millions)*	**21.289**	**103.000**	**144.190**	**100.000**	**0.000**	**100.000**	**100.000**	**100.000**	**100.000**	**60.000**	**-**	**728.479**
(The following Resource Summary rows are for informational purposes only. The corresponding budget requests are documented elsewhere.)												
Initial Spares *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Unit Cost *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-

Description:

The Wing Replacement Program (WRP) incorporates several reliability and maintainability improvements to known critical fatigue locations. With these improvements, the Enhanced Wing Assemblies (EWAs) do not require major structural inspections for the first 10,000 hours of service life. Operational Requirement Document: A-10 Multi-Staged Improvement Program, dated 19 Oct 1999.

The FY20 funds procure 22 Wing kits being organically installed. Funds may be used to resolve emerging safety of flight efforts and diminishing manufacturing sources issues, accommodate technology insertion and fulfill FAA or other mandates necessary to ensure continued aircrew safety and mission effectiveness.

Milestone/Development Status

Full rate production

Secondary Distribution		FY 2018	FY 2019	FY 2020 Base	FY 2020 OCO	FY 2020 Total	FY 2021	FY 2022	FY 2023	FY 2024
AF	Quantity	-	-	-	-	-	-	-	-	-
	Total Obligation Authority	103.000	144.190	100.000	-	100.000	100.000	100.000	100.000	60.000
Total: Secondary Distribution	**Quantity**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**
	Total Obligation Authority	**103.000**	**144.190**	**100.000**	**0.000**	**100.000**	**100.000**	**100.000**	**100.000**	**60.000**

Exhibit P-3a, Individual Modification: PB 2020 Air Force		Date: February 2019
Appropriation / Budget Activity / Budget Sub Activity: 3010F / 05 / 2	**P-1 Line Item Number / Title:** A01000 / A-10	**Modification Number / Title:** 9804 / A-10 Wing Replacement Program
ID Code (A=Service Ready, B=Not Service Ready) : B	**MDAP/MAIS Code:**	
Models of Systems Affected: A-10	**Modification Type:** Reliability & Maintainability	**Related RDT&E PEs:** 0207131F

Financial Plan	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
	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												
Modification Item 1 of 1: WRP kits, Center/Outer wing panels												
B Kits												
Recurring												
WRP kits, Center/Outer wing panels:EQUIPMENT Group B (Active)	- / -	- / -	24 / 144.190	22 / 100.000	- / -	22 / 100.000	24 / 100.000	24 / 100.000	15 / 100.000	- / 60.000	- / -	109 / 604.190
Subtotal: Recurring	*- / -*	*- / -*	*- / 144.190*	*- / 100.000*	*- / -*	*- / 100.000*	*- / 100.000*	*- / 100.000*	*- / 100.000*	*- / 60.000*	*- / -*	*- / 604.190*
Subtotal: WRP kits, Center/Outer wing panels	*- / -*	*- / -*	*- / 144.190*	*- / 100.000*	*- / -*	*- / 100.000*	*- / 100.000*	*- / 100.000*	*- / 100.000*	*- / 60.000*	*- / -*	*- / 604.190*
Subtotal: Procurement, All Modification Items	*- / -*	*- / -*	*- / 144.190*	*- / 100.000*	*- / -*	*- / 100.000*	*- / 100.000*	*- / 100.000*	*- / 100.000*	*- / 60.000*	*- / -*	*- / 604.190*
Support *(All Modification Items)*												
GROUP A: TOTAL NONRECURRING	- / -	- / 103.000	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 103.000
SUPPORT-EQUIP	- / 20.000	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 20.000
OTHER GOVT	- / 1.289	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 1.289
Subtotal: Support	*- / 21.289*	*- / 103.000*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / 124.289*
Installation												
Subtotal: Installation	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*
Total												
Total Cost (Procurement + Support + Installation)	**21.289**	**103.000**	**144.190**	**100.000**	**0.000**	**100.000**	**100.000**	**100.000**	**100.000**	**60.000**	**-**	**728.479**

Exhibit P-3a, Individual Modification: PB 2020 Air Force		Date: February 2019
Appropriation / Budget Activity / Budget Sub Activity: 3010F / 05 / 2	**P-1 Line Item Number / Title:** A01000 / A-10	**Modification Number / Title:** 9804 / A-10 Wing Replacement Program
ID Code (A=Service Ready, B=Not Service Ready) : B	**MDAP/MAIS Code:**	

Modification Item 1 of 1: WRP kits, Center/Outer wing panels

Manufacturer Information

Manufacturer Name: TBD	Manufacturer Location: TBD
Administrative Leadtime *(in Months)*: 6	Production Leadtime *(in Months)*: 3

Dates	FY 2018	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024
Contract Dates		Oct 2019	Oct 2020	Oct 2021	Oct 2022	Oct 2023	
Delivery Dates		Jan 2020	Jan 2021	Jan 2022	Jan 2023	Jan 2024	

Installation Information

Method of Implementation (Organic): Org/Intermediate	**Installation Quantity:** 109

Exhibit P-3a, Individual Modification: PB 2020 Air Force		Date: February 2019
Appropriation / Budget Activity / Budget Sub Activity: 3010F / 05 / 2	**P-1 Line Item Number / Title:** A01000 / A-10	**Modification Number / Title:** 9831 / ARC-210
ID Code (A=Service Ready, B=Not Service Ready) : B	**MDAP/MAIS Code:**	

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 *(Units in Each)*	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost *($ in Millions)*	-	0.000	0.000	8.769	0.000	8.769	18.350	7.580	5.000	5.000	-	44.699
Less PY Advance Procurement *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) *($ in Millions)*	-	0.000	0.000	8.769	0.000	8.769	18.350	7.580	5.000	5.000	-	44.699
Plus CY Advance Procurement *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Total Obligation Authority *($ in Millions)*	**-**	**0.000**	**0.000**	**8.769**	**0.000**	**8.769**	**18.350**	**7.580**	**5.000**	**5.000**	**-**	**44.699**
(The following Resource Summary rows are for informational purposes only. The corresponding budget requests are documented elsewhere.)												
Initial Spares *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Unit Cost *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-

Description:

This program, P-3A Mod 9831, ARC-210, is a new start.
Continued modernization efforts require the replacement of legacy communication systems in the A-10C. These systems are logistically unsupported and vulnerable to emerging cyber threats due to the lack of updates. A National Security Agency (NSA) mandate exists that requires updates/compliance to current cyber security threats. Also, current communication radios in the jet are not setup to handle all necessary frequencies and networks required for military communications over the next 10 years.Active duty is tasked to pay for the fleet upgrade including AFRC/ANG aircraft.

Replace current ARC-210 Gen 4 radio(s) with Gen 6 to insure crypto compliance. Replace current Radio Control Unit (RCU) with C-12561B (required update for Gen 6). Maintain same functionality of the Gen 4. Continue using 1553 Bus controller vice an Ethernet connection. Replace ARC-164 with ARC-210 Gen 4 (Suite 11). Installs will be either CFT or DSL. Procurement funds are for the hardware purchases for the fleet FY20-22. Procurement funds after that will be used for installs. Suite 11 scheduled to field 3rd Qtr FY22. ARC-210 Gen 6 installs will follow soon after. Currently pursuing an integration contract via RDT&E dollars.

Milestone/Development Status

Development Complete

Secondary Distribution		FY 2018	FY 2019	FY 2020 Base	FY 2020 OCO	FY 2020 Total	FY 2021	FY 2022	FY 2023	FY 2024
AF	Quantity	-	-	-	-	-	-	-	-	-
	Total Obligation Authority	-	-	4.769	-	4.769	10.350	3.580	2.000	5.000
AFNG	Quantity	-	-	-	-	-	-	-	-	-
	Total Obligation Authority	-	-	2.000	-	2.000	6.000	2.000	2.000	-
AFR	Quantity	-	-	-	-	-	-	-	-	-
	Total Obligation Authority	-	-	2.000	-	2.000	2.000	2.000	1.000	-
Total: Secondary Distribution	**Quantity**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**
	Total Obligation Authority	**0.000**	**0.000**	**8.769**	**0.000**	**8.769**	**18.350**	**7.580**	**5.000**	**5.000**

Exhibit P-3a, Individual Modification: PB 2020 Air Force		Date: February 2019
Appropriation / Budget Activity / Budget Sub Activity: 3010F / 05 / 2	**P-1 Line Item Number / Title:** A01000 / A-10	**Modification Number / Title:** 9831 / ARC-210
ID Code (A=Service Ready, B=Not Service Ready) : B	**MDAP/MAIS Code:**	
Models of Systems Affected: A-10C	**Modification Type:** Capability Improvement	**Related RDT&E PEs:** 0207131F

Financial Plan	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
	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												
Modification Item 1 of 1: Equipment												
B Kits												
Recurring												
Equipment:EQUIPMENT Group B (Active)	- / -	- / -	- / -	2 / 4.769	- / -	2 / 4.769	50 / 10.350	51 / 3.580	38 / 2.000	- / -	- / -	141 / 20.699
Equipment:EQUIPMENT Group B (Guard)	- / -	- / -	- / -	1 / 2.000	- / -	1 / 2.000	35 / 6.000	30 / 2.000	19 / 2.000	- / -	- / -	85 / 12.000
Equipment:EQUIPMENT Group B (Reserve)	- / -	- / -	- / -	2 / 2.000	- / -	2 / 2.000	20 / 2.000	20 / 2.000	13 / 1.000	- / -	- / -	55 / 7.000
Subtotal: Recurring	- / -	- / -	- / -	- / 8.769	- / -	- / 8.769	- / 18.350	- / 7.580	- / 5.000	- / -	- / -	- / 39.699
Subtotal: Equipment	- / -	- / -	- / -	- / 8.769	- / -	- / 8.769	- / 18.350	- / 7.580	- / 5.000	- / -	- / -	- / 39.699
Subtotal: Procurement, All Modification Items	- / -	- / -	- / -	- / 8.769	- / -	- / 8.769	- / 18.350	- / 7.580	- / 5.000	- / -	- / -	- / 39.699
Support *(All Modification Items)*												
GROUP B: TOTAL NONRECURRING	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 5.000	- / -	- / 5.000
Subtotal: Support	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 5.000	- / -	- / 5.000
Installation												
Subtotal: Installation	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
Total												
Total Cost (Procurement + Support + Installation)	-	0.000	0.000	8.769	0.000	8.769	18.350	7.580	5.000	5.000	-	44.699

Exhibit P-3a, Individual Modification: PB 2020 Air Force		Date: February 2019
Appropriation / Budget Activity / Budget Sub Activity: 3010F / 05 / 2	**P-1 Line Item Number / Title:** A01000 / A-10	**Modification Number / Title:** 9831 / ARC-210

ID Code (A=Service Ready, B=Not Service Ready) : B | **MDAP/MAIS Code:**

Modification Item 1 of 1: Equipment

Manufacturer Information

Manufacturer Name: TBD	Manufacturer Location: TBD
Administrative Leadtime *(in Months)*: 0	Production Leadtime *(in Months)*: 0

Dates	FY 2018	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024
Contract Dates			Oct 2019	Nov 2020	Nov 2021	Nov 2022	
Delivery Dates			Oct 2019	Nov 2020	Nov 2021	Nov 2022	

Installation Information

Method of Implementation (Organic): Org/Intermediate | **Installation Quantity:** 281

Exhibit P-3a, Individual Modification: PB 2020 Air Force		Date: February 2019
Appropriation / Budget Activity / Budget Sub Activity: 3010F / 05 / 2	**P-1 Line Item Number / Title:** A01000 / A-10	**Modification Number / Title:** 9832 / 2ND GIGABIT ETHERNET SWITCH (2GES)
ID Code (A=Service Ready, B=Not Service Ready) : B	**MDAP/MAIS Code:**	

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 *(Units in Each)*	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost *($ in Millions)*	-	0.000	0.000	5.000	0.000	5.000	4.900	0.000	0.000	0.000	-	9.900
Less PY Advance Procurement *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) *($ in Millions)*	-	0.000	0.000	5.000	0.000	5.000	4.900	0.000	0.000	0.000	-	9.900
Plus CY Advance Procurement *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Total Obligation Authority *($ in Millions)*	**-**	**0.000**	**0.000**	**5.000**	**0.000**	**5.000**	**4.900**	**0.000**	**0.000**	**0.000**	**-**	**9.900**
(The following Resource Summary rows are for informational purposes only. The corresponding budget requests are documented elsewhere.)												
Initial Spares *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Unit Cost *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-

Description:

This program, P-3A Mod 9832, 2ND GIGABIT ETHERNET SWITCH (2GES), is a new start.
The ARC is pursuing the acquisition and integration of a Second Gigabit Ethernet Switch (2GES) for the A-10C aircraft. Concept of Operations are changing, requiring more traffic to pass through an Ethernet port taking some of the load off the 1553 Bus. The number of ports available on the existing A-10C Gigabit Ethernet Switch (GES) will not allow for planned aircraft refurbishment which utilizes the Ethernet bus, to include electronic warfare (EW) architecture updates. An additional GES is needed to provide the required number of ports, as well as new Ethernet wiring. The system capability must provide additional Ethernet ports for planned aircraft refurbishment which utilizes the Ethernet bus, to include electronic warfare (EW) architecture updates. Introducing an Ethernet bus path to stations 1, 2, 10, and 11 will ensure that the growth potential of Ethernet interfaces. The current A-10C Ethernet system ports have been filled and expansion is necessary to continue capability upgrades to the aircraft. An additional GES is needed to provide the required number of ports, as well as new Ethernet wiring.

The need for procurement funds is to provide the USAF Active Duty with a 2GES that will expand the current Ethernet system. The ARC is leading the way for integration of a 2GES. USAF Active Duty will take advantage of the ARC integration effort and will only need to procure kits and installation as part of this effort.

Milestone/Development Status

Development Complete

Secondary Distribution		FY 2018	FY 2019	FY 2020 Base	FY 2020 OCO	FY 2020 Total	FY 2021	FY 2022	FY 2023	FY 2024
AF	Quantity	-	-	-	-	-	-	-	-	-
	Total Obligation Authority	-	-	5.000	-	5.000	4.900	-	-	-
Total: Secondary Distribution	**Quantity**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**
	Total Obligation Authority	**0.000**	**0.000**	**5.000**	**0.000**	**5.000**	**4.900**	**0.000**	**0.000**	**0.000**

Exhibit P-3a, Individual Modification: PB 2020 Air Force		Date: February 2019
Appropriation / Budget Activity / Budget Sub Activity: 3010F / 05 / 2	**P-1 Line Item Number / Title:** A01000 / A-10	**Modification Number / Title:** 9832 / 2ND GIGABIT ETHERNET SWITCH (2GES)
ID Code (A=Service Ready, B=Not Service Ready) : B	**MDAP/MAIS Code:**	
Models of Systems Affected: A-10C	**Modification Type:** Capability Improvement	**Related RDT&E PEs:** 0207131F

Financial Plan	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
	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												
Modification Item 1 of 1: Equipment (2)												
B Kits												
Recurring												
Equipment:EQUIPMENT Group B (Active)	- / -	- / -	- / -	71 / 5.000	- / -	71 / 5.000	70 / 4.900	- / -	- / -	- / -	- / -	141 / 9.900
Subtotal: Recurring	*- / -*	*- / -*	*- / -*	*- / 5.000*	*- / -*	*- / 5.000*	*- / 4.900*	*- / -*	*- / -*	*- / -*	*- / -*	*- / 9.900*
Subtotal: Equipment (2)	*- / -*	*- / -*	*- / -*	*- / 5.000*	*- / -*	*- / 5.000*	*- / 4.900*	*- / -*	*- / -*	*- / -*	*- / -*	*- / 9.900*
Subtotal: Procurement, All Modification Items	*- / -*	*- / -*	*- / -*	*- / 5.000*	*- / -*	*- / 5.000*	*- / 4.900*	*- / -*	*- / -*	*- / -*	*- / -*	*- / 9.900*
Installation												
Subtotal: Installation	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*
Total												
Total Cost (Procurement + Support + Installation)	**-**	**0.000**	**0.000**	**5.000**	**0.000**	**5.000**	**4.900**	**0.000**	**0.000**	**0.000**	**-**	**9.900**

Exhibit P-3a, Individual Modification: PB 2020 Air Force		Date: February 2019
Appropriation / Budget Activity / Budget Sub Activity: 3010F / 05 / 2	**P-1 Line Item Number / Title:** A01000 / A-10	**Modification Number / Title:** 9832 / 2ND GIGABIT ETHERNET SWITCH (2GES)

ID Code (A=Service Ready, B=Not Service Ready) : B | **MDAP/MAIS Code:**

Modification Item 1 of 1: Equipment (2)

Manufacturer Information

Manufacturer Name: TBD | Manufacturer Location: TBD

Administrative Leadtime *(in Months)*: 0 | Production Leadtime *(in Months)*: 0

Dates	FY 2018	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024
Contract Dates			Jun 2020	Jun 2021			
Delivery Dates			Jun 2020	Jun 2021			

Installation Information

Method of Implementation (Organic): Org/Intermediate | **Installation Quantity:** 141

Exhibit P-3a, Individual Modification: PB 2020 Air Force		Date: February 2019
Appropriation / Budget Activity / Budget Sub Activity: 3010F / 05 / 2	**P-1 Line Item Number / Title:** A01000 / A-10	**Modification Number / Title:** 9834 / A-10 High Resolution Display System (HRDS)
ID Code (A=Service Ready, B=Not Service Ready) : B	**MDAP/MAIS Code:**	

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 *(Units in Each)*	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost *($ in Millions)*	-	0.000	0.000	6.250	0.000	6.250	1.400	7.587	21.742	18.731	-	55.710
Less PY Advance Procurement *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) *($ in Millions)*	-	0.000	0.000	6.250	0.000	6.250	1.400	7.587	21.742	18.731	-	55.710
Plus CY Advance Procurement *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Total Obligation Authority *($ in Millions)*	**-**	**0.000**	**0.000**	**6.250**	**0.000**	**6.250**	**1.400**	**7.587**	**21.742**	**18.731**	**-**	**55.710**
(The following Resource Summary rows are for informational purposes only. The corresponding budget requests are documented elsewhere.)												
Initial Spares *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Unit Cost *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-

Description:

This program, P-3A Mod 9834, A-10 High Resolution Display System (HRDS), is a new start.
The A-10 High Resolution Display System is a technology enabler providing a platform for enhanced tactical applications which will function as a Primary Flight Display and provide Hi Resolution video from Advanced Targeting Pods. The A-10 HRDS is a true next-gen digital interface that will replace legacy analog flight instruments and provide higher resolution video signals to improve the pilot's ability to find, fix, track, target and engage ground targets and threats while reducing pilot workload.

Requirements: AF Form 1067 approved 11 May 2016 to equip ARC aircraft; ACC A-10 HRDS 1067 in development

RFP: 2Q FY19; Award: 1Q FY20; Integration Phase: 1Q FY20 - 4Q FY22; Fielding: 4Q FY22 - 4Q FY24

Milestone/Development Status

Development Complete

Secondary Distribution		FY 2018	FY 2019	FY 2020 Base	FY 2020 OCO	FY 2020 Total	FY 2021	FY 2022	FY 2023	FY 2024
AF	Quantity	-	-	-	-	-	-	-	-	-
	Total Obligation Authority	-	-	6.250	-	6.250	1.400	7.587	21.742	18.731
Total: Secondary Distribution	**Quantity**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**
	Total Obligation Authority	**0.000**	**0.000**	**6.250**	**0.000**	**6.250**	**1.400**	**7.587**	**21.742**	**18.731**

Exhibit P-3a, Individual Modification: PB 2020 Air Force		Date: February 2019
Appropriation / Budget Activity / Budget Sub Activity: 3010F / 05 / 2	**P-1 Line Item Number / Title:** A01000 / A-10	**Modification Number / Title:** 9834 / A-10 High Resolution Display System (HRDS)
ID Code (A=Service Ready, B=Not Service Ready) : B	**MDAP/MAIS Code:**	
Models of Systems Affected: A-10C	**Modification Type:** Capability Improvement	**Related RDT&E PEs:** 0207131F

Financial Plan	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
	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												
Modification Item 1 of 1: Equipment (3)												
B Kits												
Recurring												
Equipment:EQUIPMENT Group B (Active)	- / -	- / -	- / -	28 / 6.250	- / -	28 / 6.250	27 / 1.400	27 / 7.587	27 / 21.742	- / -	- / -	109 / 36.979
Subtotal: Recurring	*- / -*	*- / -*	*- / -*	*- / 6.250*	*- / -*	*- / 6.250*	*- / 1.400*	*- / 7.587*	*- / 21.742*	*- / -*	*- / -*	*- / 36.979*
Subtotal: Equipment (3)	*- / -*	*- / -*	*- / -*	*- / 6.250*	*- / -*	*- / 6.250*	*- / 1.400*	*- / 7.587*	*- / 21.742*	*- / -*	*- / -*	*- / 36.979*
Subtotal: Procurement, All Modification Items	*- / -*	*- / -*	*- / -*	*- / 6.250*	*- / -*	*- / 6.250*	*- / 1.400*	*- / 7.587*	*- / 21.742*	*- / -*	*- / -*	*- / 36.979*
Support *(All Modification Items)*												
GROUP B: TOTAL NONRECURRING	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 18.731	- / -	- / 18.731
Subtotal: Support	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / 18.731*	*- / -*	*- / 18.731*
Installation												
Subtotal: Installation	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*
Total												
Total Cost (Procurement + Support + Installation)	**-**	**0.000**	**0.000**	**6.250**	**0.000**	**6.250**	**1.400**	**7.587**	**21.742**	**18.731**	**-**	**55.710**

Exhibit P-3a, Individual Modification: PB 2020 Air Force		Date: February 2019
Appropriation / Budget Activity / Budget Sub Activity: 3010F / 05 / 2	**P-1 Line Item Number / Title:** A01000 / A-10	**Modification Number / Title:** 9834 / A-10 High Resolution Display System (HRDS)

ID Code (A=Service Ready, B=Not Service Ready) : B	**MDAP/MAIS Code:**

Modification Item 1 of 1: Equipment (3)

Manufacturer Information

Manufacturer Name: TBD	Manufacturer Location: TBD
Administrative Leadtime *(in Months)*: 0	Production Leadtime *(in Months)*: 0

Dates	FY 2018	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024
Contract Dates			Mar 2020	Jun 2021	Jun 2022	May 2023	
Delivery Dates			Mar 2020	Jun 2021	Jun 2022	May 2023	

Installation Information

Method of Implementation (Organic): Org/Intermediate	**Installation Quantity:** 109

Exhibit P-3a, Individual Modification: PB 2020 Air Force		Date: February 2019
Appropriation / Budget Activity / Budget Sub Activity: 3010F / 05 / 2	**P-1 Line Item Number / Title:** A01000 / A-10	**Modification Number / Title:** 9839 / SDB-1
ID Code (A=Service Ready, B=Not Service Ready) : B	**MDAP/MAIS Code:**	

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 *(Units in Each)*	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost *($ in Millions)*	-	0.000	0.000	8.000	0.000	8.000	0.000	0.000	0.000	0.000	-	8.000
Less PY Advance Procurement *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) *($ in Millions)*	-	0.000	0.000	8.000	0.000	8.000	0.000	0.000	0.000	0.000	-	8.000
Plus CY Advance Procurement *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Total Obligation Authority *($ in Millions)*	**-**	**0.000**	**0.000**	**8.000**	**0.000**	**8.000**	**0.000**	**0.000**	**0.000**	**0.000**	**-**	**8.000**
(The following Resource Summary rows are for informational purposes only. The corresponding budget requests are documented elsewhere.)												
Initial Spares *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Unit Cost *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-

Description:

This program, P-3A Mod 9839, SDB-1, is a new start.

Funds will be used to purchase support equipment for the use of the Small Diameter Bomb-1 on the A-10 platform. The A-10 Small Diameter Bomb (SDB) 1 program is expected to field with the Suite 11 Operational Flight Program (OFP). In addition to software integration, there is support equipment for maintenance that will need to be purchased. The bomb lift adaptor will be required for loading the weapon on to the aircraft stations. The Combat Munitions BIT Reprogramming Equipment (CMBRE) tester will be required for maintenance back shops. These testers are required for the BRU-61 software checks. Lastly, BRU-61 trainers will be required for qualification training on the maintenance side.

Milestone/Development Status

Development Complete. Support equipment.

Secondary Distribution		FY 2018	FY 2019	FY 2020 Base	FY 2020 OCO	FY 2020 Total	FY 2021	FY 2022	FY 2023	FY 2024
AF	Quantity	-	-	-	-	-	-	-	-	-
	Total Obligation Authority	-	-	8.000	-	8.000	-	-	-	-
Total: Secondary Distribution	**Quantity**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**
	Total Obligation Authority	**0.000**	**0.000**	**8.000**	**0.000**	**8.000**	**0.000**	**0.000**	**0.000**	**0.000**

Exhibit P-3a, Individual Modification: PB 2020 Air Force		Date: February 2019
Appropriation / Budget Activity / Budget Sub Activity: 3010F / 05 / 2	**P-1 Line Item Number / Title:** A01000 / A-10	**Modification Number / Title:** 9839 / SDB-1
ID Code (A=Service Ready, B=Not Service Ready) : B	**MDAP/MAIS Code:**	
Models of Systems Affected: A-10C	**Modification Type:** Capability Improvement	**Related RDT&E PEs:** 0207131F

Financial Plan	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
	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												
Modification Item 1 of 1: Support Equipment												
B Kits												
Recurring												
Support Equipment:EQUIPMENT Group B (Active)	- / -	- / -	- / -	202 / 8.000	- / -	202 / 8.000	- / -	- / -	- / -	- / -	- / -	202 / 8.000
Subtotal: Recurring	- / -	- / -	- / -	- / 8.000	- / -	- / 8.000	- / -	- / -	- / -	- / -	- / -	- / 8.000
Subtotal: Support Equipment	- / -	- / -	- / -	- / 8.000	- / -	- / 8.000	- / -	- / -	- / -	- / -	- / -	- / 8.000
Subtotal: Procurement, All Modification Items	- / -	- / -	- / -	- / 8.000	- / -	- / 8.000	- / -	- / -	- / -	- / -	- / -	- / 8.000
Installation												
Subtotal: Installation	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
Total												
Total Cost (Procurement + Support + Installation)	**-**	**0.000**	**0.000**	**8.000**	**0.000**	**8.000**	**0.000**	**0.000**	**0.000**	**0.000**	**-**	**8.000**

Exhibit P-3a, Individual Modification: PB 2020 Air Force		Date: February 2019
Appropriation / Budget Activity / Budget Sub Activity: 3010F / 05 / 2	**P-1 Line Item Number / Title:** A01000 / A-10	**Modification Number / Title:** 9839 / SDB-1

ID Code (A=Service Ready, B=Not Service Ready) : B | **MDAP/MAIS Code:**

Modification Item 1 of 1: Support Equipment

Manufacturer Information

Manufacturer Name: TBD | Manufacturer Location: TBD

Administrative Leadtime *(in Months)*: 0 | Production Leadtime *(in Months)*: 0

Dates	FY 2018	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024
Contract Dates			Oct 2019				
Delivery Dates			Oct 2019				

Installation Information

Method of Implementation (Organic): Org/Intermediate | **Installation Quantity:** 202

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Exhibit P-40, Budget Line Item Justification: PB 2020 Air Force	Date: February 2019
Appropriation / Budget Activity / Budget Sub Activity: 3010F: Aircraft Procurement, Air Force / BA 05: Modification of Inservice Aircraft / BSA 2: Tactical Aircraft	**P-1 Line Item Number / Title:** E011A0 / E-11 BACN/HAG

ID Code (A=Service Ready, B=Not Service Ready): A	**Program Elements for Code B Items:** N/A	**Other Related Program Elements:** 0207610F

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 *(Units in Each)*	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost *($ in Millions)*	-	0.000	0.000	70.027	-	70.027	33.691	25.347	53.133	89.719	-	271.917
Less PY Advance Procurement *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) *($ in Millions)*	-	0.000	0.000	70.027	-	70.027	33.691	25.347	53.133	89.719	-	271.917
Plus CY Advance Procurement *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Total Obligation Authority *($ in Millions)*	**-**	**0.000**	**0.000**	**70.027**	**-**	**70.027**	**33.691**	**25.347**	**53.133**	**89.719**	**-**	**271.917**
(The following Resource Summary rows are for informational purposes only. The corresponding budget requests are documented elsewhere.)												
Initial Spares *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Flyaway Unit Cost *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Unit Cost *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-

Description:

This line item funds multiple modifications that apply to weapon systems funded at less than $2 million per year as well as weapon systems with much greater budgets. The overall goal of the modifications budgeted is to enhance capability and improve reliability and maintainability.

Funding contained in this platform's documentation directly aids simulator aircraft training systems training enterprise to continue its overall FYDP pilot production increase thus reducing the USAF Pilot Shortage.

Funding will also be used to procure and integrate the Fifth-To-Fourth Generation Gateway (524 GW) Capability onto EQ-4B BACN fleet.

Funding may be used to address Diminishing Manufacturing Sources (DMS) issues.

AFAF funding for this exhibit contained in PE 0207238F. Development efforts are under PE 0207610F/RDT&E.

In accordance with Section 1815 of the FY 2008 National Defense Authorization Act (P.L. 110-181), this item is necessary for use by the active and reserve components of the Armed Forces for homeland defense mission, domestic emergency responses, and providing military support to civilian authorities.

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.

Exhibit P-40, Budget Line Item Justification: PB 2020 Air Force	Date: February 2019
Appropriation / Budget Activity / Budget Sub Activity: 3010F: Aircraft Procurement, Air Force / BA 05: Modification of Inservice Aircraft / BSA 2: Tactical Aircraft	**P-1 Line Item Number / Title:** E011A0 / E-11 BACN/HAG

ID Code (A=Service Ready, B=Not Service Ready): A	Program Elements for Code B Items: N/A	Other Related Program Elements: 0207610F

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-3a	1 / E-11 Mods (Other)		A		- / -	- / 0.000	- / 0.000	- / 70.027	- / 0.000	- / 70.027
P-40	**Total Gross/Weapon System Cost**				**- / -**	**- / 0.000**	**- / 0.000**	**- / 70.027**	**- / -**	**- / 70.027**

Exhibits Schedule					FY 2021	FY 2022	FY 2023	FY 2024	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 / E-11 Mods (Other)		A		- / 33.691	- / 25.347	- / 53.133	- / 89.719	- / -	- / 271.917
P-40	**Total Gross/Weapon System Cost**				**- / 33.691**	**- / 25.347**	**- / 53.133**	**- / 89.719**	**- / -**	**- / 271.917**

*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:
Where applicable, justification for individual modifications is provided in the P-3A exhibits.

Exhibit P-3a, Individual Modification: PB 2020 Air Force		Date: February 2019
Appropriation / Budget Activity / Budget Sub Activity: 3010F / 05 / 2	**P-1 Line Item Number / Title:** E011A0 / E-11 BACN/HAG	**Modification Number / Title:** 1 / E-11 Mods
ID Code (A=Service Ready, B=Not Service Ready) : A	**MDAP/MAIS Code:**	

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 *(Units in Each)*	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost *($ in Millions)*	-	0.000	0.000	70.027	0.000	70.027	33.691	25.347	53.133	89.719	-	271.917
Less PY Advance Procurement *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) *($ in Millions)*	-	0.000	0.000	70.027	0.000	70.027	33.691	25.347	53.133	89.719	-	271.917
Plus CY Advance Procurement *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Total Obligation Authority *($ in Millions)*	**-**	**0.000**	**0.000**	**70.027**	**0.000**	**70.027**	**33.691**	**25.347**	**53.133**	**89.719**	**-**	**271.917**
(The following Resource Summary rows are for informational purposes only. The corresponding budget requests are documented elsewhere.)												
Initial Spares *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Unit Cost *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-

Description:

Battlefield Airborne Communication Node (BACN) provides a Combatant Commander (CCDR) flexible, long-endurance, responsive airborne communications capability. BACN provides a dedicated airborne capability to conduct voice bridging/translation, Tactical Data Link (TDL) gateway, and TDL relay functions for beyond-line-of-sight (BLOS) data communications.

Funding will support procurement of aircraft engines to increase current BACN fleet service life expectancy. Funding also supports procurement of platform provisioning supplies.

Funding will also be used to procure and integrate the Fifth-To-Fourth Generation Gateway (524 GW) Capability onto EQ-4B BACN fleet.

Funding will support procurement and installation of retrofit kits to integrate Link 16 External Time Reference (ETR) with Global Positioning System (GPS) capability.

Milestone/Development Status

BACN includes the payload, its host platforms, and associated ground systems. The program is currently in the Operations and Support (O&S) Phase of the Life Cycle Management System. As requirements emerge for new hardware and software capabilities that improve system performance, external time references, interoperability and open mission system technologies, BACN will host the integration of these and future communication technologies. Funding will be used to address Diminishing Manufacturing Sources (DMS) Issues. This may include modifications required for enhanced capability and improvements to system reliability and maintainability. Safety of flight considerations, including but not limited to, performance, aircraft structural integrity, availability, and continuity of service requirements for long range reference, local area reference, and landing/terminal reference. This effort includes Military GPS, advanced navigation systems and any additional mandates levied on the BACN system and platforms. Funding will also be used for fulfillment of requirements in support of alteration, conversion, modernization, and transition to a normalized Program of Record. Transition to BACN Program of Record may require additional BACN aircraft platforms to meet the service retained capability requirements of Combatant Commanders needs emerge in multiple AOR's. This will include, but not be limited to, standardization of avionics baseline and the production of all Supplemental Type Certificates of the most up to date configurations of the fleet.

Exhibit P-3a, Individual Modification: PB 2020 Air Force		Date: February 2019
Appropriation / Budget Activity / Budget Sub Activity: 3010F / 05 / 2	P-1 Line Item Number / Title: E011A0 / E-11 BACN/HAG	Modification Number / Title: 1 / E-11 Mods
ID Code (A=Service Ready, B=Not Service Ready) : A	MDAP/MAIS Code:	
Models of Systems Affected: E-11A	Modification Type: Other	Related RDT&E PEs: 0207610F

Financial Plan	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
	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												
Modification Item 1 of 9: Aircraft Support Equipment												
A Kits												
Recurring												
Aircraft Support Equipment:INSTALL KITS Group A (Active)	- / -	- / -	- / -	- / -	- / -	- / -	1 / 3.964	- / -	- / -	- / -	- / -	1 / 3.964
Subtotal: Recurring	- / -	- / -	- / -	- / -	- / -	- / -	- / 3.964	- / -	- / -	- / -	- / -	- / 3.964
Subtotal: Aircraft Support Equipment	- / -	- / -	- / -	- / -	- / -	- / -	- / 3.964	- / -	- / -	- / -	- / -	- / 3.964
Modification Item 2 of 9: E-11A Modification												
A Kits												
Recurring												
E-11A Modification:INSTALL KITS Group A (Active)	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	1 / 74.530	- / -	1 / 74.530
Subtotal: Recurring	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 74.530	- / -	- / 74.530
Subtotal: E-11A Modification	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 74.530	- / -	- / 74.530
Modification Item 3 of 9: E-11A Survivability												
A Kits												
Recurring												
E-11A Survivability:INSTALL KITS Group A (Active)	- / -	- / -	- / -	- / -	- / -	- / -	4 / 10.307	- / -	1 / 8.136	1 / 4.018	- / -	6 / 22.461
Subtotal: Recurring	- / -	- / -	- / -	- / -	- / -	- / -	- / 10.307	- / -	- / 8.136	- / 4.018	- / -	- / 22.461
Subtotal: E-11A Survivability	- / -	- / -	- / -	- / -	- / -	- / -	- / 10.307	- / -	- / 8.136	- / 4.018	- / -	- / 22.461
Modification Item 4 of 9: Engines												
A Kits												
Recurring												
Engines:INSTALL KITS Group A (Active)	- / -	- / -	- / -	4 / 54.782	- / -	4 / 54.782	- / -	- / -	- / -	- / -	- / -	4 / 54.782
Subtotal: Recurring	- / -	- / -	- / -	- / 54.782	- / -	- / 54.782	- / -	- / -	- / -	- / -	- / -	- / 54.782
Subtotal: Engines	- / -	- / -	- / -	- / 54.782	- / -	- / 54.782	- / -	- / -	- / -	- / -	- / -	- / 54.782
Modification Item 5 of 9: Link 16 ETR												
A Kits												
Recurring												
Link 16 ETR:INSTALL KITS Group A (Active)	- / -	- / -	- / -	8 / 12.778	- / -	8 / 12.778	- / -	- / -	- / -	- / -	- / -	8 / 12.778
Subtotal: Recurring	- / -	- / -	- / -	- / 12.778	- / -	- / 12.778	- / -	- / -	- / -	- / -	- / -	- / 12.778
Subtotal: Link 16 ETR	- / -	- / -	- / -	- / 12.778	- / -	- / 12.778	- / -	- / -	- / -	- / -	- / -	- / 12.778

Exhibit P-3a, Individual Modification: PB 2020 Air Force		Date: February 2019
Appropriation / Budget Activity / Budget Sub Activity: 3010F / 05 / 2	P-1 Line Item Number / Title: E011A0 / E-11 BACN/HAG	Modification Number / Title: 1 / E-11 Mods
ID Code (A=Service Ready, B=Not Service Ready) : A	MDAP/MAIS Code:	
Models of Systems Affected: E-11A	Modification Type: Other	Related RDT&E PEs: 0207610F

Financial Plan	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
	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)
Modification Item 6 of 9: MIDS-J												
A Kits												
Recurring												
MIDS-J:INSTALL KITS Group A (Active)	- / -	- / -	- / -	- / -	- / -	- / -	- / -	4 / 9.796	- / -	- / -	- / -	4 / 9.796
Subtotal: Recurring	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 9.796	- / -	- / -	- / -	- / 9.796
Subtotal: MIDS-J	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 9.796	- / -	- / -	- / -	- / 9.796
Modification Item 7 of 9: Platform Provision												
A Kits												
Recurring												
Platform Provision:INSTALL KITS Group A (Active)	- / -	- / -	- / -	- / -	- / -	- / -	4 / 11.221	- / -	- / -	- / -	- / -	4 / 11.221
Subtotal: Recurring	- / -	- / -	- / -	- / -	- / -	- / -	- / 11.221	- / -	- / -	- / -	- / -	- / 11.221
Subtotal: Platform Provision	- / -	- / -	- / -	- / -	- / -	- / -	- / 11.221	- / -	- / -	- / -	- / -	- / 11.221
Modification Item 8 of 9: Protected Tactical Waveform (PTW)												
A Kits												
Recurring												
Protected Tactical Waveform (PTW):INSTALL KITS Group A (Active)	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	4 / 42.279	1 / 4.998	- / -	5 / 47.277
Subtotal: Recurring	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 42.279	- / 4.998	- / -	- / 47.277
Subtotal: Protected Tactical Waveform (PTW)	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 42.279	- / 4.998	- / -	- / 47.277
Modification Item 9 of 9: Simulators												
A Kits												
Recurring												
Simulators:INSTALL KITS Group A (Active)	- / -	- / -	- / -	- / -	- / -	- / -	- / -	4 / 13.551	- / -	- / -	- / -	4 / 13.551
Subtotal: Recurring	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 13.551	- / -	- / -	- / -	- / 13.551
Subtotal: Simulators	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 13.551	- / -	- / -	- / -	- / 13.551
Subtotal: Procurement, All Modification Items	- / -	- / -	- / -	- / 67.560	- / -	- / 67.560	- / 25.492	- / 23.347	- / 50.415	- / 83.546	- / -	- / 250.360
Support *(All Modification Items)*												
PMA - Contractor Services	- / -	- / -	- / -	- / 2.467	- / -	- / 2.467	- / 8.199	- / 2.000	- / 2.718	- / 6.173	- / -	- / 21.557
Subtotal: Support	- / -	- / -	- / -	- / 2.467	- / -	- / 2.467	- / 8.199	- / 2.000	- / 2.718	- / 6.173	- / -	- / 21.557
Installation												
Subtotal: Installation	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -

Exhibit P-3a, Individual Modification: PB 2020 Air Force		Date: February 2019
Appropriation / Budget Activity / Budget Sub Activity: 3010F / 05 / 2	**P-1 Line Item Number / Title:** E011A0 / E-11 BACN/HAG	**Modification Number / Title:** 1 / E-11 Mods
ID Code (A=Service Ready, B=Not Service Ready) : A	**MDAP/MAIS Code:**	
Models of Systems Affected: E-11A	**Modification Type:** Other	**Related RDT&E PEs:** 0207610F

Financial Plan	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
	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)*
Total												
Total Cost (Procurement + Support + Installation)	-	0.000	0.000	70.027	0.000	70.027	33.691	25.347	53.133	89.719	-	271.917

Exhibit P-3a, Individual Modification: PB 2020 Air Force		Date: February 2019
Appropriation / Budget Activity / Budget Sub Activity: 3010F / 05 / 2	**P-1 Line Item Number / Title:** E011A0 / E-11 BACN/HAG	**Modification Number / Title:** 1 / E-11 Mods

ID Code (A=Service Ready, B=Not Service Ready) : A

MDAP/MAIS Code:

Modification Item 1 of 9: Aircraft Support Equipment

Manufacturer Information

Manufacturer Name: Northrop Grumman

Manufacturer Location: Various

Administrative Leadtime *(in Months)*: 3

Production Leadtime *(in Months)*: 3

Dates	FY 2018	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024
Contract Dates			Mar 2020	May 2021	Jan 2022	Feb 2023	Jan 2024
Delivery Dates			Jun 2020	Aug 2021	Apr 2022	May 2023	Apr 2024

Installation Information

Method of Implementation (Organic): Org/Intermediate

Installation Quantity: 0

Exhibit P-3a, Individual Modification: PB 2020 Air Force		Date: February 2019
Appropriation / Budget Activity / Budget Sub Activity: 3010F / 05 / 2	**P-1 Line Item Number / Title:** E011A0 / E-11 BACN/HAG	**Modification Number / Title:** 1 / E-11 Mods

ID Code (A=Service Ready, B=Not Service Ready) : A

MDAP/MAIS Code:

Modification Item 2 of 9: E-11A Modification

Manufacturer Information

Manufacturer Name: Northrop Grumman

Manufacturer Location: Various

Administrative Leadtime *(in Months)*: 3

Production Leadtime *(in Months)*: 3

Dates	FY 2018	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024
Contract Dates			Mar 2020	Jan 2021	Jan 2022	Jan 2023	Jun 2024
Delivery Dates			Jun 2020	Apr 2021	Apr 2022	Apr 2023	Sep 2024

Installation Information

Method of Implementation (Organic): Org/Intermediate

Installation Quantity: 0

Exhibit P-3a, Individual Modification: PB 2020 Air Force		Date: February 2019
Appropriation / Budget Activity / Budget Sub Activity: 3010F / 05 / 2	**P-1 Line Item Number / Title:** E011A0 / E-11 BACN/HAG	**Modification Number / Title:** 1 / E-11 Mods

ID Code (A=Service Ready, B=Not Service Ready) : A	**MDAP/MAIS Code:**

Modification Item 3 of 9: E-11A Survivability

Manufacturer Information

Manufacturer Name: Northrop Grumman	Manufacturer Location: Various
Administrative Leadtime *(in Months)*: 3	Production Leadtime *(in Months)*: 3

Dates	FY 2018	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024
Contract Dates			Jan 2020	May 2021	Jan 2022	May 2023	Jun 2024
Delivery Dates			Apr 2020	Aug 2021	Apr 2022	Aug 2023	Sep 2024

Installation Information

Method of Implementation (Organic): Org/Intermediate	**Installation Quantity:** 0

Exhibit P-3a, Individual Modification: PB 2020 Air Force		Date: February 2019
Appropriation / Budget Activity / Budget Sub Activity: 3010F / 05 / 2	**P-1 Line Item Number / Title:** E011A0 / E-11 BACN/HAG	**Modification Number / Title:** 1 / E-11 Mods

ID Code (A=Service Ready, B=Not Service Ready) : A

MDAP/MAIS Code:

Modification Item 4 of 9: Engines

Manufacturer Information

Manufacturer Name: Rolls Royce

Manufacturer Location: Various

Administrative Leadtime *(in Months)*: 3

Production Leadtime *(in Months)*: 3

Dates	FY 2018	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024
Contract Dates			May 2020	Jan 2021	Jan 2022	Jan 2023	Jan 2024
Delivery Dates			Aug 2020	Apr 2021	Apr 2022	Apr 2023	Apr 2024

Installation Information

Method of Implementation (Organic): Org/Intermediate

Installation Quantity: 0

Exhibit P-3a, Individual Modification: PB 2020 Air Force		Date: February 2019
Appropriation / Budget Activity / Budget Sub Activity: 3010F / 05 / 2	**P-1 Line Item Number / Title:** E011A0 / E-11 BACN/HAG	**Modification Number / Title:** 1 / E-11 Mods

ID Code (A=Service Ready, B=Not Service Ready) : A

MDAP/MAIS Code:

Modification Item 5 of 9: Link 16 ETR

Manufacturer Information

Manufacturer Name: Raytheon

Manufacturer Location: Various

Administrative Leadtime *(in Months)*: 1

Production Leadtime *(in Months)*: 3

Dates	FY 2018	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024
Contract Dates			May 2020	Jan 2021	Jan 2022	Jan 2023	Jan 2024
Delivery Dates			Aug 2020	Apr 2021	Apr 2022	Apr 2023	Apr 2024

Installation Information

Method of Implementation (Organic): Org/Intermediate

Installation Quantity: 0

Exhibit P-3a, Individual Modification: PB 2020 Air Force		Date: February 2019
Appropriation / Budget Activity / Budget Sub Activity: 3010F / 05 / 2	**P-1 Line Item Number / Title:** E011A0 / E-11 BACN/HAG	**Modification Number / Title:** 1 / E-11 Mods

ID Code (A=Service Ready, B=Not Service Ready) : A | **MDAP/MAIS Code:**

Modification Item 6 of 9: MIDS-J

Manufacturer Information

Manufacturer Name: Raytheon | Manufacturer Location: Various

Administrative Leadtime *(in Months)*: 6 | Production Leadtime *(in Months)*: 6

Dates	FY 2018	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024
Contract Dates			Apr 2020	Apr 2021	May 2022	May 2023	May 2024
Delivery Dates			Oct 2020	Oct 2021	Nov 2022	Nov 2023	Nov 2024

Installation Information

Method of Implementation (Organic): Org/Intermediate | **Installation Quantity:** 0

Exhibit P-3a, Individual Modification: PB 2020 Air Force		Date: February 2019
Appropriation / Budget Activity / Budget Sub Activity: 3010F / 05 / 2	**P-1 Line Item Number / Title:** E011A0 / E-11 BACN/HAG	**Modification Number / Title:** 1 / E-11 Mods

ID Code (A=Service Ready, B=Not Service Ready) : A

MDAP/MAIS Code:

Modification Item 7 of 9: Platform Provision

Manufacturer Information

Manufacturer Name: Northrop Grumman

Manufacturer Location: San Diego, CA

Administrative Leadtime *(in Months)*: 3

Production Leadtime *(in Months)*: 3

Dates	FY 2018	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024
Contract Dates			Jan 2020	May 2021	Jan 2022	Jan 2023	Jan 2024
Delivery Dates			Apr 2020	Aug 2021	Apr 2022	Apr 2023	Apr 2024

Installation Information

Method of Implementation (Organic): Org/Intermediate

Installation Quantity: 0

Exhibit P-3a, Individual Modification: PB 2020 Air Force		Date: February 2019
Appropriation / Budget Activity / Budget Sub Activity: 3010F / 05 / 2	**P-1 Line Item Number / Title:** E011A0 / E-11 BACN/HAG	**Modification Number / Title:** 1 / E-11 Mods

ID Code (A=Service Ready, B=Not Service Ready) : A

MDAP/MAIS Code:

Modification Item 8 of 9: Protected Tactical Waveform (PTW)

Manufacturer Information

Manufacturer Name: Northrop Grumman

Manufacturer Location: Middle River, MD

Administrative Leadtime *(in Months)*: 3

Production Leadtime *(in Months)*: 3

Dates	FY 2018	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024
Contract Dates			Jan 2020	Jan 2021	Jan 2022	May 2023	May 2024
Delivery Dates			Apr 2020	Apr 2021	Apr 2022	Aug 2023	Aug 2024

Installation Information

Method of Implementation (Organic): Org/Intermediate

Installation Quantity: 0

Exhibit P-3a, Individual Modification: PB 2020 Air Force		Date: February 2019
Appropriation / Budget Activity / Budget Sub Activity: 3010F / 05 / 2	**P-1 Line Item Number / Title:** E011A0 / E-11 BACN/HAG	**Modification Number / Title:** 1 / E-11 Mods

ID Code (A=Service Ready, B=Not Service Ready) : A

MDAP/MAIS Code:

Modification Item 9 of 9: Simulators

Manufacturer Information

Manufacturer Name: Northrop Grumman

Manufacturer Location: San Diego, CA

Administrative Leadtime *(in Months)*: 3

Production Leadtime *(in Months)*: 3

Dates	FY 2018	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024
Contract Dates			Jan 2020	Jan 2021	May 2022	Jan 2023	Jan 2024
Delivery Dates			Apr 2020	Apr 2021	Aug 2022	Apr 2023	Apr 2024

Installation Information

Method of Implementation (Organic): Org/Intermediate

Installation Quantity: 0

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Exhibit P-40, Budget Line Item Justification: PB 2020 Air Force	Date: February 2019
Appropriation / Budget Activity / Budget Sub Activity: 3010F: Aircraft Procurement, Air Force / BA 05: Modification of Inservice Aircraft / BSA 2: Tactical Aircraft	**P-1 Line Item Number / Title:** F01500 / F-15

ID Code (A=Service Ready, B=Not Service Ready): B	Program Elements for Code B Items: 0207130F, 0207134F, 0207445F, 0809731F	Other Related Program Elements: 0207130F, 0207134F

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 *(Units in Each)*	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost *($ in Millions)*	2,953.888	430.273	446.647	481.073	-	481.073	661.497	274.021	277.852	243.072	23.370	5,791.693
Less PY Advance Procurement *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) *($ in Millions)*	2,953.888	430.273	446.647	481.073	-	481.073	661.497	274.021	277.852	243.072	23.370	5,791.693
Plus CY Advance Procurement *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Total Obligation Authority *($ in Millions)*	**2,953.888**	**430.273**	**446.647**	**481.073**	**-**	**481.073**	**661.497**	**274.021**	**277.852**	**243.072**	**23.370**	**5,791.693**
(The following Resource Summary rows are for informational purposes only. The corresponding budget requests are documented elsewhere.)												
Initial Spares *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Flyaway Unit Cost *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Unit Cost *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-

Description:

This line item funds modifications to the F-15 aircraft. The F-15C/D is a twin engine (F-15C single seat; F-15D dual seat) supersonic, all-weather, day/night, air-superiority fighter. The F-15E is a twin engine, two seat, supersonic dual-role, day/night, all-weather, deep interdiction fighter with multi-role air-to-air capabilities. The overall goals of the budgeted modifications are to improve operational capability, reliability and maintainability, and flight safety. The specific modifications budgeted and programmed are below.

In accordance with Section 1815 of the FY 2008 National Defense Authorization Act (P.L. 110-181), this item is necessary for use by the active and reserve components of the Armed Forces for homeland defense missions, domestic emergency responses, and providing military support to civil authorities.

Funding for this exhibit is contained in PEs 0207130F, 0207134F, 0207445F, and 0809731F.

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.

Secondary Distribution		FY 2018	FY 2019	FY 2020 Base	FY 2020 OCO	FY 2020 Total	FY 2021	FY 2022	FY 2023	FY 2024
AF	Quantity	-	-	-	-	-	-	-	-	-
	Total Obligation Authority	424.945	409.470	376.044	0.000	376.044	580.388	254.024	260.109	243.072
AFNG	Quantity	-	-	-	-	-	-	-	-	-
	Total Obligation Authority	5.328	37.177	105.029	-	105.029	81.109	19.997	17.743	-
Total: Secondary Distribution	**Quantity**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**
	Total Obligation Authority	**430.273**	**446.647**	**481.073**	**0.000**	**481.073**	**661.497**	**274.021**	**277.852**	**243.072**

Exhibit P-40, Budget Line Item Justification: PB 2020 Air Force	Date: February 2019
Appropriation / Budget Activity / Budget Sub Activity: 3010F: Aircraft Procurement, Air Force / BA 05: Modification of Inservice Aircraft / BSA 2: Tactical Aircraft	**P-1 Line Item Number / Title:** F01500 / F-15

ID Code (A=Service Ready, B=Not Service Ready): B	Program Elements for Code B Items: 0207130F, 0207134F, 0207445F, 0809731F	Other Related Program Elements: 0207130F, 0207134F

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) I ($ M)	Quantity / Total Cost (Each) I ($ M)	Quantity / Total Cost (Each) I ($ M)	Quantity / Total Cost (Each) I ($ M)	Quantity / Total Cost (Each) I ($ M)	Quantity / Total Cost (Each) I ($ M)
P-40a***	1203 / F-15 C/D Secondary Power System (SPS) (Reliability & Maintainability)				- / 7.492	- / -	- / -	- / -	- / -	- / -
P-40a***	1206 / F-15C Infrared Search and Track (IRST) (Capability Improvement)				- / -	- / 65.133	- / 51.889	- / -	- / -	- / -
P-40a***	1209 / F-15 C/D Flight Data Recorder (FDR) (Capability Improvement)				- / 24.505	- / 0.303	- / 0.020	- / -	- / -	- / -
P-40a***	1210 / F-15E Flight Data Recorder (FDR) (Capability Improvement)				- / 140.025	- / 2.421	- / 0.027	- / -	- / -	- / -
P-40a***	8353 / F-15E -JOINT HELMET-MOUNTED CUEING SYSTEM (Reliability & Maintainability)				- / 102.724	- / 1.200	- / 0.600	- / -	- / -	- / -
P-40a***	8662 / AETC MTD UPGRADES-FIELD TRAINING DETACHMENTS (Service Life Extension)				- / 6.171	- / 1.119	- / 1.128	- / 1.147	- / -	- / 1.147
P-40a***	8756 / F-15C/D Link 16 Cryptographic Modernization (Capability Improvement)				- / 0.002	- / -	- / -	- / -	- / -	- / -
P-40a***	8794 / F-15C/D Beyond Line Of Sight Communications (Capability Improvement)				- / 54.339	- / 0.088	- / -	- / -	- / -	- / -
P-40a***	8797 / F-15C Passive Attack Sensor System (Capability Improvement)				- / 28.577	- / -	- / -	- / -	- / -	- / -
P-40a***	8803 / F-15 C/D/MUOS (Capability Improvement)				- / -	- / -	- / -	- / 0.630	- / -	- / 0.630
P-40a***	8804 / F-15 F-15 E/MUOS (Capability Improvement)				- / -	- / -	- / -	- / 0.630	- / -	- / 0.630
P-40a***	8806 / F-15 C/D Cabin Pressure Indicator (Safety)				- / 1.977	- / 0.076	- / 0.120	- / -	- / -	- / -
P-40a***	8807 / F-15 E Cabin Pressure Indicator (Safety)				- / 3.332	- / 0.126	- / 0.180	- / -	- / -	- / -
P-40a***	8811 / F-15E SATCOM UON (Other)				- / 17.700	- / -	- / -	- / -	- / -	- / -
P-40a***	8812 / F-15 E Integrated Aircrew Trainer (Other)				- / -	- / -	- / 4.959	- / -	- / -	- / -
P-40a***	8813 / F-15E B61 A/C Umbilical (Capability Improvement)				- / 0.542	- / -	- / -	- / -	- / -	- / -
P-40a***	8815 / F-15C Simulator Upgrade (Capability Improvement)				- / -	- / 15.000	- / -	- / -	- / -	- / -
P-40a***	8816 / F-15C/D APG-63(V)3 Common Config (Reliability & Maintainability)				- / -	- / -	- / 4.330	- / 4.352	- / -	- / 4.352
P-40a***	8817 / F-15E DTM II (Reliability & Maintainability)				- / -	- / -	- / -	- / -	- / -	- / -
P-40a***	8820 / F-15E Digital Color Display (Capability Improvement)				- / -	- / -	- / -	- / -	- / -	- / -
P-40a***	99999U / LOW COST RETROFIT MODS (Service Life Extension)				- / 5.764	- / 0.001	- / 0.001	- / 0.001	- / -	- / 0.001
P-40a***	99999X / Low Cost Modifications (Capability Improvement)				- / 5.787	- / 0.001	- / 0.001	- / 0.001	- / -	- / 0.001
P-3a	1202 / F-15E Radar Modernization Program APG-82(V)1 (Capability Improvement)		A		- / 1,162.072	- / 171.764	- / 186.781	- / 179.525	- / 0.000	- / 179.525
P-3a	1 / Advanced Display Core Processor, ADCP II-E (Reliability & Maintainability)		B		- / 3.780	- / 82.477	- / 10.520	- / 49.187	- / 0.000	- / 49.187
P-3a	1205 / :Advanced Display Core Processor, ADCP II-C (Reliability & Maintainability)		B		- / 1.859	- / 47.399	- / 58.091	- / 75.100	- / 0.000	- / 75.100
P-3a	6158 / F-15C/D APG-63(V)3 radar upgrade (Capability Improvement)		B		- / 1,359.205	- / 5.723	- / 11.908	- / 23.681	- / 0.000	- / 23.681

Exhibit P-40, Budget Line Item Justification: PB 2020 Air Force	Date: February 2019
Appropriation / Budget Activity / Budget Sub Activity: 3010F: Aircraft Procurement, Air Force / BA 05: Modification of Inservice Aircraft / BSA 2: Tactical Aircraft	**P-1 Line Item Number / Title:** F01500 / F-15

ID Code (A=Service Ready, B=Not Service Ready): B	Program Elements for Code B Items: 0207130F, 0207134F, 0207445F, 0809731F	Other Related Program Elements: 0207130F, 0207134F

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-3a	8754 / F-15C/D IFF Mode 5 (Reliability & Maintainability)		A		- / -	- / 0.000	- / 8.000	- / 29.656	- / 0.000	- / 29.656
P-3a	8755 / F-15E IFF MODE 5 (Reliability & Maintainability)		B		- / 28.035	- / 8.006	- / 26.455	- / 15.257	- / 0.000	- / 15.257
P-3a	8799 / F-15C MIDS JTRS (Capability Improvement)		B		- / 0.000	- / 7.430	- / 21.600	- / 41.640	- / 0.000	- / 41.640
P-3a	8800 / F-15E MIDS JTRS (Capability Improvement)		B		- / 0.000	- / 14.983	- / 19.040	- / 27.844	- / 0.000	- / 27.844
P-3a	8801 / F-15 C/D SLEP Longerons (Service Life Extension)		B		- / -	- / 7.023	- / 5.900	- / 24.627	- / 0.000	- / 24.627
P-3a	8810 / F-15E APG-82(V)1 Common Config (Capability Improvement)		B		- / 0.000	- / 0.000	- / 35.097	- / 7.795	- / 0.000	- / 7.795
P-40	**Total Gross/Weapon System Cost**				**- / 2,953.888**	**- / 430.273**	**- / 446.647**	**- / 481.073**	**- / -**	**- / 481.073**

Exhibits Schedule					FY 2021	FY 2022	FY 2023	FY 2024	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-40a***	1203 / F-15 C/D Secondary Power System (SPS) (Reliability & Maintainability)				- / -	- / -	- / -	- / -	- / -	- / 7.492
P-40a***	1206 / F-15C Infrared Search and Track (IRST) (Capability Improvement)				- / -	- / -	- / -	- / -	- / -	- / 117.022
P-40a***	1209 / F-15 C/D Flight Data Recorder (FDR) (Capability Improvement)				- / -	- / -	- / -	- / -	- / -	- / 24.828
P-40a***	1210 / F-15E Flight Data Recorder (FDR) (Capability Improvement)				- / -	- / -	- / -	- / -	- / -	- / 142.473
P-40a***	8353 / F-15E -JOINT HELMET-MOUNTED CUEING SYSTEM (Reliability & Maintainability)				- / -	- / -	- / -	- / -	- / -	- / 104.524
P-40a***	8662 / AETC MTD UPGRADES-FIELD TRAINING DETACHMENTS (Service Life Extension)				- / 1.167	- / 1.190	- / 1.212	- / 1.234	- / -	- / 14.368
P-40a***	8756 / F-15C/D Link 16 Cryptographic Modernization (Capability Improvement)				- / -	- / -	- / -	- / -	- / -	- / 0.002
P-40a***	8794 / F-15C/D Beyond Line Of Sight Communications (Capability Improvement)				- / -	- / -	- / -	- / -	- / -	- / 54.427
P-40a***	8797 / F-15C Passive Attack Sensor System (Capability Improvement)				- / -	- / -	- / -	- / -	- / -	- / 28.577
P-40a***	8803 / F-15 C/D/MUOS (Capability Improvement)				- / -	- / -	- / -	- / -	- / -	- / 0.630
P-40a***	8804 / F-15 F-15 E/MUOS (Capability Improvement)				- / 8.050	- / 8.680	- / 30.952	- / 31.509	- / 23.370	- / 103.191
P-40a***	8806 / F-15 C/D Cabin Pressure Indicator (Safety)				- / -	- / -	- / -	- / -	- / -	- / 2.173
P-40a***	8807 / F-15 E Cabin Pressure Indicator (Safety)				- / -	- / -	- / -	- / -	- / -	- / 3.638
P-40a***	8811 / F-15E SATCOM UON (Other)				- / -	- / -	- / -	- / -	- / -	- / 17.700
P-40a***	8812 / F-15 E Integrated Aircrew Trainer (Other)				- / -	- / -	- / -	- / -	- / -	- / 4.959
P-40a***	8813 / F-15E B61 A/C Umbilical (Capability Improvement)				- / -	- / -	- / -	- / -	- / -	- / 0.542
P-40a***	8815 / F-15C Simulator Upgrade (Capability Improvement)				- / -	- / -	- / -	- / -	- / -	- / 15.000

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

Appropriation / Budget Activity / Budget Sub Activity:
3010F: Aircraft Procurement, Air Force / BA 05: Modification of Inservice Aircraft / BSA 2: Tactical Aircraft

P-1 Line Item Number / Title:
F01500 / F-15

ID Code (A=Service Ready, B=Not Service Ready): B

Program Elements for Code B Items: 0207130F, 0207134F, 0207445F, 0809731F

Other Related Program Elements: 0207130F, 0207134F

Line Item MDAP/MAIS Code: N/A

Exhibits Schedule					FY 2021	FY 2022	FY 2023	FY 2024	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-40a***	8816 / F-15C/D APG-63(V)3 Common Config (Reliability & Maintainability)				- / 1.526	- / -	- / -	- / -	- / -	- / 10.208
P-40a***	8817 / F-15E DTM II (Reliability & Maintainability)				- / -	- / 7.540	- / 9.920	- / 11.010	- / -	- / 28.470
P-40a***	8820 / F-15E Digital Color Display (Capability Improvement)				- / -	- / 15.159	- / 17.619	- / 24.674	- / -	- / 57.452
P-40a***	99999U / LOW COST RETROFIT MODS (Service Life Extension)				- / 0.001	- / -	- / -	- / -	- / -	- / 5.768
P-40a***	99999X / Low Cost Modifications (Capability Improvement)				- / 0.001	- / -	- / -	- / -	- / -	- / 5.791
P-3a	1202 / F-15E Radar Modernization Program APG-82(V)1 (Capability Improvement)		A		- / 313.356	- / 85.019	- / 84.324	- / 84.930	- / -	- / 2,267.771
P-3a	1 / Advanced Display Core Processor, ADCP II-E (Reliability & Maintainability)		B		- / 72.212	- / 74.483	- / 75.842	- / 51.517	- / 0.000	- / 420.018
P-3a	1205 / :Advanced Display Core Processor, ADCP II-C (Reliability & Maintainability)		B		- / 69.886	- / 0.000	- / 0.000	- / 0.000	- / -	- / 252.335
P-3a	6158 / F-15C/D APG-63(V)3 radar upgrade (Capability Improvement)		B		- / 40.540	- / 0.000	- / 0.000	- / 0.000	- / 0.000	- / 1,441.057
P-3a	8754 / F-15C/D IFF Mode 5 (Reliability & Maintainability)		A		- / 0.548	- / 0.000	- / 0.000	- / 0.000	- / -	- / 38.204
P-3a	8755 / F-15E IFF MODE 5 (Reliability & Maintainability)		B		- / 2.080	- / 0.190	- / 0.200	- / 0.000	- / -	- / 80.223
P-3a	8799 / F-15C MIDS JTRS (Capability Improvement)		B		- / 46.118	- / 0.000	- / 0.000	- / 0.000	- / -	- / 116.788
P-3a	8800 / F-15E MIDS JTRS (Capability Improvement)		B		- / 41.918	- / 43.769	- / 19.962	- / 33.051	- / 0.000	- / 200.567
P-3a	8801 / F-15 C/D SLEP Longerons (Service Life Extension)		B		- / 40.082	- / 33.024	- / 32.765	- / 0.000	- / 0.000	- / 143.421
P-3a	8810 / F-15E APG-82(V)1 Common Config (Capability Improvement)		B		- / 24.012	- / 4.967	- / 5.056	- / 5.147	- / -	- / 82.074
P-40	**Total Gross/Weapon System Cost**				**- / 661.497**	**- / 274.021**	**- / 277.852**	**- / 243.072**	**- / 23.370**	**- / 5,791.693**

*** Although this is an Exhibit P-40a item, the actual exhibit is not included since all of the required information for this item is already being shown here.

*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:
Where applicable, justification for individual modifications is provided in the P-3A exhibits.

Exhibit P-3a, Individual Modification: PB 2020 Air Force		Date: February 2019
Appropriation / Budget Activity / Budget Sub Activity: 3010F / 05 / 2	**P-1 Line Item Number / Title:** F01500 / F-15	**Modification Number / Title:** 1202 / F-15E Radar Modernization Program APG-82(V)1
ID Code (A=Service Ready, B=Not Service Ready) : A	**MDAP/MAIS Code:**	

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 *(Units in Each)*	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost *($ in Millions)*	1,162.072	171.764	186.781	179.525	0.000	179.525	313.356	85.019	84.324	84.930	-	2,267.771
Less PY Advance Procurement *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) *($ in Millions)*	1,162.072	171.764	186.781	179.525	0.000	179.525	313.356	85.019	84.324	84.930	-	2,267.771
Plus CY Advance Procurement *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Total Obligation Authority *($ in Millions)*	**1,162.072**	**171.764**	**186.781**	**179.525**	**0.000**	**179.525**	**313.356**	**85.019**	**84.324**	**84.930**	**-**	**2,267.771**
(The following Resource Summary rows are for informational purposes only. The corresponding budget requests are documented elsewhere.)												
Initial Spares *($ in Millions)*	-	6.114	3.880	7.771	-	7.771	6.218	5.350	4.050	-	-	33.383
Gross/Weapon System Unit Cost *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-

Description:

F-15E Radar Modernization Program (RMP), designated the APG-82(V)1, replaces the legacy radar using existing technology from other DOD platforms. It solves parts obsolescence problems and provides improved reliability and performance (increased synthetic aperture radar (SAR) range and resolution), including air-to-air and air-to-ground modes. Also provides for future growth. Total aircraft requirement: 217. This program funded Research Development Test and Evaluation (RDT&E) in PE 0207134F. Requirements document: F-15E Radar Modernization Program CDD dated 21 March 2005. In Aug O8, AF/ASRD again reviewed the Capabilities Production Document (CPD) requirement and determined it was no longer necessary since the operational requirements in the Capabilities Development Document were still valid and the program had already entered MS C/LRIP.

Funding may be used to resolve Diminishing Manufacturing Sources/Material Shortages (DMSMS) and/or obsolescence issues. DMSMS activities may include, but are not limited to, bridge buys, life of type buys, buys to protect production schedule, and minor engineering efforts for redesign. DMSMS costs are included in Group B NRE; SE/PM costs are include in the Group B recurring; and Depot Costs are included in Support Equipment.

Milestone/Development Status

Development is complete.

Secondary Distribution		FY 2018	FY 2019	FY 2020 Base	FY 2020 OCO	FY 2020 Total	FY 2021	FY 2022	FY 2023	FY 2024
AF	Quantity	-	-	-	-	-	-	-	-	-
	Total Obligation Authority	171.764	186.781	179.525	-	179.525	313.356	85.019	84.324	84.930
Total: Secondary Distribution	**Quantity**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**
	Total Obligation Authority	**171.764**	**186.781**	**179.525**	**0.000**	**179.525**	**313.356**	**85.019**	**84.324**	**84.930**

Exhibit P-3a, Individual Modification: PB 2020 Air Force		Date: February 2019
Appropriation / Budget Activity / Budget Sub Activity: 3010F / 05 / 2	**P-1 Line Item Number / Title:** F01500 / F-15	**Modification Number / Title:** 1202 / F-15E Radar Modernization Program APG-82(V)1
ID Code (A=Service Ready, B=Not Service Ready) : A	**MDAP/MAIS Code:**	
Models of Systems Affected: F-15E	**Modification Type:** Capability Improvement	**Related RDT&E PEs:** 0207134F

Financial Plan	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
	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												
Modification Item 1 of 1: APG-82(v)1												
A Kits												
Recurring												
APG-82(v)1:INSTALL KITS Group A (Active)	140 / 214.327	29 / 31.079	17 / 23.944	16 / 24.753	- / -	16 / 24.753	15 / 24.677	- / -	- / -	- / -	- / -	217 / 318.780
Subtotal: Recurring	*- / 214.327*	*- / 31.079*	*- / 23.944*	*- / 24.753*	*- / -*	*- / 24.753*	*- / 24.677*	*- / -*	*- / -*	*- / -*	*- / -*	*- / 318.780*
B Kits												
Recurring												
APG-82(v)1:EQUIPMENT Group B (Active)	140 / 633.971	29 / 106.406	17 / 83.732	16 / 86.516	- / -	16 / 86.516	15 / 92.201	- / -	- / -	- / -	- / -	217 / 1,002.826
Subtotal: Recurring	*- / 633.971*	*- / 106.406*	*- / 83.732*	*- / 86.516*	*- / -*	*- / 86.516*	*- / 92.201*	*- / -*	*- / -*	*- / -*	*- / -*	*- / 1,002.826*
Subtotal: APG-82(v)1	*- / 848.298*	*- / 137.485*	*- / 107.676*	*- / 111.269*	*- / -*	*- / 111.269*	*- / 116.878*	*- / -*	*- / -*	*- / -*	*- / -*	*- / 1,321.606*
Subtotal: Procurement, All Modification Items	*- / 848.298*	*- / 137.485*	*- / 107.676*	*- / 111.269*	*- / -*	*- / 111.269*	*- / 116.878*	*- / -*	*- / -*	*- / -*	*- / -*	*- / 1,321.606*
Support *(All Modification Items)*												
GROUP B: TOTAL NONRECURRING	- / 125.235	- / 5.200	- / 8.600	- / 5.100	- / -	- / 5.100	- / 5.400	- / -	- / -	- / -	- / -	- / 149.535
OTHER GOVT	- / -	- / -	- / -	- / -	- / -	- / -	- / 72.500	- / 35.460	- / 38.080	- / 50.000	- / -	- / 196.040
Change Orders	- / 86.872	- / 4.524	- / 26.935	- / 12.836	- / -	- / 12.836	- / 67.106	- / 3.259	- / 3.644	- / 9.530	- / -	- / 214.706
Data	- / 13.295	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 13.295
Type 1 Training	- / 0.501	- / -	- / 0.000	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 0.501
SUPPORT-EQUIP	- / 8.075	- / 4.370	- / 1.015	- / 1.020	- / -	- / 1.020	- / 1.035	- / -	- / -	- / -	- / -	- / 15.515
ICS-Labor	- / 35.679	- / 5.240	- / 21.200	- / 23.900	- / -	- / 23.900	- / 23.000	- / 20.000	- / 15.000	- / 9.000	- / -	- / 153.019
PMA - Other Gov't Costs	- / 13.770	- / 3.345	- / 3.000	- / 3.000	- / -	- / 3.000	- / 3.000	- / 3.000	- / 3.000	- / 3.000	- / -	- / 35.115
Subtotal: Support	*- / 283.427*	*- / 22.679*	*- / 60.750*	*- / 45.856*	*- / -*	*- / 45.856*	*- / 172.041*	*- / 61.719*	*- / 59.724*	*- / 71.530*	*- / -*	*- / 777.726*
Installation												
Modification Item 1 of 1: APG-82(v)1	61 / 30.347	24 / 11.600	24 / 18.355	24 / 22.400	- / -	24 / 22.400	24 / 24.437	24 / 23.300	24 / 24.600	12 / 13.400	- / -	217 / 168.439
Subtotal: Installation	*61 / 30.347*	*24 / 11.600*	*24 / 18.355*	*24 / 22.400*	*- / -*	*24 / 22.400*	*24 / 24.437*	*24 / 23.300*	*24 / 24.600*	*12 / 13.400*	*- / -*	*217 / 168.439*
Total												
Total Cost (Procurement + Support + Installation)	**1,162.072**	**171.764**	**186.781**	**179.525**	**0.000**	**179.525**	**313.356**	**85.019**	**84.324**	**84.930**	**-**	**2,267.771**

Exhibit P-3a, Individual Modification: PB 2020 Air Force		Date: February 2019
Appropriation / Budget Activity / Budget Sub Activity: 3010F / 05 / 2	**P-1 Line Item Number / Title:** F01500 / F-15	**Modification Number / Title:** 1202 / F-15E Radar Modernization Program APG-82(V)1

ID Code (A=Service Ready, B=Not Service Ready) : A

MDAP/MAIS Code:

Modification Item 1 of 1: APG-82(v)1

Manufacturer Information

Manufacturer Name: Raytheon

Manufacturer Location: El Segundo CA/Forest MS

Administrative Leadtime *(in Months)*: 1

Production Leadtime *(in Months)*: 18

Dates	FY 2018	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024
Contract Dates	Mar 2018	Mar 2019	Mar 2020	Mar 2021			
Delivery Dates	Sep 2019	Sep 2020	Sep 2021	Sep 2022			

Installation Information

Method of Implementation: Contract Field Team

Installation Cost	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
	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)*
Prior Years	61 / 30.347	24 / 11.600	24 / 18.355	24 / 22.400	- / -	24 / 22.400	7 / 7.127	- / -	- / -	- / -	- / -	140 / 89.829
FY 2018	- / -	- / -	- / -	- / -	- / -	- / -	17 / 17.310	12 / 11.650	- / -	- / -	- / -	29 / 28.960
FY 2019	- / -	- / -	- / -	- / -	- / -	- / -	- / -	12 / 11.650	5 / 5.125	- / -	- / -	17 / 16.775
FY 2020	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	16 / 16.400	- / -	- / -	16 / 16.400
FY 2021	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	3 / 3.075	12 / 13.400	- / -	15 / 16.475
FY 2022	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2023	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2024	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
To Complete	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
Total	61 / 30.347	24 / 11.600	24 / 18.355	24 / 22.400	- / -	24 / 22.400	24 / 24.437	24 / 23.300	24 / 24.600	12 / 13.400	- / -	217 / 168.439

Installation Schedule

		FY 2018				FY 2019				FY 2020				FY 2021				FY 2022				FY 2023				FY 2024					
	PYS	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	TC	Tot
In	61	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	-	-	0	217
Out	57	4	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	-	0	217

Exhibit P-3a, Individual Modification: PB 2020 Air Force		Date: February 2019
Appropriation / Budget Activity / Budget Sub Activity: 3010F / 05 / 2	**P-1 Line Item Number / Title:** F01500 / F-15	**Modification Number / Title:** 1 / Advanced Display Core Processor, ADCP II-E
ID Code (A=Service Ready, B=Not Service Ready) : B	**MDAP/MAIS Code:**	

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 *(Units in Each)*	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost *($ in Millions)*	3.780	82.477	10.520	49.187	0.000	49.187	72.212	74.483	75.842	51.517	0.000	420.018
Less PY Advance Procurement *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) *($ in Millions)*	3.780	82.477	10.520	49.187	0.000	49.187	72.212	74.483	75.842	51.517	0.000	420.018
Plus CY Advance Procurement *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Total Obligation Authority *($ in Millions)*	**3.780**	**82.477**	**10.520**	**49.187**	**0.000**	**49.187**	**72.212**	**74.483**	**75.842**	**51.517**	**0.000**	**420.018**
(The following Resource Summary rows are for informational purposes only. The corresponding budget requests are documented elsewhere.)												
Initial Spares *($ in Millions)*	-	0.500	6.220	6.400	-	6.400	6.600	-	-	-	3.400	23.120
Gross/Weapon System Unit Cost *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-

Description:

The F-15E requires a replacement Advanced Display Core Processor (ADCP II) to meet future and projected subsystem demands. The ADCP II program will equip the F-15E,including tail number 86-0184, with a central processor with sufficient memory, processing throughput, and Input/Output bandwidth to meet the Operational Flight Program growth requirements of Suite 8 and beyond, and to support other major platform modernization upgrades such as EPAWSS. The increased capability of ADCP II will also enable the F-15E to fully exploit the APG-82(V)1 radar capabilities, to include increased target tracks, mode simultaneity, and increased track data. The ADCP II is required to meet all APG-82(V)1 key system attributes.

Requirements: AF Form 1067 approved July 2012
DT&E 4Q2016; FDE 4Q2017; MS C: 4Q2017

Funding may be used to resolve Diminishing Manufacturing Sources/Material Shortages (DMSMS) and/or obsolescence issues. DMSMS activities may include, but are not limited to, bridge buys, life of type buys, buys to protect production schedule, and minor engineering efforts for redesign.

DMSMS costs are included in Group B recurring; SE/PM costs are include in the Group B recurring; and Depot Costs are included in the Other Govt.

This program has associated Research Development Test and Evaluation (RDT&E) funding in PE 0207134F.

Milestone/Development Status

Critical Design Review (CDR) completed 4QFY2013, Milestone B completed 1QFY2014. Milestone C completed 4QFY2017.

Secondary Distribution		FY 2018	FY 2019	FY 2020 Base	FY 2020 OCO	FY 2020 Total	FY 2021	FY 2022	FY 2023	FY 2024
AF	Quantity	-	-	-	-	-	-	-	-	-
	Total Obligation Authority	82.477	10.520	49.187	-	49.187	72.212	74.483	75.842	51.517
Total:	**Quantity**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**

Exhibit P-3a, Individual Modification: PB 2020 Air Force		Date: February 2019
Appropriation / Budget Activity / Budget Sub Activity: 3010F / 05 / 2	**P-1 Line Item Number / Title:** F01500 / F-15	**Modification Number / Title:** 1 / Advanced Display Core Processor, ADCP II-E
ID Code (A=Service Ready, B=Not Service Ready) : B	**MDAP/MAIS Code:**	

Secondary Distribution		FY 2018	FY 2019	FY 2020 Base	FY 2020 OCO	FY 2020 Total	FY 2021	FY 2022	FY 2023	FY 2024
Secondary Distribution	Total Obligation Authority	82.477	10.520	49.187	0.000	49.187	72.212	74.483	75.842	51.517

Exhibit P-3a, Individual Modification: PB 2020 Air Force		Date: February 2019
Appropriation / Budget Activity / Budget Sub Activity: 3010F / 05 / 2	**P-1 Line Item Number / Title:** F01500 / F-15	**Modification Number / Title:** 1 / Advanced Display Core Processor, ADCP II-E
ID Code (A=Service Ready, B=Not Service Ready) : B	**MDAP/MAIS Code:**	
Models of Systems Affected: F-15E	**Modification Type:** Reliability & Maintainability	**Related RDT&E PEs:** 0207134F

Financial Plan	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
	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)*
RDT&E PE #												
0207134F	- / 144.970	- / 51.513	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 196.483
Procurement												
Modification Item 1 of 1: ADCP II E												
A Kits												
Recurring												
ADCP II E:INSTALL KITS Group A (Active)	2 / 0.024	31 / 0.394	36 / 0.470	36 / 0.484	- / -	36 / 0.484	53 / 0.733	60 / 0.840	- / -	- / -	- / -	218 / 2.945
Subtotal: Recurring	*- / 0.024*	*- / 0.394*	*- / 0.470*	*- / 0.484*	*- / -*	*- / 0.484*	*- / 0.733*	*- / 0.840*	*- / -*	*- / -*	*- / -*	*- / 2.945*
B Kits												
Recurring												
ADCP II E:EQUIPMENT Group B (Active)	2 / 1.301	31 / 35.247	36 / 3.492	36 / 35.255	- / -	36 / 35.255	53 / 44.929	60 / 48.502	0 / 1.735	- / -	- / -	218 / 170.461
Subtotal: Recurring	*- / 1.301*	*- / 35.247*	*- / 3.492*	*- / 35.255*	*- / -*	*- / 35.255*	*- / 44.929*	*- / 48.502*	*- / 1.735*	*- / -*	*- / -*	*- / 170.461*
Subtotal: ADCP II E	*- / 1.325*	*- / 35.641*	*- / 3.962*	*- / 35.739*	*- / -*	*- / 35.739*	*- / 45.662*	*- / 49.342*	*- / 1.735*	*- / -*	*- / -*	*- / 173.406*
Subtotal: Procurement, All Modification Items	*- / 1.325*	*- / 35.641*	*- / 3.962*	*- / 35.739*	*- / -*	*- / 35.739*	*- / 45.662*	*- / 49.342*	*- / 1.735*	*- / -*	*- / -*	*- / 173.406*
Support *(All Modification Items)*												
GROUP B: TOTAL NONRECURRING	- / 0.000	- / 10.308	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 10.308
Type 1 Training	- / -	- / -	- / 0.043	- / 0.043	- / -	- / 0.043	- / -	- / 0.050	- / 0.000	- / -	- / -	- / 0.136
Change Orders	- / 2.275	- / 32.000	- / 0.280	- / 0.118	- / -	- / 0.118	- / 5.250	- / 5.602	- / 54.905	- / 32.117	- / -	- / 132.547
Data	- / 0.012	- / 1.337	- / 1.406	- / 1.448	- / -	- / 1.448	- / 1.602	- / 1.690	- / 1.328	- / 1.400	- / -	- / 10.223
SUPPORT-EQUIP	- / 0.000	- / 0.000	- / -	- / 0.000	- / -	- / 0.000	- / -	- / -	- / -	- / -	- / -	- / 0.000
ICS-Labor	- / -	- / 0.527	- / 0.773	- / 1.265	- / -	- / 1.265	- / 1.992	- / 2.817	- / 3.607	- / 3.900	- / -	- / 14.881
OTHER GOVT	- / 0.010	- / 0.185	- / 1.134	- / 7.625	- / -	- / 7.625	- / 12.945	- / 9.959	- / 8.054	- / 9.000	- / -	- / 48.912
PMA - Other Gov't Costs	- / 0.158	- / 2.479	- / 2.902	- / 2.699	- / -	- / 2.699	- / 4.391	- / 4.613	- / 5.523	- / 4.000	- / -	- / 26.765
Subtotal: Support	*- / 2.455*	*- / 46.836*	*- / 6.538*	*- / 13.198*	*- / -*	*- / 13.198*	*- / 26.180*	*- / 24.731*	*- / 73.417*	*- / 50.417*	*- / -*	*- / 243.772*
Installation												
Modification Item 1 of 1: ADCP II E	- / -	- / -	2 / 0.020	25 / 0.250	- / -	25 / 0.250	30 / 0.370	28 / 0.410	63 / 0.690	56 / 1.100	14 / 0.000	218 / 2.840
Subtotal: Installation	*- / -*	*- / -*	*2 / 0.020*	*25 / 0.250*	*- / -*	*25 / 0.250*	*30 / 0.370*	*28 / 0.410*	*63 / 0.690*	*56 / 1.100*	*14 / -*	*218 / 2.840*
Total												
Total Cost (Procurement + Support + Installation)	**3.780**	**82.477**	**10.520**	**49.187**	**0.000**	**49.187**	**72.212**	**74.483**	**75.842**	**51.517**	**0.000**	**420.018**

Exhibit P-3a, Individual Modification: PB 2020 Air Force		Date: February 2019
Appropriation / Budget Activity / Budget Sub Activity: 3010F / 05 / 2	**P-1 Line Item Number / Title:** F01500 / F-15	**Modification Number / Title:** 1 / Advanced Display Core Processor, ADCP II-E

ID Code (A=Service Ready, B=Not Service Ready) : B

MDAP/MAIS Code:

Modification Item 1 of 1: ADCP II E

Manufacturer Information

Manufacturer Name: TBD

Manufacturer Location: TBD

Administrative Leadtime *(in Months)*: 3

Production Leadtime *(in Months)*: 15

Dates	FY 2018	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024
Contract Dates	Jan 2018	Jan 2019	Jan 2020	Jan 2021	Jan 2022		
Delivery Dates	Apr 2019	Apr 2020	Apr 2021	Apr 2022	Apr 2023		

Installation Information

Method of Implementation: Contract Field Team

Installation Cost	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
	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)*
Prior Years	- / -	- / -	2 / 0.020	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	2 / 0.020
FY 2018	- / -	- / -	- / -	25 / 0.250	- / -	25 / 0.250	6 / 0.060	- / -	- / -	- / -	- / -	31 / 0.310
FY 2019	- / -	- / -	- / -	- / -	- / -	- / -	24 / 0.310	12 / 0.050	- / -	- / -	- / -	36 / 0.360
FY 2020	- / -	- / -	- / -	- / -	- / -	- / -	- / -	16 / 0.360	14 / 0.200	6 / 0.600	- / -	36 / 1.160
FY 2021	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	49 / 0.490	4 / 0.040	- / -	53 / 0.530
FY 2022	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	46 / 0.460	14 / 0.000	60 / 0.460
FY 2023	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2024	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
To Complete	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
Total	- / -	- / -	2 / 0.020	25 / 0.250	- / -	25 / 0.250	30 / 0.370	28 / 0.410	63 / 0.690	56 / 1.100	14 / 0.000	218 / 2.840

Installation Schedule

	PYS	FY 2018				FY 2019				FY 2020				FY 2021				FY 2022				FY 2023				FY 2024				TC	Tot
		Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4		
In	0	0	0	0	0	0	0	-	2	6	6	6	7	7	7	7	9	7	7	7	7	16	16	16	15	14	14	14	14	14	218
Out	0	-	-	-	-	0	0	0	2	6	6	6	7	7	7	7	9	7	7	7	7	16	16	16	15	14	14	14	14	14	218

Exhibit P-3a, Individual Modification: PB 2020 Air Force		Date: February 2019
Appropriation / Budget Activity / Budget Sub Activity: 3010F / 05 / 2	**P-1 Line Item Number / Title:** F01500 / F-15	**Modification Number / Title:** 1205 / :Advanced Display Core Processor, ADCP II-C
ID Code (A=Service Ready, B=Not Service Ready) : B	**MDAP/MAIS Code:**	

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 *(Units in Each)*	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost *($ in Millions)*	1.859	47.399	58.091	75.100	0.000	75.100	69.886	0.000	0.000	0.000	-	252.335
Less PY Advance Procurement *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) *($ in Millions)*	1.859	47.399	58.091	75.100	0.000	75.100	69.886	0.000	0.000	0.000	-	252.335
Plus CY Advance Procurement *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Total Obligation Authority *($ in Millions)*	**1.859**	**47.399**	**58.091**	**75.100**	**0.000**	**75.100**	**69.886**	**0.000**	**0.000**	**0.000**	**-**	**252.335**
(The following Resource Summary rows are for informational purposes only. The corresponding budget requests are documented elsewhere.)												
Initial Spares *($ in Millions)*	-	0.957	1.478	12.987	-	12.987	1.800	-	-	-	7.010	24.232
Gross/Weapon System Unit Cost *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-

Description:

The ADCP II upgrade ensures continued combat viability for the F-15C platform. The F-15C central computer (CC) and cockpit radar display (Vertical Situation Display) are functionally obsolete. CC speed and memory are unable to support growth beyond Operational Flight Plan (OFP) Suite 7C, and the monochrome radar display is the #1 mission degrader in the cockpit. The ADCP II system for the F-15C consists of the ADCP II Line Replaceable Unit (LRU), Vertical Situation Display Replacement (VSDR), and a Remote Interface Unit (RIU). Replacing the CC with the ADCP II mission computer (common with F-15E) will provide increased throughput and memory capability to support (OFP) upgrades beyond Suite 7C, enabling the aircraft to meet requirements of expanded datalink capabilities, sensors, electronic warfare, and forward/netcentric operations. Replacing the monochrome display with a 5x5 color display will reduce maintenance and sustainment costs while increasing the capability to fully support the APG-63(V)3 Active Electronic Scanning Array (AESA) radar, fighter datalink, and video recording. This program has associated RDT&E funding in PE 0207134F.

Requirements: AF Form 1067 approved July 2012

Funding may be used to resolve Diminishing Manufacturing Sources/Material Shortages (DMSMS) and/or obsolescence issues. DMSMS activities may include, but are not limited to, bridge buys, life of type buys, buys to protect production schedule, and minor engineering efforts for redesign.

DMSMS costs are included in Group B recurring,SE/PM costs are included in the Group B recurring; and Depot Costs are included in the Support Equipment.

Milestone/Development Status

Development cost and milestones are reflected in the ADCP II-E program, MN 1202B.

Secondary Distribution		FY 2018	FY 2019	FY 2020 Base	FY 2020 OCO	FY 2020 Total	FY 2021	FY 2022	FY 2023	FY 2024
AF	Quantity	-	-	-	-	-	-	-	-	-
	Total Obligation Authority	46.533	35.854	32.018	0.000	32.018	18.463	0.000	0.000	-
AFNG	Quantity	-	-	-	-	-	-	-	-	-
	Total Obligation Authority	0.866	22.237	43.082	-	43.082	51.423	0.000	0.000	-
Total:	**Quantity**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**

Exhibit P-3a, Individual Modification: PB 2020 Air Force		Date: February 2019
Appropriation / Budget Activity / Budget Sub Activity: 3010F / 05 / 2	**P-1 Line Item Number / Title:** F01500 / F-15	**Modification Number / Title:** 1205 / :Advanced Display Core Processor, ADCP II-C
ID Code (A=Service Ready, B=Not Service Ready) : B	**MDAP/MAIS Code:**	

Secondary Distribution		FY 2018	FY 2019	FY 2020 Base	FY 2020 OCO	FY 2020 Total	FY 2021	FY 2022	FY 2023	FY 2024
Secondary Distribution	Total Obligation Authority	47.399	58.091	75.100	0.000	75.100	69.886	0.000	0.000	0.000

Exhibit P-3a, Individual Modification: PB 2020 Air Force		Date: February 2019
Appropriation / Budget Activity / Budget Sub Activity: 3010F / 05 / 2	**P-1 Line Item Number / Title:** F01500 / F-15	**Modification Number / Title:** 1205 / :Advanced Display Core Processor, ADCP II-C
ID Code (A=Service Ready, B=Not Service Ready) : B	**MDAP/MAIS Code:**	
Models of Systems Affected: F-15C, F-15D	**Modification Type:** Reliability & Maintainability	**Related RDT&E PEs:**

Financial Plan	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
	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												
Modification Item 1 of 1: ADCP 2												
A Kits												
Recurring												
ADCP 2:INSTALL KITS Group A (Active)	- / -	4 / 0.204	29 / 1.566	6 / 0.324	- / -	6 / 0.324	- / -	- / -	- / -	- / -	- / -	39 / 2.094
ADCP 2:INSTALL KITS Group A (Guard)	1 / 0.051	1 / 0.051	25 / 1.361	49 / 2.646	- / -	49 / 2.646	31 / 1.674	- / -	- / -	- / -	- / -	107 / 5.783
Subtotal: Recurring	*- / 0.051*	*- / 0.255*	*- / 2.927*	*- / 2.970*	*- / -*	*- / 2.970*	*- / 1.674*	*- / -*	*- / -*	*- / -*	*- / -*	*- / 7.877*
B Kits												
Recurring												
ADCP 2:EQUIPMENT Group B (Active)	- / -	4 / 3.260	29 / 23.635	6 / 4.890	- / -	6 / 4.890	- / -	- / -	- / -	- / -	- / -	39 / 31.785
ADCP 2:EQUIPMENT Group B (Guard)	1 / 0.815	1 / 0.815	25 / 20.375	49 / 39.935	- / -	49 / 39.935	31 / 23.694	- / -	- / -	- / -	- / -	107 / 85.634
Subtotal: Recurring	*- / 0.815*	*- / 4.075*	*- / 44.010*	*- / 44.825*	*- / -*	*- / 44.825*	*- / 23.694*	*- / -*	*- / -*	*- / -*	*- / -*	*- / 117.419*
Subtotal: ADCP 2	*- / 0.866*	*- / 4.330*	*- / 46.937*	*- / 47.795*	*- / -*	*- / 47.795*	*- / 25.368*	*- / -*	*- / -*	*- / -*	*- / -*	*- / 125.296*
Subtotal: Procurement, All Modification Items	*- / 0.866*	*- / 4.330*	*- / 46.937*	*- / 47.795*	*- / -*	*- / 47.795*	*- / 25.368*	*- / -*	*- / -*	*- / -*	*- / -*	*- / 125.296*
Support *(All Modification Items)*												
GROUP A: TOTAL NONRECURRING	- / 0.000	- / -	- / 0.000	- / 0.000	- / -	- / 0.000	- / 0.000	- / -	- / -	- / -	- / -	- / 0.000
GROUP B: TOTAL NONRECURRING	- / 0.000	- / -	- / 3.493	- / 0.000	- / -	- / 0.000	- / 0.000	- / -	- / -	- / -	- / -	- / 3.493
Change Orders	- / 0.910	- / 41.115	- / 0.945	- / 15.374	- / -	- / 15.374	- / 1.351	- / -	- / -	- / -	- / -	- / 59.695
Data	- / 0.007	- / 1.058	- / 1.468	- / 1.520	- / -	- / 1.520	- / 1.433	- / -	- / -	- / -	- / -	- / 5.486
Type 1 Training	- / 0.000	- / -	- / -	- / 0.226	- / -	- / 0.226	- / 0.135	- / -	- / -	- / -	- / -	- / 0.361
SUPPORT-EQUIP	- / 0.000	- / 0.000	- / 0.000	- / 0.000	- / -	- / 0.000	- / 0.000	- / -	- / -	- / -	- / -	- / 0.000
ICS-Labor	- / 0.000	- / 0.116	- / 0.171	- / 0.832	- / -	- / 0.832	- / 1.876	- / -	- / -	- / -	- / -	- / 2.995
PMA - Other Gov't Costs	- / 0.067	- / 0.732	- / 4.044	- / 4.283	- / -	- / 4.283	- / 1.184	- / -	- / -	- / -	- / -	- / 10.310
OTHER GOVT	- / 0.009	- / 0.048	- / 0.532	- / 0.561	- / -	- / 0.561	- / -	- / -	- / -	- / -	- / -	- / 1.150
Subtotal: Support	*- / 0.993*	*- / 43.069*	*- / 10.653*	*- / 22.796*	*- / -*	*- / 22.796*	*- / 5.979*	*- / -*	*- / -*	*- / -*	*- / -*	*- / 83.490*
Installation												
Modification Item 1 of 1: ADCP 2	- / -	- / -	1 / 0.501	9 / 4.509	0 / 0.000	9 / 4.509	60 / 38.539	63 / 0.000	13 / 0.000	- / -	- / -	146 / 43.549
Subtotal: Installation	*- / -*	*- / -*	*1 / 0.501*	*9 / 4.509*	*0 / -*	*9 / 4.509*	*60 / 38.539*	*63 / -*	*13 / -*	*- / -*	*- / -*	*146 / 43.549*
Total												
Total Cost (Procurement + Support + Installation)	**1.859**	**47.399**	**58.091**	**75.100**	**0.000**	**75.100**	**69.886**	**0.000**	**0.000**	**0.000**	**-**	**252.335**

Exhibit P-3a, Individual Modification: PB 2020 Air Force		Date: February 2019
Appropriation / Budget Activity / Budget Sub Activity: 3010F / 05 / 2	**P-1 Line Item Number / Title:** F01500 / F-15	**Modification Number / Title:** 1205 / :Advanced Display Core Processor, ADCP II-C

ID Code (A=Service Ready, B=Not Service Ready) : B

MDAP/MAIS Code:

Modification Item 1 of 1: ADCP 2

Manufacturer Information

Manufacturer Name: Boeing

Manufacturer Location: TBD

Administrative Leadtime *(in Months)*: 3

Production Leadtime *(in Months)*: 15

Dates	FY 2018	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024
Contract Dates	Jan 2018	Jan 2019	Jan 2020	Jan 2021			
Delivery Dates	Apr 2019	Apr 2020	Apr 2021	Apr 2022			

Installation Information

Method of Implementation: Contract Field Team

Installation Cost	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
	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)*
Prior Years	- / -	- / -	1 / 0.501	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	1 / 0.501
FY 2018	- / -	- / -	0 / 0.000	3 / 1.503	0 / 0.000	3 / 1.503	2 / 1.002	0 / 0.000	0 / 0.000	- / -	- / -	5 / 2.505
FY 2019	- / -	- / -	- / -	6 / 3.006	- / -	6 / 3.006	48 / 14.996	- / -	- / -	- / -	- / -	54 / 18.002
FY 2020	- / -	- / -	- / -	- / -	- / -	- / -	10 / 17.511	45 / 0.000	- / -	- / -	- / -	55 / 17.511
FY 2021	- / -	- / -	- / -	- / -	- / -	- / -	0 / 5.030	18 / 0.000	13 / 0.000	- / -	- / -	31 / 5.030
FY 2022	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2023	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2024	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
To Complete	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
Total	- / -	- / -	1 / 0.501	9 / 4.509	0 / 0.000	9 / 4.509	60 / 38.539	63 / 0.000	13 / 0.000	- / -	- / -	146 / 43.549

Installation Schedule

		FY 2018				FY 2019				FY 2020				FY 2021				FY 2022				FY 2023				FY 2024					
	PYS	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	TC	Tot
In	0	-	-	-	-	0	0	1	0	0	0	3	6	15	15	15	15	16	16	16	15	5	5	3	-	-	-	-	-	0	146
Out	0	-	-	-	-	0	0	1	0	0	0	3	6	15	15	15	15	16	16	16	15	5	5	3	-	-	-	-	-	0	146

Exhibit P-3a, Individual Modification: PB 2020 Air Force		Date: February 2019
Appropriation / Budget Activity / Budget Sub Activity: 3010F / 05 / 2	**P-1 Line Item Number / Title:** F01500 / F-15	**Modification Number / Title:** 6158 / F-15C/D APG-63(V)3 radar upgrade
ID Code (A=Service Ready, B=Not Service Ready) : B	**MDAP/MAIS Code:**	

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 *(Units in Each)*	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost *($ in Millions)*	1,359.205	5.723	11.908	23.681	0.000	23.681	40.540	0.000	0.000	0.000	0.000	1,441.057
Less PY Advance Procurement *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) *($ in Millions)*	1,359.205	5.723	11.908	23.681	0.000	23.681	40.540	0.000	0.000	0.000	0.000	1,441.057
Plus CY Advance Procurement *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Total Obligation Authority *($ in Millions)*	**1,359.205**	**5.723**	**11.908**	**23.681**	**0.000**	**23.681**	**40.540**	**0.000**	**0.000**	**0.000**	**0.000**	**1,441.057**
(The following Resource Summary rows are for informational purposes only. The corresponding budget requests are documented elsewhere.)												
Initial Spares *($ in Millions)*	-	7.626	-	-	-	-	-	-	-	-	-	7.626
Gross/Weapon System Unit Cost *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-

Description:

The APG-63(V)3 Active Electronically Scanned Array (AESA) radar upgrade includes F-15C/D aircraft equipped with all variants of the APG-63 radar. The (V)3 AESA upgrade significantly improves Reliability, Maintainability & Supportability (RM&S), and substantially improves operational effectiveness and combat lethality of the existing APG-63 equipped aircraft. Other avionics which support radar functionality may also be upgraded.

Upgrade kits funded by the Air Force reflect the separate cost to install the kit in the year of installation. The installation cost for kits funded with congressional adds or OCO funding is included in the Group A/B kit cost in the procurement year.

Requirement: CDD 21 Apr 2005

Funding may be used to resolve Diminishing Manufacturing Sources/Material Shortages (DMSMS) and/or obsolescence issues. DMSMS activities may include, but are not limited to, bridge buys, life of type buys, buys to protect production schedule, and minor engineering efforts for redesign. DMSMS costs are included in Group B NRE; SE/PM costs are include in the Group B recurring.

Milestone/Development Status

Development is complete.

Secondary Distribution		FY 2018	FY 2019	FY 2020 Base	FY 2020 OCO	FY 2020 Total	FY 2021	FY 2022	FY 2023	FY 2024
AF	Quantity	-	-	-	-	-	-	-	-	-
	Total Obligation Authority	5.723	11.908	21.181	-	21.181	40.540	-	-	-
AFNG	Quantity	-	-	-	-	-	-	-	-	-
	Total Obligation Authority	-	0.000	2.500	-	2.500	-	-	-	-
Total: Secondary Distribution	**Quantity**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**
	Total Obligation Authority	**5.723**	**11.908**	**23.681**	**0.000**	**23.681**	**40.540**	**0.000**	**0.000**	**0.000**

Exhibit P-3a, Individual Modification: PB 2020 Air Force		Date: February 2019
Appropriation / Budget Activity / Budget Sub Activity: 3010F / 05 / 2	**P-1 Line Item Number / Title:** F01500 / F-15	**Modification Number / Title:** 6158 / F-15C/D APG-63(V)3 radar upgrade
ID Code (A=Service Ready, B=Not Service Ready) : B	**MDAP/MAIS Code:**	
Models of Systems Affected: F-15C, F-15D	**Modification Type:** Capability Improvement	**Related RDT&E PEs:** 0207134F, 0207130F

Financial Plan	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
	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)*
RDT&E PE #												
0207130F	- / 65.272	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 65.272
Procurement												
Modification Item 1 of 1: (V)3												
A Kits												
Recurring												
(V)3:INSTALL KITS Group A (Active)	84 / 64.171	- / -	1 / 0.700	3 / 2.532	- / -	3 / 2.532	5 / 3.320	- / -	- / -	- / -	- / -	93 / 70.723
(V)3:INSTALL KITS Group A (Guard)	112 / 72.436	- / -	0 / 0.000	0 / 0.000	- / -	0 / 0.000	- / -	- / -	- / -	- / -	- / -	112 / 72.436
Subtotal: Recurring	*- / 136.607*	*- / -*	*- / 0.700*	*- / 2.532*	*- / -*	*- / 2.532*	*- / 3.320*	*- / -*	*- / -*	*- / -*	*- / -*	*- / 143.159*
B Kits												
Recurring												
(V)3:EQUIPMENT Group B (Active)	84 / 432.535	- / -	1 / 3.701	3 / 12.975	- / -	3 / 12.975	5 / 21.732	- / -	- / -	- / -	- / -	93 / 470.943
(V)3:EQUIPMENT Group B (Guard)	112 / 513.338	- / -	0 / 0.000	0 / 0.000	- / -	0 / 0.000	- / -	- / -	- / -	- / -	- / -	112 / 513.338
Subtotal: Recurring	*- / 945.873*	*- / -*	*- / 3.701*	*- / 12.975*	*- / -*	*- / 12.975*	*- / 21.732*	*- / -*	*- / -*	*- / -*	*- / -*	*- / 984.281*
Subtotal: (V)3	*- / 1,082.480*	*- / -*	*- / 4.401*	*- / 15.507*	*- / -*	*- / 15.507*	*- / 25.052*	*- / -*	*- / -*	*- / -*	*- / -*	*- / 1,127.440*
Subtotal: Procurement, All Modification Items	*- / 1,082.480*	*- / -*	*- / 4.401*	*- / 15.507*	*- / -*	*- / 15.507*	*- / 25.052*	*- / -*	*- / -*	*- / -*	*- / -*	*- / 1,127.440*
Support *(All Modification Items)*												
GROUP A: TOTAL NONRECURRING	- / 3.215	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 3.215
GROUP B: TOTAL NONRECURRING	- / 81.500	- / -	- / -	- / -	- / -	- / -	- / 0.000	- / -	- / -	- / -	- / -	- / 81.500
Change Orders	- / 58.206	- / 1.125	- / 2.170	- / 1.700	- / -	- / 1.700	- / 6.375	- / -	- / -	- / -	- / -	- / 69.576
Data	- / 5.655	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 5.655
SUPPORT-EQUIP	- / 1.353	- / 0.467	- / 0.467	- / 2.220	- / -	- / 2.220	- / 3.000	- / -	- / -	- / -	- / -	- / 7.507
ICS-Labor	- / 15.203	- / -	- / 0.500	- / 0.320	- / -	- / 0.320	- / 1.000	- / -	- / -	- / -	- / -	- / 17.023
PMA - Other Gov't Costs	- / 5.917	- / 0.600	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 6.517
OTHER GOVT	- / 9.169	- / 0.553	- / 0.590	- / 0.234	- / -	- / 0.234	- / 0.626	- / -	- / -	- / -	- / -	- / 11.172
GFP	- / 1.457	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 1.457
Mod of Spares	7 / 47.618	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	7 / 47.618
Type 1 Training	- / 0.200	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 0.200
Subtotal: Support	*7 / 229.493*	*- / 2.745*	*- / 3.727*	*- / 4.474*	*- / -*	*- / 4.474*	*- / 11.001*	*- / -*	*- / -*	*- / -*	*- / -*	*7 / 251.440*
Installation												
Modification Item 1 of 1: (V)3	165 / 47.232	10 / 2.978	12 / 3.780	9 / 3.700	- / -	9 / 3.700	9 / 4.487	- / -	- / -	- / -	- / -	205 / 62.177

Exhibit P-3a, Individual Modification: PB 2020 Air Force		Date: February 2019
Appropriation / Budget Activity / Budget Sub Activity: 3010F / 05 / 2	**P-1 Line Item Number / Title:** F01500 / F-15	**Modification Number / Title:** 6158 / F-15C/D APG-63(V)3 radar upgrade
ID Code (A=Service Ready, B=Not Service Ready) : B	**MDAP/MAIS Code:**	
Models of Systems Affected: F-15C, F-15D	**Modification Type:** Capability Improvement	**Related RDT&E PEs:** 0207134F, 0207130F

Financial Plan	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
	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)*
Subtotal: Installation	*165 / 47.232*	*10 / 2.978*	*12 / 3.780*	*9 / 3.700*	*- / -*	*9 / 3.700*	*9 / 4.487*	*- / -*	*- / -*	*- / -*	*- / -*	*205 / 62.177*
Total												
Total Cost (Procurement + Support + Installation)	**1,359.205**	**5.723**	**11.908**	**23.681**	**0.000**	**23.681**	**40.540**	**0.000**	**0.000**	**0.000**	**0.000**	**1,441.057**

Exhibit P-3a, Individual Modification: PB 2020 Air Force		Date: February 2019
Appropriation / Budget Activity / Budget Sub Activity: 3010F / 05 / 2	**P-1 Line Item Number / Title:** F01500 / F-15	**Modification Number / Title:** 6158 / F-15C/D APG-63(V)3 radar upgrade

ID Code (A=Service Ready, B=Not Service Ready) : B

MDAP/MAIS Code:

Modification Item 1 of 1: (V)3

Manufacturer Information

Manufacturer Name: Raytheon

Manufacturer Location: El Segundo CA/Forest MS

Administrative Leadtime *(in Months)*: 6

Production Leadtime *(in Months)*: 12

Dates	FY 2018	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024
Contract Dates		Jun 2019	Apr 2020	Apr 2021			
Delivery Dates		Jun 2020	Apr 2021	Apr 2022			

Installation Information

Method of Implementation: Contract Field Team

Installation Cost	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
	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)*
Prior Years	165 / 47.232	10 / 2.978	12 / 3.780	9 / 3.700	- / -	9 / 3.700	- / -	- / -	- / -	- / -	- / -	196 / 57.690
FY 2018	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2019	- / -	- / -	- / -	- / -	- / -	- / -	1 / 0.532	- / -	- / -	- / -	- / -	1 / 0.532
FY 2020	- / -	- / -	- / -	- / -	- / -	- / -	3 / 1.468	- / -	- / -	- / -	- / -	3 / 1.468
FY 2021	- / -	- / -	- / -	- / -	- / -	- / -	5 / 2.487	- / -	- / -	- / -	- / -	5 / 2.487
FY 2022	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2023	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2024	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
To Complete	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
Total	165 / 47.232	10 / 2.978	12 / 3.780	9 / 3.700	- / -	9 / 3.700	9 / 4.487	- / -	- / -	- / -	- / -	205 / 62.177

Installation Schedule

		FY 2018				FY 2019				FY 2020				FY 2021				FY 2022				FY 2023				FY 2024					
	PYS	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	TC	Tot
In	165	3	2	3	2	3	3	3	3	3	3	3	-	3	6	-	0	-	-	-	-	-	-	-	-	-	-	-	-	0	205
Out	131	4	3	4	3	4	7	7	7	7	6	5	5	3	3	6	0	-	-	-	-	-	-	-	-	-	-	-	-	0	205

Exhibit P-3a, Individual Modification: PB 2020 Air Force		Date: February 2019
Appropriation / Budget Activity / Budget Sub Activity: 3010F / 05 / 2	**P-1 Line Item Number / Title:** F01500 / F-15	**Modification Number / Title:** 8754 / F-15C/D IFF Mode 5
ID Code (A=Service Ready, B=Not Service Ready) : A	**MDAP/MAIS Code:**	

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 *(Units in Each)*	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost *($ in Millions)*	-	0.000	8.000	29.656	0.000	29.656	0.548	0.000	0.000	0.000	-	38.204
Less PY Advance Procurement *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) *($ in Millions)*	-	0.000	8.000	29.656	0.000	29.656	0.548	0.000	0.000	0.000	-	38.204
Plus CY Advance Procurement *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Total Obligation Authority *($ in Millions)*	**-**	**0.000**	**8.000**	**29.656**	**0.000**	**29.656**	**0.548**	**0.000**	**0.000**	**0.000**	**-**	**38.204**
(The following Resource Summary rows are for informational purposes only. The corresponding budget requests are documented elsewhere.)												
Initial Spares *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Unit Cost *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-

Description:

Mode 5 is a secure Air-to-Air Interrogator/ Identification Friend-or-Foe (AAI/IFF) system for identifying friendly aircraft. Employing a radio waveform different from secure Mode 4, Mode 5 provides vastly improved performance with a robust encryption scheme. The Mode 5 modification effort is for the F-15C/D aircraft.
This effort also includes 1) ICS started under MN 8745 and 2)Retrofit/installation of AAI/IFF kits on the F-15C/D.

The National Security Agency (NSA) mandate requires the Mode 4 be retrofitted to Mode 5 no later than June 2020.

DoD AIMS office requires the Mode 5 encryption keys be zeroed out in the event of a seat ejection. The zeroization effort requires additional funding above and beyond Mode 5.

Funding may be used to resolve Diminishing Manufacturing Sources/Material Shortages (DMSMS) and/or obsolescence issues. DMSMS activities may include, but are not limited to, bridge buys, life of type buys, buys to protect production schedule, and minor engineering efforts for redesign.

DMSMS costs are included in Group B NRE; SE/PM costs are included in the Group B recurring.

Milestone/Development Status

Development Complete

Secondary Distribution		FY 2018	FY 2019	FY 2020 Base	FY 2020 OCO	FY 2020 Total	FY 2021	FY 2022	FY 2023	FY 2024
AF	Quantity	-	-	-	-	-	-	-	-	-
	Total Obligation Authority	-	8.000	15.730	-	15.730	0.548	-	-	-
AFNG	Quantity	-	-	-	-	-	-	-	-	-
	Total Obligation Authority	-	-	13.926	-	13.926	-	-	-	-
Total: Secondary Distribution	**Quantity**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**
	Total Obligation Authority	**0.000**	**8.000**	**29.656**	**0.000**	**29.656**	**0.548**	**0.000**	**0.000**	**0.000**

Exhibit P-3a, Individual Modification: PB 2020 Air Force		Date: February 2019
Appropriation / Budget Activity / Budget Sub Activity: 3010F / 05 / 2	**P-1 Line Item Number / Title:** F01500 / F-15	**Modification Number / Title:** 8754 / F-15C/D IFF Mode 5
ID Code (A=Service Ready, B=Not Service Ready) : A	**MDAP/MAIS Code:**	
Models of Systems Affected: F-15C, F-15D	**Modification Type:** Reliability & Maintainability	**Related RDT&E PEs:**

Financial Plan	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
	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												
Modification Item 1 of 1: Mode 5												
B Kits												
Recurring												
Mode 5:EQUIPMENT Group B (Active)	- / -	- / -	27 / 2.700	70 / 7.360	- / -	70 / 7.360	- / -	- / -	- / -	- / -	- / -	97 / 10.060
Mode 5:EQUIPMENT Group B (Guard)	- / -	- / -	- / -	137 / 13.926	- / -	137 / 13.926	- / -	- / -	- / -	- / -	- / -	137 / 13.926
Subtotal: Recurring	- / -	- / -	- / 2.700	- / 21.286	- / -	- / 21.286	- / -	- / -	- / -	- / -	- / -	- / 23.986
Subtotal: Mode 5	- / -	- / -	- / 2.700	- / 21.286	- / -	- / 21.286	- / -	- / -	- / -	- / -	- / -	- / 23.986
Subtotal: Procurement, All Modification Items	- / -	- / -	- / 2.700	- / 21.286	- / -	- / 21.286	- / -	- / -	- / -	- / -	- / -	- / 23.986
Support *(All Modification Items)*												
GROUP B: TOTAL NONRECURRING	- / -	- / -	- / -	- / -	- / -	- / -	- / 0.100	- / -	- / -	- / -	- / -	- / 0.100
Change Orders	- / -	- / -	- / 1.467	- / 5.766	- / -	- / 5.766	- / 0.248	- / -	- / -	- / -	- / -	- / 7.481
GFP	- / -	- / -	- / 3.170	- / 0.703	- / -	- / 0.703	- / 0.000	- / -	- / -	- / -	- / -	- / 3.873
ICS-Labor	- / -	- / -	- / 0.461	- / 1.820	- / -	- / 1.820	- / 0.200	- / -	- / -	- / -	- / -	- / 2.481
OTHER GOVT	- / -	- / -	- / 0.202	- / 0.081	- / -	- / 0.081	- / -	- / -	- / -	- / -	- / -	- / 0.283
Subtotal: Support	- / -	- / -	- / 5.300	- / 8.370	- / -	- / 8.370	- / 0.548	- / -	- / -	- / -	- / -	- / 14.218
Installation												
Subtotal: Installation	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
Total												
Total Cost (Procurement + Support + Installation)	**-**	**0.000**	**8.000**	**29.656**	**0.000**	**29.656**	**0.548**	**0.000**	**0.000**	**0.000**	**-**	**38.204**

Exhibit P-3a, Individual Modification: PB 2020 Air Force		Date: February 2019
Appropriation / Budget Activity / Budget Sub Activity: 3010F / 05 / 2	**P-1 Line Item Number / Title:** F01500 / F-15	**Modification Number / Title:** 8754 / F-15C/D IFF Mode 5

ID Code (A=Service Ready, B=Not Service Ready) : A

MDAP/MAIS Code:

Modification Item 1 of 1: Mode 5

Manufacturer Information

Manufacturer Name: Raytheon

Manufacturer Location: Largo, FL

Administrative Leadtime *(in Months)*: 3

Production Leadtime *(in Months)*: 6

Dates	FY 2018	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024
Contract Dates		Jan 2019	Jan 2020				
Delivery Dates		Jul 2019	Jul 2020				

Installation Information

Method of Implementation (Organic): Org/Intermediate

Installation Quantity: 235

Exhibit P-3a, Individual Modification: PB 2020 Air Force		Date: February 2019
Appropriation / Budget Activity / Budget Sub Activity: 3010F / 05 / 2	**P-1 Line Item Number / Title:** F01500 / F-15	**Modification Number / Title:** 8755 / F-15E IFF MODE 5
ID Code (A=Service Ready, B=Not Service Ready) : B	**MDAP/MAIS Code:**	

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 *(Units in Each)*	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost *($ in Millions)*	28.035	8.006	26.455	15.257	0.000	15.257	2.080	0.190	0.200	0.000	-	80.223
Less PY Advance Procurement *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) *($ in Millions)*	28.035	8.006	26.455	15.257	0.000	15.257	2.080	0.190	0.200	0.000	-	80.223
Plus CY Advance Procurement *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Total Obligation Authority *($ in Millions)*	**28.035**	**8.006**	**26.455**	**15.257**	**0.000**	**15.257**	**2.080**	**0.190**	**0.200**	**0.000**	**-**	**80.223**
(The following Resource Summary rows are for informational purposes only. The corresponding budget requests are documented elsewhere.)												
Initial Spares *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Unit Cost *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-

Description:

Mode 5 is a secure Air-to-Air Interrogator/ Identification Friend-or-Foe (AAI/IFF) system for identifying friendly aircraft. Employing a radio waveform different from secure Mode 4, Mode 5 provides vastly improved performance with a robust encryption scheme. The Mode 5 modification effort is for the F-15E. This effort also includes 1)ICS started under MN 8745 and 2) Procurement of new retrofit/installation of AAI/IFF kits on the F-15E.

The National Security Agency (NSA) mandate requires the Mode 4 be retrofitted to Mode 5 no later than June 2020.

DoD AIMS office requires the Mode 5 encryption keys be zeroed out in the event of a seat ejection. The zeroization effort requires additional funding above and beyond Mode 5.

Funding may be used to resolve Diminishing Manufacturing Sources/Material Shortages (DMSMS) and/or obsolescence issues. DMSMS activities may include, but are not limited to, bridge buys, life of type buys, buys to protect production schedule, and minor engineering efforts for redesign.

DMSMS costs are included in Group B NRE; and SE/PM costs are included in the Group B recurring.

Milestone/Development Status

Development Effort Complete

Secondary Distribution		FY 2018	FY 2019	FY 2020 Base	FY 2020 OCO	FY 2020 Total	FY 2021	FY 2022	FY 2023	FY 2024
AF	Quantity	-	-	-	-	-	-	-	-	-
	Total Obligation Authority	8.006	26.455	15.257	-	15.257	2.080	0.190	0.200	-
Total: Secondary Distribution	**Quantity**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**
	Total Obligation Authority	**8.006**	**26.455**	**15.257**	**0.000**	**15.257**	**2.080**	**0.190**	**0.200**	**0.000**

Exhibit P-3a, Individual Modification: PB 2020 Air Force		Date: February 2019
Appropriation / Budget Activity / Budget Sub Activity: 3010F / 05 / 2	**P-1 Line Item Number / Title:** F01500 / F-15	**Modification Number / Title:** 8755 / F-15E IFF MODE 5
ID Code (A=Service Ready, B=Not Service Ready) : B	**MDAP/MAIS Code:**	
Models of Systems Affected: F-15C, F-15D, F-15E	**Modification Type:** Reliability & Maintainability	**Related RDT&E PEs:** 0207134F

Financial Plan	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
	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												
Modification Item 1 of 1: Group B Kit												
B Kits												
Recurring												
Group B Kit:EQUIPMENT Group B (Active)	- / 13.765	45 / 5.077	143 / 14.141	29 / 3.995	- / -	29 / 3.995	- / -	- / -	- / -	- / -	- / -	217 / 36.978
Subtotal: Recurring	*- / 13.765*	*- / 5.077*	*- / 14.141*	*- / 3.995*	*- / -*	*- / 3.995*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / 36.978*
Subtotal: Group B Kit	*- / 13.765*	*- / 5.077*	*- / 14.141*	*- / 3.995*	*- / -*	*- / 3.995*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / 36.978*
Subtotal: Procurement, All Modification Items	*- / 13.765*	*- / 5.077*	*- / 14.141*	*- / 3.995*	*- / -*	*- / 3.995*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / 36.978*
Support *(All Modification Items)*												
GROUP B: TOTAL NONRECURRING	- / 7.014	- / -	- / 0.000	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 7.014
Change Orders	- / 0.000	- / 0.088	- / 1.573	- / 6.031	- / -	- / 6.031	- / 1.560	- / -	- / -	- / -	- / -	- / 9.252
SUPPORT-EQUIP	- / -	- / 2.841	- / 0.000	- / 0.000	- / -	- / 0.000	- / -	- / -	- / -	- / -	- / -	- / 2.841
ICS-Material	- / -	- / -	- / -	- / 2.302	- / -	- / 2.302	- / 0.000	- / -	- / -	- / -	- / -	- / 2.302
ICS-Labor	- / 6.446	- / 0.000	- / 0.000	- / 0.000	- / -	- / 0.000	- / 0.518	- / 0.190	- / 0.200	- / -	- / -	- / 7.354
OTHER GOVT	- / 0.810	- / 0.000	- / 10.741	- / 2.929	- / -	- / 2.929	- / 0.002	- / -	- / -	- / -	- / -	- / 14.482
Subtotal: Support	*- / 14.270*	*- / 2.929*	*- / 12.314*	*- / 11.262*	*- / -*	*- / 11.262*	*- / 2.080*	*- / 0.190*	*- / 0.200*	*- / -*	*- / -*	*- / 43.245*
Installation												
Subtotal: Installation	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*
Total												
Total Cost (Procurement + Support + Installation)	**28.035**	**8.006**	**26.455**	**15.257**	**0.000**	**15.257**	**2.080**	**0.190**	**0.200**	**0.000**	**-**	**80.223**

Exhibit P-3a, Individual Modification: PB 2020 Air Force		Date: February 2019
Appropriation / Budget Activity / Budget Sub Activity: 3010F / 05 / 2	**P-1 Line Item Number / Title:** F01500 / F-15	**Modification Number / Title:** 8755 / F-15E IFF MODE 5

ID Code (A=Service Ready, B=Not Service Ready) : B | **MDAP/MAIS Code:**

Modification Item 1 of 1: Group B Kit

Manufacturer Information

Manufacturer Name: Raytheon | Manufacturer Location: Largo, FL

Administrative Leadtime *(in Months)*: 3 | Production Leadtime *(in Months)*: 6

Dates	FY 2018	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024
Contract Dates	Jan 2019	Jan 2019	Jan 2020				
Delivery Dates	Jul 2019	Jul 2019	Jul 2020				

Installation Information

Method of Implementation (Organic): Org/Intermediate | **Installation Quantity:** 217

Exhibit P-3a, Individual Modification: PB 2020 Air Force		Date: February 2019
Appropriation / Budget Activity / Budget Sub Activity: 3010F / 05 / 2	**P-1 Line Item Number / Title:** F01500 / F-15	**Modification Number / Title:** 8799 / F-15C MIDS JTRS
ID Code (A=Service Ready, B=Not Service Ready) : B	**MDAP/MAIS Code:**	

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 *(Units in Each)*	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost *($ in Millions)*	0.000	7.430	21.600	41.640	0.000	41.640	46.118	0.000	0.000	0.000	-	116.788
Less PY Advance Procurement *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) *($ in Millions)*	0.000	7.430	21.600	41.640	0.000	41.640	46.118	0.000	0.000	0.000	-	116.788
Plus CY Advance Procurement *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Total Obligation Authority *($ in Millions)*	**0.000**	**7.430**	**21.600**	**41.640**	**0.000**	**41.640**	**46.118**	**0.000**	**0.000**	**0.000**	**-**	**116.788**
(The following Resource Summary rows are for informational purposes only. The corresponding budget requests are documented elsewhere.)												
Initial Spares *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Unit Cost *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-

Description:

This upgrade integrates and installs a new Link 16 system on the F-15C that complies with an NSA mandate on cryptographic modernization and an FAA mandate on frequency remapping. The FAA mandate requires all fielded Link-16 terminals incorporate the frequency re-mapping capability by 2025.

In addition to meeting the two mandates, the system will significantly increase data link capacity and improves long range performance and the ability to operate in a jamming environment. It will also reduce sustainment costs due to its commonality with other DoD assets.

Funding may be used to resolve Diminishing Manufacturing Sources/Material Shortages (DMSMS) and/or obsolescence issues. DMSMS activities may include, but are not limited to, bridge buys, life of type buys, buys to protect production schedule, and minor engineering efforts for redesign.

DMSMS costs are included in Group B NRE; SE/PM costs are included in the Group B recurring.

Milestone/Development Status

Integration started in FY 2016. Integrating Navy MIDS JTRS LRUs into F15 Suite 9 OFP. Milestone C was approved June 2018.

Secondary Distribution		FY 2018	FY 2019	FY 2020 Base	FY 2020 OCO	FY 2020 Total	FY 2021	FY 2022	FY 2023	FY 2024
AF	Quantity	-	-	-	-	-	-	-	-	-
	Total Obligation Authority	6.578	12.228	6.567	-	6.567	37.051	-	-	-
AFNG	Quantity	-	-	-	-	-	-	-	-	-
	Total Obligation Authority	0.852	9.372	35.073	-	35.073	9.067	0.000	0.000	-
Total: Secondary Distribution	**Quantity**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**
	Total Obligation Authority	**7.430**	**21.600**	**41.640**	**0.000**	**41.640**	**46.118**	**0.000**	**0.000**	**0.000**

Exhibit P-3a, Individual Modification: PB 2020 Air Force		Date: February 2019
Appropriation / Budget Activity / Budget Sub Activity: 3010F / 05 / 2	**P-1 Line Item Number / Title:** F01500 / F-15	**Modification Number / Title:** 8799 / F-15C MIDS JTRS
ID Code (A=Service Ready, B=Not Service Ready) : B	**MDAP/MAIS Code:**	
Models of Systems Affected: F-15C	**Modification Type:** Capability Improvement	**Related RDT&E PEs:**

Financial Plan	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
	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												
Modification Item 1 of 1: MIDS JTRS C Model												
A Kits												
Recurring												
MIDS JTRS C Model:INSTALL KITS Group A (Active)	- / -	11 / 1.936	28 / 4.928	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	39 / 6.864
MIDS JTRS C Model:INSTALL KITS Group A (Guard)	- / -	2 / 0.352	22 / 3.872	81 / 14.256	- / -	81 / 14.256	2 / 0.352	- / -	- / -	- / -	- / -	107 / 18.832
Subtotal: Recurring	*- / -*	*- / 2.288*	*- / 8.800*	*- / 14.256*	*- / -*	*- / 14.256*	*- / 0.352*	*- / -*	*- / -*	*- / -*	*- / -*	*- / 25.696*
B Kits												
Recurring												
MIDS JTRS C Model:EQUIPMENT Group B (Active)	- / -	11 / 2.750	28 / 7.000	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	39 / 9.750
MIDS JTRS C Model:EQUIPMENT Group B (Guard)	- / -	2 / 0.500	22 / 5.500	81 / 20.250	- / -	81 / 20.250	2 / 0.500	- / -	- / -	- / -	- / -	107 / 26.750
Subtotal: Recurring	*- / -*	*- / 3.250*	*- / 12.500*	*- / 20.250*	*- / -*	*- / 20.250*	*- / 0.500*	*- / -*	*- / -*	*- / -*	*- / -*	*- / 36.500*
Subtotal: MIDS JTRS C Model	*- / -*	*- / 5.538*	*- / 21.300*	*- / 34.506*	*- / -*	*- / 34.506*	*- / 0.852*	*- / -*	*- / -*	*- / -*	*- / -*	*- / 62.196*
Subtotal: Procurement, All Modification Items	*- / -*	*- / 5.538*	*- / 21.300*	*- / 34.506*	*- / -*	*- / 34.506*	*- / 0.852*	*- / -*	*- / -*	*- / -*	*- / -*	*- / 62.196*
Support *(All Modification Items)*												
GROUP A: TOTAL NONRECURRING	- / -	- / -	- / 0.060	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 0.060
GROUP B: TOTAL NONRECURRING	- / -	- / -	- / -	- / -	- / -	- / -	- / 0.440	- / -	- / -	- / -	- / -	- / 0.440
Change Orders	- / -	- / 1.892	- / 0.240	- / 3.120	- / -	- / 3.120	- / 25.355	- / -	- / -	- / -	- / -	- / 30.607
SUPPORT-EQUIP	- / -	- / -	- / -	- / 0.152	- / -	- / 0.152	- / 0.468	- / -	- / -	- / -	- / -	- / 0.620
Subtotal: Support	*- / -*	*- / 1.892*	*- / 0.300*	*- / 3.272*	*- / -*	*- / 3.272*	*- / 26.263*	*- / -*	*- / -*	*- / -*	*- / -*	*- / 31.727*
Installation												
Modification Item 1 of 1: MIDS JTRS C Model	- / -	- / -	- / -	10 / 3.862	- / -	10 / 3.862	60 / 19.003	63 / 0.000	13 / 0.000	- / -	- / -	146 / 22.865
Subtotal: Installation	*- / -*	*- / -*	*- / -*	*10 / 3.862*	*- / -*	*10 / 3.862*	*60 / 19.003*	*63 / -*	*13 / -*	*- / -*	*- / -*	*146 / 22.865*
Total												
Total Cost (Procurement + Support + Installation)	**0.000**	**7.430**	**21.600**	**41.640**	**0.000**	**41.640**	**46.118**	**0.000**	**0.000**	**0.000**	**-**	**116.788**

Exhibit P-3a, Individual Modification: PB 2020 Air Force		Date: February 2019
Appropriation / Budget Activity / Budget Sub Activity: 3010F / 05 / 2	**P-1 Line Item Number / Title:** F01500 / F-15	**Modification Number / Title:** 8799 / F-15C MIDS JTRS
ID Code (A=Service Ready, B=Not Service Ready) : B	**MDAP/MAIS Code:**	

Modification Item 1 of 1: MIDS JTRS C Model

Manufacturer Information

Manufacturer Name: BAE Systems	Manufacturer Location: Wayne, NJ
Administrative Leadtime *(in Months)*: 12	Production Leadtime *(in Months)*: 12

Dates	FY 2018	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024
Contract Dates	Oct 2018	Oct 2019					
Delivery Dates	Oct 2019	Oct 2020					

Installation Information

Method of Implementation: Contract Field Team

Installation Cost	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
	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)*
Prior Years	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2018	- / -	- / -	- / -	10 / 3.862	- / -	10 / 3.862	3 / 1.044	- / -	- / -	- / -	- / -	13 / 4.906
FY 2019	- / -	- / -	- / -	- / -	- / -	- / -	50 / 15.976	- / -	- / -	- / -	- / -	50 / 15.976
FY 2020	- / -	- / -	- / -	- / -	- / -	- / -	7 / 1.983	63 / 0.000	11 / 0.000	- / -	- / -	81 / 1.983
FY 2021	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	2 / 0.000	- / -	- / -	2 / 0.000
FY 2022	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2023	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2024	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
To Complete	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
Total	- / -	- / -	- / -	10 / 3.862	- / -	10 / 3.862	60 / 19.003	63 / 0.000	13 / 0.000	- / -	- / -	146 / 22.865

Installation Schedule

	PYS	FY 2018				FY 2019				FY 2020				FY 2021				FY 2022				FY 2023				FY 2024				TC	Tot
		Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4		
In	0	-	-	-	-	-	-	-	-	0	0	8	2	15	15	15	15	16	16	16	15	5	5	3	-	-	-	-	-	0	146
Out	0	-	-	-	-	-	-	-	-	0	0	8	2	15	15	15	15	16	16	16	15	5	5	3	-	-	-	-	-	0	146

Exhibit P-3a, Individual Modification: PB 2020 Air Force		Date: February 2019
Appropriation / Budget Activity / Budget Sub Activity: 3010F / 05 / 2	**P-1 Line Item Number / Title:** F01500 / F-15	**Modification Number / Title:** 8800 / F-15E MIDS JTRS
ID Code (A=Service Ready, B=Not Service Ready) : B	**MDAP/MAIS Code:**	

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 *(Units in Each)*	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost *($ in Millions)*	0.000	14.983	19.040	27.844	0.000	27.844	41.918	43.769	19.962	33.051	0.000	200.567
Less PY Advance Procurement *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) *($ in Millions)*	0.000	14.983	19.040	27.844	0.000	27.844	41.918	43.769	19.962	33.051	0.000	200.567
Plus CY Advance Procurement *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Total Obligation Authority *($ in Millions)*	**0.000**	**14.983**	**19.040**	**27.844**	**0.000**	**27.844**	**41.918**	**43.769**	**19.962**	**33.051**	**0.000**	**200.567**
(The following Resource Summary rows are for informational purposes only. The corresponding budget requests are documented elsewhere.)												
Initial Spares *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Unit Cost *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-

Description:

This upgrade integrates and installs a new Link 16 system on the F-15E that complies with an NSA mandate on cryptographic modernization and an FAA mandate on frequency remapping. The FAA mandate requires all fielded Link-16 terminals incorporate the frequency re-mapping capability by 2025.

In addition to meeting the two mandates, the system will significantly increase data link capacity and improve long range performance and the ability to operate in a jamming environment. It will also reduce sustainment costs due to its commonality with other DoD assets.

Funding may be used to resolve Diminishing Manufacturing Sources/Material Shortages (DMSMS) and/or obsolescence issues. DMSMS activities may include, but are not limited to, bridge buys, life of type buys, buys to protect production schedule, and minor engineering efforts for redesign.

DMSMS costs are included in Group B NRE; SE/PM costs are included in the Group B recurring; and Depot Costs are included in the Support Equipment.

Milestone/Development Status

MIDS JTRS will be integrated in OFP Suite 9. Milestone C was approved June 2018.

Secondary Distribution		FY 2018	FY 2019	FY 2020 Base	FY 2020 OCO	FY 2020 Total	FY 2021	FY 2022	FY 2023	FY 2024
AF	Quantity	-	-	-	-	-	-	-	-	-
	Total Obligation Authority	14.983	19.040	27.844	-	27.844	41.918	43.769	19.962	33.051
Total: Secondary Distribution	**Quantity**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**
	Total Obligation Authority	**14.983**	**19.040**	**27.844**	**0.000**	**27.844**	**41.918**	**43.769**	**19.962**	**33.051**

Exhibit P-3a, Individual Modification: PB 2020 Air Force		Date: February 2019
Appropriation / Budget Activity / Budget Sub Activity: 3010F / 05 / 2	**P-1 Line Item Number / Title:** F01500 / F-15	**Modification Number / Title:** 8800 / F-15E MIDS JTRS
ID Code (A=Service Ready, B=Not Service Ready) : B	**MDAP/MAIS Code:**	
Models of Systems Affected: F-15E	**Modification Type:** Capability Improvement	**Related RDT&E PEs:** 0207134F

Financial Plan	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
	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)*
RDT&E PE #												
0207134F	- / 56.932	- / 15.672	- / 6.670	- / 11.320	- / -	- / 11.320	- / 1.550	- / -	- / -	- / -	- / -	- / 92.144
Procurement												
Modification Item 1 of 1: MIDS JTRS												
A Kits												
Recurring												
MIDS JTRS:INSTALL KITS Group A (Active)	- / -	26 / 0.233	44 / 0.341	26 / 0.388	- / -	26 / 0.388	61 / 0.314	61 / 0.629	- / -	- / -	- / -	218 / 1.905
Subtotal: Recurring	*- / -*	*- / 0.233*	*- / 0.341*	*- / 0.388*	*- / -*	*- / 0.388*	*- / 0.314*	*- / 0.629*	*- / -*	*- / -*	*- / -*	*- / 1.905*
B Kits												
Recurring												
MIDS JTRS:EQUIPMENT Group B (Active)	- / -	26 / 11.076	44 / 18.699	26 / 11.076	- / -	26 / 11.076	61 / 25.986	61 / 25.986	- / -	- / -	- / -	218 / 92.823
Subtotal: Recurring	*- / -*	*- / 11.076*	*- / 18.699*	*- / 11.076*	*- / -*	*- / 11.076*	*- / 25.986*	*- / 25.986*	*- / -*	*- / -*	*- / -*	*- / 92.823*
Subtotal: MIDS JTRS	*- / -*	*- / 11.309*	*- / 19.040*	*- / 11.464*	*- / -*	*- / 11.464*	*- / 26.300*	*- / 26.615*	*- / -*	*- / -*	*- / -*	*- / 94.728*
Subtotal: Procurement, All Modification Items	*- / -*	*- / 11.309*	*- / 19.040*	*- / 11.464*	*- / -*	*- / 11.464*	*- / 26.300*	*- / 26.615*	*- / -*	*- / -*	*- / -*	*- / 94.728*
Support *(All Modification Items)*												
GROUP B: TOTAL NONRECURRING	- / -	- / 1.124	- / -	- / 1.397	- / -	- / 1.397	- / -	- / 1.209	- / -	- / -	- / -	- / 3.730
Change Orders	- / -	- / 2.550	- / -	- / 6.050	- / -	- / 6.050	- / 5.420	- / 6.067	- / 0.032	- / 5.411	- / -	- / 25.530
SUPPORT-EQUIP	- / -	- / -	- / -	- / 0.152	- / -	- / 0.152	- / -	- / 0.530	- / -	- / -	- / -	- / 0.682
Subtotal: Support	*- / -*	*- / 3.674*	*- / -*	*- / 7.599*	*- / -*	*- / 7.599*	*- / 5.420*	*- / 7.806*	*- / 0.032*	*- / 5.411*	*- / -*	*- / 29.942*
Installation												
Modification Item 1 of 1: MIDS JTRS	- / -	- / -	- / -	31 / 8.781	- / -	31 / 8.781	36 / 10.198	33 / 9.348	62 / 19.930	56 / 27.640	- / -	218 / 75.897
Subtotal: Installation	*- / -*	*- / -*	*- / -*	*31 / 8.781*	*- / -*	*31 / 8.781*	*36 / 10.198*	*33 / 9.348*	*62 / 19.930*	*56 / 27.640*	*- / -*	*218 / 75.897*
Total												
Total Cost (Procurement + Support + Installation)	**0.000**	**14.983**	**19.040**	**27.844**	**0.000**	**27.844**	**41.918**	**43.769**	**19.962**	**33.051**	**0.000**	**200.567**

Exhibit P-3a, Individual Modification: PB 2020 Air Force		Date: February 2019
Appropriation / Budget Activity / Budget Sub Activity: 3010F / 05 / 2	**P-1 Line Item Number / Title:** F01500 / F-15	**Modification Number / Title:** 8800 / F-15E MIDS JTRS

ID Code (A=Service Ready, B=Not Service Ready) : B | **MDAP/MAIS Code:**

Modification Item 1 of 1: MIDS JTRS

Manufacturer Information

Manufacturer Name: BAE Systems | Manufacturer Location: Wayne, NJ

Administrative Leadtime *(in Months)*: 12 | Production Leadtime *(in Months)*: 12

Dates	FY 2018	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024
Contract Dates	Oct 2018	Oct 2019	Oct 2020	Oct 2021	Oct 2022		
Delivery Dates	Oct 2019	Oct 2020	Oct 2021	Oct 2022	Oct 2023		

Installation Information

Method of Implementation: Contract Field Team

Installation Cost	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
	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)*
Prior Years	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2018	- / -	- / -	- / -	26 / 7.365	- / -	26 / 7.365	- / -	- / -	- / -	- / -	- / -	26 / 7.365
FY 2019	- / -	- / -	- / -	5 / 1.416	- / -	5 / 1.416	31 / 8.782	8 / 2.266	- / -	- / -	- / -	44 / 12.464
FY 2020	- / -	- / -	- / -	- / -	- / -	- / -	5 / 1.416	21 / 5.949	- / -	- / -	- / -	26 / 7.365
FY 2021	- / -	- / -	- / -	- / -	- / -	- / -	- / -	4 / 1.133	57 / 18.514	- / -	- / -	61 / 19.647
FY 2022	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	5 / 1.416	56 / 27.640	- / -	61 / 29.056
FY 2023	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2024	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
To Complete	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
Total	- / -	- / -	- / -	31 / 8.781	- / -	31 / 8.781	36 / 10.198	33 / 9.348	62 / 19.930	56 / 27.640	- / -	218 / 75.897

Installation Schedule

	PYS	FY 2018				FY 2019				FY 2020				FY 2021				FY 2022				FY 2023				FY 2024				TC	Tot
		Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4		
In	0	-	-	-	-	-	-	-	-	7	7	8	9	9	9	9	9	8	8	8	9	15	15	15	17	14	14	14	14	0	218
Out	0	-	-	-	-	-	-	-	-	7	7	8	9	9	9	9	9	8	8	8	9	15	15	15	17	14	14	14	14	0	218

Exhibit P-3a, Individual Modification: PB 2020 Air Force		Date: February 2019
Appropriation / Budget Activity / Budget Sub Activity: 3010F / 05 / 2	**P-1 Line Item Number / Title:** F01500 / F-15	**Modification Number / Title:** 8801 / F-15 C/D SLEP Longerons
ID Code (A=Service Ready, B=Not Service Ready) : B	**MDAP/MAIS Code:**	

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 *(Units in Each)*	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost *($ in Millions)*	-	7.023	5.900	24.627	0.000	24.627	40.082	33.024	32.765	0.000	0.000	143.421
Less PY Advance Procurement *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) *($ in Millions)*	-	7.023	5.900	24.627	0.000	24.627	40.082	33.024	32.765	0.000	0.000	143.421
Plus CY Advance Procurement *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Total Obligation Authority *($ in Millions)*	**-**	**7.023**	**5.900**	**24.627**	**0.000**	**24.627**	**40.082**	**33.024**	**32.765**	**0.000**	**0.000**	**143.421**
(The following Resource Summary rows are for informational purposes only. The corresponding budget requests are documented elsewhere.)												
Initial Spares *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Unit Cost *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-

Description:

The F-15C/D Service Life Extension Program (SLEP) for the Longeron addresses a potential safety of flight issue and is required to support the fleet required service life to 2045. The requirement is documented via AF 1067 15-199 dated 6 Jan 16. No additional development to the existing Longeron configuration is required. Data for replacement kits is resident within the F-15 program office. This is a Group B ONLY MOD.

Funds may be used to resolve emerging safety of flight and diminishing manufacturing sources issues, obsolescence issues, accommodate technology insertion and fulfill FAA or other mandates necessary to ensure continued aircrew safety and mission effectiveness. DMSMS activities may include, but are not limited to, bridge buys, life of type buys, buys to protect production schedule, and minor engineering efforts for redesign. DMSMS costs are included in Group B NRE; SE/PM costs are include in the Group B recurring; and Depot Costs are included in the Support Equipment.

Program procuring 234 Longeron Kits.

Milestone/Development Status

This program replaces the components according to their original design. Therefore, no development effort or funding required.

Secondary Distribution		FY 2018	FY 2019	FY 2020 Base	FY 2020 OCO	FY 2020 Total	FY 2021	FY 2022	FY 2023	FY 2024
AF	Quantity	-	-	-	-	-	-	-	-	-
	Total Obligation Authority	3.413	2.500	16.355	-	16.355	20.213	13.027	15.022	-
AFNG	Quantity	-	-	-	-	-	-	-	-	-
	Total Obligation Authority	3.610	3.400	8.272	-	8.272	19.869	19.997	17.743	-
Total: Secondary Distribution	**Quantity**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**
	Total Obligation Authority	**7.023**	**5.900**	**24.627**	**0.000**	**24.627**	**40.082**	**33.024**	**32.765**	**0.000**

Exhibit P-3a, Individual Modification: PB 2020 Air Force		Date: February 2019
Appropriation / Budget Activity / Budget Sub Activity: 3010F / 05 / 2	**P-1 Line Item Number / Title:** F01500 / F-15	**Modification Number / Title:** 8801 / F-15 C/D SLEP Longerons
ID Code (A=Service Ready, B=Not Service Ready) : B	**MDAP/MAIS Code:**	
Models of Systems Affected: F-15C, F-15D	**Modification Type:** Service Life Extension	**Related RDT&E PEs:**

Financial Plan	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
	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												
Modification Item 1 of 1: Longeron Configuration A												
B Kits												
Recurring												
Longeron Configuration A:EQUIPMENT Group B (Active)	- / -	11 / 2.090	14 / 2.380	30 / 5.100	- / -	30 / 5.100	25 / 4.250	17 / 2.890	- / -	- / -	- / -	97 / 16.710
Longeron Configuration A:EQUIPMENT Group B (Guard)	- / -	19 / 3.610	20 / 3.400	34 / 5.780	- / -	34 / 5.780	40 / 6.800	24 / 4.080	- / -	- / -	- / -	137 / 23.670
Subtotal: Recurring	*- / -*	*- / 5.700*	*- / 5.780*	*- / 10.880*	*- / -*	*- / 10.880*	*- / 11.050*	*- / 6.970*	*- / -*	*- / -*	*- / -*	*- / 40.380*
Subtotal: Longeron Configuration A	*- / -*	*- / 5.700*	*- / 5.780*	*- / 10.880*	*- / -*	*- / 10.880*	*- / 11.050*	*- / 6.970*	*- / -*	*- / -*	*- / -*	*- / 40.380*
Subtotal: Procurement, All Modification Items	*- / -*	*- / 5.700*	*- / 5.780*	*- / 10.880*	*- / -*	*- / 10.880*	*- / 11.050*	*- / 6.970*	*- / -*	*- / -*	*- / -*	*- / 40.380*
Support *(All Modification Items)*												
GROUP B: TOTAL NONRECURRING	- / -	- / -	- / -	- / 0.200	- / -	- / 0.200	- / -	- / -	- / -	- / -	- / -	- / 0.200
A&AS	- / -	- / -	- / -	- / -	- / -	- / -	- / 0.330	- / -	- / -	- / -	- / -	- / 0.330
SUPPORT-EQUIP	- / -	- / 1.313	- / 0.042	- / 8.062	- / -	- / 8.062	- / 6.000	- / -	- / -	- / -	- / -	- / 15.417
PMA - Other Gov't Costs	- / -	- / 0.010	- / 0.038	- / 0.045	- / -	- / 0.045	- / 0.055	- / 0.077	- / -	- / -	- / -	- / 0.225
Change Orders	- / -	- / -	- / 0.040	- / 0.100	- / -	- / 0.100	- / 0.230	- / -	- / 5.318	- / -	- / -	- / 5.688
Subtotal: Support	*- / -*	*- / 1.323*	*- / 0.120*	*- / 8.407*	*- / -*	*- / 8.407*	*- / 6.615*	*- / 0.077*	*- / 5.318*	*- / -*	*- / -*	*- / 21.860*
Installation												
Modification Item 1 of 1: Longeron Configuration A	- / -	- / -	- / -	15 / 5.340	- / -	15 / 5.340	47 / 22.417	57 / 25.977	59 / 27.447	- / -	- / -	178 / 81.181
Subtotal: Installation	*- / -*	*- / -*	*- / -*	*15 / 5.340*	*- / -*	*15 / 5.340*	*47 / 22.417*	*57 / 25.977*	*59 / 27.447*	*- / -*	*- / -*	*178 / 81.181*
Total												
Total Cost (Procurement + Support + Installation)	**-**	**7.023**	**5.900**	**24.627**	**0.000**	**24.627**	**40.082**	**33.024**	**32.765**	**0.000**	**0.000**	**143.421**

Exhibit P-3a, Individual Modification: PB 2020 Air Force		Date: February 2019
Appropriation / Budget Activity / Budget Sub Activity: 3010F / 05 / 2	**P-1 Line Item Number / Title:** F01500 / F-15	**Modification Number / Title:** 8801 / F-15 C/D SLEP Longerons
ID Code (A=Service Ready, B=Not Service Ready) : B	**MDAP/MAIS Code:**	

Modification Item 1 of 1: Longeron Configuration A

Manufacturer Information

Manufacturer Name: Boeing	Manufacturer Location: Robins AFB
Administrative Leadtime *(in Months)*: 0	Production Leadtime *(in Months)*: 18

Dates	FY 2018	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024
Contract Dates	Jun 2018	Jun 2019	Feb 2020	Feb 2021	Feb 2022		
Delivery Dates	Dec 2019	Dec 2020	Aug 2021	Aug 2022	Aug 2023		

Installation Information

Method of Implementation: Contractor Facility

Installation Cost	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
	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)*
Prior Years	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2018	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2019	- / -	- / -	- / -	- / -	- / -	- / -	15 / 11.025	- / -	- / -	- / -	- / -	15 / 11.025
FY 2020	- / -	- / -	- / -	- / -	- / -	- / -	- / -	15 / 11.025	- / -	- / -	- / -	15 / 11.025
FY 2021	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	17 / 12.495	- / -	- / -	17 / 12.495
FY 2022	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2023	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2024	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
To Complete	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
Total	- / -	- / -	- / -	- / -	- / -	- / -	15 / 11.025	15 / 11.025	17 / 12.495	- / -	- / -	47 / 34.545

Installation Schedule

	PYS	FY 2018				FY 2019				FY 2020				FY 2021				FY 2022				FY 2023				FY 2024				TC	Tot
		Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4		
In	0	-	-	-	-	-	-	-	-	-	-	-	-	3	4	4	4	4	4	4	3	4	4	4	5	-	-	-	-	0	47
Out	0	-	-	-	-	-	-	-	-	-	-	-	-	3	4	4	4	4	4	4	3	4	4	4	5	-	-	-	-	0	47

Method of Implementation: Depot

Installation Cost	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
	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)*
Prior Years	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -

Exhibit P-3a, Individual Modification: PB 2020 Air Force		Date: February 2019
Appropriation / Budget Activity / Budget Sub Activity: 3010F / 05 / 2	**P-1 Line Item Number / Title:** F01500 / F-15	**Modification Number / Title:** 8801 / F-15 C/D SLEP Longerons
ID Code (A=Service Ready, B=Not Service Ready) : B	**MDAP/MAIS Code:**	

Modification Item 1 of 1: Longeron Configuration A

Installation Information

Method of Implementation: Depot

Installation Cost	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
	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)*
FY 2018	- / -	- / -	- / -	15 / 5.340	- / -	15 / 5.340	15 / 5.340	- / -	- / -	- / -	- / -	30 / 10.680
FY 2019	- / -	- / -	- / -	- / -	- / -	- / -	12 / 4.272	7 / 2.492	- / -	- / -	- / -	19 / 6.764
FY 2020	- / -	- / -	- / -	- / -	- / -	- / -	5 / 1.780	35 / 12.460	9 / 3.204	- / -	- / -	49 / 17.444
FY 2021	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	33 / 11.748	- / -	- / -	33 / 11.748
FY 2022	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2023	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2024	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
To Complete	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
Total	- / -	- / -	- / -	15 / 5.340	- / -	15 / 5.340	32 / 11.392	42 / 14.952	42 / 14.952	- / -	- / -	131 / 46.636

Installation Schedule

		FY 2018				FY 2019				FY 2020				FY 2021				FY 2022				FY 2023				FY 2024					
	PYS	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	TC	Tot
In	0	-	-	-	-	-	-	-	-	-	4	4	7	6	8	9	9	9	12	12	9	10	12	12	8	-	-	-	-	0	131
Out	0	-	-	-	-	-	-	-	-	-	4	4	7	6	8	9	9	9	12	12	9	10	12	12	8	-	-	-	-	0	131

Exhibit P-3a, Individual Modification: PB 2020 Air Force		Date: February 2019
Appropriation / Budget Activity / Budget Sub Activity: 3010F / 05 / 2	**P-1 Line Item Number / Title:** F01500 / F-15	**Modification Number / Title:** 8810 / F-15E APG-82(V)1 Common Config

ID Code (A=Service Ready, B=Not Service Ready) : B

MDAP/MAIS Code:

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 *(Units in Each)*	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost *($ in Millions)*	0.000	0.000	35.097	7.795	0.000	7.795	24.012	4.967	5.056	5.147	-	82.074
Less PY Advance Procurement *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) *($ in Millions)*	0.000	0.000	35.097	7.795	0.000	7.795	24.012	4.967	5.056	5.147	-	82.074
Plus CY Advance Procurement *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Total Obligation Authority *($ in Millions)*	**0.000**	**0.000**	**35.097**	**7.795**	**0.000**	**7.795**	**24.012**	**4.967**	**5.056**	**5.147**	**-**	**82.074**
(The following Resource Summary rows are for informational purposes only. The corresponding budget requests are documented elsewhere.)												
Initial Spares *($ in Millions)*	-	0.000	-	0.000	-	0.000	1.470	1.200	0.915	-	-	3.585
Gross/Weapon System Unit Cost *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-

Description:

APG-82(v)1 Common Config ensures common configuration of hardware across the entire F-15E fleet. GPP3 retrofit for the APG-82(v)1 radar replaces obsolete components on the F-15E aircraft to bring the Radar Modernization Program (RMP) equipped jets to a common configuration. GPP3 is a new general purpose processor needed to replace the obsolete GPP1 in the APG-82(v)1 radar. GPP3 retrofit also replaces the obsolete DDS2 waveform generator with the new DDS3. The Automatic Transformer Rectifier Unit(ATRU) retrofit provides a new Isolation Unit, current-sensing contactor, and restrictor to the RMP equipped jets in order to resolve a known Deficiency Report causing dual generator failures on the F-15E aircraft.

Milestone/Development Status

Development is complete.

Secondary Distribution		FY 2018	FY 2019	FY 2020 Base	FY 2020 OCO	FY 2020 Total	FY 2021	FY 2022	FY 2023	FY 2024
AF	Quantity	-	-	-	-	-	-	-	-	-
	Total Obligation Authority	0.000	35.097	7.795	-	7.795	24.012	4.967	5.056	5.147
Total: Secondary Distribution	**Quantity**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**
	Total Obligation Authority	**0.000**	**35.097**	**7.795**	**0.000**	**7.795**	**24.012**	**4.967**	**5.056**	**5.147**

Exhibit P-3a, Individual Modification: PB 2020 Air Force		Date: February 2019
Appropriation / Budget Activity / Budget Sub Activity: 3010F / 05 / 2	**P-1 Line Item Number / Title:** F01500 / F-15	**Modification Number / Title:** 8810 / F-15E APG-82(V)1 Common Config
ID Code (A=Service Ready, B=Not Service Ready) : B	**MDAP/MAIS Code:**	
Models of Systems Affected: F-15E	**Modification Type:** Capability Improvement	**Related RDT&E PEs:**

Financial Plan	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
	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												
Modification Item 1 of 1: GPP3												
A Kits												
Recurring												
GPP3:INSTALL KITS Group A (Active)	- / -	- / -	57 / 3.000	48 / 1.200	- / -	48 / 1.200	35 / 0.900	- / -	- / -	- / -	- / -	140 / 5.100
Subtotal: Recurring	*- / -*	*- / -*	*- / 3.000*	*- / 1.200*	*- / -*	*- / 1.200*	*- / 0.900*	*- / -*	*- / -*	*- / -*	*- / -*	*- / 5.100*
B Kits												
Recurring												
GPP3:EQUIPMENT Group B (Active)	- / -	- / -	57 / 30.597	48 / 6.170	- / -	48 / 6.170	35 / 8.250	- / -	- / -	- / -	- / -	140 / 45.017
Subtotal: Recurring	*- / -*	*- / -*	*- / 30.597*	*- / 6.170*	*- / -*	*- / 6.170*	*- / 8.250*	*- / -*	*- / -*	*- / -*	*- / -*	*- / 45.017*
Subtotal: GPP3	*- / -*	*- / -*	*- / 33.597*	*- / 7.370*	*- / -*	*- / 7.370*	*- / 9.150*	*- / -*	*- / -*	*- / -*	*- / -*	*- / 50.117*
Subtotal: Procurement, All Modification Items	*- / -*	*- / -*	*- / 33.597*	*- / 7.370*	*- / -*	*- / 7.370*	*- / 9.150*	*- / -*	*- / -*	*- / -*	*- / -*	*- / 50.117*
Support *(All Modification Items)*												
GROUP A: TOTAL NONRECURRING	- / -	- / 0.000	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 0.000
Change Orders	- / -	- / 0.000	- / 1.500	- / 0.425	- / -	- / 0.425	- / 14.862	- / 4.967	- / 5.056	- / 5.147	- / -	- / 31.957
Subtotal: Support	*- / -*	*- / 0.000*	*- / 1.500*	*- / 0.425*	*- / -*	*- / 0.425*	*- / 14.862*	*- / 4.967*	*- / 5.056*	*- / 5.147*	*- / -*	*- / 31.957*
Installation												
Subtotal: Installation	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*
Total												
Total Cost (Procurement + Support + Installation)	**0.000**	**0.000**	**35.097**	**7.795**	**0.000**	**7.795**	**24.012**	**4.967**	**5.056**	**5.147**	**-**	**82.074**

Exhibit P-3a, Individual Modification: PB 2020 Air Force		Date: February 2019
Appropriation / Budget Activity / Budget Sub Activity: 3010F / 05 / 2	**P-1 Line Item Number / Title:** F01500 / F-15	**Modification Number / Title:** 8810 / F-15E APG-82(V)1 Common Config

ID Code (A=Service Ready, B=Not Service Ready) : B

MDAP/MAIS Code:

Modification Item 1 of 1: GPP3

Manufacturer Information

Manufacturer Name: Raytheon

Manufacturer Location: El Segundo CA/Forest MS

Administrative Leadtime *(in Months)*: 3

Production Leadtime *(in Months)*: 18

Dates	FY 2018	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024
Contract Dates		Jan 2019	Jan 2020	Jan 2021			
Delivery Dates		Jul 2020	Jul 2021	Jul 2022			

Installation Information

Method of Implementation (Organic): Org/Intermediate

Installation Quantity: 140

Exhibit P-40, Budget Line Item Justification: PB 2020 Air Force	Date: February 2019
Appropriation / Budget Activity / Budget Sub Activity: 3010F: Aircraft Procurement, Air Force / BA 05: Modification of Inservice Aircraft / BSA 2: Tactical Aircraft	**P-1 Line Item Number / Title:** F01600 / F-16

ID Code (A=Service Ready, B=Not Service Ready): B	Program Elements for Code B Items: 0207133F, 0207445F, 0809731F	Other Related Program Elements: 0207133F, 0207445F, 0207701F

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 *(Units in Each)*	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost *($ in Millions)*	379.676	243.864	303.413	234.782	-	234.782	765.616	594.692	602.437	682.441	2,294.568	6,101.489
Less PY Advance Procurement *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) *($ in Millions)*	379.676	243.864	303.413	234.782	-	234.782	765.616	594.692	602.437	682.441	2,294.568	6,101.489
Plus CY Advance Procurement *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Total Obligation Authority *($ in Millions)*	**379.676**	**243.864**	**303.413**	**234.782**	**-**	**234.782**	**765.616**	**594.692**	**602.437**	**682.441**	**2,294.568**	**6,101.489**
(The following Resource Summary rows are for informational purposes only. The corresponding budget requests are documented elsewhere.)												
Initial Spares *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Flyaway Unit Cost *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Unit Cost *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-

Description:

The F-16 is a multi-role fighter capable of employing a wide variety of nuclear and conventional weapons and missiles in both the air-to-surface and air-to-air mission areas. There are 937 aircraft in the F-16 fleet, consisting of 612 Post-Block (40/42/50/52) and 325 Pre-Block (25/30/32). The Post-Block aircraft have a service life of 8,000 EFH and the Pre-Block have a service life of 10,800 EFH. The average age of the fleet is 28.1 years. The specific modifications budgeted and programmed are below.

Funding for AETC-MTD Trainers mod is budgeted in PE 0809731F.
Funding for all other F-16 mods in this exhibit is budgeted in PE 0207133F.

In accordance with Section 1815 of the FY 2008 National Defense Authorization Act (P.L. 110-181), this item is necessary for use by the active and reserve components of the Armed Forces for homeland defense missions, domestic emergency responses, and providing military support to civil authorities.

Funds may be used to address Diminishing Manufacturing Sources (DMS) issues.

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.

Secondary Distribution		FY 2018	FY 2019	FY 2020 Base	FY 2020 OCO	FY 2020 Total	FY 2021	FY 2022	FY 2023	FY 2024
AF	Quantity	-	-	-	-	-	-	-	-	-
	Total Obligation Authority	204.762	239.708	191.531	0.000	191.531	672.644	528.935	529.728	627.506
AFNG	Quantity	-	-	-	-	-	-	-	-	-
	Total Obligation Authority	25.464	51.153	33.971	-	33.971	78.106	54.419	70.336	54.935
AFR	Quantity	-	-	-	-	-	-	-	-	-

Exhibit P-40, Budget Line Item Justification: PB 2020 Air Force		Date: February 2019
Appropriation / Budget Activity / Budget Sub Activity: 3010F: Aircraft Procurement, Air Force / BA 05: Modification of Inservice Aircraft / BSA 2: Tactical Aircraft	**P-1 Line Item Number / Title:** F01600 / F-16	
ID Code (A=Service Ready, B=Not Service Ready): B	**Program Elements for Code B Items:** 0207133F, 0207445F, 0809731F	**Other Related Program Elements:** 0207133F, 0207445F, 0207701F
Line Item MDAP/MAIS Code: N/A		

Secondary Distribution		FY 2018	FY 2019	FY 2020 Base	FY 2020 OCO	FY 2020 Total	FY 2021	FY 2022	FY 2023	FY 2024
	Total Obligation Authority	13.638	12.552	9.280	-	9.280	14.866	11.338	2.373	-
Total: Secondary Distribution	**Quantity**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**
	Total Obligation Authority	**243.864**	**303.413**	**234.782**	**0.000**	**234.782**	**765.616**	**594.692**	**602.437**	**682.441**

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

Appropriation / Budget Activity / Budget Sub Activity:
3010F: Aircraft Procurement, Air Force / BA 05: Modification of Inservice Aircraft / BSA 2: Tactical Aircraft

P-1 Line Item Number / Title:
F01600 / F-16

ID Code (A=Service Ready, B=Not Service Ready): B

Program Elements for Code B Items: 0207133F, 0207445F, 0809731F

Other Related Program Elements: 0207133F, 0207445F, 0207701F

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) I ($ M)	Quantity / Total Cost (Each) I ($ M)	Quantity / Total Cost (Each) I ($ M)	Quantity / Total Cost (Each) I ($ M)	Quantity / Total Cost (Each) I ($ M)	Quantity / Total Cost (Each) I ($ M)
P-40a***	633030 / Aggressors Update (Capability Improvement)				- / 6.925	- / 5.306	- / 1.154	- / 1.524	- / 0.000	- / 1.524
P-40a***	633041 / Anti Jam (Capability Improvement)				- / 5.000	- / -	- / -	- / -	- / -	- / -
P-40a***	633042 / Missile Warning Systems (Capability Improvement)				- / 12.000	- / -	- / -	- / -	- / -	- / -
P-40a***	661652 / Link 16 Crypto (Capability Improvement)				- / 0.139	- / -	- / -	- / -	- / -	- / -
P-40a***	661653 / MIDS-JTRS (Capability Improvement)				- / 11.099	- / 118.029	- / 176.888	- / 1.469	- / -	- / 1.469
P-40a***	704050 / Digital Radar Warning Receiver (RWR) (Capability Improvement)				- / -	- / -	- / -	- / 4.315	- / -	- / 4.315
P-40a***	8662 / AETC MTD UPGRADES-FIELD TRAINING DETACHMENTS (Capability Improvement)				- / 103.219	- / 3.716	- / 5.335	- / 5.431	- / -	- / 5.431
P-40a***	866250 / F-16 TRAINING SYSTEMS (Capability Improvement)				- / 6.125	- / 5.524	- / 4.286	- / 4.342	- / -	- / 4.342
P-40a***	866251 / Full Combat Mission Training (Capability Improvement)				- / -	- / -	- / 5.665	- / 1.960	- / -	- / 1.960
P-40a***	99999X / Low Cost Modifications (Capability Improvement)				- / 11.075	- / 0.003	- / 2.000	- / 0.010	- / -	- / 0.010
P-3a	602148 / MMC and Display Generator Upgrade (Capability Improvement)		B		- / 0.000	- / 0.000	- / 0.000	- / 14.530	- / 0.000	- / 14.530
P-3a	602600 / F-16 LEGACY STRUCTURAL SLEP (Service Life Extension)		B		- / 3.517	- / 10.454	- / 36.676	- / 45.050	- / 0.000	- / 45.050
P-3a	618250 / Comm Suite Upgrade (Capability Improvement)		B		- / 0.000	- / 29.916	- / 20.968	- / 29.171	- / 0.000	- / 29.171
P-3a	633031 / HFLCC AGCAS (Capability Improvement)		B		- / -	- / 13.118	- / 14.060	- / 18.153	- / 0.000	- / 18.153
P-3a	633032 / AIFF MODE 5 (Capability Improvement)		B		- / -	- / 9.009	- / 36.381	- / 7.937	- / 0.000	- / 7.937
P-3a	694050 / AESA Radars (Capability Improvement)		B		- / 220.577	- / 48.789	- / 0.000	- / 100.890	- / 0.000	- / 100.890
P-40	**Total Gross/Weapon System Cost**				**- / 379.676**	**- / 243.864**	**- / 303.413**	**- / 234.782**	**- / -**	**- / 234.782**

Exhibits Schedule					FY 2021	FY 2022	FY 2023	FY 2024	To Complete	Total
Exhibit Type	Title*	Subexhibits	ID CD	MDAP/ MAIS Code	Quantity / Total Cost (Each) I ($ M)	Quantity / Total Cost (Each) I ($ M)	Quantity / Total Cost (Each) I ($ M)	Quantity / Total Cost (Each) I ($ M)	Quantity / Total Cost (Each) I ($ M)	Quantity / Total Cost (Each) I ($ M)
P-40a***	633030 / Aggressors Update (Capability Improvement)				- / 1.990	- / 0.000	- / -	- / -	- / -	- / 16.899
P-40a***	633041 / Anti Jam (Capability Improvement)				- / -	- / -	- / -	- / -	- / -	- / 5.000
P-40a***	633042 / Missile Warning Systems (Capability Improvement)				- / -	- / -	- / -	- / -	- / -	- / 12.000
P-40a***	661652 / Link 16 Crypto (Capability Improvement)				- / -	- / -	- / -	- / -	- / -	- / 0.139
P-40a***	661653 / MIDS-JTRS (Capability Improvement)				- / 31.904	- / 0.000	- / 0.000	- / -	- / -	- / 339.389
P-40a***	704050 / Digital Radar Warning Receiver (RWR) (Capability Improvement)				- / 161.615	- / 28.037	- / 49.626	- / 224.793	- / 1,343.778	- / 1,812.164
P-40a***	8662 / AETC MTD UPGRADES-FIELD TRAINING DETACHMENTS (Capability Improvement)				- / 5.529	- / 5.639	- / 5.742	- / 5.845	- / -	- / 140.456
P-40a***	866250 / F-16 TRAINING SYSTEMS (Capability Improvement)				- / 60.233	- / 4.458	- / 3.039	- / 4.842	- / -	- / 92.849
P-40a***	866251 / Full Combat Mission Training (Capability Improvement)				- / 2.400	- / 2.034	- / 0.052	- / 0.054	- / -	- / 12.165

Exhibit P-40, Budget Line Item Justification: PB 2020 Air Force		**Date:** February 2019
Appropriation / Budget Activity / Budget Sub Activity: 3010F: Aircraft Procurement, Air Force / BA 05: Modification of Inservice Aircraft / BSA 2: Tactical Aircraft	**P-1 Line Item Number / Title:** F01600 / F-16	
ID Code (A=Service Ready, B=Not Service Ready): B	**Program Elements for Code B Items:** 0207133F, 0207445F, 0809731F	**Other Related Program Elements:** 0207133F, 0207445F, 0207701F
Line Item MDAP/MAIS Code: N/A		

Exhibits Schedule					FY 2021	FY 2022	FY 2023	FY 2024	To Complete	Total
Exhibit Type	Title*	Subexhibits	ID CD	MDAP/ MAIS Code	Quantity / Total Cost *(Each) I ($ M)*	Quantity / Total Cost *(Each) I ($ M)*	Quantity / Total Cost *(Each) I ($ M)*	Quantity / Total Cost *(Each) I ($ M)*	Quantity / Total Cost *(Each) I ($ M)*	Quantity / Total Cost *(Each) I ($ M)*
P-40a***	99999X / Low Cost Modifications (Capability Improvement)				- / 0.010	- / 0.772	- / 0.785	- / 0.799	- / -	- / 15.454
P-3a	602148 / MMC and Display Generator Upgrade (Capability Improvement)		B		- / 39.453	- / 45.181	- / 47.424	- / 43.050	- / 50.586	- / 240.224
P-3a	602600 / F-16 LEGACY STRUCTURAL SLEP (Service Life Extension)		B		- / 71.993	- / 108.410	- / 133.627	- / 117.490	- / 576.710	- / 1,103.927
P-3a	618250 / Comm Suite Upgrade (Capability Improvement)		B		- / 82.190	- / 47.309	- / 48.169	- / 112.161	- / 313.833	- / 683.717
P-3a	633031 / HFLCC AGCAS (Capability Improvement)		B		- / 15.829	- / 18.699	- / 9.080	- / 0.358	- / 0.000	- / 89.297
P-3a	633032 / AIFF MODE 5 (Capability Improvement)		B		- / 22.045	- / 16.524	- / 18.752	- / 0.000	- / -	- / 110.648
P-3a	694050 / AESA Radars (Capability Improvement)		B		- / 270.425	- / 317.629	- / 286.141	- / 173.049	- / 9.661	- / 1,427.161
P-40	**Total Gross/Weapon System Cost**				**- / 765.616**	**- / 594.692**	**- / 602.437**	**- / 682.441**	**- / 2,294.568**	**- / 6,101.489**

*** Although this is an Exhibit P-40a item, the actual exhibit is not included since all of the required information for this item is already being shown here.

*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:
Where applicable, justification for individual modifications is provided in the P-3A exhibits.

Exhibit P-3a, Individual Modification: PB 2020 Air Force		Date: February 2019
Appropriation / Budget Activity / Budget Sub Activity: 3010F / 05 / 2	**P-1 Line Item Number / Title:** F01600 / F-16	**Modification Number / Title:** 602148 / MMC and Display Generator Upgrade
ID Code (A=Service Ready, B=Not Service Ready) : B	**MDAP/MAIS Code:**	

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 *(Units in Each)*	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost *($ in Millions)*	0.000	0.000	0.000	14.530	0.000	14.530	39.453	45.181	47.424	43.050	50.586	240.224
Less PY Advance Procurement *($ in Millions)*	0.000	-	-	-	-	-	-	-	-	-	-	0.000
Net Procurement (P-1) *($ in Millions)*	0.000	0.000	0.000	14.530	0.000	14.530	39.453	45.181	47.424	43.050	50.586	240.224
Plus CY Advance Procurement *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Total Obligation Authority *($ in Millions)*	**0.000**	**0.000**	**0.000**	**14.530**	**0.000**	**14.530**	**39.453**	**45.181**	**47.424**	**43.050**	**50.586**	**240.224**
(The following Resource Summary rows are for informational purposes only. The corresponding budget requests are documented elsewhere.)												
Initial Spares *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Unit Cost *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-

Description:

This program, P-3A Mod 602148, MMC and Display Generator Upgrade, is a new start.
This modification upgrades the current F-16 core mission computer to include increased high-speed data, memory and throughput, and adding an Ethernet High Speed Data Network (HSDN). The upgraded mission computer is required because the current 1553 mux capability is nearing its capacity. The new Display Generator allows for a fully integrated Multi-Function Display Set (MFDS) solution including Hands-on Throttle and Stick (HOTAS) integration with Sensor of Interest (SOI), format swapping and high definition video on 4x4 displays; provides improved display formats during dynamic maneuvers; resolves symbol freezing issues due to throughput constraints; and provides a sustainable approach to address growing DMS concerns with the current Program Display Generator (PDG).

This funding request will support potential DMS and obsolescence solutions, to include, if optimal, life of type buys, or bridge buys limited to the program of record quantity.

Milestone/Development Status

40 MMC test assets were bought during in the Development phase.

Secondary Distribution		FY 2018	FY 2019	FY 2020 Base	FY 2020 OCO	FY 2020 Total	FY 2021	FY 2022	FY 2023	FY 2024
AF	Quantity	-	-	-	-	-	-	-	-	-
	Total Obligation Authority	-	-	14.530	-	14.530	39.453	45.181	38.535	21.954
AFNG	Quantity	-	-	-	-	-	-	-	-	-
	Total Obligation Authority	-	-	-	-	-	-	-	8.889	21.096
Total: Secondary Distribution	**Quantity**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**
	Total Obligation Authority	**0.000**	**0.000**	**14.530**	**0.000**	**14.530**	**39.453**	**45.181**	**47.424**	**43.050**

Exhibit P-3a, Individual Modification: PB 2020 Air Force		Date: February 2019
Appropriation / Budget Activity / Budget Sub Activity: 3010F / 05 / 2	**P-1 Line Item Number / Title:** F01600 / F-16	**Modification Number / Title:** 602148 / MMC and Display Generator Upgrade
ID Code (A=Service Ready, B=Not Service Ready) : B	**MDAP/MAIS Code:**	
Models of Systems Affected: F-16	**Modification Type:** Capability Improvement	**Related RDT&E PEs:** 0207133F

Financial Plan	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
	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)*
RDT&E PE #												
0207133F	45 / 47.269	18 / 18.958	- / 11.613	- / 3.837	- / -	- / 3.837	- / 9.623	- / 2.897	- / 1.296	- / 1.000	- / -	63 / 96.493
Procurement												
Modification Item 1 of 2: MMC Kit												
B Kits												
Recurring												
MMC Kit:EQUIPMENT Group B (Active)	- / -	- / -	- / -	56 / 10.236	- / -	56 / 10.236	156 / 19.202	156 / 19.775	88 / 11.313	- / -	- / -	456 / 60.526
MMC Kit:EQUIPMENT Group B (Guard)	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	68 / 8.889	90 / 12.153	- / -	158 / 21.042
Subtotal: Recurring	*- / -*	*- / -*	*- / -*	*- / 10.236*	*- / -*	*- / 10.236*	*- / 19.202*	*- / 19.775*	*- / 20.202*	*- / 12.153*	*- / -*	*- / 81.568*
Subtotal: MMC Kit	*- / -*	*- / -*	*- / -*	*- / 10.236*	*- / -*	*- / 10.236*	*- / 19.202*	*- / 19.775*	*- / 20.202*	*- / 12.153*	*- / -*	*- / 81.568*
Modification Item 2 of 2: PDG Kit												
B Kits												
Recurring												
PDG Kit:EQUIPMENT Group B (Active)	- / -	- / -	- / -	- / -	- / -	- / -	56 / 4.714	156 / 12.639	156 / 12.799	88 / 7.402	- / -	456 / 37.554
PDG Kit:EQUIPMENT Group B (Guard)	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	68 / 5.951	90 / 8.140	158 / 14.091
Subtotal: Recurring	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / 4.714*	*- / 12.639*	*- / 12.799*	*- / 13.353*	*- / 8.140*	*- / 51.645*
Subtotal: PDG Kit	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / 4.714*	*- / 12.639*	*- / 12.799*	*- / 13.353*	*- / 8.140*	*- / 51.645*
Subtotal: Procurement, All Modification Items	*- / -*	*- / -*	*- / -*	*- / 10.236*	*- / -*	*- / 10.236*	*- / 23.916*	*- / 32.414*	*- / 33.001*	*- / 25.506*	*- / 8.140*	*- / 133.213*
Support *(All Modification Items)*												
ICS-Material	- / -	- / -	- / -	- / 0.614	- / -	- / 0.614	- / 1.917	- / 0.917	- / -	- / -	- / -	- / 3.448
Change Orders	- / -	- / -	- / -	- / -	- / -	- / -	- / 5.597	- / -	- / -	- / -	- / 7.650	- / 13.247
SUPPORT-EQUIP	- / -	- / -	- / -	- / 1.250	- / -	- / 1.250	- / -	- / -	- / -	- / -	- / 7.750	- / 9.000
OTHER GOVT	- / -	- / -	- / -	- / 2.430	- / -	- / 2.430	- / 5.559	- / 2.522	- / 0.695	- / 3.816	- / 11.998	- / 27.020
Subtotal: Support	*- / -*	*- / -*	*- / -*	*- / 4.294*	*- / -*	*- / 4.294*	*- / 13.073*	*- / 3.439*	*- / 0.695*	*- / 3.816*	*- / 27.398*	*- / 52.715*
Installation												
Modification Item 1 of 2: MMC Kit	- / -	- / -	- / -	- / -	- / -	- / -	56 / 2.464	156 / 6.864	156 / 6.864	156 / 6.864	90 / 4.092	614 / 27.148
Modification Item 2 of 2: PDG Kit	- / -	- / -	- / -	- / -	- / -	- / -	- / -	56 / 2.464	156 / 6.864	156 / 6.864	246 / 10.956	614 / 27.148
Subtotal: Installation	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*56 / 2.464*	*212 / 9.328*	*312 / 13.728*	*312 / 13.728*	*336 / 15.048*	*1,228 / 54.296*
Total												

Exhibit P-3a, Individual Modification: PB 2020 Air Force		Date: February 2019
Appropriation / Budget Activity / Budget Sub Activity: 3010F / 05 / 2	**P-1 Line Item Number / Title:** F01600 / F-16	**Modification Number / Title:** 602148 / MMC and Display Generator Upgrade
ID Code (A=Service Ready, B=Not Service Ready) : B	**MDAP/MAIS Code:**	
Models of Systems Affected: F-16	**Modification Type:** Capability Improvement	**Related RDT&E PEs:** 0207133F

Financial Plan	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
	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)*
Total Cost (Procurement + Support + Installation)	**0.000**	**0.000**	**0.000**	**14.530**	**0.000**	**14.530**	**39.453**	**45.181**	**47.424**	**43.050**	**50.586**	**240.224**

Exhibit P-3a, Individual Modification: PB 2020 Air Force		Date: February 2019
Appropriation / Budget Activity / Budget Sub Activity: 3010F / 05 / 2	**P-1 Line Item Number / Title:** F01600 / F-16	**Modification Number / Title:** 602148 / MMC and Display Generator Upgrade

ID Code (A=Service Ready, B=Not Service Ready) : B

MDAP/MAIS Code:

Modification Item 1 of 2: MMC Kit

Manufacturer Information

Manufacturer Name: Raytheon

Manufacturer Location: McKinney, TX

Administrative Leadtime *(in Months)*: 2

Production Leadtime *(in Months)*: 9

Dates	FY 2018	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024
Contract Dates			Dec 2019	Dec 2020	Dec 2021	Dec 2022	Dec 2023
Delivery Dates			Sep 2020	Sep 2021	Sep 2022	Sep 2023	Sep 2024

Installation Information

Method of Implementation: Contract Field Team

Installation Cost	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
	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)*
Prior Years	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2018	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2019	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2020	- / -	- / -	- / -	- / -	- / -	- / -	56 / 2.464	- / -	- / -	- / -	- / -	56 / 2.464
FY 2021	- / -	- / -	- / -	- / -	- / -	- / -	- / -	156 / 6.864	- / -	- / -	- / -	156 / 6.864
FY 2022	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	156 / 6.864	- / -	- / -	156 / 6.864
FY 2023	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	156 / 6.864	- / -	156 / 6.864
FY 2024	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	90 / 4.092	90 / 4.092
To Complete	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
Total	- / -	- / -	- / -	- / -	- / -	- / -	56 / 2.464	156 / 6.864	156 / 6.864	156 / 6.864	90 / 4.092	614 / 27.148

Installation Schedule

	PYS	FY 2018				FY 2019				FY 2020				FY 2021				FY 2022				FY 2023				FY 2024				TC	Tot
		Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4		
In	0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	17	39	39	39	39	39	39	39	39	39	39	39	39	39	90	614
Out	0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	17	39	39	39	39	39	39	39	39	39	39	39	39	129	614

Exhibit P-3a, Individual Modification: PB 2020 Air Force		Date: February 2019
Appropriation / Budget Activity / Budget Sub Activity: 3010F / 05 / 2	**P-1 Line Item Number / Title:** F01600 / F-16	**Modification Number / Title:** 602148 / MMC and Display Generator Upgrade

ID Code (A=Service Ready, B=Not Service Ready) : B

MDAP/MAIS Code:

Modification Item 2 of 2: PDG Kit

Manufacturer Information

Manufacturer Name: General Dynamics

Manufacturer Location: Minneapolis, MN

Administrative Leadtime *(in Months)*: 2

Production Leadtime *(in Months)*: 9

Dates	FY 2018	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024
Contract Dates			Dec 2019	Dec 2020	Dec 2021	Dec 2022	Dec 2023
Delivery Dates			Sep 2020	Sep 2021	Sep 2022	Sep 2023	Sep 2024

Installation Information

Method of Implementation: Contract Field Team

Installation Cost	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
	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)*
Prior Years	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2018	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2019	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2020	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2021	- / -	- / -	- / -	- / -	- / -	- / -	- / -	56 / 2.464	- / -	- / -	- / -	56 / 2.464
FY 2022	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	156 / 6.864	- / -	- / -	156 / 6.864
FY 2023	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	156 / 6.864	- / -	156 / 6.864
FY 2024	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	156 / 6.864	156 / 6.864
To Complete	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	90 / 4.092	90 / 4.092
Total	- / -	- / -	- / -	- / -	- / -	- / -	- / -	56 / 2.464	156 / 6.864	156 / 6.864	246 / 10.956	614 / 27.148

Installation Schedule

		FY 2018				FY 2019				FY 2020				FY 2021				FY 2022				FY 2023				FY 2024					
	PYS	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	TC	Tot
In	0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	17	39	39	39	39	39	39	39	39	39	246	614
Out	0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	17	39	39	39	39	39	39	39	39	285	614

Exhibit P-3a, Individual Modification: PB 2020 Air Force		Date: February 2019
Appropriation / Budget Activity / Budget Sub Activity: 3010F / 05 / 2	**P-1 Line Item Number / Title:** F01600 / F-16	**Modification Number / Title:** 602600 / F-16 LEGACY STRUCTURAL SLEP
ID Code (A=Service Ready, B=Not Service Ready) : B	**MDAP/MAIS Code:**	

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 *(Units in Each)*	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost *($ in Millions)*	3.517	10.454	36.676	45.050	0.000	45.050	71.993	108.410	133.627	117.490	576.710	1,103.927
Less PY Advance Procurement *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) *($ in Millions)*	3.517	10.454	36.676	45.050	0.000	45.050	71.993	108.410	133.627	117.490	576.710	1,103.927
Plus CY Advance Procurement *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Total Obligation Authority *($ in Millions)*	**3.517**	**10.454**	**36.676**	**45.050**	**0.000**	**45.050**	**71.993**	**108.410**	**133.627**	**117.490**	**576.710**	**1,103.927**
(The following Resource Summary rows are for informational purposes only. The corresponding budget requests are documented elsewhere.)												
Initial Spares *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Unit Cost *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-

Description:

The goal of this program is to extend the F-16 service life beyond 8000 Equivalent Flying Hours (EFH) to ensure a continually viable fighter force. F-16 aircraft need modifications and structural enhancements to extend the service life of these fighters. The F-16 Structural Service Life Extension Program (SLEP) is intended to be a depot-level upgrade program to replace or rework known life-limited structure to preclude the onset of widespread fatigue damage, maintain safety of flight and enhance aircraft availability. Life-limited components and required installation dates will vary by aircraft block and will be determined via the F-16 Full Scale Durability Test (FSDT) and Engineering and Manufacturing Development (EMD) phase. Without modification of life-limited structures, the F-16 will experience continued structural degradation, which will adversely affect future mission capable rates and become increasingly costly to correct. Because of potential variation in modification requirements and installation schedules among aircraft blocks, the quantity and unit cost of kit procurement and hardware installation will differ from year to year, depending on the mix of aircraft involved.

Of the 300 required SLEP kits, four kits were procured with RDT&E funds (FY15-18).

This funding request will support potential DMS and obsolescence solutions, to include, if optimal, life of type buys or bridge buys limited to the program of record quantity.

Milestone/Development Status

The FSDT contract was awarded on April 28, 2011, while the EMD was awarded Nov 13, 2013. Development efforts run through 2018. The program successfully completed and returned the first kit proof aircraft to the field in May 2018. In July of 2018 a contract was competitively awarded to accommodate the purchase of SLEP modification kits for production aircraft. The program is currently in low-rate initial production, with a transition to full rate production planned for 2020.

In FY18, SLEP returned $7.673M for a congressional mark against F-16. The major cost drivers for FY20 are increased depot labor rates, modification tooling for OCONUS depots, and Engineering Change Orders. The major cost driver for FY21-FY25 is increased depot labor rates.

Secondary Distribution		FY 2018	FY 2019	FY 2020 Base	FY 2020 OCO	FY 2020 Total	FY 2021	FY 2022	FY 2023	FY 2024
AF	Quantity	-	-	-	-	-	-	-	-	-
	Total Obligation Authority	10.037	33.307	38.510	-	38.510	61.818	97.652	119.715	107.575
AFNG	Quantity	-	-	-	-	-	-	-	-	-

Exhibit P-3a, Individual Modification: PB 2020 Air Force		Date: February 2019
Appropriation / Budget Activity / Budget Sub Activity: 3010F / 05 / 2	**P-1 Line Item Number / Title:** F01600 / F-16	**Modification Number / Title:** 602600 / F-16 LEGACY STRUCTURAL SLEP
ID Code (A=Service Ready, B=Not Service Ready) : B	**MDAP/MAIS Code:**	

Secondary Distribution		FY 2018	FY 2019	FY 2020 Base	FY 2020 OCO	FY 2020 Total	FY 2021	FY 2022	FY 2023	FY 2024
	Total Obligation Authority	0.417	3.369	6.540	-	6.540	10.175	10.758	13.912	9.915
Total: Secondary Distribution	**Quantity**	-	-	-	-	-	-	-	-	-
	Total Obligation Authority	**10.454**	**36.676**	**45.050**	**0.000**	**45.050**	**71.993**	**108.410**	**133.627**	**117.490**

Exhibit P-3a, Individual Modification: PB 2020 Air Force		Date: February 2019
Appropriation / Budget Activity / Budget Sub Activity: 3010F / 05 / 2	**P-1 Line Item Number / Title:** F01600 / F-16	**Modification Number / Title:** 602600 / F-16 LEGACY STRUCTURAL SLEP
ID Code (A=Service Ready, B=Not Service Ready) : B	**MDAP/MAIS Code:**	
Models of Systems Affected: F-16	**Modification Type:** Service Life Extension	**Related RDT&E PEs:** 0207133F

Financial Plan	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
	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)*
RDT&E PE #												
0207133F	4 / 80.846	0 / 0.000	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	4 / 80.846
Procurement												
Modification Item 1 of 1: Legacy SLEP Kit												
A Kits												
Recurring												
Legacy SLEP Kit:INSTALL KITS Group A (Active)	4 / 1.628	3 / 1.251	10 / 3.890	22 / 8.814	- / -	22 / 8.814	30 / 12.381	33 / 14.027	28 / 12.259	31 / 13.970	96 / 45.912	257 / 114.132
Legacy SLEP Kit:INSTALL KITS Group A (Guard)	- / -	1 / 0.417	3 / 1.167	5 / 2.003	- / -	5 / 2.003	4 / 1.651	2 / 0.850	5 / 2.189	5 / 2.255	14 / 6.861	39 / 17.393
Subtotal: Recurring	*- / 1.628*	*- / 1.668*	*- / 5.057*	*- / 10.817*	*- / -*	*- / 10.817*	*- / 14.032*	*- / 14.877*	*- / 14.448*	*- / 16.225*	*- / 52.773*	*- / 131.525*
Subtotal: Legacy SLEP Kit	*- / 1.628*	*- / 1.668*	*- / 5.057*	*- / 10.817*	*- / -*	*- / 10.817*	*- / 14.032*	*- / 14.877*	*- / 14.448*	*- / 16.225*	*- / 52.773*	*- / 131.525*
Subtotal: Procurement, All Modification Items	*- / 1.628*	*- / 1.668*	*- / 5.057*	*- / 10.817*	*- / -*	*- / 10.817*	*- / 14.032*	*- / 14.877*	*- / 14.448*	*- / 16.225*	*- / 52.773*	*- / 131.525*
Support *(All Modification Items)*												
GROUP A: TOTAL NONRECURRING	- / -	- / -	- / 0.000	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 0.000
Change Orders	- / -	- / 0.400	- / 0.820	- / 2.330	- / -	- / 2.330	- / 2.050	- / 6.219	- / 6.876	- / 6.881	- / 8.065	- / 33.641
Data	- / -	- / -	- / -	- / 0.000	- / -	- / 0.000	- / -	- / -	- / -	- / -	- / -	- / 0.000
SUPPORT-EQUIP	- / -	- / 6.970	- / -	- / 8.290	- / -	- / 8.290	- / -	- / -	- / -	- / -	- / 0.000	- / 15.260
OTHER GOVT	- / 1.889	- / 1.416	- / 26.394	- / 7.733	- / -	- / 7.733	- / 9.047	- / 8.050	- / 9.720	- / 10.190	- / 57.966	- / 132.405
Subtotal: Support	*- / 1.889*	*- / 8.786*	*- / 27.214*	*- / 18.353*	*- / -*	*- / 18.353*	*- / 11.097*	*- / 14.269*	*- / 16.596*	*- / 17.071*	*- / 66.031*	*- / 181.306*
Installation												
Modification Item 1 of 1: Legacy SLEP Kit	- / -	- / -	2 / 4.405	7 / 15.880	- / -	7 / 15.880	22 / 46.864	32 / 79.264	35 / 102.583	33 / 84.194	165 / 457.906	296 / 791.096
Subtotal: Installation	*- / -*	*- / -*	*2 / 4.405*	*7 / 15.880*	*- / -*	*7 / 15.880*	*22 / 46.864*	*32 / 79.264*	*35 / 102.583*	*33 / 84.194*	*165 / 457.906*	*296 / 791.096*
Total												
Total Cost (Procurement + Support + Installation)	**3.517**	**10.454**	**36.676**	**45.050**	**0.000**	**45.050**	**71.993**	**108.410**	**133.627**	**117.490**	**576.710**	**1,103.927**

Exhibit P-3a, Individual Modification: PB 2020 Air Force		Date: February 2019
Appropriation / Budget Activity / Budget Sub Activity: 3010F / 05 / 2	**P-1 Line Item Number / Title:** F01600 / F-16	**Modification Number / Title:** 602600 / F-16 LEGACY STRUCTURAL SLEP

ID Code (A=Service Ready, B=Not Service Ready) : B

MDAP/MAIS Code:

Modification Item 1 of 1: Legacy SLEP Kit

Manufacturer Information

Manufacturer Name: Multiple

Manufacturer Location: Fort Worth, TX

Administrative Leadtime *(in Months)*: 3

Production Leadtime *(in Months)*: 3

Dates	FY 2018	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024
Contract Dates	Apr 2018	Apr 2019	Apr 2020	Apr 2021	Apr 2022	Apr 2023	Apr 2024
Delivery Dates	Jul 2018	Jul 2019	Jul 2020	Jul 2021	Jul 2022	Jul 2023	Jul 2024

Installation Information

Method of Implementation: Depot

Installation Cost	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
	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)*
Prior Years	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2018	- / -	- / -	2 / 4.405	3 / 6.806	- / -	3 / 6.806	1 / 2.131	1 / 2.477	1 / 2.931	- / -	- / -	8 / 18.750
FY 2019	- / -	- / -	- / -	4 / 9.074	- / -	4 / 9.074	9 / 19.177	- / -	- / -	- / -	- / -	13 / 28.251
FY 2020	- / -	- / -	- / -	- / -	- / -	- / -	12 / 25.556	15 / 37.155	- / -	- / -	- / -	27 / 62.711
FY 2021	- / -	- / -	- / -	- / -	- / -	- / -	- / -	16 / 39.632	18 / 52.757	- / -	- / -	34 / 92.389
FY 2022	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	16 / 46.895	19 / 48.448	- / -	35 / 95.343
FY 2023	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	14 / 35.746	19 / 49.908	33 / 85.654
FY 2024	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	36 / 96.100	36 / 96.100
To Complete	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	110 / 311.898	110 / 311.898
Total	- / -	- / -	2 / 4.405	7 / 15.880	- / -	7 / 15.880	22 / 46.864	32 / 79.264	35 / 102.583	33 / 84.194	165 / 457.906	296 / 791.096

Installation Schedule

		FY 2018				FY 2019				FY 2020				FY 2021				FY 2022				FY 2023				FY 2024					
	PYS	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	TC	Tot
In	0	-	-	-	-	-	-	0	2	1	2	0	4	7	3	6	6	7	11	6	8	11	6	7	11	8	8	11	6	165	296
Out	0	-	-	-	-	-	-	-	-	0	2	1	-	2	0	4	7	3	6	6	7	11	6	8	11	6	7	11	8	190	296

Exhibit P-3a, Individual Modification: PB 2020 Air Force		Date: February 2019
Appropriation / Budget Activity / Budget Sub Activity: 3010F / 05 / 2	**P-1 Line Item Number / Title:** F01600 / F-16	**Modification Number / Title:** 618250 / Comm Suite Upgrade
ID Code (A=Service Ready, B=Not Service Ready) : B	**MDAP/MAIS Code:**	

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 *(Units in Each)*	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost *($ in Millions)*	0.000	29.916	20.968	29.171	0.000	29.171	82.190	47.309	48.169	112.161	313.833	683.717
Less PY Advance Procurement *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) *($ in Millions)*	0.000	29.916	20.968	29.171	0.000	29.171	82.190	47.309	48.169	112.161	313.833	683.717
Plus CY Advance Procurement *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Total Obligation Authority *($ in Millions)*	**0.000**	**29.916**	**20.968**	**29.171**	**0.000**	**29.171**	**82.190**	**47.309**	**48.169**	**112.161**	**313.833**	**683.717**
(The following Resource Summary rows are for informational purposes only. The corresponding budget requests are documented elsewhere.)												
Initial Spares *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Unit Cost *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-

Description:

The Chairman, Joint Chiefs of Staff directed a modernization effort based on the recommendation of the National Security Agency (NSA) to modernize equipment and provide enhanced security for tactical networks (Cryptographic Modernization (CMI)). The F-16 Comm Suite Upgrade will include Cryptographic Modernization (CM), Mobile User Objective System (MUOS) and second generation Anti-Jam Tactical UHF Radio for NATO (SATURN) and the addition of a Cockpit Communication Control Panel (C3PO), Digital Comm Matrix (DCM).

This funding request will support potential DMS and obsolescence solutions, to include, if optimal, life of type buys or bridge buys limited to the program of record quantity.

Milestone/Development Status

Continue NRE efforts. Procure Group B Test assets.

Secondary Distribution		FY 2018	FY 2019	FY 2020 Base	FY 2020 OCO	FY 2020 Total	FY 2021	FY 2022	FY 2023	FY 2024
AF	Quantity	-	-	-	-	-	-	-	-	-
	Total Obligation Authority	29.916	20.968	2.171	-	2.171	40.019	13.779	25.018	88.513
AFNG	Quantity	-	-	-	-	-	-	-	-	-
	Total Obligation Authority	-	-	20.250	-	20.250	31.347	25.134	21.149	23.648
AFR	Quantity	-	-	-	-	-	-	-	-	-
	Total Obligation Authority	-	-	6.750	-	6.750	10.824	8.396	2.002	-
Total: Secondary Distribution	**Quantity**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**
	Total Obligation Authority	**29.916**	**20.968**	**29.171**	**0.000**	**29.171**	**82.190**	**47.309**	**48.169**	**112.161**

Exhibit P-3a, Individual Modification: PB 2020 Air Force		Date: February 2019
Appropriation / Budget Activity / Budget Sub Activity: 3010F / 05 / 2	**P-1 Line Item Number / Title:** F01600 / F-16	**Modification Number / Title:** 618250 / Comm Suite Upgrade
ID Code (A=Service Ready, B=Not Service Ready) : B	**MDAP/MAIS Code:**	
Models of Systems Affected: F-16	**Modification Type:** Capability Improvement	**Related RDT&E PEs:** 0207133F

Financial Plan	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
	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)*
RDT&E PE #												
0207133F	- / 2.976	- / 4.287	- / 0.000	- / 5.099	- / -	- / 5.099	- / 0.171	- / -	- / -	- / -	- / -	- / 12.533
Procurement												
Modification Item 1 of 1: Comm Suite MUOS												
A Kits												
Recurring												
Comm Suite MUOS:INSTALL KITS Group A (Active)	- / -	- / -	- / -	- / -	- / -	- / -	4 / 1.500	32 / 12.000	51 / 19.125	82 / 30.750	408 / 153.000	577 / 216.375
Comm Suite MUOS:INSTALL KITS Group A (Guard)	- / -	- / -	- / -	54 / 20.250	- / -	54 / 20.250	63 / 23.625	43 / 16.125	40 / 15.000	48 / 18.000	57 / 21.375	305 / 114.375
Comm Suite MUOS:INSTALL KITS Group A (Reserve)	- / -	- / -	- / -	18 / 6.750	- / -	18 / 6.750	22 / 8.250	14 / 5.250	- / -	- / -	- / -	54 / 20.250
Subtotal: Recurring	*- / -*	*- / -*	*- / -*	*- / 27.000*	*- / -*	*- / 27.000*	*- / 33.375*	*- / 33.375*	*- / 34.125*	*- / 48.750*	*- / 174.375*	*- / 351.000*
Subtotal: Comm Suite MUOS	*- / -*	*- / -*	*- / -*	*- / 27.000*	*- / -*	*- / 27.000*	*- / 33.375*	*- / 33.375*	*- / 34.125*	*- / 48.750*	*- / 174.375*	*- / 351.000*
Subtotal: Procurement, All Modification Items	*- / -*	*- / -*	*- / -*	*- / 27.000*	*- / -*	*- / 27.000*	*- / 33.375*	*- / 33.375*	*- / 34.125*	*- / 48.750*	*- / 174.375*	*- / 351.000*
Support *(All Modification Items)*												
OTHER GOVT	- / -	- / -	- / -	- / 2.171	- / -	- / 2.171	- / 38.519	- / 1.207	- / 1.335	- / 50.578	- / 59.008	- / 152.818
SUPPORT-EQUIP	- / -	- / 29.916	- / 20.968	- / 0.000	- / -	- / 0.000	- / 0.000	- / 0.000	- / 0.000	- / 0.000	- / 0.000	- / 50.884
Subtotal: Support	*- / -*	*- / 29.916*	*- / 20.968*	*- / 2.171*	*- / -*	*- / 2.171*	*- / 38.519*	*- / 1.207*	*- / 1.335*	*- / 50.578*	*- / 59.008*	*- / 203.702*
Installation												
Modification Item 1 of 1: Comm Suite MUOS	- / -	- / -	- / -	- / -	- / -	- / -	72 / 10.296	89 / 12.727	89 / 12.709	91 / 12.833	595 / 80.450	936 / 129.015
Subtotal: Installation	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*72 / 10.296*	*89 / 12.727*	*89 / 12.709*	*91 / 12.833*	*595 / 80.450*	*936 / 129.015*
Total												
Total Cost (Procurement + Support + Installation)	**0.000**	**29.916**	**20.968**	**29.171**	**0.000**	**29.171**	**82.190**	**47.309**	**48.169**	**112.161**	**313.833**	**683.717**

Exhibit P-3a, Individual Modification: PB 2020 Air Force		Date: February 2019
Appropriation / Budget Activity / Budget Sub Activity: 3010F / 05 / 2	**P-1 Line Item Number / Title:** F01600 / F-16	**Modification Number / Title:** 618250 / Comm Suite Upgrade
ID Code (A=Service Ready, B=Not Service Ready) : B	**MDAP/MAIS Code:**	

Modification Item 1 of 1: Comm Suite MUOS

Manufacturer Information

Manufacturer Name: tbd	Manufacturer Location: tbd
Administrative Leadtime *(in Months)*: 3	Production Leadtime *(in Months)*: 12

Dates	FY 2018	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024
Contract Dates			Mar 2020	Mar 2021	Mar 2022	Mar 2023	Mar 2024
Delivery Dates			Mar 2021	Mar 2022	Mar 2023	Mar 2024	Mar 2025

Installation Information

Method of Implementation: Depot

Installation Cost	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
	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)*
Prior Years	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2018	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2019	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2020	- / -	- / -	- / -	- / -	- / -	- / -	72 / 10.296	- / -	- / -	- / -	- / -	72 / 10.296
FY 2021	- / -	- / -	- / -	- / -	- / -	- / -	- / -	89 / 12.727	- / -	- / -	- / -	89 / 12.727
FY 2022	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	89 / 12.709	- / -	- / -	89 / 12.709
FY 2023	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	91 / 12.833	- / -	91 / 12.833
FY 2024	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	130 / 18.140	130 / 18.140
To Complete	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	465 / 62.310	465 / 62.310
Total	- / -	- / -	- / -	- / -	- / -	- / -	72 / 10.296	89 / 12.727	89 / 12.709	91 / 12.833	595 / 80.450	936 / 129.015

Installation Schedule

	PYS	FY 2018				FY 2019				FY 2020				FY 2021				FY 2022				FY 2023				FY 2024				TC	Tot
		Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4		
In	0	-	-	-	-	-	-	-	-	-	-	-	-	18	18	18	18	22	22	22	23	22	22	22	23	22	23	23	23	595	936
Out	0	-	-	-	-	-	-	-	-	-	-	-	-	-	18	18	18	18	22	22	22	23	22	22	22	23	22	23	23	618	936

Exhibit P-3a, Individual Modification: PB 2020 Air Force		Date: February 2019
Appropriation / Budget Activity / Budget Sub Activity: 3010F / 05 / 2	**P-1 Line Item Number / Title:** F01600 / F-16	**Modification Number / Title:** 633031 / HFLCC AGCAS
ID Code (A=Service Ready, B=Not Service Ready) : B	**MDAP/MAIS Code:**	

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 *(Units in Each)*	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost *($ in Millions)*	-	13.118	14.060	18.153	0.000	18.153	15.829	18.699	9.080	0.358	0.000	89.297
Less PY Advance Procurement *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) *($ in Millions)*	-	13.118	14.060	18.153	0.000	18.153	15.829	18.699	9.080	0.358	0.000	89.297
Plus CY Advance Procurement *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Total Obligation Authority *($ in Millions)*	**-**	**13.118**	**14.060**	**18.153**	**0.000**	**18.153**	**15.829**	**18.699**	**9.080**	**0.358**	**0.000**	**89.297**
(The following Resource Summary rows are for informational purposes only. The corresponding budget requests are documented elsewhere.)												
Initial Spares *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Unit Cost *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-

Description:

Hybrid Flight Control Computer (HFLCC) Auto Ground Collision Avoidance System development and integration for A/C prevents most controlled flight into terrain (CFIT) accidents using terrain database and prediction algorithms for aircraft trajectory recovery and executes an automated fly up maneuver to avoid collision.

This funding request will support potential DMS and obsolescence solutions, to include if optimal, life of type buys limited to the program of record quantity.

Milestone/Development Status

AFRL has been funded to complete HFLCC development. HFLCC Development will be complete by FY18 resulting in a fully qualified HFLCC SPO Program will update engineering and integrate hardware onto platform.

Secondary Distribution		FY 2018	FY 2019	FY 2020 Base	FY 2020 OCO	FY 2020 Total	FY 2021	FY 2022	FY 2023	FY 2024
AF	Quantity	-	-	-	-	-	-	-	-	-
	Total Obligation Authority	3.233	7.270	9.030	-	9.030	6.021	8.354	5.575	0.100
AFNG	Quantity	-	-	-	-	-	-	-	-	-
	Total Obligation Authority	7.767	5.282	6.593	-	6.593	6.966	8.223	3.302	0.258
AFR	Quantity	-	-	-	-	-	-	-	-	-
	Total Obligation Authority	2.118	1.508	2.530	-	2.530	2.842	2.122	0.203	-
Total: Secondary Distribution	**Quantity**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**
	Total Obligation Authority	**13.118**	**14.060**	**18.153**	**0.000**	**18.153**	**15.829**	**18.699**	**9.080**	**0.358**

Exhibit P-3a, Individual Modification: PB 2020 Air Force		Date: February 2019
Appropriation / Budget Activity / Budget Sub Activity: 3010F / 05 / 2	P-1 Line Item Number / Title: F01600 / F-16	Modification Number / Title: 633031 / HFLCC AGCAS
ID Code (A=Service Ready, B=Not Service Ready) : B	MDAP/MAIS Code:	
Models of Systems Affected: F-16	Modification Type: Capability Improvement	Related RDT&E PEs: 0207133F

Financial Plan	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
	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)*
RDT&E PE #												
0207133F	- / -	- / 1.200	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 1.200
Procurement												
Modification Item 1 of 2: COMMON: SCU upgrade												
B Kits												
Recurring												
COMMON: SCU upgrade:EQUIPMENT Group B (Active)	- / -	4 / 0.478	24 / 2.297	22 / 4.376	- / -	22 / 4.376	9 / 1.947	14 / 4.132	6 / 1.413	- / -	- / -	79 / 14.643
COMMON: SCU upgrade:EQUIPMENT Group B (Guard)	- / -	55 / 6.901	- / -	40 / 5.742	- / -	40 / 5.742	45 / 4.186	32 / 4.278	20 / 1.678	- / -	- / -	192 / 22.785
COMMON: SCU upgrade:EQUIPMENT Group B (Reserve)	- / -	15 / 1.882	- / -	15 / 2.152	- / -	15 / 2.152	20 / 1.900	4 / 0.520	- / -	- / -	- / -	54 / 6.454
Subtotal: Recurring	*- / -*	*- / 9.261*	*- / 2.297*	*- / 12.270*	*- / -*	*- / 12.270*	*- / 8.033*	*- / 8.930*	*- / 3.091*	*- / -*	*- / -*	*- / 43.882*
Subtotal: COMMON: SCU upgrade	*- / -*	*- / 9.261*	*- / 2.297*	*- / 12.270*	*- / -*	*- / 12.270*	*- / 8.033*	*- / 8.930*	*- / 3.091*	*- / -*	*- / -*	*- / 43.882*
Modification Item 2 of 2: Install Kits Group A												
A Kits												
Recurring												
Install Kits Group A:INSTALL KITS Group A (Active)	- / -	4 / 0.060	24 / 0.706	26 / 0.941	- / -	26 / 0.941	19 / 0.238	6 / 0.103	- / -	- / -	- / -	79 / 2.048
Install Kits Group A:INSTALL KITS Group A (Guard)	- / -	55 / 0.866	40 / 0.661	45 / 0.851	- / -	45 / 0.851	32 / 0.400	20 / 0.343	- / -	- / -	- / -	192 / 3.121
Install Kits Group A:INSTALL KITS Group A (Reserve)	- / -	15 / 0.236	15 / 0.248	20 / 0.378	- / -	20 / 0.378	4 / 0.049	- / -	- / -	- / -	- / -	54 / 0.911
Subtotal: Recurring	*- / -*	*- / 1.162*	*- / 1.615*	*- / 2.170*	*- / -*	*- / 2.170*	*- / 0.687*	*- / 0.446*	*- / -*	*- / -*	*- / -*	*- / 6.080*
Subtotal: Install Kits Group A	*- / -*	*- / 1.162*	*- / 1.615*	*- / 2.170*	*- / -*	*- / 2.170*	*- / 0.687*	*- / 0.446*	*- / -*	*- / -*	*- / -*	*- / 6.080*
Subtotal: Procurement, All Modification Items	*- / -*	*- / 10.423*	*- / 3.912*	*- / 14.440*	*- / -*	*- / 14.440*	*- / 8.720*	*- / 9.376*	*- / 3.091*	*- / -*	*- / -*	*- / 49.962*
Support *(All Modification Items)*												
GROUP B: TOTAL NONRECURRING	- / -	- / -	- / 2.000	- / 1.635	- / -	- / 1.635	- / -	- / -	- / -	- / -	- / -	- / 3.635
Change Orders	- / -	- / 1.700	- / 1.500	- / 1.313	- / -	- / 1.313	- / 0.215	- / 0.716	- / 0.550	- / -	- / -	- / 5.994
OTHER GOVT	- / -	- / 0.995	- / 0.627	- / 0.765	- / -	- / 0.765	- / 0.596	- / 1.096	- / 1.047	- / -	- / -	- / 5.126
Subtotal: Support	*- / -*	*- / 2.695*	*- / 4.127*	*- / 3.713*	*- / -*	*- / 3.713*	*- / 0.811*	*- / 1.812*	*- / 1.597*	*- / -*	*- / -*	*- / 14.755*
Installation												
Modification Item 2 of 2: Install Kits Group A	- / -	- / -	74 / 6.021	- / -	- / -	- / -	79 / 6.298	91 / 7.511	55 / 4.392	26 / 0.358	- / -	325 / 24.580
Subtotal: Installation	*- / -*	*- / -*	*74 / 6.021*	*- / -*	*- / -*	*- / -*	*79 / 6.298*	*91 / 7.511*	*55 / 4.392*	*26 / 0.358*	*- / -*	*325 / 24.580*
Total												

Exhibit P-3a, Individual Modification: PB 2020 Air Force		Date: February 2019
Appropriation / Budget Activity / Budget Sub Activity: 3010F / 05 / 2	**P-1 Line Item Number / Title:** F01600 / F-16	**Modification Number / Title:** 633031 / HFLCC AGCAS
ID Code (A=Service Ready, B=Not Service Ready) : B	**MDAP/MAIS Code:**	
Models of Systems Affected: F-16	**Modification Type:** Capability Improvement	**Related RDT&E PEs:** 0207133F

Financial Plan	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
	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)*
Total Cost (Procurement + Support + Installation)	-	13.118	14.060	18.153	0.000	18.153	15.829	18.699	9.080	0.358	0.000	89.297

Exhibit P-3a, Individual Modification: PB 2020 Air Force		Date: February 2019
Appropriation / Budget Activity / Budget Sub Activity: 3010F / 05 / 2	**P-1 Line Item Number / Title:** F01600 / F-16	**Modification Number / Title:** 633031 / HFLCC AGCAS

ID Code (A=Service Ready, B=Not Service Ready) : B	**MDAP/MAIS Code:**

Modification Item 1 of 2: COMMON: SCU upgrade

Manufacturer Information

Manufacturer Name: N/A	Manufacturer Location: N/A
Administrative Leadtime *(in Months)*:	Production Leadtime *(in Months)*:

Dates	FY 2018	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024
Contract Dates							
Delivery Dates							

Installation Information

Method of Implementation (Organic): Org/Intermediate	**Installation Quantity:** 0

Exhibit P-3a, Individual Modification: PB 2020 Air Force		Date: February 2019
Appropriation / Budget Activity / Budget Sub Activity: 3010F / 05 / 2	**P-1 Line Item Number / Title:** F01600 / F-16	**Modification Number / Title:** 633031 / HFLCC AGCAS
ID Code (A=Service Ready, B=Not Service Ready) : B	**MDAP/MAIS Code:**	

Modification Item 2 of 2: Install Kits Group A

Manufacturer Information

Manufacturer Name: TBD	Manufacturer Location: Hill AFB
Administrative Leadtime *(in Months)*: 6	Production Leadtime *(in Months)*: 3

Dates	FY 2018	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024
Contract Dates	May 2018	May 2019	May 2020	May 2021	May 2022		
Delivery Dates	Aug 2018	Aug 2019	Aug 2020	Aug 2021	Aug 2022		

Installation Information

Method of Implementation: Depot

Installation Cost	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
	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)*
Prior Years	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2018	- / -	- / -	74 / 6.021	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	74 / 6.021
FY 2019	- / -	- / -	- / -	- / -	- / -	- / -	79 / 6.298	- / -	- / -	- / -	- / -	79 / 6.298
FY 2020	- / -	- / -	- / -	- / -	- / -	- / -	- / -	91 / 7.511	- / -	- / -	- / -	91 / 7.511
FY 2021	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	55 / 4.392	- / -	- / -	55 / 4.392
FY 2022	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	26 / 0.358	- / -	26 / 0.358
FY 2023	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2024	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
To Complete	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
Total	- / -	- / -	74 / 6.021	- / -	- / -	- / -	79 / 6.298	91 / 7.511	55 / 4.392	26 / 0.358	- / -	325 / 24.580

Installation Schedule

	PYS	FY 2018				FY 2019				FY 2020				FY 2021				FY 2022				FY 2023				FY 2024				TC	Tot
		Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4		
In	0	-	-	-	-	19	19	19	17	-	-	-	-	20	20	20	19	23	23	23	22	14	14	14	13	7	7	7	5	0	325
Out	0	-	-	-	-	-	19	19	19	17	-	-	-	-	20	20	20	19	23	23	23	22	14	14	14	13	7	7	7	5	325

Exhibit P-3a, Individual Modification: PB 2020 Air Force		Date: February 2019
Appropriation / Budget Activity / Budget Sub Activity: 3010F / 05 / 2	**P-1 Line Item Number / Title:** F01600 / F-16	**Modification Number / Title:** 633032 / AIFF MODE 5
ID Code (A=Service Ready, B=Not Service Ready) : B	**MDAP/MAIS Code:**	

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 *(Units in Each)*	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost *($ in Millions)*	-	9.009	36.381	7.937	0.000	7.937	22.045	16.524	18.752	0.000	-	110.648
Less PY Advance Procurement *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) *($ in Millions)*	-	9.009	36.381	7.937	0.000	7.937	22.045	16.524	18.752	0.000	-	110.648
Plus CY Advance Procurement *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Total Obligation Authority *($ in Millions)*	**-**	**9.009**	**36.381**	**7.937**	**0.000**	**7.937**	**22.045**	**16.524**	**18.752**	**0.000**	**-**	**110.648**
(The following Resource Summary rows are for informational purposes only. The corresponding budget requests are documented elsewhere.)												
Initial Spares *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Unit Cost *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-

Description:

Project 633032, F-16 AIFF Mode 5, changed from F-16 ADS-B Out.

AIFF/Mode 5 provides hardware and software/firmware update required to comply with DoD mandate for Advanced Identify Friend or Foe (IFF) Mode 5.

Transponder upgrade program replaces/upgrades existing hardware with an AIFF Mode 5 capable system.

Advanced Identify Friend or Foe system (AIFF) provides positive identification for Air Traffic Control reporting, combat targeting, and fratricide prevention.

This funding request will support potential DMS and obsolescence solutions, to include, if optimal, life of type buys or bridge buys limited to the program of record quantity.

Milestone/Development Status

AIFF/Mode 5 development is RDT&E

Secondary Distribution		FY 2018	FY 2019	FY 2020 Base	FY 2020 OCO	FY 2020 Total	FY 2021	FY 2022	FY 2023	FY 2024
AF	Quantity	-	-	-	-	-	-	-	-	-
	Total Obligation Authority	9.009	36.381	7.937	0.000	7.937	13.025	9.553	14.972	0.000
AFNG	Quantity	-	-	-	-	-	-	-	-	-
	Total Obligation Authority	-	-	-	-	-	9.020	6.151	3.612	-
AFR	Quantity	-	-	-	-	-	-	-	-	-
	Total Obligation Authority	-	-	-	-	-	-	0.820	0.168	-
Total:	**Quantity**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**

Exhibit P-3a, Individual Modification: PB 2020 Air Force		Date: February 2019
Appropriation / Budget Activity / Budget Sub Activity: 3010F / 05 / 2	**P-1 Line Item Number / Title:** F01600 / F-16	**Modification Number / Title:** 633032 / AIFF MODE 5
ID Code (A=Service Ready, B=Not Service Ready) : B	**MDAP/MAIS Code:**	

Secondary Distribution		FY 2018	FY 2019	FY 2020 Base	FY 2020 OCO	FY 2020 Total	FY 2021	FY 2022	FY 2023	FY 2024
Secondary Distribution	Total Obligation Authority	9.009	36.381	7.937	0.000	7.937	22.045	16.524	18.752	0.000

Exhibit P-3a, Individual Modification: PB 2020 Air Force		Date: February 2019
Appropriation / Budget Activity / Budget Sub Activity: 3010F / 05 / 2	**P-1 Line Item Number / Title:** F01600 / F-16	**Modification Number / Title:** 633032 / AIFF MODE 5
ID Code (A=Service Ready, B=Not Service Ready) : B	**MDAP/MAIS Code:**	
Models of Systems Affected: F-16	**Modification Type:** Capability Improvement	**Related RDT&E PEs:** 0207133F

Financial Plan	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
	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)*
RDT&E PE #												
0207133F	- / -	- / 2.967	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 2.967
Procurement												
Modification Item 1 of 1: SCU 10 and APX 126												
A Kits												
Recurring												
SCU 10 and APX 126:INSTALL KITS Group A (Active)	- / -	12 / 4.920	18 / 7.380	19 / 3.737	- / -	19 / 3.737	26 / 11.430	- / 0.000	- / -	- / -	- / -	75 / 27.467
SCU 10 and APX 126:INSTALL KITS Group A (Guard)	- / -	- / -	- / -	- / -	- / -	- / -	22 / 9.020	21 / 6.151	- / -	- / -	- / -	43 / 15.171
SCU 10 and APX 126:INSTALL KITS Group A (Reserve)	- / -	- / -	- / -	- / -	- / -	- / -	- / -	2 / 0.820	- / -	- / -	- / -	2 / 0.820
Subtotal: Recurring	*- / -*	*- / 4.920*	*- / 7.380*	*- / 3.737*	*- / -*	*- / 3.737*	*- / 20.450*	*- / 6.971*	*- / -*	*- / -*	*- / -*	*- / 43.458*
Subtotal: SCU 10 and APX 126	*- / -*	*- / 4.920*	*- / 7.380*	*- / 3.737*	*- / -*	*- / 3.737*	*- / 20.450*	*- / 6.971*	*- / -*	*- / -*	*- / -*	*- / 43.458*
Subtotal: Procurement, All Modification Items	*- / -*	*- / 4.920*	*- / 7.380*	*- / 3.737*	*- / -*	*- / 3.737*	*- / 20.450*	*- / 6.971*	*- / -*	*- / -*	*- / -*	*- / 43.458*
Support *(All Modification Items)*												
GROUP A: TOTAL NONRECURRING	- / -	- / 0.000	- / 0.000	- / 0.000	- / 0.000	- / 0.000	- / 0.000	- / -	- / -	- / -	- / -	- / 0.000
SUPPORT-EQUIP	- / -	- / 1.070	- / 27.321	- / -	- / -	- / -	- / 0.000	- / -	- / -	- / -	- / -	- / 28.391
OTHER GOVT	- / -	- / 3.019	- / 1.680	- / -	- / 0.000	- / 0.000	- / 0.003	- / 5.635	- / 14.300	- / 0.000	- / -	- / 24.637
Subtotal: Support	*- / -*	*- / 4.089*	*- / 29.001*	*- / 0.000*	*- / 0.000*	*- / 0.000*	*- / 0.003*	*- / 5.635*	*- / 14.300*	*- / 0.000*	*- / -*	*- / 53.028*
Installation												
Modification Item 1 of 1: SCU 10 and APX 126	- / -	- / -	- / -	5 / 4.200	- / -	5 / 4.200	19 / 1.592	48 / 3.918	48 / 4.452	- / -	- / -	120 / 14.162
Subtotal: Installation	*- / -*	*- / -*	*- / -*	*5 / 4.200*	*- / -*	*5 / 4.200*	*19 / 1.592*	*48 / 3.918*	*48 / 4.452*	*- / -*	*- / -*	*120 / 14.162*
Total												
Total Cost (Procurement + Support + Installation)	**-**	**9.009**	**36.381**	**7.937**	**0.000**	**7.937**	**22.045**	**16.524**	**18.752**	**0.000**	**-**	**110.648**

Exhibit P-3a, Individual Modification: PB 2020 Air Force		Date: February 2019
Appropriation / Budget Activity / Budget Sub Activity: 3010F / 05 / 2	**P-1 Line Item Number / Title:** F01600 / F-16	**Modification Number / Title:** 633032 / AIFF MODE 5

ID Code (A=Service Ready, B=Not Service Ready) : B | **MDAP/MAIS Code:**

Modification Item 1 of 1: SCU 10 and APX 126

Manufacturer Information

Manufacturer Name: BAE | Manufacturer Location: NewYork

Administrative Leadtime *(in Months)*: 6 | Production Leadtime *(in Months)*: 8

Dates	FY 2018	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024
Contract Dates	May 2019	May 2020	May 2021	May 2021	May 2022		
Delivery Dates	Jan 2020	Jan 2021	Jan 2022	Jan 2022	Jan 2023		

Installation Information

Method of Implementation: Depot

Installation Cost	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
	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)*
Prior Years	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2018	- / -	- / -	- / -	5 / 4.200	- / -	5 / 4.200	7 / 0.586	- / -	- / -	- / -	- / -	12 / 4.786
FY 2019	- / -	- / -	- / -	- / -	- / -	- / -	12 / 1.006	6 / 0.504	- / -	- / -	- / -	18 / 1.510
FY 2020	- / -	- / -	- / -	- / -	- / -	- / -	- / -	19 / 1.482	- / -	- / -	- / -	19 / 1.482
FY 2021	- / -	- / -	- / -	- / -	- / -	- / -	- / -	23 / 1.932	25 / 2.520	- / -	- / -	48 / 4.452
FY 2022	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	23 / 1.932	- / -	- / -	23 / 1.932
FY 2023	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2024	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
To Complete	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
Total	- / -	- / -	- / -	5 / 4.200	- / -	5 / 4.200	19 / 1.592	48 / 3.918	48 / 4.452	- / -	- / -	120 / 14.162

Installation Schedule

	PYS	FY 2018				FY 2019				FY 2020				FY 2021				FY 2022				FY 2023				FY 2024				TC	Tot
		Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4		
In	0	-	-	-	-	-	-	-	-	-	0	0	5	4	5	5	5	-	-	-	48	12	12	12	12	-	-	-	-	0	120
Out	0	-	-	-	-	-	-	-	-	-	-	0	0	5	4	5	5	5	12	12	12	12	12	12	12	12	-	-	-	0	120

Exhibit P-3a, Individual Modification: PB 2020 Air Force		Date: February 2019
Appropriation / Budget Activity / Budget Sub Activity: 3010F / 05 / 2	**P-1 Line Item Number / Title:** F01600 / F-16	**Modification Number / Title:** 694050 / AESA Radars
ID Code (A=Service Ready, B=Not Service Ready) : B	**MDAP/MAIS Code:**	

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 *(Units in Each)*	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost *($ in Millions)*	220.577	48.789	0.000	100.890	0.000	100.890	270.425	317.629	286.141	173.049	9.661	1,427.161
Less PY Advance Procurement *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) *($ in Millions)*	220.577	48.789	0.000	100.890	0.000	100.890	270.425	317.629	286.141	173.049	9.661	1,427.161
Plus CY Advance Procurement *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Total Obligation Authority *($ in Millions)*	**220.577**	**48.789**	**0.000**	**100.890**	**0.000**	**100.890**	**270.425**	**317.629**	**286.141**	**173.049**	**9.661**	**1,427.161**
(The following Resource Summary rows are for informational purposes only. The corresponding budget requests are documented elsewhere.)												
Initial Spares *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Unit Cost *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-

Description:

The purpose of the F-16 Active Electronically Scanned Array (AESA) Radar program is to procure, install and sustain AESA radars plus spares for the Air National Guard, Air Force Reserve, and the active duty Air Force F-16s, across all blocks of USAF F-16 aircraft (Block 30/32/40/42/40/52). The new AESA radar will replace the legacy mechanically-scanned AN/APG-68 radar. The key requirements are enhanced Air to Air capability and an expedited delivery schedule. It is imperative to operationally field the AESA radar in support of homeland defense against evolving threats.

The Joint Emergent Operational Need (JEON) requirement was issued in March 2015 and includes improved air-to-air detect and track in support of homeland defense performing the Aerospace Control Alert (ACA) mission. The initial acquisition of 72 radars and associated spares in FY17/18 reflects the JEON portion of this requirement. To facilitate the most expedient operational capability, the JEON integration will be accomplished via the 1553 legacy interface with minimal changes to the F-16 aircraft core Operational Flight Program (OFP) during Phase 1 of the F-16 AESA program. This also includes the purchase of 264 CDU/HSDNs which is a derived requirement for AESA functionality.

Subsequent AESA radar buys, beginning in FY20 are to outfit 300 F-16's for the Combat Air Force (CAF).

This funding request will support potential DMS and obsolescence solutions, to include, if optimal, life of type buys or bridge buys limited to the program of record quantity.

AESA Radar program will continue Phase III development efforts for full CDD radar development including flight testing and TO development.

Milestone/Development Status

Development for the AESA JEON Radar began in FY17(using FY16 Congressional Add funds).

Milestone C (covering JEON AC production and phase III CDD development) was approved in 1st Qtr Fy18.

Secondary Distribution		FY 2018	FY 2019	FY 2020 Base	FY 2020 OCO	FY 2020 Total	FY 2021	FY 2022	FY 2023	FY 2024
AF	Quantity	-	-	-	-	-	-	-	-	-
	Total Obligation Authority	48.789	-	100.890	-	100.890	270.425	317.629	286.141	173.049
Total:	**Quantity**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**

Exhibit P-3a, Individual Modification: PB 2020 Air Force		Date: February 2019
Appropriation / Budget Activity / Budget Sub Activity: 3010F / 05 / 2	**P-1 Line Item Number / Title:** F01600 / F-16	**Modification Number / Title:** 694050 / AESA Radars
ID Code (A=Service Ready, B=Not Service Ready) : B	**MDAP/MAIS Code:**	

Secondary Distribution		FY 2018	FY 2019	FY 2020 Base	FY 2020 OCO	FY 2020 Total	FY 2021	FY 2022	FY 2023	FY 2024
Secondary Distribution	Total Obligation Authority	48.789	0.000	100.890	0.000	100.890	270.425	317.629	286.141	173.049

Exhibit P-3a, Individual Modification: PB 2020 Air Force		Date: February 2019
Appropriation / Budget Activity / Budget Sub Activity: 3010F / 05 / 2	P-1 Line Item Number / Title: F01600 / F-16	Modification Number / Title: 694050 / AESA Radars
ID Code (A=Service Ready, B=Not Service Ready) : B	MDAP/MAIS Code:	
Models of Systems Affected: F-16	Modification Type: Capability Improvement	Related RDT&E PEs: 0207133F

Financial Plan	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
	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)*
RDT&E PE #												
0207133F	- / 55.209	12 / 40.766	- / 3.469	15 / 65.149	- / -	15 / 65.149	- / 44.300	- / 42.046	- / 30.106	- / -	- / -	27 / 281.045
Procurement												
Modification Item 1 of 2: AESA JEON												
B Kits												
Recurring												
AESA JEON:EQUIPMENT Group B (Guard)	72 / 166.658	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	72 / 166.658
Subtotal: Recurring	*- / 166.658*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / 166.658*
Subtotal: AESA JEON	*- / 166.658*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / 166.658*
Modification Item 2 of 2: AESA Radar												
B Kits												
Recurring												
AESA Radar:EQUIPMENT Group B (Active)	- / -	- / -	- / -	26 / 63.294	- / -	26 / 63.294	71 / 171.421	83 / 200.431	75 / 181.970	45 / 108.127	- / -	300 / 725.243
Subtotal: Recurring	*- / -*	*- / -*	*- / -*	*- / 63.294*	*- / -*	*- / 63.294*	*- / 171.421*	*- / 200.431*	*- / 181.970*	*- / 108.127*	*- / -*	*- / 725.243*
Subtotal: AESA Radar	*- / -*	*- / -*	*- / -*	*- / 63.294*	*- / -*	*- / 63.294*	*- / 171.421*	*- / 200.431*	*- / 181.970*	*- / 108.127*	*- / -*	*- / 725.243*
Subtotal: Procurement, All Modification Items	*- / 166.658*	*- / -*	*- / -*	*- / 63.294*	*- / -*	*- / 63.294*	*- / 171.421*	*- / 200.431*	*- / 181.970*	*- / 108.127*	*- / -*	*- / 891.901*
Support *(All Modification Items)*												
SUPPORT-EQUIP	- / 2.864	113 / 40.000	- / -	- / 3.263	- / -	- / 3.263	- / 3.353	- / 3.444	- / -	- / -	- / 0.000	113 / 52.924
Change Orders	- / 6.243	- / 1.460	- / -	- / 2.998	- / -	- / 2.998	- / 8.510	- / 8.962	- / 4.837	- / 2.731	- / -	- / 35.741
OTHER GOVT	- / 14.599	- / 7.329	- / -	- / 14.352	- / -	- / 14.352	- / 38.870	- / 45.448	- / 41.262	- / 24.518	- / 5.500	- / 191.878
ICS-Labor	- / 5.372	- / -	- / -	- / -	- / -	- / -	- / 0.334	- / 1.259	- / 1.955	- / 1.670	- / -	- / 10.590
Mod of Spares	- / 17.040	- / -	- / -	- / 16.983	- / -	- / 16.983	- / 45.990	- / 53.780	- / 48.820	- / 29.000	- / -	- / 211.613
Subtotal: Support	*- / 46.118*	*113 / 48.789*	*- / -*	*- / 37.596*	*- / -*	*- / 37.596*	*- / 97.057*	*- / 112.893*	*- / 96.874*	*- / 57.919*	*- / 5.500*	*113 / 502.746*
Installation												
Modification Item 1 of 2: AESA JEON	72 / 7.801	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	72 / 7.801
Modification Item 2 of 2: AESA Radar	- / -	- / -	- / -	- / -	- / -	- / -	26 / 1.947	71 / 4.305	83 / 7.297	75 / 7.003	45 / 4.161	300 / 24.713
Subtotal: Installation	*72 / 7.801*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*26 / 1.947*	*71 / 4.305*	*83 / 7.297*	*75 / 7.003*	*45 / 4.161*	*372 / 32.514*
Total												
Total Cost (Procurement + Support + Installation)	**220.577**	**48.789**	**0.000**	**100.890**	**0.000**	**100.890**	**270.425**	**317.629**	**286.141**	**173.049**	**9.661**	**1,427.161**

Exhibit P-3a, Individual Modification: PB 2020 Air Force		Date: February 2019
Appropriation / Budget Activity / Budget Sub Activity: 3010F / 05 / 2	**P-1 Line Item Number / Title:** F01600 / F-16	**Modification Number / Title:** 694050 / AESA Radars
ID Code (A=Service Ready, B=Not Service Ready) : B	**MDAP/MAIS Code:**	

Modification Item 1 of 2: AESA JEON

Manufacturer Information

Manufacturer Name: Northrup-Grumman	Manufacturer Location: Baltimore, Maryland
Administrative Leadtime *(in Months)*: 1	Production Leadtime *(in Months)*: 12

Dates	FY 2018	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024
Contract Dates	Jan 2018		Jan 2020	Jan 2021	Jan 2022	Jan 2023	Jan 2024
Delivery Dates	Jan 2019		Jan 2021	Jan 2022	Jan 2023	Jan 2024	Jan 2025

Installation Information

Method of Implementation: Contract Field Team

Installation Cost	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
	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)*
Prior Years	72 / 7.801	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	72 / 7.801
FY 2018	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2019	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2020	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2021	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2022	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2023	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2024	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
To Complete	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
Total	72 / 7.801	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	72 / 7.801

Installation Schedule

	PYS	FY 2018				FY 2019				FY 2020				FY 2021				FY 2022				FY 2023				FY 2024				TC	Tot
		Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4		
In	0	-	-	-	-	3	9	9	9	9	9	9	9	6	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0	72
Out	0	-	-	-	-	-	3	9	9	9	9	9	9	9	6	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0	72

Exhibit P-3a, Individual Modification: PB 2020 Air Force		Date: February 2019
Appropriation / Budget Activity / Budget Sub Activity: 3010F / 05 / 2	**P-1 Line Item Number / Title:** F01600 / F-16	**Modification Number / Title:** 694050 / AESA Radars
ID Code (A=Service Ready, B=Not Service Ready) : B	**MDAP/MAIS Code:**	

Modification Item 2 of 2: AESA Radar

Manufacturer Information

Manufacturer Name: Northrup-Grumman	Manufacturer Location: Baltimore, Maryland
Administrative Leadtime *(in Months)*: 1	Production Leadtime *(in Months)*: 12

Dates	FY 2018	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024
Contract Dates			Jun 2020	Jun 2021	Jun 2022	Jun 2023	Jun 2024
Delivery Dates			Jun 2021	Jun 2022	Jun 2023	Jun 2024	Jun 2025

Installation Information

Method of Implementation: Depot

Installation Cost	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
	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)*
Prior Years	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2018	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2019	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2020	- / -	- / -	- / -	- / -	- / -	- / -	26 / 1.947	- / -	- / -	- / -	- / -	26 / 1.947
FY 2021	- / -	- / -	- / -	- / -	- / -	- / -	- / -	71 / 4.305	- / -	- / -	- / -	71 / 4.305
FY 2022	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	83 / 7.297	- / -	- / -	83 / 7.297
FY 2023	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	75 / 7.003	- / -	75 / 7.003
FY 2024	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	45 / 4.161	45 / 4.161
To Complete	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
Total	- / -	- / -	- / -	- / -	- / -	- / -	26 / 1.947	71 / 4.305	83 / 7.297	75 / 7.003	45 / 4.161	300 / 24.713

Installation Schedule

		FY 2018				FY 2019				FY 2020				FY 2021				FY 2022				FY 2023				FY 2024					
	PYS	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	TC	Tot
In	0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	12	14	18	18	18	17	21	21	21	20	18	18	18	21	45	300
Out	0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	12	14	18	18	18	17	21	21	21	20	18	18	18	66	300

Exhibit P-40, Budget Line Item Justification: PB 2020 Air Force	Date: February 2019
Appropriation / Budget Activity / Budget Sub Activity: 3010F: Aircraft Procurement, Air Force / BA 05: Modification of Inservice Aircraft / BSA 2: Tactical Aircraft	**P-1 Line Item Number / Title:** F0160P / F-16

ID Code (A=Service Ready, B=Not Service Ready): B	**Program Elements for Code B Items:** 0207133F	**Other Related Program Elements:** N/A
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 *(Units in Each)*	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost *($ in Millions)*	-	0.000	0.011	0.000	-	0.000	0.000	0.000	0.000	0.000	-	0.011
Less PY Advance Procurement *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) *($ in Millions)*	-	0.000	0.011	0.000	-	0.000	0.000	0.000	0.000	0.000	-	0.011
Plus CY Advance Procurement *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Total Obligation Authority *($ in Millions)*	**-**	**0.000**	**0.011**	**0.000**	**-**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**-**	**0.011**
(The following Resource Summary rows are for informational purposes only. The corresponding budget requests are documented elsewhere.)												
Initial Spares *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Flyaway Unit Cost *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Unit Cost *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-

Description:

F-16 Support

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.

Justification:

Where applicable, justification for individual modifications is provided in the P-3A exhibits.

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Exhibit P-40, Budget Line Item Justification: PB 2020 Air Force	Date: February 2019
Appropriation / Budget Activity / Budget Sub Activity: 3010F: Aircraft Procurement, Air Force / BA 05: Modification of Inservice Aircraft / BSA 2: Tactical Aircraft	**P-1 Line Item Number / Title:** F02200 / F-22A

ID Code (A=Service Ready, B=Not Service Ready): B	**Program Elements for Code B Items:** 0207138F	**Other Related Program Elements:** 0207138F
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 *(Units in Each)*	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost *($ in Millions)*	2,590.355	144.830	268.210	323.597	-	323.597	414.447	529.618	564.842	469.991	4,370.220	9,676.110
Less PY Advance Procurement *($ in Millions)*	-	-	7.500	-	-	-	-	-	-	-	-	7.500
Net Procurement (P-1) *($ in Millions)*	2,590.355	144.830	260.710	323.597	-	323.597	414.447	529.618	564.842	469.991	4,370.220	9,668.610
Plus CY Advance Procurement *($ in Millions)*	-	7.500	-	-	-	-	-	-	-	-	-	7.500
Total Obligation Authority *($ in Millions)*	**2,590.355**	**152.330**	**260.710**	**323.597**	**-**	**323.597**	**414.447**	**529.618**	**564.842**	**469.991**	**4,370.220**	**9,676.110**
(The following Resource Summary rows are for informational purposes only. The corresponding budget requests are documented elsewhere.)												
Initial Spares *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Flyaway Unit Cost *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Unit Cost *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-

Description:

The F-22 Raptor provides air superiority to the Joint Force; access in the highly contested operational environment; as well as, homeland and cruise missile defense for the next 40+ years. The F-22 is the first operational multi-mission fighter aircraft that combines stealth, supercruise, maneuverability and integrated avionics to make it the world's most capable combat aircraft. The F-22 is currently in the post-production operations phase of its acquisition lifecycle and therefore utilizes an acquisition strategy of balanced modernization and sustainment to maintain its asymmetric war fighting advantage. F-22 modernization and sustainment programs invest in upgrades to the air vehicle, engine, and training systems to improve F-22 weapons, communications, and Intelligence Surveillance Reconnaissance (ISR) capabilities.

The F-22 Raptor's Modernization Development is conducted using a rapid acquisition construct leveraging commercial best practices such as Agile and Lean. This allows the F-22 Raptor program to develop, test, and field software/hardware from multiple programs (product lines) using a scheduled cadence for capabilities as they mature. The F-22 Raptor program's utilization of these commercial best practices during production activities will allow for concurrent installations of mature Group A and Group B hardware of multiple product lines, delivering warfighter capabilities to the field earlier than under historical acquisition practices.

Funds may be used to resolve emerging safety of flight and diminishing manufacturing sources issues, accommodate technology insertion and fulfill Federal Aviation Administration (FAA) or other mandates necessary to ensure continued aircrew safety and mission effectiveness.

Funding for the exhibit contained in Program (PE) 0207138F.

In accordance with Section 1815 of the FY 2008 National Defense Authorization Act (P.L. 110-181), this item is necessary for use by the active and reserve components of the Armed Forces for homeland defense missions, domestic emergency responses, and providing military support to civil authorities.

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.

Exhibit P-40, Budget Line Item Justification: PB 2020 Air Force	Date: February 2019
Appropriation / Budget Activity / Budget Sub Activity: 3010F: Aircraft Procurement, Air Force / BA 05: Modification of Inservice Aircraft / BSA 2: Tactical Aircraft	**P-1 Line Item Number / Title:** F02200 / F-22A

ID Code (A=Service Ready, B=Not Service Ready): B	Program Elements for Code B Items: 0207138F	Other Related Program Elements: 0207138F

Line Item MDAP/MAIS Code: N/A

Secondary Distribution		FY 2018	FY 2019	FY 2020 Base	FY 2020 OCO	FY 2020 Total	FY 2021	FY 2022	FY 2023	FY 2024
AF	Quantity	-	-	-	-	-	-	-	-	-
	Total Obligation Authority	132.112	243.462	312.175	0.000	312.175	404.286	519.714	555.108	455.842
AFNG	Quantity	-	-	-	-	-	-	-	-	-
	Total Obligation Authority	20.218	17.248	11.422	-	11.422	10.161	9.904	9.734	14.149
Total: Secondary Distribution	**Quantity**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**
	Total Obligation Authority	**152.330**	**260.710**	**323.597**	**0.000**	**323.597**	**414.447**	**529.618**	**564.842**	**469.991**

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

Appropriation / Budget Activity / Budget Sub Activity:
3010F: Aircraft Procurement, Air Force / BA 05: Modification of Inservice Aircraft / BSA 2: Tactical Aircraft

P-1 Line Item Number / Title:
F02200 / F-22A

ID Code (A=Service Ready, B=Not Service Ready): B | **Program Elements for Code B Items:** 0207138F | **Other Related Program Elements:** 0207138F

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-40a***	F22001 / COMMON CONFIGURATION (Capability Improvement)				- / 669.208	- / -	- / -	- / -	- / -	- / -
P-40a***	F22003 / INCREMENT 3.1 (Capability Improvement)				- / 252.649	- / -	- / -	- / -	- / -	- / -
P-40a***	F22007 / Pilot Systems Hardware (Capability Improvement)				- / -	- / -	- / -	- / 0.000	- / -	- / 0.000
P-40a***	F22022 / Structures Retrofit Plan (Service Life Extension)				- / 263.589	- / 10.689	- / 8.809	- / 2.218	- / -	- / 2.218
P-40a***	F22024 / Trainers Modernization (Safety)				- / 88.610	- / 4.215	- / 3.036	- / 3.300	- / -	- / 3.300
P-40a***	F22027 / Crypto Modernization (Capability Improvement)				- / 3.704	- / -	- / 0.760	- / 0.720	- / -	- / 0.720
P-40a***	F22030 / Mode 5 Identification Friend or Foe (IFF) (Capability Improvement)				- / -	- / -	- / 13.485	- / -	- / -	- / -
P-40a***	F22031 / Mid-Life Updates (Capability Improvement)				- / -	- / -	- / -	- / -	- / -	- / -
P-40a***	F22034 / Navigation Systems Hardware (Reliability & Maintainability)				- / -	- / -	- / -	- / -	- / -	- / -
P-40a***	F22035 / Pylon (Capability Improvement)				- / -	- / -	- / -	- / -	- / -	- / -
P-3a	1 / Reliability and Maintainability Program (Reliability & Maintainability)		A		- / 1,238.022	- / 121.822	- / 131.217	- / 78.512	- / 0.000	- / 78.512
P-3a	2 / Link 16 (Capability Improvement)		A		- / -	- / 0.000	- / 102.414	- / 77.600	- / 0.000	- / 77.600
P-3a	3 / F119 Engine Modifications (Other)		A		- / 74.573	- / 8.104	- / 8.489	- / 9.547	- / 0.000	- / 9.547
P-3a	4 / Sensor Enhancement (Capability Improvement)		B		- / -	- / -	- / -	- / 151.700	- / 0.000	- / 151.700
P-40	**Total Gross/Weapon System Cost**				**- / 2,590.355**	**- / 144.830**	**- / 268.210**	**- / 323.597**	**- / -**	**- / 323.597**

Exhibits Schedule					FY 2021	FY 2022	FY 2023	FY 2024	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-40a***	F22001 / COMMON CONFIGURATION (Capability Improvement)				- / -	- / -	- / -	- / -	- / -	- / 669.208
P-40a***	F22003 / INCREMENT 3.1 (Capability Improvement)				- / -	- / -	- / -	- / -	- / -	- / 252.649
P-40a***	F22007 / Pilot Systems Hardware (Capability Improvement)				- / -	- / 0.000	- / -	- / 16.378	- / 29.100	- / 45.478
P-40a***	F22022 / Structures Retrofit Plan (Service Life Extension)				- / -	- / -	- / -	- / -	- / -	- / 285.305
P-40a***	F22024 / Trainers Modernization (Safety)				- / 3.540	- / 3.500	- / 3.595	- / 3.693	- / -	- / 113.489
P-40a***	F22027 / Crypto Modernization (Capability Improvement)				- / 1.275	- / -	- / -	- / -	- / -	- / 6.459
P-40a***	F22030 / Mode 5 Identification Friend or Foe (IFF) (Capability Improvement)				- / 34.800	- / 35.900	- / 31.900	- / 3.350	- / -	- / 119.435
P-40a***	F22031 / Mid-Life Updates (Capability Improvement)				- / -	- / -	- / -	- / -	- / 3,755.420	- / 3,755.420
P-40a***	F22034 / Navigation Systems Hardware (Reliability & Maintainability)				- / -	- / 35.600	- / 13.418	- / 34.260	- / 4.000	- / 87.278
P-40a***	F22035 / Pylon (Capability Improvement)				- / -	- / -	- / 30.630	- / -	- / -	- / 30.630
P-3a	1 / Reliability and Maintainability Program (Reliability & Maintainability)		A		- / 91.978	- / 83.345	- / 87.173	- / 106.621	- / -	- / 1,938.690
P-3a	2 / Link 16 (Capability Improvement)		A		- / 107.400	- / 74.700	- / 7.500	- / 0.000	- / -	- / 369.614
P-3a	3 / F119 Engine Modifications (Other)		A		- / 9.069	- / 5.174	- / 0.976	- / 14.508	- / 0.000	- / 130.440
P-3a	4 / Sensor Enhancement (Capability Improvement)		B		- / 166.385	- / 291.399	- / 389.650	- / 291.181	- / 581.700	- / 1,872.015

Exhibit P-40, Budget Line Item Justification: PB 2020 Air Force	**Date:** February 2019
Appropriation / Budget Activity / Budget Sub Activity: 3010F: Aircraft Procurement, Air Force / BA 05: Modification of Inservice Aircraft / BSA 2: Tactical Aircraft	**P-1 Line Item Number / Title:** F02200 / F-22A

ID Code (A=Service Ready, B=Not Service Ready): B	**Program Elements for Code B Items:** 0207138F	**Other Related Program Elements:** 0207138F

Line Item MDAP/MAIS Code: N/A

Exhibits Schedule					FY 2021	FY 2022	FY 2023	FY 2024	To Complete	Total
Exhibit Type	Title*	Subexhibits	ID CD	MDAP/ MAIS Code	Quantity / Total Cost *(Each) I ($ M)*	Quantity / Total Cost *(Each) I ($ M)*	Quantity / Total Cost *(Each) I ($ M)*	Quantity / Total Cost *(Each) I ($ M)*	Quantity / Total Cost *(Each) I ($ M)*	Quantity / Total Cost *(Each) I ($ M)*
P-40	Total Gross/Weapon System Cost				- / 414.447	- / 529.618	- / 564.842	- / 469.991	- / 4,370.220	- / 9,676.110

*** Although this is an Exhibit P-40a item, the actual exhibit is not included since all of the required information for this item is already being shown here.

*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:
Where applicable, justification for individual modifications is provided in the P-3A exhibits.

Exhibit P-3a, Individual Modification: PB 2020 Air Force		Date: February 2019
Appropriation / Budget Activity / Budget Sub Activity: 3010F / 05 / 2	**P-1 Line Item Number / Title:** F02200 / F-22A	**Modification Number / Title:** 1 / Reliability and Maintainability Program
ID Code (A=Service Ready, B=Not Service Ready) : A	**MDAP/MAIS Code:**	

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 *(Units in Each)*	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost *($ in Millions)*	1,238.022	121.822	131.217	78.512	0.000	78.512	91.978	83.345	87.173	106.621	-	1,938.690
Less PY Advance Procurement *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) *($ in Millions)*	1,238.022	121.822	131.217	78.512	0.000	78.512	91.978	83.345	87.173	106.621	-	1,938.690
Plus CY Advance Procurement *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Total Obligation Authority *($ in Millions)*	**1,238.022**	**121.822**	**131.217**	**78.512**	**0.000**	**78.512**	**91.978**	**83.345**	**87.173**	**106.621**	**-**	**1,938.690**
(The following Resource Summary rows are for informational purposes only. The corresponding budget requests are documented elsewhere.)												
Initial Spares *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Unit Cost *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-

Description:

Reliability, Availability, and Maintainability Program (RAMP) provides solution identification and integration of modifications to improve reliability, availability and maintainability (RAM) for the F-22 fleet. The associated RAMP efforts (O&S funded) develop candidate initiatives, which are down-selected by Air Combat Command, for implementation based on development maturity and impact on the F-22 life cycle costs. The RAMP program includes funding for retrofit installation touch labor, modifications to address corrosion, reduce maintenance hours, increase safety and provide urgent response requirements identified by the user to the F-22 fleet. Urgent response requirements are quick demand requirements addressing safety or air superiority, ensuring the warfighter and the weapon system are operating as intended. RAMP funds may be used to resolve emerging safety of flight and diminishing manufacturing sources issues, accommodate technology insertion and fulfill FAA or other mandates necessary to ensure continued aircrew safety and mission effectiveness. RAMP includes mission support costs for the F-22 program to include, but not be limited to travel, computer costs and contractor support.

RAMP modifications currently include individual projects, totaling over 9,600 kits, which are retrofitted onto aircraft based on aircraft downtime opportunities.

In FY 2020, RAMP kit procurement and installation will continue on projects such as; Configurable Rail Launchers (CRL) AIM-9X extension kits which enable AIM-9X employment; Low Observable (LO) Mighty Tough Boot which replaces less durable boot material and leads to an estimated 3% increase in aircraft reliability; field level replacement of CNI AAI Cables (current cable failing at 10% of 8,000 hour life - new cable eliminates any direct maintenance on cable assembly); FIBER Infrastructure which maximizes connectivity and preserves 10 maintenance days of aircraft availability per tail number; and the Aft Boom Surface which replaces damage to the leading flap surface area that if not corrected will ground the fleet at 2,100 hours. Every RAMP retrofit kit, to include those not listed, has a component level improvement metric and contributes to the overall reliability, availability, maintainability and safety improvements of the F-22.

Kit installations are completed at either the depot or by a contractor field team depending on the complexity of the installation effort and scheduled aircraft downtime opportunities. Quantities are based on an assumed maturity of the solution identification and are subject to change over time. The average cost per kit varies based on planned retrofit kits in a given year and the complexity of the materials and labor required to integrate and install on the fleet. Funding levels for the RAMP program from FY 2019 to FY 2020+ has declined in an effort to support increased flying hours, allow for the integrations of new capabilities (increment 3.2B, Link 16, Sensor Enhancements etc.) on the F-22 fleet, and minimize aircraft down-time.
This program was formerly the Reliability, Availability and Maintainability Maturation Program (RAMMP).

Milestone/Development Status

The solution identification effort provides for the non-recurring engineering efforts associated with future retrofit projects that increase Reliability, Availability, and Maintainability of the aircraft through the FYDP. As these projects are tested and qualified, they are implemented via the retrofit program.

Exhibit P-3a, Individual Modification: PB 2020 Air Force		Date: February 2019
Appropriation / Budget Activity / Budget Sub Activity: 3010F / 05 / 2	**P-1 Line Item Number / Title:** F02200 / F-22A	**Modification Number / Title:** 1 / Reliability and Maintainability Program
ID Code (A=Service Ready, B=Not Service Ready) : A	**MDAP/MAIS Code:**	

Secondary Distribution		FY 2018	FY 2019	FY 2020 Base	FY 2020 OCO	FY 2020 Total	FY 2021	FY 2022	FY 2023	FY 2024
AF	Quantity	-	-	-	-	-	-	-	-	-
	Total Obligation Authority	102.962	117.865	70.769	-	70.769	83.210	74.357	77.611	95.041
AFNG	Quantity	-	-	-	-	-	-	-	-	-
	Total Obligation Authority	18.860	13.352	7.743	-	7.743	8.768	8.988	9.562	11.580
Total: Secondary Distribution	**Quantity**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**
	Total Obligation Authority	**121.822**	**131.217**	**78.512**	**0.000**	**78.512**	**91.978**	**83.345**	**87.173**	**106.621**

Exhibit P-3a, Individual Modification: PB 2020 Air Force		Date: February 2019
Appropriation / Budget Activity / Budget Sub Activity: 3010F / 05 / 2	**P-1 Line Item Number / Title:** F02200 / F-22A	**Modification Number / Title:** 1 / Reliability and Maintainability Program
ID Code (A=Service Ready, B=Not Service Ready) : A	**MDAP/MAIS Code:**	
Models of Systems Affected: F-22	**Modification Type:** Reliability & Maintainability	**Related RDT&E PEs:** 0207138F

Financial Plan	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
	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												
Modification Item 1 of 1: RAMP Kits												
B Kits												
Recurring												
RAMP Kits:EQUIPMENT Group B (Active)	7,229 / 670.105	514 / 6.176	900 / 37.999	527 / 21.625	- / -	527 / 21.625	691 / 32.919	712 / 28.685	853 / 31.134	1,203 / 46.983	- / -	12,629 / 875.626
RAMP Kits:EQUIPMENT Group B (Guard)	1,091 / 63.431	66 / 3.172	141 / 5.158	76 / 2.773	- / -	76 / 2.773	98 / 3.579	101 / 3.678	109 / 3.991	165 / 6.024	- / -	1,847 / 91.806
Subtotal: Recurring	*- / 733.536*	*- / 9.348*	*- / 43.157*	*- / 24.398*	*- / -*	*- / 24.398*	*- / 36.498*	*- / 32.363*	*- / 35.125*	*- / 53.007*	*- / -*	*- / 967.432*
Subtotal: RAMP Kits	*- / 733.536*	*- / 9.348*	*- / 43.157*	*- / 24.398*	*- / -*	*- / 24.398*	*- / 36.498*	*- / 32.363*	*- / 35.125*	*- / 53.007*	*- / -*	*- / 967.432*
Subtotal: Procurement, All Modification Items	*- / 733.536*	*- / 9.348*	*- / 43.157*	*- / 24.398*	*- / -*	*- / 24.398*	*- / 36.498*	*- / 32.363*	*- / 35.125*	*- / 53.007*	*- / -*	*- / 967.432*
Support *(All Modification Items)*												
OTHER GOVT	- / 26.973	- / 2.671	- / 7.850	- / 6.518	- / -	- / 6.518	- / 5.611	- / -	- / 1.402	- / -	- / -	- / 51.025
Subtotal: Support	*- / 26.973*	*- / 2.671*	*- / 7.850*	*- / 6.518*	*- / -*	*- / 6.518*	*- / 5.611*	*- / -*	*- / 1.402*	*- / -*	*- / -*	*- / 51.025*
Installation												
Modification Item 1 of 1: RAMP Kits	8,320 / 477.513	580 / 109.803	1,041 / 80.210	603 / 47.596	- / -	603 / 47.596	789 / 49.869	813 / 50.982	962 / 50.646	1,368 / 53.614	- / -	14,476 / 920.233
Subtotal: Installation	*8,320 / 477.513*	*580 / 109.803*	*1,041 / 80.210*	*603 / 47.596*	*- / -*	*603 / 47.596*	*789 / 49.869*	*813 / 50.982*	*962 / 50.646*	*1,368 / 53.614*	*- / -*	*14,476 / 920.233*
Total												
Total Cost (Procurement + Support + Installation)	**1,238.022**	**121.822**	**131.217**	**78.512**	**0.000**	**78.512**	**91.978**	**83.345**	**87.173**	**106.621**	**-**	**1,938.690**

Exhibit P-3a, Individual Modification: PB 2020 Air Force		Date: February 2019
Appropriation / Budget Activity / Budget Sub Activity: 3010F / 05 / 2	**P-1 Line Item Number / Title:** F02200 / F-22A	**Modification Number / Title:** 1 / Reliability and Maintainability Program

ID Code (A=Service Ready, B=Not Service Ready) : A

MDAP/MAIS Code:

Modification Item 1 of 1: RAMP Kits

Manufacturer Information

Manufacturer Name: Lockheed Martin

Manufacturer Location: Hill AFB

Administrative Leadtime *(in Months)*: 3

Production Leadtime *(in Months)*: 0

Dates	FY 2018	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024
Contract Dates	Jan 2018	Jan 2019	Jan 2020	Jan 2021	Jan 2022	Jan 2023	Jan 2024
Delivery Dates	Jan 2018	Jan 2019	Jan 2020	Jan 2021	Jan 2022	Jan 2023	Jan 2024

Installation Information

Method of Implementation: Contract Field Team

Installation Cost	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
	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)*
Prior Years	1,161 / 39.744	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	1,161 / 39.744
FY 2018	- / -	206 / 31.361	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	206 / 31.361
FY 2019	- / -	- / -	360 / 27.320	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	360 / 27.320
FY 2020	- / -	- / -	- / -	211 / 15.515	- / -	211 / 15.515	- / -	- / -	- / -	- / -	- / -	211 / 15.515
FY 2021	- / -	- / -	- / -	- / -	- / -	- / -	276 / 16.377	- / -	- / -	- / -	- / -	276 / 16.377
FY 2022	- / -	- / -	- / -	- / -	- / -	- / -	- / -	285 / 16.710	- / -	- / -	- / -	285 / 16.710
FY 2023	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	341 / 14.687	- / -	- / -	341 / 14.687
FY 2024	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	481 / 17.753	- / -	481 / 17.753
To Complete	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
Total	1,161 / 39.744	206 / 31.361	360 / 27.320	211 / 15.515	- / -	211 / 15.515	276 / 16.377	285 / 16.710	341 / 14.687	481 / 17.753	- / -	3,321 / 179.467

Installation Schedule

	PYS	FY 2018				FY 2019				FY 2020				FY 2021				FY 2022				FY 2023				FY 2024				TC	Tot
		Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4		
In	1,161	51	51	51	53	90	90	90	90	52	52	52	55	69	69	69	69	71	71	71	72	85	85	85	86	120	120	120	121	0	3,321
Out	1,161	51	51	51	53	90	90	90	90	52	52	52	55	69	69	69	69	71	71	71	72	85	85	85	86	120	120	120	121	0	3,321

Method of Implementation: Depot

Installation Cost	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
	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)*
Prior Years	7,159 / 437.769	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	7,159 / 437.769

Exhibit P-3a, Individual Modification: PB 2020 Air Force		Date: February 2019
Appropriation / Budget Activity / Budget Sub Activity: 3010F / 05 / 2	**P-1 Line Item Number / Title:** F02200 / F-22A	**Modification Number / Title:** 1 / Reliability and Maintainability Program
ID Code (A=Service Ready, B=Not Service Ready) : A	**MDAP/MAIS Code:**	

Modification Item 1 of 1: RAMP Kits

Installation Information

Method of Implementation: Depot

Installation Cost	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
	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)*
FY 2018	- / -	374 / 78.442	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	374 / 78.442
FY 2019	- / -	- / -	681 / 52.890	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	681 / 52.890
FY 2020	- / -	- / -	- / -	392 / 32.081	- / -	392 / 32.081	- / -	- / -	- / -	- / -	- / -	392 / 32.081
FY 2021	- / -	- / -	- / -	- / -	- / -	- / -	513 / 33.492	- / -	- / -	- / -	- / -	513 / 33.492
FY 2022	- / -	- / -	- / -	- / -	- / -	- / -	- / -	528 / 34.272	- / -	- / -	- / -	528 / 34.272
FY 2023	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	621 / 35.959	- / -	- / -	621 / 35.959
FY 2024	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	887 / 35.861	- / -	887 / 35.861
To Complete	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
Total	7,159 / 437.769	374 / 78.442	681 / 52.890	392 / 32.081	- / -	392 / 32.081	513 / 33.492	528 / 34.272	621 / 35.959	887 / 35.861	- / -	11,155 / 740.766

Installation Schedule

		FY 2018				FY 2019				FY 2020				FY 2021				FY 2022				FY 2023				FY 2024					
	PYS	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	TC	Tot
In	7,159	93	93	93	95	170	170	170	171	98	98	98	98	128	128	128	129	132	132	132	132	155	155	155	156	221	221	221	224	0	11,155
Out	7,159	93	93	93	95	170	170	170	171	98	98	98	98	128	128	128	129	132	132	132	132	155	155	155	156	221	221	221	224	0	11,155

Exhibit P-3a, Individual Modification: PB 2020 Air Force		Date: February 2019
Appropriation / Budget Activity / Budget Sub Activity: 3010F / 05 / 2	**P-1 Line Item Number / Title:** F02200 / F-22A	**Modification Number / Title:** 2 / Link 16
ID Code (A=Service Ready, B=Not Service Ready) : A	**MDAP/MAIS Code:**	

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 *(Units in Each)*	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost *($ in Millions)*	-	0.000	102.414	77.600	0.000	77.600	107.400	74.700	7.500	0.000	-	369.614
Less PY Advance Procurement *($ in Millions)*	-	-	7.500	-	-	-	-	-	-	-	-	7.500
Net Procurement (P-1) *($ in Millions)*	-	0.000	94.914	77.600	0.000	77.600	107.400	74.700	7.500	0.000	-	362.114
Plus CY Advance Procurement *($ in Millions)*	-	7.500	-	-	-	-	-	-	-	-	-	7.500
Total Obligation Authority *($ in Millions)*	**-**	**7.500**	**94.914**	**77.600**	**0.000**	**77.600**	**107.400**	**74.700**	**7.500**	**0.000**	**-**	**369.614**
(The following Resource Summary rows are for informational purposes only. The corresponding budget requests are documented elsewhere.)												
Initial Spares *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Unit Cost *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-

Description:

The Link 16 modification was formally known as TACLink 16. Link 16 will procure the hardware and installation necessary to field Link 16 Transmit capability on the F-22 Raptor.

Link 16 capabilities will be fielded on all Block 30/35 F-22 aircraft. Link 16 transmit will be fielded via Multifunctional Information Distribution Service Joint Tactical Radio System (MIDS JTRS). Legacy Link 16 receive capabilities will be re-hosted to the MIDS JTRS. Link 16 capabilities will be enabled by Open System Architecture (OSA). Procurement of an OSA system, MIDS JTRS, L-band antennas, and other supporting hardware are required to enable Link 16 capabilities.

Link 16 will begin fielding concurrent with Increment 3.2B installs in the 4th Quarter FY 2020 and continue through FY 2023. This hardware delivery includes Mission Support Requirements and other government costs to include, but not limited to, support equipment, specialized test equipment, long-lead sets, and initial spares. Funds may be used to resolve emerging safety of flight and diminishing manufacturing sources issues, accommodate technology insertion and fulfill FAA or other mandates necessary to ensure continued aircrew safety and mission effectiveness.

The F-22 Raptor's Modernization Development is conducted using a rapid acquisition construct leveraging commercial best practices such as Agile and Lean. This allows the F-22 Raptor program to develop, test, and field software/hardware from multiple programs (product lines) using a scheduled cadence for capabilities as they mature. The F-22 Raptor program's utilization of these commercial best practices during production activities will allow for concurrent installations of mature Group A and Group B hardware of multiple product lines, delivering warfighter capabilities to the field earlier than under historical acquisition practices.

Milestone/Development Status

Development is continuing. Software has been integrated onto developmental hardware and testing is in progress in sub-system labs. Developmental testing will begin in 3rd quarter FY 2019, with a planned production decision beginning in 3rd quarter FY 2019.

Secondary Distribution		FY 2018	FY 2019	FY 2020 Base	FY 2020 OCO	FY 2020 Total	FY 2021	FY 2022	FY 2023	FY 2024
AF	Quantity	-	-	-	-	-	-	-	-	-
	Total Obligation Authority	7.500	94.914	77.600	0.000	77.600	107.400	74.700	7.500	-
Total: Secondary Distribution	**Quantity**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**
	Total Obligation Authority	**7.500**	**94.914**	**77.600**	**0.000**	**77.600**	**107.400**	**74.700**	**7.500**	**0.000**

Exhibit P-3a, Individual Modification: PB 2020 Air Force		Date: February 2019
Appropriation / Budget Activity / Budget Sub Activity: 3010F / 05 / 2	**P-1 Line Item Number / Title:** F02200 / F-22A	**Modification Number / Title:** 2 / Link 16
ID Code (A=Service Ready, B=Not Service Ready) : A	**MDAP/MAIS Code:**	
Models of Systems Affected: F-22	**Modification Type:** Capability Improvement	**Related RDT&E PEs:** 0207138F

Financial Plan	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
	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												
Modification Item 1 of 1: Link 16												
B Kits												
Recurring												
Link 16:EQUIPMENT Group B (Active)	- / -	- / -	31 / 89.900	25 / 77.600	- / -	25 / 77.600	43 / 94.200	43 / 60.300	0 / 0.000	- / -	- / -	142 / 322.000
Subtotal: Recurring	*- / -*	*- / -*	*- / 89.900*	*- / 77.600*	*- / -*	*- / 77.600*	*- / 94.200*	*- / 60.300*	*- / 0.000*	*- / -*	*- / -*	*- / 322.000*
Subtotal: Link 16	*- / -*	*- / -*	*- / 89.900*	*- / 77.600*	*- / -*	*- / 77.600*	*- / 94.200*	*- / 60.300*	*- / 0.000*	*- / -*	*- / -*	*- / 322.000*
Subtotal: Procurement, All Modification Items	*- / -*	*- / -*	*- / 89.900*	*- / 77.600*	*- / -*	*- / 77.600*	*- / 94.200*	*- / 60.300*	*- / 0.000*	*- / -*	*- / -*	*- / 322.000*
Support *(All Modification Items)*												
SUPPORT-EQUIP	- / -	- / -	- / 5.000	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 5.000
Change Orders	- / -	- / -	- / 0.014	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 0.014
OTHER GOVT	- / -	- / -	- / 7.500	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 7.500
Subtotal: Support	*- / -*	*- / -*	*- / 12.514*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / 12.514*
Installation												
Modification Item 1 of 1: Link 16	- / -	- / -	- / -	- / -	0 / 0.000	0 / 0.000	48 / 13.200	48 / 14.400	46 / 7.500	- / -	- / -	142 / 35.100
Subtotal: Installation	*- / -*	*- / -*	*- / -*	*- / -*	*0 / -*	*0 / -*	*48 / 13.200*	*48 / 14.400*	*46 / 7.500*	*- / -*	*- / -*	*142 / 35.100*
Total												
Total Cost (Procurement + Support + Installation)	**-**	**0.000**	**102.414**	**77.600**	**0.000**	**77.600**	**107.400**	**74.700**	**7.500**	**0.000**	**-**	**369.614**

Exhibit P-3a, Individual Modification: PB 2020 Air Force		Date: February 2019
Appropriation / Budget Activity / Budget Sub Activity: 3010F / 05 / 2	**P-1 Line Item Number / Title:** F02200 / F-22A	**Modification Number / Title:** 2 / Link 16
ID Code (A=Service Ready, B=Not Service Ready) : A	**MDAP/MAIS Code:**	

Modification Item 1 of 1: Link 16

Manufacturer Information

Manufacturer Name: Lockheed Martin	Manufacturer Location: Ft. Worth, TX
Administrative Leadtime *(in Months)*: 1	Production Leadtime *(in Months)*: 13

Dates	FY 2018	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024
Contract Dates		Jun 2019	Jun 2020	Jun 2021	Jun 2022		
Delivery Dates		Jul 2020	Jul 2021	Jul 2022	Jul 2023		

Installation Information

Method of Implementation: Depot

Installation Cost	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
	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)*
Prior Years	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2018	- / -	- / -	- / -	- / -	0 / 0.000	0 / 0.000	0 / 0.000	0 / 0.000	0 / 0.000	- / -	- / -	0 / 0.000
FY 2019	- / -	- / -	- / -	- / -	- / -	- / -	31 / 0.000	- / -	- / -	- / -	- / -	31 / 0.000
FY 2020	- / -	- / -	- / -	- / -	- / -	- / -	17 / 13.200	8 / 3.924	- / -	- / -	- / -	25 / 17.124
FY 2021	- / -	- / -	- / -	- / -	- / -	- / -	- / -	40 / 10.476	3 / 0.000	- / -	- / -	43 / 10.476
FY 2022	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	43 / 7.500	- / -	- / -	43 / 7.500
FY 2023	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2024	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
To Complete	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
Total	- / -	- / -	- / -	- / -	0 / 0.000	0 / 0.000	48 / 13.200	48 / 14.400	46 / 7.500	- / -	- / -	142 / 35.100

Installation Schedule

	PYS	FY 2018				FY 2019				FY 2020				FY 2021				FY 2022				FY 2023				FY 2024				TC	Tot
		Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4		
In	0	-	-	-	-	-	-	-	-	-	-	-	-	12	12	12	12	12	12	12	12	12	12	11	11	-	-	-	-	0	142
Out	0	-	-	-	-	-	-	-	-	-	-	-	-	12	12	12	12	12	12	12	12	12	12	11	11	-	-	-	-	0	142

Exhibit P-3a, Individual Modification: PB 2020 Air Force		Date: February 2019
Appropriation / Budget Activity / Budget Sub Activity: 3010F / 05 / 2	**P-1 Line Item Number / Title:** F02200 / F-22A	**Modification Number / Title:** 3 / F119 Engine Modifications
ID Code (A=Service Ready, B=Not Service Ready) : A	**MDAP/MAIS Code:**	

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 *(Units in Each)*	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost *($ in Millions)*	74.573	8.104	8.489	9.547	0.000	9.547	9.069	5.174	0.976	14.508	0.000	130.440
Less PY Advance Procurement *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) *($ in Millions)*	74.573	8.104	8.489	9.547	0.000	9.547	9.069	5.174	0.976	14.508	0.000	130.440
Plus CY Advance Procurement *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Total Obligation Authority *($ in Millions)*	**74.573**	**8.104**	**8.489**	**9.547**	**0.000**	**9.547**	**9.069**	**5.174**	**0.976**	**14.508**	**0.000**	**130.440**
(The following Resource Summary rows are for informational purposes only. The corresponding budget requests are documented elsewhere.)												
Initial Spares *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Unit Cost *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-

Description:

This program includes F119 Engine modifications, depot labor, and the support equipment (SE) tooling required for F119 Engine upgrades to improve long-term engine sustainment. This program funds engine modifications of 473 engines and 26 spare module sets. Quantities reflect individual kit procurement and installation. Engine modifications are necessary to improve the safety, reliability, maintainability, sustainability, mission performance, and affordability of the F119 engine in order to achieve full life status of 8,650 Total Accumulated Cycles (TAC). Funds may be used to resolve emerging safety of flight and diminishing manufacturing sources issues, accommodate technology insertion and fulfill FAA or other mandates necessary to ensure continued aircrew safety and mission effectiveness. Once retrofit procedures and material solution is developed, the retrofit kit installations are done either at the depot or by field teams depending on the complexity of the effort. F119 Engine Modifications includes Mission Support Requirement to include, but not be limited to, travel, computer costs, and other miscellaneous contract support.

Milestone/Development Status

Development accomplished via the Engine Component Improvement Program (CIP), PE 0207268F.

Secondary Distribution		FY 2018	FY 2019	FY 2020 Base	FY 2020 OCO	FY 2020 Total	FY 2021	FY 2022	FY 2023	FY 2024
AF	Quantity	-	-	-	-	-	-	-	-	-
	Total Obligation Authority	6.746	7.109	8.086	-	8.086	7.676	4.258	0.804	11.939
AFNG	Quantity	-	-	-	-	-	-	-	-	-
	Total Obligation Authority	1.358	1.380	1.461	-	1.461	1.393	0.916	0.172	2.569
Total: Secondary Distribution	**Quantity**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**
	Total Obligation Authority	**8.104**	**8.489**	**9.547**	**0.000**	**9.547**	**9.069**	**5.174**	**0.976**	**14.508**

Exhibit P-3a, Individual Modification: PB 2020 Air Force		Date: February 2019
Appropriation / Budget Activity / Budget Sub Activity: 3010F / 05 / 2	**P-1 Line Item Number / Title:** F02200 / F-22A	**Modification Number / Title:** 3 / F119 Engine Modifications
ID Code (A=Service Ready, B=Not Service Ready) : A	**MDAP/MAIS Code:**	
Models of Systems Affected: F-22	**Modification Type:** Other	**Related RDT&E PEs:** 0207138F

Financial Plan	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
	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												
Modification Item 1 of 1: Engine Modification Kits												
B Kits												
Recurring												
Engine Modification Kits:EQUIPMENT Group B (Active)	5,939 / 46.709	1,246 / 3.974	1,329 / 4.419	1,407 / 4.678	- / -	1,407 / 4.678	1,342 / 4.464	882 / 2.935	167 / 0.554	2,475 / 8.230	- / -	14,787 / 75.963
Engine Modification Kits:EQUIPMENT Group B (Guard)	1,161 / 5.513	160 / 0.701	170 / 0.567	180 / 0.600	- / -	180 / 0.600	172 / 0.571	113 / 0.376	21 / 0.070	318 / 1.054	- / -	2,295 / 9.452
Subtotal: Recurring	*- / 52.222*	*- / 4.675*	*- / 4.986*	*- / 5.278*	*- / -*	*- / 5.278*	*- / 5.035*	*- / 3.311*	*- / 0.624*	*- / 9.284*	*- / -*	*- / 85.415*
Subtotal: Engine Modification Kits	*- / 52.222*	*- / 4.675*	*- / 4.986*	*- / 5.278*	*- / -*	*- / 5.278*	*- / 5.035*	*- / 3.311*	*- / 0.624*	*- / 9.284*	*- / -*	*- / 85.415*
Subtotal: Procurement, All Modification Items	*- / 52.222*	*- / 4.675*	*- / 4.986*	*- / 5.278*	*- / -*	*- / 5.278*	*- / 5.035*	*- / 3.311*	*- / 0.624*	*- / 9.284*	*- / -*	*- / 85.415*
Support *(All Modification Items)*												
OTHER GOVT	- / 3.760	- / 0.800	- / 0.700	- / 1.300	- / -	- / 1.300	- / 1.200	- / -	- / -	- / -	- / -	- / 7.760
Subtotal: Support	*- / 3.760*	*- / 0.800*	*- / 0.700*	*- / 1.300*	*- / -*	*- / 1.300*	*- / 1.200*	*- / -*	*- / -*	*- / -*	*- / -*	*- / 7.760*
Installation												
Modification Item 1 of 1: Engine Modification Kits	5,714 / 18.591	1,386 / 2.629	1,406 / 2.803	1,499 / 2.969	- / -	1,499 / 2.969	1,587 / 2.834	1,514 / 1.863	995 / 0.352	188 / 5.224	2,793 / 0.000	17,082 / 37.265
Subtotal: Installation	*5,714 / 18.591*	*1,386 / 2.629*	*1,406 / 2.803*	*1,499 / 2.969*	*- / -*	*1,499 / 2.969*	*1,587 / 2.834*	*1,514 / 1.863*	*995 / 0.352*	*188 / 5.224*	*2,793 / -*	*17,082 / 37.265*
Total												
Total Cost (Procurement + Support + Installation)	**74.573**	**8.104**	**8.489**	**9.547**	**0.000**	**9.547**	**9.069**	**5.174**	**0.976**	**14.508**	**0.000**	**130.440**

Exhibit P-3a, Individual Modification: PB 2020 Air Force		Date: February 2019
Appropriation / Budget Activity / Budget Sub Activity: 3010F / 05 / 2	**P-1 Line Item Number / Title:** F02200 / F-22A	**Modification Number / Title:** 3 / F119 Engine Modifications
ID Code (A=Service Ready, B=Not Service Ready) : A	**MDAP/MAIS Code:**	

Modification Item 1 of 1: Engine Modification Kits

Manufacturer Information

Manufacturer Name: Pratt & Whitney	Manufacturer Location: East Hartford/Tinker AFB
Administrative Leadtime *(in Months)*: 3	Production Leadtime *(in Months)*: 12

Dates	FY 2018	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024
Contract Dates	Jan 2018	Jan 2019	Jan 2020	Jan 2021	Jan 2022	Jan 2023	Jan 2024
Delivery Dates	Jan 2019	Jan 2020	Jan 2021	Jan 2022	Jan 2023	Jan 2024	Jan 2025

Installation Information

Method of Implementation: Contract Field Team

Installation Cost	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
	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)*
Prior Years	1,158 / 2.488	471 / 0.394	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	1,629 / 2.882
FY 2018	- / -	- / -	498 / 0.308	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	498 / 0.308
FY 2019	- / -	- / -	- / -	532 / 0.327	- / -	532 / 0.327	- / -	- / -	- / -	- / -	- / -	532 / 0.327
FY 2020	- / -	- / -	- / -	- / -	- / -	- / -	563 / 0.312	- / -	- / -	- / -	- / -	563 / 0.312
FY 2021	- / -	- / -	- / -	- / -	- / -	- / -	- / -	537 / 0.205	- / -	- / -	- / -	537 / 0.205
FY 2022	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	353 / 0.039	- / -	- / -	353 / 0.039
FY 2023	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	67 / 0.575	- / -	67 / 0.575
FY 2024	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	2,475 / 0.000	2,475 / 0.000
To Complete	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
Total	1,158 / 2.488	471 / 0.394	498 / 0.308	532 / 0.327	- / -	532 / 0.327	563 / 0.312	537 / 0.205	353 / 0.039	67 / 0.575	2,475 / 0.000	6,654 / 4.648

Installation Schedule

	PYS	FY 2018				FY 2019				FY 2020				FY 2021				FY 2022				FY 2023				FY 2024				TC	Tot
		Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4		
In	1,158	117	118	118	118	124	124	124	126	133	133	133	133	140	140	140	143	134	134	134	135	88	88	88	89	16	16	16	19	2,475	6,654
Out	1,158	117	118	118	118	124	124	124	126	133	133	133	133	140	140	140	143	134	134	134	135	88	88	88	89	16	16	16	19	2,475	6,654

Method of Implementation: Depot

Installation Cost	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
	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)*
Prior Years	4,556 / 16.103	915 / 2.235	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	5,471 / 18.338

Exhibit P-3a, Individual Modification: PB 2020 Air Force		Date: February 2019
Appropriation / Budget Activity / Budget Sub Activity: 3010F / 05 / 2	**P-1 Line Item Number / Title:** F02200 / F-22A	**Modification Number / Title:** 3 / F119 Engine Modifications
ID Code (A=Service Ready, B=Not Service Ready) : A	**MDAP/MAIS Code:**	

Modification Item 1 of 1: Engine Modification Kits

Installation Information

Method of Implementation: Depot

Installation Cost	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
	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)*
FY 2018	- / -	- / -	908 / 2.495	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	908 / 2.495
FY 2019	- / -	- / -	- / -	967 / 2.642	- / -	967 / 2.642	- / -	- / -	- / -	- / -	- / -	967 / 2.642
FY 2020	- / -	- / -	- / -	- / -	- / -	- / -	1,024 / 2.522	- / -	- / -	- / -	- / -	1,024 / 2.522
FY 2021	- / -	- / -	- / -	- / -	- / -	- / -	- / -	977 / 1.658	- / -	- / -	- / -	977 / 1.658
FY 2022	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	642 / 0.313	- / -	- / -	642 / 0.313
FY 2023	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	121 / 4.649	- / -	121 / 4.649
FY 2024	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	318 / 0.000	318 / 0.000
To Complete	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
Total	4,556 / 16.103	915 / 2.235	908 / 2.495	967 / 2.642	- / -	967 / 2.642	1,024 / 2.522	977 / 1.658	642 / 0.313	121 / 4.649	318 / 0.000	10,428 / 32.617

Installation Schedule

		FY 2018				FY 2019				FY 2020				FY 2021				FY 2022				FY 2023				FY 2024					
	PYS	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	TC	Tot
In	4,556	228	229	229	229	227	227	227	227	241	241	241	244	256	256	256	256	244	244	244	245	160	160	160	162	30	30	30	31	318	10,428
Out	4,556	228	229	229	229	227	227	227	227	241	241	241	244	256	256	256	256	244	244	244	245	160	160	160	162	30	30	30	31	318	10,428

Exhibit P-3a, Individual Modification: PB 2020 Air Force		Date: February 2019
Appropriation / Budget Activity / Budget Sub Activity: 3010F / 05 / 2	**P-1 Line Item Number / Title:** F02200 / F-22A	**Modification Number / Title:** 4 / Sensor Enhancement
ID Code (A=Service Ready, B=Not Service Ready) : B	**MDAP/MAIS Code:**	

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 *(Units in Each)*	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost *($ in Millions)*	-	-	-	151.700	0.000	151.700	166.385	291.399	389.650	291.181	581.700	1,872.015
Less PY Advance Procurement *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) *($ in Millions)*	-	-	-	151.700	0.000	151.700	166.385	291.399	389.650	291.181	581.700	1,872.015
Plus CY Advance Procurement *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Total Obligation Authority *($ in Millions)*	**-**	**-**	**-**	**151.700**	**0.000**	**151.700**	**166.385**	**291.399**	**389.650**	**291.181**	**581.700**	**1,872.015**
(The following Resource Summary rows are for informational purposes only. The corresponding budget requests are documented elsewhere.)												
Initial Spares *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Unit Cost *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-

Description:

This program, P-3A Mod F22033, Sensor Enhancement, is a new start.
Sensor Enhancements provides improved sensor capabilities to Block 30/35 F-22 aircraft to maintain air dominance and preserve first shot, first kill capability. Funding includes 143 kits, installation, and spares.

The F-22 Raptor's Modernization Development is conducted using a rapid acquisition construct leveraging commercial best practices such as Agile and Lean. This allows the F-22 Raptor program to develop, test, and field software/hardware from multiple programs (product lines) using a scheduled cadence for capabilities as they mature. The F-22 Raptor program's utilization of these commercial best practices during production activities will allow for concurrent installations of mature Group A and Group B hardware of multiple product lines, delivering warfighter capabilities to the field earlier than under historical acquisition practices.

Milestone/Development Status

Technology development and demonstration efforts continue for Sensor Enhancements. Sensor Enhancement development continues through FY 2020 culminating in a flight demonstration. A subsequent fielding decision will occur in FY 2020.

Secondary Distribution		FY 2018	FY 2019	FY 2020 Base	FY 2020 OCO	FY 2020 Total	FY 2021	FY 2022	FY 2023	FY 2024
AF	Quantity	-	-	-	-	-	-	-	-	-
	Total Obligation Authority	-	-	151.700	-	151.700	166.385	291.399	389.650	291.181
Total: Secondary Distribution	**Quantity**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**
	Total Obligation Authority	**-**	**-**	**151.700**	**0.000**	**151.700**	**166.385**	**291.399**	**389.650**	**291.181**

Exhibit P-3a, Individual Modification: PB 2020 Air Force		Date: February 2019
Appropriation / Budget Activity / Budget Sub Activity: 3010F / 05 / 2	**P-1 Line Item Number / Title:** F02200 / F-22A	**Modification Number / Title:** 4 / Sensor Enhancement
ID Code (A=Service Ready, B=Not Service Ready) : B	**MDAP/MAIS Code:**	
Models of Systems Affected: F-22	**Modification Type:** Capability Improvement	**Related RDT&E PEs:** 0207138F

Financial Plan	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
	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)*
RDT&E PE #												
0207138F	- / -	- / -	- / -	- / 92.870	- / -	- / 92.870	- / 177.430	- / -	- / -	- / -	- / -	- / 270.300
Procurement												
Modification Item 1 of 1: Sensor Enhancements												
B Kits												
Recurring												
Sensor Enhancements:EQUIPMENT Group B (Active)	- / -	- / -	- / -	12 / 151.700	- / -	12 / 151.700	12 / 161.354	24 / 256.701	36 / 348.459	59 / 269.931	0 / 512.400	143 / 1,700.545
Subtotal: Recurring	*- / -*	*- / -*	*- / -*	*- / 151.700*	*- / -*	*- / 151.700*	*- / 161.354*	*- / 256.701*	*- / 348.459*	*- / 269.931*	*- / 512.400*	*- / 1,700.545*
Subtotal: Sensor Enhancements	*- / -*	*- / -*	*- / -*	*- / 151.700*	*- / -*	*- / 151.700*	*- / 161.354*	*- / 256.701*	*- / 348.459*	*- / 269.931*	*- / 512.400*	*- / 1,700.545*
Subtotal: Procurement, All Modification Items	*- / -*	*- / -*	*- / -*	*- / 151.700*	*- / -*	*- / 151.700*	*- / 161.354*	*- / 256.701*	*- / 348.459*	*- / 269.931*	*- / 512.400*	*- / 1,700.545*
Support *(All Modification Items)*												
OTHER GOVT	- / -	- / -	- / -	- / 0.000	- / -	- / 0.000	- / 5.031	- / 6.900	- / 13.441	- / -	- / 29.200	- / 54.572
Subtotal: Support	*- / -*	*- / -*	*- / -*	*- / 0.000*	*- / -*	*- / 0.000*	*- / 5.031*	*- / 6.900*	*- / 13.441*	*- / -*	*- / 29.200*	*- / 54.572*
Installation												
Modification Item 1 of 1: Sensor Enhancements	- / -	- / -	- / -	- / -	- / -	- / -	- / -	12 / 27.798	12 / 27.750	24 / 21.250	95 / 40.100	143 / 116.898
Subtotal: Installation	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*12 / 27.798*	*12 / 27.750*	*24 / 21.250*	*95 / 40.100*	*143 / 116.898*
Total												
Total Cost (Procurement + Support + Installation)	**-**	**-**	**-**	**151.700**	**0.000**	**151.700**	**166.385**	**291.399**	**389.650**	**291.181**	**581.700**	**1,872.015**

Exhibit P-3a, Individual Modification: PB 2020 Air Force		Date: February 2019
Appropriation / Budget Activity / Budget Sub Activity: 3010F / 05 / 2	**P-1 Line Item Number / Title:** F02200 / F-22A	**Modification Number / Title:** 4 / Sensor Enhancement
ID Code (A=Service Ready, B=Not Service Ready) : B	**MDAP/MAIS Code:**	

Modification Item 1 of 1: Sensor Enhancements

Manufacturer Information

Manufacturer Name: Lockheed Martin	Manufacturer Location: Ft. Worth, TX
Administrative Leadtime *(in Months)*: 2	Production Leadtime *(in Months)*: 22

Dates	FY 2018	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024
Contract Dates			Dec 2019	Dec 2020	Dec 2021	Dec 2022	Dec 2023
Delivery Dates			Oct 2021	Oct 2022	Oct 2023	Oct 2024	Oct 2025

Installation Information

Method of Implementation: Contract Field Team

Installation Cost	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
	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)*
Prior Years	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2018	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2019	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2020	- / -	- / -	- / -	- / -	- / -	- / -	- / -	12 / 27.798	- / -	- / -	- / -	12 / 27.798
FY 2021	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	12 / 27.750	- / -	- / -	12 / 27.750
FY 2022	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	24 / 21.250	- / -	24 / 21.250
FY 2023	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	36 / 10.800	36 / 10.800
FY 2024	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	59 / 29.300	59 / 29.300
To Complete	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
Total	- / -	- / -	- / -	- / -	- / -	- / -	- / -	12 / 27.798	12 / 27.750	24 / 21.250	95 / 40.100	143 / 116.898

Installation Schedule

		FY 2018				FY 2019				FY 2020				FY 2021				FY 2022				FY 2023				FY 2024					
	PYS	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	TC	Tot
In	0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	3	3	3	3	3	3	3	3	6	6	6	6	95	143
Out	0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	3	3	3	3	3	3	3	3	6	6	6	6	95	143

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Exhibit P-40, Advance Procurement Budget Line Item Justification: PB 2020 Air Force	Date: February 2019
Appropriation / Budget Activity / Budget Sub Activity: 3010F: Aircraft Procurement, Air Force / BA 05: Modification of Inservice Aircraft / BSA 2: Tactical Aircraft	**P-1 Line Item Number / Title:** F02200 / F-22A
Program Elements for Code B Items: 0207138F	**Other Related Program Elements:** 0207138F
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
Gross/Weapon System Cost *($ in Millions)*	-	7.500	-	-	-	-	-	-	-	-	-	7.500
Net Procurement (P-1) *($ in Millions)*	-	7.500	-	-	-	-	-	-	-	-	-	7.500
Total Obligation Authority *($ in Millions)*	**-**	**7.500**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**7.500**

Description:

Link 16 (formally TacLink 16) program accelerates fielding of key technologies previously aligned under the F-22 Mode 5 IFF (formally Tactical Mandates) program. FY 2018 Advance Procurement for Link 16 was originally planned for the procurement of long lead materials associated with the production and deployment of the Link 16 program. Delays in defining program requirements in the Agile/Lean commercial environment delayed timely procurement of long lead support equipment.

Exhibit P-40, Advance Procurement Budget Line Item Justification: PB 2020 Air Force	Date: February 2019
Appropriation / Budget Activity / Budget Sub Activity: 3010F: Aircraft Procurement, Air Force / BA 05: Modification of Inservice Aircraft / BSA 2: Tactical Aircraft	**P-1 Line Item Number / Title:** F02200 / F-22A
Program Elements for Code B Items: 0207138F	**Other Related Program Elements:** 0207138F
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*	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-10	2 / Link 16			- / -	- / 7.500	- / -	- / -	- / -	- / -
P-40	**Total Gross/Weapon System Cost**			**- / -**	**- / 7.500**	**- / -**	**- / -**	**- / -**	**- / -**

Exhibits Schedule				FY 2021	FY 2022	FY 2023	FY 2024	To Complete	Total
Exhibit Type	Title*	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-10	2 / Link 16			- / -	- / -	- / -	- / -	- / -	- / 7.500
P-40	**Total Gross/Weapon System Cost**			**- / -**	**- / -**	**- / -**	**- / -**	**- / -**	**- / 7.500**

*** Although this is an Exhibit P-40a item, the actual exhibit is not included since all of the required information for this item is already being shown here.

*Title represents the P-10 Title for Advance Procurement.

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

Justification:
Advance procurement prevents a 16-24 month delay to start kit production and deployment, with titanium being the longest lead item.

Exhibit P-10, Advance Procurement Requirements Analysis (*page 1 - Budget Funding Justification*): PB 2020 Air Force		Date: February 2019
Appropriation / Budget Activity / Budget Sub Activity: 3010F / 05 / 2	**P-1 Line Item Number / Title:** F02200 / F-22A	**P-3a Number / Title:** 2 / Link 16

First System (2020) Award Date:	First System (2020) Completion Date:	Interval Between Systems:
November 2017	July 2018	6 Months

Link 16	Production Leadtime *(Months)*	Prior Years *(Each)*	FY 2018 *(Each)*	FY 2019 *(Each)*	FY 2020 *(Each)*	FY 2021 *(Each)*	FY 2022 *(Each)*	FY 2023 *(Each)*	FY 2024 *(Each)*	To Complete *(Each)*	Total *(Each)*
Quantity	24	-	-	-	-	-	-	-	-	-	-

Cost Elements	When Required *(Months)*	Prior Years *($ M)*	FY 2018 *($ M)*	FY 2019 *($ M)*	FY 2020 *($ M)*	FY 2021 *($ M)*	FY 2022 *($ M)*	FY 2023 *($ M)*	FY 2024 *($ M)*	To Complete *($ M)*	Total *($ M)*
CFE											
Equipment: Support Equipment	12	-	7.500	-	0.000	0.000	0.000	-	-	-	7.500
Total: CFE		-	*7.500*	-	*0.000*	*0.000*	*0.000*	-	-	-	*7.500*
Total Advance Procurement/Obligation Authority		**-**	**7.500**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**7.500**

Exhibit P-10, Advance Procurement Requirements Analysis (*page 2 - Budget Funding Justification*): PB 2020 Air Force		Date: February 2019
Appropriation / Budget Activity / Budget Sub Activity: 3010F / 05 / 2	**P-1 Line Item Number / Title:** F02200 / F-22A	**P-3a Number / Title:** 2 / Link 16

Cost Elements	QPA (Each)	FY 2020 Production Leadtime (Months)	Unit Cost ($ M)	Contract Forecast Date	2020 Qty (Each)	For FY	Total Cost Request ($ M)
CFE							
Equipment: Support Equipment	-	24	0.000	Nov 2017	0		0.000
Total: CFE							*0.000*
Total Advance Procurement/Obligation Authority							**-**

Description:
Link 16 program accelerates fielding of key technologies previously aligned under the F-22 Mode 5 IFF program. FY 2018 Advance Procurement for Link 16 procures long lead materials associated with the production and deployment of the Link 16 transmit / receive and OSA. Link 16 installation is currently projected to begin in FY 2020 and will retrofit 143 aircraft.

Exhibit P-40, Budget Line Item Justification: PB 2020 Air Force	Date: February 2019
Appropriation / Budget Activity / Budget Sub Activity: 3010F: Aircraft Procurement, Air Force / BA 05: Modification of Inservice Aircraft / BSA 2: Tactical Aircraft	**P-1 Line Item Number / Title:** F03500 / F-35 Modifications

ID Code (A=Service Ready, B=Not Service Ready): B	**Program Elements for Code B Items:** 0207142F	**Other Related Program Elements:** 0604800F, 0604840F
Line Item MDAP/MAIS Code: 198		

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 *(Units in Each)*	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost *($ in Millions)*	570.934	23.270	237.271	343.590	-	343.590	281.520	287.100	292.860	298.710	0.000	2,335.255
Less PY Advance Procurement *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) *($ in Millions)*	570.934	23.270	237.271	343.590	-	343.590	281.520	287.100	292.860	298.710	0.000	2,335.255
Plus CY Advance Procurement *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Total Obligation Authority *($ in Millions)*	**570.934**	**23.270**	**237.271**	**343.590**	**-**	**343.590**	**281.520**	**287.100**	**292.860**	**298.710**	**0.000**	**2,335.255**
(The following Resource Summary rows are for informational purposes only. The corresponding budget requests are documented elsewhere.)												
Initial Spares *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Flyaway Unit Cost *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Unit Cost *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-

Description:

The F-35 Joint Strike Fighter (JSF) Program will develop and deploy a family of highly common, affordable, next generation, stealthy, multi-role strike fighters that meet the needs of multiple services and countries. The United States Air Force F-35A Conventional Take Off and Landing (CTOL) correction of deficiencies effort provides near and long term improvements to the fleet, focusing on documented deficiencies related to safety, maintainability, and aircraft systems. These modifications and selected component changes are accomplished by field and depot retrofit. In order to meet emerging deficiencies, the airframe and integrated systems must be modified as critical corrections/changes are identified. Funds will be used to manage, prepare, process and incorporate concurrency changes to sustain and improve F-35A system operations. Concurrency changes are implemented to coincide with resources and aircraft availability. Block upgrades provide more robust performance in navigation, weapons, avionics, survivability, maneuverability, maintainability, and mission deployment of the F-35A platform. This modification program will bring early production aircraft and integrated systems to a common fleet configuration as fielded capabilities evolve over the course of the F-35 program.

The modification funding requested in FY20 enables several distinct efforts pertaining to the USAF F-35A aircraft to include post aircraft delivery concurrency retrofits, to correct deficiencies, the block upgrade of hardware and software to a Block 3F configuration, Block 4 capability, and structural upgrades.

DEVELOPMENT STATUS/MAJOR DEVELOPMENT MILESTONES
The overlap of development with production and operations results in the need to manage a concurrency program and conduct retrofits on jets with life-limited parts or impacts to capabilities.

Funding for this exhibit contained in PE 0207142F.

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.

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

Appropriation / Budget Activity / Budget Sub Activity:
3010F: Aircraft Procurement, Air Force / BA 05: Modification of Inservice Aircraft / BSA 2: Tactical Aircraft

P-1 Line Item Number / Title:
F03500 / F-35 Modifications

ID Code (A=Service Ready, B=Not Service Ready): B | **Program Elements for Code B Items:** 0207142F | **Other Related Program Elements:** 0604800F, 0604840F

Line Item MDAP/MAIS Code: 198

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) I ($ M)	Quantity / Total Cost (Each) I ($ M)	Quantity / Total Cost (Each) I ($ M)	Quantity / Total Cost (Each) I ($ M)	Quantity / Total Cost (Each) I ($ M)	Quantity / Total Cost (Each) I ($ M)
P-3a	1 / Block 3i LRIP 2-5 Upgrade (Capability Improvement)		B		- / 201.420	- / 5.098	- / 2.117	- / 8.171	- / 0.000	- / 8.171
P-3a	2 / Block 3F LRIP 2-5 Upgrade (Capability Improvement)		B		- / 6.796	- / 0.540	- / 2.005	- / 0.250	- / 0.000	- / 0.250
P-3a	3 / Block 3F LRIP 6-8 Upgrade (Capability Improvement)		B		- / 0.000	- / 0.056	- / 0.000	- / 2.800	- / 0.000	- / 2.800
P-3a	4 / Concurrency (Other)		B		- / 362.718	- / 17.576	- / 233.149	- / 130.650	- / 0.000	- / 130.650
P-3a	5 / Correction of Deficiencies (Reliability & Maintainability)		B		- / 0.000	- / 0.000	- / 0.000	- / 187.719	- / 0.000	- / 187.719
P-3a	6 / Block 4 Modifications (Capability Improvement)		B		- / -	- / -	- / -	- / 14.000	- / 0.000	- / 14.000
P-40	**Total Gross/Weapon System Cost**				**- / 570.934**	**- / 23.270**	**- / 237.271**	**- / 343.590**	**- / -**	**- / 343.590**

Exhibits Schedule					FY 2021	FY 2022	FY 2023	FY 2024	To Complete	Total
Exhibit Type	Title*	Subexhibits	ID CD	MDAP/ MAIS Code	Quantity / Total Cost (Each) I ($ M)	Quantity / Total Cost (Each) I ($ M)	Quantity / Total Cost (Each) I ($ M)	Quantity / Total Cost (Each) I ($ M)	Quantity / Total Cost (Each) I ($ M)	Quantity / Total Cost (Each) I ($ M)
P-3a	1 / Block 3i LRIP 2-5 Upgrade (Capability Improvement)		B		- / 0.000	- / 0.000	- / 0.000	- / 0.000	- / 0.000	- / 216.806
P-3a	2 / Block 3F LRIP 2-5 Upgrade (Capability Improvement)		B		- / 0.000	- / 0.000	- / 0.000	- / 0.000	- / 0.000	- / 9.591
P-3a	3 / Block 3F LRIP 6-8 Upgrade (Capability Improvement)		B		- / 0.000	- / 0.000	- / 0.000	- / 0.000	- / 0.000	- / 2.856
P-3a	4 / Concurrency (Other)		B		- / 121.886	- / 109.503	- / 292.860	- / 298.710	- / 0.000	- / 1,567.052
P-3a	5 / Correction of Deficiencies (Reliability & Maintainability)		B		- / 159.634	- / 177.597	- / 0.000	- / 0.000	- / 0.000	- / 524.950
P-3a	6 / Block 4 Modifications (Capability Improvement)		B		- / 0.000	- / 0.000	- / 0.000	- / 0.000	- / -	- / 14.000
P-40	**Total Gross/Weapon System Cost**				**- / 281.520**	**- / 287.100**	**- / 292.860**	**- / 298.710**	**- / 0.000**	**- / 2,335.255**

*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:
Where applicable, justification for individual modifications is provided in the P-3A exhibits.

Exhibit P-3a, Individual Modification: PB 2020 Air Force		Date: February 2019
Appropriation / Budget Activity / Budget Sub Activity: 3010F / 05 / 2	**P-1 Line Item Number / Title:** F03500 / F-35 Modifications	**Modification Number / Title:** 1 / Block 3i LRIP 2-5 Upgrade
ID Code (A=Service Ready, B=Not Service Ready) : B	**MDAP/MAIS Code:**	

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 *(Units in Each)*	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost *($ in Millions)*	201.420	5.098	2.117	8.171	0.000	8.171	0.000	0.000	0.000	0.000	0.000	216.806
Less PY Advance Procurement *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) *($ in Millions)*	201.420	5.098	2.117	8.171	0.000	8.171	0.000	0.000	0.000	0.000	0.000	216.806
Plus CY Advance Procurement *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Total Obligation Authority *($ in Millions)*	**201.420**	**5.098**	**2.117**	**8.171**	**0.000**	**8.171**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**216.806**
(The following Resource Summary rows are for informational purposes only. The corresponding budget requests are documented elsewhere.)												
Initial Spares *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Unit Cost *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-

Description:

The block upgrade program retrofits United States Air Force F-35A aircraft and integrated systems procured under the LRIP contracts to a final Block 3F configuration. The retrofits to enable the final Block 3F configuration are comprised of hardware and software. The hardware per aircraft includes new radar modules, new Integrated Core Processor modules and rack, and new electronic warfare modules. Aircraft need to be updated to a final Block 3F configuration to avoid cost associated with maintaining multiple configurations of aircraft at operating locations. Some will require multiple modifications to reach the final Block 3F configuration.

This Modification Number (MN), effort MN-F3513 focuses on upgrading Blocks 1B, 2A, and 2B aircraft from LRIPs 2-5 to a Block 3i configuration. Block 3i is a stepping stone to the Block 3F configuration. It includes the procurement of hardware for the current Block 3i configuration. The parts include new radar modules, new Integrated Core Processor (ICP) modules and rack, and new Electronic Warfare (EW) modules. The Gen III Helmet will also be introduced as part of the Block 3i upgrade. This effort includes tooling and test equipment for Military Service Depots to support the execution of the Block Upgrade program.

Milestone/Development Status

DEVELOPMENT STATUS/MAJOR DEVELOPMENT MILESTONES
Block 3i Fleet Release occurred 4th Qtr FY15

Exhibit P-3a, Individual Modification: PB 2020 Air Force		Date: February 2019
Appropriation / Budget Activity / Budget Sub Activity: 3010F / 05 / 2	**P-1 Line Item Number / Title:** F03500 / F-35 Modifications	**Modification Number / Title:** 1 / Block 3i LRIP 2-5 Upgrade
ID Code (A=Service Ready, B=Not Service Ready) : B	**MDAP/MAIS Code:**	
Models of Systems Affected: F-35A	**Modification Type:** Capability Improvement	**Related RDT&E PEs:** 0604800F

Financial Plan	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
	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												
Modification Item 1 of 1: Block 3i												
B Kits												
Recurring												
Block 3i:EQUIPMENT Group B (Active)	46 / 158.409	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	46 / 158.409
Subtotal: Recurring	*- / 158.409*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / 158.409*
Subtotal: Block 3i	*- / 158.409*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / 158.409*
Subtotal: Procurement, All Modification Items	*- / 158.409*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / 158.409*
Support *(All Modification Items)*												
GROUP B: TOTAL NONRECURRING	- / -	- / 0.000	- / 0.000	- / -	- / 0.000	- / 0.000	- / -	- / -	- / -	- / -	- / -	- / 0.000
SIM/TRAINER	24 / 12.984	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	24 / 12.984
Mod of Spares	- / 30.027	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 30.027
Subtotal: Support	*24 / 43.011*	*- / 0.000*	*- / 0.000*	*- / -*	*- / 0.000*	*- / 0.000*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*24 / 43.011*
Installation												
Modification Item 1 of 1: Block 3i	0 / 0.000	24 / 5.098	9 / 2.117	13 / 8.171	- / -	13 / 8.171	- / -	- / -	- / -	- / -	- / -	46 / 15.386
Subtotal: Installation	*- / 0.000*	*24 / 5.098*	*9 / 2.117*	*13 / 8.171*	*- / -*	*13 / 8.171*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*46 / 15.386*
Total												
Total Cost (Procurement + Support + Installation)	**201.420**	**5.098**	**2.117**	**8.171**	**0.000**	**8.171**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**216.806**

Exhibit P-3a, Individual Modification: PB 2020 Air Force		Date: February 2019
Appropriation / Budget Activity / Budget Sub Activity: 3010F / 05 / 2	**P-1 Line Item Number / Title:** F03500 / F-35 Modifications	**Modification Number / Title:** 1 / Block 3i LRIP 2-5 Upgrade

ID Code (A=Service Ready, B=Not Service Ready) : B

MDAP/MAIS Code:

Modification Item 1 of 1: Block 3i

Manufacturer Information

Manufacturer Name: Lockheed Martin

Manufacturer Location: Fort Worth

Administrative Leadtime *(in Months)*: 10

Production Leadtime *(in Months)*: 27

Dates	FY 2018	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024
Contract Dates							
Delivery Dates							

Installation Information

Method of Implementation: Contract Field Team

Installation Cost	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
	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)*
Prior Years	0 / 0.000	24 / 5.098	9 / 2.117	13 / 8.171	- / -	13 / 8.171	- / -	- / -	- / -	- / -	- / -	46 / 15.386
FY 2018	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2019	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2020	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2021	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2022	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2023	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2024	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
To Complete	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
Total	0 / 0.000	24 / 5.098	9 / 2.117	13 / 8.171	- / -	13 / 8.171	- / -	- / -	- / -	- / -	- / -	46 / 15.386

Installation Schedule

	PYS	FY 2018				FY 2019				FY 2020				FY 2021				FY 2022				FY 2023				FY 2024				TC	Tot
		Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4		
In	0	6	5	7	6	3	2	2	2	4	3	3	3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0	46
Out	0	6	5	7	6	3	2	2	2	4	3	3	3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0	46

Exhibit P-3a, Individual Modification: PB 2020 Air Force		Date: February 2019
Appropriation / Budget Activity / Budget Sub Activity: 3010F / 05 / 2	**P-1 Line Item Number / Title:** F03500 / F-35 Modifications	**Modification Number / Title:** 2 / Block 3F LRIP 2-5 Upgrade
ID Code (A=Service Ready, B=Not Service Ready) : B	**MDAP/MAIS Code:**	

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 *(Units in Each)*	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost *($ in Millions)*	6.796	0.540	2.005	0.250	0.000	0.250	0.000	0.000	0.000	0.000	0.000	9.591
Less PY Advance Procurement *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) *($ in Millions)*	6.796	0.540	2.005	0.250	0.000	0.250	0.000	0.000	0.000	0.000	0.000	9.591
Plus CY Advance Procurement *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Total Obligation Authority *($ in Millions)*	**6.796**	**0.540**	**2.005**	**0.250**	**0.000**	**0.250**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**9.591**
(The following Resource Summary rows are for informational purposes only. The corresponding budget requests are documented elsewhere.)												
Initial Spares *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Unit Cost *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-

Description:

The block upgrade program retrofits United States Air Force F-35A aircraft and integrated systems procured under the LRIP contracts to a final Block 3F configuration. The retrofits to enable the final Block 3F configuration are comprised of hardware and software. The hardware per aircraft includes new radar modules, new Integrated Core Processor modules and rack, and new electronic warfare modules. Aircraft need to be updated to a final Block 3F configuration to avoid cost associated with maintaining multiple configurations of aircraft at operating locations. Some will require multiple modifications to reach the final Block 3F configuration.

This effort (MN-F3514) focuses on the Block 3F configuration upgrade effort for 46 LRIP 2-5 and 56 LRIP 6-8 F-35A aircraft and integrated systems. All of the LRIP 2-5 F-35A aircraft receiving the Block 3F software under this MN will have already received the Block 3i hardware under MNF3513. This effort purchases all necessary software and installation labor to ensure LRIP 2-8 F-35A aircraft are upgraded to a Block 3F baseline for full warfighting capability.

Milestone/Development Status

DEVELOPMENT STATUS/MAJOR DEVELOPMENT MILESTONES
Block 3F fleet release is planned to occur by 3rd Qtr FY18.

Exhibit P-3a, Individual Modification: PB 2020 Air Force		Date: February 2019
Appropriation / Budget Activity / Budget Sub Activity: 3010F / 05 / 2	**P-1 Line Item Number / Title:** F03500 / F-35 Modifications	**Modification Number / Title:** 2 / Block 3F LRIP 2-5 Upgrade
ID Code (A=Service Ready, B=Not Service Ready) : B	**MDAP/MAIS Code:**	
Models of Systems Affected: F-35A	**Modification Type:** Capability Improvement	**Related RDT&E PEs:** 0604800F

Financial Plan	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
	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												
Modification Item 1 of 1: Block 3F												
B Kits												
Recurring												
Block 3F:EQUIPMENT Group B (Active)	10 / 6.792	23 / 0.540	13 / 2.005	- / 0.250	- / -	- / 0.250	- / -	- / -	- / -	- / -	- / -	46 / 9.587
Subtotal: Recurring	*- / 6.792*	*- / 0.540*	*- / 2.005*	*- / 0.250*	*- / - /*	*- / 0.250*	*- / - /*	*- / - /*	*- / - /*	*- / - /*	*- / - /*	*- / 9.587*
Subtotal: Block 3F	*- / 6.792*	*- / 0.540*	*- / 2.005*	*- / 0.250*	*- / - /*	*- / 0.250*	*- / - /*	*- / - /*	*- / - /*	*- / - /*	*- / - /*	*- / 9.587*
Subtotal: Procurement, All Modification Items	*- / 6.792*	*- / 0.540*	*- / 2.005*	*- / 0.250*	*- / - /*	*- / 0.250*	*- / - /*	*- / - /*	*- / - /*	*- / - /*	*- / - /*	*- / 9.587*
Support *(All Modification Items)*												
SIM/TRAINER	4 / 0.004	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	4 / 0.004
Subtotal: Support	*4 / 0.004*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*4 / 0.004*
Installation												
Modification Item 1 of 1: Block 3F	- / -	10 / 0.000	23 / 0.000	13 / 0.000	- / -	13 / 0.000	- / -	- / -	- / -	- / -	- / -	46 / 0.000
Subtotal: Installation	*- / -*	*10 / 0.000*	*23 / 0.000*	*13 / 0.000*	*- / -*	*13 / 0.000*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*46 / 0.000*
Total												
Total Cost (Procurement + Support + Installation)	**6.796**	**0.540**	**2.005**	**0.250**	**0.000**	**0.250**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**9.591**

Exhibit P-3a, Individual Modification: PB 2020 Air Force		Date: February 2019
Appropriation / Budget Activity / Budget Sub Activity: 3010F / 05 / 2	**P-1 Line Item Number / Title:** F03500 / F-35 Modifications	**Modification Number / Title:** 2 / Block 3F LRIP 2-5 Upgrade
ID Code (A=Service Ready, B=Not Service Ready) : B	**MDAP/MAIS Code:**	

Modification Item 1 of 1: Block 3F

Manufacturer Information

Manufacturer Name: Lockheed Martin	Manufacturer Location: Fort Worth
Administrative Leadtime *(in Months)*: 10	Production Leadtime *(in Months)*: 3

Dates	FY 2018	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024
Contract Dates	Aug 2018	Aug 2019					
Delivery Dates	Nov 2018	Nov 2019					

Installation Information

Method of Implementation: Depot Field Team

Installation Cost	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
	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)*
Prior Years	- / -	10 / 0.000	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	10 / 0.000
FY 2018	- / -	- / -	23 / 0.000	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	23 / 0.000
FY 2019	- / -	- / -	- / -	13 / 0.000	- / -	13 / 0.000	- / -	- / -	- / -	- / -	- / -	13 / 0.000
FY 2020	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2021	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2022	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2023	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2024	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
To Complete	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
Total	- / -	10 / 0.000	23 / 0.000	13 / 0.000	- / -	13 / 0.000	- / -	- / -	- / -	- / -	- / -	46 / 0.000

Installation Schedule

	PYS	FY 2018				FY 2019				FY 2020				FY 2021				FY 2022				FY 2023				FY 2024				TC	Tot
		Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4		
In	0	2	2	3	3	6	6	6	5	4	3	3	3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0	46
Out	0	2	2	3	3	6	6	6	5	4	3	3	3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0	46

Exhibit P-3a, Individual Modification: PB 2020 Air Force		Date: February 2019
Appropriation / Budget Activity / Budget Sub Activity: 3010F / 05 / 2	**P-1 Line Item Number / Title:** F03500 / F-35 Modifications	**Modification Number / Title:** 3 / Block 3F LRIP 6-8 Upgrade
ID Code (A=Service Ready, B=Not Service Ready) : B	**MDAP/MAIS Code:**	

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 *(Units in Each)*	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost *($ in Millions)*	0.000	0.056	0.000	2.800	0.000	2.800	0.000	0.000	0.000	0.000	0.000	2.856
Less PY Advance Procurement *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) *($ in Millions)*	0.000	0.056	0.000	2.800	0.000	2.800	0.000	0.000	0.000	0.000	0.000	2.856
Plus CY Advance Procurement *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Total Obligation Authority *($ in Millions)*	**0.000**	**0.056**	**0.000**	**2.800**	**0.000**	**2.800**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**2.856**
(The following Resource Summary rows are for informational purposes only. The corresponding budget requests are documented elsewhere.)												
Initial Spares *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Unit Cost *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-

Description:

The block upgrade program retrofits United States Air Force F-35A aircraft and integrated systems procured under the LRIP contracts to a final Block 3F configuration. The retrofits to enable the final Block 3F configuration are comprised of hardware and software. The hardware per aircraft includes new radar modules, new Integrated Core Processor modules and rack, and new electronic warfare modules. Aircraft need to be updated to a final Block 3F configuration to avoid cost associated with maintaining multiple configurations of aircraft at operating locations. Some will require multiple modifications to reach the final Block 3F configuration.

This effort (MN-F3515) focuses on the Block 3F configuration upgrade effort for 46 LRIP 2-5 and 56 LRIP 6-8 F-35A aircraft and integrated systems. All of the LRIP 6-8 F-35A aircraft receiving the Block 3F software under this MN will have already received the Block 3i hardware under MN-F3513. This effort purchases all necessary software and installation labor to ensure LRIP 2-8 F-35A aircraft are upgraded to a Block 3F baseline for full warfighting capability.

Milestone/Development Status

DEVELOPMENT STATUS/MAJOR DEVELOPMENT MILESTONES
Block 3F fleet release is planned to occur by 3rd Qtr FY18. Modification kits will be procured based on flight test results.

Exhibit P-3a, Individual Modification: PB 2020 Air Force		Date: February 2019
Appropriation / Budget Activity / Budget Sub Activity: 3010F / 05 / 2	**P-1 Line Item Number / Title:** F03500 / F-35 Modifications	**Modification Number / Title:** 3 / Block 3F LRIP 6-8 Upgrade
ID Code (A=Service Ready, B=Not Service Ready) : B	**MDAP/MAIS Code:**	
Models of Systems Affected: F-35A	**Modification Type:** Capability Improvement	**Related RDT&E PEs:** 0604800F

Financial Plan	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
	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												
Modification Item 1 of 1: Block 3F (2)												
B Kits												
Recurring												
Block 3F:EQUIPMENT Group B (Active)	- / -	0 / 0.056	- / -	56 / 2.800	- / -	56 / 2.800	- / -	- / -	- / -	- / -	- / -	56 / 2.856
Subtotal: Recurring	*- / -*	*- / 0.056*	*- / -*	*- / 2.800*	*- / -*	*- / 2.800*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / 2.856*
Subtotal: Block 3F (2)	*- / -*	*- / 0.056*	*- / -*	*- / 2.800*	*- / -*	*- / 2.800*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / 2.856*
Subtotal: Procurement, All Modification Items	*- / -*	*- / 0.056*	*- / -*	*- / 2.800*	*- / -*	*- / 2.800*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / 2.856*
Support *(All Modification Items)*												
SUPPORT-EQUIP	- / -	- / 0.000	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 0.000
Subtotal: Support	*- / -*	*- / 0.000*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / 0.000*
Installation												
Modification Item 1 of 1: Block 3F (2)	- / -	- / -	- / -	56 / 0.000	- / -	56 / 0.000	- / -	- / -	- / -	- / -	- / -	56 / 0.000
Subtotal: Installation	*- / -*	*- / -*	*- / -*	*56 / -*	*- / -*	*56 / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*56 / -*
Total												
Total Cost (Procurement + Support + Installation)	**0.000**	**0.056**	**0.000**	**2.800**	**0.000**	**2.800**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**2.856**

Exhibit P-3a, Individual Modification: PB 2020 Air Force		Date: February 2019
Appropriation / Budget Activity / Budget Sub Activity: 3010F / 05 / 2	**P-1 Line Item Number / Title:** F03500 / F-35 Modifications	**Modification Number / Title:** 3 / Block 3F LRIP 6-8 Upgrade
ID Code (A=Service Ready, B=Not Service Ready) : B	**MDAP/MAIS Code:**	

Modification Item 1 of 1: Block 3F (2)

Manufacturer Information

Manufacturer Name: Lockheed Martin	Manufacturer Location: Fort Worth
Administrative Leadtime *(in Months)*: 0	Production Leadtime *(in Months)*: 27

Dates	FY 2018	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024
Contract Dates			Oct 2019				
Delivery Dates			Jan 2022				

Installation Information

Method of Implementation: Depot Field Team

Installation Cost	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
	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)*
Prior Years	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2018	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2019	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2020	- / -	- / -	- / -	56 / 0.000	- / -	56 / 0.000	- / -	- / -	- / -	- / -	- / -	56 / 0.000
FY 2021	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2022	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2023	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2024	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
To Complete	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
Total	- / -	- / -	- / -	56 / 0.000	- / -	56 / 0.000	- / -	- / -	- / -	- / -	- / -	56 / 0.000

Installation Schedule

	PYS	FY 2018				FY 2019				FY 2020				FY 2021				FY 2022				FY 2023				FY 2024				TC	Tot
		Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4		
In	0	-	-	-	-	-	-	-	-	15	15	15	11	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0	56
Out	0	-	-	-	-	-	-	-	-	15	15	15	11	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0	56

Exhibit P-3a, Individual Modification: PB 2020 Air Force		Date: February 2019
Appropriation / Budget Activity / Budget Sub Activity: 3010F / 05 / 2	**P-1 Line Item Number / Title:** F03500 / F-35 Modifications	**Modification Number / Title:** 4 / Concurrency
ID Code (A=Service Ready, B=Not Service Ready) : B	**MDAP/MAIS Code:**	

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 *(Units in Each)*	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost *($ in Millions)*	362.718	17.576	233.149	130.650	0.000	130.650	121.886	109.503	292.860	298.710	0.000	1,567.052
Less PY Advance Procurement *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) *($ in Millions)*	362.718	17.576	233.149	130.650	0.000	130.650	121.886	109.503	292.860	298.710	0.000	1,567.052
Plus CY Advance Procurement *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Total Obligation Authority *($ in Millions)*	**362.718**	**17.576**	**233.149**	**130.650**	**0.000**	**130.650**	**121.886**	**109.503**	**292.860**	**298.710**	**0.000**	**1,567.052**
(The following Resource Summary rows are for informational purposes only. The corresponding budget requests are documented elsewhere.)												
Initial Spares *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Unit Cost *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-

Description:

This effort (MN-F3516) funds retrofits due to concurrency changes to correct deficiencies discovered after DD-250 of the last aircraft in a given Low Rate Initial Production (LRIP) lot. This includes modifications required to extend aircraft service life currently limited by low-life parts, and relieve capability limitations driven by concurrency of production with development.

The concurrency funding line will procure the highest priority modifications from the Tri-Service Modification Prioritization List, as soon as they become supportable from an engineering, production, and installation standpoint. The list is vetted by the Services and Partners every 6 months to ensure the list accurately reflects existing requirements as well as emerging issues. Per-kit costs will vary for each modification being implemented, and in some cases will also vary for aircraft from different LRIP lots to implement an individual modification. For FY19, the highest priority modifications will directly support USAF IOC, Block 3i, and tactics development.

Total cost reflects procurement and installation costs in each fiscal year. Support costs include overall modification program planning, scheduling, and management; and support of Military and Service Depots and Depot Field Teams for incorporation of modifications.

The following modifications will be the highest priorities for accomplishment throughout the F-35A fleet using funds from this Budget Activity. FY19 concurrency funds will also be used to implement modifications across the rest of the USAF F-35A fleet. Increases in FY19-FY22 resulted from a re-phase of FY18 modification funding to better align with execution of requirements.

TI-0000-0015 Stress Failure of Hydraulic Tube Support Bracket
TI-0000-0031 Nose Wheel Steering (NWS) Motor Qualification Failure
TI-0000-0045 CTOL/STOVL MLG SDD & LRIP Part Number Rolls
TI-0000-0049 Ordnance Quick Latch System (OQLS) FS 424 Latch Corrosion Control
TI-0000-0055 IPP Bay Vent Fan Electrical Bond
TI-0000-0056 IPP Controller Part Number Roll
TI-0000-0058 Back-Up Radio Tray Clearance
TI-0000-0063 Bootstrap Accumulator Redesign
TI-0000-0064 Counter Measures Door Control Valve Life Limitation on AF:6
TI-0000-0098 CTOL Nose Landing Gear
TI-0000-0117 CTOL Trestle Inst Cotter Pin Alignment and Joint Clamp up (PR-45840)
TI-0000-0119 Production Ejection Seat (LRIP I & II) MWARS Replacement with Negative G Strap & New Cartridge Set Part Numbers
TI-0000-0122 28V BATTERY AND CHARGER CHANGES

Exhibit P-3a, Individual Modification: PB 2020 Air Force		Date: February 2019
Appropriation / Budget Activity / Budget Sub Activity: 3010F / 05 / 2	P-1 Line Item Number / Title: F03500 / F-35 Modifications	Modification Number / Title: 4 / Concurrency
ID Code (A=Service Ready, B=Not Service Ready) : B	MDAP/MAIS Code:	

TI-0000-0124 Controller, Motor Pump Qual Failure
TI-0000-0129 MLG Control Valve Part Number Roll
TI-0000-0130 Emergency Control Valve Qual Failure
TI-0000-0132 Valve, Mechanical Sequence - T Qual Failure
TI-0000-0133 Filter Module, Pressure Qual Failure
TI-0000-0135 Engine Driven Pump Life Limit
TI-0000-0137 Pump, Motor GND Maint Qual Failure
TI-0000-0138 Wingtip Light Improvement For FAA Compliance
TI-0000-0145 2AF:0006-0007 and AF:0017-0020. Record Control Panel (RCP) HARNESS ROUTE ERROR
TI-0000-0147 PTMS PAO Three-Port Valve Part Number Roll
TI-0000-0158 WBDD Flexible Cable Re-design
TI-0000-0161 EDU #1 & #2 Signal Deletion
TI-0000-0165 R3 Float Valve with Mechanical Thread Locking
TI-0000-0191 270V BCCU
TI-0000-0192 Gen II -10 Helmet Mounted Display Variance
TI-0000-0193 EW Gain State Control Logic Error
TI-0000-0208 CTOL Arresting Gear Push Rods - Incorrect Heat Treat for Al 2024-T4
TI-0000-0231 PTMS EHA Cooling Orifices - CTOL & STOVL
TI-0000-0236 FPS Fire and Bleed Leak Controller (FBLC) Redesign
TI-0000-0245 Update to Antenna Switch Unit for Cosite Function and Qualification Test Failures
TI-0000-0260 Canopy Actuation System
TI-0000-0263 Power Panel 1, 2, 3
TI-0000-0264 PTMS Controller Humidity, Temp, and Durability Qualification Test Failures
TI-0000-0281 Hoist Point Cover FIP Proposal
TI-0000-0282 Update to Audio Control Electronics (ACE) Unit for Qualification Test Failures
TI-0000-0286 Backup Radio (BuR) Indirect Lightning Qualification Test Failure
TI-0000-0316 CTOL & CV FS 496 Bulkhead Trunnion
TI-0000-0329 Refueling Bay and Nozzle Clash LRIP 1-3 Modification
TI-0000-0331 WBDDS RGAs Limited Life - Change Request Approval
TI-0000-0336 Panoramic Cockpit Display (PCD) - DU
TI-0000-0339 HMDS LRIP Subsystem Variance - UUT Outages
TI-0000-0343 Panoramic Cockpit Display (PCD) Major Variances - EU
TI-0000-0344 HMDS LRIP Subsystem Variance - Fixed Camera
TI-0000-0358 Production Ejection Seat (-0021)
TI-0000-0361 Vertical Tail 575 Fitting
TI-0000-0363 TRS Component Changes from Qual Test Failures
TI-0000-0367 Engine Trailer Adapter Kit - FS556 Interface, J27006/J27007
TI-0000-0386 Fuel System - Signal Amplifier
TI-0000-0387 Fuel System - Dive Rate Performance
TI-0000-0395 LEF Inbd Blade Seal Mousehole and CTOL LEF Lwr Inbd Blade Seal Failures
TI-0000-0398 Arresting Hook Aft Door Spring Damper Part Number Roll
TI-0000-0405 "EDU Random Vibration Failures
Electrical Distribution Unit Full Qualification"
TI-0000-0412 Wing Lighting Controller - Salt Fog Failure

Exhibit P-3a, Individual Modification: PB 2020 Air Force		Date: February 2019
Appropriation / Budget Activity / Budget Sub Activity: 3010F / 05 / 2	**P-1 Line Item Number / Title:** F03500 / F-35 Modifications	**Modification Number / Title:** 4 / Concurrency
ID Code (A=Service Ready, B=Not Service Ready) : B	**MDAP/MAIS Code:**	

TI-0000-0423 Engine Interchangeability Bleed Air System Ducting Design
TI-0000-0424 Firewall Shutoff Valve Part Number Roll
TI-0000-0425 CCDD LRIP1-016 No Intercom Transmit During Air Refueling
TI-0000-0432 Short Life - CTOL Wing Forward Root Rib
TI-0000-0441 CTOL FS 594 Centre Arch Low Life
TI-0000-0448 Add -0007 ASSCA/-0006 ATQA To Aircraft TVE
TI-0000-0456 Bulkhead - FS 450
TI-0000-0457 Bulkhead - FS 472
TI-0000-0458 Bulkhead - FS 518 Upper
TI-0000-0460 Bulkhead - FS 556
TI-0000-0463 Support - Fairing, Mid, LH/RH
TI-0000-0467 Fuel Floor - FS496-556, LH
TI-0000-0468 Fuel Floor - FS496-556, RH
TI-0000-0469 Life Support System (OBOGS, Steel BOS, SIC, SPA, PIC and Composite BOS)
TI-0000-0477 CTOL EHAS Panels - Incorrect Fastener Grips and De-torque Issu
TI-0000-0480 ICC Qual Issues
TI-0000-0495 OBIGGS & Pressure/Vent Changes for Lightning Protection
TI-0000-0538 EHA Flaperon Support Equipment Locations
TI-0000-0539 Cracking of Bifurcation Seam Treatment
TI-0000-0574 Electronics Units Modifications for EMI, Lightning and Qualification Compliance.
TI-0000-0575 ULF & 3BSD Emergency Control Valve
TI-0000-0576 Refuel Probe/Tailhook Emergency Control Valve
TI-0000-0578 Aux Inlet Door Emergency Control Valve
TI-0000-0583 CTOL STOVL Rudder EHA Design Change
TI-0000-0602 Brake Control Unit (BCU) Wet Runway Update & Operation of a Wet Runway
TI-0000-0607 Limited Life CTOL STA 3/9 Aft Rib
TI-0000-0608 Fwd Upper Engine Mount (CTOL)
TI-0000-0626 SMSFRIU SDD/LRIP Arm Disable Input
TI-0000-0631 Countermeasures Doors & NNMSB/WSESRB Concerns
TI-0000-0654 IDMS Connector Ref Des Swap
TI-0000-0655 EO DAS Center Fuselage Vibration Testing
TI-0000-0671 IFF Transponder Operation During Emergency Conditions
TI-0000-0673 Ordnance Quick Latch System (OQLS) - Clip Lock
TI-0000-0683 CR-017534 Rev- HT Bearing Issues
TI-0000-0707 Air Data System Design Changes For -0004 Configuration
TI-0000-0709 HT EHA Block Change
TI-0000-0723 EOTS PBS Startup Timeline
TI-0000-0737 IPP Purge Issue Due to Low Fuel Shutdown
TI-0000-0738 Modified Fuel Dump Valve (T28a)
TI-0000-0771 Install Battery into CNI Rack 3A and 3B
TI-0000-0772 PTMS Turbomachine/ACCM Cable Interface Changes
TI-0000-0802 CTOL Main Landing Gear
TI-0000-0808 Weapons Bay Door Uplock Sealing
TI-0000-0833 Short Shank Condition on Engine Inspection Panels

Exhibit P-3a, Individual Modification: PB 2020 Air Force		Date: February 2019
Appropriation / Budget Activity / Budget Sub Activity: 3010F / 05 / 2	**P-1 Line Item Number / Title:** F03500 / F-35 Modifications	**Modification Number / Title:** 4 / Concurrency
ID Code (A=Service Ready, B=Not Service Ready) : B	**MDAP/MAIS Code:**	

TI-0000-0854 DMCH MPEG VHDL Firmware Version
TI-0000-0866 Production Ejection Seat (-0023)
TI-0000-0884 AESG - Material & Workmanship
TI-0000-0895 Arm Disable Current Leakage Path Correction
TI-0000-0898 Electronic Warfare Band 3/4 Antenna and Edge Performance Issues
TI-0000-0910 PCD EU Cooling Rework
TI-0000-0913 LEFAS PDU Resolver and Rotor Shaft Seal Life
TI-0000-0945 CTOL Audio Control Electronics (ACE) In-Flight Refueling
TI-0000-0992 Outboard Vertical Tail Seal Redesign
TI-0000-0998 CTOL and CV Refuel System Mod
TI-0000-1000 Inboard Weapon Bay Door Flipper Door Design Change
TI-0000-1011 L-Band Pre-Selector (LBPS) Propagation Delay Calibration for Mode 5
TI-0000-1048 Panoramic Cockpit Display-Electronic Unit (PCD-EU)
TI-0000-1056 RADAR 1A & 1B Racks -0002 Cut-in
TI-0000-1060 Final Finishes
TI-0000-1078 Nacelle Insulation
TI-0000-1082 Power Panel 1 & 2 Random Vibration Failures - Second Failure
TI-0000-1092 Landing Taxi Light Redesign
TI-0000-1099 ATQA Mounting Bolt Interface
TI-0000-1102 BH-1 Weapons Bay Doors-AMRAAM Cradle Found Fatigue Cracks in Cradle Lugs @11,353 hrs
TI-0000-1113 AESG Power Connector Rating (Generator)
TI-0000-1192 Short Life - CTOL Thrust Mount Shear Web / 2WSH43777-0001 and 2WSH43778-0001 Do Not Meet Service Life Requirement
TI-0000-1198 HT Heating
TI-0000-1255 Fibre Channel Switch Design Issues-0004
TI-0000-1324 Structural Cracking of Aft MLG Door Drive Link U-Joint
TI-0000-1362 Production Incorporation of Improved ANR into VSI HMD
TI-0000-1372 EW Block-2 DRFM Module Firmware Issue
TI-0000-1396 HTCA with End Gland Material Issue
TI-0000-1408 CCDD LRIP4/LRIP 5-016 EW: AEL, Aft Sector
TI-0000-1472 Gun Port Door Threads in Bearing Issue
TI-0000-1483 Power Panel 3 Random Vibration Failures - Second Failure
TI-0000-1485 F1 Feed Tank Gasket Spill Out/Removing F1 Feed Tank Cover Gasket And Reworking To
Production Fay Seal Configuration
TI-0000-1494 PTMS Turbomachine Configuration to Correct Qualification Failures
TI-0000-1515 ESG Service Life (Generator) -0003
TI-0000-1518 Incorrect PAO Orifice In P5 Gp A Dummy LRU; Incorrect PAO Cooling Orifices In Center Fuselage Cold Liquid Loop
TI-0000-1549 Firmware Update for AMS Cartridge Reset SPAR
TI-0000-1551 28V Battery Full Qualification
TI-0000-1552 28V BCCU Lightning Compliance - 28V Battery Charger
TI-0000-1589 Hydraulic System Single Point Failure
TI-0000-1650 MWARS for Production Seat (LRIP 1-6)
TI-0000-1652 Rudder Slider Hinge Wear
TI-0000-1653 Ground Maintainance Valve Deletion to Prevent PAO in Cockpit (DR 1-4815699)
TI-0000-1706 Insertion of updated DMCH into LRIP 6 with Night Vision Camera Image Quality Improve

Exhibit P-3a, Individual Modification: PB 2020 Air Force		Date: February 2019
Appropriation / Budget Activity / Budget Sub Activity: 3010F / 05 / 2	**P-1 Line Item Number / Title:** F03500 / F-35 Modifications	**Modification Number / Title:** 4 / Concurrency
ID Code (A=Service Ready, B=Not Service Ready) : B	**MDAP/MAIS Code:**	

TI-0000-1761 HT EHA Solenoid Valve (SOV) Qual Test Failure
TI-0000-1783 Canopy Boot Cracking
TI-0000-1786 AJ-1 Test Incident - Cracked stiffener on the FS402 frame (TIN-075)
TI-0000-2450 Bleed Air Sensor Fitting Galling
TI-0000-2467 CTOL FS 503 Frame Limited Life
TI-0000-2468 CTOL IPP Shear Web Limited Life Discovery
TI-0000-2506 Gun Port Blast Mislocation
TI-0000-2528 270V Battery Gunfire Vibration Failure
TI-0000-2551 L-Band Power Amplifier (LBPA) Update for LINK-16
TI-0000-2580 AESG -0004 Qual Failure
TI-0000-2624 Lower Horizontal Tail Bullnose Panels Experiencing Coating Damage (panels 4134/4133)
TI-0000-2633 Flaperon Blade Seal Buckling
TI-0000-2659 Cockpit Green Indicator Bright/Dim Anomaly
TI-0000-2672 Radome Shroud Gapping / Trimming
TI-0000-2674 Cracking of Bifurcation Seam Treatment
TI-0000-2690 LAU-147 and BRU Vent Value Under Full Pressure
TI-0000-2699 Fibre Channel Switch Design Issues -0005
TI-0000-2714 -0025 Ejection Seat Qual Issues
TI-0000-2725 Vehicle Management Computer (VMC) Electrical Connection Issue on CTOL and STOVL A/C
TI-0000-2784 CNI 3A & 3B Integrated Backplane Assembly (IBA) EMI Upgrades
TI-0000-2786 Upgrade ICP Fibre Channel Switch Module to Address MS Stability Issues
TI-0000-2800 CNI TFR Module Humidity Qualification Test Failure
TI-0000-2818 EOTS LoS Pointing Angle
TI-0000-2833 Gun System Muzzle and Purge Door Time Out
TI-0000-2865 TR2 - SP-SPIO Issue
TI-0000-2891 OBIGGS Wash Pressure Buildup in Refuel Manifold
TI-0000-2909 IPP Bay High Flow Air Duct Separation
TI-0000-2921 Gun Vent Door Unpainted Brackets
TI-0000-3041 Nacelle Ventilation Intake (NVI) Failure Investigation
TI-0000-3054 Ammunition Handling System (AHS) Carrier Belt Rollers
TI-0000-3099 Gun Fwd Mount Muzzle Sleeve Nut Plate
TI-0000-3100 Horizontal Tail Bearing Specification Change
TI-0000-3194 Landing Aid Down Converter (LADC) Qualification Test Failure
TI-0000-3280 F-35A FS 383 Frame Short Life
TI-0000-3281 F-35A FS 402 Frame Short Life
TI-0000-3284 F-35A Center Fuselage F2 Floor Durability Life
TI-0000-3285 Egress System Safe Escape Intro for -6 Seat
TI-0000-3386 MLG Door Crank Arm Corrosion F35-A/B
TI-0000-3597 F-35 Fuel Tank Overpressure
TI-7777-0003 Block 1.0-v01.702 Formal Systems Build (Rev B - MVI R10.1.3 software. Rev C
captures ALIS 1.0.2E.1 software mod) (Rev D addresses AV software mod .702 for CTOL and new MVI R11.x.2.2)
TI-7777-0004 MLG Strut Redesign
TI-7777-0007 OBOGS Plenum HEPA Filter Provisioning
TI-7777-0010 Radar Harness Redesign

Exhibit P-3a, Individual Modification: PB 2020 Air Force		Date: February 2019
Appropriation / Budget Activity / Budget Sub Activity: 3010F / 05 / 2	**P-1 Line Item Number / Title:** F03500 / F-35 Modifications	**Modification Number / Title:** 4 / Concurrency
ID Code (A=Service Ready, B=Not Service Ready) : B	**MDAP/MAIS Code:**	

TI-7777-0024 Gun Gas Purge & Gun Port Door Actuators
TI-7777-0031 Brake Control Electronic Unit Update
TI-7777-0042 Return Fuel Cooler HX Coating
TI-7777-0057 Nacelle Fan - Full Qualified Configuration
TI-7777-0077 Small Diameter Bomb (SDB) Rack Strut
TI-7777-0081 270V BCCU Change
TI-7777-0083 CTOL/STOVL EHAS/LEFAS -0011 EU & Rack Config Update
TI-7777-0084 ACCM Filter Pin
TI-7777-0085 Replacement of Door Actuator Lock Assemblies (STOVL/CTOL Door Locks)
TI-7777-0087 CTOL/STOVL/CV Flaperon EHA Pump Design Change
TI-7777-0089 Avionics Bay Environmental Seal Change
TI-7777-0093 Flow Sensor EMI/Vibration
TI-7777-0095 Manual Drive Unit
TI-7777-0097 IEU Lightning Compliance
TI-7777-0101 NLG Down Lock Actuator
TI-7777-1001 LRIP 1&2 Block 1 Upgrade
TI-7777-1002 Replacement of Block 1B Hardware and Issuance of Block 1B Software
TI-9999-0191 Interim Solution - 270V BCCU
TI-9999-1650 MWARS for Production Seat - LRIP 5 Only
TI-0000-3443 Vehicle Management Computer CCDL Failure Investigation and Corrective Action
TI-0000-3674 NGC Supplier Disclosure - L/R 211 Skin Missing Shims
TI-0000-3762 AME 3 System Allows Water Intrusion into Aft Upper Wing Hoist Point
TI-0000-3775 FS402 Upper Frame Durability Life
TI-0000-3819 WBDDS Inductive Switch Short Life

Milestone/Development Status

DEVELOPMENT STATUS/MAJOR DEVELOPMENT MILESTONES For the F-35 program, the discovery of new concurrency changes phases out with the completion of SDD.

Exhibit P-3a, Individual Modification: PB 2020 Air Force		Date: February 2019
Appropriation / Budget Activity / Budget Sub Activity: 3010F / 05 / 2	**P-1 Line Item Number / Title:** F03500 / F-35 Modifications	**Modification Number / Title:** 4 / Concurrency
ID Code (A=Service Ready, B=Not Service Ready) : B	**MDAP/MAIS Code:**	
Models of Systems Affected: F-35A	**Modification Type:** Other	**Related RDT&E PEs:** 0604800F

Financial Plan	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
	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												
Modification Item 1 of 1: Concurrency												
A Kits												
Recurring												
Concurrency:INSTALL KITS Group A (Active)	- / 342.768	- / 11.267	- / 206.625	- / 89.326	- / -	- / 89.326	- / 83.812	- / 70.674	- / 292.860	- / 298.710	- / -	- / 1,396.042
Subtotal: Recurring	*- / 342.768*	*- / 11.267*	*- / 206.625*	*- / 89.326*	*- / -*	*- / 89.326*	*- / 83.812*	*- / 70.674*	*- / 292.860*	*- / 298.710*	*- / -*	*- / 1,396.042*
Subtotal: Concurrency	*- / 342.768*	*- / 11.267*	*- / 206.625*	*- / 89.326*	*- / -*	*- / 89.326*	*- / 83.812*	*- / 70.674*	*- / 292.860*	*- / 298.710*	*- / -*	*- / 1,396.042*
Subtotal: Procurement, All Modification Items	*- / 342.768*	*- / 11.267*	*- / 206.625*	*- / 89.326*	*- / -*	*- / 89.326*	*- / 83.812*	*- / 70.674*	*- / 292.860*	*- / 298.710*	*- / -*	*- / 1,396.042*
Support *(All Modification Items)*												
ICS-Labor	- / 13.750	- / 4.514	- / 20.427	- / 34.539	- / -	- / 34.539	- / 31.533	- / 32.158	- / -	- / -	- / -	- / 136.921
OTHER GOVT	- / 6.200	- / 1.795	- / 6.097	- / 6.785	- / -	- / 6.785	- / 6.541	- / 6.671	- / -	- / -	- / -	- / 34.089
Subtotal: Support	*- / 19.950*	*- / 6.309*	*- / 26.524*	*- / 41.324*	*- / -*	*- / 41.324*	*- / 38.074*	*- / 38.829*	*- / -*	*- / -*	*- / -*	*- / 171.010*
Installation												
Subtotal: Installation	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*
Total												
Total Cost (Procurement + Support + Installation)	**362.718**	**17.576**	**233.149**	**130.650**	**0.000**	**130.650**	**121.886**	**109.503**	**292.860**	**298.710**	**0.000**	**1,567.052**

Exhibit P-3a, Individual Modification: PB 2020 Air Force		Date: February 2019
Appropriation / Budget Activity / Budget Sub Activity: 3010F / 05 / 2	**P-1 Line Item Number / Title:** F03500 / F-35 Modifications	**Modification Number / Title:** 4 / Concurrency

ID Code (A=Service Ready, B=Not Service Ready) : B | **MDAP/MAIS Code:**

Modification Item 1 of 1: Concurrency

Manufacturer Information

Manufacturer Name: Lockheed Martin | Manufacturer Location: Fort Worth

Administrative Leadtime *(in Months)*: 0 | Production Leadtime *(in Months)*: 0

Dates	FY 2018	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024
Contract Dates							
Delivery Dates							

Installation Information

Method of Implementation (Organic): Org/Intermediate | **Installation Quantity:** 0

Exhibit P-3a, Individual Modification: PB 2020 Air Force		Date: February 2019
Appropriation / Budget Activity / Budget Sub Activity: 3010F / 05 / 2	**P-1 Line Item Number / Title:** F03500 / F-35 Modifications	**Modification Number / Title:** 5 / Correction of Deficiencies
ID Code (A=Service Ready, B=Not Service Ready) : B	**MDAP/MAIS Code:**	

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 *(Units in Each)*	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost *($ in Millions)*	0.000	0.000	0.000	187.719	0.000	187.719	159.634	177.597	0.000	0.000	0.000	524.950
Less PY Advance Procurement *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) *($ in Millions)*	0.000	0.000	0.000	187.719	0.000	187.719	159.634	177.597	0.000	0.000	0.000	524.950
Plus CY Advance Procurement *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Total Obligation Authority *($ in Millions)*	**0.000**	**0.000**	**0.000**	**187.719**	**0.000**	**187.719**	**159.634**	**177.597**	**0.000**	**0.000**	**0.000**	**524.950**
(The following Resource Summary rows are for informational purposes only. The corresponding budget requests are documented elsewhere.)												
Initial Spares *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Unit Cost *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-

Description:

This program, P-3A Mod F3517, Correction of Deficiencies, is a new start.
F-35 CTOL Correction of Deficiencies provides near and long term improvements to fielded F-35 jets, and focuses on correcting documented deficiencies related to safety, maintainability, and aircraft systems. These modifications and selected component changes are being accomplished by field retrofit performed by Hill AFB, contractor artisans, contractor field mod teams, and organic support. In order to meet emerging deficiencies, the airframe and integrated systems must be modified as critical corrections/changes are identified. Funds will be used to manage, prepare, process and incorporate Engineering Change Proposals (ECP) and implement those changes to sustain and improve F-35 CTOL system operations. ECPs are implemented to coincide with resources and aircraft availability. These changes provide more robust performance in navigation, weapons, avionics, survivability, maneuverability, maintainability, and mission deployment of the
F-35 CTOL platform. This modification program may be required to provide timely remedial action for any aircraft system, component or structure.

Milestone/Development Status

DEVELOPMENT STATUS / MAJOR DEVELOPMENT MILESTONES: The establishment of this Modification is concurrent with the phase out of SDD in FY18 and after the declaration of IOC for the USAF in FY16. This Modification will fund the incorporation of ECPs that are not associated with the concurrency program.

Exhibit P-3a, Individual Modification: PB 2020 Air Force		Date: February 2019
Appropriation / Budget Activity / Budget Sub Activity: 3010F / 05 / 2	**P-1 Line Item Number / Title:** F03500 / F-35 Modifications	**Modification Number / Title:** 5 / Correction of Deficiencies
ID Code (A=Service Ready, B=Not Service Ready) : B	**MDAP/MAIS Code:**	
Models of Systems Affected: F-35A	**Modification Type:** Reliability & Maintainability	**Related RDT&E PEs:** 0604800F

Financial Plan	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
	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												
Modification Item 1 of 1: Correction of Deficiencies												
B Kits												
Recurring												
Correction of Deficiencies:EQUIPMENT Group B (Active)	- / -	- / -	- / -	50 / 150.946	- / -	50 / 150.946	50 / 139.861	56 / 157.370	- / -	- / -	- / -	156 / 448.177
Subtotal: Recurring	*- / -*	*- / -*	*- / -*	*- / 150.946*	*- / -*	*- / 150.946*	*- / 139.861*	*- / 157.370*	*- / -*	*- / -*	*- / -*	*- / 448.177*
Subtotal: Correction of Deficiencies	*- / -*	*- / -*	*- / -*	*- / 150.946*	*- / -*	*- / 150.946*	*- / 139.861*	*- / 157.370*	*- / -*	*- / -*	*- / -*	*- / 448.177*
Subtotal: Procurement, All Modification Items	*- / -*	*- / -*	*- / -*	*- / 150.946*	*- / -*	*- / 150.946*	*- / 139.861*	*- / 157.370*	*- / -*	*- / -*	*- / -*	*- / 448.177*
Support *(All Modification Items)*												
ICS-Labor	- / -	- / -	- / -	- / 16.536	- / -	- / 16.536	- / 15.327	- / 15.631	- / -	- / -	- / -	- / 47.494
OTHER GOVT	- / -	- / -	- / -	- / 19.620	- / -	- / 19.620	- / 3.828	- / 3.903	- / -	- / -	- / -	- / 27.351
Subtotal: Support	*- / -*	*- / -*	*- / -*	*- / 36.156*	*- / -*	*- / 36.156*	*- / 19.155*	*- / 19.534*	*- / -*	*- / -*	*- / -*	*- / 74.845*
Installation												
Modification Item 1 of 1: Correction of Deficiencies	- / -	- / -	- / -	50 / 0.617	- / -	50 / 0.617	50 / 0.618	56 / 0.693	- / -	- / -	- / -	156 / 1.928
Subtotal: Installation	*- / -*	*- / -*	*- / -*	*50 / 0.617*	*- / -*	*50 / 0.617*	*50 / 0.618*	*56 / 0.693*	*- / -*	*- / -*	*- / -*	*156 / 1.928*
Total												
Total Cost (Procurement + Support + Installation)	**0.000**	**0.000**	**0.000**	**187.719**	**0.000**	**187.719**	**159.634**	**177.597**	**0.000**	**0.000**	**0.000**	**524.950**

Exhibit P-3a, Individual Modification: PB 2020 Air Force		Date: February 2019
Appropriation / Budget Activity / Budget Sub Activity: 3010F / 05 / 2	**P-1 Line Item Number / Title:** F03500 / F-35 Modifications	**Modification Number / Title:** 5 / Correction of Deficiencies
ID Code (A=Service Ready, B=Not Service Ready) : B	**MDAP/MAIS Code:**	

Modification Item 1 of 1: Correction of Deficiencies

Manufacturer Information

Manufacturer Name: TBD	Manufacturer Location: TBD
Administrative Leadtime *(in Months)*: 0	Production Leadtime *(in Months)*: 0

Dates	FY 2018	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024
Contract Dates							
Delivery Dates							

Installation Information

Method of Implementation: Depot

Installation Cost	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
	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)*
Prior Years	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2018	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2019	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2020	- / -	- / -	- / -	50 / 0.617	- / -	50 / 0.617	- / -	- / -	- / -	- / -	- / -	50 / 0.617
FY 2021	- / -	- / -	- / -	- / -	- / -	- / -	50 / 0.618	- / -	- / -	- / -	- / -	50 / 0.618
FY 2022	- / -	- / -	- / -	- / -	- / -	- / -	- / -	56 / 0.693	- / -	- / -	- / -	56 / 0.693
FY 2023	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2024	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
To Complete	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
Total	- / -	- / -	- / -	50 / 0.617	- / -	50 / 0.617	50 / 0.618	56 / 0.693	- / -	- / -	- / -	156 / 1.928

Installation Schedule

		FY 2018				FY 2019				FY 2020				FY 2021				FY 2022				FY 2023				FY 2024					
	PYS	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	TC	Tot
In	0	-	-	-	-	-	-	-	-	12	12	12	14	13	12	12	13	14	14	14	14	-	-	-	-	-	-	-	-	0	156
Out	0	-	-	-	-	-	-	-	-	12	12	12	14	13	12	12	13	14	14	14	14	-	-	-	-	-	-	-	-	0	156

Exhibit P-3a, Individual Modification: PB 2020 Air Force		Date: February 2019
Appropriation / Budget Activity / Budget Sub Activity: 3010F / 05 / 2	**P-1 Line Item Number / Title:** F03500 / F-35 Modifications	**Modification Number / Title:** 6 / Block 4 Modifications
ID Code (A=Service Ready, B=Not Service Ready) : B	**MDAP/MAIS Code:**	

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 *(Units in Each)*	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost *($ in Millions)*	-	-	-	14.000	0.000	14.000	0.000	0.000	0.000	0.000	-	14.000
Less PY Advance Procurement *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) *($ in Millions)*	-	-	-	14.000	0.000	14.000	0.000	0.000	0.000	0.000	-	14.000
Plus CY Advance Procurement *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Total Obligation Authority *($ in Millions)*	**-**	**-**	**-**	**14.000**	**0.000**	**14.000**	**0.000**	**0.000**	**0.000**	**0.000**	**-**	**14.000**
(The following Resource Summary rows are for informational purposes only. The corresponding budget requests are documented elsewhere.)												
Initial Spares *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Unit Cost *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-

Description:

This program, P-3A Mod F3518, Block 4 Modifications, is a new start.
The multi-role F-35A is the centerpiece of the U.S. Air Force's future fighter precision attack capability, and it is of vital importance to our nation's security, forming the backbone of U.S. air combat superiority for decades to come.

The current driver for the F-35A is the Block 4 upgrade, with a primary focus on meeting the estimated threat in the 2025 timeframe. It is critical we fully fund Block 4 to prevent the delay of vital capabilities for American and Coalition warfighters. These capabilities include: integration of additional weapons as well as essential upgrades to the electronic warfare system, data link systems, and radar.

This effort funds production of non-recurring Block 4 Modifications.

Milestone/Development Status

Development Status. This effort is upgrading Block 3 aircraft to a Block 4 configuration. Development status is pending.

Exhibit P-3a, Individual Modification: PB 2020 Air Force		Date: February 2019
Appropriation / Budget Activity / Budget Sub Activity: 3010F / 05 / 2	**P-1 Line Item Number / Title:** F03500 / F-35 Modifications	**Modification Number / Title:** 6 / Block 4 Modifications
ID Code (A=Service Ready, B=Not Service Ready) : B	**MDAP/MAIS Code:**	
Models of Systems Affected: F-35A	**Modification Type:** Capability Improvement	**Related RDT&E PEs:** 0604840F

Financial Plan	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
	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												
Modification Item 1 of 1: Block 4 Modifications												
A Kits												
Recurring												
Block 4 Modifications:INSTALL KITS Group A (Active)	- / -	- / -	- / -	1 / 14.000	- / -	1 / 14.000	- / -	- / -	- / -	- / -	- / -	1 / 14.000
Subtotal: Recurring	- / -	- / -	- / -	- / 14.000	- / -	- / 14.000	- / -	- / -	- / -	- / -	- / -	- / 14.000
Subtotal: Block 4 Modifications	- / -	- / -	- / -	- / 14.000	- / -	- / 14.000	- / -	- / -	- / -	- / -	- / -	- / 14.000
Subtotal: Procurement, All Modification Items	- / -	- / -	- / -	- / 14.000	- / -	- / 14.000	- / -	- / -	- / -	- / -	- / -	- / 14.000
Installation												
Subtotal: Installation	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
Total												
Total Cost (Procurement + Support + Installation)	-	-	-	14.000	0.000	14.000	0.000	0.000	0.000	0.000	-	14.000

Exhibit P-3a, Individual Modification: PB 2020 Air Force		Date: February 2019
Appropriation / Budget Activity / Budget Sub Activity: 3010F / 05 / 2	**P-1 Line Item Number / Title:** F03500 / F-35 Modifications	**Modification Number / Title:** 6 / Block 4 Modifications

ID Code (A=Service Ready, B=Not Service Ready) : B | **MDAP/MAIS Code:**

Modification Item 1 of 1: Block 4 Modifications

Manufacturer Information

Manufacturer Name: Lockheed Martin	Manufacturer Location: Fort Worth, TX
Administrative Leadtime *(in Months)*: 0	Production Leadtime *(in Months)*: 27

Dates	FY 2018	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024
Contract Dates			Oct 2019				
Delivery Dates			Jan 2022				

Installation Information

Method of Implementation (Organic): Org/Intermediate | **Installation Quantity:** 1

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Exhibit P-40, Budget Line Item Justification: PB 2020 Air Force	Date: February 2019
Appropriation / Budget Activity / Budget Sub Activity: 3010F: Aircraft Procurement, Air Force / BA 05: Modification of Inservice Aircraft / BSA 2: Tactical Aircraft	**P-1 Line Item Number / Title:** F15EWS / F-15 EPAW

ID Code (A=Service Ready, B=Not Service Ready): B	**Program Elements for Code B Items:** 0207171F	**Other Related Program Elements:** N/A

Line Item MDAP/MAIS Code: 485

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 *(Units in Each)*	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost *($ in Millions)*	-	0.000	214.885	149.047	-	149.047	179.087	308.818	337.777	266.100	651.507	2,107.221
Less PY Advance Procurement *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) *($ in Millions)*	-	0.000	214.885	149.047	-	149.047	179.087	308.818	337.777	266.100	651.507	2,107.221
Plus CY Advance Procurement *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Total Obligation Authority *($ in Millions)*	**-**	**0.000**	**214.885**	**149.047**	**-**	**149.047**	**179.087**	**308.818**	**337.777**	**266.100**	**651.507**	**2,107.221**
(The following Resource Summary rows are for informational purposes only. The corresponding budget requests are documented elsewhere.)												
Initial Spares *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Flyaway Unit Cost *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Unit Cost *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-

Description:

The current F-15's self-protection suite called the Tactical Electronic Warfare System (TEWS) is functionally obsolete. It uses 1970's analog technology designed for combat operations in environments defended by 1980s-era radar-based ground and air threats. In addition, this aging system is becoming more difficult and expensive to support. As a result, Air Force is replacing TEWS with the F-15 Eagle Passive / Active Warning and Survivability System (EPAWSS). F-15 EPAWSS is an advanced digital electronic warfare system capable of detecting, identifying, locating, denying, degrading, disrupting, and defeating modern and emerging threat systems in up to contested environments. This upgrade will significantly improve the F-15's capability to autonomously and automatically detect, identify and locate radio frequency (RF) threats as well as provide the ability to deny, degrade, deceive, disrupt and defeat RF and electro-optical / infrared (EO / IR) threat systems in contested and unplanned operations within highly contested environments through 2040. F-15 EPAWSS will provide indication, type and position of ground-based RF threats as well as the indication, type and bearing of airborne threats with the situational awareness needed to avoid, engage or negate the threat. It will also prevent RF and IR threat systems from detecting or acquiring accurate targeting information prior to threat engagement to complicate and / or negate an enemy threat targeting solution--and effectively counter enemy missiles / weapons if adversary threat systems engage and employ weapons against friendly forces--through components such as chaff, flares, decoys / angle countermeasures and jamming.

Funding may be used to resolve Diminishing Manufacturing Sources/Material Shortages (DMSMS) and/or obsolescence issues. DMSMS activities may include, but are not limited to, bridge buys, life of type buys, buys to protect production schedule, and minor engineering efforts. DMSMS costs are included in Group B NRE; SE/PM costs are included in Group B recurring.

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.

Secondary Distribution		FY 2018	FY 2019	FY 2020 Base	FY 2020 OCO	FY 2020 Total	FY 2021	FY 2022	FY 2023	FY 2024
AF	Quantity	-	-	-	-	-	-	-	-	-
	Total Obligation Authority	-	214.884	149.047	0.000	149.047	179.087	308.818	337.777	266.100
AFNG	Quantity	-	-	-	-	-	-	-	-	-
	Total Obligation Authority	-	0.000	0.000	-	0.000	0.000	0.000	0.000	0.000
Total:	**Quantity**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**

Exhibit P-40, Budget Line Item Justification: PB 2020 Air Force		Date: February 2019
Appropriation / Budget Activity / Budget Sub Activity: 3010F: Aircraft Procurement, Air Force / BA 05: Modification of Inservice Aircraft / BSA 2: Tactical Aircraft	**P-1 Line Item Number / Title:** F15EWS / F-15 EPAW	
ID Code (A=Service Ready, B=Not Service Ready): B	**Program Elements for Code B Items:** 0207171F	**Other Related Program Elements:** N/A
Line Item MDAP/MAIS Code: 485		

Secondary Distribution		FY 2018	FY 2019	FY 2020 Base	FY 2020 OCO	FY 2020 Total	FY 2021	FY 2022	FY 2023	FY 2024
Secondary Distribution	Total Obligation Authority	-	214.884	149.047	0.000	149.047	179.087	308.818	337.777	266.100

Exhibit P-40, Budget Line Item Justification: PB 2020 Air Force	Date: February 2019
Appropriation / Budget Activity / Budget Sub Activity: 3010F: Aircraft Procurement, Air Force / BA 05: Modification of Inservice Aircraft / BSA 2: Tactical Aircraft	**P-1 Line Item Number / Title:** F15EWS / F-15 EPAW

ID Code (A=Service Ready, B=Not Service Ready): B	Program Elements for Code B Items: 0207171F	Other Related Program Elements: N/A

Line Item MDAP/MAIS Code: 485

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-3a	8795 / EPAWSS F-15C/D (Capability Improvement)		B		- / -	- / -	- / 67.200	- / 0.000	- / 0.000	- / 0.000
P-3a	8796 / EPAWSS F-15E (Capability Improvement)		B		- / -	- / -	- / 147.684	- / 149.047	- / 0.000	- / 149.047
P-40	**Total Gross/Weapon System Cost**				**- / -**	**- / 0.000**	**- / 214.885**	**- / 149.047**	**- / -**	**- / 149.047**

Exhibits Schedule					FY 2021	FY 2022	FY 2023	FY 2024	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	8795 / EPAWSS F-15C/D (Capability Improvement)		B		- / 0.000	- / 0.000	- / 0.000	- / 0.000	- / 0.000	- / 67.200
P-3a	8796 / EPAWSS F-15E (Capability Improvement)		B		- / 179.087	- / 308.818	- / 337.777	- / 266.100	- / 651.507	- / 2,040.020
P-40	**Total Gross/Weapon System Cost**				**- / 179.087**	**- / 308.818**	**- / 337.777**	**- / 266.100**	**- / 651.507**	**- / 2,107.221**

*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:
Where applicable, justification for individual modifications is provided in the P-3A exhibits.

Exhibit P-3a, Individual Modification: PB 2020 Air Force		Date: February 2019
Appropriation / Budget Activity / Budget Sub Activity: 3010F / 05 / 2	**P-1 Line Item Number / Title:** F15EWS / F-15 EPAW	**Modification Number / Title:** 8795 / EPAWSS F-15C/D
ID Code (A=Service Ready, B=Not Service Ready) : B	**MDAP/MAIS Code:**	

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 *(Units in Each)*	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost *($ in Millions)*	-	-	67.200	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	67.200
Less PY Advance Procurement *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) *($ in Millions)*	-	-	67.200	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	67.200
Plus CY Advance Procurement *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Total Obligation Authority *($ in Millions)*	**-**	**-**	**67.200**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**67.200**
(The following Resource Summary rows are for informational purposes only. The corresponding budget requests are documented elsewhere.)												
Initial Spares *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Unit Cost *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-

Description:

The current F-15's self-protection suite called the Tactical Electronic Warfare System (TEWS) is functionally obsolete. It uses 1970's analog technology designed for combat operations in environments defended by 1980s-era radar-based ground and air threats. In addition, this aging system is becoming more difficult and expensive to support. As a result, Air Force is replacing TEWS with the F-15 Eagle Passive / Active Warning and Survivability System (EPAWSS). F-15 EPAWSS is an advanced digital electronic warfare system capable of detecting, identifying, locating, denying, degrading, disrupting, and defeating modern and emerging threat systems in up to contested environments. This upgrade will significantly improve the F-15's capability to autonomously and automatically detect, identify and locate radio frequency (RF) threats as well as provide the ability to deny, degrade, deceive, disrupt and defeat RF and electro-optical / infrared (EO / IR) threat systems in contested and unplanned operations within highly contested environments through 2040. F-15 EPAWSS will provide indication, type and position of ground-based RF threats as well as the indication, type and bearing of airborne threats with the situational awareness needed to avoid, engage or negate the threat. It will also prevent RF and IR threat systems from detecting or acquiring accurate targeting information prior to threat engagement to complicate and / or negate an enemy threat targeting solution--and effectively counter enemy missiles / weapons if adversary threat systems engage and employ weapons against friendly forces--through components such as chaff, flares, decoys / angle countermeasures and jamming.

Funding may be used to resolve Diminishing Manufacturing Sources/Material Shortages (DMSMS) and/or obsolescence issues. DMSMS activities may include, but are not limited to, bridge buys, life of type buys, buys to protect production schedule, and minor engineering efforts. DMSMS costs are included in Group B Non Recurring Engineering; Sustaining Engineering/Program Management costs are included in Group B recurring.

Milestone/Development Status

F-15 EPAWSS remains within its acquisition program baseline for Milestone C. Although electronic warfare hardware delays are pacing the program, tailored acquisition strategy will enables early initiation of Low Rate Initial Production.

Secondary Distribution		FY 2018	FY 2019	FY 2020 Base	FY 2020 OCO	FY 2020 Total	FY 2021	FY 2022	FY 2023	FY 2024
AF	Quantity	-	-	-	-	-	-	-	-	-
	Total Obligation Authority	-	67.200	0.000	-	0.000	0.000	0.000	0.000	0.000
Total: Secondary Distribution	**Quantity**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**
	Total Obligation Authority	**-**	**67.200**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**

Exhibit P-3a, Individual Modification: PB 2020 Air Force		Date: February 2019
Appropriation / Budget Activity / Budget Sub Activity: 3010F / 05 / 2	P-1 Line Item Number / Title: F15EWS / F-15 EPAW	Modification Number / Title: 8795 / EPAWSS F-15C/D
ID Code (A=Service Ready, B=Not Service Ready) : B	MDAP/MAIS Code:	
Models of Systems Affected: F-15C	Modification Type: Capability Improvement	Related RDT&E PEs: 0207171F

Financial Plan	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
	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)*
RDT&E PE #												
0207171F	- / -	- / -	- / 137.095	- / 67.322	- / -	- / 67.322	- / 1.276	- / 2.360	- / 22.573	- / -	- / -	- / 230.626
Procurement												
Modification Item 1 of 1: EPAWSS												
A Kits												
Recurring												
EPAWSS:INSTALL KITS Group A (Active)	- / -	- / -	4 / 30.262	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 0.000	4 / 30.262
Subtotal: Recurring	- / -	- / -	- / *30.262*	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / *0.000*	- / *30.262*
B Kits												
Recurring												
EPAWSS:EQUIPMENT Group B (Active)	- / -	- / -	4 / 19.085	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	4 / 19.085
Subtotal: Recurring	- / -	- / -	- / *19.085*	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / *19.085*
Subtotal: EPAWSS	- / -	- / -	- / *49.347*	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / *0.000*	- / *49.347*
Subtotal: Procurement, All Modification Items	- / -	- / -	- / *49.347*	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / *0.000*	- / *49.347*
Support *(All Modification Items)*												
GROUP B: TOTAL NONRECURRING	- / -	- / -	- / -	- / 0.000	- / -	- / 0.000	- / 0.000	- / 0.000	- / 0.000	- / 0.000	- / 0.000	- / 0.000
PMA - Other Gov't Costs	- / -	- / -	- / 4.403	- / 0.000	- / -	- / 0.000	- / 0.000	- / 0.000	- / 0.000	- / 0.000	- / 0.000	- / 4.403
Data	- / -	- / -	- / 0.632	- / 0.000	- / -	- / 0.000	- / 0.000	- / 0.000	- / 0.000	- / 0.000	- / 0.000	- / 0.632
Change Orders	- / -	- / -	- / 3.972	- / 0.000	- / -	- / 0.000	- / 0.000	- / 0.000	- / 0.000	- / 0.000	- / 0.000	- / 3.972
SUPPORT-EQUIP	- / -	- / -	- / 1.418	- / 0.000	- / -	- / 0.000	- / 0.000	- / 0.000	- / 0.000	- / 0.000	- / 0.000	- / 1.418
ICS-Labor	- / -	- / -	- / 0.000	- / 0.000	- / -	- / 0.000	- / 0.000	- / 0.000	- / 0.000	- / 0.000	- / 0.000	- / 0.000
Type 1 Training	- / -	- / -	- / 0.228	- / 0.000	- / -	- / 0.000	- / 0.000	- / 0.000	- / 0.000	- / 0.000	- / 0.000	- / 0.228
Subtotal: Support	- / -	- / -	- / *10.653*	- / *0.000*	- / -	- / *0.000*	- / *0.000*	- / *0.000*	- / *0.000*	- / *0.000*	- / *0.000*	- / *10.653*
Installation												
Modification Item 1 of 1: EPAWSS	- / -	- / -	4 / 7.200	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	4 / 7.200
Subtotal: Installation	- / -	- / -	*4 / 7.200*	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	*4 / 7.200*
Total												
Total Cost (Procurement + Support + Installation)	**-**	**-**	**67.200**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**67.200**

Exhibit P-3a, Individual Modification: PB 2020 Air Force		Date: February 2019
Appropriation / Budget Activity / Budget Sub Activity: 3010F / 05 / 2	**P-1 Line Item Number / Title:** F15EWS / F-15 EPAW	**Modification Number / Title:** 8795 / EPAWSS F-15C/D
ID Code (A=Service Ready, B=Not Service Ready) : B	**MDAP/MAIS Code:**	

Modification Item 1 of 1: EPAWSS

Manufacturer Information

Manufacturer Name: Boeing	Manufacturer Location: St. Louis
Administrative Leadtime *(in Months)*: 0	Production Leadtime *(in Months)*: 13

Dates	FY 2018	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024
Contract Dates		Aug 2019					
Delivery Dates		Sep 2020					

Installation Information

Method of Implementation: Contract Field Team

Installation Cost	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
	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)*
Prior Years	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2018	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2019	- / -	- / -	4 / 7.200	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	4 / 7.200
FY 2020	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2021	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2022	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2023	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2024	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
To Complete	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
Total	- / -	- / -	4 / 7.200	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	4 / 7.200

Installation Schedule

	PYS	FY 2018				FY 2019				FY 2020				FY 2021				FY 2022				FY 2023				FY 2024				TC	Tot
		Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4		
In	0	-	-	-	-	-	-	-	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0	4
Out	0	-	-	-	-	-	-	-	-	-	-	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0	4

Exhibit P-3a, Individual Modification: PB 2020 Air Force		Date: February 2019
Appropriation / Budget Activity / Budget Sub Activity: 3010F / 05 / 2	**P-1 Line Item Number / Title:** F15EWS / F-15 EPAW	**Modification Number / Title:** 8796 / EPAWSS F-15E
ID Code (A=Service Ready, B=Not Service Ready) : B	**MDAP/MAIS Code:**	

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 *(Units in Each)*	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost *($ in Millions)*	-	-	147.684	149.047	0.000	149.047	179.087	308.818	337.777	266.100	651.507	2,040.020
Less PY Advance Procurement *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) *($ in Millions)*	-	-	147.684	149.047	0.000	149.047	179.087	308.818	337.777	266.100	651.507	2,040.020
Plus CY Advance Procurement *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Total Obligation Authority *($ in Millions)*	**-**	**-**	**147.684**	**149.047**	**0.000**	**149.047**	**179.087**	**308.818**	**337.777**	**266.100**	**651.507**	**2,040.020**
(The following Resource Summary rows are for informational purposes only. The corresponding budget requests are documented elsewhere.)												
Initial Spares *($ in Millions)*	-	-	0.000	4.185	-	4.185	8.046	10.214	19.605	11.100	11.679	64.829
Gross/Weapon System Unit Cost *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-

Description:

The current F-15's self-protection suite called the Tactical Electronic Warfare System (TEWS) is functionally obsolete. It uses 1970's analog technology designed for combat operations in environments defended by 1980s-era radar-based ground and air threats. In addition, this aging system is becoming more difficult and expensive to support. As a result, Air Force is replacing TEWS with the F-15 Eagle Passive / Active Warning and Survivability System (EPAWSS). F-15 EPAWSS is an advanced digital electronic warfare system capable of detecting, identifying, locating, denying, degrading, disrupting, and defeating modern and emerging threat systems in up to contested environments. This upgrade will significantly improve the F-15's capability to autonomously and automatically detect, identify and locate radio frequency (RF) threats as well as provide the ability to deny, degrade, deceive, disrupt and defeat RF and electro-optical / infrared (EO / IR) threat systems in contested and unplanned operations within highly contested environments through 2040. F-15 EPAWSS will provide indication, type and position of ground-based RF threats as well as the indication, type and bearing of airborne threats with the situational awareness needed to avoid, engage or negate the threat. It will also prevent RF and IR threat systems from detecting or acquiring accurate targeting information prior to threat engagement to complicate and / or negate an enemy threat targeting solution--and effectively counter enemy missiles / weapons if adversary threat systems engage and employ weapons against friendly forces--through components such as chaff, flares, decoys / angle countermeasures and jamming.

Funding may be used to resolve Diminishing Manufacturing Sources/Material Shortages (DMSMS) and/or obsolescence issues. DMSMS activities may include, but are not limited to, bridge buys, life of type buys, buys to protect production schedule, and minor engineering efforts. DMSMS costs are included in Group B Non Recurring Engineering; Sustaining Engineering/Program Management costs are included in Group B recurring.

Milestone/Development Status

F-15 EPAWSS remains within its acquisition program baseline for Milestone C. Although electronic warfare hardware delays are pacing the program, tailored acquisition strategy will enables early initiation of Low Rate Initial Production.

Secondary Distribution		FY 2018	FY 2019	FY 2020 Base	FY 2020 OCO	FY 2020 Total	FY 2021	FY 2022	FY 2023	FY 2024
AF	Quantity	-	-	-	-	-	-	-	-	-
	Total Obligation Authority	-	147.684	149.047	0.000	149.047	179.087	308.818	337.777	266.100
AFNG	Quantity	-	-	-	-	-	-	-	-	-
	Total Obligation Authority	-	0.000	0.000	-	0.000	0.000	0.000	0.000	0.000
Total:	**Quantity**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**

Exhibit P-3a, Individual Modification: PB 2020 Air Force		Date: February 2019
Appropriation / Budget Activity / Budget Sub Activity: 3010F / 05 / 2	**P-1 Line Item Number / Title:** F15EWS / F-15 EPAW	**Modification Number / Title:** 8796 / EPAWSS F-15E
ID Code (A=Service Ready, B=Not Service Ready) : B	**MDAP/MAIS Code:**	

Secondary Distribution		FY 2018	FY 2019	FY 2020 Base	FY 2020 OCO	FY 2020 Total	FY 2021	FY 2022	FY 2023	FY 2024
Secondary Distribution	Total Obligation Authority	-	147.684	149.047	0.000	149.047	179.087	308.818	337.777	266.100

Exhibit P-3a, Individual Modification: PB 2020 Air Force		Date: February 2019
Appropriation / Budget Activity / Budget Sub Activity: 3010F / 05 / 2	**P-1 Line Item Number / Title:** F15EWS / F-15 EPAW	**Modification Number / Title:** 8796 / EPAWSS F-15E
ID Code (A=Service Ready, B=Not Service Ready) : B	**MDAP/MAIS Code:**	
Models of Systems Affected: F-15E	**Modification Type:** Capability Improvement	**Related RDT&E PEs:** 0207171F

Financial Plan	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
	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)*
RDT&E PE #												
0207171F	- / -	- / -	- / 137.095	- / 47.322	- / -	- / 47.322	- / 23.942	- / 12.269	- / -	- / -	- / -	- / 220.628
Procurement												
Modification Item 1 of 1: F-15E EPAWSS												
A Kits												
Recurring												
F-15E EPAWSS:INSTALL KITS Group A (Active)	- / -	- / -	14 / 73.621	12 / 81.467	- / -	12 / 81.467	23 / 63.658	27 / 165.841	33 / 159.474	26 / 102.107	82 / 184.917	217 / 831.085
F-15E EPAWSS:INSTALL KITS Group A (Guard)	- / -	- / -	0 / 0.000	0 / 0.000	- / -	0 / 0.000	0 / 0.000	0 / 0.000	0 / 0.000	0 / 0.000	0 / 0.000	0 / 0.000
Subtotal: Recurring	*- / -*	*- / -*	*- / 73.621*	*- / 81.467*	*- / -*	*- / 81.467*	*- / 63.658*	*- / 165.841*	*- / 159.474*	*- / 102.107*	*- / 184.917*	*- / 831.085*
B Kits												
Recurring												
F-15E EPAWSS:EQUIPMENT Group B (Active)	- / -	- / -	14 / 54.123	12 / 47.636	- / 0.000	12 / 47.636	23 / 75.116	27 / 89.739	33 / 110.758	26 / 88.178	82 / 183.787	217 / 649.337
F-15E EPAWSS:EQUIPMENT Group B (Guard)	- / -	- / -	0 / 0.000	0 / 0.000	- / -	0 / 0.000	0 / 0.000	0 / 0.000	0 / 0.000	0 / 0.000	0 / 0.000	0 / 0.000
Subtotal: Recurring	*- / -*	*- / -*	*- / 54.123*	*- / 47.636*	*- / 0.000*	*- / 47.636*	*- / 75.116*	*- / 89.739*	*- / 110.758*	*- / 88.178*	*- / 183.787*	*- / 649.337*
Subtotal: F-15E EPAWSS	*- / -*	*- / -*	*- / 127.744*	*- / 129.103*	*- / 0.000*	*- / 129.103*	*- / 138.774*	*- / 255.580*	*- / 270.232*	*- / 190.285*	*- / 368.704*	*- / 1,480.422*
Subtotal: Procurement, All Modification Items	*- / -*	*- / -*	*- / 127.744*	*- / 129.103*	*- / 0.000*	*- / 129.103*	*- / 138.774*	*- / 255.580*	*- / 270.232*	*- / 190.285*	*- / 368.704*	*- / 1,480.422*
Support *(All Modification Items)*												
GROUP A: TOTAL NONRECURRING	- / -	- / -	- / 0.000	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 0.000
ICS-Labor	- / -	- / -	- / -	- / 4.724	- / -	- / 4.724	- / 5.061	- / 5.521	- / 7.210	- / 7.891	- / 28.643	- / 59.050
PMA - Other Gov't Costs	- / -	- / -	- / 3.352	- / 2.850	- / -	- / 2.850	- / 4.452	- / 7.199	- / 7.947	- / 7.996	- / 17.587	- / 51.383
SUPPORT-EQUIP	- / -	- / -	- / 12.340	- / 3.614	- / -	- / 3.614	- / 1.477	- / -	- / 2.302	- / -	- / 6.059	- / 25.792
Data	- / -	- / -	- / 1.604	- / 1.526	- / -	- / 1.526	- / 2.954	- / 3.429	- / 4.376	- / 3.877	- / 14.142	- / 31.908
Change Orders	- / -	- / -	- / 2.644	- / 1.000	- / -	- / 1.000	- / 0.916	- / 1.846	- / 1.172	- / -	- / 2.291	- / 9.869
Subtotal: Support	*- / -*	*- / -*	*- / 19.940*	*- / 13.714*	*- / -*	*- / 13.714*	*- / 14.860*	*- / 17.995*	*- / 23.007*	*- / 19.764*	*- / 68.722*	*- / 178.002*
Installation												
Modification Item 1 of 1: F-15E EPAWSS	- / -	- / -	- / -	4 / 6.230	- / -	4 / 6.230	15 / 25.453	22 / 35.243	27 / 44.538	33 / 56.051	116 / 214.081	217 / 381.596
Subtotal: Installation	*- / -*	*- / -*	*- / -*	*4 / 6.230*	*- / -*	*4 / 6.230*	*15 / 25.453*	*22 / 35.243*	*27 / 44.538*	*33 / 56.051*	*116 / 214.081*	*217 / 381.596*
Total												
Total Cost (Procurement + Support + Installation)	**-**	**-**	**147.684**	**149.047**	**0.000**	**149.047**	**179.087**	**308.818**	**337.777**	**266.100**	**651.507**	**2,040.020**

Exhibit P-3a, Individual Modification: PB 2020 Air Force		Date: February 2019
Appropriation / Budget Activity / Budget Sub Activity: 3010F / 05 / 2	**P-1 Line Item Number / Title:** F15EWS / F-15 EPAW	**Modification Number / Title:** 8796 / EPAWSS F-15E
ID Code (A=Service Ready, B=Not Service Ready) : B	**MDAP/MAIS Code:**	

Modification Item 1 of 1: F-15E EPAWSS

Manufacturer Information

Manufacturer Name: Boeing	Manufacturer Location: St. Louis
Administrative Leadtime *(in Months)*: 0	Production Leadtime *(in Months)*: 13

Dates	FY 2018	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024
Contract Dates		Aug 2019	Aug 2020	Jun 2021	Jun 2022	Jun 2023	Jun 2024
Delivery Dates		Sep 2020	Sep 2021	Jul 2022	Jul 2023	Jul 2024	Jul 2025

Installation Information

Method of Implementation: Contract Field Team

Installation Cost	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
	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)*
Prior Years	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2018	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2019	- / -	- / -	- / -	4 / 6.230	- / -	4 / 6.230	10 / 16.969	- / -	- / -	- / -	- / -	14 / 23.199
FY 2020	- / -	- / -	- / -	- / -	- / -	- / -	5 / 8.484	7 / 11.214	- / -	- / -	- / -	12 / 19.698
FY 2021	- / -	- / -	- / -	- / -	- / -	- / -	- / -	15 / 24.029	8 / 13.196	- / -	- / -	23 / 37.225
FY 2022	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	19 / 31.342	8 / 13.588	- / -	27 / 44.930
FY 2023	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	25 / 42.463	8 / 13.992	33 / 56.455
FY 2024	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	26 / 45.888	26 / 45.888
To Complete	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	82 / 154.201	82 / 154.201
Total	- / -	- / -	- / -	4 / 6.230	- / -	4 / 6.230	15 / 25.453	22 / 35.243	27 / 44.538	33 / 56.051	116 / 214.081	217 / 381.596

Installation Schedule

	PYS	FY 2018				FY 2019				FY 2020				FY 2021				FY 2022				FY 2023				FY 2024				TC	Tot
		Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4		
In	0	-	-	-	-	0	0	0	0	0	0	0	4	4	4	2	5	6	6	5	5	7	7	6	7	9	8	8	8	116	217
Out	0	-	-	-	-	0	0	0	0	0	0	0	0	2	2	4	4	3	4	6	6	5	5	7	7	6	7	9	8	132	217

Exhibit P-40, Budget Line Item Justification: PB 2020 Air Force	Date: February 2019
Appropriation / Budget Activity / Budget Sub Activity: 3010F: Aircraft Procurement, Air Force / BA 05: Modification of Inservice Aircraft / BSA 2: Tactical Aircraft	**P-1 Line Item Number / Title:** F2232B / Increment 3.2b

ID Code (A=Service Ready, B=Not Service Ready): B	**Program Elements for Code B Items:** 0207138F	**Other Related Program Elements:** 0605213F

Line Item MDAP/MAIS Code: 474

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 *(Units in Each)*	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost *($ in Millions)*	169.235	104.907	2.007	20.213	-	20.213	5.963	0.000	0.000	0.000	-	302.325
Less PY Advance Procurement *($ in Millions)*	28.500	2.000	-	-	-	-	-	-	-	-	-	30.500
Net Procurement (P-1) *($ in Millions)*	140.735	102.907	2.007	20.213	-	20.213	5.963	0.000	0.000	0.000	-	271.825
Plus CY Advance Procurement *($ in Millions)*	30.500	-	-	-	-	-	-	-	-	-	-	30.500
Total Obligation Authority *($ in Millions)*	**171.235**	**102.907**	**2.007**	**20.213**	**-**	**20.213**	**5.963**	**0.000**	**0.000**	**0.000**	**-**	**302.325**
(The following Resource Summary rows are for informational purposes only. The corresponding budget requests are documented elsewhere.)												
Initial Spares *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Flyaway Unit Cost *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Unit Cost *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-

Description:

Increment 3.2B retrofits Block 30 and 35 aircraft with hardware to host Increment 3.2B capabilities including the Enhanced Stores Management System (ESMS) Common Split Bus, AIM-120D, AIM-9X, Electronic Protection enhancements, Intra-Flight Datalink (IFDL) improvements, and Geolocate 2.0. Increment 3.2B is the user's highest priority for F-22.

The F-22 Raptor's Modernization Development is conducted using a rapid acquisition construct leveraging commercial best practices such as Agile and Lean. This allows the F-22 Raptor program to develop, test, and field software/hardware from multiple programs (product lines) using a scheduled cadence for capabilities as they mature. The F-22 Raptor program's utilization of these commercial best practices during production activities will allow for concurrent installations of mature Group A and Group B hardware of multiple product lines, delivering warfighter capabilities to the field earlier than under historical acquisition practices.

F-22 Increment 3.2B procurement and installation is scheduled to complete prior to FY 2024 therefore there is no cost to complete.

FY 2020 Increment 3.2B funding excludes dollars for OCO - Direct War Costs and OCO - Enduring Requirements.

Funding for this exhibit is contained in PE 0207138F.

The RDT&E funding for this effort is contained in PE 0605213F (FY 2004 - FY 2018); PE 0207163F (FY 2010 - FY 2013); PE 0207445F (FY 2007 - FY 2010); and PE 020001F (FY 2007).

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.

Secondary Distribution		FY 2018	FY 2019	FY 2020 Base	FY 2020 OCO	FY 2020 Total	FY 2021	FY 2022	FY 2023	FY 2024
AF	Quantity	-	-	-	-	-	-	-	-	-
	Total Obligation Authority	79.707	2.007	20.213	-	20.213	5.963	0.000	-	-

Exhibit P-40, Budget Line Item Justification: PB 2020 Air Force	Date: February 2019
Appropriation / Budget Activity / Budget Sub Activity: 3010F: Aircraft Procurement, Air Force / BA 05: Modification of Inservice Aircraft / BSA 2: Tactical Aircraft	**P-1 Line Item Number / Title:** F2232B / Increment 3.2b

ID Code (A=Service Ready, B=Not Service Ready): B	Program Elements for Code B Items: 0207138F	Other Related Program Elements: 0605213F

Line Item MDAP/MAIS Code: 474

Secondary Distribution		FY 2018	FY 2019	FY 2020 Base	FY 2020 OCO	FY 2020 Total	FY 2021	FY 2022	FY 2023	FY 2024
AFNG	Quantity	-	-	-	-	-	-	-	-	-
	Total Obligation Authority	23.200	-	0.000	-	0.000	-	-	-	-
Total: Secondary Distribution	**Quantity**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**
	Total Obligation Authority	**102.907**	**2.007**	**20.213**	**-**	**20.213**	**5.963**	**0.000**	**-**	**-**

Exhibit P-40, Budget Line Item Justification: PB 2020 Air Force	Date: February 2019
Appropriation / Budget Activity / Budget Sub Activity: 3010F: Aircraft Procurement, Air Force / BA 05: Modification of Inservice Aircraft / BSA 2: Tactical Aircraft	**P-1 Line Item Number / Title:** F2232B / Increment 3.2b

ID Code (A=Service Ready, B=Not Service Ready): B	Program Elements for Code B Items: 0207138F	Other Related Program Elements: 0605213F

Line Item MDAP/MAIS Code: 474

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-3a	11100 / INCREMENT 3.2B (Capability Improvement)		B		- / 169.235	- / 104.907	- / 2.007	- / 20.213	- / 0.000	- / 20.213
P-40	**Total Gross/Weapon System Cost**				**- / 169.235**	**- / 104.907**	**- / 2.007**	**- / 20.213**	**- / -**	**- / 20.213**

Exhibits Schedule					FY 2021	FY 2022	FY 2023	FY 2024	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	11100 / INCREMENT 3.2B (Capability Improvement)		B		- / 5.963	- / 0.000	- / 0.000	- / -	- / -	- / 302.325
P-40	**Total Gross/Weapon System Cost**				**- / 5.963**	**- / 0.000**	**- / 0.000**	**- / 0.000**	**- / -**	**- / 302.325**

*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:
Where applicable, justification for individual modifications is provided in the P-3A exhibits.

Exhibit P-3a, Individual Modification: PB 2020 Air Force		Date: February 2019
Appropriation / Budget Activity / Budget Sub Activity: 3010F / 05 / 2	**P-1 Line Item Number / Title:** F2232B / Increment 3.2b	**Modification Number / Title:** 11100 / INCREMENT 3.2B
ID Code (A=Service Ready, B=Not Service Ready) : B	**MDAP/MAIS Code:**	

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 *(Units in Each)*	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost *($ in Millions)*	169.235	104.907	2.007	20.213	0.000	20.213	5.963	0.000	0.000	-	-	302.325
Less PY Advance Procurement *($ in Millions)*	28.500	2.000	-	-	-	-	-	-	-	-	-	30.500
Net Procurement (P-1) *($ in Millions)*	140.735	102.907	2.007	20.213	0.000	20.213	5.963	0.000	0.000	-	-	271.825
Plus CY Advance Procurement *($ in Millions)*	30.500	-	-	-	-	-	-	-	-	-	-	30.500
Total Obligation Authority *($ in Millions)*	**171.235**	**102.907**	**2.007**	**20.213**	**0.000**	**20.213**	**5.963**	**0.000**	**0.000**	**-**	**-**	**302.325**
(The following Resource Summary rows are for informational purposes only. The corresponding budget requests are documented elsewhere.)												
Initial Spares *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Unit Cost *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-

Description:

Increment 3.2B retrofits Block 30 and 35 aircraft with hardware to host Increment 3.2B Enhanced Stores Management System (ESMS) Common Split Bus, AIM-120D, AIM-9X, Electronic Protection enhancements, IFDL improvements, and Geolocate 2.0. Increment 3.2B is the user's highest priority for F-22.

Milestone/Development Status

LRIP installs on schedule to begin May 2019.

Secondary Distribution		FY 2018	FY 2019	FY 2020 Base	FY 2020 OCO	FY 2020 Total	FY 2021	FY 2022	FY 2023	FY 2024
AF	Quantity	-	-	-	-	-	-	-	-	-
	Total Obligation Authority	79.707	2.007	20.213	-	20.213	5.963	0.000	-	-
AFNG	Quantity	-	-	-	-	-	-	-	-	-
	Total Obligation Authority	23.200	-	0.000	-	0.000	-	-	-	-
Total: Secondary Distribution	**Quantity**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**
	Total Obligation Authority	**102.907**	**2.007**	**20.213**	**0.000**	**20.213**	**5.963**	**0.000**	**0.000**	**-**

Exhibit P-3a, Individual Modification: PB 2020 Air Force		Date: February 2019
Appropriation / Budget Activity / Budget Sub Activity: 3010F / 05 / 2	**P-1 Line Item Number / Title:** F2232B / Increment 3.2b	**Modification Number / Title:** 11100 / INCREMENT 3.2B
ID Code (A=Service Ready, B=Not Service Ready) : B	**MDAP/MAIS Code:**	
Models of Systems Affected: F-22	**Modification Type:** Capability Improvement	**Related RDT&E PEs:** 0605213F, 0207138F

Financial Plan	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
	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)*
RDT&E PE #												
0207138F	- / 967.329	- / 10.500	- / 0.000	- / 0.000	- / -	- / 0.000	- / 0.000	- / -	- / -	- / -	- / -	- / 977.829
Procurement												
Modification Item 1 of 1: Inc 3.2B Kits												
A Kits												
Recurring												
Inc 3.2B Kits:INSTALL KITS Group A (Active)	- / 0.000	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 0.000
Subtotal: Recurring	*- / 0.000*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / 0.000*
B Kits												
Recurring												
Inc 3.2B Kits:EQUIPMENT Group B (Active)	71 / 60.910	52 / 67.114	- / -	0 / 0.000	- / -	0 / 0.000	- / -	0 / 0.000	- / -	- / -	- / -	123 / 128.024
Inc 3.2B Kits:EQUIPMENT Group B (Guard)	- / -	20 / 23.200	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	20 / 23.200
Subtotal: Recurring	*- / 60.910*	*- / 90.314*	*- / -*	*- / 0.000*	*- / -*	*- / 0.000*	*- / -*	*- / 0.000*	*- / -*	*- / -*	*- / -*	*- / 151.224*
Subtotal: Inc 3.2B Kits	*- / 60.910*	*- / 90.314*	*- / -*	*- / 0.000*	*- / -*	*- / 0.000*	*- / -*	*- / 0.000*	*- / -*	*- / -*	*- / -*	*- / 151.224*
Subtotal: Procurement, All Modification Items	*- / 60.910*	*- / 90.314*	*- / -*	*- / 0.000*	*- / -*	*- / 0.000*	*- / -*	*- / 0.000*	*- / -*	*- / -*	*- / -*	*- / 151.224*
Support *(All Modification Items)*												
GROUP A: TOTAL NONRECURRING	- / 78.425	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 78.425
Data	- / 4.700	- / 1.480	- / 0.000	- / 0.300	- / -	- / 0.300	- / -	- / -	- / -	- / -	- / -	- / 6.480
SUPPORT-EQUIP	- / 17.098	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 17.098
PMA - Other Gov't Costs	- / 8.102	- / 4.048	- / 2.007	- / 5.113	- / -	- / 5.113	- / 5.963	- / -	- / -	- / -	- / -	- / 25.233
Subtotal: Support	*- / 108.325*	*- / 5.528*	*- / 2.007*	*- / 5.413*	*- / -*	*- / 5.413*	*- / 5.963*	*- / -*	*- / -*	*- / -*	*- / -*	*- / 127.236*
Installation												
Modification Item 1 of 1: Inc 3.2B Kits	- / -	71 / 9.065	- / -	72 / 14.800	- / -	72 / 14.800	- / -	- / -	- / -	- / -	- / -	143 / 23.865
Subtotal: Installation	*- / -*	*71 / 9.065*	*- / -*	*72 / 14.800*	*- / -*	*72 / 14.800*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*143 / 23.865*
Total												
Total Cost (Procurement + Support + Installation)	**169.235**	**104.907**	**2.007**	**20.213**	**0.000**	**20.213**	**5.963**	**0.000**	**0.000**	**-**	**-**	**302.325**

Exhibit P-3a, Individual Modification: PB 2020 Air Force		Date: February 2019
Appropriation / Budget Activity / Budget Sub Activity: 3010F / 05 / 2	**P-1 Line Item Number / Title:** F2232B / Increment 3.2b	**Modification Number / Title:** 11100 / INCREMENT 3.2B

ID Code (A=Service Ready, B=Not Service Ready) : B | **MDAP/MAIS Code:**

Modification Item 1 of 1: Inc 3.2B Kits

Manufacturer Information

Manufacturer Name: Lockheed Martin | Manufacturer Location: Fort Worth, TX

Administrative Leadtime *(in Months)*: 1 | Production Leadtime *(in Months)*: 12

Dates	FY 2018	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024
Contract Dates	Jan 2018						
Delivery Dates	Jan 2019						

Installation Information

Method of Implementation: Contract Field Team

Installation Cost	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
	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)*
Prior Years	- / -	71 / 9.065	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	71 / 9.065
FY 2018	- / -	- / -	- / -	72 / 14.800	- / -	72 / 14.800	- / -	- / -	- / -	- / -	- / -	72 / 14.800
FY 2019	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2020	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2021	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2022	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2023	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2024	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
To Complete	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
Total	- / -	71 / 9.065	- / -	72 / 14.800	- / -	72 / 14.800	- / -	- / -	- / -	- / -	- / -	143 / 23.865

Installation Schedule

	PYS	FY 2018				FY 2019				FY 2020				FY 2021				FY 2022				FY 2023				FY 2024				TC	Tot
		Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4		
In	0	-	-	15	56	0	0	0	0	18	18	18	18	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0	143
Out	0	-	-	15	56	0	0	0	0	18	18	18	18	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0	143

Exhibit P-40, Budget Line Item Justification: PB 2020 Air Force	Date: February 2019
Appropriation / Budget Activity / Budget Sub Activity: 3010F: Aircraft Procurement, Air Force / BA 05: Modification of Inservice Aircraft / BSA 2: Tactical Aircraft	**P-1 Line Item Number / Title:** KC046A / KC-46A MDAP

ID Code (A=Service Ready, B=Not Service Ready): B	**Program Elements for Code B Items:** 0401221F	**Other Related Program Elements:** 0401221F

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 *(Units in Each)*	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost *($ in Millions)*	-	1.213	8.547	10.213	-	10.213	27.394	58.641	88.549	0.000	2,645.935	2,840.492
Less PY Advance Procurement *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) *($ in Millions)*	-	1.213	8.547	10.213	-	10.213	27.394	58.641	88.549	0.000	2,645.935	2,840.492
Plus CY Advance Procurement *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Total Obligation Authority *($ in Millions)*	**-**	**1.213**	**8.547**	**10.213**	**-**	**10.213**	**27.394**	**58.641**	**88.549**	**0.000**	**2,645.935**	**2,840.492**
(The following Resource Summary rows are for informational purposes only. The corresponding budget requests are documented elsewhere.)												
Initial Spares *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Flyaway Unit Cost *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Unit Cost *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-

Description:

The KC-46 will provide the capability to fuel joint and coalition receivers via a boom or drogue system on every mission and will also augment the airlift fleet with cargo, passenger, and aeromedical evacuation capabilities. The KC-46 will operate in day/night and adverse weather conditions to enable deployment, employment, sustainment, and redeployment of U.S. joint, allied, and coalition forces. The KC-46 will have communication, navigation, and surveillance equipment for world-wide operations; the capability to perform missions in chemical and biological environments; the ability to operate in up to medium threat environments with self-defense/protection (both active and passive) capabilities; and the necessary battle space awareness to mitigate survivability threats. The dynamics and mission urgency of the post-production environment requires the program to maintain flexible and responsive posture to support a broad range of mission support needs. The KC-46 will continue to identify, design, develop, integrate, verify, certify, produce, install, field, and sustain a comprehensive range of non-recurring and recurring post-production, air vehicle enhancements and field support needs. These needs may originate from programmed Mobility Air Force (MAF) requirements, Combatant Commander Joint or Urgent Operational Needs (JUON/UON), non-programmed Federal Aviation Administration (FAA) directives, or correction of deficiency reports.

The KC-46 will continue to develop, field, and sustain warfighter capabilities to meet evolving threats and mission support requirements through Block or discrete modification or modernization programs depending on mission urgency, available funding, and programmatic and technical risks. Post-production requirements can include, but will not be limited to, avionics and structural systems/ architecture and subsystem updates, general mission equipment updates and procurement, general sustainment support, studies and analyses, and correction of deficiency reports.

Justification:
FY 2020 funding consists of the integration of Airworthiness Directives (ADs)/Service Bulletins (SBs) and other reported issues to correct identified deficiencies, provide product improvements, and maintain Federal Aviation Administration (FAA) certification compliance for the aircraft. FY 2020 funding will also support Low Cost Mods (LCMs).

Other modifications to the KC-46 through the FYDP include, but are not limited to, R&M, Safety Mods, Avionics and Flight Systems enhancements (described as the Pegasus Advanced Communications Suite (PACS) modification), efforts executed under the auspices of Pegasus Combat Capability (PC2) (M-Code Global Positioning System (GPS), Multifunctional Information Distribution Systems (MIDS) Enhancements, Advanced Communication Systems, Survivability and Mission Performance), requirements identified and supported by Major Command (MAJCOM)-approved 1067s, HHQ Enterprise Capability Collaboration Teams (i.e., High Value Airborne Asset [HVAA], Air Superiority 2030, and Multi-Domain Command and Control [MDC2]), ADs/SBs and LCMs. Funding for To Complete is continuing.

Funding for this exhibit contained in PE 0401221F.

Exhibit P-40, Budget Line Item Justification: PB 2020 Air Force		Date: February 2019
Appropriation / Budget Activity / Budget Sub Activity: 3010F: Aircraft Procurement, Air Force / BA 05: Modification of Inservice Aircraft / BSA 2: Tactical Aircraft	**P-1 Line Item Number / Title:** KC046A / KC-46A MDAP	
ID Code (A=Service Ready, B=Not Service Ready): B	**Program Elements for Code B Items:** 0401221F	**Other Related Program Elements:** 0401221F
Line Item MDAP/MAIS Code: N/A		

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.

Exhibit P-40, Budget Line Item Justification: PB 2020 Air Force	**Date:** February 2019
Appropriation / Budget Activity / Budget Sub Activity: 3010F: Aircraft Procurement, Air Force / BA 05: Modification of Inservice Aircraft / BSA 2: Tactical Aircraft	**P-1 Line Item Number / Title:** KC046A / KC-46A MDAP

ID Code (A=Service Ready, B=Not Service Ready): B	**Program Elements for Code B Items:** 0401221F	**Other Related Program Elements:** 0401221F

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) I ($ M)*	**Quantity / Total Cost** *(Each) I ($ M)*	**Quantity / Total Cost** *(Each) I ($ M)*	**Quantity / Total Cost** *(Each) I ($ M)*	**Quantity / Total Cost** *(Each) I ($ M)*	**Quantity / Total Cost** *(Each) I ($ M)*
P-40a***	4601 / R&M Safety Mods (Safety)				- / -	- / -	- / -	- / 0.000	- / -	- / 0.000
P-40a***	4602 / Pegasus Advanced Communications Suite (PACS) (Capability Improvement)				- / -	- / -	- / -	- / 0.000	- / -	- / 0.000
P-40a***	99999X / Low Cost Modifications (Capability Improvement)				- / -	- / -	- / 2.000	- / 2.000	- / -	- / 2.000
P-3a	1 / Airworthiness Directives (Service Life Extension)		B		- / -	- / 1.213	- / 6.547	- / 8.213	- / 0.000	- / 8.213
P-40	**Total Gross/Weapon System Cost**				**- / -**	**- / 1.213**	**- / 8.547**	**- / 10.213**	**- / -**	**- / 10.213**

Exhibits Schedule					FY 2021	FY 2022	FY 2023	FY 2024	To Complete	Total
Exhibit Type	**Title***	**Subexhibits**	**ID CD**	**MDAP/ MAIS Code**	**Quantity / Total Cost** *(Each) I ($ M)*	**Quantity / Total Cost** *(Each) I ($ M)*	**Quantity / Total Cost** *(Each) I ($ M)*	**Quantity / Total Cost** *(Each) I ($ M)*	**Quantity / Total Cost** *(Each) I ($ M)*	**Quantity / Total Cost** *(Each) I ($ M)*
P-40a***	4601 / R&M Safety Mods (Safety)				- / 0.000	- / 17.222	- / 20.938	- / 0.000	- / 1,059.701	- / 1,097.861
P-40a***	4602 / Pegasus Advanced Communications Suite (PACS) (Capability Improvement)				- / 0.000	- / 0.000	- / 0.000	- / 0.000	- / 333.509	- / 333.509
P-40a***	99999X / Low Cost Modifications (Capability Improvement)				- / 2.000	- / 2.000	- / 2.000	- / 0.000	- / 40.000	- / 50.000
P-3a	1 / Airworthiness Directives (Service Life Extension)		B		- / 25.394	- / 39.419	- / 65.611	- / 0.000	- / 1,212.725	- / 1,359.122
P-40	**Total Gross/Weapon System Cost**				**- / 27.394**	**- / 58.641**	**- / 88.549**	**- / 0.000**	**- / 2,645.935**	**- / 2,840.492**

*** Although this is an Exhibit P-40a item, the actual exhibit is not included since all of the required information for this item is already being shown here.

*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:
Where applicable, justification for individual modifications is provided in the P-3A exhibits.

Exhibit P-3a, Individual Modification: PB 2020 Air Force		Date: February 2019
Appropriation / Budget Activity / Budget Sub Activity: 3010F / 05 / 2	**P-1 Line Item Number / Title:** KC046A / KC-46A MDAP	**Modification Number / Title:** 1 / Airworthiness Directives
ID Code (A=Service Ready, B=Not Service Ready) : B	**MDAP/MAIS Code:**	

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 *(Units in Each)*	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost *($ in Millions)*	-	1.213	6.547	8.213	0.000	8.213	25.394	39.419	65.611	0.000	1,212.725	1,359.122
Less PY Advance Procurement *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) *($ in Millions)*	-	1.213	6.547	8.213	0.000	8.213	25.394	39.419	65.611	0.000	1,212.725	1,359.122
Plus CY Advance Procurement *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Total Obligation Authority *($ in Millions)*	**-**	**1.213**	**6.547**	**8.213**	**0.000**	**8.213**	**25.394**	**39.419**	**65.611**	**0.000**	**1,212.725**	**1,359.122**
(The following Resource Summary rows are for informational purposes only. The corresponding budget requests are documented elsewhere.)												
Initial Spares *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Unit Cost *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-

Description:

Airworthiness Directives (ADs), Service Bulletins (SBs), Service Letters (SLs), and Maintenance Tips (MTs)

Funding in support of production, installation, and fielding of emerging ADs, SBs, SLs, and MTs as issued, or mandated by the FAA, to correct identified deficiencies, provide product improvements, and maintain FAA certification requirements for the KC-46 aircraft.

This funding request will support potential DMS and obsolescence solutions, to include if optimal, life-of-type buys or bridge buys limited to the program of record quantity.

Funding for this exhibit contained in PE 0401221F.

Milestone/Development Status

The KC-46 program is projecting a Full Rate Production Decision in 2020.

Exhibit P-3a, Individual Modification: PB 2020 Air Force		Date: February 2019
Appropriation / Budget Activity / Budget Sub Activity: 3010F / 05 / 2	**P-1 Line Item Number / Title:** KC046A / KC-46A MDAP	**Modification Number / Title:** 1 / Airworthiness Directives
ID Code (A=Service Ready, B=Not Service Ready) : B	**MDAP/MAIS Code:**	
Models of Systems Affected: KC-46	**Modification Type:** Service Life Extension	**Related RDT&E PEs:** 0401221F

Financial Plan	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
	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												
Modification Item 1 of 1: KC-46 Airworthiness Directives												
A Kits												
Recurring												
KC-46 Airworthiness Directives:INSTALL KITS Group A (Active)	- / -	0 / 1.213	0 / 6.547	0 / 8.213	- / -	0 / 8.213	0 / 25.394	0 / 39.419	0 / 65.611	- / 0.000	- / 1,212.725	0 / 1,359.122
Subtotal: Recurring	*- / -*	*- / 1.213*	*- / 6.547*	*- / 8.213*	*- / -*	*- / 8.213*	*- / 25.394*	*- / 39.419*	*- / 65.611*	*- / 0.000*	*- / 1,212.725*	*- / 1,359.122*
Subtotal: KC-46 Airworthiness Directives	*- / -*	*- / 1.213*	*- / 6.547*	*- / 8.213*	*- / -*	*- / 8.213*	*- / 25.394*	*- / 39.419*	*- / 65.611*	*- / 0.000*	*- / 1,212.725*	*- / 1,359.122*
Subtotal: Procurement, All Modification Items	*- / -*	*- / 1.213*	*- / 6.547*	*- / 8.213*	*- / -*	*- / 8.213*	*- / 25.394*	*- / 39.419*	*- / 65.611*	*- / 0.000*	*- / 1,212.725*	*- / 1,359.122*
Installation												
Subtotal: Installation	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*
Total												
Total Cost (Procurement + Support + Installation)	**-**	**1.213**	**6.547**	**8.213**	**0.000**	**8.213**	**25.394**	**39.419**	**65.611**	**0.000**	**1,212.725**	**1,359.122**

Exhibit P-3a, Individual Modification: PB 2020 Air Force		Date: February 2019
Appropriation / Budget Activity / Budget Sub Activity: 3010F / 05 / 2	**P-1 Line Item Number / Title:** KC046A / KC-46A MDAP	**Modification Number / Title:** 1 / Airworthiness Directives

ID Code (A=Service Ready, B=Not Service Ready) : B | **MDAP/MAIS Code:**

Modification Item 1 of 1: KC-46 Airworthiness Directives

Manufacturer Information

Manufacturer Name: TBD | Manufacturer Location: TBD

Administrative Leadtime *(in Months)*: 0 | Production Leadtime *(in Months)*: 0

Dates	FY 2018	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024
Contract Dates							
Delivery Dates							

Installation Information

Method of Implementation (Organic): Org/Intermediate | **Installation Quantity:** 0

Exhibit P-40, Budget Line Item Justification: PB 2020 Air Force	Date: February 2019
Appropriation / Budget Activity / Budget Sub Activity: 3010F: Aircraft Procurement, Air Force / BA 05: Modification of Inservice Aircraft / BSA 3: Airlift Aircraft	**P-1 Line Item Number / Title:** C00500 / C-5

ID Code (A=Service Ready, B=Not Service Ready): B	**Program Elements for Code B Items:** 0401119F, 0401897F	**Other Related Program Elements:** 0401119F, 0401897F
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 *(Units in Each)*	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost *($ in Millions)*	37.264	21.742	67.909	73.550	-	73.550	62.973	33.511	34.104	26.475	71.143	428.671
Less PY Advance Procurement *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) *($ in Millions)*	37.264	21.742	67.909	73.550	-	73.550	62.973	33.511	34.104	26.475	71.143	428.671
Plus CY Advance Procurement *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Total Obligation Authority *($ in Millions)*	**37.264**	**21.742**	**67.909**	**73.550**	**-**	**73.550**	**62.973**	**33.511**	**34.104**	**26.475**	**71.143**	**428.671**
(The following Resource Summary rows are for informational purposes only. The corresponding budget requests are documented elsewhere.)												
Initial Spares *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Flyaway Unit Cost *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Unit Cost *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-

Description:

This line item funds modifications to the C-5 aircraft. The C-5 carries outsized and heavy cargo (tanks, helicopters, etc.) between main operating bases. Additionally, the aircraft is capable of carrying 73 troops and 36 standard 463-L pallets. Modifications increase operational capability while improving flight safety, reliability, and maintainability.

There are 52 C-5B/C/M aircraft in the Air Force fleet as of 31 August 2017. The C-5 fleet was delivered to the Air Force from 1969 to 1989. Initial service life for the aircraft was 30,000 flight hours. Service life is extended out to 2040 as a result of the reliability enhancement and re-engining program (RERP) modification.

Available funds will be used for program management administration, studies and analysis, risk reduction efforts, Advisory and Assistance Services, change orders, and other government costs such as travel, directorate support, government furnished equipment (GFE), and over and above costs. Funding may also be used to address Diminishing Manufacturing Sources (DMS) through studies and analysis, bridge buys, life-of-type buys, etc.

In accordance with Section 1815 of the FY 2008 National Defense Authorization Act (P.L.110-181), this item is necessary for use by the active and reserve components of the Armed Forces for homeland defense missions, domestic emergency responses, and providing military support to civil authorities.

Funding for this exhibit is contained in PE 0401119F.

The CNS/ATM program (Production) is a new start in FY19.

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.

Secondary Distribution		FY 2018	FY 2019	FY 2020 Base	FY 2020 OCO	FY 2020 Total	FY 2021	FY 2022	FY 2023	FY 2024
AF	Quantity	-	-	-	-	-	-	-	-	-
	Total Obligation Authority	19.381	55.640	61.115	0.000	61.115	47.531	28.239	31.303	26.475

Exhibit P-40, Budget Line Item Justification: PB 2020 Air Force	Date: February 2019
Appropriation / Budget Activity / Budget Sub Activity: 3010F: Aircraft Procurement, Air Force / BA 05: Modification of Inservice Aircraft / BSA 3: Airlift Aircraft	**P-1 Line Item Number / Title:** C00500 / C-5

ID Code (A=Service Ready, B=Not Service Ready): B	Program Elements for Code B Items: 0401119F, 0401897F	Other Related Program Elements: 0401119F, 0401897F

Line Item MDAP/MAIS Code: N/A

Secondary Distribution		FY 2018	FY 2019	FY 2020 Base	FY 2020 OCO	FY 2020 Total	FY 2021	FY 2022	FY 2023	FY 2024
AFR	Quantity	-	-	-	-	-	-	-	-	-
	Total Obligation Authority	2.361	12.269	12.435	-	12.435	15.442	5.272	2.801	-
Total: Secondary Distribution	**Quantity**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**
	Total Obligation Authority	**21.742**	**67.909**	**73.550**	**0.000**	**73.550**	**62.973**	**33.511**	**34.104**	**26.475**

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

Appropriation / Budget Activity / Budget Sub Activity:
3010F: Aircraft Procurement, Air Force / BA 05: Modification of Inservice Aircraft / BSA 3: Airlift Aircraft

P-1 Line Item Number / Title:
C00500 / C-5

ID Code (A=Service Ready, B=Not Service Ready): B | **Program Elements for Code B Items:** 0401119F, 0401897F | **Other Related Program Elements:** 0401119F, 0401897F

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-40a***	8964 / C-5 Replace Multifunctional Co (Reliability & Maintainability)				- / -	- / -	- / -	- / -	- / -	- / -
P-40a***	8965 / C-5 Fleet Blk Upgrade 01 (Other)				- / 13.093	- / -	- / -	- / -	- / -	- / -
P-40a***	8969 / C-5 Training Systems (Training Mods) (Capability Improvement)				- / -	- / -	- / -	- / -	- / -	- / -
P-40a***	99999X / Low Cost Modifications (Capability Improvement)				- / 0.000	- / 0.000	- / 0.000	- / 0.000	- / 0.000	- / 0.000
P-3a	8966 / C-5 Mission Systems Equipment- Lavatory (Other)		B		- / 3.332	- / 6.129	- / 10.943	- / 8.742	- / 0.000	- / 8.742
P-3a	8967 / Mission Computer and Weather Radar (Other)		B		- / 20.839	- / 15.613	- / 28.353	- / 32.422	- / 0.000	- / 32.422
P-3a	8968 / C-5M Communication Navigation Surveillance/Air Traffic Management (CNS/ATM) (Capability Improvement)		B		- / 0.000	- / 0.000	- / 28.613	- / 32.386	- / 0.000	- / 32.386
P-40	**Total Gross/Weapon System Cost**				**- / 37.264**	**- / 21.742**	**- / 67.909**	**- / 73.550**	**- / -**	**- / 73.550**

Exhibits Schedule					FY 2021	FY 2022	FY 2023	FY 2024	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-40a***	8964 / C-5 Replace Multifunctional Co (Reliability & Maintainability)				- / -	- / -	- / 20.740	- / 24.077	- / 71.143	- / 115.960
P-40a***	8965 / C-5 Fleet Blk Upgrade 01 (Other)				- / -	- / -	- / -	- / -	- / -	- / 13.093
P-40a***	8969 / C-5 Training Systems (Training Mods) (Capability Improvement)				- / -	- / -	- / 2.639	- / -	- / -	- / 2.639
P-40a***	99999X / Low Cost Modifications (Capability Improvement)				- / 1.999	- / 0.000	- / 0.000	- / -	- / -	- / 1.999
P-3a	8966 / C-5 Mission Systems Equipment- Lavatory (Other)		B		- / 12.866	- / 3.838	- / 0.000	- / 0.000	- / -	- / 45.850
P-3a	8967 / Mission Computer and Weather Radar (Other)		B		- / 15.365	- / 6.928	- / 1.007	- / 0.000	- / -	- / 120.527
P-3a	8968 / C-5M Communication Navigation Surveillance/Air Traffic Management (CNS/ATM) (Capability Improvement)		B		- / 32.743	- / 22.745	- / 9.718	- / 2.398	- / -	- / 128.603
P-40	**Total Gross/Weapon System Cost**				**- / 62.973**	**- / 33.511**	**- / 34.104**	**- / 26.475**	**- / 71.143**	**- / 428.671**

*** Although this is an Exhibit P-40a item, the actual exhibit is not included since all of the required information for this item is already being shown here.

*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:
Where applicable, justification for individual modifications is provided in the P-3A exhibits.

Exhibit P-3a, Individual Modification: PB 2020 Air Force		Date: February 2019
Appropriation / Budget Activity / Budget Sub Activity: 3010F / 05 / 3	**P-1 Line Item Number / Title:** C00500 / C-5	**Modification Number / Title:** 8966 / C-5 Mission Systems Equipment-Lavatory
ID Code (A=Service Ready, B=Not Service Ready) : B	**MDAP/MAIS Code:**	

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 *(Units in Each)*	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost *($ in Millions)*	3.332	6.129	10.943	8.742	0.000	8.742	12.866	3.838	0.000	0.000	-	45.850
Less PY Advance Procurement *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) *($ in Millions)*	3.332	6.129	10.943	8.742	0.000	8.742	12.866	3.838	0.000	0.000	-	45.850
Plus CY Advance Procurement *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Total Obligation Authority *($ in Millions)*	**3.332**	**6.129**	**10.943**	**8.742**	**0.000**	**8.742**	**12.866**	**3.838**	**0.000**	**0.000**	**-**	**45.850**
(The following Resource Summary rows are for informational purposes only. The corresponding budget requests are documented elsewhere.)												
Initial Spares *($ in Millions)*	0.959	-	-	-	-	-	-	-	-	-	-	0.959
Gross/Weapon System Unit Cost *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-

Description:

The C-5M (P-3A Mod 8966), Mission System Equipment(MSE)Lavatory program replaces the three lavatories and their associated systems in each aircraft with a commercial off-the-shelf (COTS) solution, which improves aircraft availability for the C-5M fleet. The current lavatory is the original design dating back to the inception of the C-5 in the 1960s. The existing fiberglass tanks are old and have exceeded their useful life. The lavatory requires extensive maintenance personnel hours to maintain. Parts obsolescence limits the purchase of spare parts such as pump motors, drain valves, etc. Structural corrosion due to leaks (Sodium Hypochlorite/blue water), continues to put a strain on maintenance resources in terms of labor hours and cost of repairs. The updated COTS lavatory will improve aircraft availability while providing the war-fighter with a reliable system that will last the projected remaining life of the C-5M. This production program mitigates parts obsolescence of the existing system and corrects malfunctions currently occurring to the main landing gear system and avionics system components. Poor design and age of existing component parts have enabled sodium hypochlorite to leak into the aircraft structure, which in turn cause extensive structural and avionics corrosion. Corrosion of the avionics components has led to burnt wires and circuit cards in the main landing gear sequence panel, which has resulted in shorted wires to the system. Program office implementation of stop-gap measures to fix the major causes of leaks and implementation of preventive measures to protect the surrounding structures have not alleviated the issues. Diminishing manufacturing source (DMS) issues, as a result of parts obsolescence and data right issues, are preventing the procurement of replacement parts for the current system. System degradation and extra maintenance are causing increased aircraft downtime. A COTS solution to the problem will be implemented for a long-term, sustainable mission system equipment lavatory. The Lavatory requirement has been validated with the approved AMC 1067 11-206.

Available funds will be used for program management administration, studies and analysis, risk reduction efforts, Advisory and Assistance Services, change orders, and other government costs such as travel, directorate support, government furnished equipment (GFE), and over and above costs. Funding may also be used to address Diminishing Manufacturing Sources (DMS) through studies and analysis, bridge buys, life-of-type buys, etc.

Milestone/Development Status

An engineering trade study was accomplished by the prime contractor (WYLE) to determine the best commercial off-the-shelf (COTS) alternative and to conduct a proof of concept effort to ensure the COTS lavatory could be retrofitted onto the C-5M. The first trial installation successfully completed in May 2015 and after some minor redesign on two components, the second production validation/verification successfully completed at Robins AFB in March 2016. IOT&E completed on 31 March 2016. The technical data package (TDP) was completed and delivered June 2016. The remaining 50 C-5Ms will be modified in conjunction with organic depot level maintenance. Installations began on 13 Nov 2018 and will run through completion in FY 2023.

This funding request will support potential DMS and obsolescence solutions, to include if optimal, life of type buys or bridge buys limited to the program of record quantity.

Exhibit P-3a, Individual Modification: PB 2020 Air Force		Date: February 2019
Appropriation / Budget Activity / Budget Sub Activity: 3010F / 05 / 3	**P-1 Line Item Number / Title:** C00500 / C-5	**Modification Number / Title:** 8966 / C-5 Mission Systems Equipment-Lavatory
ID Code (A=Service Ready, B=Not Service Ready) : B	**MDAP/MAIS Code:**	

Available funds will be used for program management administration, studies and analysis, risk reduction efforts, Advisory and Assistance Services, change orders, and other government costs such as travel, directorate support, government furnished equipment (GFE), and over and above costs. Funding may also be used to address Diminishing Manufacturing Sources (DMS) through studies and analysis, bridge buys, life-of-type buys, etc.

Secondary Distribution		FY 2018	FY 2019	FY 2020 Base	FY 2020 OCO	FY 2020 Total	FY 2021	FY 2022	FY 2023	FY 2024
AF	Quantity	-	-	-	-	-	-	-	-	-
	Total Obligation Authority	3.768	8.201	6.721	-	6.721	7.815	3.361	-	-
AFR	Quantity	-	-	-	-	-	-	-	-	-
	Total Obligation Authority	2.361	2.742	2.021	-	2.021	5.051	0.477	-	-
Total: Secondary Distribution	**Quantity**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**
	Total Obligation Authority	**6.129**	**10.943**	**8.742**	**0.000**	**8.742**	**12.866**	**3.838**	**0.000**	**0.000**

Exhibit P-3a, Individual Modification: PB 2020 Air Force		Date: February 2019
Appropriation / Budget Activity / Budget Sub Activity: 3010F / 05 / 3	**P-1 Line Item Number / Title:** C00500 / C-5	**Modification Number / Title:** 8966 / C-5 Mission Systems Equipment-Lavatory
ID Code (A=Service Ready, B=Not Service Ready) : B	**MDAP/MAIS Code:**	
Models of Systems Affected: C-5M	**Modification Type:** Other	**Related RDT&E PEs:** 0401119F

Financial Plan	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
	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												
Modification Item 1 of 1: Lavatory Kit												
B Kits												
Recurring												
Lavatory Kit:EQUIPMENT Group B (Active)	6 / 2.499	7 / 2.648	8 / 3.008	4 / 1.496	- / -	4 / 1.496	9 / 3.451	0 / 0.000	- / -	- / -	- / -	34 / 13.102
Lavatory Kit:EQUIPMENT Group B (Reserve)	2 / 0.833	3 / 1.135	4 / 1.504	2 / 0.748	- / -	2 / 0.748	5 / 1.917	0 / 0.000	- / -	- / -	- / -	16 / 6.137
Subtotal: Recurring	*- / 3.332*	*- / 3.783*	*- / 4.512*	*- / 2.244*	*- / -*	*- / 2.244*	*- / 5.368*	*- / 0.000*	*- / -*	*- / -*	*- / -*	*- / 19.239*
Subtotal: Lavatory Kit	*- / 3.332*	*- / 3.783*	*- / 4.512*	*- / 2.244*	*- / -*	*- / 2.244*	*- / 5.368*	*- / 0.000*	*- / -*	*- / -*	*- / -*	*- / 19.239*
Subtotal: Procurement, All Modification Items	*- / 3.332*	*- / 3.783*	*- / 4.512*	*- / 2.244*	*- / -*	*- / 2.244*	*- / 5.368*	*- / 0.000*	*- / -*	*- / -*	*- / -*	*- / 19.239*
Support *(All Modification Items)*												
Change Orders	- / -	- / 0.290	- / 0.480	- / 0.368	- / -	- / 0.368	- / 0.559	- / 0.142	- / -	- / -	- / -	- / 1.839
PMA - Other Gov't Costs	- / -	- / 0.217	- / 0.587	- / 0.613	- / -	- / 0.613	- / 0.671	- / 0.354	- / -	- / -	- / -	- / 2.442
Subtotal: Support	*- / -*	*- / 0.507*	*- / 1.067*	*- / 0.981*	*- / -*	*- / 0.981*	*- / 1.230*	*- / 0.496*	*- / -*	*- / -*	*- / -*	*- / 4.281*
Installation												
Modification Item 1 of 1: Lavatory Kit	- / -	3 / 1.839	13 / 5.364	13 / 5.517	- / -	13 / 5.517	14 / 6.268	7 / 3.342	- / -	- / -	- / -	50 / 22.330
Subtotal: Installation	*- / -*	*3 / 1.839*	*13 / 5.364*	*13 / 5.517*	*- / -*	*13 / 5.517*	*14 / 6.268*	*7 / 3.342*	*- / -*	*- / -*	*- / -*	*50 / 22.330*
Total												
Total Cost (Procurement + Support + Installation)	**3.332**	**6.129**	**10.943**	**8.742**	**0.000**	**8.742**	**12.866**	**3.838**	**0.000**	**0.000**	**-**	**45.850**

Exhibit P-3a, Individual Modification: PB 2020 Air Force		Date: February 2019
Appropriation / Budget Activity / Budget Sub Activity: 3010F / 05 / 3	**P-1 Line Item Number / Title:** C00500 / C-5	**Modification Number / Title:** 8966 / C-5 Mission Systems Equipment-Lavatory

ID Code (A=Service Ready, B=Not Service Ready) : B

MDAP/MAIS Code:

Modification Item 1 of 1: Lavatory Kit

Manufacturer Information

Manufacturer Name: Small Business (Kit Build)

Manufacturer Location: WRALC/Unit

Administrative Leadtime *(in Months)*: 1

Production Leadtime *(in Months)*: 10

Dates	FY 2018	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024
Contract Dates	Mar 2018	Nov 2018	Nov 2019	Nov 2020			
Delivery Dates	Jan 2019	Sep 2019	Sep 2020	Sep 2021			

Installation Information

Method of Implementation: Depot

Installation Cost	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
	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)*
Prior Years	- / -	3 / 1.839	5 / 2.063	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	8 / 3.902
FY 2018	- / -	- / -	8 / 3.301	2 / 0.849	- / -	2 / 0.849	- / -	- / -	- / -	- / -	- / -	10 / 4.150
FY 2019	- / -	- / -	- / -	11 / 4.668	- / -	11 / 4.668	1 / 0.448	- / -	- / -	- / -	- / -	12 / 5.116
FY 2020	- / -	- / -	- / -	- / -	- / -	- / -	5 / 2.239	1 / 0.477	- / -	- / -	- / -	6 / 2.716
FY 2021	- / -	- / -	- / -	- / -	- / -	- / -	8 / 3.581	6 / 2.865	- / -	- / -	- / -	14 / 6.446
FY 2022	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2023	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2024	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
To Complete	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
Total	- / -	3 / 1.839	13 / 5.364	13 / 5.517	- / -	13 / 5.517	14 / 6.268	7 / 3.342	- / -	- / -	- / -	50 / 22.330

Installation Schedule

		FY 2018				FY 2019				FY 2020				FY 2021				FY 2022				FY 2023				FY 2024					
	PYS	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	TC	Tot
In	0	-	-	-	3	3	3	4	3	3	6	2	2	6	4	3	1	4	3	-	-	-	-	-	-	-	-	-	-	0	50
Out	0	-	-	-	3	3	3	4	3	3	6	2	2	6	4	3	1	4	3	-	-	-	-	-	-	-	-	-	-	0	50

Exhibit P-3a, Individual Modification: PB 2020 Air Force		Date: February 2019
Appropriation / Budget Activity / Budget Sub Activity: 3010F / 05 / 3	**P-1 Line Item Number / Title:** C00500 / C-5	**Modification Number / Title:** 8967 / Mission Computer and Weather Radar
ID Code (A=Service Ready, B=Not Service Ready) : B	**MDAP/MAIS Code:**	

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 *(Units in Each)*	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost *($ in Millions)*	20.839	15.613	28.353	32.422	0.000	32.422	15.365	6.928	1.007	0.000	-	120.527
Less PY Advance Procurement *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) *($ in Millions)*	20.839	15.613	28.353	32.422	0.000	32.422	15.365	6.928	1.007	0.000	-	120.527
Plus CY Advance Procurement *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Total Obligation Authority *($ in Millions)*	**20.839**	**15.613**	**28.353**	**32.422**	**0.000**	**32.422**	**15.365**	**6.928**	**1.007**	**0.000**	**-**	**120.527**
(The following Resource Summary rows are for informational purposes only. The corresponding budget requests are documented elsewhere.)												
Initial Spares *($ in Millions)*	1.438	1.952	0.647	-	-	-	0.000	-	-	-	-	4.037
Gross/Weapon System Unit Cost *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-

Description:

The C-5M core mission computer (CMC) and weather radar (WxRadar) requirement is for the modification of 50 C-5M aircraft. The CMC/WxRadar replacement program is a comprehensive permanent sustainment modification, as described in validated requirements per AMC AF Form 1067s 11-152 and 11-153, to mitigate the obsolescence of the current CMC and WxRadar. This effort centers around modifying the current CMC, to obtain sufficient capability/capability to support integration of the WxRadar with margin for growth to accommodate future requirements. This includes requirements to meet calendar year 2020 FAA Automatic Dependent Surveillance-Broadcast (ADS-B) Out and Communication, Navigation, Surveillance/Air Traffic Management (CNS/ATM) requirements. The program will modify a total of 52 aircraft; 2 during Engineering and Manufacturing Development and 50 during Production.

The CMC/WxRadar modification is necessary to keep the C-5M worldwide deployable. This effort replaces the APS-133 WxRadar, resolving severe diminishing manufacturing source (DMS) issues, using the Rockwell Collins WXR-2100 commercial off-the-shelf WxRadar, which is common to other aircraft platforms, and provides the same capability as the APS-133. The effort also replaces the current core processing module (CPM) cards in the CMC with new Honeywell CPM II cards, providing additional processing speed and throughput capacity.

The CMC/WxRadar program is the baseline for all future modifications to the C-5M. The modification helps to maintain aircraft availability as the current APS-133 WxRadar and current CPM cards are both facing severe diminishing manufacturing source (DMS) issues. Failure to upgrade the WxRadar and CMC to support calendar year 2020 CNS/ATM mandates will create a significant operational impact. Available funds will be used for program management administration, studies and analysis, risk reduction efforts, Advisory and Assistance Services, change orders, and other government costs such as travel, directorate support, government furnished equipment (GFE), and over and above costs. Funding may also be used to address Diminishing Manufacturing Sources (DMS) through studies and analysis, bridge buys, life-of-type buys, etc.

FY17 and FY18 kit buys include Group B Non-Recurring Engineering modifications to supply inventory of Versatile Integrated Avionics and Avionics Interface Unit's.

There are a total of 7 trainers to be updated; 5 weapon systems trainers (WST) and 2 aircrew maintenance system trainers (AMST).

Milestone/Development Status

The Production strategy is to award a competitive contract for the kitting of Group A components (wiring harnesses, brackets, etc.) and award sole-source contracts for the Group B components such as Core Mission Computer (CMC) Versatile Integrated Avionics (VIAs) and Avionics Interface Units (AIUs), Radar components, etc. The current modification install strategy is to have the modification accomplished at the Warner Robins Air Logistics Center.

Exhibit P-3a, Individual Modification: PB 2020 Air Force		Date: February 2019
Appropriation / Budget Activity / Budget Sub Activity: 3010F / 05 / 3	**P-1 Line Item Number / Title:** C00500 / C-5	**Modification Number / Title:** 8967 / Mission Computer and Weather Radar
ID Code (A=Service Ready, B=Not Service Ready) : B	**MDAP/MAIS Code:**	

Production Milestones
Milestone C Decision: 2Q FY19
First Modification started: 1Q FY20
Last Modification complete: 1Q FY24

Secondary Distribution		FY 2018	FY 2019	FY 2020 Base	FY 2020 OCO	FY 2020 Total	FY 2021	FY 2022	FY 2023	FY 2024
AF	Quantity	-	-	-	-	-	-	-	-	-
	Total Obligation Authority	15.613	24.472	28.114	-	28.114	11.851	5.702	0.396	-
AFR	Quantity	-	-	-	-	-	-	-	-	-
	Total Obligation Authority	-	3.881	4.308	-	4.308	3.514	1.226	0.611	-
Total: Secondary Distribution	**Quantity**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**
	Total Obligation Authority	**15.613**	**28.353**	**32.422**	**0.000**	**32.422**	**15.365**	**6.928**	**1.007**	**0.000**

Exhibit P-3a, Individual Modification: PB 2020 Air Force		Date: February 2019
Appropriation / Budget Activity / Budget Sub Activity: 3010F / 05 / 3	**P-1 Line Item Number / Title:** C00500 / C-5	**Modification Number / Title:** 8967 / Mission Computer and Weather Radar
ID Code (A=Service Ready, B=Not Service Ready) : B	**MDAP/MAIS Code:**	
Models of Systems Affected: C-5M	**Modification Type:** Other	**Related RDT&E PEs:** 0401119F

Financial Plan	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
	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)*
RDT&E PE #												
0401119F	2 / 102.444	- / 5.856	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	2 / 108.300
Procurement												
Modification Item 1 of 1: CMC/WxRadar												
A Kits												
Recurring												
CMC/WxRadar:INSTALL KITS Group A (Active)	4 / 0.532	2 / 0.266	15 / 1.496	13 / 1.435	- / -	13 / 1.435	- / -	- / -	- / -	- / -	- / -	34 / 3.729
CMC/WxRadar:INSTALL KITS Group A (Reserve)	3 / 0.399	- / -	5 / 0.499	5 / 0.552	- / -	5 / 0.552	3 / 0.439	- / 0.000	- / -	- / -	- / -	16 / 1.889
Subtotal: Recurring	*- / 0.931*	*- / 0.266*	*- / 1.995*	*- / 1.987*	*- / -*	*- / 1.987*	*- / 0.439*	*- / 0.000*	*- / -*	*- / -*	*- / -*	*- / 5.618*
B Kits												
Recurring												
CMC/WxRadar:EQUIPMENT Group B (Active)	4 / 2.426	2 / 1.215	15 / 10.147	13 / 7.372	- / -	13 / 7.372	- / -	- / -	- / -	- / -	- / -	34 / 21.160
CMC/WxRadar:EQUIPMENT Group B (Guard)	- / 0.000	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 0.000
CMC/WxRadar:EQUIPMENT Group B (Reserve)	3 / 1.819	- / -	5 / 3.382	5 / 2.835	- / -	5 / 2.835	3 / 1.899	- / -	- / -	- / -	- / -	16 / 9.935
Subtotal: Recurring	*- / 4.245*	*- / 1.215*	*- / 13.529*	*- / 10.207*	*- / -*	*- / 10.207*	*- / 1.899*	*- / -*	*- / -*	*- / -*	*- / -*	*- / 31.095*
Subtotal: CMC/WxRadar	*- / 5.176*	*- / 1.481*	*- / 15.524*	*- / 12.194*	*- / -*	*- / 12.194*	*- / 2.338*	*- / 0.000*	*- / -*	*- / -*	*- / -*	*- / 36.713*
Subtotal: Procurement, All Modification Items	*- / 5.176*	*- / 1.481*	*- / 15.524*	*- / 12.194*	*- / -*	*- / 12.194*	*- / 2.338*	*- / 0.000*	*- / -*	*- / -*	*- / -*	*- / 36.713*
Support *(All Modification Items)*												
GROUP A: TOTAL NONRECURRING	- / 0.000	- / 0.000	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 0.000
GROUP B: TOTAL NONRECURRING	- / 5.753	- / 10.293	- / 0.255	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 16.301
Change Orders	- / 0.000	- / 0.000	- / 1.496	- / 1.506	- / -	- / 1.506	- / 0.663	- / 0.322	- / 0.042	- / -	- / -	- / 4.029
Data	- / 0.000	- / -	- / 0.509	- / 0.512	- / -	- / 0.512	- / 0.226	- / 0.109	- / 0.014	- / -	- / -	- / 1.370
SIM/TRAINER	- / -	- / -	4 / 8.142	2 / 7.618	- / -	2 / 7.618	1 / 2.182	- / -	- / -	- / -	- / -	7 / 17.942
SUPPORT-EQUIP	- / 1.181	- / 0.100	- / 0.000	- / 0.000	- / -	- / 0.000	- / -	- / -	- / -	- / -	- / -	- / 1.281
PMA - Other Gov't Costs	- / 0.401	- / 1.002	- / 1.237	- / 0.134	- / -	- / 0.134	- / 0.137	- / 0.141	- / 0.036	- / -	- / -	- / 3.088
PMA - Contractor Services	- / 1.159	- / 2.290	- / -	- / 0.713	- / -	- / 0.713	- / 0.713	- / 0.000	- / 0.000	- / -	- / -	- / 4.875
A&AS	- / 6.704	- / -	- / -	- / 2.622	- / -	- / 2.622	- / 0.034	- / 0.000	- / 0.000	- / -	- / -	- / 9.360
OTHER GOVT	- / -	- / -	- / 0.889	- / 4.361	- / -	- / 4.361	- / 4.603	- / 2.431	- / 0.304	- / -	- / -	- / 12.588
ICS-Material	- / 0.093	- / 0.089	- / 0.000	- / 0.000	- / -	- / 0.000	- / -	- / 0.000	- / -	- / -	- / -	- / 0.182
ICS-Labor	- / 0.372	- / 0.358	- / 0.000	- / 0.000	- / -	- / 0.000	- / -	- / -	- / -	- / -	- / -	- / 0.730
Subtotal: Support	*- / 15.663*	*- / 14.132*	*4 / 12.528*	*2 / 17.466*	*- / -*	*2 / 17.466*	*1 / 8.558*	*- / 3.003*	*- / 0.396*	*- / -*	*- / -*	*7 / 71.746*

Exhibit P-3a, Individual Modification: PB 2020 Air Force		Date: February 2019
Appropriation / Budget Activity / Budget Sub Activity: 3010F / 05 / 3	**P-1 Line Item Number / Title:** C00500 / C-5	**Modification Number / Title:** 8967 / Mission Computer and Weather Radar
ID Code (A=Service Ready, B=Not Service Ready) : B	**MDAP/MAIS Code:**	
Models of Systems Affected: C-5M	**Modification Type:** Other	**Related RDT&E PEs:** 0401119F

Financial Plan	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
	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)*
Installation												
Modification Item 1 of 1: CMC/WxRadar	- / -	- / -	1 / 0.301	12 / 2.762	- / -	12 / 2.762	19 / 4.469	16 / 3.925	2 / 0.611	- / -	- / -	50 / 12.068
Subtotal: Installation	*- / -*	*- / -*	*1 / 0.301*	*12 / 2.762*	*- / -*	*12 / 2.762*	*19 / 4.469*	*16 / 3.925*	*2 / 0.611*	*- / -*	*- / -*	*50 / 12.068*
Total												
Total Cost (Procurement + Support + Installation)	**20.839**	**15.613**	**28.353**	**32.422**	**0.000**	**32.422**	**15.365**	**6.928**	**1.007**	**0.000**	**-**	**120.527**

Exhibit P-3a, Individual Modification: PB 2020 Air Force		Date: February 2019
Appropriation / Budget Activity / Budget Sub Activity: 3010F / 05 / 3	**P-1 Line Item Number / Title:** C00500 / C-5	**Modification Number / Title:** 8967 / Mission Computer and Weather Radar

ID Code (A=Service Ready, B=Not Service Ready) : B

MDAP/MAIS Code:

Modification Item 1 of 1: CMC/WxRadar

Manufacturer Information

Manufacturer Name: Source Selection

Manufacturer Location: TBD

Administrative Leadtime *(in Months)*: 11

Production Leadtime *(in Months)*: 10

Dates	FY 2018	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024
Contract Dates	Nov 2018	Sep 2019	Sep 2020	Sep 2021			
Delivery Dates	Sep 2019	Jul 2020	Jul 2021	Jul 2022			

Installation Information

Method of Implementation: Depot

Installation Cost	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
	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)*
Prior Years	- / -	- / -	1 / 0.301	6 / 1.382	- / -	6 / 1.382	- / -	- / -	- / -	- / -	- / -	7 / 1.683
FY 2018	- / -	- / -	- / -	2 / 0.459	- / -	2 / 0.459	- / -	- / -	- / -	- / -	- / -	2 / 0.459
FY 2019	- / -	- / -	- / -	4 / 0.921	- / -	4 / 0.921	16 / 3.764	- / -	- / -	- / -	- / -	20 / 4.685
FY 2020	- / -	- / -	- / -	- / -	- / -	- / -	3 / 0.705	15 / 3.680	- / -	- / -	- / -	18 / 4.385
FY 2021	- / -	- / -	- / -	- / -	- / -	- / -	- / -	1 / 0.245	2 / 0.611	- / -	- / -	3 / 0.856
FY 2022	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2023	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2024	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
To Complete	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
Total	- / -	- / -	1 / 0.301	12 / 2.762	- / -	12 / 2.762	19 / 4.469	16 / 3.925	2 / 0.611	- / -	- / -	50 / 12.068

Installation Schedule

	PYS	FY 2018				FY 2019				FY 2020				FY 2021				FY 2022				FY 2023				FY 2024				TC	Tot
		Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4		
In	0	-	-	-	-	-	-	-	1	3	2	2	5	3	5	4	7	4	7	2	3	1	1	-	-	-	-	-	-	0	50
Out	0	-	-	-	-	-	-	-	-	1	1	1	4	3	5	4	5	4	7	4	4	2	3	1	1	-	-	-	-	0	50

Exhibit P-3a, Individual Modification: PB 2020 Air Force		Date: February 2019
Appropriation / Budget Activity / Budget Sub Activity: 3010F / 05 / 3	**P-1 Line Item Number / Title:** C00500 / C-5	**Modification Number / Title:** 8968 / C-5M Communication Navigation Surveillance/Air Traffic Management (CNS/ATM)
ID Code (A=Service Ready, B=Not Service Ready) : B	**MDAP/MAIS Code:**	

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 *(Units in Each)*	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost *($ in Millions)*	0.000	0.000	28.613	32.386	0.000	32.386	32.743	22.745	9.718	2.398	-	128.603
Less PY Advance Procurement *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) *($ in Millions)*	0.000	0.000	28.613	32.386	0.000	32.386	32.743	22.745	9.718	2.398	-	128.603
Plus CY Advance Procurement *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Total Obligation Authority *($ in Millions)*	**0.000**	**0.000**	**28.613**	**32.386**	**0.000**	**32.386**	**32.743**	**22.745**	**9.718**	**2.398**	**-**	**128.603**
(The following Resource Summary rows are for informational purposes only. The corresponding budget requests are documented elsewhere.)												
Initial Spares *($ in Millions)*	-	0.000	2.108	2.053	-	2.053	0.409	0.000	1.972	2.028	-	8.570
Gross/Weapon System Unit Cost *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-

Description:

The C-5 communication, navigation, surveillance/air traffic management (CNS/ATM) program is a comprehensive effort to ensure appropriate system design architectures are developed and installed on the C-5 to allow aircraft operation in accordance with civil airspace access mandates for the US national airspace system (NAS) and international civil airspace. Also, the program will add equipment to meet outstanding National Security Agency (NSA) mandates for encryption of voice communications. The CNS/ATM program ensures system standardization and interoperability with other DoD systems to the maximum extent possible and directly supports airworthiness certification of the C-5. CNS/ATM requirements include, but are not limited to, capabilities such as automatic dependent surveillance-broadcast out (ADS-B Out), identification friend or foe (IFF) mode 5, satellite communication equipment replacement, and beyond line-of-sight voice radio replacement. It is anticipated equipment will be predominately commercial off-the-shelf or non-developmental items. The current ARC-210 radio for very high frequency (VHF) voice communications is facing diminishing manufacturing source (DMS) issues and will no longer be capable of providing secure voice communications due to the development of new crypto algorithms. The addition of next generation ARC-210 radios and associated cryptologic equipment will enable the C-5 to meet NSA mandates for secure communications and allow aircrews to continue to communicate securely over VHF, ultra high frequency (UHF), high frequency (HF), or MILSATCOM. The current generation of satellites support services used on the C-5 to provide oceanic controller/pilot data link communications (CPDLCs) to air traffic control and aircraft communications addressing and reporting system (ACARS) beyond-line-of-sight command and control messages will no longer be functional after 2016. The next generation of satellites will accommodate legacy C-5 SATCOM equipment for an interim period of time to allow for integration of upgraded SATCOM equipment compatible with this satellite constellation. Without this modification, the C-5 will not be able to fly oceanic tracks and will not be able to meet aircraft separation distance requirements for civil airspace access. ADS-B Out is a next generation surveillance technology that transitions key aspects of air traffic control from terrestrial based technologies to satellite enabled technologies to provide controllers a more accurate picture of aircraft positioning. ADS-B Out will allow aircraft to provide continuous broadcast of aircraft position to both controllers and other aircraft equipped with ADS-B In capable avionics. International and US NAS mandates for ADS-B Out for civil airspace access call for equipage by calendar year 2020. Fifty-two (52) C-5M aircraft will receive this modification in calendar year 2019. The following requirement documents for C-5M CNS/ATM upgrade components were approved by HAF/A5 on 7 Nov 14: AMC AF Form 1067s 14-067, 12-067, 10-034, and 09-015. There is a total of 7 trainers, 5 are weapon systems trainers (WST) and 2 are aircrew maintenance system trainers (AMST). Change Orders also include SE/PM and O&A. OGC's also include DMS. Funding may be used to address DMS issues through analysis, bridge buys, life-of-type buys, etc. All installations planned to be performed by PDM (Organic).

Available funds will be used for program management administration, studies and analysis, risk reduction efforts, Advisory and Assistance Services, change orders, and other government costs such as travel, directorate support, government furnished equipment (GFE), and over and above costs. Funding may also be used to address Diminishing Manufacturing Sources (DMS) through studies and analysis, bridge buys, life-of-type buys, etc.

ADS-B Out software and hardware upgrade modifications will be done in FY19 and FY20 to meet mandates.

Exhibit P-3a, Individual Modification: PB 2020 Air Force		Date: February 2019
Appropriation / Budget Activity / Budget Sub Activity: 3010F / 05 / 3	**P-1 Line Item Number / Title:** C00500 / C-5	**Modification Number / Title:** 8968 / C-5M Communication Navigation Surveillance/Air Traffic Management (CNS/ATM)

ID Code (A=Service Ready, B=Not Service Ready) : B

MDAP/MAIS Code:

Milestone/Development Status

- Preliminary design review (PDR) July 2017
- Critical design review (CDR) September 2017
- DT&E July 2018 (Start Date)
- OT&E July 2019 (Start Date)
- MS-C March 2019
- Production contract award April 2019

Secondary Distribution		FY 2018	FY 2019	FY 2020 Base	FY 2020 OCO	FY 2020 Total	FY 2021	FY 2022	FY 2023	FY 2024
AF	Quantity	-	-	-	-	-	-	-	-	-
	Total Obligation Authority	-	22.967	26.280	-	26.280	25.866	19.176	7.528	2.398
AFR	Quantity	-	-	-	-	-	-	-	-	-
	Total Obligation Authority	-	5.646	6.106	-	6.106	6.877	3.569	2.190	-
Total: Secondary Distribution	**Quantity**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**
	Total Obligation Authority	**0.000**	**28.613**	**32.386**	**0.000**	**32.386**	**32.743**	**22.745**	**9.718**	**2.398**

Exhibit P-3a, Individual Modification: PB 2020 Air Force		Date: February 2019
Appropriation / Budget Activity / Budget Sub Activity: 3010F / 05 / 3	**P-1 Line Item Number / Title:** C00500 / C-5	**Modification Number / Title:** 8968 / C-5M Communication Navigation Surveillance/Air Traffic Management (CNS/ATM)
ID Code (A=Service Ready, B=Not Service Ready) : B	**MDAP/MAIS Code:**	
Models of Systems Affected: C-5M	**Modification Type:** Capability Improvement	**Related RDT&E PEs:** 0401119F

Financial Plan	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
	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)*
RDT&E PE #												
0401119F	2 / 78.575	- / 5.577	- / 25.071	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	2 / 109.223
Procurement												
Modification Item 1 of 1: CNS/ATM												
A Kits												
Recurring												
CNS/ATM:INSTALL KITS Group A (Active)	- / -	- / -	14 / 2.964	14 / 3.045	- / -	14 / 3.045	6 / 1.340	- / -	- / -	- / -	- / -	34 / 7.349
CNS/ATM:INSTALL KITS Group A (Reserve)	- / -	- / -	7 / 1.482	5 / 1.087	- / -	5 / 1.087	4 / 0.894	- / -	- / -	- / -	- / -	16 / 3.463
Subtotal: Recurring	- / -	- / -	- / 4.446	- / 4.132	- / -	- / 4.132	- / 2.234	- / -	- / -	- / -	- / -	- / 10.812
B Kits												
Recurring												
CNS/ATM:EQUIPMENT Group B (Active)	- / -	- / -	14 / 8.328	14 / 8.555	- / -	14 / 8.555	6 / 3.767	- / -	- / -	- / -	- / -	34 / 20.650
CNS/ATM:EQUIPMENT Group B (Reserve)	- / -	- / -	7 / 4.164	5 / 3.056	- / -	5 / 3.056	4 / 2.511	- / -	- / -	- / -	- / -	16 / 9.731
Subtotal: Recurring	- / -	- / -	- / 12.492	- / 11.611	- / -	- / 11.611	- / 6.278	- / -	- / -	- / -	- / -	- / 30.381
Subtotal: CNS/ATM	- / -	- / -	- / 16.938	- / 15.743	- / -	- / 15.743	- / 8.512	- / -	- / -	- / -	- / -	- / 41.193
Subtotal: Procurement, All Modification Items	- / -	- / -	- / 16.938	- / 15.743	- / -	- / 15.743	- / 8.512	- / -	- / -	- / -	- / -	- / 41.193
Support *(All Modification Items)*												
SUPPORT-EQUIP	- / -	- / -	- / 1.171	- / 0.329	- / -	- / 0.329	- / 0.000	- / 0.000	- / 0.000	- / 0.000	- / -	- / 1.500
ICS-Labor	- / -	- / -	- / 1.051	- / 1.083	- / -	- / 1.083	- / 1.159	- / 1.285	- / 1.389	- / 1.089	- / -	- / 7.056
ICS-Material	- / -	- / -	- / 0.069	- / 0.071	- / -	- / 0.071	- / 0.232	- / 0.572	- / 0.814	- / 0.576	- / -	- / 2.334
SIM/TRAINER	- / -	- / -	0 / 0.000	5 / 5.295	- / -	5 / 5.295	2 / 2.635	0 / 0.000	0 / 0.000	0 / 0.000	- / -	7 / 7.930
Data	- / -	- / -	- / 0.747	- / 0.694	- / -	- / 0.694	- / 0.375	- / 0.000	- / 0.000	- / 0.000	- / -	- / 1.816
Change Orders	- / -	- / -	- / 5.047	- / 2.925	- / -	- / 2.925	- / 1.616	- / 7.405	- / 2.502	- / 0.000	- / -	- / 19.495
A&AS	- / -	- / -	- / 2.514	- / 0.000	- / -	- / 0.000	- / 2.667	- / 0.000	- / 0.000	- / 0.000	- / -	- / 5.181
OTHER GOVT	- / -	- / -	- / 0.706	- / 0.364	- / -	- / 0.364	- / 1.698	- / 0.980	- / 0.263	- / 0.363	- / -	- / 4.374
PMA - Other Gov't Costs	- / -	- / -	- / 0.090	- / 0.136	- / -	- / 0.136	- / 0.137	- / 0.090	- / 0.090	- / 0.090	- / -	- / 0.633
PMA - Contractor Services	- / -	- / -	- / 0.030	- / 0.260	- / -	- / 0.260	- / 0.268	- / 0.030	- / 0.030	- / 0.030	- / -	- / 0.648
Type 1 Training	- / -	- / -	- / 0.250	- / 0.250	- / -	- / 0.250	- / 0.250	- / 0.250	- / 0.250	- / 0.250	- / -	- / 1.500
Subtotal: Support	- / -	- / -	0 / 11.675	5 / 11.407	- / -	5 / 11.407	2 / 11.037	0 / 10.612	0 / 5.338	0 / 2.398	- / -	7 / 52.467
Installation												

Exhibit P-3a, Individual Modification: PB 2020 Air Force		Date: February 2019
Appropriation / Budget Activity / Budget Sub Activity: 3010F / 05 / 3	**P-1 Line Item Number / Title:** C00500 / C-5	**Modification Number / Title:** 8968 / C-5M Communication Navigation Surveillance/Air Traffic Management (CNS/ATM)

ID Code (A=Service Ready, B=Not Service Ready) : B

MDAP/MAIS Code:

Models of Systems Affected: C-5M

Modification Type: Capability Improvement

Related RDT&E PEs: 0401119F

Financial Plan	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
	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)*
Modification Item 1 of 1: CNS/ATM	- / -	- / -	- / -	8 / 5.236	- / -	8 / 5.236	19 / 13.194	17 / 12.133	6 / 4.380	- / -	- / -	50 / 34.943
Subtotal: Installation	*- / -*	*- / -*	*- / -*	*8 / 5.236*	*- / -*	*8 / 5.236*	*19 / 13.194*	*17 / 12.133*	*6 / 4.380*	*- / -*	*- / -*	*50 / 34.943*
Total												
Total Cost (Procurement + Support + Installation)	**0.000**	**0.000**	**28.613**	**32.386**	**0.000**	**32.386**	**32.743**	**22.745**	**9.718**	**2.398**	**-**	**128.603**

Exhibit P-3a, Individual Modification: PB 2020 Air Force		Date: February 2019
Appropriation / Budget Activity / Budget Sub Activity: 3010F / 05 / 3	**P-1 Line Item Number / Title:** C00500 / C-5	**Modification Number / Title:** 8968 / C-5M Communication Navigation Surveillance/Air Traffic Management (CNS/ATM)

ID Code (A=Service Ready, B=Not Service Ready) : B

MDAP/MAIS Code:

Modification Item 1 of 1: CNS/ATM

Manufacturer Information

Manufacturer Name: TBD

Manufacturer Location: TBD

Administrative Leadtime *(in Months)*: 6

Production Leadtime *(in Months)*: 11

Dates	FY 2018	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024
Contract Dates		Apr 2019	Apr 2020	Apr 2021			
Delivery Dates		Mar 2020	Mar 2021	Mar 2022			

Installation Information

Method of Implementation: Depot Field Team

Installation Cost	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
	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)*
Prior Years	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2018	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2019	- / -	- / -	- / -	8 / 5.236	- / -	8 / 5.236	13 / 9.028	- / -	- / -	- / -	- / -	21 / 14.264
FY 2020	- / -	- / -	- / -	- / -	- / -	- / -	6 / 4.166	13 / 9.278	- / -	- / -	- / -	19 / 13.444
FY 2021	- / -	- / -	- / -	- / -	- / -	- / -	- / -	4 / 2.855	6 / 4.380	- / -	- / -	10 / 7.235
FY 2022	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2023	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2024	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
To Complete	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
Total	- / -	- / -	- / -	8 / 5.236	- / -	8 / 5.236	19 / 13.194	17 / 12.133	6 / 4.380	- / -	- / -	50 / 34.943

Installation Schedule

	PYS	FY 2018				FY 2019				FY 2020				FY 2021				FY 2022				FY 2023				FY 2024				TC	Tot
		Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4		
In	0	-	-	-	-	-	-	-	-	-	-	4	4	3	4	5	7	5	7	2	3	2	2	2	-	-	-	-	-	0	50
Out	0	-	-	-	-	-	-	-	-	-	-	-	2	3	3	4	6	6	7	4	4	2	4	3	2	-	-	-	-	0	50

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Exhibit P-40, Budget Line Item Justification: PB 2020 Air Force	Date: February 2019
Appropriation / Budget Activity / Budget Sub Activity: 3010F: Aircraft Procurement, Air Force / BA 05: Modification of Inservice Aircraft / BSA 3: Airlift Aircraft	**P-1 Line Item Number / Title:** C005M0 / C-5M

ID Code (A=Service Ready, B=Not Service Ready): B	**Program Elements for Code B Items:** 0401119F	**Other Related Program Elements:** 0401119F

Line Item MDAP/MAIS Code: 327

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 *(Units in Each)*	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost *($ in Millions)*	3,720.453	3.305	0.000	0.000	-	0.000	0.000	0.000	0.000	0.000	-	3,723.758
Less PY Advance Procurement *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) *($ in Millions)*	3,720.453	3.305	0.000	0.000	-	0.000	0.000	0.000	0.000	0.000	-	3,723.758
Plus CY Advance Procurement *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Total Obligation Authority *($ in Millions)*	**3,720.453**	**3.305**	**0.000**	**0.000**	**-**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**-**	**3,723.758**
(The following Resource Summary rows are for informational purposes only. The corresponding budget requests are documented elsewhere.)												
Initial Spares *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Flyaway Unit Cost *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Unit Cost *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-

Description:

The four-engine C-5 carries outsized and heavy cargo (tanks, helicopters, etc.) between main operating bases. Additionally, the aircraft is capable of carrying 73 troops and 36 standard 463-L pallets.

The C-5 fleet was delivered to the Air Force from 1969 to 1989. The aircraft's initial service life was 30,000 flight hours. The Air Force started converting 52 C-5A, B and C aircraft to the C-5M in October 2004 under the C-5 Reliability and Re-engining Program (RERP). The final C-5M delivered in August 2018. This modernization effort extends the service life of the C-5 out to 2040 with an expected service life of 51,025 flight hours.

As of March 2019, the C-5 inventory consists of 52 C-5M aircraft. All C-5A have been retired.

Funding for this exhibit is contained in PE 0401119F. No Budget Year FY20 funding requested.

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.

Justification:
Where applicable, justification for individual modifications is provided in the P-3A exhibits.

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Exhibit P-40, Budget Line Item Justification: PB 2020 Air Force	Date: February 2019
Appropriation / Budget Activity / Budget Sub Activity: 3010F: Aircraft Procurement, Air Force / BA 05: Modification of Inservice Aircraft / BSA 3: Airlift Aircraft	**P-1 Line Item Number / Title:** C01700 / C-17A

ID Code (A=Service Ready, B=Not Service Ready): B	**Program Elements for Code B Items:** 0401130F	**Other Related Program Elements:** 0401130F

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 *(Units in Each)*	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost *($ in Millions)*	249.685	96.352	77.221	60.244	0.000	60.244	104.403	96.030	108.331	79.508	38.975	910.749
Less PY Advance Procurement *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) *($ in Millions)*	249.685	96.352	77.221	60.244	0.000	60.244	104.403	96.030	108.331	79.508	38.975	910.749
Plus CY Advance Procurement *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Total Obligation Authority *($ in Millions)*	**249.685**	**96.352**	**77.221**	**60.244**	**0.000**	**60.244**	**104.403**	**96.030**	**108.331**	**79.508**	**38.975**	**910.749**
(The following Resource Summary rows are for informational purposes only. The corresponding budget requests are documented elsewhere.)												
Initial Spares *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Flyaway Unit Cost *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Unit Cost *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-

Description:

This line item funds modifications to the C-17 aircraft and Training Systems. The United States Air Force (USAF) C-17 inventory is 222 aircraft. The four engine C-17 is the only aircraft capable of routine delivery of outsize cargo (tanks, helicopters, etc.) to short, austere airfields. The aircraft can carry up to 102 troops, 36 litter patients, or 18 standard 463-L pallets.

Major C-17 modifications in FY20 include Pylon Stub Flammable Fluid Leakage Zone (FFLZ) Fixed Fairing (FF) Translating Fairing, Identification Friend or Foe Global Air Traffic Management (IFF GATM), Automatic Dependent Surveillance - Broadcast Out (ADS-B Out), Replacement Heads Up Display (RHUD), Filter Fire Mitigation, and Beyond Line of Sight (BLOS). The ADS-B Out installations are scheduled to meet the 1 Jan 2020 FAA mandate.

This funding includes RGM platform-related rapid prototyping and fielding activities executed under the authority of National Defense Authorization Act 2016, Section 804, as amended. Such activities include, but are not limited to, roll-on/roll-off, carry-on/carry-off, pod-based, aircraft-integrated support equipment, and other technical solutions supporting the full spectrum of the platform's RGM missions.

Funding may also be used to address Diminishing Manufacturing Sources (DMS) issues, obsolescence resolution for multi-functional displays, fuel efficiency & drag reduction improvements, aircraft data bus maintenance initiatives, and cockpit situational awareness.

In accordance with Section 1815 of the FY08 National Defense Authorization Act (P.L.110-181), these items are necessary for use by the active and reserve components of the Armed Forces for homeland defense missions, domestic emergency responses and providing military support to civil authorities.

Funding for this exhibit is contained in PE 0401130F and 0401897F.

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.

Secondary Distribution		FY 2018	FY 2019	FY 2020 Base	FY 2020 OCO	FY 2020 Total	FY 2021	FY 2022	FY 2023	FY 2024
AF	Quantity	-	-	-	-	-	-	-	-	-

Exhibit P-40, Budget Line Item Justification: PB 2020 Air Force	Date: February 2019
Appropriation / Budget Activity / Budget Sub Activity: 3010F: Aircraft Procurement, Air Force / BA 05: Modification of Inservice Aircraft / BSA 3: Airlift Aircraft	**P-1 Line Item Number / Title:** C01700 / C-17A

ID Code (A=Service Ready, B=Not Service Ready): B	Program Elements for Code B Items: 0401130F	Other Related Program Elements: 0401130F

Line Item MDAP/MAIS Code: N/A

Secondary Distribution		FY 2018	FY 2019	FY 2020 Base	FY 2020 OCO	FY 2020 Total	FY 2021	FY 2022	FY 2023	FY 2024
	Total Obligation Authority	69.559	74.021	60.244	0.000	60.244	102.785	96.030	76.679	59.987
AFNG	Quantity	-	-	-	-	-	-	-	-	-
	Total Obligation Authority	17.746	1.733	0.000	-	0.000	1.618	0.000	21.200	15.926
AFR	Quantity	-	-	-	-	-	-	-	-	-
	Total Obligation Authority	9.047	1.467	0.000	-	0.000	-	-	10.452	3.595
Total: Secondary Distribution	**Quantity**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**
	Total Obligation Authority	**96.352**	**77.221**	**60.244**	**0.000**	**60.244**	**104.403**	**96.030**	**108.331**	**79.508**

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

Appropriation / Budget Activity / Budget Sub Activity:
3010F: Aircraft Procurement, Air Force / BA 05: Modification of Inservice Aircraft / BSA 3: Airlift Aircraft

P-1 Line Item Number / Title:
C01700 / C-17A

ID Code (A=Service Ready, B=Not Service Ready): B | **Program Elements for Code B Items:** 0401130F | **Other Related Program Elements:** 0401130F

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-40a***	_2000 / Pylon Stub FFLZ, FF, Translating Fairing (Safety)				- / 89.697	- / 3.765	- / 1.200	- / -	- / -	- / -
P-40a***	_2590 / ELT Frequency Change (Capability Improvement)				- / 3.062	- / 2.120	- / -	- / -	- / -	- / -
P-40a***	_2633 / MFOQA (Capability Improvement)				- / 14.070	- / -	- / -	- / -	- / -	- / -
P-40a***	1508 / IFF GATM (Capability Improvement)				- / 96.453	- / 26.830	- / 0.015	- / -	- / -	- / -
P-40a***	2901 / Automatic Dependent Surveillance - Broadcast Out (ADS-B Out) (Capability Improvement)				- / 43.186	- / 40.649	- / 2.000	- / -	- / -	- / -
P-40a***	6403 / Filter Fire Mitigation (Capability Improvement)				- / -	- / -	- / -	- / 0.389	- / -	- / 0.389
P-40a***	9740 / Fixed Installation Satellite Antenna (FISA) (Capability Improvement)				- / -	- / 13.543	- / 12.317	- / -	- / -	- / -
P-40a***	9742 / C-17 Simulator Lateral Motion Maneuver Enhancement (Other)				- / -	- / -	- / 1.438	- / -	- / -	- / -
P-40a***	9744 / C-17 Visual System Field of View (Other)				- / -	- / -	- / 1.008	- / 0.100	- / -	- / 0.100
P-40a***	9747 / C-17 Training System (Other Mods) (Other)				- / -	- / -	- / 6.554	- / 1.290	- / -	- / 1.290
P-40a***	9748 / C-17 Training System (Training Mods) (No text provided.)				- / -	- / -	- / -	- / 11.270	- / -	- / 11.270
P-40a***	99999X / Low Cost Modifications (Capability Improvement)				- / 3.217	- / 0.024	- / 0.100	- / 0.100	- / -	- / 0.100
P-3a	3080 / Replacement Heads Up Display (RHUD) (Capability Improvement)		B		- / 0.000	- / 9.421	- / 51.991	- / 34.425	- / 0.000	- / 34.425
P-3a	9741 / Beyond Line of Sight (BLOS) (Capability Improvement)		B		- / -	- / -	- / 0.598	- / 12.670	- / 0.000	- / 12.670
P-40	**Total Gross/Weapon System Cost**				**- / 249.685**	**- / 96.352**	**- / 77.221**	**- / 60.244**	**- / 0.000**	**- / 60.244**

Exhibits Schedule					FY 2021	FY 2022	FY 2023	FY 2024	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-40a***	_2000 / Pylon Stub FFLZ, FF, Translating Fairing (Safety)				- / 1.618	- / -	- / -	- / -	- / -	- / 96.280
P-40a***	_2590 / ELT Frequency Change (Capability Improvement)				- / -	- / -	- / -	- / -	- / -	- / 5.182
P-40a***	_2633 / MFOQA (Capability Improvement)				- / -	- / -	- / -	- / -	- / -	- / 14.070
P-40a***	1508 / IFF GATM (Capability Improvement)				- / -	- / -	- / -	- / -	- / -	- / 123.298
P-40a***	2901 / Automatic Dependent Surveillance - Broadcast Out (ADS-B Out) (Capability Improvement)				- / -	- / -	- / -	- / -	- / -	- / 85.835
P-40a***	6403 / Filter Fire Mitigation (Capability Improvement)				- / 0.374	- / 2.190	- / 2.693	- / 2.727	- / 6.682	- / 15.055
P-40a***	9740 / Fixed Installation Satellite Antenna (FISA) (Capability Improvement)				- / -	- / -	- / -	- / -	- / -	- / 25.860
P-40a***	9742 / C-17 Simulator Lateral Motion Maneuver Enhancement (Other)				- / -	- / -	- / -	- / -	- / -	- / 1.438
P-40a***	9744 / C-17 Visual System Field of View (Other)				- / -	- / -	- / -	- / -	- / -	- / 1.108
P-40a***	9747 / C-17 Training System (Other Mods) (Other)				- / 8.457	- / 0.880	- / 1.097	- / 1.183	- / -	- / 19.461
P-40a***	9748 / C-17 Training System (Training Mods) (No text provided.)				- / 2.483	- / -	- / 10.556	- / -	- / -	- / 24.309
P-40a***	99999X / Low Cost Modifications (Capability Improvement)				- / 0.100	- / 0.100	- / 0.101	- / 0.100	- / -	- / 3.842

Exhibit P-40, Budget Line Item Justification: PB 2020 Air Force	**Date:** February 2019
Appropriation / Budget Activity / Budget Sub Activity: 3010F: Aircraft Procurement, Air Force / BA 05: Modification of Inservice Aircraft / BSA 3: Airlift Aircraft	**P-1 Line Item Number / Title:** C01700 / C-17A

ID Code (A=Service Ready, B=Not Service Ready): B	**Program Elements for Code B Items:** 0401130F	**Other Related Program Elements:** 0401130F

Line Item MDAP/MAIS Code: N/A

Exhibits Schedule					FY 2021	FY 2022	FY 2023	FY 2024	To Complete	Total
Exhibit Type	Title*	Subexhibits	ID CD	MDAP/ MAIS Code	Quantity / Total Cost *(Each) I ($ M)*	Quantity / Total Cost *(Each) I ($ M)*	Quantity / Total Cost *(Each) I ($ M)*	Quantity / Total Cost *(Each) I ($ M)*	Quantity / Total Cost *(Each) I ($ M)*	Quantity / Total Cost *(Each) I ($ M)*
P-3a	3080 / Replacement Heads Up Display (RHUD) (Capability Improvement)		B		- / 41.735	- / 38.521	- / 34.060	- / 43.446	- / 32.077	- / 285.676
P-3a	9741 / Beyond Line of Sight (BLOS) (Capability Improvement)		B		- / 49.636	- / 54.339	- / 59.824	- / 32.052	- / 0.216	- / 209.335
P-40	**Total Gross/Weapon System Cost**				**- / 104.403**	**- / 96.030**	**- / 108.331**	**- / 79.508**	**- / 38.975**	**- / 910.749**

*** Although this is an Exhibit P-40a item, the actual exhibit is not included since all of the required information for this item is already being shown here.

*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:
Where applicable, justification for individual modifications is provided in the P-3A exhibits.

Exhibit P-3a, Individual Modification: PB 2020 Air Force		Date: February 2019
Appropriation / Budget Activity / Budget Sub Activity: 3010F / 05 / 3	**P-1 Line Item Number / Title:** C01700 / C-17A	**Modification Number / Title:** 3080 / Replacement Heads Up Display (RHUD)
ID Code (A=Service Ready, B=Not Service Ready) : B	**MDAP/MAIS Code:**	

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 *(Units in Each)*	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost *($ in Millions)*	0.000	9.421	51.991	34.425	0.000	34.425	41.735	38.521	34.060	43.446	32.077	285.676
Less PY Advance Procurement *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) *($ in Millions)*	0.000	9.421	51.991	34.425	0.000	34.425	41.735	38.521	34.060	43.446	32.077	285.676
Plus CY Advance Procurement *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Total Obligation Authority *($ in Millions)*	**0.000**	**9.421**	**51.991**	**34.425**	**0.000**	**34.425**	**41.735**	**38.521**	**34.060**	**43.446**	**32.077**	**285.676**
(The following Resource Summary rows are for informational purposes only. The corresponding budget requests are documented elsewhere.)												
Initial Spares *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Unit Cost *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-

Description:

This modification effort is an ACAT III program for modernization of the C-17 on the Air Force Acquisition Master List (AML). This effort is for development, integration and installation of a Replacement Heads-Up Display (RHUD) onto the C-17 aircraft. Analysis indicates the current HUD, which is required to fly the C-17, is becoming unsupportable due to obsolescence. This effort will retrofit the C-17 fleet with an RHUD that is supportable and provides improved reliability, maintainability, and supportability, while providing growth to support future planned capability improvements. The RHUD is scheduled to complete all installs by CY26.

Projected allocations by component are subject to total force mission priorities and aircraft availability.

Funding may be used to address Diminishing Manufacturing Sources (DMS) issues.

Milestone/Development Status

The first RHUD will be tested with RDT&E funding in FY18. The first production kitproof kits will be purchased in FY18 for FY19 installation.

Secondary Distribution		FY 2018	FY 2019	FY 2020 Base	FY 2020 OCO	FY 2020 Total	FY 2021	FY 2022	FY 2023	FY 2024
AF	Quantity	-	-	-	-	-	-	-	-	-
	Total Obligation Authority	9.421	51.991	34.425	-	34.425	41.735	38.521	31.952	34.034
AFNG	Quantity	-	-	-	-	-	-	-	-	-
	Total Obligation Authority	-	-	-	-	-	-	-	2.108	9.412
AFR	Quantity	-	-	-	-	-	-	-	-	-
	Total Obligation Authority	-	-	-	-	-	-	-	0.000	-
Total: Secondary Distribution	**Quantity**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**
	Total Obligation Authority	**9.421**	**51.991**	**34.425**	**0.000**	**34.425**	**41.735**	**38.521**	**34.060**	**43.446**

Exhibit P-3a, Individual Modification: PB 2020 Air Force		Date: February 2019
Appropriation / Budget Activity / Budget Sub Activity: 3010F / 05 / 3	**P-1 Line Item Number / Title:** C01700 / C-17A	**Modification Number / Title:** 3080 / Replacement Heads Up Display (RHUD)
ID Code (A=Service Ready, B=Not Service Ready) : B	**MDAP/MAIS Code:**	
Models of Systems Affected: C-17	**Modification Type:** Capability Improvement	**Related RDT&E PEs:** 0401130F

Financial Plan	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
	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)*
RDT&E PE #												
0401130F	- / 108.629	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 108.629
Procurement												
Modification Item 1 of 1: RHUD												
A Kits												
Recurring												
RHUD:INSTALL KITS Group A (Active)	- / -	2 / 4.807	- / 10.000	30 / 17.008	- / -	30 / 17.008	38 / 25.090	38 / 25.590	38 / 24.592	24 / 16.186	- / -	170 / 123.273
RHUD:INSTALL KITS Group A (Guard)	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	0 / 2.108	14 / 9.412	20 / 13.472	34 / 24.992
RHUD:INSTALL KITS Group A (Reserve)	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	18 / 12.125	18 / 12.125
Subtotal: Recurring	*- / -*	*- / 4.807*	*- / 10.000*	*- / 17.008*	*- / -*	*- / 17.008*	*- / 25.090*	*- / 25.590*	*- / 26.700*	*- / 25.598*	*- / 25.597*	*- / 160.390*
Subtotal: RHUD	*- / -*	*- / 4.807*	*- / 10.000*	*- / 17.008*	*- / -*	*- / 17.008*	*- / 25.090*	*- / 25.590*	*- / 26.700*	*- / 25.598*	*- / 25.597*	*- / 160.390*
Subtotal: Procurement, All Modification Items	*- / -*	*- / 4.807*	*- / 10.000*	*- / 17.008*	*- / -*	*- / 17.008*	*- / 25.090*	*- / 25.590*	*- / 26.700*	*- / 25.598*	*- / 25.597*	*- / 160.390*
Support *(All Modification Items)*												
OTHER GOVT	- / -	- / -	- / 32.991	- / 0.045	- / -	- / 0.045	- / 0.045	- / 0.045	- / -	- / 0.045	- / -	- / 33.171
SUPPORT-EQUIP	- / -	- / -	- / -	- / 4.182	- / -	- / 4.182	- / -	- / -	- / -	- / -	- / -	- / 4.182
SIM/TRAINER	- / -	0 / 4.614	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	0 / 4.614
PMA - Other Gov't Costs	- / -	- / -	- / 9.000	- / 10.000	- / -	- / 10.000	- / 10.000	- / 5.916	- / -	0 / 10.000	- / -	0 / 44.916
Subtotal: Support	*- / -*	*0 / 4.614*	*- / 41.991*	*- / 14.227*	*- / -*	*- / 14.227*	*- / 10.045*	*- / 5.961*	*- / -*	*0 / 10.045*	*- / -*	*0 / 86.883*
Installation												
Modification Item 1 of 1: RHUD	- / -	- / -	- / -	2 / 3.190	- / -	2 / 3.190	30 / 6.600	38 / 6.970	38 / 7.360	38 / 7.803	76 / 6.480	222 / 38.403
Subtotal: Installation	*- / -*	*- / -*	*- / -*	*2 / 3.190*	*- / -*	*2 / 3.190*	*30 / 6.600*	*38 / 6.970*	*38 / 7.360*	*38 / 7.803*	*76 / 6.480*	*222 / 38.403*
Total												
Total Cost (Procurement + Support + Installation)	**0.000**	**9.421**	**51.991**	**34.425**	**0.000**	**34.425**	**41.735**	**38.521**	**34.060**	**43.446**	**32.077**	**285.676**

Exhibit P-3a, Individual Modification: PB 2020 Air Force		Date: February 2019
Appropriation / Budget Activity / Budget Sub Activity: 3010F / 05 / 3	**P-1 Line Item Number / Title:** C01700 / C-17A	**Modification Number / Title:** 3080 / Replacement Heads Up Display (RHUD)

ID Code (A=Service Ready, B=Not Service Ready) : B

MDAP/MAIS Code:

Modification Item 1 of 1: RHUD

Manufacturer Information

Manufacturer Name: The Boeing Company

Manufacturer Location: Long Beach, Ca

Administrative Leadtime *(in Months)*: 0

Production Leadtime *(in Months)*: 14

Dates	FY 2018	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024
Contract Dates	Nov 2018		Jun 2020	Jun 2021	Jun 2022	Jun 2023	Jun 2024
Delivery Dates	Jan 2020		Aug 2021	Aug 2022	Aug 2023	Aug 2024	Aug 2025

Installation Information

Method of Implementation: Contractor Facility

Installation Cost	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
	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)*
Prior Years	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2018	- / -	- / -	- / -	2 / 3.190	- / -	2 / 3.190	- / -	- / -	- / -	- / -	- / -	2 / 3.190
FY 2019	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2020	- / -	- / -	- / -	- / -	- / -	- / -	11 / 3.300	- / -	- / -	- / -	- / -	11 / 3.300
FY 2021	- / -	- / -	- / -	- / -	- / -	- / -	- / -	19 / 3.485	- / -	- / -	- / -	19 / 3.485
FY 2022	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	19 / 3.680	- / -	- / -	19 / 3.680
FY 2023	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	19 / 3.901	- / -	19 / 3.901
FY 2024	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	19 / 3.240	19 / 3.240
To Complete	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	19 / 0.000	19 / 0.000
Total	- / -	- / -	- / -	2 / 3.190	- / -	2 / 3.190	11 / 3.300	19 / 3.485	19 / 3.680	19 / 3.901	38 / 3.240	108 / 20.796

Installation Schedule

		FY 2018				FY 2019				FY 2020				FY 2021				FY 2022				FY 2023				FY 2024					
	PYS	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	TC	Tot
In	0	-	-	-	-	-	-	-	-	-	2	-	-	-	1	6	4	5	5	5	4	5	5	5	4	5	5	5	4	38	108
Out	0	-	-	-	-	-	-	-	-	-	-	2	-	-	-	1	6	4	5	5	5	4	5	5	5	4	5	5	5	42	108

Exhibit P-3a, Individual Modification: PB 2020 Air Force		Date: February 2019
Appropriation / Budget Activity / Budget Sub Activity: 3010F / 05 / 3	**P-1 Line Item Number / Title:** C01700 / C-17A	**Modification Number / Title:** 3080 / Replacement Heads Up Display (RHUD)

ID Code (A=Service Ready, B=Not Service Ready) : B

MDAP/MAIS Code:

Modification Item 1 of 1: RHUD

Installation Information

Method of Implementation: Depot

Installation Cost	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
	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)*
Prior Years	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2018	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2019	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2020	- / -	- / -	- / -	- / -	- / -	- / -	19 / 3.300	- / -	- / -	- / -	- / -	19 / 3.300
FY 2021	- / -	- / -	- / -	- / -	- / -	- / -	- / -	19 / 3.485	- / -	- / -	- / -	19 / 3.485
FY 2022	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	19 / 3.680	- / -	- / -	19 / 3.680
FY 2023	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	19 / 3.902	- / -	19 / 3.902
FY 2024	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	19 / 3.240	19 / 3.240
To Complete	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	19 / 0.000	19 / 0.000
Total	- / -	- / -	- / -	- / -	- / -	- / -	19 / 3.300	19 / 3.485	19 / 3.680	19 / 3.902	38 / 3.240	114 / 17.607

Installation Schedule

		FY 2018				FY 2019				FY 2020				FY 2021				FY 2022				FY 2023				FY 2024					
	PYS	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	TC	Tot
In	0	-	-	-	-	-	-	-	-	-	-	-	-	0	7	6	6	5	5	5	4	5	5	5	4	5	5	5	4	38	114
Out	0	-	-	-	-	-	-	-	-	-	-	-	-	0	-	7	6	6	5	5	5	4	5	5	5	4	5	5	5	42	114

Exhibit P-3a, Individual Modification: PB 2020 Air Force		Date: February 2019
Appropriation / Budget Activity / Budget Sub Activity: 3010F / 05 / 3	**P-1 Line Item Number / Title:** C01700 / C-17A	**Modification Number / Title:** 9741 / Beyond Line of Sight (BLOS)
ID Code (A=Service Ready, B=Not Service Ready) : B	**MDAP/MAIS Code:**	

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 *(Units in Each)*	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost *($ in Millions)*	-	-	0.598	12.670	0.000	12.670	49.636	54.339	59.824	32.052	0.216	209.335
Less PY Advance Procurement *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) *($ in Millions)*	-	-	0.598	12.670	0.000	12.670	49.636	54.339	59.824	32.052	0.216	209.335
Plus CY Advance Procurement *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Total Obligation Authority *($ in Millions)*	**-**	**-**	**0.598**	**12.670**	**0.000**	**12.670**	**49.636**	**54.339**	**59.824**	**32.052**	**0.216**	**209.335**
(The following Resource Summary rows are for informational purposes only. The corresponding budget requests are documented elsewhere.)												
Initial Spares *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Unit Cost *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-

Description:

This modification effort is associated with the C-17 Beyond Line of Sight (BLOS) program on the Air Force Acquisition Master List (AML). BLOS provides aircraft communication solutions (radio/antenna) to implement global secure line-of-sight and beyond line-of-sight communication to enable dynamic re-tasking and command and control support of MAF aircraft. BLOS includes, but is not limited to, Commercial SATCOM modernization, MILSATCOM modernization, and Cryptographic modernization.

Funding may be used to address Diminishing Manufacturing Sources (DMS) issues. Project allocations by component are subject to total force mission priorities and aircraft availability.

Milestone/Development Status

BLOS completed Milestone B in FY18Q4; Acquisition Program Baseline (APB) was approved on 21 Dec 19. Plan to procure long-lead material (ARC-210 radios) in FY19 for FY20 low rate production (kitproof).

Secondary Distribution		FY 2018	FY 2019	FY 2020 Base	FY 2020 OCO	FY 2020 Total	FY 2021	FY 2022	FY 2023	FY 2024
AF	Quantity	-	-	-	-	-	-	-	-	-
	Total Obligation Authority	-	0.598	12.670	0.000	12.670	49.636	54.339	30.280	21.943
AFNG	Quantity	-	-	-	-	-	-	-	-	-
	Total Obligation Authority	-	-	-	-	-	-	-	19.092	6.514
AFR	Quantity	-	-	-	-	-	-	-	-	-
	Total Obligation Authority	-	-	-	-	-	-	-	10.452	3.595
Total: Secondary Distribution	**Quantity**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**
	Total Obligation Authority	**-**	**0.598**	**12.670**	**0.000**	**12.670**	**49.636**	**54.339**	**59.824**	**32.052**

Exhibit P-3a, Individual Modification: PB 2020 Air Force		Date: February 2019
Appropriation / Budget Activity / Budget Sub Activity: 3010F / 05 / 3	**P-1 Line Item Number / Title:** C01700 / C-17A	**Modification Number / Title:** 9741 / Beyond Line of Sight (BLOS)
ID Code (A=Service Ready, B=Not Service Ready) : B	**MDAP/MAIS Code:**	
Models of Systems Affected: C-17	**Modification Type:** Capability Improvement	**Related RDT&E PEs:** 0401130F

Financial Plan	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
	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												
Modification Item 1 of 1: Comm Mod												
B Kits												
Recurring												
Comm Mod:EQUIPMENT Group B (Active)	- / -	- / -	2 / 0.598	10 / 5.760	- / -	10 / 5.760	93 / 46.918	51 / 28.417	14 / 5.292	- / -	- / -	170 / 86.985
Comm Mod:EQUIPMENT Group B (Guard)	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	30 / 19.092	4 / 1.558	- / -	34 / 20.650
Comm Mod:EQUIPMENT Group B (Reserve)	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	18 / 10.452	- / 0.621	- / -	18 / 11.073
Subtotal: Recurring	*- / -*	*- / -*	*- / 0.598*	*- / 5.760*	*- / -*	*- / 5.760*	*- / 46.918*	*- / 28.417*	*- / 34.836*	*- / 2.179*	*- / -*	*- / 118.708*
Subtotal: Comm Mod	*- / -*	*- / -*	*- / 0.598*	*- / 5.760*	*- / -*	*- / 5.760*	*- / 46.918*	*- / 28.417*	*- / 34.836*	*- / 2.179*	*- / -*	*- / 118.708*
Subtotal: Procurement, All Modification Items	*- / -*	*- / -*	*- / 0.598*	*- / 5.760*	*- / -*	*- / 5.760*	*- / 46.918*	*- / 28.417*	*- / 34.836*	*- / 2.179*	*- / -*	*- / 118.708*
Support *(All Modification Items)*												
PMA - Other Gov't Costs	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 10.045	- / -	- / -	- / 10.045
SIM/TRAINER	- / -	- / -	- / -	0 / 6.625	- / -	0 / 6.625	- / -	- / -	- / -	- / -	- / -	0 / 6.625
OTHER GOVT	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 19.631	- / -	- / 19.631
Subtotal: Support	*- / -*	*- / -*	*- / -*	*0 / 6.625*	*- / -*	*0 / 6.625*	*- / -*	*- / -*	*- / 10.045*	*- / 19.631*	*- / -*	*0 / 36.301*
Installation												
Modification Item 1 of 1: Comm Mod	- / -	- / -	- / -	2 / 0.285	0 / 0.000	2 / 0.285	10 / 2.718	93 / 25.922	51 / 14.943	62 / 10.242	4 / 0.216	222 / 54.326
Subtotal: Installation	*- / -*	*- / -*	*- / -*	*2 / 0.285*	*0 / 0.000*	*2 / 0.285*	*10 / 2.718*	*93 / 25.922*	*51 / 14.943*	*62 / 10.242*	*4 / 0.216*	*222 / 54.326*
Total												
Total Cost (Procurement + Support + Installation)	**-**	**-**	**0.598**	**12.670**	**0.000**	**12.670**	**49.636**	**54.339**	**59.824**	**32.052**	**0.216**	**209.335**

Exhibit P-3a, Individual Modification: PB 2020 Air Force		Date: February 2019
Appropriation / Budget Activity / Budget Sub Activity: 3010F / 05 / 3	**P-1 Line Item Number / Title:** C01700 / C-17A	**Modification Number / Title:** 9741 / Beyond Line of Sight (BLOS)
ID Code (A=Service Ready, B=Not Service Ready) : B	**MDAP/MAIS Code:**	

Modification Item 1 of 1: Comm Mod

Manufacturer Information

Manufacturer Name: Boeing	Manufacturer Location: Long Beach, CA
Administrative Leadtime *(in Months)*: 0	Production Leadtime *(in Months)*: 12

Dates	FY 2018	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024
Contract Dates		Jul 2019	Jul 2020	Oct 2020	Oct 2021	Oct 2022	Oct 2023
Delivery Dates		Jul 2020	Jul 2021	Oct 2021	Oct 2022	Oct 2023	Oct 2024

Installation Information

Method of Implementation: Contractor Facility

Installation Cost	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
	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)*
Prior Years	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2018	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2019	- / -	- / -	- / -	1 / 0.143	0 / 0.000	1 / 0.143	0 / 0.000	0 / 0.000	0 / 0.000	0 / 0.000	0 / 0.000	1 / 0.143
FY 2020	- / -	- / -	- / -	- / -	- / -	- / -	5 / 1.359	- / -	- / -	- / -	- / -	5 / 1.359
FY 2021	- / -	- / -	- / -	- / -	- / -	- / -	- / -	47 / 12.961	- / -	- / -	- / -	47 / 12.961
FY 2022	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	25 / 7.472	- / -	- / -	25 / 7.472
FY 2023	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	31 / 5.121	- / -	31 / 5.121
FY 2024	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	2 / 0.108	2 / 0.108
To Complete	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
Total	- / -	- / -	- / -	1 / 0.143	0 / 0.000	1 / 0.143	5 / 1.359	47 / 12.961	25 / 7.472	31 / 5.121	2 / 0.108	111 / 27.164

Installation Schedule

	PYS	FY 2018				FY 2019				FY 2020				FY 2021				FY 2022				FY 2023				FY 2024				TC	Tot
		Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4		
In	0	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-	5	12	13	12	10	13	12	-	-	13	12	6	-	2	111
Out	0	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-	5	12	13	12	10	13	12	-	-	13	12	6	2	111

Method of Implementation: Depot

Installation Cost	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
	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)*
Prior Years	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -

Exhibit P-3a, Individual Modification: PB 2020 Air Force		Date: February 2019
Appropriation / Budget Activity / Budget Sub Activity: 3010F / 05 / 3	**P-1 Line Item Number / Title:** C01700 / C-17A	**Modification Number / Title:** 9741 / Beyond Line of Sight (BLOS)
ID Code (A=Service Ready, B=Not Service Ready) : B	**MDAP/MAIS Code:**	

Modification Item 1 of 1: Comm Mod

Installation Information

Method of Implementation: Depot

Installation Cost	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
	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)*
FY 2018	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2019	- / -	- / -	- / -	1 / 0.142	- / -	1 / 0.142	- / -	- / -	- / -	- / -	- / -	1 / 0.142
FY 2020	- / -	- / -	- / -	- / -	- / -	- / -	5 / 1.359	- / -	- / -	- / -	- / -	5 / 1.359
FY 2021	- / -	- / -	- / -	- / -	- / -	- / -	- / -	46 / 12.961	- / -	- / -	- / -	46 / 12.961
FY 2022	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	26 / 7.471	- / -	- / -	26 / 7.471
FY 2023	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	31 / 5.121	- / -	31 / 5.121
FY 2024	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	2 / 0.108	2 / 0.108
To Complete	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
Total	- / -	- / -	- / -	1 / 0.142	- / -	1 / 0.142	5 / 1.359	46 / 12.961	26 / 7.471	31 / 5.121	2 / 0.108	111 / 27.162

Installation Schedule

		FY 2018				FY 2019				FY 2020				FY 2021				FY 2022				FY 2023				FY 2024					
	PYS	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	TC	Tot
In	0	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-	5	13	12	13	8	12	14	-	-	12	13	6	-	2	111
Out	0	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-	5	13	12	13	8	12	14	-	-	12	13	6	2	111

Exhibit P-40, Budget Line Item Justification: PB 2020 Air Force	Date: February 2019
Appropriation / Budget Activity / Budget Sub Activity: 3010F: Aircraft Procurement, Air Force / BA 05: Modification of Inservice Aircraft / BSA 3: Airlift Aircraft	**P-1 Line Item Number / Title:** C02100 / C-21

ID Code (A=Service Ready, B=Not Service Ready): B	**Program Elements for Code B Items:** 0401314F	**Other Related Program Elements:** 0401314F

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 *(Units in Each)*	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost *($ in Millions)*	10.956	13.253	17.516	0.216	-	0.216	0.220	0.224	0.228	0.000	-	42.613
Less PY Advance Procurement *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) *($ in Millions)*	10.956	13.253	17.516	0.216	-	0.216	0.220	0.224	0.228	0.000	-	42.613
Plus CY Advance Procurement *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Total Obligation Authority *($ in Millions)*	**10.956**	**13.253**	**17.516**	**0.216**	**-**	**0.216**	**0.220**	**0.224**	**0.228**	**0.000**	**-**	**42.613**
(The following Resource Summary rows are for informational purposes only. The corresponding budget requests are documented elsewhere.)												
Initial Spares *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Flyaway Unit Cost *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Unit Cost *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-

Description:

This line item funds low-cost modifications and service bulletins for nineteen (19) nineteen C-21A aircraft, commercial equivalent to the Learjet 35. The C-21A aircraft is a twin-turbofan engine aircraft used for cargo and passenger airlift over medium ranges. The design service life is 50 years with an average of 11 years remaining. Service bulletins and low cost modifications are necessary for continuing Federal Aviation Administration certification while improving flight safety, reliability, and maintainability. This funding may include emerging modification requirements to support PMA, A&AS, equipment and other government cost

Funding may be used to address Diminishing Manufacturing Sources (DMS) issues.

Funding for this exhibit contained in PE 0401314F.

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.

Justification:

Where applicable, justification for individual modifications is provided in the P-3A exhibits.

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Exhibit P-40, Budget Line Item Justification: PB 2020 Air Force	Date: February 2019
Appropriation / Budget Activity / Budget Sub Activity: 3010F: Aircraft Procurement, Air Force / BA 05: Modification of Inservice Aircraft / BSA 3: Airlift Aircraft	**P-1 Line Item Number / Title:** C03200 / C-32A

ID Code (A=Service Ready, B=Not Service Ready): B	**Program Elements for Code B Items:** 0401314F	**Other Related Program Elements:** 0401314F

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 *(Units in Each)*	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost *($ in Millions)*	140.794	79.449	4.537	11.511	-	11.511	1.951	1.990	2.026	0.010	-	242.268
Less PY Advance Procurement *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) *($ in Millions)*	140.794	79.449	4.537	11.511	-	11.511	1.951	1.990	2.026	0.010	-	242.268
Plus CY Advance Procurement *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Total Obligation Authority *($ in Millions)*	**140.794**	**79.449**	**4.537**	**11.511**	**-**	**11.511**	**1.951**	**1.990**	**2.026**	**0.010**	**-**	**242.268**
(The following Resource Summary rows are for informational purposes only. The corresponding budget requests are documented elsewhere.)												
Initial Spares *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Flyaway Unit Cost *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Unit Cost *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-

Description:

This line item funds all aircraft modifications for four (4) C-32A aircraft, a commercial derivative of the Boeing 757-200. The C-32A is a twin-engine, turbofan aircraft used to transport high ranking government officals worldwide. The design service life is 30 years with an average of 10 years remaining. This funding may include emerging modification requirements to support PMA, A&AS, equipment and other government costs.

Service bulletins and low cost modifications are necessary for continuing Federal Aviation Administration certification while improving flight safety, reliability, and maintainability.

Funding may be used to address Diminishing Manufacturing Sources (DMS) issues.

Funding for this exhibit is contained in PE 0401314F.

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.

Secondary Distribution		FY 2018	FY 2019	FY 2020 Base	FY 2020 OCO	FY 2020 Total	FY 2021	FY 2022	FY 2023	FY 2024
AF	Quantity	-	-	-	-	-	-	-	-	-
	Total Obligation Authority	79.447	4.537	11.511	0.000	11.511	1.951	1.990	2.026	0.010
Total: Secondary Distribution	**Quantity**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**
	Total Obligation Authority	**79.447**	**4.537**	**11.511**	**0.000**	**11.511**	**1.951**	**1.990**	**2.026**	**0.010**

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

Appropriation / Budget Activity / Budget Sub Activity:
3010F: Aircraft Procurement, Air Force / BA 05: Modification of Inservice Aircraft / BSA 3: Airlift Aircraft

P-1 Line Item Number / Title:
C03200 / C-32A

ID Code (A=Service Ready, B=Not Service Ready): B | **Program Elements for Code B Items:** 0401314F | **Other Related Program Elements:** 0401314F

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) I ($ M)	Quantity / Total Cost (Each) I ($ M)	Quantity / Total Cost (Each) I ($ M)	Quantity / Total Cost (Each) I ($ M)	Quantity / Total Cost (Each) I ($ M)	Quantity / Total Cost (Each) I ($ M)
P-40a***	1110 / Nitrogen Generation System (Other)				- / 20.106	- / 2.046	- / -	- / -	- / -	- / -
P-40a***	1116 / WIDEBAND SATCOM (Capability Improvement)				- / 107.689	- / 53.425	- / -	- / -	- / -	- / -
P-40a***	1117 / CNS/ATM Compliance (Capability Improvement)				- / 4.821	- / 20.220	- / 1.968	- / -	- / -	- / -
P-40a***	99999S / SERVICE BULLETINS (Capability Improvement)				- / 0.962	- / 0.000	- / 0.005	- / 0.005	- / -	- / 0.005
P-40a***	99999SG / 99999SG - Service Bulletins - C-32B (Capability Improvement)				- / 3.795	- / 2.000	- / 1.000	- / 1.000	- / 0.000	- / 1.000
P-40a***	99999X / Low Cost Modifications (Capability Improvement)				- / 0.003	- / 0.008	- / 0.005	- / 0.005	- / -	- / 0.005
P-40a***	99999XG / 99999XG - Low Cost Mods - C-32B (Capability Improvement)				- / 3.418	- / 1.748	- / 0.893	- / 0.908	- / -	- / 0.908
P-3a	1119 / Crew Rest Seats (Capability Improvement)		B		- / -	- / 0.000	- / 0.666	- / 9.593	- / 0.000	- / 9.593
P-40	**Total Gross/Weapon System Cost**				**- / 140.794**	**- / 79.449**	**- / 4.537**	**- / 11.511**	**- / -**	**- / 11.511**

Exhibits Schedule					FY 2021	FY 2022	FY 2023	FY 2024	To Complete	Total
Exhibit Type	Title*	Subexhibits	ID CD	MDAP/ MAIS Code	Quantity / Total Cost (Each) I ($ M)	Quantity / Total Cost (Each) I ($ M)	Quantity / Total Cost (Each) I ($ M)	Quantity / Total Cost (Each) I ($ M)	Quantity / Total Cost (Each) I ($ M)	Quantity / Total Cost (Each) I ($ M)
P-40a***	1110 / Nitrogen Generation System (Other)				- / -	- / -	- / -	- / -	- / -	- / 22.152
P-40a***	1116 / WIDEBAND SATCOM (Capability Improvement)				- / -	- / -	- / -	- / -	- / -	- / 161.114
P-40a***	1117 / CNS/ATM Compliance (Capability Improvement)				- / -	- / -	- / -	- / -	- / -	- / 27.009
P-40a***	99999S / SERVICE BULLETINS (Capability Improvement)				- / 0.005	- / 0.005	- / 0.005	- / 0.005	- / -	- / 0.992
P-40a***	99999SG / 99999SG - Service Bulletins - C-32B (Capability Improvement)				- / 1.000	- / 1.000	- / 2.000	- / 0.000	- / -	- / 11.795
P-40a***	99999X / Low Cost Modifications (Capability Improvement)				- / 0.005	- / 0.005	- / 0.005	- / 0.005	- / -	- / 0.041
P-40a***	99999XG / 99999XG - Low Cost Mods - C-32B (Capability Improvement)				- / 0.941	- / 0.980	- / 0.016	- / -	- / -	- / 8.904
P-3a	1119 / Crew Rest Seats (Capability Improvement)		B		- / 0.000	- / 0.000	- / 0.000	- / 0.000	- / -	- / 10.259
P-40	**Total Gross/Weapon System Cost**				**- / 1.951**	**- / 1.990**	**- / 2.026**	**- / 0.010**	**- / -**	**- / 242.268**

*** Although this is an Exhibit P-40a item, the actual exhibit is not included since all of the required information for this item is already being shown here.

*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:
Where applicable, justification for individual modifications is provided in the P-3A exhibits.

Exhibit P-3a, Individual Modification: PB 2020 Air Force		Date: February 2019
Appropriation / Budget Activity / Budget Sub Activity: 3010F / 05 / 3	**P-1 Line Item Number / Title:** C03200 / C-32A	**Modification Number / Title:** 1119 / Crew Rest Seats
ID Code (A=Service Ready, B=Not Service Ready) : B	**MDAP/MAIS Code:**	

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 *(Units in Each)*	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost *($ in Millions)*	-	0.000	0.666	9.593	0.000	9.593	0.000	0.000	0.000	0.000	-	10.259
Less PY Advance Procurement *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) *($ in Millions)*	-	0.000	0.666	9.593	0.000	9.593	0.000	0.000	0.000	0.000	-	10.259
Plus CY Advance Procurement *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Total Obligation Authority *($ in Millions)*	**-**	**0.000**	**0.666**	**9.593**	**0.000**	**9.593**	**0.000**	**0.000**	**0.000**	**0.000**	**-**	**10.259**
(The following Resource Summary rows are for informational purposes only. The corresponding budget requests are documented elsewhere.)												
Initial Spares *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Unit Cost *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-

Description:

This modification installs Federal Aviation Administration (FAA) certified crew rest seating on Air Force C-32A aircraft to allow a 24 hour, augmented crew duty day versus the current 16 hours. The C-32A is an FAA certified commercial derivative Boeing 757-200 Business Jet capable of long range, oceanic flight operations. C-32A customers frequently request missions requiring operation beyond the current 16 hour limit. This modification installs four crew rest seats, in the C-32A crew seating area, that recline to a flat horizontal position meeting FAA crew rest certification standards. This modification will eliminate the expense and inconvenience of en route crew rest stops or prepositioning additional crews, and also makes C-32A range comparable to other long haul mobility assets such as C-17, C-5, and KC-10. This funding may include emerging modification requirements to support PMA, A&AS, equipment and other government costs.

Milestone/Development Status

Non Developmental. Commercial-off-the-shelf item with non-recurring engineering for integration.

Secondary Distribution		FY 2018	FY 2019	FY 2020 Base	FY 2020 OCO	FY 2020 Total	FY 2021	FY 2022	FY 2023	FY 2024
AF	Quantity	-	-	-	-	-	-	-	-	-
	Total Obligation Authority	-	0.666	9.593	-	9.593	-	-	-	-
Total: Secondary Distribution	**Quantity**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**
	Total Obligation Authority	**0.000**	**0.666**	**9.593**	**0.000**	**9.593**	**0.000**	**0.000**	**0.000**	**0.000**

Exhibit P-3a, Individual Modification: PB 2020 Air Force		Date: February 2019
Appropriation / Budget Activity / Budget Sub Activity: 3010F / 05 / 3	P-1 Line Item Number / Title: C03200 / C-32A	Modification Number / Title: 1119 / Crew Rest Seats
ID Code (A=Service Ready, B=Not Service Ready) : B	MDAP/MAIS Code:	
Models of Systems Affected: C-32A	Modification Type: Capability Improvement	Related RDT&E PEs: 0401314F

Financial Plan	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
	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												
Modification Item 1 of 1: Crew Rest Seats												
B Kits												
Recurring												
Crew Rest Seats:EQUIPMENT Group B (Active)	- / -	- / -	- / -	4 / 1.949	- / -	4 / 1.949	- / -	- / -	- / -	- / -	- / -	4 / 1.949
Subtotal: Recurring	- / -	- / -	- / -	- / 1.949	- / -	- / 1.949	- / -	- / -	- / -	- / -	- / -	- / 1.949
Subtotal: Crew Rest Seats	- / -	- / -	- / -	- / 1.949	- / -	- / 1.949	- / -	- / -	- / -	- / -	- / -	- / 1.949
Subtotal: Procurement, All Modification Items	- / -	- / -	- / -	- / 1.949	- / -	- / 1.949	- / -	- / -	- / -	- / -	- / -	- / 1.949
Support *(All Modification Items)*												
GROUP B: TOTAL NONRECURRING	- / -	- / -	- / 0.000	- / 4.962	- / -	- / 4.962	- / -	- / -	- / -	- / -	- / -	- / 4.962
Data	- / -	- / -	- / -	- / 0.124	- / -	- / 0.124	- / -	- / -	- / -	- / -	- / -	- / 0.124
PMA - Other Gov't Costs	- / -	- / -	- / 0.666	- / 0.338	- / -	- / 0.338	- / -	- / -	- / -	- / -	- / -	- / 1.004
Subtotal: Support	- / -	- / -	- / 0.666	- / 5.424	- / -	- / 5.424	- / -	- / -	- / -	- / -	- / -	- / 6.090
Installation												
Modification Item 1 of 1: Crew Rest Seats	- / -	- / -	- / -	4 / 2.220	- / -	4 / 2.220	- / -	- / -	- / -	- / -	- / -	4 / 2.220
Subtotal: Installation	- / -	- / -	- / -	4 / 2.220	- / -	4 / 2.220	- / -	- / -	- / -	- / -	- / -	4 / 2.220
Total												
Total Cost (Procurement + Support + Installation)	**-**	**0.000**	**0.666**	**9.593**	**0.000**	**9.593**	**0.000**	**0.000**	**0.000**	**0.000**	**-**	**10.259**

Exhibit P-3a, Individual Modification: PB 2020 Air Force		Date: February 2019
Appropriation / Budget Activity / Budget Sub Activity: 3010F / 05 / 3	**P-1 Line Item Number / Title:** C03200 / C-32A	**Modification Number / Title:** 1119 / Crew Rest Seats

ID Code (A=Service Ready, B=Not Service Ready) : B

MDAP/MAIS Code:

Modification Item 1 of 1: Crew Rest Seats

Manufacturer Information

Manufacturer Name: Boeing

Manufacturer Location: San Antonio, TX

Administrative Leadtime *(in Months)*: 3

Production Leadtime *(in Months)*: 12

Dates	FY 2018	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024
Contract Dates			Apr 2020				
Delivery Dates			Apr 2021				

Installation Information

Method of Implementation: Contractor Facility

Installation Cost	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
	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)*
Prior Years	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2018	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2019	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2020	- / -	- / -	- / -	4 / 2.220	- / -	4 / 2.220	- / -	- / -	- / -	- / -	- / -	4 / 2.220
FY 2021	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2022	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2023	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2024	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
To Complete	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
Total	- / -	- / -	- / -	4 / 2.220	- / -	4 / 2.220	- / -	- / -	- / -	- / -	- / -	4 / 2.220

Installation Schedule

	PYS	FY 2018				FY 2019				FY 2020				FY 2021				FY 2022				FY 2023				FY 2024				TC	Tot
		Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4		
In	0	-	-	-	-	-	-	-	-	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0	4
Out	0	-	-	-	-	-	-	-	-	-	-	-	-	-	1	1	2	-	-	-	-	-	-	-	-	-	-	-	-	0	4

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Exhibit P-40, Budget Line Item Justification: PB 2020 Air Force	Date: February 2019
Appropriation / Budget Activity / Budget Sub Activity: 3010F: Aircraft Procurement, Air Force / BA 05: Modification of Inservice Aircraft / BSA 3: Airlift Aircraft	**P-1 Line Item Number / Title:** C03700 / C-37A

ID Code (A=Service Ready, B=Not Service Ready): B	**Program Elements for Code B Items:** 0401314F	**Other Related Program Elements:** 0401314F

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 *(Units in Each)*	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost *($ in Millions)*	5.518	15.423	0.419	0.435	-	0.435	0.459	0.469	0.477	0.485	-	23.685
Less PY Advance Procurement *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) *($ in Millions)*	5.518	15.423	0.419	0.435	-	0.435	0.459	0.469	0.477	0.485	-	23.685
Plus CY Advance Procurement *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Total Obligation Authority *($ in Millions)*	**5.518**	**15.423**	**0.419**	**0.435**	**-**	**0.435**	**0.459**	**0.469**	**0.477**	**0.485**	**-**	**23.685**
(The following Resource Summary rows are for informational purposes only. The corresponding budget requests are documented elsewhere.)												
Initial Spares *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Flyaway Unit Cost *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Unit Cost *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-

Description:

This line item funds modifications to twelve (12) C-37A and C-37B aircraft, commercial equivalent Gulfstream 5 and Gulfstream 550. The C-37A/B is a twin-engine jet transport designed to transport high-ranking government officials worldwide. The designed service life is 40,000 hours with an average of 28,000 hours remaining. This funding may include emerging modification requirements to support PMA, A&AS, equipment and other government costs.

Service bulletins and low cost modifications are necessary for continuing Federal Aviation Administration (FAA) certification while improving flight safety, reliability, and maintainability.

Funding may be used to address Diminishing Manufacturing Sources (DMS) issues.

Funding for this exhibit is contained in PE 0401314F.

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.

Justification:
Where applicable, justification for individual modifications is provided in the P-3A exhibits.

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Exhibit P-40, Budget Line Item Justification: PB 2020 Air Force	Date: February 2019
Appropriation / Budget Activity / Budget Sub Activity: 3010F: Aircraft Procurement, Air Force / BA 05: Modification of Inservice Aircraft / BSA 4: Trainer Aircraft	**P-1 Line Item Number / Title:** GLID00 / Glider Mods

ID Code (A=Service Ready, B=Not Service Ready): B	**Program Elements for Code B Items:** 0804748F	**Other Related Program Elements:** N/A
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 *(Units in Each)*	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost *($ in Millions)*	4.724	0.136	0.137	0.138	-	0.138	0.141	0.144	0.147	0.150	-	5.717
Less PY Advance Procurement *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) *($ in Millions)*	4.724	0.136	0.137	0.138	-	0.138	0.141	0.144	0.147	0.150	-	5.717
Plus CY Advance Procurement *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Total Obligation Authority *($ in Millions)*	**4.724**	**0.136**	**0.137**	**0.138**	**-**	**0.138**	**0.141**	**0.144**	**0.147**	**0.150**	**-**	**5.717**
(The following Resource Summary rows are for informational purposes only. The corresponding budget requests are documented elsewhere.)												
Initial Spares *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Flyaway Unit Cost *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Unit Cost *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-

Description:

This line item funds modifications to the TG-15 and TG-16 gliders, T-41, T-51, T-53 and UV-18 aircraft used at the United States Air Force Academy. Among gliders there are two TG-15A aircraft with a design service life of 6,000 hours, three TG-15B aircraft with a design service life of 6,000 hours, and 19 TG-16A aircraft with a design service life of 12,000. Powered flight consists of four T-41D aircraft with a design service life of 60,000 hours, three T-51A aircraft with a design service life of 60,000 hours and 24 T-53A aircraft with a design service life of 12,000 hours. To support parachute jumping there are three UV-18B aircraft with a design service life of 40,000 hours. The primary effort in FY20 is Low Cost Modifications, which includes various AF Academy simulator system procurements, FAA Service Bulletin, Air Worthiness Directives, studies, and civilian pay and CMEs in support of program activities.

Funding for this exhibit contained in PE 0804748F.

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.

Justification:

Where applicable, justification for individual modifications is provided in the P-3A exhibits.

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Exhibit P-40, Budget Line Item Justification: PB 2020 Air Force	Date: February 2019
Appropriation / Budget Activity / Budget Sub Activity: 3010F: Aircraft Procurement, Air Force / BA 05: Modification of Inservice Aircraft / BSA 4: Trainer Aircraft	**P-1 Line Item Number / Title:** JPAT00 / T-6

ID Code (A=Service Ready, B=Not Service Ready): B	Program Elements for Code B Items: 0604233F	Other Related Program Elements: 0604233F

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 *(Units in Each)*	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost *($ in Millions)*	27.722	14.606	22.550	11.826	-	11.826	32.059	14.161	6.157	3.214	0.100	132.395
Less PY Advance Procurement *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) *($ in Millions)*	27.722	14.606	22.550	11.826	-	11.826	32.059	14.161	6.157	3.214	0.100	132.395
Plus CY Advance Procurement *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Total Obligation Authority *($ in Millions)*	**27.722**	**14.606**	**22.550**	**11.826**	**-**	**11.826**	**32.059**	**14.161**	**6.157**	**3.214**	**0.100**	**132.395**
(The following Resource Summary rows are for informational purposes only. The corresponding budget requests are documented elsewhere.)												
Initial Spares *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Flyaway Unit Cost *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Unit Cost *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-

Description:

The Joint Primary Aircraft Training System (JPATS) T-6 replaces the USAF T-37B and USN T-34C training aircraft and their associated ground based training systems. The JPATS T-6 aircraft provides significant improvements over the aircraft it replaced, including a 0/0 ejection seat which accommodates a larger anthropometric pilot population, a pressurized cockpit, gravitational-force (g-force) strain reduction capabilities, and increased birdstrike protection. There are currently 444 T-6A aircraft in the Air Force inventory. The aircraft were designed with a 24 year service life. Remaining service life is up to 21 years from the final delivery in May 2010. The primary modifications in FY 2020 include Aircrew Training Device (ATD) Modernization, Avionics Upgrades FAA Compliance,Reliability & Maintainability (R&M) Safety Mods, Crew System Modernization Program, and Service Bulletins. Funding may be used to address Diminishing Manufacturing Sources (DMS) issues.

Funding contained in this platform's documentation directly aids Air Education Training Command (AETC) flying training enterprise to continue its overall pilot production increase starting in FY 2020 thus reducing the USAF Pilot Shortage.

Funding for this exhibit contained in PE 0804740F.

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.

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

Appropriation / Budget Activity / Budget Sub Activity:
3010F: Aircraft Procurement, Air Force / BA 05: Modification of Inservice Aircraft / BSA 4: Trainer Aircraft

P-1 Line Item Number / Title:
JPAT00 / T-6

ID Code (A=Service Ready, B=Not Service Ready): B | **Program Elements for Code B Items:** 0604233F | **Other Related Program Elements:** 0604233F

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) I ($ M)	Quantity / Total Cost (Each) I ($ M)	Quantity / Total Cost (Each) I ($ M)	Quantity / Total Cost (Each) I ($ M)	Quantity / Total Cost (Each) I ($ M)	Quantity / Total Cost (Each) I ($ M)
P-40a***	9871 / COCKPIT UPGRADES (Capability Improvement)				- / -	- / -	- / -	- / -	- / -	- / -
P-40a***	9873 / Canopy Fracture Initiation System (Reliability & Maintainability)				- / 0.867	- / 0.264	- / -	- / -	- / -	- / -
P-40a***	9878 / Aircrew Training Device (ATD) Modernization (Capability Improvement)				- / 25.962	- / 9.369	- / 2.210	- / 3.601	- / -	- / 3.601
P-40a***	9890 / Controlled Flight Into Terrain Avoidance (Capability Improvement)				- / -	- / -	- / -	- / -	- / -	- / -
P-40a***	9892 / Reliability & Maintainability (R&M) Safety Mods (Safety)				- / -	- / -	- / -	- / 0.100	- / -	- / 0.100
P-40a***	9893 / Crew System Modernization Program (Capability Improvement)				- / -	- / -	- / -	- / 0.100	- / -	- / 0.100
P-40a***	99999S / SERVICE BULLETINS (Service Life Extension)				- / -	- / -	- / -	- / 0.100	- / -	- / 0.100
P-40a***	99999X / Low Cost Modifications (Capability Improvement)				- / 0.893	- / 1.148	- / 1.191	- / 1.700	- / -	- / 1.700
P-3a	9877 / Avionics Upgrades FAA Compliance (Reliability & Maintainability)		A		- / 0.000	- / 3.825	- / 19.149	- / 6.225	- / 0.000	- / 6.225
P-40	**Total Gross/Weapon System Cost**				**- / 27.722**	**- / 14.606**	**- / 22.550**	**- / 11.826**	**- / -**	**- / 11.826**

Exhibits Schedule					FY 2021	FY 2022	FY 2023	FY 2024	To Complete	Total
Exhibit Type	Title*	Subexhibits	ID CD	MDAP/ MAIS Code	Quantity / Total Cost (Each) I ($ M)	Quantity / Total Cost (Each) I ($ M)	Quantity / Total Cost (Each) I ($ M)	Quantity / Total Cost (Each) I ($ M)	Quantity / Total Cost (Each) I ($ M)	Quantity / Total Cost (Each) I ($ M)
P-40a***	9871 / COCKPIT UPGRADES (Capability Improvement)				- / 25.736	- / 7.342	- / -	- / -	- / -	- / 33.078
P-40a***	9873 / Canopy Fracture Initiation System (Reliability & Maintainability)				- / -	- / -	- / -	- / -	- / -	- / 1.131
P-40a***	9878 / Aircrew Training Device (ATD) Modernization (Capability Improvement)				- / 4.323	- / 3.200	- / 2.922	- / 2.914	- / -	- / 54.501
P-40a***	9890 / Controlled Flight Into Terrain Avoidance (Capability Improvement)				- / -	- / 3.219	- / 2.835	- / -	- / -	- / 6.054
P-40a***	9892 / Reliability & Maintainability (R&M) Safety Mods (Safety)				- / 0.100	- / 0.100	- / 0.100	- / 0.100	- / -	- / 0.500
P-40a***	9893 / Crew System Modernization Program (Capability Improvement)				- / 0.100	- / 0.100	- / 0.100	- / 0.100	- / -	- / 0.500
P-40a***	99999S / SERVICE BULLETINS (Service Life Extension)				- / 0.100	- / 0.100	- / 0.100	- / 0.100	- / 0.100	- / 0.600
P-40a***	99999X / Low Cost Modifications (Capability Improvement)				- / 1.700	- / 0.100	- / 0.100	- / 0.000	- / -	- / 6.832
P-3a	9877 / Avionics Upgrades FAA Compliance (Reliability & Maintainability)		A		- / 0.000	- / 0.000	- / -	- / -	- / -	- / 29.199
P-40	**Total Gross/Weapon System Cost**				**- / 32.059**	**- / 14.161**	**- / 6.157**	**- / 3.214**	**- / 0.100**	**- / 132.395**

*** Although this is an Exhibit P-40a item, the actual exhibit is not included since all of the required information for this item is already being shown here.

*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:
Where applicable, justification for individual modifications is provided in the P-3A exhibits.

Exhibit P-40, Budget Line Item Justification: PB 2020 Air Force		Date: February 2019
Appropriation / Budget Activity / Budget Sub Activity: 3010F: Aircraft Procurement, Air Force / BA 05: Modification of Inservice Aircraft / BSA 4: Trainer Aircraft	**P-1 Line Item Number / Title:** JPAT00 / T-6	
ID Code (A=Service Ready, B=Not Service Ready): B	**Program Elements for Code B Items:** 0604233F	**Other Related Program Elements:** 0604233F
Line Item MDAP/MAIS Code: N/A		

Exhibit P-3a, Individual Modification: PB 2020 Air Force		Date: February 2019
Appropriation / Budget Activity / Budget Sub Activity: 3010F / 05 / 4	**P-1 Line Item Number / Title:** JPAT00 / T-6	**Modification Number / Title:** 9877 / Avionics Upgrades FAA Compliance
ID Code (A=Service Ready, B=Not Service Ready) : A	**MDAP/MAIS Code:**	

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 *(Units in Each)*	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost *($ in Millions)*	0.000	3.825	19.149	6.225	0.000	6.225	0.000	0.000	-	-	-	29.199
Less PY Advance Procurement *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) *($ in Millions)*	0.000	3.825	19.149	6.225	0.000	6.225	0.000	0.000	-	-	-	29.199
Plus CY Advance Procurement *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Total Obligation Authority *($ in Millions)*	**0.000**	**3.825**	**19.149**	**6.225**	**0.000**	**6.225**	**0.000**	**0.000**	**-**	**-**	**-**	**29.199**
(The following Resource Summary rows are for informational purposes only. The corresponding budget requests are documented elsewhere.)												
Initial Spares *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Unit Cost *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-

Description:

The overall goal of the modification is to be in compliance with the 28 May 2010 Federal Aviation Administration (FAA) release of DoT/FAA, 14 CFR Par 91.225: Automatic Dependent Surveillance Broadcast (ADS-B) Out Performance Requirements to Support Air Traffic Control (ATC) Service Final Rule. This mandate stipulates that all aircraft are required to have unrestricted access to operate in Classes A, B, and C airspace, certain Class E airspace, and other specified airspace requiring ADS-B Out, must be in compliance with this regulation by January 1, 2020. Upgrading to ADS-B Out will require significant avionics system modifications to the T-6 fleet and will include the addition of a Wide Area Augmentation System (WAAS) capable GPS.

Milestone/Development Status

Development for this effort began in FY16 under PE 0604233F.

Exhibit P-3a, Individual Modification: PB 2020 Air Force		Date: February 2019
Appropriation / Budget Activity / Budget Sub Activity: 3010F / 05 / 4	**P-1 Line Item Number / Title:** JPAT00 / T-6	**Modification Number / Title:** 9877 / Avionics Upgrades FAA Compliance
ID Code (A=Service Ready, B=Not Service Ready) : A	**MDAP/MAIS Code:**	
Models of Systems Affected: T-6A	**Modification Type:** Reliability & Maintainability	**Related RDT&E PEs:** 0604233F

Financial Plan	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
	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												
Modification Item 1 of 1: Model B Kits												
B Kits												
Recurring												
Model B Kits:EQUIPMENT Group B (Active)	- / -	- / -	444 / 5.962	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	444 / 5.962
Subtotal: Recurring	- / -	- / -	- / 5.962	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 5.962
Subtotal: Model B Kits	- / -	- / -	- / 5.962	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 5.962
Subtotal: Procurement, All Modification Items	- / -	- / -	- / 5.962	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 5.962
Support *(All Modification Items)*												
Change Orders	- / -	- / 0.000	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 0.000
PMA - Contractor Services	- / -	- / 1.010	- / -	- / 1.000	- / -	- / 1.000	- / -	- / -	- / -	- / -	- / -	- / 2.010
OTHER GOVT	- / -	- / 2.815	- / 6.062	- / 2.225	- / -	- / 2.225	- / -	- / -	- / -	- / -	- / -	- / 11.102
SIM/TRAINER	- / -	- / -	75 / 0.850	11 / 1.000	- / -	11 / 1.000	- / -	- / -	- / -	- / -	- / -	86 / 1.850
Subtotal: Support	- / -	- / 3.825	75 / 6.912	11 / 4.225	- / -	11 / 4.225	- / -	- / -	- / -	- / -	- / -	86 / 14.962
Installation												
Modification Item 1 of 1: Model B Kits	- / -	- / -	363 / 6.275	81 / 2.000	- / -	81 / 2.000	- / -	- / -	- / -	- / -	- / -	444 / 8.275
Subtotal: Installation	- / -	- / -	363 / 6.275	81 / 2.000	- / -	81 / 2.000	- / -	- / -	- / -	- / -	- / -	444 / 8.275
Total												
Total Cost (Procurement + Support + Installation)	**0.000**	**3.825**	**19.149**	**6.225**	**0.000**	**6.225**	**0.000**	**0.000**	**-**	**-**	**-**	**29.199**

Exhibit P-3a, Individual Modification: PB 2020 Air Force		Date: February 2019
Appropriation / Budget Activity / Budget Sub Activity: 3010F / 05 / 4	**P-1 Line Item Number / Title:** JPAT00 / T-6	**Modification Number / Title:** 9877 / Avionics Upgrades FAA Compliance

ID Code (A=Service Ready, B=Not Service Ready) : A

MDAP/MAIS Code:

Modification Item 1 of 1: Model B Kits

Manufacturer Information

Manufacturer Name: Scientific Research Corporation

Manufacturer Location: GA

Administrative Leadtime *(in Months)*: 0

Production Leadtime *(in Months)*: 3

Dates	FY 2018	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024
Contract Dates		Oct 2018					
Delivery Dates		Jan 2019					

Installation Information

Method of Implementation: Contract Field Team

Installation Cost	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
	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)*
Prior Years	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2018	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2019	- / -	- / -	363 / 6.275	81 / 2.000	- / -	81 / 2.000	- / -	- / -	- / -	- / -	- / -	444 / 8.275
FY 2020	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2021	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2022	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2023	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2024	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
To Complete	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
Total	- / -	- / -	363 / 6.275	81 / 2.000	- / -	81 / 2.000	- / -	- / -	- / -	- / -	- / -	444 / 8.275

Installation Schedule

	PYS	FY 2018				FY 2019				FY 2020				FY 2021				FY 2022				FY 2023				FY 2024				TC	Tot
		Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4		
In	0	-	-	-	-	-	141	136	86	81	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0	444
Out	0	-	-	-	-	-	141	136	86	81	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0	444

Exhibit P-40, Budget Line Item Justification: PB 2020 Air Force	Date: February 2019
Appropriation / Budget Activity / Budget Sub Activity: 3010F: Aircraft Procurement, Air Force / BA 05: Modification of Inservice Aircraft / BSA 4: Trainer Aircraft	**P-1 Line Item Number / Title:** T00100 / T-1

ID Code (A=Service Ready, B=Not Service Ready): B	**Program Elements for Code B Items:** 0804741F	**Other Related Program Elements:** N/A
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 *(Units in Each)*	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost *($ in Millions)*	15.774	21.477	21.952	26.787	-	26.787	37.206	34.223	5.832	38.144	-	201.395
Less PY Advance Procurement *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) *($ in Millions)*	15.774	21.477	21.952	26.787	-	26.787	37.206	34.223	5.832	38.144	-	201.395
Plus CY Advance Procurement *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Total Obligation Authority *($ in Millions)*	**15.774**	**21.477**	**21.952**	**26.787**	**-**	**26.787**	**37.206**	**34.223**	**5.832**	**38.144**	**-**	**201.395**
(The following Resource Summary rows are for informational purposes only. The corresponding budget requests are documented elsewhere.)												
Initial Spares *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Flyaway Unit Cost *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Unit Cost *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-

Description:

This line item funds modifications to the T-1A aircraft and simulators. The effort is to modify the fleet of 178 T-1A trainer aircraft, 16 Operational Flight Trainers (OFT's) and 14 Part Task Trainers (PTT's). The T-1A is a missionized Beech 400A used in the Airlift/Tanker track of the USAF Specialized Undergraduate Pilot Training (SUPT) and in Combat Systems Officer (CSO) training for Air Education and Training Command (AETC). It is powered by two Pratt and Whitney JT15D-5 turbofan engines mounted on the aft fuselage producing 2,900 pounds of thrust each. Avionics include Ultra High Frequency (UHF) and Very High Frequency (VHF) radios, Inertial Navigation System (INS), Tactical Air Navigation (TACAN), Airborne Direction Finder (ADF), and two Very High Frequency Omni Range/Instrument Landing System (VOR/ILS). Aircraft modified for CSO training include a Global Positioning System (GPS)-driven synthetic radar and simulated Radar Warning Receiver (RWR) in the right seat flight deck position to be utilized by the student CSO. A second student station and a second instructor station have also been added in the rear of the aircraft. The primary effort in FY2020 is the Avionics Modification. Funding contained in this platform's documentation directly aids Air Education and Training Command (AETC) flying training enterprise to continue its overall pilot production increase starting in FY2019, thus reducing the USAF Pilot Shortage.

Funding may be used to address Diminishing Manufacturing Sources (DMS) issues. Funding for this exhibit contained in PE 0804741F.

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.

Exhibit P-40, Budget Line Item Justification: PB 2020 Air Force	**Date:** February 2019
Appropriation / Budget Activity / Budget Sub Activity: 3010F: Aircraft Procurement, Air Force / BA 05: Modification of Inservice Aircraft / BSA 4: Trainer Aircraft	**P-1 Line Item Number / Title:** T00100 / T-1

ID Code (A=Service Ready, B=Not Service Ready): B	**Program Elements for Code B Items:** 0804741F	**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-40a***	8998 / Crew Relief Station Replacement (Reliability & Maintainability)				- / -	- / -	- / -	- / 1.500	- / 0.000	- / 1.500
P-40a***	99999X / Low Cost Modifications (Reliability & Maintainability)				- / 1.365	- / 0.305	- / 0.310	- / 0.316	- / -	- / 0.316
P-3a	8997 / Avionics Modification (Capability Improvement)		B		- / 14.409	- / 21.172	- / 21.642	- / 24.971	- / 0.000	- / 24.971
P-40	**Total Gross/Weapon System Cost**				**- / 15.774**	**- / 21.477**	**- / 21.952**	**- / 26.787**	**- / -**	**- / 26.787**

Exhibits Schedule					FY 2021	FY 2022	FY 2023	FY 2024	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-40a***	8998 / Crew Relief Station Replacement (Reliability & Maintainability)				- / 1.500	- / -	- / -	- / -	- / -	- / 3.000
P-40a***	99999X / Low Cost Modifications (Reliability & Maintainability)				- / 0.300	- / 0.300	- / 0.300	- / 0.300	- / -	- / 3.496
P-3a	8997 / Avionics Modification (Capability Improvement)		B		- / 35.406	- / 33.923	- / 5.532	- / 37.844	- / -	- / 194.899
P-40	**Total Gross/Weapon System Cost**				**- / 37.206**	**- / 34.223**	**- / 5.832**	**- / 38.144**	**- / -**	**- / 201.395**

*** Although this is an Exhibit P-40a item, the actual exhibit is not included since all of the required information for this item is already being shown here.

*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:
Where applicable, justification for individual modifications is provided in the P-3A exhibits.

Exhibit P-3a, Individual Modification: PB 2020 Air Force		Date: February 2019
Appropriation / Budget Activity / Budget Sub Activity: 3010F / 05 / 4	**P-1 Line Item Number / Title:** T00100 / T-1	**Modification Number / Title:** 8997 / Avionics Modification
ID Code (A=Service Ready, B=Not Service Ready) : B	**MDAP/MAIS Code:**	

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 *(Units in Each)*	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost *($ in Millions)*	14.409	21.172	21.642	24.971	0.000	24.971	35.406	33.923	5.532	37.844	-	194.899
Less PY Advance Procurement *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) *($ in Millions)*	14.409	21.172	21.642	24.971	0.000	24.971	35.406	33.923	5.532	37.844	-	194.899
Plus CY Advance Procurement *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Total Obligation Authority *($ in Millions)*	**14.409**	**21.172**	**21.642**	**24.971**	**0.000**	**24.971**	**35.406**	**33.923**	**5.532**	**37.844**	**-**	**194.899**
(The following Resource Summary rows are for informational purposes only. The corresponding budget requests are documented elsewhere.)												
Initial Spares *($ in Millions)*	-	0.000	0.920	1.317	-	1.317	1.343	1.106	0.000	0.672	15.238	20.596
Gross/Weapon System Unit Cost *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-

Description:

The justification/approval for the T-1A Avionics Modification Program is documented on an AF Form 1067, signed February 2014 by AETC/A5/8/9. The 1067 was approved by the Air Force Requirement Oversight Council in June 2014, which established the requirement identified above to replace the existing avionics suite throughout the fleet of 178 aircraft, 16 Operational Flight Trainers, and 14 Part Task Trainers. This effort will require integration engineering for the installation of a current industry standard avionics suite with the legacy aircraft.

Milestone/Development Status

T-1A AMP contract awarded 14 Feb 18 with no protest. Post Award Conference, System Requirements Review / System Functional Review, Aircraft & Simulator Preliminary Integration Review (PIR) and Critical Integration Review (CIR)completed. First Article Aircraft inducted 4QFY18.

Exhibit P-3a, Individual Modification: PB 2020 Air Force		Date: February 2019
Appropriation / Budget Activity / Budget Sub Activity: 3010F / 05 / 4	P-1 Line Item Number / Title: T00100 / T-1	Modification Number / Title: 8997 / Avionics Modification
ID Code (A=Service Ready, B=Not Service Ready) : B	MDAP/MAIS Code:	
Models of Systems Affected: T-1A	Modification Type: Capability Improvement	Related RDT&E PEs:

Financial Plan	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
	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												
Modification Item 1 of 1: T-1A Avionics Replacement Kit (ARK)												
A Kits												
Recurring												
T-1A Avionics Replacement Kit (ARK):INSTALL KITS Group A (Active)	0 / 0.000	7 / 5.391	30 / 4.934	30 / 5.033	- / -	30 / 5.033	40 / 6.845	40 / 6.982	4 / 0.712	27 / 4.903	- / -	178 / 34.800
Subtotal: Recurring	*- / 0.000*	*- / 5.391*	*- / 4.934*	*- / 5.033*	*- / -*	*- / 5.033*	*- / 6.845*	*- / 6.982*	*- / 0.712*	*- / 4.903*	*- / -*	*- / 34.800*
B Kits												
Recurring												
T-1A Avionics Replacement Kit (ARK):EQUIPMENT Group B (Active)	- / -	7 / 8.181	30 / 7.701	30 / 7.876	- / -	30 / 7.876	40 / 10.848	40 / 11.058	4 / 1.127	27 / 7.755	- / -	178 / 54.546
Subtotal: Recurring	*- / -*	*- / 8.181*	*- / 7.701*	*- / 7.876*	*- / -*	*- / 7.876*	*- / 10.848*	*- / 11.058*	*- / 1.127*	*- / 7.755*	*- / -*	*- / 54.546*
Subtotal: T-1A Avionics Replacement Kit (ARK)	*- / 0.000*	*- / 13.572*	*- / 12.635*	*- / 12.909*	*- / -*	*- / 12.909*	*- / 17.693*	*- / 18.040*	*- / 1.839*	*- / 12.658*	*- / -*	*- / 89.346*
Subtotal: Procurement, All Modification Items	*- / 0.000*	*- / 13.572*	*- / 12.635*	*- / 12.909*	*- / -*	*- / 12.909*	*- / 17.693*	*- / 18.040*	*- / 1.839*	*- / 12.658*	*- / -*	*- / 89.346*
Support *(All Modification Items)*												
GROUP A: TOTAL NONRECURRING	- / 11.500	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 11.500
CY Advance Procurement	- / -	- / -	- / -	- / -	- / -	- / -	- / 4.757	- / 3.181	- / -	- / 11.273	- / -	- / 19.211
Change Orders	- / 0.000	- / 2.318	- / 0.818	- / 2.260	- / -	- / 2.260	- / 4.000	- / 4.009	- / 0.551	- / 3.466	- / -	- / 17.422
Data	- / 0.000	- / 2.842	- / 0.127	- / 0.121	- / -	- / 0.121	- / 0.000	- / 0.000	- / -	- / -	- / -	- / 3.090
SIM/TRAINER	- / -	0 / 0.000	5 / 4.109	6 / 5.959	- / -	6 / 5.959	5 / 4.303	4 / 3.767	2 / 1.920	8 / 7.037	- / -	30 / 27.095
SUPPORT-EQUIP	- / 0.000	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 0.000
A&AS	- / 0.580	- / 0.580	- / 0.580	- / 0.580	- / -	- / 0.580	- / 0.600	- / 0.600	- / 0.600	- / 0.600	- / -	- / 4.720
PMA - Other Gov't Costs	- / 2.329	- / 1.169	- / 0.392	- / 0.328	- / -	- / 0.328	- / 0.519	- / 0.697	- / 0.248	- / 0.210	- / -	- / 5.892
Subtotal: Support	*- / 14.409*	*0 / 6.909*	*5 / 6.026*	*6 / 9.248*	*- / -*	*6 / 9.248*	*5 / 14.179*	*4 / 12.254*	*2 / 3.319*	*8 / 22.586*	*- / -*	*30 / 88.930*
Installation												
Modification Item 1 of 1: T-1A Avionics Replacement Kit (ARK)	- / -	7 / 0.691	30 / 2.981	30 / 2.814	- / -	30 / 2.814	40 / 3.534	40 / 3.629	4 / 0.374	27 / 2.600	- / -	178 / 16.623
Subtotal: Installation	*- / -*	*7 / 0.691*	*30 / 2.981*	*30 / 2.814*	*- / -*	*30 / 2.814*	*40 / 3.534*	*40 / 3.629*	*4 / 0.374*	*27 / 2.600*	*- / -*	*178 / 16.623*
Total												
Total Cost (Procurement + Support + Installation)	**14.409**	**21.172**	**21.642**	**24.971**	**0.000**	**24.971**	**35.406**	**33.923**	**5.532**	**37.844**	**-**	**194.899**

Exhibit P-3a, Individual Modification: PB 2020 Air Force		Date: February 2019
Appropriation / Budget Activity / Budget Sub Activity: 3010F / 05 / 4	**P-1 Line Item Number / Title:** T00100 / T-1	**Modification Number / Title:** 8997 / Avionics Modification
ID Code (A=Service Ready, B=Not Service Ready) : B	**MDAP/MAIS Code:**	

Modification Item 1 of 1: T-1A Avionics Replacement Kit (ARK)

Manufacturer Information

Manufacturer Name: Field Aerospace	Manufacturer Location: Contractor Facility
Administrative Leadtime *(in Months)*: 10	Production Leadtime *(in Months)*: 1

Dates	FY 2018	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024
Contract Dates	Feb 2018	Aug 2019	Aug 2020	Aug 2021	Aug 2022	Aug 2023	Aug 2024
Delivery Dates	Mar 2018	Sep 2019	Sep 2020	Sep 2021	Sep 2022	Sep 2023	Sep 2024

Installation Information

Method of Implementation: Contractor Facility

Installation Cost	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
	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)*
Prior Years	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2018	- / -	7 / 0.691	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	7 / 0.691
FY 2019	- / -	- / -	30 / 2.981	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	30 / 2.981
FY 2020	- / -	- / -	- / -	30 / 2.814	- / -	30 / 2.814	- / -	- / -	- / -	- / -	- / -	30 / 2.814
FY 2021	- / -	- / -	- / -	- / -	- / -	- / -	40 / 3.534	- / -	- / -	- / -	- / -	40 / 3.534
FY 2022	- / -	- / -	- / -	- / -	- / -	- / -	- / -	40 / 3.629	- / -	- / -	- / -	40 / 3.629
FY 2023	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	4 / 0.374	- / -	- / -	4 / 0.374
FY 2024	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	27 / 2.600	- / -	27 / 2.600
To Complete	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
Total	- / -	7 / 0.691	30 / 2.981	30 / 2.814	- / -	30 / 2.814	40 / 3.534	40 / 3.629	4 / 0.374	27 / 2.600	- / -	178 / 16.623

Installation Schedule

	PYS	FY 2018				FY 2019				FY 2020				FY 2021				FY 2022				FY 2023				FY 2024				TC	Tot
		Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4		
In	0	0	0	3	4	8	7	8	7	8	7	8	7	10	10	10	10	10	10	10	10	1	1	1	1	7	7	7	6	0	178
Out	0	0	0	3	4	8	7	8	7	8	7	8	7	10	10	10	10	10	10	10	10	1	1	1	1	7	7	7	6	0	178

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Exhibit P-40, Budget Line Item Justification: PB 2020 Air Force	Date: February 2019
Appropriation / Budget Activity / Budget Sub Activity: 3010F: Aircraft Procurement, Air Force / BA 05: Modification of Inservice Aircraft / BSA 4: Trainer Aircraft	**P-1 Line Item Number / Title:** T03800 / T-38

ID Code (A=Service Ready, B=Not Service Ready): B	**Program Elements for Code B Items:** 0804741F	**Other Related Program Elements:** 0604233F
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 *(Units in Each)*	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost *($ in Millions)*	166.332	51.641	70.623	37.341	-	37.341	46.226	62.798	71.784	79.595	119.838	706.178
Less PY Advance Procurement *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) *($ in Millions)*	166.332	51.641	70.623	37.341	-	37.341	46.226	62.798	71.784	79.595	119.838	706.178
Plus CY Advance Procurement *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Total Obligation Authority *($ in Millions)*	**166.332**	**51.641**	**70.623**	**37.341**	**-**	**37.341**	**46.226**	**62.798**	**71.784**	**79.595**	**119.838**	**706.178**
(The following Resource Summary rows are for informational purposes only. The corresponding budget requests are documented elsewhere.)												
Initial Spares *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Flyaway Unit Cost *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Unit Cost *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-

Description:

The T-38 is a twin engine, two seat (tandem), supersonic jet trainer used by Air Education Training Command as an advanced trainer in Specialized Undergraduate Pilot Training. Modifications are budgeted to enhance operational capability while improving flight safety, reliability, and maintainability. There are currently 505 T-38's in the Air Force inventory (53 T-38A, 6 AT-38B and 446 T-38C) with 5 T-38C's pending removal. The T-38 first entered service in 1960 and the average age is over 50 years old. The T-38 was designed with a 7,000 hour service life. Aircraft are now in their third service life and are sustained by upgrades and service life extensions.

Funding for this exhibit contained in PE 0804741F.

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.

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

Appropriation / Budget Activity / Budget Sub Activity:
3010F: Aircraft Procurement, Air Force / BA 05: Modification of Inservice Aircraft / BSA 4: Trainer Aircraft

P-1 Line Item Number / Title:
T03800 / T-38

ID Code (A=Service Ready, B=Not Service Ready): B | **Program Elements for Code B Items:** 0804741F | **Other Related Program Elements:** 0604233F

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-40a***	6090 / T-38 Avionics (Reliability & Maintainability)				- / 43.817	- / 24.960	- / 29.530	- / 0.126	- / -	- / 0.126
P-40a***	6091 / Talon Repair, Inspection and Maintenance (Reliability & Maintainability)				- / -	- / -	- / 0.600	- / 3.841	- / -	- / 3.841
P-40a***	6092 / T-38 A/B ADS-B Out (Reliability & Maintainability)				- / -	- / 4.193	- / 8.390	- / -	- / -	- / -
P-40a***	6093 / T-38 Canopy (Safety)				- / -	- / -	- / -	- / 0.181	- / -	- / 0.181
P-40a***	99999A / LOW COST SAFETY MODIFICATIONS (Safety)				- / 0.029	- / 0.005	- / 0.005	- / 0.005	- / -	- / 0.005
P-40a***	99999X / Low Cost Modifications (Service Life Extension)				- / 0.031	- / 0.006	- / 0.006	- / 0.006	- / -	- / 0.006
P-3a	6088 / Pacer Classic III (Service Life Extension)		A		- / 122.455	- / 22.477	- / 32.092	- / 33.181	- / 0.000	- / 33.181
P-40	**Total Gross/Weapon System Cost**				**- / 166.332**	**- / 51.641**	**- / 70.623**	**- / 37.341**	**- / -**	**- / 37.341**

Exhibits Schedule					FY 2021	FY 2022	FY 2023	FY 2024	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-40a***	6090 / T-38 Avionics (Reliability & Maintainability)				- / 1.586	- / 1.587	- / 1.579	- / 1.607	- / 85.667	- / 190.459
P-40a***	6091 / Talon Repair, Inspection and Maintenance (Reliability & Maintainability)				- / 8.200	- / 23.174	- / 33.295	- / 40.415	- / 0.000	- / 109.525
P-40a***	6092 / T-38 A/B ADS-B Out (Reliability & Maintainability)				- / -	- / -	- / -	- / -	- / -	- / 12.583
P-40a***	6093 / T-38 Canopy (Safety)				- / 1.576	- / 1.576	- / 1.576	- / 1.604	- / -	- / 6.513
P-40a***	99999A / LOW COST SAFETY MODIFICATIONS (Safety)				- / 0.005	- / 0.005	- / 0.005	- / 0.005	- / -	- / 0.064
P-40a***	99999X / Low Cost Modifications (Service Life Extension)				- / 0.006	- / 0.006	- / 0.006	- / 0.006	- / -	- / 0.073
P-3a	6088 / Pacer Classic III (Service Life Extension)		A		- / 34.853	- / 36.450	- / 35.323	- / 35.958	- / 34.171	- / 386.960
P-40	**Total Gross/Weapon System Cost**				**- / 46.226**	**- / 62.798**	**- / 71.784**	**- / 79.595**	**- / 119.838**	**- / 706.178**

*** Although this is an Exhibit P-40a item, the actual exhibit is not included since all of the required information for this item is already being shown here.

*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:
Where applicable, justification for individual modifications is provided in the P-3A exhibits.

Exhibit P-3a, Individual Modification: PB 2020 Air Force		Date: February 2019
Appropriation / Budget Activity / Budget Sub Activity: 3010F / 05 / 4	**P-1 Line Item Number / Title:** T03800 / T-38	**Modification Number / Title:** 6088 / Pacer Classic III
ID Code (A=Service Ready, B=Not Service Ready) : A	**MDAP/MAIS Code:**	

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 *(Units in Each)*	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost *($ in Millions)*	122.455	22.477	32.092	33.181	0.000	33.181	34.853	36.450	35.323	35.958	34.171	386.960
Less PY Advance Procurement *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) *($ in Millions)*	122.455	22.477	32.092	33.181	0.000	33.181	34.853	36.450	35.323	35.958	34.171	386.960
Plus CY Advance Procurement *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Total Obligation Authority *($ in Millions)*	**122.455**	**22.477**	**32.092**	**33.181**	**0.000**	**33.181**	**34.853**	**36.450**	**35.323**	**35.958**	**34.171**	**386.960**
(The following Resource Summary rows are for informational purposes only. The corresponding budget requests are documented elsewhere.)												
Initial Spares *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Unit Cost *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-

Description:

Pacer Classic III (PCIII) is a depot-level modification program which replaces known life-limited components and ensures structural sustainment of 180 T-38C aircraft which are at high risk of grounding. Timely modifications will ensure continued execution of the Air Education and Training Command (AETC) advanced undergraduate pilot training mission. PCIII will replace major structural components within the aircraft fuselage including major longerons, bulkhead/formers, internal skins and structural floors. These modifications have been categorized as Safety of Flight and determined by HQ Air Force Materiel Command (AFMC) to be required to correct material deficiencies to ensure safety of personnel, systems or equipment. If uncorrected, the hazard will ground the system or equipment, restrict flight or ground operations, or result in unacceptable risk to personnel. PCIII program requirements are documented in Air Force Form 1067: AETC 2016-037. PCIII installations will be performed by the 309 Maintenance Wing geographically separated unit at Randolph AFB, TX.

Milestone/Development Status

Production and deployment underway

Exhibit P-3a, Individual Modification: PB 2020 Air Force		Date: February 2019
Appropriation / Budget Activity / Budget Sub Activity: 3010F / 05 / 4	**P-1 Line Item Number / Title:** T03800 / T-38	**Modification Number / Title:** 6088 / Pacer Classic III
ID Code (A=Service Ready, B=Not Service Ready) : A	**MDAP/MAIS Code:**	
Models of Systems Affected: T-38	**Modification Type:** Service Life Extension	**Related RDT&E PEs:**

Financial Plan	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
	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												
Modification Item 1 of 1: Aircraft Modification Kits												
A Kits												
Recurring												
Aircraft Modification Kits:INSTALL KITS Group A (Active)	85 / 33.747	16 / 5.600	18 / 6.600	18 / 5.810	- / -	18 / 5.810	18 / 7.200	18 / 7.200	7 / 5.100	- / -	- / -	180 / 71.257
Subtotal: Recurring	*- / 33.747*	*- / 5.600*	*- / 6.600*	*- / 5.810*	*- / -*	*- / 5.810*	*- / 7.200*	*- / 7.200*	*- / 5.100*	*- / -*	*- / -*	*- / 71.257*
Subtotal: Aircraft Modification Kits	*- / 33.747*	*- / 5.600*	*- / 6.600*	*- / 5.810*	*- / -*	*- / 5.810*	*- / 7.200*	*- / 7.200*	*- / 5.100*	*- / -*	*- / -*	*- / 71.257*
Subtotal: Procurement, All Modification Items	*- / 33.747*	*- / 5.600*	*- / 6.600*	*- / 5.810*	*- / -*	*- / 5.810*	*- / 7.200*	*- / 7.200*	*- / 5.100*	*- / -*	*- / -*	*- / 71.257*
Support *(All Modification Items)*												
GROUP A: TOTAL NONRECURRING	0 / 17.791	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	0 / 17.791
OTHER GOVT	- / 12.563	- / 0.125	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 12.688
PMA - Contractor Services	- / 3.069	- / 0.200	- / 0.300	- / 0.300	- / -	- / 0.300	- / 0.300	- / 0.300	- / 0.300	- / 0.300	- / -	- / 5.069
PMA - Other Gov't Costs	- / 1.117	- / 0.017	- / 0.050	- / 0.050	- / -	- / 0.050	- / 0.070	- / 0.060	- / 0.050	- / 0.050	- / -	- / 1.464
Subtotal: Support	*0 / 34.540*	*- / 0.342*	*- / 0.350*	*- / 0.350*	*- / -*	*- / 0.350*	*- / 0.370*	*- / 0.360*	*- / 0.350*	*- / 0.350*	*- / -*	*0 / 37.012*
Installation												
Modification Item 1 of 1: Aircraft Modification Kits	35 / 54.168	18 / 16.535	18 / 25.142	18 / 27.021	- / -	18 / 27.021	18 / 27.283	18 / 28.890	18 / 29.873	18 / 35.608	19 / 34.171	180 / 278.691
Subtotal: Installation	*35 / 54.168*	*18 / 16.535*	*18 / 25.142*	*18 / 27.021*	*- / -*	*18 / 27.021*	*18 / 27.283*	*18 / 28.890*	*18 / 29.873*	*18 / 35.608*	*19 / 34.171*	*180 / 278.691*
Total												
Total Cost (Procurement + Support + Installation)	**122.455**	**22.477**	**32.092**	**33.181**	**0.000**	**33.181**	**34.853**	**36.450**	**35.323**	**35.958**	**34.171**	**386.960**

Exhibit P-3a, Individual Modification: PB 2020 Air Force		Date: February 2019
Appropriation / Budget Activity / Budget Sub Activity: 3010F / 05 / 4	**P-1 Line Item Number / Title:** T03800 / T-38	**Modification Number / Title:** 6088 / Pacer Classic III
ID Code (A=Service Ready, B=Not Service Ready) : A	**MDAP/MAIS Code:**	

Modification Item 1 of 1: Aircraft Modification Kits

Manufacturer Information

Manufacturer Name: CPI Aero	Manufacturer Location: Edgewood, NY
Administrative Leadtime *(in Months)*: 5	Production Leadtime *(in Months)*: 18

Dates	FY 2018	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024
Contract Dates	Jun 2018	Mar 2019	Mar 2020	Dec 2020	Dec 2021	Mar 2023	
Delivery Dates	Dec 2019	Sep 2020	Sep 2021	Jun 2022	Jun 2023	Sep 2024	

Installation Information

Method of Implementation: Depot

Installation Cost	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
	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)*
Prior Years	35 / 54.168	18 / 16.535	18 / 25.142	14 / 21.016	- / -	14 / 21.016	- / -	- / -	- / -	- / -	- / -	85 / 116.861
FY 2018	- / -	- / -	- / -	4 / 6.005	- / -	4 / 6.005	12 / 18.189	- / -	- / -	- / -	- / -	16 / 24.194
FY 2019	- / -	- / -	- / -	- / -	- / -	- / -	6 / 9.094	12 / 19.260	- / -	- / -	- / -	18 / 28.354
FY 2020	- / -	- / -	- / -	- / -	- / -	- / -	- / -	6 / 9.630	12 / 19.915	- / -	- / -	18 / 29.545
FY 2021	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	6 / 9.958	12 / 23.739	- / -	18 / 33.697
FY 2022	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	6 / 11.869	12 / 21.582	18 / 33.451
FY 2023	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	7 / 12.589	7 / 12.589
FY 2024	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
To Complete	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
Total	35 / 54.168	18 / 16.535	18 / 25.142	18 / 27.021	- / -	18 / 27.021	18 / 27.283	18 / 28.890	18 / 29.873	18 / 35.608	19 / 34.171	180 / 278.691

Installation Schedule

		FY 2018				FY 2019				FY 2020				FY 2021				FY 2022				FY 2023				FY 2024					
	PYS	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	TC	Tot
In	35	4	4	5	5	4	4	5	5	5	4	5	4	5	4	5	4	5	4	5	4	5	4	5	4	5	4	5	4	19	180
Out	21	5	4	5	4	4	5	5	4	4	5	5	5	4	5	4	5	4	5	4	5	4	5	4	5	4	5	4	5	32	180

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Exhibit P-40, Budget Line Item Justification: PB 2020 Air Force	Date: February 2019
Appropriation / Budget Activity / Budget Sub Activity: 3010F: Aircraft Procurement, Air Force / BA 05: Modification of Inservice Aircraft / BSA 5: Other Aircraft	**P-1 Line Item Number / Title:** 11U200 / U-2 Mods

ID Code (A=Service Ready, B=Not Service Ready): B	**Program Elements for Code B Items:** 0305202F, 0305206F	**Other Related Program Elements:** 0305202F, 0604257F
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 *(Units in Each)*	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost *($ in Millions)*	58.169	32.177	56.674	86.896	0.000	86.896	110.770	129.467	82.016	70.758	0.000	626.927
Less PY Advance Procurement *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) *($ in Millions)*	58.169	32.177	56.674	86.896	0.000	86.896	110.770	129.467	82.016	70.758	0.000	626.927
Plus CY Advance Procurement *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Total Obligation Authority *($ in Millions)*	**58.169**	**32.177**	**56.674**	**86.896**	**0.000**	**86.896**	**110.770**	**129.467**	**82.016**	**70.758**	**0.000**	**626.927**
(The following Resource Summary rows are for informational purposes only. The corresponding budget requests are documented elsewhere.)												
Initial Spares *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Flyaway Unit Cost *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Unit Cost *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-

Description:

The U-2S Dragon Lady platform is a high-demand/low-density aircraft equipped with state-of-the-art sensor and data link systems providing mission essential Intelligence, Surveillance, and Reconnaissance (ISR) to the Combatant Commands, Joint and Combined forces, and the IC community in peacetime and wartime. The program supports core missions such as Sensitive Reconnaissance Operations (outlined in CJCSI 3250.01) in addition to other missions that include execution of CCMD OPLANs and CONPLANs, Humanitarian Assistance/Disaster Response (HADR), Counter-Insurgency (COIN) operations and third-party treaty verification/monitoring via the OLIVE HARVEST mission.

The Air Force continues to invest and modernize the U-2 program in the 2020 President's Budget by addressing reliability, maintainability, supportability, diminishing manufacturing sources/ material shortages (DMS/MS), flight test, safety issues, and integration of capability development activities in support of the broader ISR portfolio. Procurement efforts primarily address sustainment, modification, and modernization of sensors and associated mission equipment; these efforts include (but are not limited to) ASARS 2B/C, avionics and navigation tech refresh, mission planning software and infrastructure upgrades, and modernization of aircraft data links.

Additionally, the U-2 program will continue to prioritize emergent and/or necessary procurement efforts designed to mitigate the rapidly evolving combat environment (e.g. electromagnetic requirements) in order to maintain safety and operational relevance through current and future U-2 operating locations.

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.

Exhibit P-40, Budget Line Item Justification: PB 2020 Air Force	Date: February 2019
Appropriation / Budget Activity / Budget Sub Activity: 3010F: Aircraft Procurement, Air Force / BA 05: Modification of Inservice Aircraft / BSA 5: Other Aircraft	**P-1 Line Item Number / Title:** 11U200 / U-2 Mods

ID Code (A=Service Ready, B=Not Service Ready): B	Program Elements for Code B Items: 0305202F, 0305206F	Other Related Program Elements: 0305202F, 0604257F

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-3a	4494 / U-2 Mod (Other)		B		- / 58.169	- / 32.177	- / 56.674	- / 54.443	- / 0.000	- / 54.443
P-3a	4496 / ASARS-2B Procurement for U-2 (Other)		B		- / -	- / -	- / -	- / 32.453	- / 0.000	- / 32.453
P-40	**Total Gross/Weapon System Cost**				**- / 58.169**	**- / 32.177**	**- / 56.674**	**- / 86.896**	**- / 0.000**	**- / 86.896**

Exhibits Schedule					FY 2021	FY 2022	FY 2023	FY 2024	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	4494 / U-2 Mod (Other)		B		- / 62.566	- / 57.127	- / 53.908	- / 54.878	- / -	- / 429.942
P-3a	4496 / ASARS-2B Procurement for U-2 (Other)		B		- / 48.204	- / 72.340	- / 28.108	- / 15.880	- / 0.000	- / 196.985
P-40	**Total Gross/Weapon System Cost**				**- / 110.770**	**- / 129.467**	**- / 82.016**	**- / 70.758**	**- / 0.000**	**- / 626.927**

*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:
Where applicable, justification for individual modifications is provided in the P-3A exhibits.

Exhibit P-3a, Individual Modification: PB 2020 Air Force		Date: February 2019
Appropriation / Budget Activity / Budget Sub Activity: 3010F / 05 / 5	**P-1 Line Item Number / Title:** 11U200 / U-2 Mods	**Modification Number / Title:** 4494 / U-2 Mod
ID Code (A=Service Ready, B=Not Service Ready) : B	**MDAP/MAIS Code:**	

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 *(Units in Each)*	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost *($ in Millions)*	58.169	32.177	56.674	54.443	0.000	54.443	62.566	57.127	53.908	54.878	-	429.942
Less PY Advance Procurement *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) *($ in Millions)*	58.169	32.177	56.674	54.443	0.000	54.443	62.566	57.127	53.908	54.878	-	429.942
Plus CY Advance Procurement *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Total Obligation Authority *($ in Millions)*	**58.169**	**32.177**	**56.674**	**54.443**	**0.000**	**54.443**	**62.566**	**57.127**	**53.908**	**54.878**	**-**	**429.942**
(The following Resource Summary rows are for informational purposes only. The corresponding budget requests are documented elsewhere.)												
Initial Spares *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Unit Cost *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-

Description:

The U-2 Program will continue to address reliability, maintainability, sustainability, and safety issues and support U-2 integration of payloads and capabilities. Aircraft and sensor sustainment or enhancements include activities such as, but not limited to the following current programs:

- Advanced Synthetic Aperture Radar System (ASARS) procurement, sustainment, and enhancements to support collection capability and capacity requirements to meet global ISR requirements.
- Multi-Spectral Sensor sustainment and enhancements to optics and focal planes in support of operational requirements.
- Electronic Warfare System (EWS) sustainment and enhancements to mitigate DMS and to defend against current and emerging threat systems.
- Data Link sustainment and enhancement: Development, integration and test of beyond line of sight (BLOS) and tactical data links (L-16, IFDL, MADL, etc.) in support of operational requirements and to mitigate DMSMS.
- Modification programs in support safety of flight, DMSMS concerns, support of operational capability and capacity requirements to include: airframe sustainment, Egress System Sustainment and Suitability Effort, helmet and Full Pressure Suit technical refresh, avionics, mission planning, navigation system and stellar tracker initiatives, advanced and agile systems/payloads, Open Mission Systems and Unmanned Aerospace Systems Command and Control Standard Initiative (OMS/UCI) standards compliance, payload sensors, and associated ground support equipment.
- Signals Intelligence (SIGINT) system sustainment, modernization, enhancement, test and integration to meet new/emerging operational requirements.
- Navigation software/infrastructure, and avionics refresh and upgrades to address DMSMS issues while increase capability in the integrated intelligence environment. May include procurement for non-GPS precision, navigation, and timing (PNT) hardware and software.

Milestone/Development Status

Various efforts will continue to develop technologies and capabilities supporting U-2 operations, and will be fielded onto the U-2 platforms, on a schedule dependent on system requirements.

Exhibit P-3a, Individual Modification: PB 2020 Air Force		Date: February 2019
Appropriation / Budget Activity / Budget Sub Activity: 3010F / 05 / 5	**P-1 Line Item Number / Title:** 11U200 / U-2 Mods	**Modification Number / Title:** 4494 / U-2 Mod
ID Code (A=Service Ready, B=Not Service Ready) : B	**MDAP/MAIS Code:**	
Models of Systems Affected: U-2	**Modification Type:** Other	**Related RDT&E PEs:** 0305202F

Financial Plan	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
	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)*
RDT&E PE #												
0305202F	- / 71.688	- / 34.486	- / 48.882	- / 38.682	- / -	- / 38.682	- / 16.994	- / 17.120	- / 19.849	- / -	- / -	- / 247.701
Procurement												
Modification Item 1 of 1: U-2 Update Block 20-1												
A Kits												
Recurring												
U-2 Update Block 20-1:INSTALL KITS Group A (Active)	4 / 43.442	8 / 24.028	9 / 32.513	9 / 36.292	- / 0.000	9 / 36.292	22 / 41.710	12 / 38.081	12 / 37.736	12 / 41.508	- / -	88 / 295.310
Subtotal: Recurring	*- / 43.442*	*- / 24.028*	*- / 32.513*	*- / 36.292*	*- / 0.000*	*- / 36.292*	*- / 41.710*	*- / 38.081*	*- / 37.736*	*- / 41.508*	*- / -*	*- / 295.310*
Subtotal: U-2 Update Block 20-1	*- / 43.442*	*- / 24.028*	*- / 32.513*	*- / 36.292*	*- / 0.000*	*- / 36.292*	*- / 41.710*	*- / 38.081*	*- / 37.736*	*- / 41.508*	*- / -*	*- / 295.310*
Subtotal: Procurement, All Modification Items	*- / 43.442*	*- / 24.028*	*- / 32.513*	*- / 36.292*	*- / 0.000*	*- / 36.292*	*- / 41.710*	*- / 38.081*	*- / 37.736*	*- / 41.508*	*- / -*	*- / 295.310*
Installation												
Modification Item 1 of 1: U-2 Update Block 20-1	4 / 14.727	8 / 8.149	9 / 24.161	9 / 18.151	- / -	9 / 18.151	22 / 20.856	12 / 19.046	12 / 16.172	12 / 13.370	- / -	88 / 134.632
Subtotal: Installation	*4 / 14.727*	*8 / 8.149*	*9 / 24.161*	*9 / 18.151*	*- / -*	*9 / 18.151*	*22 / 20.856*	*12 / 19.046*	*12 / 16.172*	*12 / 13.370*	*- / -*	*88 / 134.632*
Total												
Total Cost (Procurement + Support + Installation)	**58.169**	**32.177**	**56.674**	**54.443**	**0.000**	**54.443**	**62.566**	**57.127**	**53.908**	**54.878**	**-**	**429.942**

Exhibit P-3a, Individual Modification: PB 2020 Air Force		Date: February 2019
Appropriation / Budget Activity / Budget Sub Activity: 3010F / 05 / 5	**P-1 Line Item Number / Title:** 11U200 / U-2 Mods	**Modification Number / Title:** 4494 / U-2 Mod
ID Code (A=Service Ready, B=Not Service Ready) : B	**MDAP/MAIS Code:**	

Modification Item 1 of 1: U-2 Update Block 20-1

Manufacturer Information

Manufacturer Name: Details Classified	Manufacturer Location: Details Classified
Administrative Leadtime *(in Months)*: 3	Production Leadtime *(in Months)*: 6

Dates	FY 2018	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024
Contract Dates	Jan 2018	Jan 2019	Jan 2020	Jan 2021	Jan 2022	Jan 2023	Jan 2024
Delivery Dates	Jul 2018	Jul 2019	Jul 2020	Jul 2021	Jul 2022	Jul 2023	Jul 2024

Installation Information

Method of Implementation: Depot

Installation Cost	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
	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)*
Prior Years	4 / 14.727	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	4 / 14.727
FY 2018	- / -	8 / 8.149	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	8 / 8.149
FY 2019	- / -	- / -	9 / 24.161	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	9 / 24.161
FY 2020	- / -	- / -	- / -	9 / 18.151	- / -	9 / 18.151	- / -	- / -	- / -	- / -	- / -	9 / 18.151
FY 2021	- / -	- / -	- / -	- / -	- / -	- / -	22 / 20.856	- / -	- / -	- / -	- / -	22 / 20.856
FY 2022	- / -	- / -	- / -	- / -	- / -	- / -	- / -	12 / 19.046	- / -	- / -	- / -	12 / 19.046
FY 2023	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	12 / 16.172	- / -	- / -	12 / 16.172
FY 2024	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	12 / 13.370	- / -	12 / 13.370
To Complete	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
Total	4 / 14.727	8 / 8.149	9 / 24.161	9 / 18.151	- / -	9 / 18.151	22 / 20.856	12 / 19.046	12 / 16.172	12 / 13.370	- / -	88 / 134.632

Installation Schedule

	PYS	FY 2018				FY 2019				FY 2020				FY 2021				FY 2022				FY 2023				FY 2024				TC	Tot
		Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4		
In	4	2	2	2	2	3	2	2	2	3	2	2	2	8	8	4	2	4	4	2	2	3	3	3	3	3	3	3	3	0	88
Out	4	2	2	2	2	3	2	2	2	3	2	2	2	8	8	4	2	4	4	2	2	3	3	3	3	3	3	3	3	0	88

Exhibit P-3a, Individual Modification: PB 2020 Air Force		Date: February 2019
Appropriation / Budget Activity / Budget Sub Activity: 3010F / 05 / 5	**P-1 Line Item Number / Title:** 11U200 / U-2 Mods	**Modification Number / Title:** 4496 / ASARS-2B Procurement for U-2
ID Code (A=Service Ready, B=Not Service Ready) : B	**MDAP/MAIS Code:**	

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 *(Units in Each)*	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost *($ in Millions)*	-	-	-	32.453	0.000	32.453	48.204	72.340	28.108	15.880	0.000	196.985
Less PY Advance Procurement *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) *($ in Millions)*	-	-	-	32.453	0.000	32.453	48.204	72.340	28.108	15.880	0.000	196.985
Plus CY Advance Procurement *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Total Obligation Authority *($ in Millions)*	**-**	**-**	**-**	**32.453**	**0.000**	**32.453**	**48.204**	**72.340**	**28.108**	**15.880**	**0.000**	**196.985**
(The following Resource Summary rows are for informational purposes only. The corresponding budget requests are documented elsewhere.)												
Initial Spares *($ in Millions)*	-	-	-	28.097	-	28.097	43.117	7.854	2.083	2.120	-	83.271
Gross/Weapon System Unit Cost *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-

Description:

The Advanced Synthetic Aperture Radar System (ASARS)-2B program replaces the front end components of the ASARS-2A airborne radar to alleviate reduction in current ASARS-2A capability starting in FY21 due to significant diminishing manufacturing sources and material shortages (DMSMS) issues. ASARS-2B fixes these front end DMSMS issues while advancing the AF high altitude long range ISR radar capabilities. ASARS-2B incorporates a new Active Electronically Scanned Array (AESA) antenna, Power Conditioning Unit (PCU), and Liquid Cooling System (LCS) while replacing the existing ASARS-2A Receiver Exciter Controller (REC) and radar data processing software on the Onboard Processor (OBP). The front-end (AESA, PCU, and LCS) together with the replaced/modified components (REC and OBP) significantly improve existing Synthetic Aperture Radar (SAR) and Ground Moving Target Indicator (GMTI) capabilities while adding new Maritime capabilities. These efforts will align with back end up grades, previously referred to as ASARS 2C.

Validated requirements consists of the "Improved Synthetic Aperture Radar for the U-2" Operational Requirement Document (Apr 1996) and approved AF Form 1067s. It also aligns with the USECAF/VCSAF "Interim Guidance on High Altitude ISR Transition Plan", dated 19 Oct 2017. Current efforts are collaborative in funding and scheduling with PE 0305206F & PE 0604257F. ASARS 2B/2C efforts are NOT a new start, and has been previously planned for in PE 35202F.

Milestone/Development Status

The ASARS-2B program builds upon and operationalizes the ASARS-2B Technology Demonstration effort, funded under Advanced Technology and Sensors PE 0604257F, which concludes in early FY19 with flight demonstrations. ASARS-2B expects contract award in FY19 to complete non-recurring engineering and build/integrate of two systems for flight test activities expected early FY22. A production contract will be awarded by late FY21 to produce ASARS-2B operational systems and initial spares with an Initial Operational Capability expected in FY23. Efforts will be made to align procurement of ASARS-2B with ASARS-2C ("back-end"/processor) to the max extent possible IAW CSAF/SECAF rapid innovation initiatives.

Exhibit P-3a, Individual Modification: PB 2020 Air Force		Date: February 2019
Appropriation / Budget Activity / Budget Sub Activity: 3010F / 05 / 5	**P-1 Line Item Number / Title:** 11U200 / U-2 Mods	**Modification Number / Title:** 4496 / ASARS-2B Procurement for U-2
ID Code (A=Service Ready, B=Not Service Ready) : B	**MDAP/MAIS Code:**	
Models of Systems Affected: U-2	**Modification Type:** Other	**Related RDT&E PEs:** 0305202F, 0604257F

Financial Plan	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
	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												
Modification Item 1 of 1: ASARS-2B												
B Kits												
Recurring												
ASARS-2B:EQUIPMENT Group B (Active)	- / -	- / -	- / -	1 / 32.453	- / -	1 / 32.453	2 / 48.204	3 / 72.340	1 / 28.108	1 / 15.880	- / -	8 / 196.985
Subtotal: Recurring	*- / -*	*- / -*	*- / -*	*- / 32.453*	*- / -*	*- / 32.453*	*- / 48.204*	*- / 72.340*	*- / 28.108*	*- / 15.880*	*- / -*	*- / 196.985*
Subtotal: ASARS-2B	*- / -*	*- / -*	*- / -*	*- / 32.453*	*- / -*	*- / 32.453*	*- / 48.204*	*- / 72.340*	*- / 28.108*	*- / 15.880*	*- / -*	*- / 196.985*
Subtotal: Procurement, All Modification Items	*- / -*	*- / -*	*- / -*	*- / 32.453*	*- / -*	*- / 32.453*	*- / 48.204*	*- / 72.340*	*- / 28.108*	*- / 15.880*	*- / -*	*- / 196.985*
Installation												
Modification Item 1 of 1: ASARS-2B	- / -	- / -	- / -	- / -	- / -	- / -	- / -	1 / 0.000	2 / 0.000	3 / 0.000	2 / 0.000	8 / 0.000
Subtotal: Installation	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*1 / 0.000*	*2 / 0.000*	*3 / 0.000*	*2 / 0.000*	*8 / 0.000*
Total												
Total Cost (Procurement + Support + Installation)	**-**	**-**	**-**	**32.453**	**0.000**	**32.453**	**48.204**	**72.340**	**28.108**	**15.880**	**0.000**	**196.985**

Exhibit P-3a, Individual Modification: PB 2020 Air Force		Date: February 2019
Appropriation / Budget Activity / Budget Sub Activity: 3010F / 05 / 5	**P-1 Line Item Number / Title:** 11U200 / U-2 Mods	**Modification Number / Title:** 4496 / ASARS-2B Procurement for U-2
ID Code (A=Service Ready, B=Not Service Ready) : B	**MDAP/MAIS Code:**	

Modification Item 1 of 1: ASARS-2B

Manufacturer Information

Manufacturer Name: TBD	Manufacturer Location: TBD
Administrative Leadtime *(in Months)*: 1	Production Leadtime *(in Months)*: 18

Dates	FY 2018	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024
Contract Dates			Jun 2020	Jun 2021	Jun 2022	Jun 2023	Nov 2023
Delivery Dates			Dec 2021	Dec 2022	Dec 2023	Dec 2024	May 2025

Installation Information

Method of Implementation: Depot

Installation Cost	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
	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)*
Prior Years	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2018	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2019	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2020	- / -	- / -	- / -	- / -	- / -	- / -	- / -	1 / 0.000	- / -	- / -	- / -	1 / 0.000
FY 2021	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	2 / 0.000	- / -	- / -	2 / 0.000
FY 2022	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	3 / 0.000	- / -	3 / 0.000
FY 2023	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	1 / 0.000	1 / 0.000
FY 2024	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	1 / 0.000	1 / 0.000
To Complete	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
Total	- / -	- / -	- / -	- / -	- / -	- / -	- / -	1 / 0.000	2 / 0.000	3 / 0.000	2 / 0.000	8 / 0.000

Installation Schedule

	PYS	FY 2018				FY 2019				FY 2020				FY 2021				FY 2022				FY 2023				FY 2024				TC	Tot
		Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4		
In	0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	1	-	1	-	1	1	1	2	8
Out	0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	-	1	-	1	-	1	1	1	2	8

Exhibit P-40, Budget Line Item Justification: PB 2020 Air Force	Date: February 2019
Appropriation / Budget Activity / Budget Sub Activity: 3010F: Aircraft Procurement, Air Force / BA 05: Modification of Inservice Aircraft / BSA 5: Other Aircraft	**P-1 Line Item Number / Title:** C01000 / KC-10A (ATCA)

ID Code (A=Service Ready, B=Not Service Ready): B	Program Elements for Code B Items: 0401219F, 0401897F	Other Related Program Elements: 0401219F

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 *(Units in Each)*	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost *($ in Millions)*	49.136	4.243	11.104	2.108	-	2.108	3.959	3.443	3.505	0.000	-	77.498
Less PY Advance Procurement *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) *($ in Millions)*	49.136	4.243	11.104	2.108	-	2.108	3.959	3.443	3.505	0.000	-	77.498
Plus CY Advance Procurement *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Total Obligation Authority *($ in Millions)*	**49.136**	**4.243**	**11.104**	**2.108**	**-**	**2.108**	**3.959**	**3.443**	**3.505**	**0.000**	**-**	**77.498**
(The following Resource Summary rows are for informational purposes only. The corresponding budget requests are documented elsewhere.)												
Initial Spares *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Flyaway Unit Cost *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Unit Cost *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-

Description:

This line item funds modifications for the fleet of 59 KC-10 aircraft. KC-10 has a divestiture strategy that will follow the FY19 NDAA. On average, the aircraft are 35 years old with 20 service years remaining. The three engine KC-10 serves a dual role by providing both air refueling and strategic airlift support. The aircraft provides air refueling by using both the boom and the drogue methods and can carry up to 27 standard 463-L pallets. The primary modifications are Mode-5 Identification Friend or Foe (IFF) Surveillance in combination with an FAA mandated Automatic Dependent Surveillance-Broadcast (ADS-B) upgrade, and Service Bulletins (SBs) that address obsolescence issues, provide worldwide civil airspace accessibility, and incorporate aging aircraft and FAA certification requirements. In FY19 AMC updated the Mode 5 requirement to all 59 aircraft.

Funding may be used to address diminishing manufacturing sources (DMS) issues.

Funding for this exhibit is contained in PE 0401219F and PE 0401897F

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.

Justification:
Where applicable, justification for individual modifications is provided in the P-3A exhibits.

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Exhibit P-40, Budget Line Item Justification: PB 2020 Air Force	Date: February 2019
Appropriation / Budget Activity / Budget Sub Activity: 3010F: Aircraft Procurement, Air Force / BA 05: Modification of Inservice Aircraft / BSA 5: Other Aircraft	**P-1 Line Item Number / Title:** C01200 / C-12

ID Code (A=Service Ready, B=Not Service Ready): B	**Program Elements for Code B Items:** 0401314F	**Other Related Program Elements:** 0401314F

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 *(Units in Each)*	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost *($ in Millions)*	6.911	5.846	4.900	3.021	-	3.021	2.131	2.172	2.211	2.251	-	29.443
Less PY Advance Procurement *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) *($ in Millions)*	6.911	5.846	4.900	3.021	-	3.021	2.131	2.172	2.211	2.251	-	29.443
Plus CY Advance Procurement *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Total Obligation Authority *($ in Millions)*	**6.911**	**5.846**	**4.900**	**3.021**	**-**	**3.021**	**2.131**	**2.172**	**2.211**	**2.251**	**-**	**29.443**
(The following Resource Summary rows are for informational purposes only. The corresponding budget requests are documented elsewhere.)												
Initial Spares *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Flyaway Unit Cost *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Unit Cost *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-

Description:

This line item funds low-cost modifications and service bulletins for twenty-nine (29) C-12 C, D, F, and J aircraft, commercial equivalent to the Beech Craft Super King Air. The C-12 is a twin-turboprop, support-airlift aircraft used to transport cargo and passengers over medium distances. The design service life is 30,000 hours with 17,000 remaining on the C (16), 20,000 hours remaining on the D (6), 9,000 on the F (3), 13,500 on the J (4). Service bulletins and low cost modifications are necessary for continuing Federal Aviation Administration certification while improving flight safety, reliability, and maintainability. Support funding for emerging modification requirements to support PMA, A&AS, equipment and other government costs.

Funding may be used to address Diminishing Manufacturing Sources (DMS) issues.

Funding for this exhibit contained in PE 0401314F.

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.

Justification:

Where applicable, justification for individual modifications is provided in the P-3A exhibits.

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Exhibit P-40, Budget Line Item Justification: PB 2020 Air Force	Date: February 2019
Appropriation / Budget Activity / Budget Sub Activity: 3010F: Aircraft Procurement, Air Force / BA 05: Modification of Inservice Aircraft / BSA 5: Other Aircraft	**P-1 Line Item Number / Title:** C02500 / VC-25A Mod

ID Code (A=Service Ready, B=Not Service Ready): B	Program Elements for Code B Items: 0401314F	Other Related Program Elements: 0401314F

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 *(Units in Each)*	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost *($ in Millions)*	189.418	52.107	27.238	48.624	-	48.624	0.985	1.006	1.023	1.042	-	321.443
Less PY Advance Procurement *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) *($ in Millions)*	189.418	52.107	27.238	48.624	-	48.624	0.985	1.006	1.023	1.042	-	321.443
Plus CY Advance Procurement *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Total Obligation Authority *($ in Millions)*	**189.418**	**52.107**	**27.238**	**48.624**	**-**	**48.624**	**0.985**	**1.006**	**1.023**	**1.042**	**-**	**321.443**
(The following Resource Summary rows are for informational purposes only. The corresponding budget requests are documented elsewhere.)												
Initial Spares *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Flyaway Unit Cost *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Unit Cost *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-

Description:

This line item funds modifications for (2) VC-25A presidential support aircraft, a commercial derivative of the commercial Boeing 747-200. The aircraft are commonly referred to as "Air Force One." The aircraft were purchased in FY87, modified by Boeing to meet presidential requirements, and delivered in FY91. These on-going modifications are to extend the service life until the VC-25B aircraft are fielded in the 2024 timeframe.

VC-25 Block Upgrades ensure aircraft viability until the VC-25B program reaches full operational capability. The upgrades include installing protected satellite communications, weather radar, digital/voice data systems, and network capabilities. Service bulletins and low cost modifications are necessary for continuing Federal Aviation Administration (FAA) airworthiness certification while improving flight safety, reliability, and maintainability. This funding may include emerging modification requirements, PMA, A&AS, equipment and other government costs (OGC).

Funding may be used to address Diminishing Manufacturing Sources (DMS) issues.

SecAF National Security Waiver includes the following capabilities:
ADS-B Out/IFF Mode 5 2025 FAA mandate Diminishing Manufacturing Sources and Material Solutions (DMSMS), Communications Management System (CMS) Modernization - VIPSAM Protected SATCOM (VPS), Presidential Information Technology Communication (PITC) Wi-Fi and Commercial Internet, Bandwidth Aggregation, Multi-Role Tactical Common Data Link (MR-TCDL), Mobile User Objective System (MUOS) and High Definition Video Teleconference (HDVTC).

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.

Exhibit P-40, Budget Line Item Justification: PB 2020 Air Force	**Date:** February 2019
Appropriation / Budget Activity / Budget Sub Activity: 3010F: Aircraft Procurement, Air Force / BA 05: Modification of Inservice Aircraft / BSA 5: Other Aircraft	**P-1 Line Item Number / Title:** C02500 / VC-25A Mod

ID Code (A=Service Ready, B=Not Service Ready): B	**Program Elements for Code B Items:** 0401314F	**Other Related Program Elements:** 0401314F

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) I ($ M)*	Quantity / Total Cost *(Each) I ($ M)*	Quantity / Total Cost *(Each) I ($ M)*	Quantity / Total Cost *(Each) I ($ M)*	Quantity / Total Cost *(Each) I ($ M)*	Quantity / Total Cost *(Each) I ($ M)*
P-40a***	99999S / SERVICE BULLETINS (Capability Improvement)				- / 1.002	- / 0.993	- / 0.893	- / 0.567	- / -	- / 0.567
P-40a***	99999X / Low Cost Modifications (Capability Improvement)				- / 2.199	- / 0.000	- / 0.100	- / 0.100	- / -	- / 0.100
P-3a	9715 / VC-25 Block Upgrade (Capability Improvement)		B		- / 186.217	- / 51.114	- / 26.245	- / 47.957	- / 0.000	- / 47.957
P-40	**Total Gross/Weapon System Cost**				**- / 189.418**	**- / 52.107**	**- / 27.238**	**- / 48.624**	**- / -**	**- / 48.624**

Exhibits Schedule					FY 2021	FY 2022	FY 2023	FY 2024	To Complete	Total
Exhibit Type	Title*	Subexhibits	ID CD	MDAP/ MAIS Code	Quantity / Total Cost *(Each) I ($ M)*	Quantity / Total Cost *(Each) I ($ M)*	Quantity / Total Cost *(Each) I ($ M)*	Quantity / Total Cost *(Each) I ($ M)*	Quantity / Total Cost *(Each) I ($ M)*	Quantity / Total Cost *(Each) I ($ M)*
P-40a***	99999S / SERVICE BULLETINS (Capability Improvement)				- / 0.885	- / 0.906	- / 0.923	- / 0.924	- / -	- / 7.093
P-40a***	99999X / Low Cost Modifications (Capability Improvement)				- / 0.100	- / 0.100	- / 0.100	- / 0.118	- / -	- / 2.817
P-3a	9715 / VC-25 Block Upgrade (Capability Improvement)		B		- / 0.000	- / 0.000	- / 0.000	- / 0.000	- / -	- / 311.533
P-40	**Total Gross/Weapon System Cost**				**- / 0.985**	**- / 1.006**	**- / 1.023**	**- / 1.042**	**- / -**	**- / 321.443**

*** Although this is an Exhibit P-40a item, the actual exhibit is not included since all of the required information for this item is already being shown here.

*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:
Where applicable, justification for individual modifications is provided in the P-3A exhibits.

Exhibit P-3a, Individual Modification: PB 2020 Air Force		Date: February 2019
Appropriation / Budget Activity / Budget Sub Activity: 3010F / 05 / 5	**P-1 Line Item Number / Title:** C02500 / VC-25A Mod	**Modification Number / Title:** 9715 / VC-25 Block Upgrade
ID Code (A=Service Ready, B=Not Service Ready) : B	**MDAP/MAIS Code:**	

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 *(Units in Each)*	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost *($ in Millions)*	186.217	51.114	26.245	47.957	0.000	47.957	0.000	0.000	0.000	0.000	-	311.533
Less PY Advance Procurement *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) *($ in Millions)*	186.217	51.114	26.245	47.957	0.000	47.957	0.000	0.000	0.000	0.000	-	311.533
Plus CY Advance Procurement *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Total Obligation Authority *($ in Millions)*	**186.217**	**51.114**	**26.245**	**47.957**	**0.000**	**47.957**	**0.000**	**0.000**	**0.000**	**0.000**	**-**	**311.533**
(The following Resource Summary rows are for informational purposes only. The corresponding budget requests are documented elsewhere.)												
Initial Spares *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Unit Cost *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-

Description:

This modification installs several upgrades on Air Force VC-25A aircraft to maintain presidential mission viability until replaced by VC-25B in the 2024 timeframe. The block modification includes: Protected SATCOM, weather radar, digital voice/data systems, and network capabilities (e.g., Commercial Internet, Multi-Role Tactical Common Data Link, and Mobile User Objective System. Installation of the block upgrade will be aligned with aircraft heavy maintenance depot visits.

Milestone/Development Status

Commercial-off-the-Shelf item with non-recurring engineering for integration.

Exhibit P-3a, Individual Modification: PB 2020 Air Force		Date: February 2019
Appropriation / Budget Activity / Budget Sub Activity: 3010F / 05 / 5	**P-1 Line Item Number / Title:** C02500 / VC-25A Mod	**Modification Number / Title:** 9715 / VC-25 Block Upgrade
ID Code (A=Service Ready, B=Not Service Ready) : B	**MDAP/MAIS Code:**	
Models of Systems Affected: VC-25A	**Modification Type:** Capability Improvement	**Related RDT&E PEs:** 0401314F

Financial Plan	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
	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												
Modification Item 1 of 1: Block Upgrade												
A Kits												
Recurring												
Block Upgrade:INSTALL KITS Group A (Active)	2 / 57.801	- / -	1 / 21.000	2 / 31.457	- / -	2 / 31.457	- / -	- / -	- / -	- / -	- / -	5 / 110.258
Subtotal: Recurring	*- / 57.801*	*- / -*	*- / 21.000*	*- / 31.457*	*- / -*	*- / 31.457*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / 110.258*
Subtotal: Block Upgrade	*- / 57.801*	*- / -*	*- / 21.000*	*- / 31.457*	*- / -*	*- / 31.457*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / 110.258*
Subtotal: Procurement, All Modification Items	*- / 57.801*	*- / -*	*- / 21.000*	*- / 31.457*	*- / -*	*- / 31.457*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / 110.258*
Support *(All Modification Items)*												
GROUP A: TOTAL NONRECURRING	- / 74.434	- / 41.352	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 115.786
GROUP B: TOTAL NONRECURRING	- / -	- / -	- / -	- / 10.000	- / -	- / 10.000	- / -	- / -	- / -	- / -	- / -	- / 10.000
OTHER GOVT	- / 17.900	- / 6.262	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 24.162
PMA - Other Gov't Costs	- / 7.082	- / 3.500	- / 3.271	- / 1.500	- / -	- / 1.500	- / -	- / -	- / -	- / -	- / -	- / 15.353
Subtotal: Support	*- / 99.416*	*- / 51.114*	*- / 3.271*	*- / 11.500*	*- / -*	*- / 11.500*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / 165.301*
Installation												
Modification Item 1 of 1: Block Upgrade	2 / 29.000	- / -	1 / 1.974	2 / 5.000	- / -	2 / 5.000	- / -	- / -	- / -	- / -	- / -	5 / 35.974
Subtotal: Installation	*2 / 29.000*	*- / -*	*1 / 1.974*	*2 / 5.000*	*- / -*	*2 / 5.000*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*5 / 35.974*
Total												
Total Cost (Procurement + Support + Installation)	**186.217**	**51.114**	**26.245**	**47.957**	**0.000**	**47.957**	**0.000**	**0.000**	**0.000**	**0.000**	**-**	**311.533**

Exhibit P-3a, Individual Modification: PB 2020 Air Force		Date: February 2019
Appropriation / Budget Activity / Budget Sub Activity: 3010F / 05 / 5	**P-1 Line Item Number / Title:** C02500 / VC-25A Mod	**Modification Number / Title:** 9715 / VC-25 Block Upgrade
ID Code (A=Service Ready, B=Not Service Ready) : B	**MDAP/MAIS Code:**	

Modification Item 1 of 1: Block Upgrade

Manufacturer Information

Manufacturer Name: Boeing	Manufacturer Location: San Antonio, TX
Administrative Leadtime *(in Months)*: 8	Production Leadtime *(in Months)*: 15

Dates	FY 2018	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024
Contract Dates		Jun 2019	Jun 2020				
Delivery Dates		Sep 2020	Sep 2021				

Installation Information

Method of Implementation: Contractor Facility

Installation Cost	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
	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)*
Prior Years	2 / 29.000	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	2 / 29.000
FY 2018	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2019	- / -	- / -	1 / 1.974	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	1 / 1.974
FY 2020	- / -	- / -	- / -	2 / 5.000	- / -	2 / 5.000	- / -	- / -	- / -	- / -	- / -	2 / 5.000
FY 2021	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2022	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2023	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2024	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
To Complete	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
Total	2 / 29.000	- / -	1 / 1.974	2 / 5.000	- / -	2 / 5.000	- / -	- / -	- / -	- / -	- / -	5 / 35.974

Installation Schedule

	PYS	FY 2018				FY 2019				FY 2020				FY 2021				FY 2022				FY 2023				FY 2024				TC	Tot
		Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4		
In	2	-	-	-	-	-	-	-	1	-	-	-	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0	5
Out	1	-	-	1	-	-	-	-	-	-	-	-	1	-	-	-	2	-	-	-	-	-	-	-	-	-	-	-	-	0	5

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Exhibit P-40, Budget Line Item Justification: PB 2020 Air Force	Date: February 2019
Appropriation / Budget Activity / Budget Sub Activity: 3010F: Aircraft Procurement, Air Force / BA 05: Modification of Inservice Aircraft / BSA 5: Other Aircraft	**P-1 Line Item Number / Title:** C04000 / C-40

ID Code (A=Service Ready, B=Not Service Ready): B	**Program Elements for Code B Items:** 0401314F	**Other Related Program Elements:** 0401314F

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 *(Units in Each)*	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost *($ in Millions)*	90.560	31.119	0.251	0.256	-	0.256	0.261	0.267	0.272	0.000	-	122.986
Less PY Advance Procurement *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) *($ in Millions)*	90.560	31.119	0.251	0.256	-	0.256	0.261	0.267	0.272	0.000	-	122.986
Plus CY Advance Procurement *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Total Obligation Authority *($ in Millions)*	**90.560**	**31.119**	**0.251**	**0.256**	**-**	**0.256**	**0.261**	**0.267**	**0.272**	**0.000**	**-**	**122.986**
(The following Resource Summary rows are for informational purposes only. The corresponding budget requests are documented elsewhere.)												
Initial Spares *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Flyaway Unit Cost *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Unit Cost *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-

Description:

This line item funds all modifications for eleven (11) C-40B and C-40C aircraft, commercial-derivative Boeing 737 business jets. The C-40B/C is a twin-engine, turbo fan aircraft used to airlift DoD officials and government personnel worldwide. The design service life is 30 years with an average of 22 years remaining. This funding may include emerging modification requirements to support PMA, A&AS, equipment and other government costs.

Service bulletins and low cost modifications are necessary for continuing Federal Aviation Administration (FAA) certification while improving flight safety, reliability, and maintainability.

Funding may be used to address Diminishing Manufacturing Sources (DMS) issues.

Funding for this exhibit contained in PE 0401314F.

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.

Justification:

Where applicable, justification for individual modifications is provided in the P-3A exhibits.

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Exhibit P-40, Budget Line Item Justification: PB 2020 Air Force	Date: February 2019
Appropriation / Budget Activity / Budget Sub Activity: 3010F: Aircraft Procurement, Air Force / BA 05: Modification of Inservice Aircraft / BSA 5: Other Aircraft	**P-1 Line Item Number / Title:** C13000 / C-130

ID Code (A=Service Ready, B=Not Service Ready): B	**Program Elements for Code B Items:** 0207224F, 0401115F, 0401897F, 0404011F	**Other Related Program Elements:** 0207224F, 0401115F

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 *(Units in Each)*	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost *($ in Millions)*	1,256.189	210.310	181.094	52.066	-	52.066	81.898	204.291	282.671	182.550	960.308	3,411.377
Less PY Advance Procurement *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) *($ in Millions)*	1,256.189	210.310	181.094	52.066	-	52.066	81.898	204.291	282.671	182.550	960.308	3,411.377
Plus CY Advance Procurement *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Total Obligation Authority *($ in Millions)*	**1,256.189**	**210.310**	**181.094**	**52.066**	**-**	**52.066**	**81.898**	**204.291**	**282.671**	**182.550**	**960.308**	**3,411.377**
(The following Resource Summary rows are for informational purposes only. The corresponding budget requests are documented elsewhere.)												
Initial Spares *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Flyaway Unit Cost *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Unit Cost *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-

Description:

This line item funds modifications to the legacy C-130 and Special Mission C-130 aircraft. The four engine legacy C-130 provides theater airlift and carries either 92 troops, 64 paratroopers, 74 litter patients, or 6 standard 463-L pallets.

The modifications budgeted in FY20 are the Systems/Structure (Center Wing Replacement) mod, the C-130H Avionics Modernization Program (AMP) Increment 1 mod, Simulators, the AFSOC C-130 Mods and low cost/safety/misc sims mods.

In accordance with Section 1815 of the FY 2008 National Defense Authorization Act (P.L. 110-181), this item is necessary for use by the active and reserve components of the Armed Forces for homeland defense missions, domestic emergency responses, and providing military support to civil authorities.

Funding may be used to address Diminishing Manufacturing Sources (DMS) issues.

Funding for this exhibit is contained in PEs 0401115F, 0401897F, and 0404011F.

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.

Secondary Distribution		FY 2018	FY 2019	FY 2020 Base	FY 2020 OCO	FY 2020 Total	FY 2021	FY 2022	FY 2023	FY 2024
AF	Quantity	-	-	-	-	-	-	-	-	-
	Total Obligation Authority	70.866	73.491	37.952	0.000	37.952	32.904	99.194	126.079	10.546
AFNG	Quantity	-	-	-	-	-	-	-	-	-
	Total Obligation Authority	135.302	91.654	7.481	-	7.481	39.878	81.378	119.469	130.871

Exhibit P-40, Budget Line Item Justification: PB 2020 Air Force		Date: February 2019
Appropriation / Budget Activity / Budget Sub Activity: 3010F: Aircraft Procurement, Air Force / BA 05: Modification of Inservice Aircraft / BSA 5: Other Aircraft	**P-1 Line Item Number / Title:** C13000 / C-130	
ID Code (A=Service Ready, B=Not Service Ready): B	**Program Elements for Code B Items:** 0207224F, 0401115F, 0401897F, 0404011F	**Other Related Program Elements:** 0207224F, 0401115F
Line Item MDAP/MAIS Code: N/A		

Secondary Distribution		FY 2018	FY 2019	FY 2020 Base	FY 2020 OCO	FY 2020 Total	FY 2021	FY 2022	FY 2023	FY 2024
AFR	Quantity	-	-	-	-	-	-	-	-	-
	Total Obligation Authority	4.142	15.949	6.633	-	6.633	9.116	23.719	37.123	41.133
Total: Secondary Distribution	**Quantity**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**
	Total Obligation Authority	**210.310**	**181.094**	**52.066**	**0.000**	**52.066**	**81.898**	**204.291**	**282.671**	**182.550**

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

Appropriation / Budget Activity / Budget Sub Activity:
3010F: Aircraft Procurement, Air Force / BA 05: Modification of Inservice Aircraft / BSA 5: Other Aircraft

P-1 Line Item Number / Title:
C13000 / C-130

ID Code (A=Service Ready, B=Not Service Ready): B

Program Elements for Code B Items: 0207224F, 0401115F, 0401897F, 0404011F

Other Related Program Elements: 0207224F, 0401115F

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-40a***	3773 / C-130 8-Bladed Propeller Upgrade (Capability Improvement)				- / 82.000	- / 55.000	- / 55.000	- / 0.000	- / 0.000	- / 0.000
P-40a***	8221 / C-130 ALR-69A Radar Warning Receiver (RWR) (Capability Improvement)				- / 36.080	- / 0.000	- / -	- / -	- / -	- / -
P-40a***	8518 / C-130H Avionics Modernization Program (AMP) Increment 2 (Capability Improvement)				- / -	- / -	- / 0.000	- / 0.000	- / -	- / 0.000
P-40a***	9139 / MOD V IFF (Capability Improvement)				- / 39.223	- / 1.550	- / 1.050	- / -	- / -	- / -
P-40a***	9141 / C-130 CRASHWORTHY LOADMASTER SEAT (No text provided.)				- / 1.853	- / -	- / -	- / -	- / -	- / -
P-40a***	9149 / C-130 Aux Hyd Pump (Capability Improvement)				- / 14.967	- / 0.522	- / -	- / -	- / -	- / -
P-40a***	92308 / T-56 3.5 Engine Mod (Capability Improvement)				- / 113.000	- / 74.000	- / 74.000	- / -	- / -	- / -
P-40a***	92309 / Onboard Fire Incident Response Equipment (Capability Improvement)				- / 66.606	- / 8.300	- / 30.000	- / -	- / -	- / -
P-40a***	92310 / HC-130P/N Variable Speed Drogue (VSD) (Capability Improvement)				- / 1.410	- / -	- / -	- / -	- / -	- / -
P-40a***	92311 / Electronic Propeller Control System (EPCS) (Capability Improvement)				- / 140.500	- / 15.000	- / -	- / -	- / -	- / -
P-40a***	92312 / In-Flight Propeller Balancing System (IPBS) (Reliability & Maintainability)				- / 3.000	- / 0.000	- / -	- / -	- / -	- / -
P-40a***	92315 / C-130H Simulator (Other)				- / -	- / 25.000	- / -	- / 15.675	- / -	- / 15.675
P-40a***	99999A / LOW COST SAFETY MODIFICATIONS (Safety)				- / 3.389	- / 1.499	- / -	- / 1.999	- / -	- / 1.999
P-40a***	99999C / HC-130 Low Cost Mods (Reliability & Maintainability)				- / 1.907	- / -	- / -	- / -	- / -	- / -
P-40a***	99999M / MISC SIMULATOR UPDATES (Capability Improvement)				- / 0.723	- / 0.606	- / -	- / 1.999	- / -	- / 1.999
P-40a***	99999S / SERVICE BULLETINS (Capability Improvement)				- / 1.101	- / 1.024	- / -	- / 1.106	- / -	- / 1.106
P-40a***	99999X / Low Cost Modifications (Capability Improvement)				- / 13.559	- / 1.449	- / 1.926	- / 1.500	- / -	- / 1.500
P-3a	8578 / C-130 SYSTEMS/STRUCTURE (PHASE II MODERNIZATION) (Service Life Extension)		A		- / 666.871	- / 8.160	- / 3.546	- / 14.512	- / 0.000	- / 14.512
P-3a	92302 / C-130H Avionics Modernization Program (AMP) Increment 1 (Capability Improvement)		B		- / 70.000	- / 7.200	- / 7.637	- / 7.338	- / 0.000	- / 7.338
P-3a	92316 / AFSOC C-130 Mods (Capability Improvement)		B		- / 0.000	- / 11.000	- / 7.935	- / 7.937	- / 0.000	- / 7.937
P-40	**Total Gross/Weapon System Cost**				**- / 1,256.189**	**- / 210.310**	**- / 181.094**	**- / 52.066**	**- / -**	**- / 52.066**

Exhibits Schedule					FY 2021	FY 2022	FY 2023	FY 2024	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-40a***	3773 / C-130 8-Bladed Propeller Upgrade (Capability Improvement)				- / 0.000	- / 0.000	- / 0.000	- / 0.000	- / 0.000	- / 192.000

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

Appropriation / Budget Activity / Budget Sub Activity:
3010F: Aircraft Procurement, Air Force / BA 05: Modification of Inservice Aircraft / BSA 5: Other Aircraft

P-1 Line Item Number / Title:
C13000 / C-130

ID Code (A=Service Ready, B=Not Service Ready): B

Program Elements for Code B Items: 0207224F, 0401115F, 0401897F, 0404011F

Other Related Program Elements: 0207224F, 0401115F

Line Item MDAP/MAIS Code: N/A

Exhibits Schedule					FY 2021	FY 2022	FY 2023	FY 2024	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-40a***	8221 / C-130 ALR-69A Radar Warning Receiver (RWR) (Capability Improvement)				- / -	- / -	- / -	- / -	- / -	- / 36.080
P-40a***	8518 / C-130H Avionics Modernization Program (AMP) Increment 2 (Capability Improvement)				- / 61.297	- / 164.524	- / 229.971	- / 165.000	- / 952.108	- / 1,572.900
P-40a***	9139 / MOD V IFF (Capability Improvement)				- / -	- / -	- / -	- / -	- / -	- / 41.823
P-40a***	9141 / C-130 CRASHWORTHY LOADMASTER SEAT (No text provided.)				- / -	- / -	- / -	- / -	- / -	- / 1.853
P-40a***	9149 / C-130 Aux Hyd Pump (Capability Improvement)				- / -	- / -	- / -	- / -	- / -	- / 15.489
P-40a***	92308 / T-56 3.5 Engine Mod (Capability Improvement)				- / -	- / -	- / -	- / -	- / -	- / 261.000
P-40a***	92309 / Onboard Fire Incident Response Equipment (Capability Improvement)				- / -	- / -	- / -	- / -	- / -	- / 104.906
P-40a***	92310 / HC-130P/N Variable Speed Drogue (VSD) (Capability Improvement)				- / -	- / -	- / -	- / -	- / -	- / 1.410
P-40a***	92311 / Electronic Propeller Control System (EPCS) (Capability Improvement)				- / -	- / -	- / -	- / -	- / -	- / 155.500
P-40a***	92312 / In-Flight Propeller Balancing System (IPBS) (Reliability & Maintainability)				- / -	- / -	- / -	- / -	- / -	- / 3.000
P-40a***	92315 / C-130H Simulator (Other)				- / -	- / 22.720	- / 35.461	- / 0.000	- / -	- / 98.856
P-40a***	99999A / LOW COST SAFETY MODIFICATIONS (Safety)				- / -	- / -	- / -	- / -	- / -	- / 6.887
P-40a***	99999C / HC-130 Low Cost Mods (Reliability & Maintainability)				- / -	- / -	- / -	- / -	- / -	- / 1.907
P-40a***	99999M / MISC SIMULATOR UPDATES (Capability Improvement)				- / -	- / -	- / -	- / -	- / -	- / 3.328
P-40a***	99999S / SERVICE BULLETINS (Capability Improvement)				- / -	- / -	- / -	- / -	- / -	- / 3.231
P-40a***	99999X / Low Cost Modifications (Capability Improvement)				- / 1.982	- / 1.979	- / 1.896	- / 1.999	- / -	- / 26.290
P-3a	8578 / C-130 SYSTEMS/STRUCTURE (PHASE II MODERNIZATION) (Service Life Extension)		A		- / 14.773	- / 15.068	- / 15.343	- / 15.551	- / 8.200	- / 762.024
P-3a	92302 / C-130H Avionics Modernization Program (AMP) Increment 1 (Capability Improvement)		B		- / 3.846	- / 0.000	- / 0.000	- / -	- / -	- / 96.021
P-3a	92316 / AFSOC C-130 Mods (Capability Improvement)		B		- / 0.000	- / 0.000	- / 0.000	- / 0.000	- / -	- / 26.872
P-40	**Total Gross/Weapon System Cost**				**- / 81.898**	**- / 204.291**	**- / 282.671**	**- / 182.550**	**- / 960.308**	**- / 3,411.377**

*** Although this is an Exhibit P-40a item, the actual exhibit is not included since all of the required information for this item is already being shown here.

*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:
Where applicable, justification for individual modifications is provided in the P-3A exhibits.

Exhibit P-3a, Individual Modification: PB 2020 Air Force		Date: February 2019
Appropriation / Budget Activity / Budget Sub Activity: 3010F / 05 / 5	**P-1 Line Item Number / Title:** C13000 / C-130	**Modification Number / Title:** 8578 / C-130 SYSTEMS/STRUCTURE (PHASE II MODERNIZATION)
ID Code (A=Service Ready, B=Not Service Ready) : A	**MDAP/MAIS Code:**	

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 *(Units in Each)*	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost *($ in Millions)*	666.871	8.160	3.546	14.512	0.000	14.512	14.773	15.068	15.343	15.551	8.200	762.024
Less PY Advance Procurement *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) *($ in Millions)*	666.871	8.160	3.546	14.512	0.000	14.512	14.773	15.068	15.343	15.551	8.200	762.024
Plus CY Advance Procurement *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Total Obligation Authority *($ in Millions)*	**666.871**	**8.160**	**3.546**	**14.512**	**0.000**	**14.512**	**14.773**	**15.068**	**15.343**	**15.551**	**8.200**	**762.024**
(The following Resource Summary rows are for informational purposes only. The corresponding budget requests are documented elsewhere.)												
Initial Spares *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Unit Cost *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-

Description:

Replaces the Center Wing Box (CWB) on MC-130H, HC-130N/P, C-130H, EC-130H, and AC-130U aircraft whose center wings service life expires between 2005-2022. Kit costs vary by Mission Design Series (MDS) as reflected in the kit costs FY05-FY22. Installations are done at the Warner Robins Depot, except for the EC-130Hs which are done at L3 Communication's facility.

The following is a status of each MDS: MC-130H: 20 required, 20 procured, 100%; HC-130: 4 required, 4 procured, 100%; AC-130U: 15 required, 15 procured, 100%; C-130H1: 28 required, 28 procured, 100%; EC-130H: 14 required, 14 procured, 100%; C-130H2/3: 29 required (through 2022), 20 procured, 9 to be procured, 77%.

The C-130 Systems/Structures mod is a validated requirement via AF Special Operations Command's Operational Requirement Document 023-93-1, and Air Mobility Command's (AMC) AF Form 1067s (AMC-04-228, AMC-05-148, AMC-06-005, AMC-06-136).

The Coast Guard purchased three center wings kits and they were provided back to the USAF free of charge. Kits were combined with the H3 buy in FY14 and will be installed between FY19 and FY26.

2 EC-130H aircraft retired and those kits will be converted to C-130H2/3 with additional NRE paid for in FY22 and installed in FY26 & beyond. Kits will be converted as a part of H2/3 kit buy in FY22.

Milestone/Development Status

Post-Milestone C

Secondary Distribution		FY 2018	FY 2019	FY 2020 Base	FY 2020 OCO	FY 2020 Total	FY 2021	FY 2022	FY 2023	FY 2024
AF	Quantity	-	-	-	-	-	-	-	-	-
	Total Obligation Authority	2.018	0.475	2.638	-	2.638	0.623	0.628	0.643	0.765
AFNG	Quantity	-	-	-	-	-	-	-	-	-
	Total Obligation Authority	3.071	0.000	5.937	-	5.937	14.150	14.440	14.700	14.786
AFR	Quantity	-	-	-	-	-	-	-	-	-
	Total Obligation Authority	3.071	3.071	5.937	-	5.937	0.000	-	-	-

Exhibit P-3a, Individual Modification: PB 2020 Air Force		Date: February 2019
Appropriation / Budget Activity / Budget Sub Activity: 3010F / 05 / 5	**P-1 Line Item Number / Title:** C13000 / C-130	**Modification Number / Title:** 8578 / C-130 SYSTEMS/STRUCTURE (PHASE II MODERNIZATION)
ID Code (A=Service Ready, B=Not Service Ready) : A	**MDAP/MAIS Code:**	

Secondary Distribution		FY 2018	FY 2019	FY 2020 Base	FY 2020 OCO	FY 2020 Total	FY 2021	FY 2022	FY 2023	FY 2024
Total: Secondary Distribution	Quantity	-	-	-	-	-	-	-	-	-
	Total Obligation Authority	8.160	3.546	14.512	0.000	14.512	14.773	15.068	15.343	15.551

Exhibit P-3a, Individual Modification: PB 2020 Air Force		Date: February 2019
Appropriation / Budget Activity / Budget Sub Activity: 3010F / 05 / 5	**P-1 Line Item Number / Title:** C13000 / C-130	**Modification Number / Title:** 8578 / C-130 SYSTEMS/STRUCTURE (PHASE II MODERNIZATION)
ID Code (A=Service Ready, B=Not Service Ready) : A	**MDAP/MAIS Code:**	
Models of Systems Affected: C-130H, MC-130H, HC-130P, HC-130N, EC-130H, AC-130U	**Modification Type:** Service Life Extension	**Related RDT&E PEs:**

Financial Plan	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
	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												
Modification Item 1 of 6: AC-130U												
A Kits												
Recurring												
AC-130U:INSTALL KITS Group A (Active)	15 / 53.926	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	15 / 53.926
Subtotal: Recurring	*- / 53.926*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / 53.926*
Subtotal: AC-130U	*- / 53.926*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / 53.926*
Modification Item 2 of 6: C-130H1												
A Kits												
Recurring												
C-130H1:INSTALL KITS Group A (Active)	28 / 102.218	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	28 / 102.218
Subtotal: Recurring	*- / 102.218*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / 102.218*
Subtotal: C-130H1	*- / 102.218*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / 102.218*
Modification Item 3 of 6: C-130H2/3												
A Kits												
Recurring												
C-130H2/3:INSTALL KITS Group A (Active)	14 / 54.530	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	14 / 54.530
C-130H2/3:INSTALL KITS Group A (Guard)	5 / 12.659	- / -	- / -	- / -	- / -	- / -	2 / 9.600	3 / 14.440	2 / 9.200	2 / 9.686	- / -	14 / 55.585
C-130H2/3:INSTALL KITS Group A (Reserve)	4 / 12.672	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	4 / 12.672
Subtotal: Recurring	*- / 79.861*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / 9.600*	*- / 14.440*	*- / 9.200*	*- / 9.686*	*- / -*	*- / 122.787*
Subtotal: C-130H2/3	*- / 79.861*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / 9.600*	*- / 14.440*	*- / 9.200*	*- / 9.686*	*- / -*	*- / 122.787*
Modification Item 4 of 6: EC-130H												
A Kits												
Recurring												
EC-130H:INSTALL KITS Group A (Active)	14 / 54.834	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	14 / 54.834
Subtotal: Recurring	*- / 54.834*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / 54.834*
Subtotal: EC-130H	*- / 54.834*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / 54.834*
Modification Item 5 of 6: HC-130												
A Kits												

Exhibit P-3a, Individual Modification: PB 2020 Air Force		Date: February 2019
Appropriation / Budget Activity / Budget Sub Activity: 3010F / 05 / 5	**P-1 Line Item Number / Title:** C13000 / C-130	**Modification Number / Title:** 8578 / C-130 SYSTEMS/STRUCTURE (PHASE II MODERNIZATION)
ID Code (A=Service Ready, B=Not Service Ready) : A	**MDAP/MAIS Code:**	
Models of Systems Affected: C-130H, MC-130H, HC-130P, HC-130N, EC-130H, AC-130U	**Modification Type:** Service Life Extension	**Related RDT&E PEs:**

Financial Plan	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
	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)*
Recurring												
HC-130:INSTALL KITS Group A (Active)	4 / 17.311	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	4 / 17.311
Subtotal: Recurring	*- / 17.311*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / 17.311*
Subtotal: HC-130	*- / 17.311*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / 17.311*
Modification Item 6 of 6: MC-130H												
A Kits												
Recurring												
MC-130H:INSTALL KITS Group A (Active)	20 / 72.078	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	20 / 72.078
Subtotal: Recurring	*- / 72.078*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / 72.078*
Subtotal: MC-130H	*- / 72.078*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / 72.078*
Subtotal: Procurement, All Modification Items	*- / 380.228*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / 9.600*	*- / 14.440*	*- / 9.200*	*- / 9.686*	*- / -*	*- / 423.154*
Support *(All Modification Items)*												
GROUP A: TOTAL NONRECURRING	- / 41.291	- / -	- / -	- / 2.025	- / -	- / 2.025	- / -	- / 0.000	- / 0.000	- / -	- / -	- / 43.316
Change Orders	- / 0.829	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 0.829
Data	- / 3.296	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 3.296
SUPPORT-EQUIP	- / 3.290	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 3.290
OTHER GOVT	- / 1.194	- / 1.507	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 2.701
A&AS	- / 2.531	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 2.531
PMA - Contractor Services	- / 2.181	- / 0.498	- / 0.463	- / 0.600	- / -	- / 0.600	- / 0.610	- / 0.615	- / 0.630	- / 0.750	- / -	- / 6.347
PMA - Other Gov't Costs	- / 3.824	- / 0.013	- / 0.012	- / 0.013	- / -	- / 0.013	- / 0.013	- / 0.013	- / 0.013	- / 0.015	- / -	- / 3.916
Subtotal: Support	*- / 58.436*	*- / 2.018*	*- / 0.475*	*- / 2.638*	*- / -*	*- / 2.638*	*- / 0.623*	*- / 0.628*	*- / 0.643*	*- / 0.765*	*- / -*	*- / 66.226*
Installation												
Modification Item 1 of 6: AC-130U	15 / 34.586	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	15 / 34.586
Modification Item 2 of 6: C-130H1	28 / 70.067	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	28 / 70.067
Modification Item 3 of 6: C-130H2/3	16 / 45.492	2 / 6.142	1 / 3.071	3 / 11.874	- / -	3 / 11.874	1 / 4.550	0 / 0.000	1 / 5.500	1 / 5.100	2 / 8.200	27 / 89.929
Modification Item 4 of 6: EC-130H	12 / 28.762	- / -	- / -	- / -	- / -	- / -	0 / 0.000	- / -	- / -	- / -	- / -	12 / 28.762
Modification Item 5 of 6: HC-130	4 / 10.890	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	4 / 10.890
Modification Item 6 of 6: MC-130H	20 / 38.410	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	20 / 38.410
Subtotal: Installation	*95 / 228.207*	*2 / 6.142*	*1 / 3.071*	*3 / 11.874*	*- / -*	*3 / 11.874*	*1 / 4.550*	*0 / 0.000*	*1 / 5.500*	*1 / 5.100*	*2 / 8.200*	*106 / 272.644*

Exhibit P-3a, Individual Modification: PB 2020 Air Force		Date: February 2019
Appropriation / Budget Activity / Budget Sub Activity: 3010F / 05 / 5	**P-1 Line Item Number / Title:** C13000 / C-130	**Modification Number / Title:** 8578 / C-130 SYSTEMS/STRUCTURE (PHASE II MODERNIZATION)
ID Code (A=Service Ready, B=Not Service Ready) : A	**MDAP/MAIS Code:**	
Models of Systems Affected: C-130H, MC-130H, HC-130P, HC-130N, EC-130H, AC-130U	**Modification Type:** Service Life Extension	**Related RDT&E PEs:**

Financial Plan	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
	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)*
Total												
Total Cost (Procurement + Support + Installation)	**666.871**	**8.160**	**3.546**	**14.512**	**0.000**	**14.512**	**14.773**	**15.068**	**15.343**	**15.551**	**8.200**	**762.024**

Exhibit P-3a, Individual Modification: PB 2020 Air Force		Date: February 2019
Appropriation / Budget Activity / Budget Sub Activity: 3010F / 05 / 5	**P-1 Line Item Number / Title:** C13000 / C-130	**Modification Number / Title:** 8578 / C-130 SYSTEMS/STRUCTURE (PHASE II MODERNIZATION)

ID Code (A=Service Ready, B=Not Service Ready) : A

MDAP/MAIS Code:

Modification Item 1 of 6: AC-130U

Manufacturer Information

Manufacturer Name: Lockheed Martin (3)

Manufacturer Location: Marietta, GA

Administrative Leadtime *(in Months)*: 2

Production Leadtime *(in Months)*: 15

Dates	FY 2018	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024
Contract Dates							
Delivery Dates							

Installation Information

Method of Implementation: Depot

Installation Cost	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
	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)*
Prior Years	15 / 34.586	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	15 / 34.586
FY 2018	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2019	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2020	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2021	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2022	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2023	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2024	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
To Complete	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
Total	15 / 34.586	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	15 / 34.586

Installation Schedule

	PYS	FY 2018				FY 2019				FY 2020				FY 2021				FY 2022				FY 2023				FY 2024				TC	Tot
		Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4		
In	15	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0	15
Out	15	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0	15

Exhibit P-3a, Individual Modification: PB 2020 Air Force		Date: February 2019
Appropriation / Budget Activity / Budget Sub Activity: 3010F / 05 / 5	**P-1 Line Item Number / Title:** C13000 / C-130	**Modification Number / Title:** 8578 / C-130 SYSTEMS/STRUCTURE (PHASE II MODERNIZATION)

ID Code (A=Service Ready, B=Not Service Ready) : A

MDAP/MAIS Code:

Modification Item 2 of 6: C-130H1

Manufacturer Information

Manufacturer Name: Lockheed Martin (5)

Manufacturer Location: Marietta, GA

Administrative Leadtime *(in Months)*: 2

Production Leadtime *(in Months)*: 27

Dates	FY 2018	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024
Contract Dates							
Delivery Dates							

Installation Information

Method of Implementation: Depot

Installation Cost	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
	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)*
Prior Years	28 / 70.067	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	28 / 70.067
FY 2018	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2019	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2020	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2021	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2022	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2023	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2024	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
To Complete	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
Total	28 / 70.067	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	28 / 70.067

Installation Schedule

	PYS	FY 2018				FY 2019				FY 2020				FY 2021				FY 2022				FY 2023				FY 2024				TC	Tot
		Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4		
In	28	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0	28
Out	28	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0	28

Exhibit P-3a, Individual Modification: PB 2020 Air Force		Date: February 2019
Appropriation / Budget Activity / Budget Sub Activity: 3010F / 05 / 5	**P-1 Line Item Number / Title:** C13000 / C-130	**Modification Number / Title:** 8578 / C-130 SYSTEMS/STRUCTURE (PHASE II MODERNIZATION)

ID Code (A=Service Ready, B=Not Service Ready) : A

MDAP/MAIS Code:

Modification Item 3 of 6: C-130H2/3

Manufacturer Information

Manufacturer Name: Lockheed Martin (6)

Manufacturer Location: Marietta, GA

Administrative Leadtime *(in Months)*: 2

Production Leadtime *(in Months)*: 27

Dates	FY 2018	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024
Contract Dates				Dec 2020	Dec 2021	Dec 2022	Dec 2023
Delivery Dates				Mar 2023	Mar 2024	Mar 2025	Mar 2026

Installation Information

Method of Implementation: Depot

Installation Cost	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
	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)*
Prior Years	16 / 45.492	2 / 6.142	1 / 3.071	3 / 11.874	- / -	3 / 11.874	0 / 0.000	- / -	- / -	- / -	- / -	22 / 66.579
FY 2018	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2019	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2020	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2021	- / -	- / -	- / -	- / -	- / -	- / -	1 / 4.550	0 / 0.000	- / -	- / -	- / -	1 / 4.550
FY 2022	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	1 / 5.500	- / -	0 / 0.000	1 / 5.500
FY 2023	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	0 / 0.000	0 / 0.000
FY 2024	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	1 / 5.100	2 / 8.200	3 / 13.300
To Complete	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
Total	16 / 45.492	2 / 6.142	1 / 3.071	3 / 11.874	- / -	3 / 11.874	1 / 4.550	0 / 0.000	1 / 5.500	1 / 5.100	2 / 8.200	27 / 89.929

Installation Schedule

		FY 2018				FY 2019				FY 2020				FY 2021				FY 2022				FY 2023				FY 2024					
	PYS	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	TC	Tot
In	16	1	1	1	-	1	1	-	-	1	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	3	26
Out	16	1	1	1	-	1	1	-	-	1	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	3	26

Exhibit P-3a, Individual Modification: PB 2020 Air Force		Date: February 2019
Appropriation / Budget Activity / Budget Sub Activity: 3010F / 05 / 5	**P-1 Line Item Number / Title:** C13000 / C-130	**Modification Number / Title:** 8578 / C-130 SYSTEMS/STRUCTURE (PHASE II MODERNIZATION)

ID Code (A=Service Ready, B=Not Service Ready) : A

MDAP/MAIS Code:

Modification Item 4 of 6: EC-130H

Manufacturer Information

Manufacturer Name: Lockheed Martin (2)

Manufacturer Location: Marietta, GA

Administrative Leadtime *(in Months)*: 2

Production Leadtime *(in Months)*: 15

Dates	FY 2018	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024
Contract Dates							
Delivery Dates							

Installation Information

Method of Implementation: Contractor Facility

Installation Cost	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
	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)*
Prior Years	12 / 28.762	- / -	- / -	- / -	- / -	- / -	0 / 0.000	- / -	- / -	- / -	- / -	12 / 28.762
FY 2018	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2019	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2020	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2021	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2022	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2023	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2024	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
To Complete	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
Total	12 / 28.762	- / -	- / -	- / -	- / -	- / -	0 / 0.000	- / -	- / -	- / -	- / -	12 / 28.762

Installation Schedule

	PYS	FY 2018				FY 2019				FY 2020				FY 2021				FY 2022				FY 2023				FY 2024				TC	Tot
		Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4		
In	12	-	-	-	-	-	-	-	-	-	-	-	-	0	0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0	12
Out	12	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0	0	-	-	-	-	-	-	-	-	-	-	0	12

Exhibit P-3a, Individual Modification: PB 2020 Air Force		Date: February 2019
Appropriation / Budget Activity / Budget Sub Activity: 3010F / 05 / 5	**P-1 Line Item Number / Title:** C13000 / C-130	**Modification Number / Title:** 8578 / C-130 SYSTEMS/STRUCTURE (PHASE II MODERNIZATION)

ID Code (A=Service Ready, B=Not Service Ready) : A

MDAP/MAIS Code:

Modification Item 5 of 6: HC-130

Manufacturer Information

Manufacturer Name: Lockheed Martin (4)

Manufacturer Location: Marietta, GA

Administrative Leadtime *(in Months)*: 2

Production Leadtime *(in Months)*: 27

Dates	FY 2018	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024
Contract Dates							
Delivery Dates							

Installation Information

Method of Implementation: Depot

Installation Cost	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
	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)*
Prior Years	4 / 10.890	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	4 / 10.890
FY 2018	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2019	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2020	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2021	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2022	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2023	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2024	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
To Complete	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
Total	4 / 10.890	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	4 / 10.890

Installation Schedule

	PYS	FY 2018				FY 2019				FY 2020				FY 2021				FY 2022				FY 2023				FY 2024				TC	Tot
		Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4		
In	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0	4
Out	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0	4

Exhibit P-3a, Individual Modification: PB 2020 Air Force		Date: February 2019
Appropriation / Budget Activity / Budget Sub Activity: 3010F / 05 / 5	**P-1 Line Item Number / Title:** C13000 / C-130	**Modification Number / Title:** 8578 / C-130 SYSTEMS/STRUCTURE (PHASE II MODERNIZATION)

ID Code (A=Service Ready, B=Not Service Ready) : A

MDAP/MAIS Code:

Modification Item 6 of 6: MC-130H

Manufacturer Information

Manufacturer Name: Lockheed Martin (1)

Manufacturer Location: Marietta, GA

Administrative Leadtime *(in Months)*: 2

Production Leadtime *(in Months)*: 15

Dates	FY 2018	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024
Contract Dates							
Delivery Dates							

Installation Information

Method of Implementation: Depot

Installation Cost	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
	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)*
Prior Years	20 / 38.410	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	20 / 38.410
FY 2018	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2019	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2020	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2021	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2022	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2023	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2024	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
To Complete	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
Total	20 / 38.410	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	20 / 38.410

Installation Schedule

	PYS	FY 2018				FY 2019				FY 2020				FY 2021				FY 2022				FY 2023				FY 2024				TC	Tot
		Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4		
In	20	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0	20
Out	20	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0	20

Exhibit P-3a, Individual Modification: PB 2020 Air Force		Date: February 2019
Appropriation / Budget Activity / Budget Sub Activity: 3010F / 05 / 5	**P-1 Line Item Number / Title:** C13000 / C-130	**Modification Number / Title:** 92302 / C-130H Avionics Modernization Program (AMP) Increment 1
ID Code (A=Service Ready, B=Not Service Ready) : B	**MDAP/MAIS Code:**	

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 *(Units in Each)*	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost *($ in Millions)*	70.000	7.200	7.637	7.338	0.000	7.338	3.846	0.000	0.000	-	-	96.021
Less PY Advance Procurement *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) *($ in Millions)*	70.000	7.200	7.637	7.338	0.000	7.338	3.846	0.000	0.000	-	-	96.021
Plus CY Advance Procurement *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Total Obligation Authority *($ in Millions)*	**70.000**	**7.200**	**7.637**	**7.338**	**0.000**	**7.338**	**3.846**	**0.000**	**0.000**	**-**	**-**	**96.021**
(The following Resource Summary rows are for informational purposes only. The corresponding budget requests are documented elsewhere.)												
Initial Spares *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Unit Cost *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-

Description:

The C-130H Avionics Modernization Program (AMP) Increment 1 program will modify up to 176 aircraft (consisting of H3s, H2.5s, H2s, H1s and LC-130Hs) with Automatic Dependent Surveillance-Broadcast (ADS-B) Out, 8.33 kHz radios, updated Cockpit Voice Recorder/Digital Flight Data Recorder (CVR/DFDR), and Enhanced Mode S. C-130H AMP Increment 1 also provides Type 1 training and modifies the C-130H aircrew and maintenance training systems and courseware including MODE 5 Identification Friend or Foe (IFF). Funding also includes studies and risk reduction efforts as necessary. Identified obsolescence and Diminishing Manufacturing Source (DMS) issues will be resolved, the DMS effort will include removal of end-of-life software/hardware within simulator systems and move to a modular, common open system architecture that is sustainable and cyber-resilient. This modification will also implement requirements and standards defined under the Simulator Common Architecture Requirements and Standards (SCARS) initiative. The Capability Development Document (CDD) was approved 8 Aug 14.

C-130H AMP Increment 1 acquisition strategy addresses the Federal Aviation Administration/International Civil Aviation Organization (FAA/ICAO) Communication/ Navigation/Surveillance & Air Traffic Management (CNS/ATM) required upgrades in the most efficient manner that will meet FAA's January 2020 and ICAO's June 2020 Airspace Compliance mandates. Current efforts are primarily involved with execution of the Engineering and Manufacturing Development (EMD) phase for ADS-B Out. The ADS-B Out EMD contract awarded in 2nd quarter FY17 following a competitive source selection.

This funding includes Rapid Global Mobility (RGM) platform related activities including but not limited to fielding actions such as kit buys, installation and support equipment.

The Engineering and Manufacturing Development (EMD) phase had 4 prototype aircraft to accomplish the ADS-B Out effort. The prototype aircraft were representative of variations in the C-130H mission designs. The remaining aircraft will be modified in the production phase.

Note, the Traffic Alert and Collision Avoidance System (TCAS II) is listed in the C-130H AMP Capability Development Document (CDD) as a requirement since it's required for flight operations in airspace controlled by the Federal Aviation Administration (FAA), and airspace controlled by foreign countries; however, the legacy C-130H fleet already has TCAS II 7.0 installed and will be maintained through the AMP Increment 1 upgrade. Also, MODE 5 IFF is listed in the CDD as a requirement but is funded in mod number 9139.

Other government costs include technical support for CFT installations.

Milestone/Development Status

Milestone C approved 23 Jul 2018. Program is on schedule to meet the FAA ADS-B Out Jan 20 mandate.

Exhibit P-3a, Individual Modification: PB 2020 Air Force		Date: February 2019
Appropriation / Budget Activity / Budget Sub Activity: 3010F / 05 / 5	**P-1 Line Item Number / Title:** C13000 / C-130	**Modification Number / Title:** 92302 / C-130H Avionics Modernization Program (AMP) Increment 1
ID Code (A=Service Ready, B=Not Service Ready) : B	**MDAP/MAIS Code:**	

Secondary Distribution		FY 2018	FY 2019	FY 2020 Base	FY 2020 OCO	FY 2020 Total	FY 2021	FY 2022	FY 2023	FY 2024
AF	Quantity	-	-	-	-	-	-	-	-	-
	Total Obligation Authority	4.035	2.103	5.098	-	5.098	3.846	0.000	-	-
AFNG	Quantity	-	-	-	-	-	-	-	-	-
	Total Obligation Authority	2.317	4.309	1.544	-	1.544	-	-	-	-
AFR	Quantity	-	-	-	-	-	-	-	-	-
	Total Obligation Authority	0.848	1.225	0.696	-	0.696	-	-	-	-
Total: Secondary Distribution	**Quantity**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**
	Total Obligation Authority	**7.200**	**7.637**	**7.338**	**0.000**	**7.338**	**3.846**	**0.000**	**0.000**	**-**

Exhibit P-3a, Individual Modification: PB 2020 Air Force		Date: February 2019
Appropriation / Budget Activity / Budget Sub Activity: 3010F / 05 / 5	**P-1 Line Item Number / Title:** C13000 / C-130	**Modification Number / Title:** 92302 / C-130H Avionics Modernization Program (AMP) Increment 1
ID Code (A=Service Ready, B=Not Service Ready) : B	**MDAP/MAIS Code:**	
Models of Systems Affected: C-130H	**Modification Type:** Capability Improvement	**Related RDT&E PEs:** 0401115F

Financial Plan	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
	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)*
RDT&E PE #												
0401115F	- / 42.383	4 / 2.894	- / 5.864	- / 0.000	- / -	- / 0.000	- / 0.000	- / -	- / -	- / -	- / -	4 / 51.141
Procurement												
Modification Item 1 of 1: C-130H												
A Kits												
Recurring												
C-130H:INSTALL KITS Group A (Guard)	- / -	123 / 0.579	4 / 0.019	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	127 / 0.598
C-130H:INSTALL KITS Group A (Reserve)	- / -	45 / 0.212	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	45 / 0.212
Subtotal: Recurring	- / -	- / *0.791*	- / *0.019*	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / *0.810*
B Kits												
Recurring												
C-130H:EQUIPMENT Group B (Active)	- / -	- / -	- / 0.000	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 0.000
C-130H:EQUIPMENT Group B (Guard)	- / -	123 / 1.738	4 / 0.057	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	127 / 1.795
C-130H:EQUIPMENT Group B (Reserve)	- / -	45 / 0.636	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	45 / 0.636
Subtotal: Recurring	- / -	- / *2.374*	- / *0.057*	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / *2.431*
Subtotal: C-130H	- / -	- / *3.165*	- / *0.076*	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / *3.241*
Subtotal: Procurement, All Modification Items	- / -	- / *3.165*	- / *0.076*	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / *3.241*
Support *(All Modification Items)*												
GROUP A: TOTAL NONRECURRING	- / 0.000	- / -	- / 0.000	- / 0.000	- / -	- / 0.000	- / 0.000	- / 0.000	- / -	- / -	- / -	- / 0.000
GROUP B: TOTAL NONRECURRING	- / 0.000	- / -	- / 0.000	- / 0.000	- / -	- / 0.000	- / 0.000	- / -	- / -	- / -	- / -	- / 0.000
Change Orders	- / 43.702	- / 1.035	- / 0.490	- / 0.888	- / -	- / 0.888	- / 0.080	- / -	- / -	- / -	- / -	- / 46.195
Data	- / 0.100	- / 0.500	- / 0.025	- / 0.025	- / -	- / 0.025	- / -	- / -	- / -	- / -	- / -	- / 0.650
SIM/TRAINER	- / -	- / -	- / -	4 / 3.453	- / -	4 / 3.453	4 / 3.673	- / -	- / -	- / -	- / -	8 / 7.126
SUPPORT-EQUIP	- / -	- / 0.500	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 0.500
GFP	- / 24.898	- / 0.150	- / 0.040	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 25.088
ICS-Labor	- / -	- / 0.100	- / 0.009	- / 0.032	- / -	- / 0.032	- / -	- / -	- / -	- / -	- / -	- / 0.141
ICS-Material	- / -	- / 0.050	- / 0.011	- / 0.011	- / -	- / 0.011	- / -	- / -	- / -	- / -	- / -	- / 0.072
Type 1 Training	- / -	- / 0.100	- / 0.050	- / 0.030	- / -	- / 0.030	- / -	- / -	- / -	- / -	- / -	- / 0.180
OTHER GOVT	- / -	- / -	- / 0.420	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 0.420
PMA - Contractor Services	- / 1.200	- / 1.500	- / 0.958	- / 0.656	- / -	- / 0.656	- / 0.090	- / -	- / -	- / -	- / -	- / 4.404
PMA - Other Gov't Costs	- / 0.100	- / 0.100	- / 0.100	- / 0.003	- / -	- / 0.003	- / 0.003	- / -	- / -	- / -	- / -	- / 0.306

Exhibit P-3a, Individual Modification: PB 2020 Air Force		Date: February 2019
Appropriation / Budget Activity / Budget Sub Activity: 3010F / 05 / 5	**P-1 Line Item Number / Title:** C13000 / C-130	**Modification Number / Title:** 92302 / C-130H Avionics Modernization Program (AMP) Increment 1
ID Code (A=Service Ready, B=Not Service Ready) : B	**MDAP/MAIS Code:**	
Models of Systems Affected: C-130H	**Modification Type:** Capability Improvement	**Related RDT&E PEs:** 0401115F

Financial Plan	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
	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)*
Subtotal: Support	- / 70.000	- / 4.035	- / 2.103	4 / 5.098	- / -	4 / 5.098	4 / 3.846	- / 0.000	- / -	- / -	- / -	8 / 85.082
Installation												
Modification Item 1 of 1: C-130H	- / -	- / -	98 / 5.458	74 / 2.240	- / -	74 / 2.240	- / -	- / -	- / -	- / -	- / -	172 / 7.698
Subtotal: Installation	- / -	- / -	98 / 5.458	74 / 2.240	- / -	74 / 2.240	- / -	- / -	- / -	- / -	- / -	172 / 7.698
Total												
Total Cost (Procurement + Support + Installation)	**70.000**	**7.200**	**7.637**	**7.338**	**0.000**	**7.338**	**3.846**	**0.000**	**0.000**	**-**	**-**	**96.021**

Exhibit P-3a, Individual Modification: PB 2020 Air Force		Date: February 2019
Appropriation / Budget Activity / Budget Sub Activity: 3010F / 05 / 5	**P-1 Line Item Number / Title:** C13000 / C-130	**Modification Number / Title:** 92302 / C-130H Avionics Modernization Program (AMP) Increment 1

ID Code (A=Service Ready, B=Not Service Ready) : B

MDAP/MAIS Code:

Modification Item 1 of 1: C-130H

Manufacturer Information

Manufacturer Name: iAccess

Manufacturer Location: Santa Ana, CA

Administrative Leadtime *(in Months)*: 2

Production Leadtime *(in Months)*: 9

Dates	FY 2018	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024
Contract Dates	Jul 2018	Dec 2018					
Delivery Dates	Apr 2019	Sep 2019					

Installation Information

Method of Implementation: Contract Field Team

Installation Cost	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
	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)*
Prior Years	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2018	- / -	- / -	98 / 5.458	70 / 2.119	- / -	70 / 2.119	- / -	- / -	- / -	- / -	- / -	168 / 7.577
FY 2019	- / -	- / -	- / -	4 / 0.121	- / -	4 / 0.121	- / -	- / -	- / -	- / -	- / -	4 / 0.121
FY 2020	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2021	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2022	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2023	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2024	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
To Complete	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
Total	- / -	- / -	98 / 5.458	74 / 2.240	- / -	74 / 2.240	- / -	- / -	- / -	- / -	- / -	172 / 7.698

Installation Schedule

	PYS	FY 2018				FY 2019				FY 2020				FY 2021				FY 2022				FY 2023				FY 2024				TC	Tot
		Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4		
In	0	-	-	-	-	-	-	24	74	74	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0	172
Out	0	-	-	-	-	-	-	24	74	74	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0	172

Exhibit P-3a, Individual Modification: PB 2020 Air Force		Date: February 2019
Appropriation / Budget Activity / Budget Sub Activity: 3010F / 05 / 5	**P-1 Line Item Number / Title:** C13000 / C-130	**Modification Number / Title:** 92316 / AFSOC C-130 Mods
ID Code (A=Service Ready, B=Not Service Ready) : B	**MDAP/MAIS Code:**	

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 *(Units in Each)*	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost *($ in Millions)*	0.000	11.000	7.935	7.937	0.000	7.937	0.000	0.000	0.000	0.000	-	26.872
Less PY Advance Procurement *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) *($ in Millions)*	0.000	11.000	7.935	7.937	0.000	7.937	0.000	0.000	0.000	0.000	-	26.872
Plus CY Advance Procurement *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Total Obligation Authority *($ in Millions)*	**0.000**	**11.000**	**7.935**	**7.937**	**0.000**	**7.937**	**0.000**	**0.000**	**0.000**	**0.000**	**-**	**26.872**
(The following Resource Summary rows are for informational purposes only. The corresponding budget requests are documented elsewhere.)												
Initial Spares *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Unit Cost *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-

Description:

AFSOC C-130H Mods are focused on compliance and capability improvements. The compliance aspect will install the Automatic Dependent Surveillance-Broadcast (ADS-B) Out and Enhanced Mode S capabilities on 16 MC-130H aircraft to comply with the Federal Aviation Administration/International Civil Aviation Organization (FAA/ICAO) Communication/Navigation/Surveillance and Air Traffic Management (CNS/ATM) mandated upgrades. Additionally capability improvements include installing updated digital flight data recorders (DFDR), Light Weight Armor (LWA), and the Electronic Propeller Control System (EPCS) on 15 MC-130H fleet aircraft. The DFDR replaces old analog systems with digital systems. The EPCS system replaces mechanical propeller control system and synchrophaser with an electronic control system. Identified obsolescence and Diminishing Manufacturing Source (DMS) issues will be resolved, the DMS effort may include removal of end-of-life software/hardware within simulator systems and move to a modular, common open system architecture that is sustainable and cyber-resilient. AF 1067s are the validated source for these modifications.

Milestone/Development Status

The modifications only require non-reoccurring engineering funds and no development funds. The ADS-B Out contract awarded in 3rd quarter FY18. LWA contract awarded in 4th quarter FY18. DFDR is planned to award in 4th quarter FY19.

Secondary Distribution		FY 2018	FY 2019	FY 2020 Base	FY 2020 OCO	FY 2020 Total	FY 2021	FY 2022	FY 2023	FY 2024
AF	Quantity	-	-	-	-	-	-	-	-	-
	Total Obligation Authority	11.000	7.935	7.937	-	7.937	-	-	-	-
Total: Secondary Distribution	**Quantity**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**
	Total Obligation Authority	**11.000**	**7.935**	**7.937**	**0.000**	**7.937**	**0.000**	**0.000**	**0.000**	**0.000**

Exhibit P-3a, Individual Modification: PB 2020 Air Force		Date: February 2019
Appropriation / Budget Activity / Budget Sub Activity: 3010F / 05 / 5	P-1 Line Item Number / Title: C13000 / C-130	Modification Number / Title: 92316 / AFSOC C-130 Mods
ID Code (A=Service Ready, B=Not Service Ready) : B	MDAP/MAIS Code:	
Models of Systems Affected: MC-130H	Modification Type: Capability Improvement	Related RDT&E PEs: 0401115F

Financial Plan	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
	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												
Modification Item 1 of 4: ADS-B Out												
A Kits												
Recurring												
ADS-B Out:INSTALL KITS Group A (Active)	- / -	16 / 1.970	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	16 / 1.970
Subtotal: Recurring	- / -	- / *1.970*	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / *1.970*
B Kits												
Recurring												
ADS-B Out:EQUIPMENT Group B (Active)	- / -	16 / 0.880	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	16 / 0.880
Subtotal: Recurring	- / -	- / *0.880*	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / *0.880*
Subtotal: ADS-B Out	- / -	- / *2.850*	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / *2.850*
Modification Item 2 of 4: DFDR												
A Kits												
Recurring												
DFDR:INSTALL KITS Group A (Active)	- / -	- / -	15 / 1.085	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	15 / 1.085
Subtotal: Recurring	- / -	- / -	- / *1.085*	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / *1.085*
B Kits												
Recurring												
DFDR:EQUIPMENT Group B (Active)	- / -	- / -	15 / 1.234	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	15 / 1.234
Subtotal: Recurring	- / -	- / -	- / *1.234*	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / *1.234*
Subtotal: DFDR	- / -	- / -	- / *2.319*	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / *2.319*
Modification Item 3 of 4: EPCS												
A Kits												
Recurring												
EPCS:INSTALL KITS Group A (Active)	- / -	- / -	- / -	4 / 3.862	- / -	4 / 3.862	- / -	- / -	- / -	- / -	- / -	4 / 3.862
Subtotal: Recurring	- / -	- / -	- / -	- / *3.862*	- / -	- / *3.862*	- / -	- / -	- / -	- / -	- / -	- / *3.862*
B Kits												
Recurring												
EPCS:EQUIPMENT Group B (Active)	- / -	- / -	- / -	4 / 0.560	- / -	4 / 0.560	- / -	- / -	- / -	- / -	- / -	4 / 0.560
Subtotal: Recurring	- / -	- / -	- / -	- / *0.560*	- / -	- / *0.560*	- / -	- / -	- / -	- / -	- / -	- / *0.560*
Subtotal: EPCS	- / -	- / -	- / -	- / *4.422*	- / -	- / *4.422*	- / -	- / -	- / -	- / -	- / -	- / *4.422*

Exhibit P-3a, Individual Modification: PB 2020 Air Force		Date: February 2019
Appropriation / Budget Activity / Budget Sub Activity: 3010F / 05 / 5	**P-1 Line Item Number / Title:** C13000 / C-130	**Modification Number / Title:** 92316 / AFSOC C-130 Mods
ID Code (A=Service Ready, B=Not Service Ready) : B	**MDAP/MAIS Code:**	
Models of Systems Affected: MC-130H	**Modification Type:** Capability Improvement	**Related RDT&E PEs:** 0401115F

Financial Plan	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
	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)*
Modification Item 4 of 4: LWA												
A Kits												
Recurring												
LWA:INSTALL KITS Group A (Active)	- / -	15 / 2.595	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	15 / 2.595
Subtotal: Recurring	*- / -*	*- / 2.595*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / 2.595*
Subtotal: LWA	*- / -*	*- / 2.595*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / 2.595*
Subtotal: Procurement, All Modification Items	*- / -*	*- / 5.445*	*- / 2.319*	*- / 4.422*	*- / -*	*- / 4.422*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / 12.186*
Support *(All Modification Items)*												
GROUP B: TOTAL NONRECURRING	- / -	- / 3.500	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 3.500
PMA - Contractor Services	- / -	- / -	- / 0.560	- / 0.600	- / -	- / 0.600	- / -	- / -	- / -	- / -	- / -	- / 1.160
ICS-Labor	- / -	- / -	- / 0.330	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 0.330
SIM/TRAINER	- / -	0 / 0.425	0 / 0.200	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	0 / 0.625
PMA - Other Gov't Costs	- / -	- / 0.650	- / 0.934	- / 0.450	- / -	- / 0.450	- / -	- / -	- / -	- / -	- / -	- / 2.034
Data	- / -	- / 0.275	- / 2.783	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 3.058
SUPPORT-EQUIP	- / -	- / 0.705	- / 0.809	- / 1.030	- / -	- / 1.030	- / -	- / -	- / -	- / -	- / -	- / 2.544
Subtotal: Support	*- / -*	*0 / 5.555*	*0 / 5.616*	*- / 2.080*	*- / -*	*- / 2.080*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*0 / 13.251*
Installation												
Modification Item 2 of 4: DFDR	- / -	- / -	- / -	15 / 0.610	- / -	15 / 0.610	- / -	- / -	- / -	- / -	- / -	15 / 0.610
Modification Item 3 of 4: EPCS	- / -	- / -	- / -	4 / 0.825	- / -	4 / 0.825	- / -	- / -	- / -	- / -	- / -	4 / 0.825
Subtotal: Installation	*- / -*	*- / -*	*- / -*	*19 / 1.435*	*- / -*	*19 / 1.435*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*19 / 1.435*
Total												
Total Cost (Procurement + Support + Installation)	**0.000**	**11.000**	**7.935**	**7.937**	**0.000**	**7.937**	**0.000**	**0.000**	**0.000**	**0.000**	**-**	**26.872**

Exhibit P-3a, Individual Modification: PB 2020 Air Force		Date: February 2019
Appropriation / Budget Activity / Budget Sub Activity: 3010F / 05 / 5	**P-1 Line Item Number / Title:** C13000 / C-130	**Modification Number / Title:** 92316 / AFSOC C-130 Mods

ID Code (A=Service Ready, B=Not Service Ready) : B | **MDAP/MAIS Code:**

Modification Item 1 of 4: ADS-B Out

Manufacturer Information

Manufacturer Name: TBD | Manufacturer Location: TBD

Administrative Leadtime *(in Months)*: 3 | Production Leadtime *(in Months)*: 9

Dates	FY 2018	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024
Contract Dates	Jun 2018						
Delivery Dates	Mar 2019						

Installation Information

Method of Implementation (Organic): Org/Intermediate | **Installation Quantity:** 16

Exhibit P-3a, Individual Modification: PB 2020 Air Force		Date: February 2019
Appropriation / Budget Activity / Budget Sub Activity: 3010F / 05 / 5	**P-1 Line Item Number / Title:** C13000 / C-130	**Modification Number / Title:** 92316 / AFSOC C-130 Mods

ID Code (A=Service Ready, B=Not Service Ready) : B | **MDAP/MAIS Code:**

Modification Item 2 of 4: DFDR

Manufacturer Information

Manufacturer Name: TBD | Manufacturer Location: TBD

Administrative Leadtime *(in Months)*: 3 | Production Leadtime *(in Months)*: 9

Dates	FY 2018	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024
Contract Dates		Jun 2019					
Delivery Dates		Mar 2020					

Installation Information

Method of Implementation: Contract Field Team

Installation Cost	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
	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)*
Prior Years	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2018	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2019	- / -	- / -	- / -	15 / 0.610	- / -	15 / 0.610	- / -	- / -	- / -	- / -	- / -	15 / 0.610
FY 2020	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2021	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2022	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2023	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2024	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
To Complete	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
Total	- / -	- / -	- / -	15 / 0.610	- / -	15 / 0.610	- / -	- / -	- / -	- / -	- / -	15 / 0.610

Installation Schedule

	PYS	FY 2018				FY 2019				FY 2020				FY 2021				FY 2022				FY 2023				FY 2024				TC	Tot
		Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4		
In	0	-	-	-	-	-	-	-	-	4	5	6	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0	15
Out	0	-	-	-	-	-	-	-	-	-	4	5	6	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0	15

Exhibit P-3a, Individual Modification: PB 2020 Air Force		Date: February 2019
Appropriation / Budget Activity / Budget Sub Activity: 3010F / 05 / 5	**P-1 Line Item Number / Title:** C13000 / C-130	**Modification Number / Title:** 92316 / AFSOC C-130 Mods

ID Code (A=Service Ready, B=Not Service Ready) : B | **MDAP/MAIS Code:**

Modification Item 3 of 4: EPCS

Manufacturer Information

Manufacturer Name: TBD | Manufacturer Location: TBD

Administrative Leadtime *(in Months)*: 3 | Production Leadtime *(in Months)*: 9

Dates	FY 2018	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024
Contract Dates			Jan 2020				
Delivery Dates			Oct 2020				

Installation Information

Method of Implementation: Contract Field Team

Installation Cost	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
	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)*
Prior Years	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2018	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2019	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2020	- / -	- / -	- / -	4 / 0.825	- / -	4 / 0.825	- / -	- / -	- / -	- / -	- / -	4 / 0.825
FY 2021	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2022	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2023	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2024	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
To Complete	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
Total	- / -	- / -	- / -	4 / 0.825	- / -	4 / 0.825	- / -	- / -	- / -	- / -	- / -	4 / 0.825

Installation Schedule

	PYS	FY 2018				FY 2019				FY 2020				FY 2021				FY 2022				FY 2023				FY 2024				TC	Tot
		Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4		
In	0	-	-	-	-	-	-	-	-	-	2	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0	4
Out	0	-	-	-	-	-	-	-	-	-	-	2	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0	4

Exhibit P-3a, Individual Modification: PB 2020 Air Force		Date: February 2019
Appropriation / Budget Activity / Budget Sub Activity: 3010F / 05 / 5	**P-1 Line Item Number / Title:** C13000 / C-130	**Modification Number / Title:** 92316 / AFSOC C-130 Mods

ID Code (A=Service Ready, B=Not Service Ready) : B | **MDAP/MAIS Code:**

Modification Item 4 of 4: LWA

Manufacturer Information

Manufacturer Name: Lockheed Martin SOFSA | Manufacturer Location: Blue Grass, KY

Administrative Leadtime *(in Months)*: 1 | Production Leadtime *(in Months)*: 5

Dates	FY 2018	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024
Contract Dates	May 2018						
Delivery Dates	Oct 2018						

Installation Information

Method of Implementation (Organic): Org/Intermediate | **Installation Quantity:** 15

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Exhibit P-40, Budget Line Item Justification: PB 2020 Air Force	Date: February 2019
Appropriation / Budget Activity / Budget Sub Activity: 3010F: Aircraft Procurement, Air Force / BA 05: Modification of Inservice Aircraft / BSA 5: Other Aircraft	**P-1 Line Item Number / Title:** C1300J / C-130J Mods

ID Code (A=Service Ready, B=Not Service Ready): B	**Program Elements for Code B Items:** 0401132F, 0401897F	**Other Related Program Elements:** 0401132F, 0401897F
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 *(Units in Each)*	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost *($ in Millions)*	327.640	177.516	127.434	141.686	0.000	141.686	126.838	164.002	176.983	12.417	988.600	2,243.116
Less PY Advance Procurement *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) *($ in Millions)*	327.640	177.516	127.434	141.686	0.000	141.686	126.838	164.002	176.983	12.417	988.600	2,243.116
Plus CY Advance Procurement *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Total Obligation Authority *($ in Millions)*	**327.640**	**177.516**	**127.434**	**141.686**	**0.000**	**141.686**	**126.838**	**164.002**	**176.983**	**12.417**	**988.600**	**2,243.116**
(The following Resource Summary rows are for informational purposes only. The corresponding budget requests are documented elsewhere.)												
Initial Spares *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Flyaway Unit Cost *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Unit Cost *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-

Description:

The C-130J is a medium-size transport aircraft capable of performing a variety of combat delivery (tactical airlift) operations across a broad range of mission environments. The C-130J aircraft, with its extended (by 15 ft) fuselage, provides additional cargo carrying capacity for the USAF combat delivery mission compared with legacy C-130E/Hs and the C-130J (short).

Other variants of the USAF C-130J fleet are all short-bodied aircraft and include the EC-130J (airborne psychological operations), WC-130J (weather reconnaissance), HC-130J (combat search and rescue), MC-130J (special operations), and the AC-130J (close air support and armed reconnaissance).

As of 1 Mar 2019, there are 229 USAF C-130J Variants: C-130J - 121, C-130J (short) - 10, WC-130J - 10, EC-130J - 7, HC-130J - 27, MC-130J - 36, AC-130J - 18. The designed service life is 35 years and the average service life remaining is 26.6 years.

Funding for this exhibit is contained in PE 0401132F. Funding may be used to address Diminishing Manufacturing Sources (DMS) issues.

In FY19, the center wing box replacement program continues with the installation of two enhanced service life (ESL) center wing kits and the procurement of two ESL kits. Since Nov 2009, all production C-130Js have been delivered with the ESL center wing.

In order to better manage the fleet and avoid having to simultaneously support three separate aircraft configurations (Block 6, Block 7 and Block 8.1), Blocks 7.0 and 8.1 have been combined into one aircraft modification program. This way the aircraft and trainers will only have to be modified one time. The Block 8.1 mod includes Block 7.0 content.

The international C-130J Block 8.1 DT&E is complete and the OT&E scheduled to be released in Mar 2019.

Block 8.1 includes ADS-B Out and Mode V IFF as well as 34 additional capabilities. In order to meet the Federal Aviation Administration (FAA) 2020 mandate the USAF will install the Block 8.1 ADS-B Out/Mode V IFF solution on all C-130J variants not scheduled to receive Block 8.1 by January 2020. All C-130Js will still require Block 8.1.

This funding includes Rapid Global Mobility (RGM) platform related activities including but not limited to fielding actions.

Exhibit P-40, Budget Line Item Justification: PB 2020 Air Force	Date: February 2019
Appropriation / Budget Activity / Budget Sub Activity: 3010F: Aircraft Procurement, Air Force / BA 05: Modification of Inservice Aircraft / BSA 5: Other Aircraft	**P-1 Line Item Number / Title:** C1300J / C-130J Mods

ID Code (A=Service Ready, B=Not Service Ready): B	Program Elements for Code B Items: 0401132F, 0401897F	Other Related Program Elements: 0401132F, 0401897F

Line Item MDAP/MAIS Code: N/A

NOTE: USMC KC-130Js and USCG HC-130Js are following USAF's lead and will also field combined Block 7/8.1 aircraft.

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.

Secondary Distribution		FY 2018	FY 2019	FY 2020 Base	FY 2020 OCO	FY 2020 Total	FY 2021	FY 2022	FY 2023	FY 2024
AF	Quantity	-	-	-	-	-	-	-	-	-
	Total Obligation Authority	177.516	127.434	141.686	-	141.686	126.838	164.002	176.983	12.417
Total: Secondary Distribution	**Quantity**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**
	Total Obligation Authority	**177.516**	**127.434**	**141.686**	**-**	**141.686**	**126.838**	**164.002**	**176.983**	**12.417**

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

Appropriation / Budget Activity / Budget Sub Activity:
3010F: Aircraft Procurement, Air Force / BA 05: Modification of Inservice Aircraft / BSA 5: Other Aircraft

P-1 Line Item Number / Title:
C1300J / C-130J Mods

ID Code (A=Service Ready, B=Not Service Ready): B | **Program Elements for Code B Items:** 0401132F, 0401897F | **Other Related Program Elements:** 0401132F, 0401897F

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-40a***	_2612 / Avionics System and Structural Modifications (Capability Improvement)				- / 26.843	- / 3.200	- / 0.288	- / 0.649	- / -	- / 0.649
P-40a***	_5296 / Wind Gust Brake (Reliability & Maintainability)				- / 36.855	- / 1.500	- / 0.250	- / -	- / -	- / -
P-40a***	8668 / WST Threat Generators (Capability Improvement)				- / -	- / -	- / 1.567	- / -	- / -	- / -
P-40a***	99999X / Low Cost Modifications (Safety)				- / 10.940	- / 1.443	- / 0.500	- / 0.560	- / -	- / 0.560
P-3a	5222 / BLOCK 8.1 (Capability Improvement)		B		- / 183.903	- / 141.059	- / 106.004	- / 110.987	- / 0.000	- / 110.987
P-3a	8646 / C-130J Center Wing Replacement (Service Life Extension)		A		- / 69.099	- / 30.314	- / 18.825	- / 29.490	- / 0.000	- / 29.490
P-40	**Total Gross/Weapon System Cost**				**- / 327.640**	**- / 177.516**	**- / 127.434**	**- / 141.686**	**- / 0.000**	**- / 141.686**

Exhibits Schedule					FY 2021	FY 2022	FY 2023	FY 2024	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-40a***	_2612 / Avionics System and Structural Modifications (Capability Improvement)				- / -	- / -	- / -	- / -	- / -	- / 30.980
P-40a***	_5296 / Wind Gust Brake (Reliability & Maintainability)				- / -	- / -	- / -	- / -	- / -	- / 38.605
P-40a***	8668 / WST Threat Generators (Capability Improvement)				- / 5.950	- / -	- / -	- / -	- / -	- / 7.517
P-40a***	99999X / Low Cost Modifications (Safety)				- / 2.000	- / 0.500	- / 0.460	- / -	- / 2.000	- / 18.403
P-3a	5222 / BLOCK 8.1 (Capability Improvement)		B		- / 105.490	- / 162.992	- / 166.003	- / 11.888	- / 986.600	- / 1,974.926
P-3a	8646 / C-130J Center Wing Replacement (Service Life Extension)		A		- / 13.398	- / 0.510	- / 10.520	- / 0.529	- / 0.000	- / 172.685
P-40	**Total Gross/Weapon System Cost**				**- / 126.838**	**- / 164.002**	**- / 176.983**	**- / 12.417**	**- / 988.600**	**- / 2,243.116**

*** Although this is an Exhibit P-40a item, the actual exhibit is not included since all of the required information for this item is already being shown here.

*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:
Where applicable, justification for individual modifications is provided in the P-3A exhibits.

Exhibit P-3a, Individual Modification: PB 2020 Air Force		Date: February 2019
Appropriation / Budget Activity / Budget Sub Activity: 3010F / 05 / 5	**P-1 Line Item Number / Title:** C1300J / C-130J Mods	**Modification Number / Title:** 5222 / BLOCK 8.1
ID Code (A=Service Ready, B=Not Service Ready) : B	**MDAP/MAIS Code:**	

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 *(Units in Each)*	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost *($ in Millions)*	183.903	141.059	106.004	110.987	0.000	110.987	105.490	162.992	166.003	11.888	986.600	1,974.926
Less PY Advance Procurement *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) *($ in Millions)*	183.903	141.059	106.004	110.987	0.000	110.987	105.490	162.992	166.003	11.888	986.600	1,974.926
Plus CY Advance Procurement *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Total Obligation Authority *($ in Millions)*	**183.903**	**141.059**	**106.004**	**110.987**	**0.000**	**110.987**	**105.490**	**162.992**	**166.003**	**11.888**	**986.600**	**1,974.926**
(The following Resource Summary rows are for informational purposes only. The corresponding budget requests are documented elsewhere.)												
Initial Spares *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Unit Cost *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-

Description:

The C-130J combined 7.0 and 8.1 Block Upgrades (BU) modification program funds the procurement and installation of Communication, Navigation and Surveillance Air Traffic Management (CNS/ATM) navigation safety and other aircraft hardware and software improvements on USAF C-130J aircraft and associated training systems. The combined BU 7.0 and 8.1 (now called just Block 8.1) is being implemented to maintain access to global airspace, enhance aircraft navigational accuracy and aircrew situational awareness. It increases overall C-130J operational utility/effectiveness and reduces C-130J systems/parts obsolescence.

Block 8.1 provided 38 capabilities for the C-130J including: a new Flight Management System, civil GPS, Link-16, digital maps, Mission Computer - Operational Flight Program (MC-OFP), a modified control yoke, TEMPEST compliance, Identification Friend or Foe (IFF) Transponder Mode 5, Enhanced Inter-Communication System, CNS/ATM Civil Data Link and Automatic Dependent Surveillance Broadcast (ADS-B) out. The HC Block 8.1 retrofit program begins in FY19 under the HC/MC Recap Mod program. HQ AMC procures the "common" Group B Kits only for the EC/HC Block 8.1 program. All "variant unique" hardware is procured by the applicable variant. HQ AMC is collaborating with AFRC ad ANG units to provide funding in the out years to retrofit their respective units. Block 8.1 provides the final wiring configuration for the ADS-B Out program.

This funding request will support DMS and obsolescence solutions, to include if optimal, life of type buys or bridge buys limited to the program of record quantity.

Support equipment cost element contains support equipment and initial spares.

This project contains procurement funding for related non-recurring engineering efforts, studies and risk reduction activities.

Aircraft installations, as the foundation for kit procurements, will vary each year depending on the acquisition strategy for the competitive contractor lines and whether the organic depot installations will be performed on a separate speed line or in conjunction with programmed depot maintenance (longer install timeframes).

The ADS-B Out and Mode V IFF capability is being accelerated ahead of the complete Block 8.1 mod in order tom meet Jan 2020 mandates and are included in this document.

This program includes costs for the following C-130J aircraft variants: C-130J stretch aircraft, C-130J short aircraft, WC-130J aircraft, HC-130J aircraft, and EC-130J aircraft.

This funding includes Rapid Global Mobility (RGM) platform related activities including but not limited to fielding actions such as kit buys, installation and support equipment.

Milestone/Development Status

Exhibit P-3a, Individual Modification: PB 2020 Air Force		Date: February 2019
Appropriation / Budget Activity / Budget Sub Activity: 3010F / 05 / 5	**P-1 Line Item Number / Title:** C1300J / C-130J Mods	**Modification Number / Title:** 5222 / BLOCK 8.1
ID Code (A=Service Ready, B=Not Service Ready) : B	**MDAP/MAIS Code:**	

BU 8.1 operational testing occurred 9 Jul 18 to 28 Sep 18 with no reported CAT 1 deficiencies. An adversarial assessment is planned for second quarter FY19.

Secondary Distribution		FY 2018	FY 2019	FY 2020 Base	FY 2020 OCO	FY 2020 Total	FY 2021	FY 2022	FY 2023	FY 2024
AF	Quantity	-	-	-	-	-	-	-	-	-
	Total Obligation Authority	141.059	106.004	110.987	-	110.987	105.490	162.992	166.003	11.888
Total: Secondary Distribution	**Quantity**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**
	Total Obligation Authority	**141.059**	**106.004**	**110.987**	**0.000**	**110.987**	**105.490**	**162.992**	**166.003**	**11.888**

Exhibit P-3a, Individual Modification: PB 2020 Air Force		Date: February 2019
Appropriation / Budget Activity / Budget Sub Activity: 3010F / 05 / 5	**P-1 Line Item Number / Title:** C1300J / C-130J Mods	**Modification Number / Title:** 5222 / BLOCK 8.1
ID Code (A=Service Ready, B=Not Service Ready) : B	**MDAP/MAIS Code:**	
Models of Systems Affected: C-130J	**Modification Type:** Capability Improvement	**Related RDT&E PEs:** 0401132F

Financial Plan	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
	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)*
RDT&E PE #												
0401132F	- / 28.654	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 28.654
Procurement												
Modification Item 1 of 2: ADS-B Out												
A Kits												
Recurring												
ADS-B Out:INSTALL KITS Group A (Active)	242 / 25.893	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	242 / 25.893
Subtotal: Recurring	*- / 25.893*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / 25.893*
B Kits												
Recurring												
ADS-B Out:EQUIPMENT Group B (Active)	242 / 38.163	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	242 / 38.163
Subtotal: Recurring	*- / 38.163*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / 38.163*
Subtotal: ADS-B Out	*- / 64.056*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / 64.056*
Modification Item 2 of 2: Block 81 LM Kit												
A Kits												
Recurring												
Block 81 LM Kit:INSTALL KITS Group A (Active)	21 / 21.516	11 / 9.794	- / -	14 / 22.700	- / -	14 / 22.700	5 / 5.300	11 / 11.800	13 / 14.300	- / -	83 / 106.000	158 / 191.410
Subtotal: Recurring	*- / 21.516*	*- / 9.794*	*- / -*	*- / 22.700*	*- / -*	*- / 22.700*	*- / 5.300*	*- / 11.800*	*- / 14.300*	*- / -*	*- / 106.000*	*- / 191.410*
B Kits												
Recurring												
Block 81 LM Kit:EQUIPMENT Group B (Active)	21 / 33.204	11 / 15.737	- / -	14 / 14.100	- / -	14 / 14.100	5 / 11.700	11 / 27.500	13 / 30.000	- / -	83 / 225.700	158 / 357.941
Subtotal: Recurring	*- / 33.204*	*- / 15.737*	*- / -*	*- / 14.100*	*- / -*	*- / 14.100*	*- / 11.700*	*- / 27.500*	*- / 30.000*	*- / -*	*- / 225.700*	*- / 357.941*
Subtotal: Block 81 LM Kit	*- / 54.720*	*- / 25.531*	*- / -*	*- / 36.800*	*- / -*	*- / 36.800*	*- / 17.000*	*- / 39.300*	*- / 44.300*	*- / -*	*- / 331.700*	*- / 549.351*
Subtotal: Procurement, All Modification Items	*- / 118.776*	*- / 25.531*	*- / -*	*- / 36.800*	*- / -*	*- / 36.800*	*- / 17.000*	*- / 39.300*	*- / 44.300*	*- / -*	*- / 331.700*	*- / 613.407*
Support *(All Modification Items)*												
GROUP A: TOTAL NONRECURRING	- / -	- / -	- / -	- / 5.776	- / -	- / 5.776	- / -	- / -	- / -	- / -	- / -	- / 5.776
GROUP B: TOTAL NONRECURRING	- / 29.917	- / 9.579	- / -	- / -	- / -	- / -	- / -	- / 1.092	- / -	- / -	- / -	- / 40.588
OTHER GOVT	- / 27.964	- / 34.078	- / 16.700	- / 6.206	- / -	- / 6.206	- / 3.900	- / 6.600	- / 6.900	- / 2.988	- / 143.674	- / 249.010
Data	- / 1.204	- / 5.540	- / -	- / 0.900	- / -	- / 0.900	- / 1.000	- / 1.400	- / 1.400	- / -	- / 5.200	- / 16.644
GFP	- / 1.500	- / 9.492	- / -	- / 5.500	- / -	- / 5.500	- / 4.400	- / 6.400	- / 6.300	- / -	- / 57.000	- / 90.592
SIM/TRAINER	- / -	0 / 20.542	0 / 13.024	0 / 16.900	- / -	0 / 16.900	0 / 16.100	0 / 11.700	0 / 4.800	- / -	0 / 38.000	0 / 121.066
SUPPORT-EQUIP	- / 1.110	- / 24.826	- / -	- / 0.200	- / -	- / 0.200	- / 14.600	- / 15.200	- / 15.900	- / 2.300	- / 96.400	- / 170.536

Exhibit P-3a, Individual Modification: PB 2020 Air Force		Date: February 2019
Appropriation / Budget Activity / Budget Sub Activity: 3010F / 05 / 5	**P-1 Line Item Number / Title:** C1300J / C-130J Mods	**Modification Number / Title:** 5222 / BLOCK 8.1
ID Code (A=Service Ready, B=Not Service Ready) : B	**MDAP/MAIS Code:**	
Models of Systems Affected: C-130J	**Modification Type:** Capability Improvement	**Related RDT&E PEs:** 0401132F

Financial Plan	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
	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)*
ICS-Labor	- / -	- / 9.255	- / 1.000	- / 4.800	- / -	- / 4.800	- / 6.700	- / 24.900	- / 25.900	- / -	- / 37.300	- / 109.855
Change Orders	- / -	- / 0.300	- / -	- / 5.700	- / -	- / 5.700	- / 5.900	- / 8.900	- / 8.900	- / 3.000	- / 61.900	- / 94.600
PMA - Other Gov't Costs	- / 3.432	- / 1.916	- / 1.400	- / 7.291	- / -	- / 7.291	- / 8.692	- / 8.200	- / 8.103	- / 3.600	- / 64.800	- / 107.434
Subtotal: Support	*- / 65.127*	*0 / 115.528*	*0 / 32.124*	*0 / 53.273*	*- / -*	*0 / 53.273*	*0 / 61.292*	*0 / 84.392*	*0 / 78.203*	*- / 11.888*	*0 / 504.274*	*0 / 1,006.101*
Installation												
Modification Item 1 of 2: ADS-B Out	- / -	- / -	209 / 6.580	33 / 1.020	- / -	33 / 1.020	- / -	- / -	- / -	- / -	- / -	242 / 7.600
Modification Item 2 of 2: Block 81 LM Kit	- / -	- / -	0 / 67.300	14 / 19.894	- / -	14 / 19.894	9 / 27.198	13 / 39.300	14 / 43.500	- / -	108 / 150.626	158 / 347.818
Subtotal: Installation	*- / -*	*- / -*	*209 / 73.880*	*47 / 20.914*	*- / -*	*47 / 20.914*	*9 / 27.198*	*13 / 39.300*	*14 / 43.500*	*- / -*	*108 / 150.626*	*400 / 355.418*
Total												
Total Cost (Procurement + Support + Installation)	**183.903**	**141.059**	**106.004**	**110.987**	**0.000**	**110.987**	**105.490**	**162.992**	**166.003**	**11.888**	**986.600**	**1,974.926**

Exhibit P-3a, Individual Modification: PB 2020 Air Force		Date: February 2019
Appropriation / Budget Activity / Budget Sub Activity: 3010F / 05 / 5	**P-1 Line Item Number / Title:** C1300J / C-130J Mods	**Modification Number / Title:** 5222 / BLOCK 8.1
ID Code (A=Service Ready, B=Not Service Ready) : B	**MDAP/MAIS Code:**	

Modification Item 1 of 2: ADS-B Out

Manufacturer Information

Manufacturer Name: Lockheed Martin	Manufacturer Location: Marietta GA
Administrative Leadtime *(in Months)*: 0	Production Leadtime *(in Months)*: 7

Dates	FY 2018	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024
Contract Dates							
Delivery Dates							

Installation Information

Method of Implementation: Contract Field Team

Installation Cost	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
	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)*
Prior Years	- / -	- / -	209 / 6.580	33 / 1.020	- / -	33 / 1.020	- / -	- / -	- / -	- / -	- / -	242 / 7.600
FY 2018	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2019	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2020	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2021	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2022	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2023	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2024	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
To Complete	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
Total	- / -	- / -	209 / 6.580	33 / 1.020	- / -	33 / 1.020	- / -	- / -	- / -	- / -	- / -	242 / 7.600

Installation Schedule

	PYS	FY 2018				FY 2019				FY 2020				FY 2021				FY 2022				FY 2023				FY 2024				TC	Tot
		Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4		
In	0	-	-	-	-	-	28	98	83	28	5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0	242
Out	0	-	-	-	-	-	28	98	83	28	5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0	242

Exhibit P-3a, Individual Modification: PB 2020 Air Force		Date: February 2019
Appropriation / Budget Activity / Budget Sub Activity: 3010F / 05 / 5	**P-1 Line Item Number / Title:** C1300J / C-130J Mods	**Modification Number / Title:** 5222 / BLOCK 8.1

ID Code (A=Service Ready, B=Not Service Ready) : B

MDAP/MAIS Code:

Modification Item 2 of 2: Block 81 LM Kit

Manufacturer Information

Manufacturer Name: Lockheed Martin

Manufacturer Location: Marietta GA/Greenville SC

Administrative Leadtime *(in Months)*: 1

Production Leadtime *(in Months)*: 24

Dates	FY 2018	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024
Contract Dates	Nov 2017		Nov 2019	Nov 2020	Nov 2021	Nov 2022	
Delivery Dates	Nov 2019		Nov 2021	Nov 2022	Nov 2023	Nov 2024	

Installation Information

Method of Implementation: Depot

Installation Cost	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
	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)*
Prior Years	- / -	- / -	0 / 67.300	14 / 19.894	- / -	14 / 19.894	7 / 21.154	- / -	- / -	- / -	- / -	21 / 108.348
FY 2018	- / -	- / -	- / -	- / -	- / -	- / -	2 / 6.044	9 / 27.208	- / -	- / -	- / -	11 / 33.252
FY 2019	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2020	- / -	- / -	- / -	- / -	- / -	- / -	- / -	4 / 12.092	10 / 31.072	- / -	- / -	14 / 43.164
FY 2021	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	4 / 12.428	- / -	1 / 1.421	5 / 13.849
FY 2022	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	11 / 15.631	11 / 15.631
FY 2023	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	13 / 18.473	13 / 18.473
FY 2024	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
To Complete	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	83 / 115.101	83 / 115.101
Total	- / -	- / -	0 / 67.300	14 / 19.894	- / -	14 / 19.894	9 / 27.198	13 / 39.300	14 / 43.500	- / -	108 / 150.626	158 / 347.818

Installation Schedule

	PYS	FY 2018				FY 2019				FY 2020				FY 2021				FY 2022				FY 2023				FY 2024				TC	Tot
		Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4		
In	0	-	-	-	-	-	-	-	-	2	4	3	5	3	2	2	2	3	3	3	4	3	4	3	4	0	0	0	0	108	158
Out	0	-	-	-	-	-	-	-	-	0	0	0	3	3	3	5	3	2	2	2	3	3	3	3	4	3	4	3	4	105	158

Exhibit P-3a, Individual Modification: PB 2020 Air Force		Date: February 2019
Appropriation / Budget Activity / Budget Sub Activity: 3010F / 05 / 5	**P-1 Line Item Number / Title:** C1300J / C-130J Mods	**Modification Number / Title:** 8646 / C-130J Center Wing Replacement
ID Code (A=Service Ready, B=Not Service Ready) : A	**MDAP/MAIS Code:**	

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 *(Units in Each)*	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost *($ in Millions)*	69.099	30.314	18.825	29.490	0.000	29.490	13.398	0.510	10.520	0.529	0.000	172.685
Less PY Advance Procurement *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) *($ in Millions)*	69.099	30.314	18.825	29.490	0.000	29.490	13.398	0.510	10.520	0.529	0.000	172.685
Plus CY Advance Procurement *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Total Obligation Authority *($ in Millions)*	**69.099**	**30.314**	**18.825**	**29.490**	**0.000**	**29.490**	**13.398**	**0.510**	**10.520**	**0.529**	**0.000**	**172.685**
(The following Resource Summary rows are for informational purposes only. The corresponding budget requests are documented elsewhere.)												
Initial Spares *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Unit Cost *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-

Description:

This program replaces the Center Wing Box (CWB) on C-130J aircraft with an extended service life (ESL) center wing. The ESL wing has been the standard production wing since Nov 2009. The first 77 C-130Js were built with the legacy C-130H center wing. The legacy wing has a life of 38,500 equivalent flying hours (EFH) before flight restrictions are imposed. The severity of the flight environment dictates how rapidly a wing needs to be replaced. The planes at the C-130J schoolhouse require replacement first, as virtually all of their flight hours are tactical. Validated Requirements Document: AF IMT 1067 (Modification Proposal) AMC-11-115, dated 19 Sep 11.

This project contains procurement funding for studies and risk reduction activities

Milestone/Development Status

N/A

Secondary Distribution		FY 2018	FY 2019	FY 2020 Base	FY 2020 OCO	FY 2020 Total	FY 2021	FY 2022	FY 2023	FY 2024
AF	Quantity	-	-	-	-	-	-	-	-	-
	Total Obligation Authority	30.314	18.825	29.490	-	29.490	13.398	0.510	10.520	0.529
Total: Secondary Distribution	**Quantity**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**
	Total Obligation Authority	**30.314**	**18.825**	**29.490**	**0.000**	**29.490**	**13.398**	**0.510**	**10.520**	**0.529**

Exhibit P-3a, Individual Modification: PB 2020 Air Force		Date: February 2019
Appropriation / Budget Activity / Budget Sub Activity: 3010F / 05 / 5	**P-1 Line Item Number / Title:** C1300J / C-130J Mods	**Modification Number / Title:** 8646 / C-130J Center Wing Replacement
ID Code (A=Service Ready, B=Not Service Ready) : A	**MDAP/MAIS Code:**	
Models of Systems Affected: C-130J	**Modification Type:** Service Life Extension	**Related RDT&E PEs:**

Financial Plan	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
	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												
Modification Item 1 of 1: C-130J CWR Contract 1												
A Kits												
Recurring												
C-130J CWR Contract 1:INSTALL KITS Group A (Active)	11 / 42.459	5 / 21.304	2 / 8.538	3 / 14.002	- / -	3 / 14.002	- / -	- / -	- / -	- / -	- / -	21 / 86.303
Subtotal: Recurring	*- / 42.459*	*- / 21.304*	*- / 8.538*	*- / 14.002*	*- / -*	*- / 14.002*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / 86.303*
Subtotal: C-130J CWR Contract 1	*- / 42.459*	*- / 21.304*	*- / 8.538*	*- / 14.002*	*- / -*	*- / 14.002*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / 86.303*
Subtotal: Procurement, All Modification Items	*- / 42.459*	*- / 21.304*	*- / 8.538*	*- / 14.002*	*- / -*	*- / 14.002*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / 86.303*
Support *(All Modification Items)*												
GROUP A: TOTAL NONRECURRING	- / 8.240	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 8.240
Data	- / 1.043	- / 0.914	- / -	- / 1.199	- / -	- / 1.199	- / 12.893	- / -	- / 9.961	- / -	- / -	- / 26.010
OCO INSTALLATIONS	- / 0.000	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 0.000
PMA - Contractor Services	- / 1.618	- / 0.498	- / 0.485	- / 0.494	- / -	- / 0.494	- / 0.469	- / 0.473	- / 0.521	- / 0.490	- / -	- / 5.048
PMA - Other Gov't Costs	- / 0.046	- / 0.012	- / 0.034	- / 0.035	- / -	- / 0.035	- / 0.036	- / 0.037	- / 0.038	- / 0.039	- / -	- / 0.277
Subtotal: Support	*- / 10.947*	*- / 1.424*	*- / 0.519*	*- / 1.728*	*- / -*	*- / 1.728*	*- / 13.398*	*- / 0.510*	*- / 10.520*	*- / 0.529*	*- / -*	*- / 39.575*
Installation												
Modification Item 1 of 1: C-130J CWR Contract 1	4 / 15.693	3 / 7.586	3 / 9.768	3 / 13.760	- / -	3 / 13.760	3 / 0.000	3 / 0.000	2 / 0.000	- / -	- / -	21 / 46.807
Subtotal: Installation	*4 / 15.693*	*3 / 7.586*	*3 / 9.768*	*3 / 13.760*	*- / -*	*3 / 13.760*	*3 / -*	*3 / -*	*2 / -*	*- / -*	*- / -*	*21 / 46.807*
Total												
Total Cost (Procurement + Support + Installation)	**69.099**	**30.314**	**18.825**	**29.490**	**0.000**	**29.490**	**13.398**	**0.510**	**10.520**	**0.529**	**0.000**	**172.685**

Exhibit P-3a, Individual Modification: PB 2020 Air Force		Date: February 2019
Appropriation / Budget Activity / Budget Sub Activity: 3010F / 05 / 5	**P-1 Line Item Number / Title:** C1300J / C-130J Mods	**Modification Number / Title:** 8646 / C-130J Center Wing Replacement
ID Code (A=Service Ready, B=Not Service Ready) : A	**MDAP/MAIS Code:**	

Modification Item 1 of 1: C-130J CWR Contract 1

Manufacturer Information

Manufacturer Name: Lockheed Martin Aero	Manufacturer Location: Marietta GA
Administrative Leadtime *(in Months)*: 3	Production Leadtime *(in Months)*: 27

Dates	FY 2018	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024
Contract Dates	Jan 2018	Jan 2019	Jan 2020				
Delivery Dates	Apr 2020	Apr 2021	Apr 2022				

Installation Information

Method of Implementation: Depot

Installation Cost	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
	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)*
Prior Years	4 / 15.693	3 / 3.463	3 / 9.768	0 / 3.440	- / -	0 / 3.440	1 / 0.000	- / -	- / -	- / -	- / -	11 / 32.364
FY 2018	- / -	0 / 4.123	- / -	3 / 10.320	- / -	3 / 10.320	2 / 0.000	- / -	- / -	- / -	- / -	5 / 14.443
FY 2019	- / -	- / -	- / -	- / -	- / -	- / -	- / -	2 / 0.000	- / -	- / -	- / -	2 / 0.000
FY 2020	- / -	- / -	- / -	- / -	- / -	- / -	- / -	1 / 0.000	2 / 0.000	- / -	- / -	3 / 0.000
FY 2021	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2022	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2023	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2024	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
To Complete	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
Total	4 / 15.693	3 / 7.586	3 / 9.768	3 / 13.760	- / -	3 / 13.760	3 / 0.000	3 / 0.000	2 / 0.000	- / -	- / -	21 / 46.807

Installation Schedule

	PYS	FY 2018				FY 2019				FY 2020				FY 2021				FY 2022				FY 2023				FY 2024				TC	Tot
		Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4		
In	4	1	1	-	1	1	-	1	1	1	-	1	1	-	1	1	1	1	-	1	1	1	-	1	-	-	-	-	-	0	21
Out	0	1	1	1	1	1	1	-	1	1	-	1	1	-	1	1	-	1	1	1	1	-	1	1	1	-	1	-	1	0	21

Exhibit P-40, Budget Line Item Justification: PB 2020 Air Force	Date: February 2019
Appropriation / Budget Activity / Budget Sub Activity: 3010F: Aircraft Procurement, Air Force / BA 05: Modification of Inservice Aircraft / BSA 5: Other Aircraft	**P-1 Line Item Number / Title:** C13500 / C-135

ID Code (A=Service Ready, B=Not Service Ready): B	**Program Elements for Code B Items:** 0401218F	**Other Related Program Elements:** N/A

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 *(Units in Each)*	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost *($ in Millions)*	225.942	69.428	91.410	124.491	-	124.491	104.383	108.192	110.159	66.740	59.442	960.187
Less PY Advance Procurement *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) *($ in Millions)*	225.942	69.428	91.410	124.491	-	124.491	104.383	108.192	110.159	66.740	59.442	960.187
Plus CY Advance Procurement *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Total Obligation Authority *($ in Millions)*	**225.942**	**69.428**	**91.410**	**124.491**	**-**	**124.491**	**104.383**	**108.192**	**110.159**	**66.740**	**59.442**	**960.187**
(The following Resource Summary rows are for informational purposes only. The corresponding budget requests are documented elsewhere.)												
Initial Spares *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Flyaway Unit Cost *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Unit Cost *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-

Description:

The C/KC-135 is a four engine aircraft used for long range cargo and passenger airlift and to support theater commanders. The C/KC-135 provides air refueling through either the refueling boom or drogue. As a cargo aircraft, the C/KC-135 can carry six standard 463-L pallets. There are 399 aircraft (396 KCs, 3 special purpose) in the C/KC-135 inventory. The average age is 55 years, with 22 years of service life remaining. The KC-135 has a retirement strategy through its projected service life of 2040.

In accordance with Section 1815 of the FY 2008 National Defense Authorization Act (P.L. 110-181), this item is necessary for use by the active and reserve components of the Armed Forces for homeland defense missions, domestic emergency responses, and providing military support to civil authorities.

Funding for this exhibit is contained in PE 0401218F.

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.

Secondary Distribution		FY 2018	FY 2019	FY 2020 Base	FY 2020 OCO	FY 2020 Total	FY 2021	FY 2022	FY 2023	FY 2024
AF	Quantity	-	-	-	-	-	-	-	-	-
	Total Obligation Authority	45.715	58.898	87.335	0.000	87.335	53.904	51.425	54.280	23.723
AFNG	Quantity	-	-	-	-	-	-	-	-	-
	Total Obligation Authority	15.161	21.835	26.700	0.000	26.700	35.563	38.674	38.217	28.732
AFR	Quantity	-	-	-	-	-	-	-	-	-
	Total Obligation Authority	8.552	10.677	10.456	0.000	10.456	14.916	18.093	17.662	14.285
Total:	**Quantity**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**

Exhibit P-40, Budget Line Item Justification: PB 2020 Air Force			Date: February 2019
Appropriation / Budget Activity / Budget Sub Activity: 3010F: Aircraft Procurement, Air Force / BA 05: Modification of Inservice Aircraft / BSA 5: Other Aircraft		P-1 Line Item Number / Title: C13500 / C-135	
ID Code (A=Service Ready, B=Not Service Ready): B	Program Elements for Code B Items: 0401218F		Other Related Program Elements: N/A
Line Item MDAP/MAIS Code: N/A			

Secondary Distribution		FY 2018	FY 2019	FY 2020 Base	FY 2020 OCO	FY 2020 Total	FY 2021	FY 2022	FY 2023	FY 2024
Secondary Distribution	Total Obligation Authority	69.428	91.410	124.491	0.000	124.491	104.383	108.192	110.159	66.740

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

Appropriation / Budget Activity / Budget Sub Activity:
3010F: Aircraft Procurement, Air Force / BA 05: Modification of Inservice Aircraft / BSA 5: Other Aircraft

P-1 Line Item Number / Title:
C13500 / C-135

ID Code (A=Service Ready, B=Not Service Ready): B | **Program Elements for Code B Items:** 0401218F | **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-40a***	9818 / VOR/ILS ANTENNAE (Capability Improvement)				- / 9.392	- / -	- / 0.001	- / 0.001	- / -	- / 0.001
P-40a***	9824 / ADS-B (Capability Improvement)				- / -	- / 11.500	- / 3.200	- / 0.000	- / -	- / 0.000
P-40a***	99999A / LOW COST SAFETY MODIFICATIONS (Capability Improvement)				- / 0.025	- / 0.025	- / 0.025	- / 0.025	- / -	- / 0.025
P-40a***	99999X / Low Cost Modifications (Capability Improvement)				- / 11.018	- / 1.111	- / 1.995	- / 1.995	- / -	- / 1.995
P-3a	8653 / BLOCK 45 (Capability Improvement)		A		- / 200.604	- / 54.157	- / 53.865	- / 52.082	- / 0.000	- / 52.082
P-3a	9826 / Rudder Position Indicator (RPI) (Capability Improvement)		B		- / 4.903	- / 2.635	- / 6.124	- / 18.807	- / 0.000	- / 18.807
P-3a	9827 / KC-135 AERO-I SATCOM replacement (Reliability & Maintainability)		B		- / -	- / -	- / 0.000	- / 28.581	- / 0.000	- / 28.581
P-3a	9828 / Real Time in the Cockpit (RTIC) (Capability Improvement)		B		- / -	- / -	- / 26.200	- / 23.000	- / 0.000	- / 23.000
P-40	**Total Gross/Weapon System Cost**				**- / 225.942**	**- / 69.428**	**- / 91.410**	**- / 124.491**	**- / -**	**- / 124.491**

Exhibits Schedule					FY 2021	FY 2022	FY 2023	FY 2024	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-40a***	9818 / VOR/ILS ANTENNAE (Capability Improvement)				- / 0.001	- / 0.001	- / 0.001	- / -	- / -	- / 9.397
P-40a***	9824 / ADS-B (Capability Improvement)				- / -	- / -	- / -	- / -	- / -	- / 14.700
P-40a***	99999A / LOW COST SAFETY MODIFICATIONS (Capability Improvement)				- / 0.025	- / 0.025	- / 0.025	- / 0.025	- / 0.025	- / 0.225
P-40a***	99999X / Low Cost Modifications (Capability Improvement)				- / 1.995	- / 1.995	- / 1.995	- / 1.995	- / -	- / 24.099
P-3a	8653 / BLOCK 45 (Capability Improvement)		A		- / 60.311	- / 73.710	- / 74.559	- / 55.271	- / 59.167	- / 683.726
P-3a	9826 / Rudder Position Indicator (RPI) (Capability Improvement)		B		- / 9.770	- / 8.779	- / 8.999	- / 8.119	- / 0.150	- / 68.286
P-3a	9827 / KC-135 AERO-I SATCOM replacement (Reliability & Maintainability)		B		- / 32.281	- / 23.682	- / 24.580	- / 1.330	- / 0.100	- / 110.554
P-3a	9828 / Real Time in the Cockpit (RTIC) (Capability Improvement)		B		- / 0.000	- / 0.000	- / 0.000	- / 0.000	- / -	- / 49.200
P-40	**Total Gross/Weapon System Cost**				**- / 104.383**	**- / 108.192**	**- / 110.159**	**- / 66.740**	**- / 59.442**	**- / 960.187**

*** Although this is an Exhibit P-40a item, the actual exhibit is not included since all of the required information for this item is already being shown here.

*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:
Where applicable, justification for individual modifications is provided in the P-3A exhibits.

Exhibit P-3a, Individual Modification: PB 2020 Air Force		Date: February 2019
Appropriation / Budget Activity / Budget Sub Activity: 3010F / 05 / 5	**P-1 Line Item Number / Title:** C13500 / C-135	**Modification Number / Title:** 8653 / BLOCK 45
ID Code (A=Service Ready, B=Not Service Ready) : A	**MDAP/MAIS Code:**	

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 *(Units in Each)*	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost *($ in Millions)*	200.604	54.157	53.865	52.082	0.000	52.082	60.311	73.710	74.559	55.271	59.167	683.726
Less PY Advance Procurement *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) *($ in Millions)*	200.604	54.157	53.865	52.082	0.000	52.082	60.311	73.710	74.559	55.271	59.167	683.726
Plus CY Advance Procurement *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Total Obligation Authority *($ in Millions)*	**200.604**	**54.157**	**53.865**	**52.082**	**0.000**	**52.082**	**60.311**	**73.710**	**74.559**	**55.271**	**59.167**	**683.726**
(The following Resource Summary rows are for informational purposes only. The corresponding budget requests are documented elsewhere.)												
Initial Spares *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Unit Cost *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-

Description:

The Block 45 program replaces legacy parts that are difficult to maintain, driving high sustainment costs, failing at high rates, and are no longer procurable. The modification includes a new Digital Flight Director (DFD), Digital Radio Altimeter (RA), Digital Autopilot (AP) and Electronic Engine Instrument Displays (EEID). Block 45 requirements are outlined in the Capability Production Document for C/KC-135 Communications, Navigation, and Surveillance / Air Traffic Management (CNS/ATM), dated 17 May 12. Program of record: 399 C/KC-135 aircraft, 19 pilot simulators and 5 cockpit simulators with Block 45. The Block 45 program's associated Research Development Test and Evaluation funding (PE 0401218F) modified two prototype aircraft. The remaining 398 aircraft will be funded with APAF. Funding may be used to address Diminishing Manufacturing Sources (DMS) issues.

Milestone/Development Status

Developmental Test & Evaluation completed March 2013. Milestone C approval received 25 July 2013. Currently in Full Rate Production.

Secondary Distribution		FY 2018	FY 2019	FY 2020 Base	FY 2020 OCO	FY 2020 Total	FY 2021	FY 2022	FY 2023	FY 2024
AF	Quantity	-	-	-	-	-	-	-	-	-
	Total Obligation Authority	30.536	23.099	18.173	-	18.173	20.565	34.618	36.426	16.689
AFNG	Quantity	-	-	-	-	-	-	-	-	-
	Total Obligation Authority	15.087	20.537	24.280	-	24.280	27.396	25.782	25.272	25.721
AFR	Quantity	-	-	-	-	-	-	-	-	-
	Total Obligation Authority	8.534	10.229	9.629	-	9.629	12.350	13.310	12.861	12.861
Total: Secondary Distribution	**Quantity**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**
	Total Obligation Authority	**54.157**	**53.865**	**52.082**	**0.000**	**52.082**	**60.311**	**73.710**	**74.559**	**55.271**

Exhibit P-3a, Individual Modification: PB 2020 Air Force		Date: February 2019
Appropriation / Budget Activity / Budget Sub Activity: 3010F / 05 / 5	**P-1 Line Item Number / Title:** C13500 / C-135	**Modification Number / Title:** 8653 / BLOCK 45
ID Code (A=Service Ready, B=Not Service Ready) : A	**MDAP/MAIS Code:**	
Models of Systems Affected: KC-135	**Modification Type:** Capability Improvement	**Related RDT&E PEs:**

Financial Plan	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
	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												
Modification Item 1 of 1: Block 45												
A Kits												
Recurring												
Block 45:INSTALL KITS Group A (Active)	52 / 4.506	12 / 1.232	10 / 1.003	11 / 0.796	- / -	11 / 0.796	5 / 0.362	9 / 0.651	8 / 0.579	8 / 0.579	8 / 0.600	123 / 10.308
Block 45:INSTALL KITS Group A (Guard)	53 / 4.767	10 / 0.586	18 / 1.147	20 / 1.448	- / -	20 / 1.448	22 / 1.593	19 / 1.375	20 / 1.448	20 / 1.448	8 / 0.600	190 / 14.412
Block 45:INSTALL KITS Group A (Reserve)	22 / 1.928	5 / 0.293	10 / 0.573	7 / 0.507	- / -	7 / 0.507	11 / 0.796	10 / 0.724	10 / 0.724	10 / 0.724	- / -	85 / 6.269
Subtotal: Recurring	*- / 11.201*	*- / 2.111*	*- / 2.723*	*- / 2.751*	*- / -*	*- / 2.751*	*- / 2.751*	*- / 2.750*	*- / 2.751*	*- / 2.751*	*- / 1.200*	*- / 30.989*
B Kits												
Recurring												
Block 45:EQUIPMENT Group B (Active)	52 / 34.070	12 / 14.786	14 / 10.488	11 / 8.411	- / -	11 / 8.411	5 / 3.823	9 / 6.882	8 / 6.117	8 / 6.117	8 / 6.643	127 / 97.337
Block 45:EQUIPMENT Group B (Guard)	53 / 35.706	10 / 7.301	16 / 12.521	20 / 15.293	- / -	20 / 15.293	22 / 16.823	19 / 14.529	20 / 15.293	20 / 15.293	8 / 6.643	188 / 139.402
Block 45:EQUIPMENT Group B (Reserve)	22 / 14.948	5 / 5.841	8 / 5.993	7 / 5.352	- / -	7 / 5.352	11 / 8.411	10 / 7.647	10 / 7.647	10 / 7.647	0 / 0.000	83 / 63.486
Subtotal: Recurring	*- / 84.724*	*- / 27.928*	*- / 29.002*	*- / 29.056*	*- / -*	*- / 29.056*	*- / 29.057*	*- / 29.058*	*- / 29.057*	*- / 29.057*	*- / 13.286*	*- / 300.225*
Subtotal: Block 45	*- / 95.925*	*- / 30.039*	*- / 31.725*	*- / 31.807*	*- / -*	*- / 31.807*	*- / 31.808*	*- / 31.808*	*- / 31.808*	*- / 31.808*	*- / 14.486*	*- / 331.214*
Subtotal: Procurement, All Modification Items	*- / 95.925*	*- / 30.039*	*- / 31.725*	*- / 31.807*	*- / -*	*- / 31.807*	*- / 31.808*	*- / 31.808*	*- / 31.808*	*- / 31.808*	*- / 14.486*	*- / 331.214*
Support *(All Modification Items)*												
Change Orders	- / 8.002	- / -	- / -	- / 0.800	- / -	- / 0.800	- / -	- / -	- / -	- / -	- / -	- / 8.802
Data	- / 1.295	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 0.000	- / -	- / 2.662	- / 3.957
SIM/TRAINER	15 / 31.418	3 / 6.590	2 / 3.100	0 / 0.736	- / -	0 / 0.736	0 / 0.325	4 / 8.990	0 / 0.000	- / -	- / -	24 / 51.159
SUPPORT-EQUIP	- / 0.604	- / 0.140	- / 0.144	- / 0.000	- / -	- / 0.000	- / -	- / -	- / -	- / -	- / -	- / 0.888
OTHER GOVT	- / 25.093	- / 1.694	- / 1.903	- / 0.500	- / -	- / 0.500	- / 10.730	- / 15.453	- / 25.279	- / 5.981	- / 16.057	- / 102.690
PMA - Contractor Services	- / 2.804	- / 0.420	- / 0.432	- / 0.300	- / -	- / 0.300	- / 0.305	- / 0.314	- / 0.323	- / 0.332	- / 0.694	- / 5.924
PMA - Other Gov't Costs	- / 0.347	- / 0.074	- / 0.076	- / 0.078	- / -	- / 0.078	- / 0.081	- / 0.083	- / 0.087	- / 0.088	- / 0.183	- / 1.097
Subtotal: Support	*15 / 69.563*	*3 / 8.918*	*2 / 5.655*	*0 / 2.414*	*- / -*	*0 / 2.414*	*0 / 11.441*	*4 / 24.840*	*0 / 25.689*	*- / 6.401*	*- / 19.596*	*24 / 174.517*
Installation												
Modification Item 1 of 1: Block 45	80 / 35.116	38 / 15.200	38 / 16.485	38 / 17.861	- / -	38 / 17.861	38 / 17.062	38 / 17.062	38 / 17.062	38 / 17.062	52 / 25.085	398 / 177.995
Subtotal: Installation	*80 / 35.116*	*38 / 15.200*	*38 / 16.485*	*38 / 17.861*	*- / -*	*38 / 17.861*	*38 / 17.062*	*38 / 17.062*	*38 / 17.062*	*38 / 17.062*	*52 / 25.085*	*398 / 177.995*
Total												
Total Cost (Procurement + Support + Installation)	**200.604**	**54.157**	**53.865**	**52.082**	**0.000**	**52.082**	**60.311**	**73.710**	**74.559**	**55.271**	**59.167**	**683.726**

Exhibit P-3a, Individual Modification: PB 2020 Air Force		Date: February 2019
Appropriation / Budget Activity / Budget Sub Activity: 3010F / 05 / 5	**P-1 Line Item Number / Title:** C13500 / C-135	**Modification Number / Title:** 8653 / BLOCK 45
ID Code (A=Service Ready, B=Not Service Ready) : A	**MDAP/MAIS Code:**	

Modification Item 1 of 1: Block 45

Manufacturer Information

Manufacturer Name: Rockwell Collins	Manufacturer Location: Cedar Rapids, IA
Administrative Leadtime *(in Months)*: 3	Production Leadtime *(in Months)*: 8

Dates	FY 2018	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024
Contract Dates	Jan 2018	Jan 2019	Jan 2020	Jan 2021	Jan 2022	Jan 2023	Jan 2024
Delivery Dates	Sep 2018	Sep 2019	Sep 2020	Sep 2021	Sep 2022	Sep 2023	Sep 2024

Installation Information

Method of Implementation: Contractor Facility

Installation Cost	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
	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)*
Prior Years	15 / 8.434	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	15 / 8.434
FY 2018	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2019	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2020	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2021	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2022	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2023	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2024	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
To Complete	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
Total	15 / 8.434	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	15 / 8.434

Installation Schedule

	PYS	FY 2018				FY 2019				FY 2020				FY 2021				FY 2022				FY 2023				FY 2024				TC	Tot
		Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4		
In	15	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0	15
Out	15	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0	15

Method of Implementation: Depot

Installation Cost	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
	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)*
Prior Years	65 / 26.682	38 / 15.200	9 / 4.121	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	112 / 46.003

Exhibit P-3a, Individual Modification: PB 2020 Air Force		Date: February 2019
Appropriation / Budget Activity / Budget Sub Activity: 3010F / 05 / 5	**P-1 Line Item Number / Title:** C13500 / C-135	**Modification Number / Title:** 8653 / BLOCK 45
ID Code (A=Service Ready, B=Not Service Ready) : A	**MDAP/MAIS Code:**	

Modification Item 1 of 1: Block 45

Installation Information

Method of Implementation: Depot

Installation Cost	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
	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)*
FY 2018	- / -	- / -	27 / 12.364	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	27 / 12.364
FY 2019	- / -	- / -	2 / 0.000	36 / 16.963	- / -	36 / 16.963	- / -	- / -	- / -	- / -	- / -	38 / 16.963
FY 2020	- / -	- / -	- / -	2 / 0.898	- / -	2 / 0.898	36 / 16.164	- / -	- / -	- / -	- / -	38 / 17.062
FY 2021	- / -	- / -	- / -	- / -	- / -	- / -	2 / 0.898	36 / 16.164	- / -	- / -	- / -	38 / 17.062
FY 2022	- / -	- / -	- / -	- / -	- / -	- / -	- / -	2 / 0.898	36 / 16.164	- / -	- / -	38 / 17.062
FY 2023	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	2 / 0.898	36 / 16.164	- / -	38 / 17.062
FY 2024	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	2 / 0.898	36 / 16.164	38 / 17.062
To Complete	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	16 / 8.921	16 / 8.921
Total	65 / 26.682	38 / 15.200	38 / 16.485	38 / 17.861	- / -	38 / 17.861	38 / 17.062	38 / 17.062	38 / 17.062	38 / 17.062	52 / 25.085	383 / 169.561

Installation Schedule

		FY 2018				FY 2019				FY 2020				FY 2021				FY 2022				FY 2023				FY 2024					
	PYS	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	TC	Tot
In	65	9	10	9	10	9	10	9	10	9	10	9	10	9	10	9	10	9	10	9	10	9	10	9	10	9	10	9	10	52	383
Out	56	9	9	10	9	10	9	10	9	10	9	10	9	10	9	10	9	10	9	10	9	10	9	10	9	10	9	10	9	62	383

Exhibit P-3a, Individual Modification: PB 2020 Air Force		Date: February 2019
Appropriation / Budget Activity / Budget Sub Activity: 3010F / 05 / 5	**P-1 Line Item Number / Title:** C13500 / C-135	**Modification Number / Title:** 9826 / Rudder Position Indicator (RPI)
ID Code (A=Service Ready, B=Not Service Ready) : B	**MDAP/MAIS Code:**	

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 *(Units in Each)*	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost *($ in Millions)*	4.903	2.635	6.124	18.807	0.000	18.807	9.770	8.779	8.999	8.119	0.150	68.286
Less PY Advance Procurement *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) *($ in Millions)*	4.903	2.635	6.124	18.807	0.000	18.807	9.770	8.779	8.999	8.119	0.150	68.286
Plus CY Advance Procurement *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Total Obligation Authority *($ in Millions)*	**4.903**	**2.635**	**6.124**	**18.807**	**0.000**	**18.807**	**9.770**	**8.779**	**8.999**	**8.119**	**0.150**	**68.286**
(The following Resource Summary rows are for informational purposes only. The corresponding budget requests are documented elsewhere.)												
Initial Spares *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Unit Cost *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-

Description:

The Rudder Position Indicator (RPI) addresses crew situational awareness for the actual rudder position. Currently, there are no means to determine actual rudder position within the cockpit. The program installs a display on each side of the cockpit showing the actual and commanded rudder position and will visually identify differences to the crew. The RPI program of record is 359 C/KC-135 aircraft and will be funded with APAF. Funding may be used to address Diminishing manufacturing Sources (DMS) issues.

Milestone/Development Status

MDD/ASP Sep 18

Secondary Distribution		FY 2018	FY 2019	FY 2020 Base	FY 2020 OCO	FY 2020 Total	FY 2021	FY 2022	FY 2023	FY 2024
AF	Quantity	-	-	-	-	-	-	-	-	-
	Total Obligation Authority	2.635	6.124	15.585	0.000	15.585	4.780	3.718	3.867	3.709
AFNG	Quantity	-	-	-	-	-	-	-	-	-
	Total Obligation Authority	0.000	0.000	2.395	0.000	2.395	3.563	3.711	3.764	2.986
AFR	Quantity	-	-	-	-	-	-	-	-	-
	Total Obligation Authority	0.000	0.000	0.827	0.000	0.827	1.427	1.350	1.368	1.424
Total: Secondary Distribution	**Quantity**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**
	Total Obligation Authority	**2.635**	**6.124**	**18.807**	**0.000**	**18.807**	**9.770**	**8.779**	**8.999**	**8.119**

Exhibit P-3a, Individual Modification: PB 2020 Air Force		Date: February 2019
Appropriation / Budget Activity / Budget Sub Activity: 3010F / 05 / 5	**P-1 Line Item Number / Title:** C13500 / C-135	**Modification Number / Title:** 9826 / Rudder Position Indicator (RPI)
ID Code (A=Service Ready, B=Not Service Ready) : B	**MDAP/MAIS Code:**	
Models of Systems Affected: KC-135	**Modification Type:** Capability Improvement	**Related RDT&E PEs:**

Financial Plan	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
	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												
Modification Item 1 of 1: RPI												
A Kits												
Recurring												
RPI:INSTALL KITS Group A (Active)	0 / 0.000	0 / 0.000	0 / 0.000	30 / 0.930	- / -	30 / 0.930	30 / 0.953	30 / 0.977	30 / 1.001	22 / 0.753	- / -	142 / 4.614
RPI:INSTALL KITS Group A (Guard)	0 / 0.000	0 / 0.000	0 / 0.000	33 / 1.023	- / -	33 / 1.023	33 / 1.048	33 / 1.074	33 / 1.101	23 / 0.787	- / -	155 / 5.033
RPI:INSTALL KITS Group A (Reserve)	0 / 0.000	0 / 0.000	0 / 0.000	12 / 0.372	- / -	12 / 0.372	12 / 0.381	12 / 0.391	12 / 0.400	14 / 0.479	- / -	62 / 2.023
Subtotal: Recurring	*- / 0.000*	*- / 0.000*	*- / 0.000*	*- / 2.325*	*- / -*	*- / 2.325*	*- / 2.382*	*- / 2.442*	*- / 2.502*	*- / 2.019*	*- / -*	*- / 11.670*
B Kits												
Recurring												
RPI:EQUIPMENT Group B (Active)	- / -	- / -	- / -	30 / 0.894	- / -	30 / 0.894	30 / 0.916	30 / 0.939	30 / 0.963	22 / 0.569	- / -	142 / 4.281
RPI:EQUIPMENT Group B (Guard)	- / -	- / -	- / -	33 / 0.983	- / -	33 / 0.983	33 / 1.008	33 / 1.033	33 / 1.059	23 / 0.595	- / -	155 / 4.678
RPI:EQUIPMENT Group B (Reserve)	- / -	- / -	- / -	12 / 0.358	- / -	12 / 0.358	12 / 0.366	12 / 0.376	12 / 0.385	14 / 0.362	- / -	62 / 1.847
Subtotal: Recurring	*- / -*	*- / -*	*- / -*	*- / 2.235*	*- / -*	*- / 2.235*	*- / 2.290*	*- / 2.348*	*- / 2.407*	*- / 1.526*	*- / -*	*- / 10.806*
Subtotal: RPI	*- / 0.000*	*- / 0.000*	*- / 0.000*	*- / 4.560*	*- / -*	*- / 4.560*	*- / 4.672*	*- / 4.790*	*- / 4.909*	*- / 3.545*	*- / -*	*- / 22.476*
Subtotal: Procurement, All Modification Items	*- / 0.000*	*- / 0.000*	*- / 0.000*	*- / 4.560*	*- / -*	*- / 4.560*	*- / 4.672*	*- / 4.790*	*- / 4.909*	*- / 3.545*	*- / -*	*- / 22.476*
Support *(All Modification Items)*												
GROUP A: TOTAL NONRECURRING	- / -	- / -	- / -	- / 3.400	- / -	- / 3.400	- / -	- / -	- / -	- / -	- / -	- / 3.400
GROUP B: TOTAL NONRECURRING	- / -	- / -	- / -	- / 1.555	- / -	- / 1.555	- / -	- / -	- / -	- / -	- / -	- / 1.555
Change Orders	- / 0.195	- / 0.250	- / 0.205	- / 0.910	- / -	- / 0.910	- / 0.250	- / 0.194	- / 0.242	- / 0.385	- / -	- / 2.631
Data	- / 0.125	- / 0.135	- / -	- / -	- / -	- / -	- / 0.125	- / 0.000	- / -	- / -	- / -	- / 0.385
SIM/TRAINER	19 / 2.964	- / -	19 / 2.869	19 / 4.940	- / -	19 / 4.940	- / -	- / -	- / -	- / -	- / -	57 / 10.773
PMA - Contractor Services	- / 0.250	- / 0.250	- / 0.250	- / 0.250	- / -	- / 0.250	- / 0.261	- / 0.150	- / 0.203	- / 0.150	- / 0.150	- / 1.914
PMA - Other Gov't Costs	- / 0.715	- / 0.900	- / 1.225	- / 0.775	- / -	- / 0.775	- / 0.400	- / 0.000	- / 0.000	- / 0.000	- / -	- / 4.015
OTHER GOVT	- / 0.654	- / 1.100	- / 1.575	- / 1.542	- / -	- / 1.542	- / 0.417	- / 0.000	- / -	- / 0.394	- / -	- / 5.682
Subtotal: Support	*19 / 4.903*	*- / 2.635*	*19 / 6.124*	*19 / 13.372*	*- / -*	*19 / 13.372*	*- / 1.453*	*- / 0.344*	*- / 0.445*	*- / 0.929*	*- / 0.150*	*57 / 30.355*
Installation												
Modification Item 1 of 1: RPI	- / -	- / -	- / -	18 / 0.875	0 / 0.000	18 / 0.875	75 / 3.645	75 / 3.645	75 / 3.645	75 / 3.645	41 / 0.000	359 / 15.455
Subtotal: Installation	*- / -*	*- / -*	*- / -*	*18 / 0.875*	*0 / -*	*18 / 0.875*	*75 / 3.645*	*75 / 3.645*	*75 / 3.645*	*75 / 3.645*	*41 / 0.000*	*359 / 15.455*
Total												
Total Cost (Procurement + Support + Installation)	**4.903**	**2.635**	**6.124**	**18.807**	**0.000**	**18.807**	**9.770**	**8.779**	**8.999**	**8.119**	**0.150**	**68.286**

Exhibit P-3a, Individual Modification: PB 2020 Air Force		Date: February 2019
Appropriation / Budget Activity / Budget Sub Activity: 3010F / 05 / 5	**P-1 Line Item Number / Title:** C13500 / C-135	**Modification Number / Title:** 9826 / Rudder Position Indicator (RPI)

ID Code (A=Service Ready, B=Not Service Ready) : B | **MDAP/MAIS Code:**

Modification Item 1 of 1: RPI

Manufacturer Information

Manufacturer Name: TBD | Manufacturer Location: TBD

Administrative Leadtime *(in Months)*: 2 | Production Leadtime *(in Months)*: 9

Dates	FY 2018	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024
Contract Dates			Dec 2019	Dec 2020	Dec 2021	Dec 2022	Dec 2023
Delivery Dates			Sep 2020	Sep 2021	Sep 2022	Sep 2023	Sep 2024

Installation Information

Method of Implementation: Depot

Installation Cost	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
	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)*
Prior Years	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2018	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2019	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2020	- / -	- / -	- / -	18 / 0.875	0 / 0.000	18 / 0.875	57 / 2.770	- / -	- / -	- / -	- / -	75 / 3.645
FY 2021	- / -	- / -	- / -	- / -	- / -	- / -	18 / 0.875	57 / 2.770	- / -	- / -	- / -	75 / 3.645
FY 2022	- / -	- / -	- / -	- / -	- / -	- / -	- / -	18 / 0.875	57 / 2.770	- / -	- / -	75 / 3.645
FY 2023	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	18 / 0.875	57 / 2.770	- / -	75 / 3.645
FY 2024	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	18 / 0.875	41 / 0.000	59 / 0.875
To Complete	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
Total	- / -	- / -	- / -	18 / 0.875	0 / 0.000	18 / 0.875	75 / 3.645	75 / 3.645	75 / 3.645	75 / 3.645	41 / 0.000	359 / 15.455

Installation Schedule

	PYS	FY 2018				FY 2019				FY 2020				FY 2021				FY 2022				FY 2023				FY 2024				TC	Tot
		Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4		
In	0	0	0	0	0	0	0	-	0	0	0	0	18	19	19	19	18	19	19	19	18	19	19	19	18	19	19	19	18	41	359
Out	0	0	0	0	0	0	0	0	0	0	0	0	18	19	19	19	18	19	19	19	18	19	19	19	18	19	19	19	18	41	359

Exhibit P-3a, Individual Modification: PB 2020 Air Force		Date: February 2019
Appropriation / Budget Activity / Budget Sub Activity: 3010F / 05 / 5	**P-1 Line Item Number / Title:** C13500 / C-135	**Modification Number / Title:** 9827 / KC-135 AERO-I SATCOM replacement
ID Code (A=Service Ready, B=Not Service Ready) : B	**MDAP/MAIS Code:**	

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 *(Units in Each)*	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost *($ in Millions)*	-	-	0.000	28.581	0.000	28.581	32.281	23.682	24.580	1.330	0.100	110.554
Less PY Advance Procurement *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) *($ in Millions)*	-	-	0.000	28.581	0.000	28.581	32.281	23.682	24.580	1.330	0.100	110.554
Plus CY Advance Procurement *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Total Obligation Authority *($ in Millions)*	**-**	**-**	**0.000**	**28.581**	**0.000**	**28.581**	**32.281**	**23.682**	**24.580**	**1.330**	**0.100**	**110.554**
(The following Resource Summary rows are for informational purposes only. The corresponding budget requests are documented elsewhere.)												
Initial Spares *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Unit Cost *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-

Description:

Inmarsat's existing third generation satellites (I-3) which provide Aero-I services will no longer be functional after 31 Dec 22. Aero-I services are used to provide oceanic Controller/Pilot Data Link Communications (CPDLC) to Air Traffic Control and Aircraft Communications Addressing and Reporting System (ACARS) Beyond Line of Sight (BLOS) Command and Control (C2) messages to 618th Tactical Air Control Center (TACC) Global Decision Support System.

Program of Record: 359 C/KC-135s and 19 Simulators. Iridium installations planned to be performed by a combination of Programmed Depot Maintenance (PDM) and Contract Field Team (CFT). The CFT installations begin in FY21 and the PDM installations begin with the FY22 cycle. Both installations continue through FY24. This funding request will support potential DMS and obsolescence solutions, to include if optimal, life of type buys or bridge buys limited to the program of record quantity. Funding may be used to address Diminishing Manufacturing Sources (DMS) issues.

Milestone/Development Status

This program will begin its integration effort in FY20. The solution is a mature COTS product.

Secondary Distribution		FY 2018	FY 2019	FY 2020 Base	FY 2020 OCO	FY 2020 Total	FY 2021	FY 2022	FY 2023	FY 2024
AF	Quantity	-	-	-	-	-	-	-	-	-
	Total Obligation Authority	-	0.000	28.581	0.000	28.581	26.563	11.093	11.991	1.330
AFNG	Quantity	-	-	-	-	-	-	-	-	-
	Total Obligation Authority	-	0.000	0.000	-	0.000	4.579	9.156	9.156	0.000
AFR	Quantity	-	-	-	-	-	-	-	-	-
	Total Obligation Authority	-	0.000	0.000	-	0.000	1.139	3.433	3.433	0.000
Total: Secondary Distribution	**Quantity**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**
	Total Obligation Authority	**-**	**0.000**	**28.581**	**0.000**	**28.581**	**32.281**	**23.682**	**24.580**	**1.330**

Exhibit P-3a, Individual Modification: PB 2020 Air Force		Date: February 2019
Appropriation / Budget Activity / Budget Sub Activity: 3010F / 05 / 5	**P-1 Line Item Number / Title:** C13500 / C-135	**Modification Number / Title:** 9827 / KC-135 AERO-I SATCOM replacement
ID Code (A=Service Ready, B=Not Service Ready) : B	**MDAP/MAIS Code:**	
Models of Systems Affected: KC-135	**Modification Type:** Reliability & Maintainability	**Related RDT&E PEs:**

Financial Plan	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
	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												
Modification Item 1 of 1: Group B												
A Kits												
Recurring												
Group B:INSTALL KITS Group A (Active)	- / -	- / -	0 / 0.000	0 / 0.000	- / -	0 / 0.000	27 / 0.856	44 / 1.394	44 / 1.394	32 / 0.000	- / -	147 / 3.644
Group B:INSTALL KITS Group A (Guard)	- / -	- / -	0 / 0.000	0 / 0.000	- / -	0 / 0.000	24 / 0.761	48 / 1.521	48 / 1.521	40 / 0.000	- / -	160 / 3.803
Group B:INSTALL KITS Group A (Reserve)	- / -	- / -	- / 0.000	0 / 0.000	- / -	0 / 0.000	4 / 0.127	18 / 0.570	18 / 0.570	12 / 0.000	- / -	52 / 1.267
Subtotal: Recurring	*- / -*	*- / -*	*- / 0.000*	*- / 0.000*	*- / -*	*- / 0.000*	*- / 1.744*	*- / 3.485*	*- / 3.485*	*- / 0.000*	*- / -*	*- / 8.714*
B Kits												
Recurring												
Group B:EQUIPMENT Group B (Active)	- / -	- / -	0 / 0.000	0 / 0.000	- / -	0 / 0.000	27 / 3.430	44 / 5.578	44 / 5.578	32 / 0.000	- / -	147 / 14.586
Group B:EQUIPMENT Group B (Guard)	- / -	- / -	0 / 0.000	0 / 0.000	- / -	0 / 0.000	24 / 3.043	48 / 6.085	48 / 6.085	40 / 0.000	- / -	160 / 15.213
Group B:EQUIPMENT Group B (Reserve)	- / -	- / -	0 / 0.000	0 / 0.000	- / -	0 / 0.000	4 / 0.883	18 / 2.282	18 / 2.282	12 / 0.000	- / -	52 / 5.447
Subtotal: Recurring	*- / -*	*- / -*	*- / 0.000*	*- / 0.000*	*- / -*	*- / 0.000*	*- / 7.356*	*- / 13.945*	*- / 13.945*	*- / 0.000*	*- / -*	*- / 35.246*
Subtotal: Group B	*- / -*	*- / -*	*- / 0.000*	*- / 0.000*	*- / -*	*- / 0.000*	*- / 9.100*	*- / 17.430*	*- / 17.430*	*- / 0.000*	*- / -*	*- / 43.960*
Subtotal: Procurement, All Modification Items	*- / -*	*- / -*	*- / 0.000*	*- / 0.000*	*- / -*	*- / 0.000*	*- / 9.100*	*- / 17.430*	*- / 17.430*	*- / 0.000*	*- / -*	*- / 43.960*
Support *(All Modification Items)*												
GROUP B: TOTAL NONRECURRING	- / -	- / -	- / 0.000	- / 10.566	- / 0.000	- / 10.566	- / 0.000	- / 0.000	- / 0.000	- / 0.000	- / 0.000	- / 10.566
GROUP A: TOTAL NONRECURRING	- / -	- / -	- / 0.000	- / 6.980	- / 0.000	- / 6.980	- / 0.000	- / 0.000	- / 0.000	- / 0.000	- / 0.000	- / 6.980
PMA - Other Gov't Costs	- / -	- / -	- / -	- / 2.110	- / -	- / 2.110	- / 2.310	- / 0.150	- / 0.625	- / 0.435	- / -	- / 5.630
PMA - Contractor Services	- / -	- / -	- / -	- / 1.250	- / -	- / 1.250	- / 0.125	- / 0.625	- / 0.625	- / 0.625	- / -	- / 3.250
OTHER GOVT	- / -	- / -	- / -	- / 2.220	- / -	- / 2.220	- / 14.310	- / 0.847	- / 0.718	- / 0.100	- / 0.100	- / 18.295
Change Orders	- / -	- / -	- / -	- / 1.775	- / -	- / 1.775	- / -	- / 0.213	- / 0.211	- / 0.100	- / -	- / 2.299
SUPPORT-EQUIP	- / -	- / -	- / -	- / 1.400	- / -	- / 1.400	- / 0.740	- / 0.866	- / 1.430	- / 0.070	- / -	- / 4.506
Data	- / -	- / -	- / -	- / 0.180	- / -	- / 0.180	- / -	- / -	- / -	- / -	- / -	- / 0.180
SIM/TRAINER	- / -	- / -	- / -	8 / 2.100	- / -	8 / 2.100	11 / 3.920	- / -	- / -	- / -	- / -	19 / 6.020
Subtotal: Support	*- / -*	*- / -*	*- / 0.000*	*8 / 28.581*	*- / 0.000*	*8 / 28.581*	*11 / 21.405*	*- / 2.701*	*- / 3.609*	*- / 1.330*	*- / 0.100*	*19 / 57.726*
Installation												
Modification Item 1 of 1: Group B	- / -	- / -	- / -	- / -	- / -	- / -	55 / 1.776	110 / 3.551	110 / 3.541	84 / 0.000	- / -	359 / 8.868
Subtotal: Installation	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*55 / 1.776*	*110 / 3.551*	*110 / 3.541*	*84 / 0.000*	*- / -*	*359 / 8.868*
Total												

Exhibit P-3a, Individual Modification: PB 2020 Air Force		Date: February 2019
Appropriation / Budget Activity / Budget Sub Activity: 3010F / 05 / 5	**P-1 Line Item Number / Title:** C13500 / C-135	**Modification Number / Title:** 9827 / KC-135 AERO-I SATCOM replacement
ID Code (A=Service Ready, B=Not Service Ready) : B	**MDAP/MAIS Code:**	
Models of Systems Affected: KC-135	**Modification Type:** Reliability & Maintainability	**Related RDT&E PEs:**

Financial Plan	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
	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)*
Total Cost (Procurement + Support + Installation)	-	-	0.000	28.581	0.000	28.581	32.281	23.682	24.580	1.330	0.100	110.554

Exhibit P-3a, Individual Modification: PB 2020 Air Force		Date: February 2019
Appropriation / Budget Activity / Budget Sub Activity: 3010F / 05 / 5	**P-1 Line Item Number / Title:** C13500 / C-135	**Modification Number / Title:** 9827 / KC-135 AERO-I SATCOM replacement

ID Code (A=Service Ready, B=Not Service Ready) : B

MDAP/MAIS Code:

Modification Item 1 of 1: Group B

Manufacturer Information

Manufacturer Name: TBD

Manufacturer Location: TBD

Administrative Leadtime *(in Months)*: 0

Production Leadtime *(in Months)*: 2

Dates	FY 2018	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024
Contract Dates				Oct 2020	Oct 2021	Oct 2022	Oct 2023
Delivery Dates				Dec 2020	Dec 2021	Dec 2022	Dec 2023

Installation Information

Method of Implementation: Contract Field Team

Installation Cost	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
	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)*
Prior Years	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2018	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2019	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2020	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2021	- / -	- / -	- / -	- / -	- / -	- / -	55 / 1.776	0 / 0.000	- / -	- / -	- / -	55 / 1.776
FY 2022	- / -	- / -	- / -	- / -	- / -	- / -	- / -	110 / 3.551	- / -	- / -	- / -	110 / 3.551
FY 2023	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	110 / 3.541	- / -	- / -	110 / 3.541
FY 2024	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	84 / 0.000	- / -	84 / 0.000
To Complete	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
Total	- / -	- / -	- / -	- / -	- / -	- / -	55 / 1.776	110 / 3.551	110 / 3.541	84 / 0.000	- / -	359 / 8.868

Installation Schedule

	PYS	FY 2018				FY 2019				FY 2020				FY 2021				FY 2022				FY 2023				FY 2024				TC	Tot
		Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4		
In	0	-	-	-	-	-	-	-	-	0	0	0	0	9	9	9	28	27	28	27	28	27	28	27	28	29	28	27	0	0	359
Out	0	-	-	-	-	-	-	-	-	0	0	0	0	9	9	9	28	27	28	27	28	27	28	27	28	29	28	27	0	0	359

Exhibit P-3a, Individual Modification: PB 2020 Air Force		Date: February 2019
Appropriation / Budget Activity / Budget Sub Activity: 3010F / 05 / 5	**P-1 Line Item Number / Title:** C13500 / C-135	**Modification Number / Title:** 9828 / Real Time in the Cockpit (RTIC)
ID Code (A=Service Ready, B=Not Service Ready) : B	**MDAP/MAIS Code:**	

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 *(Units in Each)*	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost *($ in Millions)*	-	-	26.200	23.000	0.000	23.000	0.000	0.000	0.000	0.000	-	49.200
Less PY Advance Procurement *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) *($ in Millions)*	-	-	26.200	23.000	0.000	23.000	0.000	0.000	0.000	0.000	-	49.200
Plus CY Advance Procurement *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Total Obligation Authority *($ in Millions)*	**-**	**-**	**26.200**	**23.000**	**0.000**	**23.000**	**0.000**	**0.000**	**0.000**	**0.000**	**-**	**49.200**
(The following Resource Summary rows are for informational purposes only. The corresponding budget requests are documented elsewhere.)												
Initial Spares *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Unit Cost *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-

Description:

"Real Time in the Cockpit (RTIC) is designed to provide real time information to the KC-135 pilot/co-pilot with regards to battlespace, situational and threat awareness. The RTIC program will provide protected, classified data connectivity via machine-to-machine (M2M) technology enabling the KC-135 to interoperate with global and theater operations, intelligence, and Tactical Data Networks (TDNs) to provide the aircrew the information needed to reduce impacts of enemy and blue-on-blue threats and increase KC-135 combat support effectiveness, mission safety, and enhanced situational awareness (SA). The modification includes displays to the cockpit, ARC-210, SADL & Link-16 Modems, RTIC Airborne Executive Processor (AEP), and the ability to integrate on-board/off-board inputs for threat warning (e.g. RWR, multiple data networks, countermeasures, etc.). The requirement document governing this effort is the Air National Guard/Air Force Reserve Corps (ANG/AFRC) RTIC Capabilities Description Document (COD) Requirements Correlation Table and the Air Mobility Command (AMC) approved KC-135 RTIC Milestone (MS) B Requirements Traceability Matrix (RTM) from the using commands into system performance requirements that can be measured and verified. The Integration and test effort will use NGREA funds and had been negotiated for $15,481,409. The funding breakdown is below:

AFRC NGREA 2016: $5,584,662
AFRC NGREA 2017: $2,200,000
ANG NGREA 2016: $6,800,000
ANG NGREA 2017: $896,747

This funding ensures the active duty component can flow with the NGB/AFRC NGREA funded production starting in FY19 and going through FY23.

This program will enter Post Milestone C.

Milestone/Development Status

Program is for Active Duty only. This will be integrated via NGREA funding and does not require development.

Secondary Distribution		FY 2018	FY 2019	FY 2020 Base	FY 2020 OCO	FY 2020 Total	FY 2021	FY 2022	FY 2023	FY 2024
AF	Quantity	-	-	-	-	-	-	-	-	-
	Total Obligation Authority	-	26.200	23.000	-	23.000	-	-	-	-
AFNG	Quantity	-	-	-	-	-	-	-	-	-

Exhibit P-3a, Individual Modification: PB 2020 Air Force		Date: February 2019
Appropriation / Budget Activity / Budget Sub Activity: 3010F / 05 / 5	**P-1 Line Item Number / Title:** C13500 / C-135	**Modification Number / Title:** 9828 / Real Time in the Cockpit (RTIC)
ID Code (A=Service Ready, B=Not Service Ready) : B	**MDAP/MAIS Code:**	

Secondary Distribution		FY 2018	FY 2019	FY 2020 Base	FY 2020 OCO	FY 2020 Total	FY 2021	FY 2022	FY 2023	FY 2024
	Total Obligation Authority	-	0.000	-	-	-	-	-	-	-
AFR	Quantity	-	-	-	-	-	-	-	-	-
	Total Obligation Authority	-	0.000	-	-	-	-	-	-	-
Total: Secondary Distribution	**Quantity**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**
	Total Obligation Authority	**-**	**26.200**	**23.000**	**0.000**	**23.000**	**0.000**	**0.000**	**0.000**	**0.000**

Exhibit P-3a, Individual Modification: PB 2020 Air Force		Date: February 2019
Appropriation / Budget Activity / Budget Sub Activity: 3010F / 05 / 5	**P-1 Line Item Number / Title:** C13500 / C-135	**Modification Number / Title:** 9828 / Real Time in the Cockpit (RTIC)
ID Code (A=Service Ready, B=Not Service Ready) : B	**MDAP/MAIS Code:**	
Models of Systems Affected: KC-135	**Modification Type:** Capability Improvement	**Related RDT&E PEs:**

Financial Plan	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
	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												
Modification Item 1 of 2: A Kit												
A Kits												
Recurring												
A Kit:INSTALL KITS Group A (Active)	- / -	- / -	26 / 1.040	23 / 0.920	- / -	23 / 0.920	- / -	- / -	- / -	- / -	- / -	49 / 1.960
Subtotal: Recurring	*- / -*	*- / -*	*- / 1.040*	*- / 0.920*	*- / -*	*- / 0.920*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / 1.960*
Subtotal: A Kit	*- / -*	*- / -*	*- / 1.040*	*- / 0.920*	*- / -*	*- / 0.920*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / 1.960*
Modification Item 2 of 2: B Kit												
B Kits												
Recurring												
B Kit:EQUIPMENT Group B (Active)	- / -	- / -	26 / 14.560	23 / 12.880	- / -	23 / 12.880	- / -	- / -	- / -	- / -	- / -	49 / 27.440
B Kit:EQUIPMENT Group B (Guard)	- / -	- / -	0 / 0.000	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	0 / 0.000
B Kit:EQUIPMENT Group B (Reserve)	- / -	- / -	0 / 0.000	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	0 / 0.000
Subtotal: Recurring	*- / -*	*- / -*	*- / 14.560*	*- / 12.880*	*- / -*	*- / 12.880*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / 27.440*
Subtotal: B Kit	*- / -*	*- / -*	*- / 14.560*	*- / 12.880*	*- / -*	*- / 12.880*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / 27.440*
Subtotal: Procurement, All Modification Items	*- / -*	*- / -*	*- / 15.600*	*- / 13.800*	*- / -*	*- / 13.800*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / 29.400*
Support *(All Modification Items)*												
SUPPORT-EQUIP	- / -	- / -	0 / 0.000	0 / 0.000	- / -	0 / 0.000	- / -	- / -	- / -	- / -	- / -	0 / 0.000
PMA - Other Gov't Costs	- / -	- / -	0 / 0.200	0 / 0.000	- / -	0 / 0.000	- / -	- / -	- / -	- / -	- / -	0 / 0.200
Data	- / -	- / -	0 / 0.000	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	0 / 0.000
Subtotal: Support	*- / -*	*- / -*	*0 / 0.200*	*0 / 0.000*	*- / -*	*0 / 0.000*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*0 / 0.200*
Installation												
Modification Item 2 of 2: B Kit	- / -	- / -	26 / 10.400	23 / 9.200	- / -	23 / 9.200	- / -	- / -	- / -	- / -	- / -	49 / 19.600
Subtotal: Installation	*- / -*	*- / -*	*26 / 10.400*	*23 / 9.200*	*- / -*	*23 / 9.200*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*49 / 19.600*
Total												
Total Cost (Procurement + Support + Installation)	**-**	**-**	**26.200**	**23.000**	**0.000**	**23.000**	**0.000**	**0.000**	**0.000**	**0.000**	**-**	**49.200**

Exhibit P-3a, Individual Modification: PB 2020 Air Force		Date: February 2019
Appropriation / Budget Activity / Budget Sub Activity: 3010F / 05 / 5	**P-1 Line Item Number / Title:** C13500 / C-135	**Modification Number / Title:** 9828 / Real Time in the Cockpit (RTIC)
ID Code (A=Service Ready, B=Not Service Ready) : B	**MDAP/MAIS Code:**	
Modification Item 1 of 2: A Kit		

Manufacturer Information

Manufacturer Name: N/A	Manufacturer Location: N/A
Administrative Leadtime *(in Months)*:	Production Leadtime *(in Months)*:

Dates	FY 2018	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024
Contract Dates							
Delivery Dates							

Installation Information

Method of Implementation (Organic): Org/Intermediate	**Installation Quantity:** 0

Exhibit P-3a, Individual Modification: PB 2020 Air Force		Date: February 2019
Appropriation / Budget Activity / Budget Sub Activity: 3010F / 05 / 5	**P-1 Line Item Number / Title:** C13500 / C-135	**Modification Number / Title:** 9828 / Real Time in the Cockpit (RTIC)
ID Code (A=Service Ready, B=Not Service Ready) : B	**MDAP/MAIS Code:**	

Modification Item 2 of 2: B Kit

Manufacturer Information

Manufacturer Name: NSN Items	Manufacturer Location: Unk
Administrative Leadtime *(in Months)*: 1	Production Leadtime *(in Months)*: 4

Dates	FY 2018	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024
Contract Dates		Apr 2019	Dec 2019				
Delivery Dates		Aug 2019	Apr 2020				

Installation Information

Method of Implementation: Contract Field Team

Installation Cost	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
	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)*
Prior Years	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2018	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2019	- / -	- / -	26 / 10.400	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	26 / 10.400
FY 2020	- / -	- / -	- / -	23 / 9.200	- / -	23 / 9.200	- / -	- / -	- / -	- / -	- / -	23 / 9.200
FY 2021	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2022	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2023	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2024	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
To Complete	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
Total	- / -	- / -	26 / 10.400	23 / 9.200	- / -	23 / 9.200	- / -	- / -	- / -	- / -	- / -	49 / 19.600

Installation Schedule

	PYS	FY 2018				FY 2019				FY 2020				FY 2021				FY 2022				FY 2023				FY 2024				TC	Tot
		Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4		
In	0	-	-	-	-	0	0	0	26	-	-	11	12	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0	49
Out	0	-	-	-	-	0	0	0	26	-	-	11	12	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0	49

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Exhibit P-40, Budget Line Item Justification: PB 2020 Air Force	Date: February 2019
Appropriation / Budget Activity / Budget Sub Activity: 3010F: Aircraft Procurement, Air Force / BA 05: Modification of Inservice Aircraft / BSA 5: Other Aircraft	**P-1 Line Item Number / Title:** C135BO / OC-135B

ID Code (A=Service Ready, B=Not Service Ready): B	**Program Elements for Code B Items:** 0305145F	**Other Related Program Elements:** 0305145F

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 *(Units in Each)*	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost *($ in Millions)*	-	23.091	5.913	0.000	-	0.000	0.000	0.000	0.000	5.560	0.000	34.564
Less PY Advance Procurement *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) *($ in Millions)*	-	23.091	5.913	0.000	-	0.000	0.000	0.000	0.000	5.560	0.000	34.564
Plus CY Advance Procurement *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Total Obligation Authority *($ in Millions)*	**-**	**23.091**	**5.913**	**0.000**	**-**	**0.000**	**0.000**	**0.000**	**0.000**	**5.560**	**0.000**	**34.564**
(The following Resource Summary rows are for informational purposes only. The corresponding budget requests are documented elsewhere.)												
Initial Spares *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Flyaway Unit Cost *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Unit Cost *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-

Description:

The OC-135B aircraft supports the implementation of the United States Government (USG) Open Skies Treaty. Mission equipment on the OC-135B includes wet film optical framing and panoramic cameras. Open Skies Sensors program addresses the requirements in the Presidential Policy Directive-15 (PPD-15), which states," The United States shall begin budgeting no later than Fiscal Year 2014 to upgrade the sensors on the current aircraft by replacing film-based cameras with available electro-optical sensors.(U)" Additionally, current cameras are nearly obsolete, frequently unreliable, hard and increasingly expensive to maintain, and repair parts must be individually manufactured. In addition, the web film manufacturers are discontinuing production of the film stock.

This camera replacement program will replace the wet film cameras with modern, digital cameras. This program will result in modern, digital cameras with higher reliability, maintainability and cost effectiveness. The customer of the imagery will be able to more readily use the imagery products and the equipment service life will be extended significantly.

OC-135B fleet consists of two aircraft. Both aircraft will be modified. One aircraft will be modified during development using RDT&E funds. Each aircraft will receive one A-kit and two B-kits to comply with treaty requirements.

Automatic Dependent Surveillance-Broadcast (ADS-B) out is planned to replace Air Traffic Control (ATC) radar and is mandated to be installed on aircraft using US airspace by 2020.

Funding for this exhibit contained in PE 0305145F

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.

Justification:
Where applicable, justification for individual modifications is provided in the P-3A exhibits.

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Exhibit P-40, Budget Line Item Justification: PB 2020 Air Force	Date: February 2019
Appropriation / Budget Activity / Budget Sub Activity: 3010F: Aircraft Procurement, Air Force / BA 05: Modification of Inservice Aircraft / BSA 5: Other Aircraft	**P-1 Line Item Number / Title:** CALL00 / Compass Call

ID Code (A=Service Ready, B=Not Service Ready): A	Program Elements for Code B Items: N/A	Other Related Program Elements: 0207253F

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 *(Units in Each)*	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost *($ in Millions)*	227.457	125.788	172.285	110.754	0.000	110.754	41.954	38.461	39.159	39.864	0.000	795.722
Less PY Advance Procurement *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) *($ in Millions)*	227.457	125.788	172.285	110.754	0.000	110.754	41.954	38.461	39.159	39.864	0.000	795.722
Plus CY Advance Procurement *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Total Obligation Authority *($ in Millions)*	**227.457**	**125.788**	**172.285**	**110.754**	**0.000**	**110.754**	**41.954**	**38.461**	**39.159**	**39.864**	**0.000**	**795.722**
(The following Resource Summary rows are for informational purposes only. The corresponding budget requests are documented elsewhere.)												
Initial Spares *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Flyaway Unit Cost *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Unit Cost *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-

Description:

The COMPASS CALL capability is the USAF's premier wide-area coverage Airborne Electronic Attack (AEA) Offensive Counter Information (OCI) weapon system. In order to ensure continued tactical effectiveness COMPASS CALL's Prime Mission Equipment (PME) must evolve to keep pace with emerging adversary developments in communications, radar, and sensor technology as well as the use of rapidly advancing commercial communications technology. To meet this challenge the COMPASS CALL program employs an incremental Baseline upgrade acquisition strategy that puts capability into the warfighter's hands as soon as practical and ensures each iteration of the weapon system is effective against the highest priority threats. Capabilities inserted into each Baseline are planned in advance, based on war-fighter inputs. Executive Management Reviews are held to review and set the expectation for the Baseline content as production nears. Procurement funds are required for modification kit production (hardware, firmware, and software), installation, certification, and test on a re-host platform in accordance with the Baseline upgrade cyclic schedule.

As of first quarter FY 2019, the COMPASS CALL EC-130H fleet consists of two (2) Baseline 1 (BL1) aircraft, ten (10) Mid-Baseline 2 (MBL2) aircraft, and one (1) MBL2 test aircraft. One of the (1) MBL2 aircraft is in depot receiving Programmed Depot Maintenance (PDM) and modification of the Avionics Viability Program (AVP, glass cockpit). In late FY 2018, two (2) BL1 aircraft were divested (one was inducted into AMARG, one
was provided to a museum). Additional BL1 aircraft will divest in FY 2019 and FY 2020. EC-130H aircraft baseline upgrade modification efforts will be complete with MBL2. The MBL2 efforts focus on reliability and sustainability improvements, obsolescence replacement, weight reduction, simplification of PME operations and maintenance, and electronic attack capability increases.

In addition to these aircraft the program also includes one (1) EC-130H Weapon System Trainer (WST, flight deck simulator) and two (2) COMPASS CALL Mission Crew Simulators (CCMCS). With each Baseline, efforts focus on reliability and sustainability improvements, obsolescence resolution, weight reduction, simplification of PME operations and maintenance, and increased electronic attack capabilities.

Beginning in FY 2017, with the transition to the Baseline 3 (BL3) re-host effort, the program of record added one (1) aircraft (known as EC-37B) which was procured in late FY 2017. A second aircraft was procured in late FY 2018 and the third and fourth are projected to be procured in FY 2019. These four aircraft will receive a mix of legacy PME from donor EC-130H aircraft as well as new, upgraded PME. Procurement of the air vehicles for re-host is performed under the Aircraft Procurement, Air Force appropriation, Budget Activity 04, Budget Sub Activity 05 under P-1 Line Item Number: CALL00/COMPASS CALL.

COMPASS CALL modification efforts include, but are not limited to, the Counter Radar Subsystem; third generation Special Purpose Emitter Array (SPEAR) subsystem; and other systems necessary to counter modern commercial and military communications, navigation, radar, and other threats in the electromagnetic spectrum; as well as aircraft and PME retrofits. Baseline upgrades and enhancements will also

Exhibit P-40, Budget Line Item Justification: PB 2020 Air Force		Date: February 2019
Appropriation / Budget Activity / Budget Sub Activity: 3010F: Aircraft Procurement, Air Force / BA 05: Modification of Inservice Aircraft / BSA 5: Other Aircraft	**P-1 Line Item Number / Title:** CALL00 / Compass Call	
ID Code (A=Service Ready, B=Not Service Ready): A	**Program Elements for Code B Items:** N/A	**Other Related Program Elements:** 0207253F
Line Item MDAP/MAIS Code: N/A		

include necessary support equipment, training device/simulator modifications, test and test support activities (planning, integration). The simulators provide for the training and qualification of aircrew and ground personnel as well as address training obsolescence issues.

FY 2018 funding totals include $56.72M for Overseas Contingency Operations (OCO): $28.12M is included in the P-3A for Mod Number 1001 (COMPASS CALL) and $28.6M is included in in the P-3A for Mod Number 1003 (COMPASS CALL Baseline 3).

FY 2019 funding totals include $36.4M for OCO, it is included in the P-3A for Mod Number 1001 (COMPASS CALL).

Due to the rapidly changing threat environment encountered in overseas contingency operations, the acquisition program manager has the authority to redirect funding, as necessary, to meet currently slated and/or emerging Combatant Commander requirements through the integration of Quick Reaction Capability (QRC) kits and other high-priority efforts.

Funding for this exhibit is contained in PE 0207253F.

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.

Exhibit P-40, Budget Line Item Justification: PB 2020 Air Force	Date: February 2019
Appropriation / Budget Activity / Budget Sub Activity: 3010F: Aircraft Procurement, Air Force / BA 05: Modification of Inservice Aircraft / BSA 5: Other Aircraft	**P-1 Line Item Number / Title:** CALL00 / Compass Call

ID Code (A=Service Ready, B=Not Service Ready): A | **Program Elements for Code B Items:** N/A | **Other Related Program Elements:** 0207253F

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) I ($ M)	Quantity / Total Cost (Each) I ($ M)	Quantity / Total Cost (Each) I ($ M)	Quantity / Total Cost (Each) I ($ M)	Quantity / Total Cost (Each) I ($ M)	Quantity / Total Cost (Each) I ($ M)
P-40a***	1001 / COMPASS CALL (Capability Improvement)				- / -	- / 38.120	- / 36.400	- / -	- / -	- / -
P-3a	1003 / COMPASS CALL Baseline 3 (Capability Improvement)		A		- / 227.457	- / 87.668	- / 135.885	- / 110.754	- / 0.000	- / 110.754
P-40	**Total Gross/Weapon System Cost**				**- / 227.457**	**- / 125.788**	**- / 172.285**	**- / 110.754**	**- / 0.000**	**- / 110.754**

Exhibits Schedule					FY 2021	FY 2022	FY 2023	FY 2024	To Complete	Total
Exhibit Type	Title*	Subexhibits	ID CD	MDAP/ MAIS Code	Quantity / Total Cost (Each) I ($ M)	Quantity / Total Cost (Each) I ($ M)	Quantity / Total Cost (Each) I ($ M)	Quantity / Total Cost (Each) I ($ M)	Quantity / Total Cost (Each) I ($ M)	Quantity / Total Cost (Each) I ($ M)
P-40a***	1001 / COMPASS CALL (Capability Improvement)				- / -	- / -	- / -	- / -	- / -	- / 74.520
P-3a	1003 / COMPASS CALL Baseline 3 (Capability Improvement)		A		- / 41.954	- / 38.461	- / 39.159	- / 39.864	- / 0.000	- / 721.202
P-40	**Total Gross/Weapon System Cost**				**- / 41.954**	**- / 38.461**	**- / 39.159**	**- / 39.864**	**- / 0.000**	**- / 795.722**

*** Although this is an Exhibit P-40a item, the actual exhibit is not included since all of the required information for this item is already being shown here.

*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:
Where applicable, justification for individual modifications is provided in the P-3A exhibits.

Exhibit P-3a, Individual Modification: PB 2020 Air Force		Date: February 2019
Appropriation / Budget Activity / Budget Sub Activity: 3010F / 05 / 5	**P-1 Line Item Number / Title:** CALL00 / Compass Call	**Modification Number / Title:** 1003 / COMPASS CALL Baseline 3
ID Code (A=Service Ready, B=Not Service Ready) : A	**MDAP/MAIS Code:**	

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 *(Units in Each)*	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost *($ in Millions)*	227.457	87.668	135.885	110.754	0.000	110.754	41.954	38.461	39.159	39.864	0.000	721.202
Less PY Advance Procurement *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) *($ in Millions)*	227.457	87.668	135.885	110.754	0.000	110.754	41.954	38.461	39.159	39.864	0.000	721.202
Plus CY Advance Procurement *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Total Obligation Authority *($ in Millions)*	**227.457**	**87.668**	**135.885**	**110.754**	**0.000**	**110.754**	**41.954**	**38.461**	**39.159**	**39.864**	**0.000**	**721.202**
(The following Resource Summary rows are for informational purposes only. The corresponding budget requests are documented elsewhere.)												
Initial Spares *($ in Millions)*	-	10.050	10.618	10.805	-	10.805	10.999	11.219	11.424	11.630	-	76.745
Gross/Weapon System Unit Cost *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-

Description:

The COMPASS CALL capability is the USAF's premier wide-area coverage Airborne Electronic Attack (AEA) Offensive Counter Information (OCI) weapon system. In order to ensure continued tactical effectiveness COMPASS CALL's Prime Mission Equipment (PME) must evolve to keep pace with emerging adversary developments in communications, radar, and sensor technology as well as the use of rapidly advancing commercial communications technology. To meet this challenge the COMPASS CALL program employs an incremental Baseline upgrade acquisition strategy that puts capability into the warfighter's hands as soon as practical and ensures each iteration of the weapon system is effective against the highest priority threats. Capabilities inserted into each Baseline are planned in advance, based on war-fighter inputs. Executive Management Reviews are held to review and set the expectation for Baseline content as production nears. Both modification kit components and integration costs for a given Baseline upgrade are procured in the first fiscal year (FY) of execution and installed the next year. Procurement funds are required for modification kit production (hardware, firmware, and software) to include software integration lab components, installation, certification, and test on a re-host platform in accordance with the Baseline upgrade cyclic schedule.

As of first quarter FY 2019, the COMPASS CALL EC-130H fleet consists of two (2) Baseline 1 (BL1) aircraft, ten (10) Mid-Baseline 2 (MBL2) aircraft and one (1) MBL2 test aircraft. One (1) MBL2 aircraft is in depot receiving Programmed Depot Maintenance (PDM) and modification of the Avionics Viability Program (AVP, glass cockpit) upgrade. In addition to these aircraft the program also includes one (1) EC-130H Weapon System Trainer (WST, flight deck simulator) and two (2) COMPASS CALL Mission Crew Simulators (CCMCS). In late FY 2018, two (2) BL1 aircraft were divested (one was inducted into AMARG, one was provided to a museum). Additional BL1 aircraft will divest in FY 2019 and FY 2020. EC-130H aircraft baseline upgrade modification efforts will be complete with MBL2. The MBL2 efforts focus on reliability and sustainability improvements, obsolescence replacement, weight reduction, simplification of PME operations and maintenance, and electronic attack capability increases.

Transitioning to the re-host effort, the program of record procured two (2) commercial derivative aircraft (known as EC-37B); one was procured in late FY 2017 and one in late FY 2018. Two (2) aircraft will be procured in FY 2019, and one (1) aircraft will be procured in FY 2020, bringing the program of record to five (5) commercial derivative aircraft. These five aircraft will receive Prime Mission Equipment (PME) from legacy donor EC-130H aircraft, as well as new, upgraded PME. The FY20 budget request supports the procurement of Group A and prime mission equipment (Group B), installation of Group A/B, support equipment which includes test program sets, Compass Call Mission Crew Simulator upgrades and program management administration (PMA) requirements. Procurement and installation of the BL3 PME modification kits onto those air vehicles is performed under this line item (CALL00/Modification Number 1003). Procurement of the air vehicles for re-host is performed under the Aircraft Procurement, Air Force appropriation, Budget Activity 04, Budget Sub Activity 05 under P-1 Line Item Number: CALL00/COMPASS CALL.

COMPASS CALL modification efforts include, but are not limited to, the Counter Radar Subsystem; next generation Special Purpose Emitter Array (SPEAR) subsystem; and aircraft and PME retrofits. Baseline upgrades and enhancements will also include necessary support equipment, training device/simulator modifications, test and test support activities (planning, integration). The simulators provide for the training and qualification of aircrew and ground personnel as well as address training obsolescence issues.

In FY 2018, Mod Number 1003 includes $28.6M of the $56.72M total CALL00 OCO funding. This funding is for SPEAR Generation 3 capability and is included in the Group B kit procurement line. The remaining $28.12M is included in the P-3A for Mod Number 1001 (COMPASS CALL).

Exhibit P-3a, Individual Modification: PB 2020 Air Force		Date: February 2019
Appropriation / Budget Activity / Budget Sub Activity: 3010F / 05 / 5	**P-1 Line Item Number / Title:** CALL00 / Compass Call	**Modification Number / Title:** 1003 / COMPASS CALL Baseline 3
ID Code (A=Service Ready, B=Not Service Ready) : A	**MDAP/MAIS Code:**	

The Group B amount in FY 2018 is for the SPEAR Generation 3 capability identified in the OCO paragraph above and prime mission equipment for the Systems Integration Laboratory (SIL). The third and fourth aircraft Group B will be procured in FY 2019. The fifth aircraft Group B kit will be procured in FY 2020.

Due to the rapidly changing threat environment encountered in combat operations, the acquisition program manager has the authority to redirect funding as necessary to meet currently stated and/ or emerging Combatant Commander requirements through the integration of Quick Reaction Capability (QRC) kits and other high-priority efforts.

Funding for this exhibit is contained in PE 0207253F.

Milestone/Development Status

The COMPASS CALL weapon system is continuously improved using a rapid development and acquisition process supporting a Baseline upgrade strategy. User needs and technology opportunities are continuously reviewed. The COMPASS CALL Baseline 3 configuration will begin initial fielding in 2023.

Exhibit P-3a, Individual Modification: PB 2020 Air Force		Date: February 2019
Appropriation / Budget Activity / Budget Sub Activity: 3010F / 05 / 5	**P-1 Line Item Number / Title:** CALL00 / Compass Call	**Modification Number / Title:** 1003 / COMPASS CALL Baseline 3
ID Code (A=Service Ready, B=Not Service Ready) : A	**MDAP/MAIS Code:**	
Models of Systems Affected: EC-37B	**Modification Type:** Capability Improvement	**Related RDT&E PEs:** 0207253F

Financial Plan	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
	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												
Modification Item 1 of 1: Baseline 3												
A Kits												
Recurring												
Baseline 3:INSTALL KITS Group A (Active)	1 / 19.046	1 / 8.622	2 / 19.060	1 / 9.600	- / -	1 / 9.600	1 / 8.970	1 / 8.970	1 / 8.970	1 / 8.970	- / -	9 / 92.208
Subtotal: Recurring	*- / 19.046*	*- / 8.622*	*- / 19.060*	*- / 9.600*	*- / -*	*- / 9.600*	*- / 8.970*	*- / 8.970*	*- / 8.970*	*- / 8.970*	*- / -*	*- / 92.208*
B Kits												
Recurring												
Baseline 3:EQUIPMENT Group B (Active)	2 / 72.007	- / 28.600	2 / 63.538	1 / 35.500	- / -	1 / 35.500	1 / 15.725	1 / 15.725	1 / 15.725	1 / 15.725	- / -	9 / 262.545
Subtotal: Recurring	*- / 72.007*	*- / 28.600*	*- / 63.538*	*- / 35.500*	*- / -*	*- / 35.500*	*- / 15.725*	*- / 15.725*	*- / 15.725*	*- / 15.725*	*- / -*	*- / 262.545*
Subtotal: Baseline 3	*- / 91.053*	*- / 37.222*	*- / 82.598*	*- / 45.100*	*- / -*	*- / 45.100*	*- / 24.695*	*- / 24.695*	*- / 24.695*	*- / 24.695*	*- / -*	*- / 354.753*
Subtotal: Procurement, All Modification Items	*- / 91.053*	*- / 37.222*	*- / 82.598*	*- / 45.100*	*- / -*	*- / 45.100*	*- / 24.695*	*- / 24.695*	*- / 24.695*	*- / 24.695*	*- / -*	*- / 354.753*
Support *(All Modification Items)*												
GROUP A: TOTAL NONRECURRING	- / 40.037	- / 5.331	- / 10.092	- / 5.100	- / -	- / 5.100	- / 5.547	- / 4.460	- / 5.547	- / 5.547	- / -	- / 81.661
GROUP B: TOTAL NONRECURRING	- / 62.906	- / 28.840	- / 18.010	- / 20.020	- / -	- / 20.020	- / 2.806	- / 0.400	- / 0.011	- / 0.716	- / -	- / 133.709
PMA - Other Gov't Costs	- / -	- / 3.001	- / 0.000	- / 3.902	- / -	- / 3.902	- / 0.000	- / 0.000	- / 0.000	- / 0.000	- / -	- / 6.903
SUPPORT-EQUIP	- / 10.984	- / 4.906	- / 2.396	- / 12.100	- / -	- / 12.100	- / 0.200	- / 0.200	- / 0.200	- / 0.200	- / -	- / 31.186
SIM/TRAINER	0 / 10.994	- / -	- / -	0 / 13.500	- / -	0 / 13.500	0 / 0.000	0 / 0.000	0 / 0.000	0 / 0.000	- / -	0 / 24.494
Subtotal: Support	*0 / 124.921*	*- / 42.078*	*- / 30.498*	*0 / 54.622*	*- / -*	*0 / 54.622*	*0 / 8.553*	*0 / 5.060*	*0 / 5.758*	*0 / 6.463*	*- / -*	*0 / 277.953*
Installation												
Modification Item 1 of 1: Baseline 3	1 / 11.483	1 / 8.368	2 / 22.789	1 / 11.032	- / -	1 / 11.032	1 / 8.706	1 / 8.706	1 / 8.706	1 / 8.706	- / -	9 / 88.496
Subtotal: Installation	*1 / 11.483*	*1 / 8.368*	*2 / 22.789*	*1 / 11.032*	*- / -*	*1 / 11.032*	*1 / 8.706*	*1 / 8.706*	*1 / 8.706*	*1 / 8.706*	*- / -*	*9 / 88.496*
Total												
Total Cost (Procurement + Support + Installation)	**227.457**	**87.668**	**135.885**	**110.754**	**0.000**	**110.754**	**41.954**	**38.461**	**39.159**	**39.864**	**0.000**	**721.202**

Exhibit P-3a, Individual Modification: PB 2020 Air Force		Date: February 2019
Appropriation / Budget Activity / Budget Sub Activity: 3010F / 05 / 5	**P-1 Line Item Number / Title:** CALL00 / Compass Call	**Modification Number / Title:** 1003 / COMPASS CALL Baseline 3
ID Code (A=Service Ready, B=Not Service Ready) : A	**MDAP/MAIS Code:**	

Modification Item 1 of 1: Baseline 3

Manufacturer Information

Manufacturer Name: L-3 Technologies	Manufacturer Location: Greenville, TX
Administrative Leadtime *(in Months)*: 1	Production Leadtime *(in Months)*: 9

Dates	FY 2018	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024
Contract Dates	Jun 2018	Nov 2018	Nov 2019	Nov 2020	Nov 2021	Nov 2022	Nov 2023
Delivery Dates	Sep 2018	Aug 2019	Aug 2020	Aug 2021	Aug 2022	Aug 2023	Aug 2024

Installation Information

Method of Implementation: Contractor Facility

Installation Cost	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
	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)*
Prior Years	1 / 11.483	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	1 / 11.483
FY 2018	- / -	1 / 8.368	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	1 / 8.368
FY 2019	- / -	- / -	2 / 22.789	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	2 / 22.789
FY 2020	- / -	- / -	- / -	1 / 11.032	- / -	1 / 11.032	- / -	- / -	- / -	- / -	- / -	1 / 11.032
FY 2021	- / -	- / -	- / -	- / -	- / -	- / -	1 / 8.706	- / -	- / -	- / -	- / -	1 / 8.706
FY 2022	- / -	- / -	- / -	- / -	- / -	- / -	- / -	1 / 8.706	- / -	- / -	- / -	1 / 8.706
FY 2023	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	1 / 8.706	- / -	- / -	1 / 8.706
FY 2024	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	1 / 8.706	- / -	1 / 8.706
To Complete	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
Total	1 / 11.483	1 / 8.368	2 / 22.789	1 / 11.032	- / -	1 / 11.032	1 / 8.706	1 / 8.706	1 / 8.706	1 / 8.706	- / -	9 / 88.496

Installation Schedule

		FY 2018				FY 2019				FY 2020				FY 2021				FY 2022				FY 2023				FY 2024					
	PYS	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	TC	Tot
In	1	-	1	-	-	-	-	-	2	-	-	-	1	-	-	-	1	-	-	-	1	-	-	-	1	-	-	-	1	0	9
Out	0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	4	-	-	-	-	-	-	5	9

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Exhibit P-40, Budget Line Item Justification: PB 2020 Air Force	Date: February 2019
Appropriation / Budget Activity / Budget Sub Activity: 3010F: Aircraft Procurement, Air Force / BA 05: Modification of Inservice Aircraft / BSA 5: Other Aircraft	**P-1 Line Item Number / Title:** CFIN00 / combat flight inspection - CFIN

ID Code (A=Service Ready, B=Not Service Ready): B	**Program Elements for Code B Items:** 0401314F	**Other Related Program Elements:** 0401314F

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 *(Units in Each)*	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost *($ in Millions)*	-	0.495	0.499	0.508	-	0.508	0.000	0.000	0.000	0.000	-	1.502
Less PY Advance Procurement *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) *($ in Millions)*	-	0.495	0.499	0.508	-	0.508	0.000	0.000	0.000	0.000	-	1.502
Plus CY Advance Procurement *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Total Obligation Authority *($ in Millions)*	**-**	**0.495**	**0.499**	**0.508**	**-**	**0.508**	**0.000**	**0.000**	**0.000**	**0.000**	**-**	**1.502**
(The following Resource Summary rows are for informational purposes only. The corresponding budget requests are documented elsewhere.)												
Initial Spares *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Flyaway Unit Cost *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Unit Cost *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-

Description:

Funds are required to procure and sustain unique military equipment on three FAA owned, Air Force operated, Canadair Challenger flight inspection aircraft to provide the DoD Combat Flight Inspection (CFIN) capability. CFIN is an Air Force combat capability to validate and certify airfield instrument approach and landing equipment, and associated instrument procedures, are safe and meet specifications before all-weather combat flight operations can begin. The CFIN capability is provided by three FAA Canadair Challenger aircraft modified with unique military equipment required for the CFIN mission, including secure anti-jam radios, military Identification Friend or Foe Mode IV and V transponders, and survivability equipment.

This funding may include emerging modification requirements to support PMA, A&AS, equipment and other government cost

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.

Justification:

Where applicable, justification for individual modifications is provided in the P-3A exhibits.

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Exhibit P-40, Budget Line Item Justification: PB 2020 Air Force	Date: February 2019
Appropriation / Budget Activity / Budget Sub Activity: 3010F: Aircraft Procurement, Air Force / BA 05: Modification of Inservice Aircraft / BSA 5: Other Aircraft	**P-1 Line Item Number / Title:** DARP01 / RC-135

ID Code (A=Service Ready, B=Not Service Ready): B	**Program Elements for Code B Items:** 0305207F	**Other Related Program Elements:** 0305207F
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 *(Units in Each)*	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost *($ in Millions)*	382.953	204.559	394.532	227.673	-	227.673	205.440	203.642	205.519	86.108	-	1,910.426
Less PY Advance Procurement *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) *($ in Millions)*	382.953	204.559	394.532	227.673	-	227.673	205.440	203.642	205.519	86.108	-	1,910.426
Plus CY Advance Procurement *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Total Obligation Authority *($ in Millions)*	**382.953**	**204.559**	**394.532**	**227.673**	**-**	**227.673**	**205.440**	**203.642**	**205.519**	**86.108**	**-**	**1,910.426**
(The following Resource Summary rows are for informational purposes only. The corresponding budget requests are documented elsewhere.)												
Initial Spares *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Flyaway Unit Cost *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Unit Cost *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-

Description:

The USAF's Manned Reconnaissance Systems program includes seventeen RC-135V/W RIVET JOINT, three RC-135S COBRA BALL, and two RC-135U COMBAT SENT mission aircraft performing Air Combat Command (ACC) operational missions. The RC-135V/W RIVET JOINT is the majority variant that drives the Baseline integration and modification upgrade strategy for the entire RC-135 fleet. Therefore, a significant amount of the modification budget is directly related to the RIVET JOINT weapon system baseline strategy enhancements which subsequently transfers into the follow-on baseline strategy enhancements for COBRA BALL and COMBAT SENT weapon systems.

RC-135 Viability Assessments in 2008 and 2012 reported that despite the fleet average airframe age (44 years) and accumulated flight hours (38,000) as of the end of FY 2007, the RC-135 should be able to continue to meet the user's needs by performing intended operations through at least 2050. Viability was assessed based on underlying analyses of reliability, maintainability, performance, corrosion, fatigue, architectural stability, safety and availability. The Viability Assessment also summarized that the RC-135 fleet has experienced significant improvements in reliability, maintainability and availability since FY 2001. The Program Manager attributes these improvements directly to the 645th Aeronautical Systems Group (645 AESG) Baseline integration and spiral modification upgrade strategy and synergies gained with long standing relationships with the RC-135 industry partners.

FY20 procurement funding will concentrate on four major efforts: (1) completing the conversion of the RIVET JOINT aircraft from a Baseline 10 to Baseline 12 configuration, (2) converting three KC-135R aircraft into WC-135R aircraft, (3) starting the conversion of RIVET JOINT aircraft from Baseline 11 to Baseline 13, and (4)upgrading the autopilot. First, with regards to RIVET JOINT, a total of ten aircraft are projected to become Baseline 12 configured. During this same period, the COBRA BALL and the COMBAT SENT aircraft will concentrate on completing the conversion from the Baseline 5 to the Baseline 6 configuration (COBRA BALL and COMBAT SENT Baseline 5 configurations most closely align with the RIVET JOINT Baseline 11/12 configuration). Additionally, with regards to the WC-135, procurement funding will procure and install modification kits to convert three KC-135Rs into WC-135Rs as well as procure and install sensors for the WC-135Rs. In addition to the aforementioned aircraft modifications, FY20 procurement will ensure integration and fielding of the RC-135 ground systems to include RIVET JOINT Mission Trainer (RJMT), Ground Data Processing Systems (GDPS), Distributed Mission Shelters (DMS), Mission Crew Training Systems (MCTS), Airborne Capabilities Extension System (ACES) and Operational Flight Trainers (OFT).

The ground systems are upgraded to remain consistent with the fielded aircraft configurations to allow for training and qualification of the aircrew and maintenance personnel assigned, plus verification and certification of software builds that are continuously modified to address the dynamic mission requirements of these weapons systems. The RIVET JOINT Baseline integration efforts of Baselines 12 and 13 starting in early FY19, address the 2012 RC-135 Multi-Attribute Utility Assessment (MUA) that detailed operational effectiveness, cost and program analyses of the alternative weapon system configurations. The MUA determined that retaining and sustaining the RC-135V/W airframe offers the highest assessed weapons system utility (measured as a benefit of cost-to-risk ratio) over the 25-year assessment period.

Exhibit P-40, Budget Line Item Justification: PB 2020 Air Force		**Date:** February 2019
Appropriation / Budget Activity / Budget Sub Activity: 3010F: Aircraft Procurement, Air Force / BA 05: Modification of Inservice Aircraft / BSA 5: Other Aircraft	**P-1 Line Item Number / Title:** DARP01 / RC-135	
ID Code (A=Service Ready, B=Not Service Ready): B	**Program Elements for Code B Items:** 0305207F	**Other Related Program Elements:** 0305207F
Line Item MDAP/MAIS Code: N/A		

Following the approval of the Memorandum of Agreement between the National Security Agency/Central Security Service (NSA/CSS) Directorate of Operations and the United States Air Force on 26 September 2016, an additional $3.0M was provided in FY18 through the Future Years Defense Plan due to previous shortfalls in funding. Due to an administrative error, the additional $3.0M in FY18 is listed under Program Element 0305207F as U-2 Modifications.

Due to the changing threat and rapidly evolving electromagnetic combat environment encountered during the RC-135's prolonged commitment to Overseas Contingency Operations (OCO), the acquisition program manager has the authority to redirect funding as necessary to meet current states and emerging Combatant Commander and/or Intelligence Community requirements to better meet the war fighting objectives.

Funding for this exhibit is contained in PE 0305207F.

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.

Exhibit P-40, Budget Line Item Justification: PB 2020 Air Force	Date: February 2019
Appropriation / Budget Activity / Budget Sub Activity: 3010F: Aircraft Procurement, Air Force / BA 05: Modification of Inservice Aircraft / BSA 5: Other Aircraft	**P-1 Line Item Number / Title:** DARP01 / RC-135

ID Code (A=Service Ready, B=Not Service Ready): B | **Program Elements for Code B Items:** 0305207F | **Other Related Program Elements:** 0305207F

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) I ($ M)	Quantity / Total Cost (Each) I ($ M)	Quantity / Total Cost (Each) I ($ M)	Quantity / Total Cost (Each) I ($ M)	Quantity / Total Cost (Each) I ($ M)	Quantity / Total Cost (Each) I ($ M)
P-3a	2504 / COBRA BALL (Capability Improvement)		A		- / 12.469	- / 6.959	- / 6.776	- / 12.177	- / 0.000	- / 12.177
P-3a	4263 / RIVET JOINT (Capability Improvement)		A		- / 343.123	- / 187.807	- / 169.664	- / 197.574	- / 0.000	- / 197.574
P-3a	4265 / COMBAT SENT (Capability Improvement)		A		- / 27.361	- / 9.793	- / 9.802	- / 9.985	- / 0.000	- / 9.985
P-3a	4266 / CONSTANT PHOENIX (Capability Improvement)		B		- / -	- / -	- / 208.290	- / 7.937	- / 0.000	- / 7.937
P-40	**Total Gross/Weapon System Cost**				**- / 382.953**	**- / 204.559**	**- / 394.532**	**- / 227.673**	**- / -**	**- / 227.673**

Exhibits Schedule					FY 2021	FY 2022	FY 2023	FY 2024	To Complete	Total
Exhibit Type	Title*	Subexhibits	ID CD	MDAP/ MAIS Code	Quantity / Total Cost (Each) I ($ M)	Quantity / Total Cost (Each) I ($ M)	Quantity / Total Cost (Each) I ($ M)	Quantity / Total Cost (Each) I ($ M)	Quantity / Total Cost (Each) I ($ M)	Quantity / Total Cost (Each) I ($ M)
P-3a	2504 / COBRA BALL (Capability Improvement)		A		- / 12.414	- / 12.656	- / 12.902	- / 13.154	- / -	- / 89.507
P-3a	4263 / RIVET JOINT (Capability Improvement)		A		- / 183.060	- / 180.795	- / 182.242	- / 62.392	- / -	- / 1,506.657
P-3a	4265 / COMBAT SENT (Capability Improvement)		A		- / 9.966	- / 10.191	- / 10.375	- / 10.562	- / -	- / 98.035
P-3a	4266 / CONSTANT PHOENIX (Capability Improvement)		B		- / 0.000	- / -	- / -	- / -	- / -	- / 216.227
P-40	**Total Gross/Weapon System Cost**				**- / 205.440**	**- / 203.642**	**- / 205.519**	**- / 86.108**	**- / -**	**- / 1,910.426**

*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:
Where applicable, justification for individual modifications is provided in the P-3A exhibits.

Exhibit P-3a, Individual Modification: PB 2020 Air Force		Date: February 2019
Appropriation / Budget Activity / Budget Sub Activity: 3010F / 05 / 5	**P-1 Line Item Number / Title:** DARP01 / RC-135	**Modification Number / Title:** 2504 / COBRA BALL
ID Code (A=Service Ready, B=Not Service Ready) : A	**MDAP/MAIS Code:**	

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 *(Units in Each)*	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost *($ in Millions)*	12.469	6.959	6.776	12.177	0.000	12.177	12.414	12.656	12.902	13.154	-	89.507
Less PY Advance Procurement *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) *($ in Millions)*	12.469	6.959	6.776	12.177	0.000	12.177	12.414	12.656	12.902	13.154	-	89.507
Plus CY Advance Procurement *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Total Obligation Authority *($ in Millions)*	**12.469**	**6.959**	**6.776**	**12.177**	**0.000**	**12.177**	**12.414**	**12.656**	**12.902**	**13.154**	**-**	**89.507**
(The following Resource Summary rows are for informational purposes only. The corresponding budget requests are documented elsewhere.)												
Initial Spares *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Unit Cost *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-

Description:

FY20 procurement funding acquires and installs various upgrade and enhancement modifications for the three RC-135S COBRA BALL aircraft performing Air Combat Command (ACC) directed operational missions. Due to the rapidly changing global threat environment, the acquisition program manager has the authority to redirect funding as necessary to meet current stated and emerging Combatant Command (CCMD) and Intelligence Community (IC) requirements.

The Operational Requirements Document (ORD '99) addresses airframe, sensor, navigation, communications, data link, and processing requirements necessary to keep the RC-135 fleet viable through 2050. A Program Management Directive (PMD) provides direction to the 645th Aeronautical Systems Group (645 AESG) for the acquisition, and sustainment of the weapons system, associated mission support equipment, and processing, exploitation and dissemination tools.

The RC-135S COBRA BALL program--Defense Airborne Reconnaissance Program (DARP)/Manned Reconnaissance Systems is managed as an incremental baseline upgrade acquisition strategy in order to maintain collection parity with evolving and emerging adversarial weapons systems utilized by state and non-state actors. The 645 AESG Baseline upgrade strategy requires purchase agreements for long-lead items that take approximately 10 to 12 months from contract award to delivery. Items required for integration in a given Baseline upgrade are contracted for purchase in the first year of the procurement funding cycle and are acquired and installed in the subsequent year. This acquisition strategy has been successful in maintaining critical combat capability in the Intelligence, Surveillance, Reconnaissance (ISR) arena over the last 50 years.

FY20 procurement funding efforts will concentrate on the initiatives pertaining to completing the development, integration and fielding COBRA BALL Baseline 7 enhancements. Baseline 7 subsystem upgrades consist of, but are not limited to: FISINT Direction Finding and Digital Data Recording, Digital Search, and Target Discrimination via SATCOM, and the integration of the RIVET JOINT Baseline 11/12 communications intelligence (COMINT) suite.

Funding for this exhibit contained in PE 0305207F.

Milestone/Development Status

FY 2020 procurement funding associated with the acquisition, integration, and fielding of Baseline 7,and logistical support efforts for the Baseline 6 configuration upgrades and enhancements of the three RC-135S COBRA BALL aircraft, sensor systems, and associated ground support system are attributed to the development efforts initiated in FY 2017 and FY 2018 research & development funding initiatives. These initiatives formed the basis for the RC-135S COBRA BALL fleet modification strategy.

Exhibit P-3a, Individual Modification: PB 2020 Air Force		Date: February 2019
Appropriation / Budget Activity / Budget Sub Activity: 3010F / 05 / 5	**P-1 Line Item Number / Title:** DARP01 / RC-135	**Modification Number / Title:** 2504 / COBRA BALL
ID Code (A=Service Ready, B=Not Service Ready) : A	**MDAP/MAIS Code:**	
Models of Systems Affected: RC-135S, TC-135W	**Modification Type:** Capability Improvement	**Related RDT&E PEs:** 0305207F

Financial Plan	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
	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												
Modification Item 1 of 1: Baseline Upgrade												
A Kits												
Recurring												
Baseline Upgrade:INSTALL KITS Group A (Active)	2 / 2.149	1 / 1.417	1 / 1.111	1 / 3.044	- / -	1 / 3.044	1 / 3.127	1 / 3.190	1 / 3.255	1 / 3.321	- / -	9 / 20.614
Subtotal: Recurring	*- / 2.149*	*- / 1.417*	*- / 1.111*	*- / 3.044*	*- / -*	*- / 3.044*	*- / 3.127*	*- / 3.190*	*- / 3.255*	*- / 3.321*	*- / -*	*- / 20.614*
B Kits												
Recurring												
Baseline Upgrade:EQUIPMENT Group B (Active)	2 / 3.181	1 / 1.834	1 / 1.867	1 / 5.267	- / -	1 / 5.267	1 / 5.411	1 / 5.520	1 / 5.630	1 / 5.744	- / -	9 / 34.454
Subtotal: Recurring	*- / 3.181*	*- / 1.834*	*- / 1.867*	*- / 5.267*	*- / -*	*- / 5.267*	*- / 5.411*	*- / 5.520*	*- / 5.630*	*- / 5.744*	*- / -*	*- / 34.454*
Subtotal: Baseline Upgrade	*- / 5.330*	*- / 3.251*	*- / 2.978*	*- / 8.311*	*- / -*	*- / 8.311*	*- / 8.538*	*- / 8.710*	*- / 8.885*	*- / 9.065*	*- / -*	*- / 55.068*
Subtotal: Procurement, All Modification Items	*- / 5.330*	*- / 3.251*	*- / 2.978*	*- / 8.311*	*- / -*	*- / 8.311*	*- / 8.538*	*- / 8.710*	*- / 8.885*	*- / 9.065*	*- / -*	*- / 55.068*
Installation												
Modification Item 1 of 1: Baseline Upgrade	2 / 7.139	1 / 3.708	1 / 3.798	1 / 3.866	0 / 0.000	1 / 3.866	1 / 3.876	1 / 3.946	1 / 4.017	1 / 4.089	- / -	9 / 34.439
Subtotal: Installation	*2 / 7.139*	*1 / 3.708*	*1 / 3.798*	*1 / 3.866*	*0 / -*	*1 / 3.866*	*1 / 3.876*	*1 / 3.946*	*1 / 4.017*	*1 / 4.089*	*- / -*	*9 / 34.439*
Total												
Total Cost (Procurement + Support + Installation)	**12.469**	**6.959**	**6.776**	**12.177**	**0.000**	**12.177**	**12.414**	**12.656**	**12.902**	**13.154**	**-**	**89.507**

Exhibit P-3a, Individual Modification: PB 2020 Air Force		Date: February 2019
Appropriation / Budget Activity / Budget Sub Activity: 3010F / 05 / 5	**P-1 Line Item Number / Title:** DARP01 / RC-135	**Modification Number / Title:** 2504 / COBRA BALL
ID Code (A=Service Ready, B=Not Service Ready) : A	**MDAP/MAIS Code:**	

Modification Item 1 of 1: Baseline Upgrade

Manufacturer Information

Manufacturer Name: L-3 Technologies	Manufacturer Location: Greenville, TX
Administrative Leadtime *(in Months)*: 2	Production Leadtime *(in Months)*: 6

Dates	FY 2018	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024
Contract Dates	Dec 2017	Dec 2018	Dec 2019	Dec 2020	Dec 2021	Dec 2022	Dec 2023
Delivery Dates	Jun 2018	Jun 2019	Jun 2020	Jun 2021	Jun 2022	Jun 2023	Jun 2024

Installation Information

Method of Implementation: Contractor Facility

Installation Cost	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
	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)*
Prior Years	2 / 7.139	0 / 0.000	0 / 0.000	0 / 0.000	0 / 0.000	0 / 0.000	0 / 0.000	0 / 0.000	0 / 0.000	- / -	- / -	2 / 7.139
FY 2018	- / -	1 / 3.708	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	1 / 3.708
FY 2019	- / -	- / -	1 / 3.798	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	1 / 3.798
FY 2020	- / -	- / -	- / -	1 / 3.866	- / -	1 / 3.866	- / -	- / -	- / -	- / -	- / -	1 / 3.866
FY 2021	- / -	- / -	- / -	- / -	- / -	- / -	1 / 3.876	- / -	- / -	- / -	- / -	1 / 3.876
FY 2022	- / -	- / -	- / -	- / -	- / -	- / -	- / -	1 / 3.946	- / -	- / -	- / -	1 / 3.946
FY 2023	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	1 / 4.017	- / -	- / -	1 / 4.017
FY 2024	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	1 / 4.089	- / -	1 / 4.089
To Complete	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
Total	2 / 7.139	1 / 3.708	1 / 3.798	1 / 3.866	0 / 0.000	1 / 3.866	1 / 3.876	1 / 3.946	1 / 4.017	1 / 4.089	- / -	9 / 34.439

Installation Schedule

		FY 2018				FY 2019				FY 2020				FY 2021				FY 2022				FY 2023				FY 2024					
	PYS	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	TC	Tot
In	2	1	-	-	-	1	-	-	-	1	-	-	-	1	-	-	-	1	-	-	-	1	-	-	-	1	-	-	-	0	9
Out	2	-	-	1	-	-	-	1	-	-	-	1	-	-	-	1	-	-	-	1	-	-	-	1	-	-	-	1	-	0	9

Exhibit P-3a, Individual Modification: PB 2020 Air Force		Date: February 2019
Appropriation / Budget Activity / Budget Sub Activity: 3010F / 05 / 5	**P-1 Line Item Number / Title:** DARP01 / RC-135	**Modification Number / Title:** 4263 / RIVET JOINT
ID Code (A=Service Ready, B=Not Service Ready) : A	**MDAP/MAIS Code:**	

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 *(Units in Each)*	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost *($ in Millions)*	343.123	187.807	169.664	197.574	0.000	197.574	183.060	180.795	182.242	62.392	-	1,506.657
Less PY Advance Procurement *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) *($ in Millions)*	343.123	187.807	169.664	197.574	0.000	197.574	183.060	180.795	182.242	62.392	-	1,506.657
Plus CY Advance Procurement *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Total Obligation Authority *($ in Millions)*	**343.123**	**187.807**	**169.664**	**197.574**	**0.000**	**197.574**	**183.060**	**180.795**	**182.242**	**62.392**	**-**	**1,506.657**
(The following Resource Summary rows are for informational purposes only. The corresponding budget requests are documented elsewhere.)												
Initial Spares *($ in Millions)*	-	45.615	49.520	50.448	-	50.448	51.352	52.380	53.332	24.730	-	327.377
Gross/Weapon System Unit Cost *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-

Description:

FY20 procurement funding acquires and installs various upgrade and enhancement modifications for the seventeen RC-135V/W RIVET JOINT aircraft performing Air Combat Command (ACC) directed operational missions. Due to the rapidly changing global threat environment, the acquisition program manager has the authority to redirect funding as necessary to meet current stated and emerging Combatant Command (CCMD) and Intelligence Community (IC) requirements.

The Operational Requirements Document (ORD '99) addresses airframe, sensor, navigation, communications, data link, and processing requirements necessary to keep the RC-135 fleet viable through 2050. A Program Management Directive (PMD) provides direction to the 645th Aeronautical Systems Group (645 AESG) for the acquisition, and sustainment of the weapons system, associated mission support equipment, and processing, exploitation and dissemination tools.

The RC-135V/W RIVET JOINT program Defense Airborne Reconnaissance Program (DARP)/Manned Reconnaissance Systems is managed as an incremental baseline upgrade acquisition strategy in order to maintain collection parity with an evolving threat environment. The 645 AESG Baseline upgrade strategy requires purchase agreements for long lead items that take approximately 10 to 12 months from contract award to delivery. Items required for integration in a given Baseline upgrade are contracted and purchased in the first year of the procurement funding cycle and are acquired and installed in the next year. This acquisition strategy has been successful in maintaining critical combat capability in the Intelligence, Surveillance and Reconnaissance (ISR) arena over the last 50 years.

FY20 procurement funding will concentrate on sustainment of the fielded RIVET JOINT Baseline 12 configured aircraft. Baseline 12 subsystem upgrades consist of, but are not limited to: precision multi-angle direction finding communications intelligence (DF COMINT) capability, electronic intelligence (ELINT) recorder expansion, precision ELINT digital signals intelligence (SIGINT) system (DSS) integration, wideband global satellite (WGS) enhanced integration, increased near real time (NRT) national tactical integration, improved operator interface and reporting tools, enhancing capabilities in dense signal environments (search-thru-interference improvement), re-double copy channel count, increased digital signal exploitation, increased digital signal recorder bandwidth, Specific Emitter ID improvement, enhanced spatial processing/exploitation, Air Force Distributed Common Ground System (AF-DCGS) interoperability, operator work station 3-D map projection, enhanced operator reporting management tools, modernized communications security Communications Security (COMSEC) protocols, continued CNS/ATM compliant cockpit avionics enhancements to include addressing any obsolescence issues, new steerable beam antenna, weight reduction phase 4, enhanced weather radar, digitally enhanced electronic flight instrument system (EFIS).

Funding for this exhibit contained in PE 0305207F.

Milestone/Development Status

Exhibit P-3a, Individual Modification: PB 2020 Air Force		Date: February 2019
Appropriation / Budget Activity / Budget Sub Activity: 3010F / 05 / 5	**P-1 Line Item Number / Title:** DARP01 / RC-135	**Modification Number / Title:** 4263 / RIVET JOINT
ID Code (A=Service Ready, B=Not Service Ready) : A	**MDAP/MAIS Code:**	

FY20 procurement funding associated with acquisition, integration, fielding and logistical support efforts for the Baseline 12 configuration upgrades / enhancements of the RC-135V/W RIVET JOINT aircraft, sensor systems, and associated ground support system are attributed to the development efforts initiated in FY16 and FY17 research & development funding intitatives. These initiatives formed the basis for the RC-135V/W RIVET JOINT fleet modification strategy.

Exhibit P-3a, Individual Modification: PB 2020 Air Force		Date: February 2019
Appropriation / Budget Activity / Budget Sub Activity: 3010F / 05 / 5	**P-1 Line Item Number / Title:** DARP01 / RC-135	**Modification Number / Title:** 4263 / RIVET JOINT
ID Code (A=Service Ready, B=Not Service Ready) : A	**MDAP/MAIS Code:**	
Models of Systems Affected: RC-135V, RC-135W, TC-135W	**Modification Type:** Capability Improvement	**Related RDT&E PEs:** 0305207F

Financial Plan	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
	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												
Modification Item 1 of 1: Baseline 12												
A Kits												
Recurring												
Baseline 12:INSTALL KITS Group A (Active)	8 / 222.322	4 / 125.828	4 / 106.890	4 / 135.622	- / -	4 / 135.622	4 / 120.013	4 / 116.349	4 / 116.630	1 / 29.770	- / -	33 / 973.424
Subtotal: Recurring	*- / 222.322*	*- / 125.828*	*- / 106.890*	*- / 135.622*	*- / -*	*- / 135.622*	*- / 120.013*	*- / 116.349*	*- / 116.630*	*- / 29.770*	*- / -*	*- / 973.424*
B Kits												
Recurring												
Baseline 12:EQUIPMENT Group B (Active)	8 / 24.475	4 / 12.881	4 / 13.339	4 / 13.164	- / -	4 / 13.164	4 / 13.401	4 / 13.743	4 / 13.992	4 / 14.286	- / -	36 / 119.281
Subtotal: Recurring	*- / 24.475*	*- / 12.881*	*- / 13.339*	*- / 13.164*	*- / -*	*- / 13.164*	*- / 13.401*	*- / 13.743*	*- / 13.992*	*- / 14.286*	*- / -*	*- / 119.281*
Subtotal: Baseline 12	*- / 246.797*	*- / 138.709*	*- / 120.229*	*- / 148.786*	*- / -*	*- / 148.786*	*- / 133.414*	*- / 130.092*	*- / 130.622*	*- / 44.056*	*- / -*	*- / 1,092.705*
Subtotal: Procurement, All Modification Items	*- / 246.797*	*- / 138.709*	*- / 120.229*	*- / 148.786*	*- / -*	*- / 148.786*	*- / 133.414*	*- / 130.092*	*- / 130.622*	*- / 44.056*	*- / -*	*- / 1,092.705*
Support *(All Modification Items)*												
PMA - Other Gov't Costs	- / 2.629	- / 1.316	- / 1.317	- / 1.300	- / -	- / 1.300	- / 1.313	- / 1.468	- / 1.495	- / 0.382	- / -	- / 11.220
Subtotal: Support	*- / 2.629*	*- / 1.316*	*- / 1.317*	*- / 1.300*	*- / -*	*- / 1.300*	*- / 1.313*	*- / 1.468*	*- / 1.495*	*- / 0.382*	*- / -*	*- / 11.220*
Installation												
Modification Item 1 of 1: Baseline 12	8 / 93.697	4 / 47.782	4 / 48.118	4 / 47.488	0 / 0.000	4 / 47.488	4 / 48.333	4 / 49.235	4 / 50.125	1 / 17.954	- / -	33 / 402.732
Subtotal: Installation	*8 / 93.697*	*4 / 47.782*	*4 / 48.118*	*4 / 47.488*	*0 / -*	*4 / 47.488*	*4 / 48.333*	*4 / 49.235*	*4 / 50.125*	*1 / 17.954*	*- / -*	*33 / 402.732*
Total												
Total Cost (Procurement + Support + Installation)	**343.123**	**187.807**	**169.664**	**197.574**	**0.000**	**197.574**	**183.060**	**180.795**	**182.242**	**62.392**	**-**	**1,506.657**

Exhibit P-3a, Individual Modification: PB 2020 Air Force		Date: February 2019
Appropriation / Budget Activity / Budget Sub Activity: 3010F / 05 / 5	**P-1 Line Item Number / Title:** DARP01 / RC-135	**Modification Number / Title:** 4263 / RIVET JOINT
ID Code (A=Service Ready, B=Not Service Ready) : A	**MDAP/MAIS Code:**	

Modification Item 1 of 1: Baseline 12

Manufacturer Information

Manufacturer Name: L-3 Technologies	Manufacturer Location: Greenville, TX
Administrative Leadtime *(in Months)*: 2	Production Leadtime *(in Months)*: 9

Dates	FY 2018	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024
Contract Dates	Dec 2017	Dec 2018	Dec 2019	Dec 2020	Dec 2021	Dec 2022	Dec 2023
Delivery Dates	Sep 2018	Sep 2019	Sep 2020	Sep 2021	Sep 2022	Sep 2023	Sep 2024

Installation Information

Method of Implementation: Contractor Facility

Installation Cost	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
	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)*
Prior Years	8 / 93.697	0 / 0.000	0 / 0.000	0 / 0.000	0 / 0.000	0 / 0.000	0 / 0.000	0 / 0.000	0 / 0.000	- / -	- / -	8 / 93.697
FY 2018	- / -	4 / 47.782	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	4 / 47.782
FY 2019	- / -	- / -	4 / 48.118	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	4 / 48.118
FY 2020	- / -	- / -	- / -	4 / 47.488	- / -	4 / 47.488	- / -	- / -	- / -	- / -	- / -	4 / 47.488
FY 2021	- / -	- / -	- / -	- / -	- / -	- / -	4 / 48.333	- / -	- / -	- / -	- / -	4 / 48.333
FY 2022	- / -	- / -	- / -	- / -	- / -	- / -	- / -	4 / 49.235	- / -	- / -	- / -	4 / 49.235
FY 2023	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	4 / 50.125	- / -	- / -	4 / 50.125
FY 2024	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	1 / 17.954	- / -	1 / 17.954
To Complete	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
Total	8 / 93.697	4 / 47.782	4 / 48.118	4 / 47.488	0 / 0.000	4 / 47.488	4 / 48.333	4 / 49.235	4 / 50.125	1 / 17.954	- / -	33 / 402.732

Installation Schedule

	PYS	FY 2018				FY 2019				FY 2020				FY 2021				FY 2022				FY 2023				FY 2024				TC	Tot
		Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4		
In	8	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	-	-	-	0	33
Out	8	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	-	-	1	-	0	33

Exhibit P-3a, Individual Modification: PB 2020 Air Force		Date: February 2019
Appropriation / Budget Activity / Budget Sub Activity: 3010F / 05 / 5	**P-1 Line Item Number / Title:** DARP01 / RC-135	**Modification Number / Title:** 4265 / COMBAT SENT
ID Code (A=Service Ready, B=Not Service Ready) : A	**MDAP/MAIS Code:**	

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 *(Units in Each)*	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost *($ in Millions)*	27.361	9.793	9.802	9.985	0.000	9.985	9.966	10.191	10.375	10.562	-	98.035
Less PY Advance Procurement *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) *($ in Millions)*	27.361	9.793	9.802	9.985	0.000	9.985	9.966	10.191	10.375	10.562	-	98.035
Plus CY Advance Procurement *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Total Obligation Authority *($ in Millions)*	**27.361**	**9.793**	**9.802**	**9.985**	**0.000**	**9.985**	**9.966**	**10.191**	**10.375**	**10.562**	**-**	**98.035**
(The following Resource Summary rows are for informational purposes only. The corresponding budget requests are documented elsewhere.)												
Initial Spares *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Unit Cost *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-

Description:

FY20 procurement funding acquires and installs various upgrade and enhancement modifications for the two RC-135U COMBAT SENT aircraft performing Air Combat Command (ACC) directed operational missions. Due to the rapidly changing global threat environment and technological advances of our adversaries, the acquisition program manager has the authority to redirect funding as necessary to meet current stated and emerging Combatant Command (CCMD) and Intelligence Community (IC) requirements.

The Operational Requirements Document (ORD '99) addresses airframe, sensor, navigation, communications, data link, and processing requirements necessary to keep the RC-135 fleet viable through 2050. A Program Management Directive (PMD) provides direction to the 645th Aeronautical Systems Group (645 AESG) for the acquisition, and sustainment of the weapons system, associated mission support equipment, and processing, exploitation and dissemination tools.

The RC-135U COMBAT SENT program Defense Airborne Reconnaissance Program (DARP)/Manned Reconnaissance Systems) is managed as an incremental baseline upgrade acquisition strategy in order to maintain collection parity with evolving threat environment. The 645 AESG Baseline upgrade strategy requires purchase agreements for long-lead items that take approximately 12 months from contract award to delivery. Items required for integration in a given Baseline upgrade are contracted for purchase in the first year of the procurement funding cycle and are acquired and installed in the next year. This acquisition strategy has been successful in maintaining critical combat capability in the ISR arena over the last 50 years.

FY20 procurement funding efforts will concentrate on efforts pertaining to sustainment and completion of the COMBAT SENT Baseline 5 and Baseline 6 enhancements. Baseline 6 subsystem upgrades consist of, but are not limited to: Wideband collection, Scientific and Technical Processors, improved antennas, improved operator interface and reporting tools, sensor calibration/testing systems, integration of the RIVET JOINT Baseline 12/13 Communication Intelligence (COMINT) suite, and enhancing capabilities in dense signal environments.

Funding for this exhibit contained in PE 0305207F.

Milestone/Development Status

FY20 procurement funding associated with the acquisition, integration, fielding and logistical support efforts for the Baseline 6 configuration upgrades/enhancements of the two RC-135U COMBAT SENT aircraft, sensor systems, and associated ground support system are attributed to the development efforts initiated in FY17 and FY18 research & development funding initiatives. These initiatives formed the basis for the RC-135U COMBAT SENT fleet modification strategy.

Exhibit P-3a, Individual Modification: PB 2020 Air Force		Date: February 2019
Appropriation / Budget Activity / Budget Sub Activity: 3010F / 05 / 5	P-1 Line Item Number / Title: DARP01 / RC-135	Modification Number / Title: 4265 / COMBAT SENT
ID Code (A=Service Ready, B=Not Service Ready) : A	MDAP/MAIS Code:	
Models of Systems Affected: RC-135U	Modification Type: Capability Improvement	Related RDT&E PEs: 0305207F

Financial Plan	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
	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												
Modification Item 1 of 1: Baseline 5												
A Kits												
Recurring												
Baseline 5:INSTALL KITS Group A (Active)	2 / 17.508	1 / 2.081	1 / 2.042	1 / 2.081	- / -	1 / 2.081	1 / 2.118	1 / 2.156	1 / 2.195	1 / 2.235	- / -	9 / 32.416
Subtotal: Recurring	*- / 17.508*	*- / 2.081*	*- / 2.042*	*- / 2.081*	*- / -*	*- / 2.081*	*- / 2.118*	*- / 2.156*	*- / 2.195*	*- / 2.235*	*- / -*	*- / 32.416*
B Kits												
Recurring												
Baseline 5:EQUIPMENT Group B (Active)	2 / 2.120	1 / 1.027	1 / 1.103	1 / 1.121	- / -	1 / 1.121	1 / 1.141	1 / 1.161	1 / 1.182	1 / 1.203	- / -	9 / 10.058
Subtotal: Recurring	*- / 2.120*	*- / 1.027*	*- / 1.103*	*- / 1.121*	*- / -*	*- / 1.121*	*- / 1.141*	*- / 1.161*	*- / 1.182*	*- / 1.203*	*- / -*	*- / 10.058*
Subtotal: Baseline 5	*- / 19.628*	*- / 3.108*	*- / 3.145*	*- / 3.202*	*- / -*	*- / 3.202*	*- / 3.259*	*- / 3.317*	*- / 3.377*	*- / 3.438*	*- / -*	*- / 42.474*
Subtotal: Procurement, All Modification Items	*- / 19.628*	*- / 3.108*	*- / 3.145*	*- / 3.202*	*- / -*	*- / 3.202*	*- / 3.259*	*- / 3.317*	*- / 3.377*	*- / 3.438*	*- / -*	*- / 42.474*
Installation												
Modification Item 1 of 1: Baseline 5	2 / 7.733	1 / 6.685	1 / 6.657	1 / 6.783	0 / 0.000	1 / 6.783	1 / 6.707	1 / 6.874	1 / 6.998	1 / 7.124	- / -	9 / 55.561
Subtotal: Installation	*2 / 7.733*	*1 / 6.685*	*1 / 6.657*	*1 / 6.783*	*0 / -*	*1 / 6.783*	*1 / 6.707*	*1 / 6.874*	*1 / 6.998*	*1 / 7.124*	*- / -*	*9 / 55.561*
Total												
Total Cost (Procurement + Support + Installation)	**27.361**	**9.793**	**9.802**	**9.985**	**0.000**	**9.985**	**9.966**	**10.191**	**10.375**	**10.562**	**-**	**98.035**

Exhibit P-3a, Individual Modification: PB 2020 Air Force		Date: February 2019
Appropriation / Budget Activity / Budget Sub Activity: 3010F / 05 / 5	**P-1 Line Item Number / Title:** DARP01 / RC-135	**Modification Number / Title:** 4265 / COMBAT SENT
ID Code (A=Service Ready, B=Not Service Ready) : A	**MDAP/MAIS Code:**	

Modification Item 1 of 1: Baseline 5

Manufacturer Information

Manufacturer Name: L-3 Technologies	Manufacturer Location: Greenville, TX
Administrative Leadtime *(in Months)*: 2	Production Leadtime *(in Months)*: 6

Dates	FY 2018	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024
Contract Dates	Dec 2017	Dec 2018	Dec 2019	Dec 2020	Dec 2021	Dec 2022	Dec 2023
Delivery Dates	Jun 2018	Jun 2019	Jun 2020	Jun 2021	Jun 2022	Jun 2023	Jun 2024

Installation Information

Method of Implementation: Contractor Facility

Installation Cost	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
	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)*
Prior Years	2 / 7.733	0 / 0.000	0 / 0.000	0 / 0.000	0 / 0.000	0 / 0.000	0 / 0.000	0 / 0.000	0 / 0.000	- / -	- / -	2 / 7.733
FY 2018	- / -	1 / 6.685	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	1 / 6.685
FY 2019	- / -	- / -	1 / 6.657	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	1 / 6.657
FY 2020	- / -	- / -	- / -	1 / 6.783	- / -	1 / 6.783	- / -	- / -	- / -	- / -	- / -	1 / 6.783
FY 2021	- / -	- / -	- / -	- / -	- / -	- / -	1 / 6.707	- / -	- / -	- / -	- / -	1 / 6.707
FY 2022	- / -	- / -	- / -	- / -	- / -	- / -	- / -	1 / 6.874	- / -	- / -	- / -	1 / 6.874
FY 2023	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	1 / 6.998	- / -	- / -	1 / 6.998
FY 2024	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	1 / 7.124	- / -	1 / 7.124
To Complete	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
Total	2 / 7.733	1 / 6.685	1 / 6.657	1 / 6.783	0 / 0.000	1 / 6.783	1 / 6.707	1 / 6.874	1 / 6.998	1 / 7.124	- / -	9 / 55.561

Installation Schedule

	PYS	FY 2018				FY 2019				FY 2020				FY 2021				FY 2022				FY 2023				FY 2024				TC	Tot
		Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4		
In	2	1	-	-	-	1	-	-	-	1	-	-	-	1	-	-	-	1	-	-	-	1	-	-	-	1	-	-	-	0	9
Out	2	-	-	1	-	-	-	1	-	-	-	1	-	-	-	1	-	-	-	1	-	-	-	1	-	-	-	1	-	0	9

Exhibit P-3a, Individual Modification: PB 2020 Air Force		Date: February 2019
Appropriation / Budget Activity / Budget Sub Activity: 3010F / 05 / 5	**P-1 Line Item Number / Title:** DARP01 / RC-135	**Modification Number / Title:** 4266 / CONSTANT PHOENIX
ID Code (A=Service Ready, B=Not Service Ready) : B	**MDAP/MAIS Code:**	

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 *(Units in Each)*	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost *($ in Millions)*	-	-	208.290	7.937	0.000	7.937	0.000	-	-	-	-	216.227
Less PY Advance Procurement *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) *($ in Millions)*	-	-	208.290	7.937	0.000	7.937	0.000	-	-	-	-	216.227
Plus CY Advance Procurement *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Total Obligation Authority *($ in Millions)*	**-**	**-**	**208.290**	**7.937**	**0.000**	**7.937**	**0.000**	**-**	**-**	**-**	**-**	**216.227**
(The following Resource Summary rows are for informational purposes only. The corresponding budget requests are documented elsewhere.)												
Initial Spares *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Unit Cost *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-

Description:

The WC-135 CONSTANT PHOENIX atmospheric collection aircraft supports national level consumers by collecting particulate and gaseous effluents and debris from accessible regions of the atmosphere in support of the Limited Nuclear Test Ban Treaty of 1963. The platform is based on a modified C-135 aircraft, the modifications are primarily related to its on-board atmospheric collection suite, which allows the mission crew to detect radioactive "clouds" in real time. The WC-135 is currently the only aircraft in the inventory conducting air-sampling operations. The aircraft is operated by Air Combat Command (ACC).

FY19 procurement funding procured modification kits to convert three (3) KC-135R aerial refueling tanker aircraft into WC-135 CONSTANT PHOENIX aircraft. In addition, procurement funding procured mission sensors to install onto the WC-135s. FY20 funding will complete procurement and installation of the remaining mission sensors. These conversions are needed to address airframe viability concerns associated with the aging WC-135W fleet. Analysis determined that it was more cost-effective to convert KC-135R aircraft into WC-135s than to modify existing WC-135W aircraft to be on par with the rest of the C-135 variants (i.e. RC-135 and KC-135). Due to the rapidly changing global threat environment, the acquisition program manager has the authority to redirect funding as necessary to meet current stated and emerging Combatant Command (CCMD) and Intelligence Community (IC) requirements.

The Operational Requirements Document (ORD 1999) addresses airframe, sensor, navigation, and communications requirements necessary to keep the WC-135 fleet viable through 2050. A Program Management Directive (PMD) provides direction to the 645th Aeronautical Systems Group (645 AESG) to perform acquisition and sustainment activities for the weapon system, associated mission support equipment, and Processing, Exploitation and Dissemination (PED) tools.

The WC-135 CONSTANT PHOENIX program--Defense Airborne Reconnaissance Program (DARP)/Manned Reconnaissance Systems is managed via an incremental baseline upgrade acquisition strategy in order to sustain aircraft viability. The 645 AESG baseline upgrade strategy requires purchase agreements for long-lead items that take approximately 10 to 12 months from contract award to delivery. Items required for integration in a given baseline upgrade are contracted for purchase in the first year of the procurement funding cycle and are acquired and installed in the subsequent year. This acquisition strategy has been successful in maintaining critical combat capability in the Intelligence, Surveillance, and Reconnaissance (ISR) arena over the last 50 years.

Funding for this exhibit contained in PE 0305207F.

Milestone/Development Status

Milestone/Development Status

FY20 funding will procure the remaining mission systems equipment. FY19 procurement funding procured and install modification kits to convert three (3) KC-135R aerial refueling tanker aircraft into WC-135 CONSTANT PHOENIX aircraft. In addition, procurement funding procured and funded installation of mission sensors onto the WC-135s.

Exhibit P-3a, Individual Modification: PB 2020 Air Force		Date: February 2019
Appropriation / Budget Activity / Budget Sub Activity: 3010F / 05 / 5	**P-1 Line Item Number / Title:** DARP01 / RC-135	**Modification Number / Title:** 4266 / CONSTANT PHOENIX
ID Code (A=Service Ready, B=Not Service Ready) : B	**MDAP/MAIS Code:**	
Models of Systems Affected: WC-135R	**Modification Type:** Capability Improvement	**Related RDT&E PEs:**

Financial Plan	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
	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												
Modification Item 1 of 2: COMMON: Mission Sensor System												
B Kits												
Recurring												
COMMON: Mission Sensor System:EQUIPMENT Group B (Active)	- / -	- / -	2 / 8.232	1 / 7.937	- / -	1 / 7.937	- / -	- / -	- / -	- / -	- / -	3 / 16.169
Subtotal: Recurring	*- / -*	*- / -*	*- / 8.232*	*- / 7.937*	*- / -*	*- / 7.937*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / 16.169*
Subtotal: COMMON: Mission Sensor System	*- / -*	*- / -*	*- / 8.232*	*- / 7.937*	*- / -*	*- / 7.937*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / 16.169*
Modification Item 2 of 2: KC-135R Modification Kit												
A Kits												
Recurring												
KC-135R Modification Kit:INSTALL KITS Group A (Active)	- / -	- / -	3 / 111.000	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	3 / 111.000
Subtotal: Recurring	*- / -*	*- / -*	*- / 111.000*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / 111.000*
Subtotal: KC-135R Modification Kit	*- / -*	*- / -*	*- / 111.000*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / 111.000*
Subtotal: Procurement, All Modification Items	*- / -*	*- / -*	*- / 119.232*	*- / 7.937*	*- / -*	*- / 7.937*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / 127.169*
Installation												
Modification Item 2 of 2: KC-135R Modification Kit	- / -	- / -	3 / 89.058	0 / 0.000	- / -	0 / 0.000	- / -	- / -	- / -	- / -	- / -	3 / 89.058
Subtotal: Installation	*- / -*	*- / -*	*3 / 89.058*	*0 / -*	*- / -*	*0 / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*3 / 89.058*
Total												
Total Cost (Procurement + Support + Installation)	**-**	**-**	**208.290**	**7.937**	**0.000**	**7.937**	**0.000**	**-**	**-**	**-**	**-**	**216.227**

Exhibit P-3a, Individual Modification: PB 2020 Air Force		Date: February 2019
Appropriation / Budget Activity / Budget Sub Activity: 3010F / 05 / 5	**P-1 Line Item Number / Title:** DARP01 / RC-135	**Modification Number / Title:** 4266 / CONSTANT PHOENIX

ID Code (A=Service Ready, B=Not Service Ready) : B	**MDAP/MAIS Code:**

Modification Item 1 of 2: COMMON: Mission Sensor System

Manufacturer Information

Manufacturer Name: N/A	Manufacturer Location: N/A
Administrative Leadtime *(in Months)*:	Production Leadtime *(in Months)*:

Dates	FY 2018	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024
Contract Dates							
Delivery Dates							

Installation Information

Method of Implementation (Organic): Org/Intermediate	**Installation Quantity:** 0

Exhibit P-3a, Individual Modification: PB 2020 Air Force		Date: February 2019
Appropriation / Budget Activity / Budget Sub Activity: 3010F / 05 / 5	**P-1 Line Item Number / Title:** DARP01 / RC-135	**Modification Number / Title:** 4266 / CONSTANT PHOENIX

ID Code (A=Service Ready, B=Not Service Ready) : B

MDAP/MAIS Code:

Modification Item 2 of 2: KC-135R Modification Kit

Manufacturer Information

Manufacturer Name: L-3 Technologies

Manufacturer Location: Greenville, TX

Administrative Leadtime *(in Months)*: 2

Production Leadtime *(in Months)*: 6

Dates	FY 2018	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024
Contract Dates		Dec 2018					
Delivery Dates		Jun 2019					

Installation Information

Method of Implementation: Contractor Facility

Installation Cost	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
	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)*
Prior Years	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2018	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2019	- / -	- / -	3 / 89.058	0 / 0.000	- / -	0 / 0.000	- / -	- / -	- / -	- / -	- / -	3 / 89.058
FY 2020	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2021	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2022	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2023	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2024	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
To Complete	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
Total	- / -	- / -	3 / 89.058	0 / 0.000	- / -	0 / 0.000	- / -	- / -	- / -	- / -	- / -	3 / 89.058

Installation Schedule

	PYS	FY 2018				FY 2019				FY 2020				FY 2021				FY 2022				FY 2023				FY 2024				TC	Tot
		Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4		
In	0	-	-	-	-	-	-	3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0	3
Out	0	-	-	-	-	-	-	-	-	-	-	3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0	3

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Exhibit P-40, Budget Line Item Justification: PB 2020 Air Force	Date: February 2019
Appropriation / Budget Activity / Budget Sub Activity: 3010F: Aircraft Procurement, Air Force / BA 05: Modification of Inservice Aircraft / BSA 5: Other Aircraft	**P-1 Line Item Number / Title:** E00300 / E-3

ID Code (A=Service Ready, B=Not Service Ready): B	**Program Elements for Code B Items:** 0207417F	**Other Related Program Elements:** 0207417F

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 *(Units in Each)*	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost *($ in Millions)*	851.776	119.908	116.865	216.299	-	216.299	225.584	255.743	290.373	350.796	378.330	2,805.674
Less PY Advance Procurement *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) *($ in Millions)*	851.776	119.908	116.865	216.299	-	216.299	225.584	255.743	290.373	350.796	378.330	2,805.674
Plus CY Advance Procurement *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Total Obligation Authority *($ in Millions)*	**851.776**	**119.908**	**116.865**	**216.299**	**-**	**216.299**	**225.584**	**255.743**	**290.373**	**350.796**	**378.330**	**2,805.674**
(The following Resource Summary rows are for informational purposes only. The corresponding budget requests are documented elsewhere.)												
Initial Spares *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Flyaway Unit Cost *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Unit Cost *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-

Description:

The four-engine E-3 is a modified Boeing 707 airframe which carries airborne radar and provides all-altitude air surveillance, threat warning, and control of theater air forces. Totals include funding for Airborne Warning and Control System (AWACS) Upgrades. This line item funds modifications and may be used to address Diminishing Manufacturing Sources (DMS) issues for the overall E-3 weapon system to include aircraft, simulators, and training devices.

Life of Type (LoT) buy to procure parts for retrofit of Production jets.

NATO E-3 aircraft provide air and maritime surveillance and air control for allied forces in the NATO area of operations. Fiscal Year Defense Plan funding provides the required U.S. contribution for projects defined by the NATO Airborne Early Warning and Control (NAEWC) Board of Directors and approved by the U.S. government. These projects include but are not limited to the Follow-on Upgrade Program (FUP I) and future modernization projects. The Follow-on Upgrade program satisfies international airspace mandates for upgraded Communications Navigation Surveillance/Air Traffic Management (CNS/ATM) as well as transponder upgrades for Mode 5 and Enhanced Mode S and includes planning activities for a FUP II effort. Future efforts include but are not limited to FUP II efforts and other modernization projects. These future projects will enable the aircraft to maintain interoperability, meet emerging military requirements and sustain the NATO fleet for the future needs of NATO.

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.

Secondary Distribution		FY 2018	FY 2019	FY 2020 Base	FY 2020 OCO	FY 2020 Total	FY 2021	FY 2022	FY 2023	FY 2024
AF	Quantity	-	-	-	-	-	-	-	-	-
	Total Obligation Authority	119.908	116.865	216.299	0.000	216.299	225.584	255.743	290.373	350.796
AFNG	Quantity	-	-	-	-	-	-	-	-	-
	Total Obligation Authority	0.000	-	-	-	-	-	0.000	-	-
AFR	Quantity	-	-	-	-	-	-	-	-	-

Exhibit P-40, Budget Line Item Justification: PB 2020 Air Force		Date: February 2019
Appropriation / Budget Activity / Budget Sub Activity: 3010F: Aircraft Procurement, Air Force / BA 05: Modification of Inservice Aircraft / BSA 5: Other Aircraft	**P-1 Line Item Number / Title:** E00300 / E-3	
ID Code (A=Service Ready, B=Not Service Ready): B	**Program Elements for Code B Items:** 0207417F	**Other Related Program Elements:** 0207417F
Line Item MDAP/MAIS Code: N/A		

Secondary Distribution		FY 2018	FY 2019	FY 2020 Base	FY 2020 OCO	FY 2020 Total	FY 2021	FY 2022	FY 2023	FY 2024
	Total Obligation Authority	0.000	-	-	-	-	-	0.000	-	-
Total: Secondary Distribution	**Quantity**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**
	Total Obligation Authority	**119.908**	**116.865**	**216.299**	**0.000**	**216.299**	**225.584**	**255.743**	**290.373**	**350.796**

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

Appropriation / Budget Activity / Budget Sub Activity:
3010F: Aircraft Procurement, Air Force / BA 05: Modification of Inservice Aircraft / BSA 5: Other Aircraft

P-1 Line Item Number / Title:
E00300 / E-3

ID Code (A=Service Ready, B=Not Service Ready): B | **Program Elements for Code B Items:** 0207417F | **Other Related Program Elements:** 0207417F

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) I ($ M)	Quantity / Total Cost (Each) I ($ M)	Quantity / Total Cost (Each) I ($ M)	Quantity / Total Cost (Each) I ($ M)	Quantity / Total Cost (Each) I ($ M)	Quantity / Total Cost (Each) I ($ M)
P-40a***	50001P / TSI (Other)				- / 19.007	- / -	- / 0.000	- / 0.000	- / -	- / 0.000
P-40a***	50001T / BLOCK 40/45 UPGRADE (Capability Improvement)				- / 658.246	- / -	- / 0.000	- / 0.000	- / -	- / 0.000
P-40a***	50002T / AWACS Mode 5 Acceleration (Capability Improvement)				- / -	- / -	- / -	- / 2.343	- / -	- / 2.343
P-40a***	7225 / NEXT GENERATION IDENTIFICATION FRIEND OR FOE (IFF) (Capability Improvement)				- / 56.833	- / 0.000	- / -	- / -	- / -	- / -
P-40a***	8662 / AETC MTD UPGRADES-FIELD TRAINING DETACHMENTS (Capability Improvement)				- / 6.998	- / 0.701	- / 0.707	- / 0.719	- / -	- / 0.719
P-40a***	9707 / RM&A Mod (Reliability & Maintainability)				- / 21.599	- / 0.620	- / 0.075	- / 0.328	- / -	- / 0.328
P-40a***	9716 / VERTICAL STABILIZER AND RUDDER (Reliability & Maintainability)				- / 2.904	- / 0.135	- / 0.018	- / -	- / -	- / -
P-40a***	9717 / ELECTRONIC PROTECTION (Capability Improvement)				- / -	- / -	- / -	- / -	- / -	- / -
P-40a***	9719 / Combat ID Diminishing Manufacturing Sources (Capability Improvement)				- / -	- / -	- / -	- / -	- / -	- / -
P-40a***	99999XA / LOW COST MOD - AIRFRAME (Reliability & Maintainability)				- / 0.450	- / 1.999	- / 1.999	- / 1.999	- / -	- / 1.999
P-40a***	99999XB / LOW COST MOD - AVIONICS & MISSION SYSTEMS (Reliability & Maintainability)				- / 0.450	- / 1.999	- / 1.999	- / 1.999	- / -	- / 1.999
P-40a***	NATO / US Contribution to NATO AWACS Modernization Projects (Other)				- / -	- / -	- / -	- / 87.307	- / -	- / 87.307
P-3a	50002 / Communication Networking Upgrade (CNU) (Capability Improvement)		B		- / 0.000	- / 0.000	- / 0.000	- / 10.423	- / 0.000	- / 10.423
P-3a	9709 / E-3 DRAGON (Capability Improvement)		B		- / 31.402	- / 91.324	- / 91.058	- / 94.770	- / 0.000	- / 94.770
P-3a	9718 / IP-enabled Capability (IPEC) (Capability Improvement)		B		- / 53.887	- / 23.130	- / 21.009	- / 16.411	- / 0.000	- / 16.411
P-40	**Total Gross/Weapon System Cost**				**- / 851.776**	**- / 119.908**	**- / 116.865**	**- / 216.299**	**- / -**	**- / 216.299**

Exhibits Schedule					FY 2021	FY 2022	FY 2023	FY 2024	To Complete	Total
Exhibit Type	Title*	Subexhibits	ID CD	MDAP/ MAIS Code	Quantity / Total Cost (Each) I ($ M)	Quantity / Total Cost (Each) I ($ M)	Quantity / Total Cost (Each) I ($ M)	Quantity / Total Cost (Each) I ($ M)	Quantity / Total Cost (Each) I ($ M)	Quantity / Total Cost (Each) I ($ M)
P-40a***	50001P / TSI (Other)				- / 0.000	- / -	- / -	- / -	- / -	- / 19.007
P-40a***	50001T / BLOCK 40/45 UPGRADE (Capability Improvement)				- / 0.000	- / 0.000	- / -	- / -	- / -	- / 658.246
P-40a***	50002T / AWACS Mode 5 Acceleration (Capability Improvement)				- / 4.017	- / 3.729	- / -	- / -	- / -	- / 10.089
P-40a***	7225 / NEXT GENERATION IDENTIFICATION FRIEND OR FOE (IFF) (Capability Improvement)				- / -	- / -	- / -	- / -	- / -	- / 56.833
P-40a***	8662 / AETC MTD UPGRADES-FIELD TRAINING DETACHMENTS (Capability Improvement)				- / 0.732	- / 0.748	- / 0.762	- / 0.776	- / -	- / 12.143
P-40a***	9707 / RM&A Mod (Reliability & Maintainability)				- / 0.320	- / 0.000	- / -	- / -	- / -	- / 22.942
P-40a***	9716 / VERTICAL STABILIZER AND RUDDER (Reliability & Maintainability)				- / -	- / -	- / -	- / -	- / -	- / 3.057

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

Appropriation / Budget Activity / Budget Sub Activity:
3010F: Aircraft Procurement, Air Force / BA 05: Modification of Inservice Aircraft / BSA 5: Other Aircraft

P-1 Line Item Number / Title:
E00300 / E-3

ID Code (A=Service Ready, B=Not Service Ready): B | **Program Elements for Code B Items:** 0207417F | **Other Related Program Elements:** 0207417F

Line Item MDAP/MAIS Code: N/A

Exhibits Schedule					FY 2021	FY 2022	FY 2023	FY 2024	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-40a***	9717 / ELECTRONIC PROTECTION (Capability Improvement)				- / -	- / -	- / -	- / 24.321	- / 131.634	- / 155.955
P-40a***	9719 / Combat ID Diminishing Manufacturing Sources (Capability Improvement)				- / -	- / -	- / 0.560	- / 8.490	- / 100.240	- / 109.290
P-40a***	99999XA / LOW COST MOD - AIRFRAME (Reliability & Maintainability)				- / 1.999	- / 1.999	- / 1.999	- / 1.999	- / 5.997	- / 20.440
P-40a***	99999XB / LOW COST MOD - AVIONICS & MISSION SYSTEMS (Reliability & Maintainability)				- / 1.999	- / 1.999	- / 1.999	- / 1.999	- / 5.997	- / 20.440
P-40a***	NATO / US Contribution to NATO AWACS Modernization Projects (Other)				- / 71.398	- / 65.448	- / 46.615	- / 47.454	- / -	- / 318.222
P-3a	50002 / Communication Networking Upgrade (CNU) (Capability Improvement)		B		- / 11.447	- / 14.128	- / 14.537	- / 12.920	- / 13.239	- / 76.694
P-3a	9709 / E-3 DRAGON (Capability Improvement)		B		- / 117.312	- / 160.300	- / 220.011	- / 252.837	- / 121.223	- / 1,180.237
P-3a	9718 / IP-enabled Capability (IPEC) (Capability Improvement)		B		- / 16.360	- / 7.392	- / 3.890	- / 0.000	- / -	- / 142.079
P-40	**Total Gross/Weapon System Cost**				**- / 225.584**	**- / 255.743**	**- / 290.373**	**- / 350.796**	**- / 378.330**	**- / 2,805.674**

*** Although this is an Exhibit P-40a item, the actual exhibit is not included since all of the required information for this item is already being shown here.

*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:
Where applicable, justification for individual modifications is provided in the P-3A exhibits.

Exhibit P-3a, Individual Modification: PB 2020 Air Force		Date: February 2019
Appropriation / Budget Activity / Budget Sub Activity: 3010F / 05 / 5	**P-1 Line Item Number / Title:** E00300 / E-3	**Modification Number / Title:** 50002 / Communication Networking Upgrade (CNU)
ID Code (A=Service Ready, B=Not Service Ready) : B	**MDAP/MAIS Code:**	

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 *(Units in Each)*	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost *($ in Millions)*	0.000	0.000	0.000	10.423	0.000	10.423	11.447	14.128	14.537	12.920	13.239	76.694
Less PY Advance Procurement *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) *($ in Millions)*	0.000	0.000	0.000	10.423	0.000	10.423	11.447	14.128	14.537	12.920	13.239	76.694
Plus CY Advance Procurement *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Total Obligation Authority *($ in Millions)*	**0.000**	**0.000**	**0.000**	**10.423**	**0.000**	**10.423**	**11.447**	**14.128**	**14.537**	**12.920**	**13.239**	**76.694**
(The following Resource Summary rows are for informational purposes only. The corresponding budget requests are documented elsewhere.)												
Initial Spares *($ in Millions)*	-	-	-	5.974	-	5.974	-	-	-	-	-	5.974
Gross/Weapon System Unit Cost *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-

Description:

This program, P-3A Mod 50002, Communication Networking Upgrade (CNU) , is a new start.
E-3 Communication Network Upgrade (CNU): CNU will provide a Link 16 capability with high-jam-resistance, high-speed, crypto-secure computer-to-computer connectivity in support of every type of military platform from Air Force fighters to Navy submarines. The current 20 year old Class 2 terminal has sustainability/Diminishing Manufacturing Sources (DMS) issues and does not support mandated Crypto Mod (CM) & Freq Remap (FR). CNU resolves DMS issues, provides CM & FR, Link 16 enhancements & growth for Next Gen Tactical Data Link (TDL). This modification program has related RDT&E funding in PE 0207417F.

Milestone/Development Status

Risk Reduction activities began 1QFY18 and are ongoing. Development contract award planned for 2Q FY19.

Secondary Distribution		FY 2018	FY 2019	FY 2020 Base	FY 2020 OCO	FY 2020 Total	FY 2021	FY 2022	FY 2023	FY 2024
AF	Quantity	-	-	-	-	-	-	-	-	-
	Total Obligation Authority	-	-	10.423	-	10.423	11.447	14.128	14.537	12.920
Total: Secondary Distribution	**Quantity**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**
	Total Obligation Authority	**0.000**	**0.000**	**10.423**	**0.000**	**10.423**	**11.447**	**14.128**	**14.537**	**12.920**

Exhibit P-3a, Individual Modification: PB 2020 Air Force		Date: February 2019
Appropriation / Budget Activity / Budget Sub Activity: 3010F / 05 / 5	**P-1 Line Item Number / Title:** E00300 / E-3	**Modification Number / Title:** 50002 / Communication Networking Upgrade (CNU)
ID Code (A=Service Ready, B=Not Service Ready) : B	**MDAP/MAIS Code:**	
Models of Systems Affected: E-3	**Modification Type:** Capability Improvement	**Related RDT&E PEs:** 0207417F

Financial Plan	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
	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)*
RDT&E PE #												
0207417F	- / 1.781	- / 29.195	- / 25.216	- / 29.651	- / -	- / 29.651	- / 58.450	- / 32.763	- / 34.656	- / 35.280	- / -	- / 246.992
Procurement												
Modification Item 1 of 1: CNU												
A Kits												
Recurring												
CNU:INSTALL KITS Group A (Active)	- / -	- / -	- / -	5 / 2.082	- / -	5 / 2.082	6 / 2.315	6 / 2.766	5 / 3.047	4 / 2.815	4 / 2.891	30 / 15.916
Subtotal: Recurring	*- / -*	*- / -*	*- / -*	*- / 2.082*	*- / -*	*- / 2.082*	*- / 2.315*	*- / 2.766*	*- / 3.047*	*- / 2.815*	*- / 2.891*	*- / 15.916*
B Kits												
Recurring												
CNU:EQUIPMENT Group B (Active)	- / -	- / -	- / -	5 / 6.890	- / -	5 / 6.890	6 / 7.605	6 / 8.701	5 / 8.775	4 / 7.386	4 / 7.562	30 / 46.919
Subtotal: Recurring	*- / -*	*- / -*	*- / -*	*- / 6.890*	*- / -*	*- / 6.890*	*- / 7.605*	*- / 8.701*	*- / 8.775*	*- / 7.386*	*- / 7.562*	*- / 46.919*
Subtotal: CNU	*- / -*	*- / -*	*- / -*	*- / 8.972*	*- / -*	*- / 8.972*	*- / 9.920*	*- / 11.467*	*- / 11.822*	*- / 10.201*	*- / 10.453*	*- / 62.835*
Subtotal: Procurement, All Modification Items	*- / -*	*- / -*	*- / -*	*- / 8.972*	*- / -*	*- / 8.972*	*- / 9.920*	*- / 11.467*	*- / 11.822*	*- / 10.201*	*- / 10.453*	*- / 62.835*
Support *(All Modification Items)*												
Change Orders	- / -	- / -	- / -	- / 0.326	- / -	- / 0.326	- / 0.379	- / 0.478	- / 0.478	- / 0.428	- / 0.437	- / 2.526
ICS-Labor	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 1.013	- / 1.043	- / 1.074	- / 1.107	- / 4.237
PMA - Contractor Services	- / -	- / -	- / -	- / 1.125	- / -	- / 1.125	- / 1.148	- / 1.170	- / 1.194	- / 1.217	- / 1.242	- / 7.096
Subtotal: Support	*- / -*	*- / -*	*- / -*	*- / 1.451*	*- / -*	*- / 1.451*	*- / 1.527*	*- / 2.661*	*- / 2.715*	*- / 2.719*	*- / 2.786*	*- / 13.859*
Installation												
Subtotal: Installation	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*
Total												
Total Cost (Procurement + Support + Installation)	**0.000**	**0.000**	**0.000**	**10.423**	**0.000**	**10.423**	**11.447**	**14.128**	**14.537**	**12.920**	**13.239**	**76.694**

Exhibit P-3a, Individual Modification: PB 2020 Air Force		Date: February 2019
Appropriation / Budget Activity / Budget Sub Activity: 3010F / 05 / 5	**P-1 Line Item Number / Title:** E00300 / E-3	**Modification Number / Title:** 50002 / Communication Networking Upgrade (CNU)

ID Code (A=Service Ready, B=Not Service Ready) : B	**MDAP/MAIS Code:**

Modification Item 1 of 1: CNU

Manufacturer Information

Manufacturer Name: TBD	Manufacturer Location: TBD
Administrative Leadtime *(in Months)*: 3	Production Leadtime *(in Months)*: 12

Dates	FY 2018	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024
Contract Dates			May 2020	May 2021	May 2022	May 2023	May 2024
Delivery Dates			May 2021	May 2022	May 2023	May 2024	May 2025

Installation Information

Method of Implementation (Organic): Org/Intermediate	**Installation Quantity:** 30

Exhibit P-3a, Individual Modification: PB 2020 Air Force		Date: February 2019
Appropriation / Budget Activity / Budget Sub Activity: 3010F / 05 / 5	**P-1 Line Item Number / Title:** E00300 / E-3	**Modification Number / Title:** 9709 / E-3 DRAGON
ID Code (A=Service Ready, B=Not Service Ready) : B	**MDAP/MAIS Code:**	

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 *(Units in Each)*	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost *($ in Millions)*	31.402	91.324	91.058	94.770	0.000	94.770	117.312	160.300	220.011	252.837	121.223	1,180.237
Less PY Advance Procurement *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) *($ in Millions)*	31.402	91.324	91.058	94.770	0.000	94.770	117.312	160.300	220.011	252.837	121.223	1,180.237
Plus CY Advance Procurement *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Total Obligation Authority *($ in Millions)*	**31.402**	**91.324**	**91.058**	**94.770**	**0.000**	**94.770**	**117.312**	**160.300**	**220.011**	**252.837**	**121.223**	**1,180.237**
(The following Resource Summary rows are for informational purposes only. The corresponding budget requests are documented elsewhere.)												
Initial Spares *($ in Millions)*	-	11.828	11.651	10.448	-	10.448	10.631	-	-	-	-	44.558
Gross/Weapon System Unit Cost *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-

Description:

E-3 DMS Replacement of Avionics for Global Operations and Navigation (DRAGON): DRAGON completes the Federal Aviation Administration (FAA), International Civil Aviation Organization (ICAO), and European Organization for the Safety of Air Navigation (EUROCONTROL) air traffic control mandated safety of flight capabilities. This program will provide the E-3 fleet with the flight instruments and other avionics for the Required Navigation Performance (RNP), and the surveillance and communication capabilities necessary to maintain continued critical unrestricted access to global airspace. Non-compliance will result in airspace restrictions and denials that will impact AWACS ability to support worldwide responses to situations requiring immediate on-scene BM/C2. DRAGON replaces the existing Diminishing Manufacturing Sources (DMS) Global Positioning System (GPS) Integrated Navigation System (GINS) with a modern Flight Management System (FMS) that will accommodate new capabilities including Mode 5 Identification Friend or Foe (IFF) and Joint Mission Planning System (JMPS). Also included as part of the modification is the addition of data link communications, voice and data link digital radios, and improved visual displays. Additionally, the acquisition of DRAGON flight simulators also contains DMS efforts which include removal of end-of-life software/hardware within simulator systems and move to a modular, common open system architecture that is sustainable and cyber resilient. The simulator effort also implements requirements and standards defined under the Simulator Common Architecture Requirements and Standards (SCARS) initiative. Emphasis on employment of Commercial-Off-The-Shelf (COTS) avionics is expected to lower cost, reduce the tech refresh cycle, and enhance life cycle management. DRAGON will provide development of support and test equipment needed for DRAGON production; DRAGON will also provide DMS and Interim Contractor Support (ICS) needed to support the DRAGON modified aircraft. The Engineering and Manufacturing Development (EMD) phase of DRAGON was executed as a Cooperative Program between the US and NATO. Production will be executed as a USAF only effort.

Milestone/Development Status

FY11-FY21 RDT&E funds support integration of the DRAGON requirements/flight simulator. EMD Contract Award: November 2011 Milestone B Approval: November 2011 Milestone C Approval: July 2017 LRIP Contract Award: 29 June 2017 Anticipated FRP Contract Award: July 2020

Secondary Distribution		FY 2018	FY 2019	FY 2020 Base	FY 2020 OCO	FY 2020 Total	FY 2021	FY 2022	FY 2023	FY 2024
AF	Quantity	-	-	-	-	-	-	-	-	-
	Total Obligation Authority	91.324	91.058	94.770	-	94.770	117.312	160.300	220.011	252.837
Total: Secondary Distribution	**Quantity**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**
	Total Obligation Authority	**91.324**	**91.058**	**94.770**	**0.000**	**94.770**	**117.312**	**160.300**	**220.011**	**252.837**

Exhibit P-3a, Individual Modification: PB 2020 Air Force		Date: February 2019
Appropriation / Budget Activity / Budget Sub Activity: 3010F / 05 / 5	**P-1 Line Item Number / Title:** E00300 / E-3	**Modification Number / Title:** 9709 / E-3 DRAGON
ID Code (A=Service Ready, B=Not Service Ready) : B	**MDAP/MAIS Code:**	
Models of Systems Affected: E-3B, E-3C	**Modification Type:** Capability Improvement	**Related RDT&E PEs:** 0207417F

Financial Plan	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
	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)*
RDT&E PE #												
0207417F	- / 373.449	- / 7.762	- / 9.400	- / 2.000	- / -	- / 2.000	- / 2.200	- / -	- / -	- / -	- / -	- / 394.811
Procurement												
Modification Item 1 of 1: DRAGON												
A Kits												
Recurring												
DRAGON:INSTALL KITS Group A (Active)	1 / 3.914	4 / 13.204	4 / 13.306	4 / 12.948	- / -	4 / 12.948	4 / 12.935	4 / 12.760	4 / 12.871	5 / 14.467	- / 14.741	30 / 111.146
Subtotal: Recurring	*- / 3.914*	*- / 13.204*	*- / 13.306*	*- / 12.948*	*- / -*	*- / 12.948*	*- / 12.935*	*- / 12.760*	*- / 12.871*	*- / 14.467*	*- / 14.741*	*- / 111.146*
B Kits												
Recurring												
DRAGON:EQUIPMENT Group B (Active)	1 / 10.380	4 / 28.690	4 / 30.030	4 / 28.980	- / -	4 / 28.980	4 / 28.980	4 / 28.140	4 / 28.470	5 / 33.710	- / 19.310	30 / 236.690
Subtotal: Recurring	*- / 10.380*	*- / 28.690*	*- / 30.030*	*- / 28.980*	*- / -*	*- / 28.980*	*- / 28.980*	*- / 28.140*	*- / 28.470*	*- / 33.710*	*- / 19.310*	*- / 236.690*
Subtotal: DRAGON	*- / 14.294*	*- / 41.894*	*- / 43.336*	*- / 41.928*	*- / -*	*- / 41.928*	*- / 41.915*	*- / 40.900*	*- / 41.341*	*- / 48.177*	*- / 34.051*	*- / 347.836*
Subtotal: Procurement, All Modification Items	*- / 14.294*	*- / 41.894*	*- / 43.336*	*- / 41.928*	*- / -*	*- / 41.928*	*- / 41.915*	*- / 40.900*	*- / 41.341*	*- / 48.177*	*- / 34.051*	*- / 347.836*
Support *(All Modification Items)*												
GROUP A: TOTAL NONRECURRING	- / -	- / 27.759	- / 20.401	- / 15.035	- / -	- / 15.035	- / 34.952	- / 76.236	- / 140.113	- / 161.039	- / -	- / 475.535
GROUP B: TOTAL NONRECURRING	- / 13.668	- / 5.434	- / 1.350	- / 1.377	- / -	- / 1.377	- / 1.404	- / 0.000	- / -	- / -	- / -	- / 23.233
Change Orders	- / 1.743	- / 11.167	- / 13.093	- / 13.841	- / -	- / 13.841	- / 13.729	- / 12.976	- / 12.633	- / 12.098	- / 23.248	- / 114.528
Data	- / -	- / -	- / -	- / -	- / -	- / -	- / 0.000	- / 0.000	- / -	- / -	- / -	- / 0.000
SIM/TRAINER	- / -	- / -	0 / 0.100	0 / 0.200	- / -	0 / 0.200	0 / 9.800	- / -	- / -	- / -	- / -	0 / 10.100
ICS-Labor	- / -	- / -	- / 0.205	- / 0.630	- / -	- / 0.630	- / 1.068	- / 1.396	- / 1.436	- / 1.469	- / 1.494	- / 7.698
PMA - Contractor Services	- / 0.589	- / 2.363	- / 2.470	- / 2.520	- / -	- / 2.520	- / 2.570	- / 2.621	- / 2.674	- / 2.727	- / 8.513	- / 27.047
OTHER GOVT	- / 0.764	- / 1.239	- / 0.925	- / 0.939	- / -	- / 0.939	- / 0.954	- / 0.969	- / 0.984	- / 0.999	- / 1.427	- / 9.200
PMA - Other Gov't Costs	- / 0.344	- / 1.468	- / 1.678	- / 1.913	- / -	- / 1.913	- / 1.732	- / 2.045	- / 1.933	- / 2.235	- / 2.849	- / 16.197
Subtotal: Support	*- / 17.108*	*- / 49.430*	*0 / 40.222*	*0 / 36.455*	*- / -*	*0 / 36.455*	*0 / 66.209*	*- / 96.243*	*- / 159.773*	*- / 180.567*	*- / 37.531*	*0 / 683.538*
Installation												
Modification Item 1 of 1: DRAGON	- / -	- / -	1 / 7.500	3 / 16.387	- / -	3 / 16.387	2 / 9.188	5 / 23.157	4 / 18.897	5 / 24.093	10 / 49.641	30 / 148.863
Subtotal: Installation	*- / -*	*- / -*	*1 / 7.500*	*3 / 16.387*	*- / -*	*3 / 16.387*	*2 / 9.188*	*5 / 23.157*	*4 / 18.897*	*5 / 24.093*	*10 / 49.641*	*30 / 148.863*
Total												
Total Cost (Procurement + Support + Installation)	**31.402**	**91.324**	**91.058**	**94.770**	**0.000**	**94.770**	**117.312**	**160.300**	**220.011**	**252.837**	**121.223**	**1,180.237**

Exhibit P-3a, Individual Modification: PB 2020 Air Force		Date: February 2019
Appropriation / Budget Activity / Budget Sub Activity: 3010F / 05 / 5	**P-1 Line Item Number / Title:** E00300 / E-3	**Modification Number / Title:** 9709 / E-3 DRAGON
ID Code (A=Service Ready, B=Not Service Ready) : B	**MDAP/MAIS Code:**	

Modification Item 1 of 1: DRAGON

Manufacturer Information

Manufacturer Name: Boeing	Manufacturer Location: Oklahoma City
Administrative Leadtime *(in Months)*: 3	Production Leadtime *(in Months)*: 18

Dates	FY 2018	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024
Contract Dates	Jan 2018	Jan 2020	Jan 2021	Jan 2021	Jan 2022	Jan 2023	Jan 2024
Delivery Dates	Jul 2019	Jul 2021	Jul 2022	Jul 2022	Jul 2023	Jul 2024	Jul 2025

Installation Information

Method of Implementation: Depot

Installation Cost	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
	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)*
Prior Years	- / -	- / -	1 / 7.500	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	1 / 7.500
FY 2018	- / -	- / -	- / -	3 / 16.387	- / -	3 / 16.387	1 / 4.594	- / -	- / -	- / -	- / -	4 / 20.981
FY 2019	- / -	- / -	- / -	- / -	- / -	- / -	1 / 4.594	3 / 13.893	- / -	- / -	- / -	4 / 18.487
FY 2020	- / -	- / -	- / -	- / -	- / -	- / -	- / -	2 / 9.264	2 / 9.448	- / -	- / -	4 / 18.712
FY 2021	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	2 / 9.449	2 / 9.638	- / -	4 / 19.087
FY 2022	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	3 / 14.455	1 / 4.915	4 / 19.370
FY 2023	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	4 / 19.660	4 / 19.660
FY 2024	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	5 / 25.066	5 / 25.066
To Complete	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
Total	- / -	- / -	1 / 7.500	3 / 16.387	- / -	3 / 16.387	2 / 9.188	5 / 23.157	4 / 18.897	5 / 24.093	10 / 49.641	30 / 148.863

Installation Schedule

		FY 2018				FY 2019				FY 2020				FY 2021				FY 2022				FY 2023				FY 2024					
	PYS	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	TC	Tot
In	0	-	-	-	-	-	-	1	-	-	1	1	1	1	-	-	2	1	1	1	2	1	1	1	-	2	1	1	2	9	30
Out	0	-	-	-	-	-	-	1	-	-	1	1	1	1	-	-	2	1	1	1	2	1	1	1	-	2	1	1	2	9	30

Exhibit P-3a, Individual Modification: PB 2020 Air Force		Date: February 2019
Appropriation / Budget Activity / Budget Sub Activity: 3010F / 05 / 5	**P-1 Line Item Number / Title:** E00300 / E-3	**Modification Number / Title:** 9718 / IP-enabled Capability (IPEC)
ID Code (A=Service Ready, B=Not Service Ready) : B	**MDAP/MAIS Code:**	

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 *(Units in Each)*	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost *($ in Millions)*	53.887	23.130	21.009	16.411	0.000	16.411	16.360	7.392	3.890	0.000	-	142.079
Less PY Advance Procurement *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) *($ in Millions)*	53.887	23.130	21.009	16.411	0.000	16.411	16.360	7.392	3.890	0.000	-	142.079
Plus CY Advance Procurement *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Total Obligation Authority *($ in Millions)*	**53.887**	**23.130**	**21.009**	**16.411**	**0.000**	**16.411**	**16.360**	**7.392**	**3.890**	**0.000**	**-**	**142.079**
(The following Resource Summary rows are for informational purposes only. The corresponding budget requests are documented elsewhere.)												
Initial Spares *($ in Millions)*	-	-	-	3.204	-	3.204	-	-	-	-	-	3.204
Gross/Weapon System Unit Cost *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-

Description:

Internet Protocol Enabled Communication (IPEC): IPEC provides the E-3G aircraft with a medium-bandwidth IP communications capability to connect to the Global Information Grid (GIG) and will support net-centric operations/warfare. IPEC provides a reliable IP-Enabled communication capability to support a shortened digitized kill-chain of time-sensitive targets. The modification provides a permanent INMARSAT-based IP-Enabled communications package supporting warfighter identified requirements for increased bandwidth SIPRNET and multi-domain networks. This modification has related RDT&E funding in PE 0207417F.

Milestone/Development Status

EMD contract awarded 21 September 2015.

Limited Production Contract awarded 4 November 2016. UCA awarded 30 November 2017; Full Rate award projected 28 February 2019.

Out of 30 Production aircraft, 10 IPEC mods have been completed to date.

Secondary Distribution		FY 2018	FY 2019	FY 2020 Base	FY 2020 OCO	FY 2020 Total	FY 2021	FY 2022	FY 2023	FY 2024
AF	Quantity	-	-	-	-	-	-	-	-	-
	Total Obligation Authority	23.130	21.009	16.411	-	16.411	16.360	7.392	3.890	-
Total: Secondary Distribution	**Quantity**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**
	Total Obligation Authority	**23.130**	**21.009**	**16.411**	**0.000**	**16.411**	**16.360**	**7.392**	**3.890**	**0.000**

Exhibit P-3a, Individual Modification: PB 2020 Air Force		Date: February 2019
Appropriation / Budget Activity / Budget Sub Activity: 3010F / 05 / 5	**P-1 Line Item Number / Title:** E00300 / E-3	**Modification Number / Title:** 9718 / IP-enabled Capability (IPEC)
ID Code (A=Service Ready, B=Not Service Ready) : B	**MDAP/MAIS Code:**	
Models of Systems Affected: E-3	**Modification Type:** Capability Improvement	**Related RDT&E PEs:** 0207417F

Financial Plan	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
	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)*
RDT&E PE #												
0207417F	- / 56.659	- / 9.359	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 66.018
Procurement												
Modification Item 1 of 1: IP Enabled Communication												
A Kits												
Recurring												
IP Enabled Communication:INSTALL KITS Group A (Active)	13 / 16.948	10 / 6.884	- / -	4 / 3.887	- / -	4 / 3.887	1 / 1.350	2 / 1.994	- / -	- / -	- / -	30 / 31.063
Subtotal: Recurring	*- / 16.948*	*- / 6.884*	*- / -*	*- / 3.887*	*- / -*	*- / 3.887*	*- / 1.350*	*- / 1.994*	*- / -*	*- / -*	*- / -*	*- / 31.063*
B Kits												
Recurring												
IP Enabled Communication:EQUIPMENT Group B (Active)	13 / 21.106	10 / 10.670	- / -	4 / 5.899	- / -	4 / 5.899	1 / 1.350	2 / 2.813	- / -	- / -	- / -	30 / 41.838
Subtotal: Recurring	*- / 21.106*	*- / 10.670*	*- / -*	*- / 5.899*	*- / -*	*- / 5.899*	*- / 1.350*	*- / 2.813*	*- / -*	*- / -*	*- / -*	*- / 41.838*
Subtotal: IP Enabled Communication	*- / 38.054*	*- / 17.554*	*- / -*	*- / 9.786*	*- / -*	*- / 9.786*	*- / 2.700*	*- / 4.807*	*- / -*	*- / -*	*- / -*	*- / 72.901*
Subtotal: Procurement, All Modification Items	*- / 38.054*	*- / 17.554*	*- / -*	*- / 9.786*	*- / -*	*- / 9.786*	*- / 2.700*	*- / 4.807*	*- / -*	*- / -*	*- / -*	*- / 72.901*
Support *(All Modification Items)*												
GROUP B: TOTAL NONRECURRING	- / 1.068	- / 0.878	- / 2.026	- / 2.548	- / -	- / 2.548	- / 5.699	- / 1.421	- / 2.868	- / -	- / -	- / 16.508
GROUP A: TOTAL NONRECURRING	- / 10.113	- / -	- / 15.180	- / -	- / -	- / -	- / 3.853	- / -	- / -	- / -	- / -	- / 29.146
Change Orders	- / 2.266	- / 0.998	- / 0.364	- / 0.675	- / -	- / 0.675	- / 0.675	- / 0.233	- / 0.072	- / -	- / -	- / 5.283
ICS-Labor	- / 1.512	- / 1.688	- / 2.566	- / 2.512	- / -	- / 2.512	- / 2.525	- / 0.005	- / 0.006	- / -	- / -	- / 10.814
PMA - Contractor Services	- / 0.874	- / 2.012	- / 0.873	- / 0.890	- / -	- / 0.890	- / 0.908	- / 0.926	- / 0.944	- / -	- / -	- / 7.427
Subtotal: Support	*- / 15.833*	*- / 5.576*	*- / 21.009*	*- / 6.625*	*- / -*	*- / 6.625*	*- / 13.660*	*- / 2.585*	*- / 3.890*	*- / -*	*- / -*	*- / 69.178*
Installation												
Subtotal: Installation	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*
Total												
Total Cost (Procurement + Support + Installation)	**53.887**	**23.130**	**21.009**	**16.411**	**0.000**	**16.411**	**16.360**	**7.392**	**3.890**	**0.000**	**-**	**142.079**

Exhibit P-3a, Individual Modification: PB 2020 Air Force		Date: February 2019
Appropriation / Budget Activity / Budget Sub Activity: 3010F / 05 / 5	**P-1 Line Item Number / Title:** E00300 / E-3	**Modification Number / Title:** 9718 / IP-enabled Capability (IPEC)
ID Code (A=Service Ready, B=Not Service Ready) : B	**MDAP/MAIS Code:**	

Modification Item 1 of 1: IP Enabled Communication

Manufacturer Information

Manufacturer Name: Boeing	Manufacturer Location: Oklahoma City
Administrative Leadtime *(in Months)*: 1	Production Leadtime *(in Months)*: 16

Dates	FY 2018	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024
Contract Dates	Nov 2017		Nov 2019	Nov 2020	Nov 2021		
Delivery Dates	Mar 2019		Mar 2021	Mar 2022	Mar 2023		

Installation Information

Method of Implementation (Organic): Org/Intermediate	**Installation Quantity:** 30

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Exhibit P-40, Budget Line Item Justification: PB 2020 Air Force	Date: February 2019
Appropriation / Budget Activity / Budget Sub Activity: 3010F: Aircraft Procurement, Air Force / BA 05: Modification of Inservice Aircraft / BSA 5: Other Aircraft	**P-1 Line Item Number / Title:** E00400 / E-4

ID Code (A=Service Ready, B=Not Service Ready): B	**Program Elements for Code B Items:** 0302015F	**Other Related Program Elements:** 0101316F, 0302015F
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 *(Units in Each)*	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost *($ in Millions)*	168.726	25.914	67.858	58.477	-	58.477	73.905	52.293	38.868	41.213	0.000	527.254
Less PY Advance Procurement *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) *($ in Millions)*	168.726	25.914	67.858	58.477	-	58.477	73.905	52.293	38.868	41.213	0.000	527.254
Plus CY Advance Procurement *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Total Obligation Authority *($ in Millions)*	**168.726**	**25.914**	**67.858**	**58.477**	**-**	**58.477**	**73.905**	**52.293**	**38.868**	**41.213**	**0.000**	**527.254**
(The following Resource Summary rows are for informational purposes only. The corresponding budget requests are documented elsewhere.)												
Initial Spares *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Flyaway Unit Cost *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Unit Cost *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-

Description:

This line item funds modifications to the four (4) aircraft E-4B fleet. The four (4) engine E-4B is a highly modified Boeing 747 Model 200 (747-200) airframe which supports the National Airborne Operations Center (NAOC) mission. NAOC provides national civilian and military leadership with a worldwide, survivable, and enduring communications node of the National Military Command System (NMCS). The modifications listed within this document provide updates to maintain Federal Aviation Agency (FAA) airframe flight worthiness certification and provide additional capabilities to the aircraft flight control, navigation and communication systems, as well as the primary mission equipment to ensure the E-4B is able to execute its various missions. These modifications also enhance operational capability while improving flight safety, reliability, and maintainability.

The current Boeing estimated design service life of the Boeing 747-200 E-4B airframe is 115K hours and 30K cycles. It is estimated this limit will be reached by 2033. However, as the aircraft age, depot periods will need to be extended due to maintenance issues associated with an aging fleet, thus limiting the E-4B's ability to support the NAOC mission due to aircraft non-availability. The age of the four (4) E-4B aircraft fleet presents Diminishing Manufacturing Sources (DMS) issues involving primary mission equipment, and to a lesser extent the airframe. Airframe DMS and issues associated with the non-availability of FAA certified parts are expected to increase due to the dwindling world-wide number of Boeing 747-200 aircraft because of the the international commercial airline industry removing aging aircraft from their inventories. Funding also supports emerging modification requirements, Government travel, Advisory and Assistance Services Contract (A&ASC) & Federally Funded Research and Development Contract (FFRDC) support and equipment as required.

This funding may include emerging modification requirements to support PMA, A&AS, equipment and other government cost.

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.

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

Appropriation / Budget Activity / Budget Sub Activity:
3010F: Aircraft Procurement, Air Force / BA 05: Modification of Inservice Aircraft / BSA 5: Other Aircraft

P-1 Line Item Number / Title:
E00400 / E-4

ID Code (A=Service Ready, B=Not Service Ready): B | **Program Elements for Code B Items:** 0302015F | **Other Related Program Elements:** 0101316F, 0302015F

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-40a***	3410 / NPES (NC2AIS) E-4B (Reliability & Maintainability)				- / 2.730	- / -	- / -	- / -	- / -	- / -
P-40a***	3411 / Survivable SHF (Capability Improvement)				- / -	- / -	- / -	- / -	- / -	- / -
P-40a***	4406A / SHF Modernization (Capability Improvement)				- / 109.088	- / -	- / 11.000	- / -	- / -	- / -
P-40a***	4406B / AEHF Compatible Terminal/PNVC (Capability Improvement)				- / 0.017	- / -	- / 8.107	- / 3.472	- / -	- / 3.472
P-40a***	9709F / CNS/ATM(ADS-B OUT) (Capability Improvement)				- / 5.118	- / 4.860	- / 0.000	- / 0.000	- / -	- / 0.000
P-40a***	99999X / Low Cost Modifications (Reliability & Maintainability)				- / 8.412	- / 1.938	- / 1.990	- / 1.990	- / -	- / 1.990
P-3a	4380 / MUOS (Capability Improvement)		B		- / -	- / -	- / 0.000	- / 5.700	- / 0.000	- / 5.700
P-3a	4409 / Low Frequency Transmit System (LFTS) (Capability Improvement)		B		- / 21.100	- / 15.854	- / 41.281	- / 41.748	- / 0.000	- / 41.748
P-3a	1 / SERVICE BULLETINS (Reliability & Maintainability)		B		- / 22.261	- / 3.262	- / 5.480	- / 5.567	- / 0.000	- / 5.567
P-40	**Total Gross/Weapon System Cost**				**- / 168.726**	**- / 25.914**	**- / 67.858**	**- / 58.477**	**- / -**	**- / 58.477**

Exhibits Schedule					FY 2021	FY 2022	FY 2023	FY 2024	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-40a***	3410 / NPES (NC2AIS) E-4B (Reliability & Maintainability)				- / -	- / -	- / -	- / -	- / -	- / 2.730
P-40a***	3411 / Survivable SHF (Capability Improvement)				- / 29.749	- / 29.749	- / 29.754	- / 30.290	- / -	- / 119.542
P-40a***	4406A / SHF Modernization (Capability Improvement)				- / -	- / -	- / -	- / -	- / -	- / 120.088
P-40a***	4406B / AEHF Compatible Terminal/PNVC (Capability Improvement)				- / 13.991	- / 14.651	- / 1.078	- / 2.743	- / -	- / 44.059
P-40a***	9709F / CNS/ATM(ADS-B OUT) (Capability Improvement)				- / -	- / -	- / -	- / -	- / -	- / 9.978
P-40a***	99999X / Low Cost Modifications (Reliability & Maintainability)				- / 1.990	- / 1.990	- / 1.990	- / 1.990	- / -	- / 22.290
P-3a	4380 / MUOS (Capability Improvement)		B		- / 2.400	- / 0.000	- / 0.000	- / 0.000	- / -	- / 8.100
P-3a	4409 / Low Frequency Transmit System (LFTS) (Capability Improvement)		B		- / 20.046	- / 0.000	- / 0.000	- / 0.000	- / 0.000	- / 140.029
P-3a	1 / SERVICE BULLETINS (Reliability & Maintainability)		B		- / 5.729	- / 5.903	- / 6.046	- / 6.190	- / 0.000	- / 60.438
P-40	**Total Gross/Weapon System Cost**				**- / 73.905**	**- / 52.293**	**- / 38.868**	**- / 41.213**	**- / 0.000**	**- / 527.254**

*** Although this is an Exhibit P-40a item, the actual exhibit is not included since all of the required information for this item is already being shown here.

*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:
Where applicable, justification for individual modifications is provided in the P-3A exhibits.

Exhibit P-3a, Individual Modification: PB 2020 Air Force		Date: February 2019
Appropriation / Budget Activity / Budget Sub Activity: 3010F / 05 / 5	**P-1 Line Item Number / Title:** E00400 / E-4	**Modification Number / Title:** 4380 / MUOS
ID Code (A=Service Ready, B=Not Service Ready) : B	**MDAP/MAIS Code:**	

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 *(Units in Each)*	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost *($ in Millions)*	-	-	0.000	5.700	0.000	5.700	2.400	0.000	0.000	0.000	-	8.100
Less PY Advance Procurement *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) *($ in Millions)*	-	-	0.000	5.700	0.000	5.700	2.400	0.000	0.000	0.000	-	8.100
Plus CY Advance Procurement *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Total Obligation Authority *($ in Millions)*	**-**	**-**	**0.000**	**5.700**	**0.000**	**5.700**	**2.400**	**0.000**	**0.000**	**0.000**	**-**	**8.100**
(The following Resource Summary rows are for informational purposes only. The corresponding budget requests are documented elsewhere.)												
Initial Spares *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Unit Cost *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-

Description:

This program, P-3A Mod 4380, MUOS, is a new start.
The MUOS program upgrades the E-4B's Ultra-High Frequency Radio transmitters to be MUOS capable to meet E-4B Capability Development Document (CDD) and CJCSI 6251_01D requirements. MUOS provides securable data and full duplex voice communications while simultaneously monitoring a second frequency. The MUOS upgrade will provide interoperability with MUOS waveforms for voice and data communications and with other nuclear and national C2 centers and aircraft by replacing the legacy USC-42 UHF SATCOM radios with a MUOS capable radio. Expected modifications include, but are not limited to, component and sub-system upgrades, replacement of the current UHF system, and installation on all (4) E-4Bs. The MUOS program has associated Research Development Test and Evaluation funding (PE 0302015F) that will modify one prototype aircraft. APAF will fund the remaining three aircraft.

This funding may include emerging modification requirements to support PMA, A&AS, equipment and other government cost.

Milestone/Development Status

FY20 production new start.

Exhibit P-3a, Individual Modification: PB 2020 Air Force		Date: February 2019
Appropriation / Budget Activity / Budget Sub Activity: 3010F / 05 / 5	P-1 Line Item Number / Title: E00400 / E-4	Modification Number / Title: 4380 / MUOS
ID Code (A=Service Ready, B=Not Service Ready) : B	MDAP/MAIS Code:	
Models of Systems Affected: E-4	Modification Type: Capability Improvement	Related RDT&E PEs: 0302015F

Financial Plan	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
	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)*
RDT&E PE #												
0302015F	- / -	- / -	- / 5.757	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 5.757
Procurement												
Modification Item 1 of 1: MUOS												
A Kits												
Recurring												
MUOS:INSTALL KITS Group A (Active)	- / -	- / -	- / -	3 / 0.663	- / -	3 / 0.663	- / -	- / -	- / -	- / -	- / -	3 / 0.663
Subtotal: Recurring	- / -	- / -	- / -	- / 0.663	- / -	- / 0.663	- / -	- / -	- / -	- / -	- / -	- / 0.663
B Kits												
Recurring												
MUOS:EQUIPMENT Group B (Active)	- / -	- / -	- / -	- / 1.980	- / -	- / 1.980	- / -	- / -	- / -	- / -	- / -	- / 1.980
Subtotal: Recurring	- / -	- / -	- / -	- / 1.980	- / -	- / 1.980	- / -	- / -	- / -	- / -	- / -	- / 1.980
Subtotal: MUOS	- / -	- / -	- / -	- / 2.643	- / -	- / 2.643	- / -	- / -	- / -	- / -	- / -	- / 2.643
Subtotal: Procurement, All Modification Items	- / -	- / -	- / -	- / 2.643	- / -	- / 2.643	- / -	- / -	- / -	- / -	- / -	- / 2.643
Support *(All Modification Items)*												
GROUP A: TOTAL NONRECURRING	- / -	- / -	- / 0.000	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 0.000
PMA - Other Gov't Costs	- / -	- / -	- / -	- / 1.357	- / -	- / 1.357	- / 0.958	- / -	- / -	- / -	- / -	- / 2.315
Data	- / -	- / -	- / -	- / 1.000	- / -	- / 1.000	- / 0.000	- / -	- / -	- / -	- / -	- / 1.000
Subtotal: Support	- / -	- / -	- / 0.000	- / 2.357	- / -	- / 2.357	- / 0.958	- / -	- / -	- / -	- / -	- / 3.315
Installation												
Modification Item 1 of 1: MUOS	- / -	- / -	- / -	1 / 0.700	- / -	1 / 0.700	2 / 1.442	- / -	- / -	- / -	- / -	3 / 2.142
Subtotal: Installation	- / -	- / -	- / -	1 / 0.700	- / -	1 / 0.700	2 / 1.442	- / -	- / -	- / -	- / -	3 / 2.142
Total												
Total Cost (Procurement + Support + Installation)	-	-	0.000	5.700	0.000	5.700	2.400	0.000	0.000	0.000	-	8.100

Exhibit P-3a, Individual Modification: PB 2020 Air Force		Date: February 2019
Appropriation / Budget Activity / Budget Sub Activity: 3010F / 05 / 5	**P-1 Line Item Number / Title:** E00400 / E-4	**Modification Number / Title:** 4380 / MUOS
ID Code (A=Service Ready, B=Not Service Ready) : B	**MDAP/MAIS Code:**	

Modification Item 1 of 1: MUOS

Manufacturer Information

Manufacturer Name: Boeing	Manufacturer Location: Oklahoma City
Administrative Leadtime *(in Months)*: 3	Production Leadtime *(in Months)*: 6

Dates	FY 2018	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024
Contract Dates			Jan 2020				
Delivery Dates			Jul 2020				

Installation Information

Method of Implementation: Contract Field Team

Installation Cost	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
	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)*
Prior Years	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2018	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2019	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2020	- / -	- / -	- / -	1 / 0.700	- / -	1 / 0.700	2 / 1.442	- / -	- / -	- / -	- / -	3 / 2.142
FY 2021	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2022	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2023	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2024	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
To Complete	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
Total	- / -	- / -	- / -	1 / 0.700	- / -	1 / 0.700	2 / 1.442	- / -	- / -	- / -	- / -	3 / 2.142

Installation Schedule

	PYS	FY 2018				FY 2019				FY 2020				FY 2021				FY 2022				FY 2023				FY 2024				TC	Tot
		Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4		
In	0	-	-	-	-	-	-	-	-	-	-	-	1	1	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0	3
Out	0	-	-	-	-	-	-	-	-	-	-	-	-	1	1	1	-	-	-	-	-	-	-	-	-	-	-	-	-	0	3

Exhibit P-3a, Individual Modification: PB 2020 Air Force		Date: February 2019
Appropriation / Budget Activity / Budget Sub Activity: 3010F / 05 / 5	**P-1 Line Item Number / Title:** E00400 / E-4	**Modification Number / Title:** 4409 / Low Frequency Transmit System (LFTS)
ID Code (A=Service Ready, B=Not Service Ready) : B	**MDAP/MAIS Code:**	

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 *(Units in Each)*	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost *($ in Millions)*	21.100	15.854	41.281	41.748	0.000	41.748	20.046	0.000	0.000	0.000	0.000	140.029
Less PY Advance Procurement *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) *($ in Millions)*	21.100	15.854	41.281	41.748	0.000	41.748	20.046	0.000	0.000	0.000	0.000	140.029
Plus CY Advance Procurement *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Total Obligation Authority *($ in Millions)*	**21.100**	**15.854**	**41.281**	**41.748**	**0.000**	**41.748**	**20.046**	**0.000**	**0.000**	**0.000**	**0.000**	**140.029**
(The following Resource Summary rows are for informational purposes only. The corresponding budget requests are documented elsewhere.)												
Initial Spares *($ in Millions)*	5.021	0.647	0.734	-	-	-	-	-	-	-	-	6.402
Gross/Weapon System Unit Cost *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-

Description:

The Low Frequency Transmit System (LFTS) program will replace the current Very Low Frequency/Low Frequency (VLF/LF) Transmit system on the four aircraft E-4B fleet. The current system has been on the E-4B for over 35 years and is unsustainable. System replacement is required in order to meet existing Presidential Policy Directive (PPD)-35 requirements and ensure there is constant and consistent connectivity between National Leadership and Military Forces in all phases on conflict. The E-4B National Airborne Operations Center (NAOC) Capability Development Document (CDD) is the relevant requirements document with the LF requirement revalidated in Oct 2013 for LFTS. The AFROC approved AF1067 is ACC 13-059. LFTS will consist of three primary equipment groups: a Power Amplifier/Coupler (PA/C) group, a Trailing Wire Antenna (TWA) group, and a Control group.

This funding may include emerging modification requirements to support PMA, A&AS, equipment and other government cost.

Milestone/Development Status

Milestone B and the Systems Requirements Review (SRR) occurred in February 2015. The Preliminary Design Review (PDR) completed in October 2015 and the Critical Design Review (CDR) completed in March 2016. FY16 and FY17 RDT&E utilized for the prototype kit. Prototype installation occurred during the Programmed Depot Maintenance (PDM) inducting November 2017 and funded with FY18 and FY19 RDT&E. The first production kit purchased with FY17 procurement funding and installed with FY19 funds due to an 18-month lead-time. The second production kit purchased with FY17 and FY18 funds with installation utilizing FY20 funds. The LFTS Trainer originally planned with FY18 funds, but now funded with FY20 funds. Other efforts will include integration and support activities and logistics planning.

Exhibit P-3a, Individual Modification: PB 2020 Air Force		Date: February 2019
Appropriation / Budget Activity / Budget Sub Activity: 3010F / 05 / 5	**P-1 Line Item Number / Title:** E00400 / E-4	**Modification Number / Title:** 4409 / Low Frequency Transmit System (LFTS)
ID Code (A=Service Ready, B=Not Service Ready) : B	**MDAP/MAIS Code:**	
Models of Systems Affected: E-4B	**Modification Type:** Capability Improvement	**Related RDT&E PEs:** 0302015F

Financial Plan	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
	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)*
RDT&E PE #												
0302015F	1 / 99.878	- / 18.744	- / 25.167	- / 0.000	- / -	- / 0.000	- / -	- / -	- / -	- / -	- / -	1 / 143.789
Procurement												
Modification Item 1 of 1: LFTS Baseline Kit												
A Kits												
Recurring												
LFTS Baseline Kit:INSTALL KITS Group A (Active)	1 / 20.700	1 / 15.454	1 / 17.610	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	3 / 53.764
Subtotal: Recurring	*- / 20.700*	*- / 15.454*	*- / 17.610*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / 53.764*
Subtotal: LFTS Baseline Kit	*- / 20.700*	*- / 15.454*	*- / 17.610*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / 53.764*
Subtotal: Procurement, All Modification Items	*- / 20.700*	*- / 15.454*	*- / 17.610*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / 53.764*
Support *(All Modification Items)*												
SIM/TRAINER	- / -	- / -	- / -	1 / 19.600	- / -	1 / 19.600	- / -	- / -	- / -	- / -	- / -	1 / 19.600
PMA - Other Gov't Costs	- / 0.400	- / 0.400	- / 0.400	- / 0.400	- / -	- / 0.400	- / -	- / -	- / -	- / -	- / -	- / 1.600
Subtotal: Support	*- / 0.400*	*- / 0.400*	*- / 0.400*	*1 / 20.000*	*- / -*	*1 / 20.000*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*1 / 21.200*
Installation												
Modification Item 1 of 1: LFTS Baseline Kit	- / -	- / -	1 / 23.271	1 / 21.748	- / -	1 / 21.748	1 / 20.046	- / -	- / -	- / -	- / -	3 / 65.065
Subtotal: Installation	*- / -*	*- / -*	*1 / 23.271*	*1 / 21.748*	*- / -*	*1 / 21.748*	*1 / 20.046*	*- / -*	*- / -*	*- / -*	*- / -*	*3 / 65.065*
Total												
Total Cost (Procurement + Support + Installation)	**21.100**	**15.854**	**41.281**	**41.748**	**0.000**	**41.748**	**20.046**	**0.000**	**0.000**	**0.000**	**0.000**	**140.029**

Exhibit P-3a, Individual Modification: PB 2020 Air Force		Date: February 2019
Appropriation / Budget Activity / Budget Sub Activity: 3010F / 05 / 5	**P-1 Line Item Number / Title:** E00400 / E-4	**Modification Number / Title:** 4409 / Low Frequency Transmit System (LFTS)

ID Code (A=Service Ready, B=Not Service Ready) : B

MDAP/MAIS Code:

Modification Item 1 of 1: LFTS Baseline Kit

Manufacturer Information

Manufacturer Name: Boeing

Manufacturer Location: Oklahoma City

Administrative Leadtime *(in Months)*: 0

Production Leadtime *(in Months)*: 18

Dates	FY 2018	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024
Contract Dates	Jun 2018	May 2019					
Delivery Dates	Dec 2019	Nov 2020					

Installation Information

Method of Implementation: Depot

Installation Cost	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
	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)*
Prior Years	- / -	- / -	1 / 23.271	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	1 / 23.271
FY 2018	- / -	- / -	- / -	1 / 21.748	- / -	1 / 21.748	- / -	- / -	- / -	- / -	- / -	1 / 21.748
FY 2019	- / -	- / -	- / -	- / -	- / -	- / -	1 / 20.046	- / -	- / -	- / -	- / -	1 / 20.046
FY 2020	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2021	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2022	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2023	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2024	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
To Complete	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
Total	- / -	- / -	1 / 23.271	1 / 21.748	- / -	1 / 21.748	1 / 20.046	- / -	- / -	- / -	- / -	3 / 65.065

Installation Schedule

	PYS	FY 2018				FY 2019				FY 2020				FY 2021				FY 2022				FY 2023				FY 2024				TC	Tot
		Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4		
In	0	-	-	-	-	1	-	-	-	1	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0	3
Out	0	-	-	-	-	-	-	-	-	-	1	-	-	-	1	-	-	-	1	-	-	-	-	-	-	-	-	-	-	0	3

Exhibit P-3a, Individual Modification: PB 2020 Air Force		Date: February 2019
Appropriation / Budget Activity / Budget Sub Activity: 3010F / 05 / 5	**P-1 Line Item Number / Title:** E00400 / E-4	**Modification Number / Title:** 1 / SERVICE BULLETINS
ID Code (A=Service Ready, B=Not Service Ready) : B	**MDAP/MAIS Code:**	

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 *(Units in Each)*	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost *($ in Millions)*	22.261	3.262	5.480	5.567	0.000	5.567	5.729	5.903	6.046	6.190	0.000	60.438
Less PY Advance Procurement *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) *($ in Millions)*	22.261	3.262	5.480	5.567	0.000	5.567	5.729	5.903	6.046	6.190	0.000	60.438
Plus CY Advance Procurement *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Total Obligation Authority *($ in Millions)*	**22.261**	**3.262**	**5.480**	**5.567**	**0.000**	**5.567**	**5.729**	**5.903**	**6.046**	**6.190**	**0.000**	**60.438**
(The following Resource Summary rows are for informational purposes only. The corresponding budget requests are documented elsewhere.)												
Initial Spares *($ in Millions)*	-	0.325	0.327	0.332	-	0.332	0.339	0.346	0.352	0.358	-	2.379
Gross/Weapon System Unit Cost *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-

Description:

Funds are required to complete Service Bulletins in order to maintain compliance with FAA standards and certification. Service Bulletins affect the safety, maintenance, and reliability for the aircraft, engines, and associated mission equipment. The funding profile is driven by Service Bulletin due date and aircraft availability.

Milestone/Development Status

None

Exhibit P-3a, Individual Modification: PB 2020 Air Force		Date: February 2019
Appropriation / Budget Activity / Budget Sub Activity: 3010F / 05 / 5	**P-1 Line Item Number / Title:** E00400 / E-4	**Modification Number / Title:** 1 / SERVICE BULLETINS
ID Code (A=Service Ready, B=Not Service Ready) : B	**MDAP/MAIS Code:**	
Models of Systems Affected: E-4B	**Modification Type:** Reliability & Maintainability	**Related RDT&E PEs:** 0302015F

Financial Plan	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
	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												
Modification Item 1 of 1: Service Support Deliverables												
A Kits												
Recurring												
Service Support Deliverables:INSTALL KITS Group A (Active)	13 / 15.106	1 / 1.601	2 / 2.610	2 / 2.652	- / -	2 / 2.652	2 / 2.734	2 / 2.694	2 / 2.812	2 / 2.941	- / -	26 / 33.150
Subtotal: Recurring	*- / 15.106*	*- / 1.601*	*- / 2.610*	*- / 2.652*	*- / -*	*- / 2.652*	*- / 2.734*	*- / 2.694*	*- / 2.812*	*- / 2.941*	*- / -*	*- / 33.150*
Subtotal: Service Support Deliverables	*- / 15.106*	*- / 1.601*	*- / 2.610*	*- / 2.652*	*- / -*	*- / 2.652*	*- / 2.734*	*- / 2.694*	*- / 2.812*	*- / 2.941*	*- / -*	*- / 33.150*
Subtotal: Procurement, All Modification Items	*- / 15.106*	*- / 1.601*	*- / 2.610*	*- / 2.652*	*- / -*	*- / 2.652*	*- / 2.734*	*- / 2.694*	*- / 2.812*	*- / 2.941*	*- / -*	*- / 33.150*
Support *(All Modification Items)*												
SUPPORT-EQUIP	- / 1.580	- / 0.620	- / 0.030	- / 0.020	- / -	- / 0.020	- / 0.052	- / 0.032	- / 0.044	- / 0.054	- / -	- / 2.432
A&AS	- / 0.414	- / 0.021	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 0.435
Subtotal: Support	*- / 1.994*	*- / 0.641*	*- / 0.030*	*- / 0.020*	*- / -*	*- / 0.020*	*- / 0.052*	*- / 0.032*	*- / 0.044*	*- / 0.054*	*- / -*	*- / 2.867*
Installation												
Modification Item 1 of 1: Service Support Deliverables	13 / 5.161	1 / 1.020	2 / 2.840	2 / 2.895	- / -	2 / 2.895	2 / 2.943	2 / 3.177	2 / 3.190	2 / 3.195	- / -	26 / 24.421
Subtotal: Installation	*13 / 5.161*	*1 / 1.020*	*2 / 2.840*	*2 / 2.895*	*- / -*	*2 / 2.895*	*2 / 2.943*	*2 / 3.177*	*2 / 3.190*	*2 / 3.195*	*- / -*	*26 / 24.421*
Total												
Total Cost (Procurement + Support + Installation)	**22.261**	**3.262**	**5.480**	**5.567**	**0.000**	**5.567**	**5.729**	**5.903**	**6.046**	**6.190**	**0.000**	**60.438**

Exhibit P-3a, Individual Modification: PB 2020 Air Force		Date: February 2019
Appropriation / Budget Activity / Budget Sub Activity: 3010F / 05 / 5	**P-1 Line Item Number / Title:** E00400 / E-4	**Modification Number / Title:** 1 / SERVICE BULLETINS
ID Code (A=Service Ready, B=Not Service Ready) : B	**MDAP/MAIS Code:**	

Modification Item 1 of 1: Service Support Deliverables

Manufacturer Information

Manufacturer Name: Boeing	Manufacturer Location: San Antonio, TX
Administrative Leadtime *(in Months)*: 2	Production Leadtime *(in Months)*: 4

Dates	FY 2018	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024
Contract Dates	Feb 2018	Jan 2019	Jan 2020	Jan 2021	Jan 2022	Jan 2023	
Delivery Dates	Jun 2018	May 2019	May 2020	May 2021	May 2022	May 2023	

Installation Information

Method of Implementation: Depot Field Team

Installation Cost	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
	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)*
Prior Years	13 / 5.161	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	13 / 5.161
FY 2018	- / -	1 / 1.020	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	1 / 1.020
FY 2019	- / -	- / -	2 / 2.840	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	2 / 2.840
FY 2020	- / -	- / -	- / -	2 / 2.895	- / -	2 / 2.895	- / -	- / -	- / -	- / -	- / -	2 / 2.895
FY 2021	- / -	- / -	- / -	- / -	- / -	- / -	2 / 2.943	- / -	- / -	- / -	- / -	2 / 2.943
FY 2022	- / -	- / -	- / -	- / -	- / -	- / -	- / -	2 / 3.177	0 / 0.000	- / -	- / -	2 / 3.177
FY 2023	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	2 / 3.190	- / -	- / -	2 / 3.190
FY 2024	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	2 / 3.195	- / -	2 / 3.195
To Complete	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
Total	13 / 5.161	1 / 1.020	2 / 2.840	2 / 2.895	- / -	2 / 2.895	2 / 2.943	2 / 3.177	2 / 3.190	2 / 3.195	- / -	26 / 24.421

Installation Schedule

		FY 2018				FY 2019				FY 2020				FY 2021				FY 2022				FY 2023				FY 2024					
	PYS	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	TC	Tot
In	13	-	-	1	-	-	-	2	-	-	-	2	-	-	-	2	-	-	-	2	-	-	-	2	-	-	-	2	-	0	26
Out	13	-	-	-	1	-	-	-	2	-	-	-	2	-	-	-	2	-	-	-	2	-	-	-	2	-	-	-	2	0	26

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Exhibit P-40, Budget Line Item Justification: PB 2020 Air Force	Date: February 2019
Appropriation / Budget Activity / Budget Sub Activity: 3010F: Aircraft Procurement, Air Force / BA 05: Modification of Inservice Aircraft / BSA 5: Other Aircraft	**P-1 Line Item Number / Title:** E00800 / E-8

ID Code (A=Service Ready, B=Not Service Ready): B	**Program Elements for Code B Items:** 0207581F	**Other Related Program Elements:** 0207581F
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 *(Units in Each)*	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost *($ in Millions)*	150.628	16.232	37.807	28.778	0.000	28.778	13.883	5.950	0.000	0.000	-	253.278
Less PY Advance Procurement *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) *($ in Millions)*	150.628	16.232	37.807	28.778	0.000	28.778	13.883	5.950	0.000	0.000	-	253.278
Plus CY Advance Procurement *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Total Obligation Authority *($ in Millions)*	**150.628**	**16.232**	**37.807**	**28.778**	**0.000**	**28.778**	**13.883**	**5.950**	**0.000**	**0.000**	**-**	**253.278**
(The following Resource Summary rows are for informational purposes only. The corresponding budget requests are documented elsewhere.)												
Initial Spares *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Flyaway Unit Cost *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Unit Cost *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-

Description:

This line item funds modifications to the E-8C Joint Surveillance Target Attack Radar System (JSTARS) aircraft through FY 2023. JSTARS was developed for ground surveillance, targeting, and battle management. The E-8C is a modified Boeing 707-300 airframe that provides a unique blend of Battle Management Command and Control (BMC2) and Intelligence, Surveillance, and Reconnaissance (ISR). Air Battle Managers onboard the JSTARS use its wide area ground surveillance radar to build situational awareness and identify targets which are passed to strike assets or crossed cued with ISR platforms. The capability to perform this dual mission at the tactical edge both reduces the time to execute the kill chain and improves ISR collections across the range of military options.

There are 16 E-8Cs in the inventory plus 1 E-8A trainer.

Funding may be used to address other general modernization and/or sustainment related procurement requirements such as but not limited to: Diminishing Manufacturing Sources (DMS)/technical refreshes of hardware or software, aviation and security mandates, or safety of flight issues. Funding may also be used to procure items associated with J/UONs or rapid acquisition/fielding requirements in support of combat requirements.

Funding supports increased aircraft availability and deployability requirements to support the FY19 National Defense Authorization Act.

A technical adjustment was requested in FY18 to move FY19 3600 funds to the 3010 Aircraft Procurement Appropriation line. This move is necessary to fund the Common Data Link modification effort.

FY2018 ACCOMPLISHMENTS
- Completed procurement of PME/DM Kits #15 and 16
- Awarded contract for ELT
- Awarded contract for CENTRIXs
- Provided for Program Office Other Direct Costs

FY19 funds cover three efforts:
- Common Data Link (CDL)(In CY FY19 CDL Mod is a new start)

Exhibit P-40, Budget Line Item Justification: PB 2020 Air Force	Date: February 2019
Appropriation / Budget Activity / Budget Sub Activity: 3010F: Aircraft Procurement, Air Force / BA 05: Modification of Inservice Aircraft / BSA 5: Other Aircraft	**P-1 Line Item Number / Title:** E00800 / E-8

ID Code (A=Service Ready, B=Not Service Ready): B	Program Elements for Code B Items: 0207581F	Other Related Program Elements: 0207581F

Line Item MDAP/MAIS Code: N/A

- Funds JSTARS OCO rqmts such as, but not limited to, 360 FOV Camera, SW/OS, and SATCOM in support of war time needs.(FY19 funding totals include $13.0M in Overseas Contingency Operations (OCO)) (A new start in FY19)
- Provide for Program Office Other Direct Costs

FY20 funds cover three efforts:
- Distributed Mission Operations Center (DMOC)
- Continued procurement of CDL
- Provide for Program Office Other Direct Costs

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.

Secondary Distribution		FY 2018	FY 2019	FY 2020 Base	FY 2020 OCO	FY 2020 Total	FY 2021	FY 2022	FY 2023	FY 2024
AF	Quantity	-	-	-	-	-	-	-	-	-
	Total Obligation Authority	9.732	24.807	28.778	-	28.778	13.883	5.950	0.000	-
AFNG	Quantity	-	-	-	-	-	-	-	-	-
	Total Obligation Authority	6.500	13.000	0.000	-	0.000	0.000	-	-	-
Total: Secondary Distribution	**Quantity**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**
	Total Obligation Authority	**16.232**	**37.807**	**28.778**	**-**	**28.778**	**13.883**	**5.950**	**0.000**	**-**

Exhibit P-40, Budget Line Item Justification: PB 2020 Air Force	Date: February 2019
Appropriation / Budget Activity / Budget Sub Activity: 3010F: Aircraft Procurement, Air Force / BA 05: Modification of Inservice Aircraft / BSA 5: Other Aircraft	**P-1 Line Item Number / Title:** E00800 / E-8

ID Code (A=Service Ready, B=Not Service Ready): B	Program Elements for Code B Items: 0207581F	Other Related Program Elements: 0207581F

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-40a***	38198 / Prime Mission Equipment - Diminishing Manufacturing Sources (Other)				- / 150.628	- / 10.732	- / -	- / -	- / -	- / -
P-40a***	38199 / Emergency Locator Transmitter (ELT) (Other)				- / -	- / 3.000	- / -	- / -	- / -	- / -
P-40a***	38201 / COMBINED ENTERPRISE REGIONAL INFORMATION EXHANGE SYSTEM (CENTRIXs) (Other)				- / -	- / 2.500	- / 0.000	- / -	- / -	- / -
P-40a***	38204 / JSTARS OCO Requirements (Other)				- / -	- / -	- / 13.000	- / -	- / -	- / -
P-3a	38202 / Common Data Link (Other)		B		- / -	- / -	- / 24.807	- / 23.778	- / 0.000	- / 23.778
P-3a	38203 / Distributed Mission Ops Center (DMOC) (Other)		B		- / -	- / 0.000	- / 0.000	- / 5.000	- / 0.000	- / 5.000
P-40	**Total Gross/Weapon System Cost**				**- / 150.628**	**- / 16.232**	**- / 37.807**	**- / 28.778**	**- / 0.000**	**- / 28.778**

Exhibits Schedule					FY 2021	FY 2022	FY 2023	FY 2024	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-40a***	38198 / Prime Mission Equipment - Diminishing Manufacturing Sources (Other)				- / -	- / -	- / -	- / -	- / -	- / 161.360
P-40a***	38199 / Emergency Locator Transmitter (ELT) (Other)				- / -	- / -	- / -	- / -	- / -	- / 3.000
P-40a***	38201 / COMBINED ENTERPRISE REGIONAL INFORMATION EXHANGE SYSTEM (CENTRIXs) (Other)				- / -	- / -	- / -	- / -	- / -	- / 2.500
P-40a***	38204 / JSTARS OCO Requirements (Other)				- / -	- / -	- / -	- / -	- / -	- / 13.000
P-3a	38202 / Common Data Link (Other)		B		- / 13.883	- / 5.950	- / 0.000	- / 0.000	- / -	- / 68.418
P-3a	38203 / Distributed Mission Ops Center (DMOC) (Other)		B		- / 0.000	- / 0.000	- / 0.000	- / 0.000	- / -	- / 5.000
P-40	**Total Gross/Weapon System Cost**				**- / 13.883**	**- / 5.950**	**- / 0.000**	**- / 0.000**	**- / -**	**- / 253.278**

*** Although this is an Exhibit P-40a item, the actual exhibit is not included since all of the required information for this item is already being shown here.

*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:
Where applicable, justification for individual modifications is provided in the P-3A exhibits.

Exhibit P-3a, Individual Modification: PB 2020 Air Force		Date: February 2019
Appropriation / Budget Activity / Budget Sub Activity: 3010F / 05 / 5	**P-1 Line Item Number / Title:** E00800 / E-8	**Modification Number / Title:** 38202 / Common Data Link
ID Code (A=Service Ready, B=Not Service Ready) : B	**MDAP/MAIS Code:**	

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 *(Units in Each)*	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost *($ in Millions)*	-	-	24.807	23.778	0.000	23.778	13.883	5.950	0.000	0.000	-	68.418
Less PY Advance Procurement *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) *($ in Millions)*	-	-	24.807	23.778	0.000	23.778	13.883	5.950	0.000	0.000	-	68.418
Plus CY Advance Procurement *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Total Obligation Authority *($ in Millions)*	**-**	**-**	**24.807**	**23.778**	**0.000**	**23.778**	**13.883**	**5.950**	**0.000**	**0.000**	**-**	**68.418**
(The following Resource Summary rows are for informational purposes only. The corresponding budget requests are documented elsewhere.)												
Initial Spares *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Unit Cost *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-

Description:

A Technical Adjustment was submitted in FY18 to move FY19 3600 RDT&E funds in the amount of $14.888 to the PE 0207581F 3010 Procurement line.

Common Data Link (CDL)is a jam-resistant air-to-ground line-of-sight link from the JSTARS to the Army's Tactical Intelligence Ground Station (TGS) and USMC Tactical Exploitation Group Remote Work Station (TEG-RWS). Current SCDL is encrypted using the KGV-8, which is near end of life and has been operating with an extended National Security Agency (NSA) wavier. Section 144 of the FY18 NDAA has mandated that military aircraft use a specified standard data link, eliminating the waiver authority of the Deputy SECDEF on 1 October 23. NSA, has also mandated type 1 encryption on all airborne Common Data Link (CDL) platforms.

Milestone/Development Status

No development is needed.

Secondary Distribution		FY 2018	FY 2019	FY 2020 Base	FY 2020 OCO	FY 2020 Total	FY 2021	FY 2022	FY 2023	FY 2024
AF	Quantity	-	-	-	-	-	-	-	-	-
	Total Obligation Authority	-	24.807	23.778	-	23.778	13.883	5.950	0.000	-
Total: Secondary Distribution	**Quantity**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**
	Total Obligation Authority	**-**	**24.807**	**23.778**	**0.000**	**23.778**	**13.883**	**5.950**	**0.000**	**0.000**

Exhibit P-3a, Individual Modification: PB 2020 Air Force		Date: February 2019
Appropriation / Budget Activity / Budget Sub Activity: 3010F / 05 / 5	**P-1 Line Item Number / Title:** E00800 / E-8	**Modification Number / Title:** 38202 / Common Data Link
ID Code (A=Service Ready, B=Not Service Ready) : B	**MDAP/MAIS Code:**	
Models of Systems Affected: E-8C	**Modification Type:** Other	**Related RDT&E PEs:**

Financial Plan	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
	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												
Modification Item 1 of 1: CDL												
B Kits												
Recurring												
CDL:EQUIPMENT Group B (Active)	- / -	- / -	16 / 24.807	- / 23.778	- / -	- / 23.778	- / 13.883	- / 5.950	- / -	- / -	- / -	16 / 68.418
Subtotal: Recurring	*- / -*	*- / -*	*- / 24.807*	*- / 23.778*	*- / -*	*- / 23.778*	*- / 13.883*	*- / 5.950*	*- / -*	*- / -*	*- / -*	*- / 68.418*
Subtotal: CDL	*- / -*	*- / -*	*- / 24.807*	*- / 23.778*	*- / -*	*- / 23.778*	*- / 13.883*	*- / 5.950*	*- / -*	*- / -*	*- / -*	*- / 68.418*
Subtotal: Procurement, All Modification Items	*- / -*	*- / -*	*- / 24.807*	*- / 23.778*	*- / -*	*- / 23.778*	*- / 13.883*	*- / 5.950*	*- / -*	*- / -*	*- / -*	*- / 68.418*
Installation												
Modification Item 1 of 1: CDL	- / -	- / -	- / -	2 / 0.000	- / -	2 / 0.000	5 / 0.000	6 / 0.000	3 / 0.000	- / -	- / -	16 / 0.000
Subtotal: Installation	*- / -*	*- / -*	*- / -*	*2 / 0.000*	*- / -*	*2 / 0.000*	*5 / -*	*6 / -*	*3 / -*	*- / -*	*- / -*	*16 / 0.000*
Total												
Total Cost (Procurement + Support + Installation)	**-**	**-**	**24.807**	**23.778**	**0.000**	**23.778**	**13.883**	**5.950**	**0.000**	**0.000**	**-**	**68.418**

Exhibit P-3a, Individual Modification: PB 2020 Air Force		Date: February 2019
Appropriation / Budget Activity / Budget Sub Activity: 3010F / 05 / 5	**P-1 Line Item Number / Title:** E00800 / E-8	**Modification Number / Title:** 38202 / Common Data Link
ID Code (A=Service Ready, B=Not Service Ready) : B	**MDAP/MAIS Code:**	

Modification Item 1 of 1: CDL

Manufacturer Information

Manufacturer Name: Northrop Grumman	Manufacturer Location: Melbourne
Administrative Leadtime *(in Months)*: 0	Production Leadtime *(in Months)*: 0

Dates	FY 2018	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024
Contract Dates		Jun 2019					
Delivery Dates		Jul 2020					

Installation Information

Method of Implementation: Depot

Installation Cost	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
	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)*
Prior Years	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2018	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2019	- / -	- / -	- / -	2 / 0.000	- / -	2 / 0.000	5 / 0.000	6 / 0.000	3 / 0.000	- / -	- / -	16 / 0.000
FY 2020	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2021	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2022	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2023	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2024	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
To Complete	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
Total	- / -	- / -	- / -	2 / 0.000	- / -	2 / 0.000	5 / 0.000	6 / 0.000	3 / 0.000	- / -	- / -	16 / 0.000

Installation Schedule

	PYS	FY 2018				FY 2019				FY 2020				FY 2021				FY 2022				FY 2023				FY 2024				TC	Tot
		Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4		
In	0	-	-	-	-	-	-	-	-	-	-	-	2	-	2	-	3	-	3	-	3	-	3	-	-	-	-	-	-	0	16
Out	0	-	-	-	-	-	-	-	-	-	-	-	-	2	-	2	-	3	-	3	-	3	-	3	-	-	-	-	-	0	16

Exhibit P-3a, Individual Modification: PB 2020 Air Force		Date: February 2019
Appropriation / Budget Activity / Budget Sub Activity: 3010F / 05 / 5	**P-1 Line Item Number / Title:** E00800 / E-8	**Modification Number / Title:** 38203 / Distributed Mission Ops Center (DMOC)
ID Code (A=Service Ready, B=Not Service Ready) : B	**MDAP/MAIS Code:**	

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 *(Units in Each)*	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost *($ in Millions)*	-	0.000	0.000	5.000	0.000	5.000	0.000	0.000	0.000	0.000	-	5.000
Less PY Advance Procurement *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) *($ in Millions)*	-	0.000	0.000	5.000	0.000	5.000	0.000	0.000	0.000	0.000	-	5.000
Plus CY Advance Procurement *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Total Obligation Authority *($ in Millions)*	**-**	**0.000**	**0.000**	**5.000**	**0.000**	**5.000**	**0.000**	**0.000**	**0.000**	**0.000**	**-**	**5.000**
(The following Resource Summary rows are for informational purposes only. The corresponding budget requests are documented elsewhere.)												
Initial Spares *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Unit Cost *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-

Description:

This program, P-3A Mod 38203, Distributed Mission Ops Center (DMOC), is a new start.
Description:
DMOC is a Distributed Mission Operations Center that provides JSTARS E-8C simulators for training.
Current DMOC block 30 JSTARS simulator is no longer concurrent with fielded systems / simulators. The DMOC JSTARS simulator does not include ELMM/ARM and FBCB2 capabilities or other major Block 40 modifications such as new graphic displays, form-fit-function keyboards, updated operator workstation processors (alpa to HP 380 Gen8), and new imagery server. Additionally, the current DMOC JSTARS simulator hardware configuration is not compatible with the IR 40.08 software update.

Milestone/Development Status

No development required

Milestone/Development Status

No development is required.

Secondary Distribution		FY 2018	FY 2019	FY 2020 Base	FY 2020 OCO	FY 2020 Total	FY 2021	FY 2022	FY 2023	FY 2024
AF	Quantity	-	-	-	-	-	-	-	-	-
	Total Obligation Authority	-	-	5.000	-	5.000	-	-	-	-
Total: Secondary Distribution	**Quantity**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**
	Total Obligation Authority	**0.000**	**0.000**	**5.000**	**0.000**	**5.000**	**0.000**	**0.000**	**0.000**	**0.000**

Exhibit P-3a, Individual Modification: PB 2020 Air Force		Date: February 2019
Appropriation / Budget Activity / Budget Sub Activity: 3010F / 05 / 5	**P-1 Line Item Number / Title:** E00800 / E-8	**Modification Number / Title:** 38203 / Distributed Mission Ops Center (DMOC)
ID Code (A=Service Ready, B=Not Service Ready) : B	**MDAP/MAIS Code:**	
Models of Systems Affected: No text provided.	**Modification Type:** Other	**Related RDT&E PEs:**

Financial Plan	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
	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												
Modification Item 1 of 1: DMOC												
B Kits												
Recurring												
DMOC:EQUIPMENT Group B (Active)	- / -	- / -	- / -	1 / 5.000	- / -	1 / 5.000	- / -	- / -	- / -	- / -	- / -	1 / 5.000
Subtotal: Recurring	- / -	- / -	- / -	- / 5.000	- / -	- / 5.000	- / -	- / -	- / -	- / -	- / -	- / 5.000
Subtotal: DMOC	- / -	- / -	- / -	- / 5.000	- / -	- / 5.000	- / -	- / -	- / -	- / -	- / -	- / 5.000
Subtotal: Procurement, All Modification Items	- / -	- / -	- / -	- / 5.000	- / -	- / 5.000	- / -	- / -	- / -	- / -	- / -	- / 5.000
Installation												
Modification Item 1 of 1: DMOC	- / -	- / -	- / -	1 / 0.000	- / -	1 / 0.000	- / -	- / -	- / -	- / -	- / -	1 / 0.000
Subtotal: Installation	- / -	- / -	- / -	1 / 0.000	- / -	1 / 0.000	- / -	- / -	- / -	- / -	- / -	1 / 0.000
Total												
Total Cost (Procurement + Support + Installation)	**-**	**0.000**	**0.000**	**5.000**	**0.000**	**5.000**	**0.000**	**0.000**	**0.000**	**0.000**	**-**	**5.000**

Exhibit P-3a, Individual Modification: PB 2020 Air Force		Date: February 2019
Appropriation / Budget Activity / Budget Sub Activity: 3010F / 05 / 5	**P-1 Line Item Number / Title:** E00800 / E-8	**Modification Number / Title:** 38203 / Distributed Mission Ops Center (DMOC)

ID Code (A=Service Ready, B=Not Service Ready) : B

MDAP/MAIS Code:

Modification Item 1 of 1: DMOC

Manufacturer Information

Manufacturer Name: Unknown

Manufacturer Location: Unknown

Administrative Leadtime *(in Months)*: 0

Production Leadtime *(in Months)*: 0

Dates	FY 2018	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024
Contract Dates			Jan 2020				
Delivery Dates			Jun 2020				

Installation Information

Method of Implementation: Contract Field Team

Installation Cost	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
	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)*
Prior Years	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2018	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2019	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2020	- / -	- / -	- / -	1 / 0.000	- / -	1 / 0.000	- / -	- / -	- / -	- / -	- / -	1 / 0.000
FY 2021	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2022	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2023	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2024	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
To Complete	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
Total	- / -	- / -	- / -	1 / 0.000	- / -	1 / 0.000	- / -	- / -	- / -	- / -	- / -	1 / 0.000

Installation Schedule

	PYS	FY 2018				FY 2019				FY 2020				FY 2021				FY 2022				FY 2023				FY 2024				TC	Tot
		Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4		
In	0	-	-	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0	1
Out	0	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0	1

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Exhibit P-40, Budget Line Item Justification: PB 2020 Air Force	Date: February 2019
Appropriation / Budget Activity / Budget Sub Activity: 3010F: Aircraft Procurement, Air Force / BA 05: Modification of Inservice Aircraft / BSA 5: Other Aircraft	**P-1 Line Item Number / Title:** E34045 / Airborne Warning and Cntrl Sys (AWACS) 40/45

ID Code (A=Service Ready, B=Not Service Ready): B	Program Elements for Code B Items: 0207417F	Other Related Program Elements: 0207417F

Line Item MDAP/MAIS Code: 277

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 *(Units in Each)*	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost *($ in Millions)*	581.925	142.886	57.780	36.000	-	36.000	46.148	42.454	0.000	0.000	0.000	907.193
Less PY Advance Procurement *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) *($ in Millions)*	581.925	142.886	57.780	36.000	-	36.000	46.148	42.454	0.000	0.000	0.000	907.193
Plus CY Advance Procurement *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Total Obligation Authority *($ in Millions)*	**581.925**	**142.886**	**57.780**	**36.000**	**-**	**36.000**	**46.148**	**42.454**	**0.000**	**0.000**	**0.000**	**907.193**
(The following Resource Summary rows are for informational purposes only. The corresponding budget requests are documented elsewhere.)												
Initial Spares *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Flyaway Unit Cost *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Unit Cost *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-

Description:

The Airborne Warning and Control System (AWACS) provides a highly mobile, flexible, survivable theater Battle Management (BM), Wide Area Surveillance, and Command and Control (C2) capability. It is capable of detecting, identifying, and tracking airborne and maritime targets at extended ranges as well as identifying air/ground emitters. AWACS can relay "big picture information to C2 agencies and friendly aircraft. AWACS provides worldwide response to situations requiring immediate on-scene C2/BM using embedded real-time surveillance for employment of US and allied combat air forces. AWACS is critical to gaining and maintaining battle-space air superiority. AWACS coordinates with both tactical and C2 assets in theater to execute the air mission. The AWACS Block 40/45 Upgrade program is the largest modification in U.S. AWACS history and represents the critical foundation and baseline system required for all future AWACS enterprise modifications including net-centric operations. The AWACS Block 40/45 Upgrade provides a single target/single track capability with an improved human-machine interface for time-critical targeting designed to increase combat effectiveness and reduce fratricide. The AWACS Block 40/45 Upgrade program includes an upgrade to Electronic Support Measures sensor data processing; Multi-Source Integration; a Data Link Infrastructure with prioritized data link bandwidth management for Link 16/Link 11; new battle management tools; capability to parse, allow user access to, and integrate Air Control Order/Air Tasking Order data; enhanced mission and console recording capabilities; and an update to a low-bandwidth internet chat capability (Secure Iridium Chat).

Low Rate Initial Production (LRIP) was approved for six (6) aircraft in November 2008 [one (1) buy in FY2009, two (2) buys in FY2010, and three (3) buys in FY2012]. The Block 40/45 Full Rate Production was approved in November 2012 for the remaining twenty five (25) aircraft and technology refresh of the six (6) LRIP aircraft; the corresponding production contract was awarded on 27 December 2012. The FY2015 President's budget reduced the AWACS inventory of 31 aircraft to 24 and funding for Block 40/45 Full Rate Production to 24 aircraft. Recent FY2017 -FY2019 budgetary actions have restored the required funding for 31 aircraft. The program is currently in the process of awarding contracts to procure remaining Block 40/45 production kits to be used to modify the seven (7) remaining Block 30/35 aircrafts and update version 3.0 aircraft to version 4.0, and provide contractor shipside and engineering support for modifications. Additionally, the Program Office will provide updates to fielded ground support systems and provide systems to support organic software maintenance.

The Program will continue to meet emerging cyber security and system integration requirements and execute an Interim Contractor Support (ICS) contract to maintain fielded aircraft in preparation for a transition to a long-term Contractor Logistics Support (CLS) contract to be awarded in FY2020. The program will continue to support the 552nd ACW and field support infrastructure at the 962nd Air Control Squadron at Joint Base Elmendorf- Richardson, AK and the 961st Air Control Squadron at Kadena AFB, Japan.

In FY2013, the program office began Depot Activation activities to comply with Sources of Repair Assignment Program (SORAP) 09-063 that mandates organic hardware and software maintenance. In December 2015 the government awarded a contract to fully implement an organic software maintenance facility known as the Avionics Integration Support Facility (AISF) by FY 2020. Depot activation of select components and implementation of a Performance Based Logistics (PBL) strategy recommended by our Product Support Business Case Analysis are in work.

Exhibit P-40, Budget Line Item Justification: PB 2020 Air Force		Date: February 2019
Appropriation / Budget Activity / Budget Sub Activity: 3010F: Aircraft Procurement, Air Force / BA 05: Modification of Inservice Aircraft / BSA 5: Other Aircraft	**P-1 Line Item Number / Title:** E34045 / Airborne Warning and Cntrl Sys (AWACS) 40/45	
ID Code (A=Service Ready, B=Not Service Ready): B	**Program Elements for Code B Items:** 0207417F	**Other Related Program Elements:** 0207417F
Line Item MDAP/MAIS Code: 277		

Funding for this modification had previously been contained in Weapon System Code (WSC) E00300, but as part of OSD's Major Programs Transparency Initiative and starting in FY2015, the AWACS Block 40/45 Upgrade (MDAP) was moved to WSC E34045. Prior year funding remains in WSC E00300.

FY2020 Plan: Program continues to complete block modification upgrades to the 40/45 configuration (E-3G). L6, P7, P8 and P9 aircraft will commence Program Depot Maintenance (PDM) in FY2020 and receive and update from the older DMS variant. One (1) Block 30/35 aircraft (P23) will be inducted to be retrofitted to the latest Block 40/45 baseline configuration. The two (2) aircraft that began PDM in FY2019 (P21 and P22) will be delivered to the 552nd Air Control Wing (ACW) at Tinker AFB, OK in FY2020, bringing the total 40/45 (E-3G) configured aircraft to twenty-two (22). The Program will also induct two (2) older DMS variant aircraft (L1 and L2) for Depot Field Team modification and deliver these in FY2020. Program will also procure and install Mission Crew Trainer Sets (MCTS) at the Distributed Mission Operations Center and the Virtual Test and Training Range. The Program will continue to meet emerging cyber security and system integration requirements and execute an Interim Contractor Support (ICS) contract to maintain fielded aircraft in preparation for a transition to a long-term Contractor Logistics Support (CLS) contract to be awarded in FY2020. The program will continue to support the 552nd ACW and field support infrastructure at the 962nd Air Control Squadron at Joint Base Elmendorf- Richardson, AK and the 961st Air Control Squadron at Kadena AFB, Japan.

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.

Exhibit P-40, Budget Line Item Justification: PB 2020 Air Force	Date: February 2019
Appropriation / Budget Activity / Budget Sub Activity: 3010F: Aircraft Procurement, Air Force / BA 05: Modification of Inservice Aircraft / BSA 5: Other Aircraft	**P-1 Line Item Number / Title:** E34045 / Airborne Warning and Cntrl Sys (AWACS) 40/45

ID Code (A=Service Ready, B=Not Service Ready): B	Program Elements for Code B Items: 0207417F	Other Related Program Elements: 0207417F

Line Item MDAP/MAIS Code: 277

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-3a	1 / BLOCK 40/45 BLOCK UPGRADE (Capability Improvement)		A		- / 581.925	- / 142.886	- / 57.780	- / 36.000	- / 0.000	- / 36.000
P-40	**Total Gross/Weapon System Cost**				**- / 581.925**	**- / 142.886**	**- / 57.780**	**- / 36.000**	**- / -**	**- / 36.000**

Exhibits Schedule					FY 2021	FY 2022	FY 2023	FY 2024	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 / BLOCK 40/45 BLOCK UPGRADE (Capability Improvement)		A		- / 46.148	- / 42.454	- / 0.000	- / 0.000	- / 0.000	- / 907.193
P-40	**Total Gross/Weapon System Cost**				**- / 46.148**	**- / 42.454**	**- / 0.000**	**- / 0.000**	**- / 0.000**	**- / 907.193**

*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:
Where applicable, justification for individual modifications is provided in the P-3A exhibits.

Exhibit P-3a, Individual Modification: PB 2020 Air Force		Date: February 2019
Appropriation / Budget Activity / Budget Sub Activity: 3010F / 05 / 5	**P-1 Line Item Number / Title:** E34045 / Airborne Warning and Cntrl Sys (AWACS) 40/45	**Modification Number / Title:** 1 / BLOCK 40/45 BLOCK UPGRADE
ID Code (A=Service Ready, B=Not Service Ready) : A	**MDAP/MAIS Code:**	

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 *(Units in Each)*	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost *($ in Millions)*	581.925	142.886	57.780	36.000	0.000	36.000	46.148	42.454	0.000	0.000	0.000	907.193
Less PY Advance Procurement *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) *($ in Millions)*	581.925	142.886	57.780	36.000	0.000	36.000	46.148	42.454	0.000	0.000	0.000	907.193
Plus CY Advance Procurement *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Total Obligation Authority *($ in Millions)*	**581.925**	**142.886**	**57.780**	**36.000**	**0.000**	**36.000**	**46.148**	**42.454**	**0.000**	**0.000**	**0.000**	**907.193**
(The following Resource Summary rows are for informational purposes only. The corresponding budget requests are documented elsewhere.)												
Initial Spares *($ in Millions)*	-	4.492	3.174	3.226	-	3.226	3.282	0.000	0.000	0.000	0.000	14.174
Gross/Weapon System Unit Cost *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-

Description:

The Airborne Warning and Control System (AWACS) provides a highly mobile, flexible, survivable theater Battle Management (BM), Wide Area Surveillance, and Command and Control (C2) capability. It is capable of detecting, identifying, and tracking airborne and maritime targets at extended ranges as well as identifying air/ground emitters. AWACS can relay "big picture information to C2 agencies and friendly aircraft. AWACS provides worldwide response to situations requiring immediate on-scene C2/BM using embedded real-time surveillance for employment of US and allied combat air forces. AWACS is critical to gaining and maintaining battle-space air superiority. AWACS coordinates with both tactical and C2 assets in theater to execute the air mission. The AWACS Block 40/45 Upgrade program is the largest modification in U.S. AWACS history and represents the critical foundation and baseline system required for all future AWACS enterprise modifications including net-centric operations. The AWACS Block 40/45 Upgrade provides a single target/single track capability with an improved human-machine interface for time-critical targeting designed to increase combat effectiveness and reduce fratricide. The AWACS Block 40/45 Upgrade program includes an upgrade to Electronic Support Measures sensor data processing; Multi-Source Integration; a Data Link Infrastructure with prioritized data link bandwidth management for Link 16/Link 11; new battle management tools; capability to parse, allow user access to, and integrate Air Control Order/Air Tasking Order data; enhanced mission and console recording capabilities; and an update to a low-bandwidth internet chat capability (Secure Iridium Chat).

Low Rate Initial Production (LRIP) was approved for six (6) aircraft in November 2008 [one (1) buy in FY2009, two (2) buys in FY2010, and three (3) buys in FY2012]. The Block 40/45 Full Rate Production was approved in November 2012 for the remaining twenty five (25) aircraft and technology refresh of the six (6) LRIP aircraft; the corresponding production contract was awarded on 27 December 2012. The FY2015 President's budget reduced the AWACS inventory of 31 aircraft to 24 and funding for Block 40/45 Full Rate Production to 24 aircraft. Recent FY2017 -FY2019 budgetary actions have restored the required funding for 31 aircraft. The program is currently in the process of awarding a contract to procure remaining Block 40/45 production kits to be used to modify the seven (7) remaining Block 30/35 aircrafts and update version 3.0 aircraft to version 4.0, and provide contractor shipside and engineering support for modifications. Additionally, the Program Office will provide updates to fielded ground support systems and provide systems to support organic software maintenance.

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Funding for this modification had previously been contained in Weapon System Code (WSC) E00300, but as part of OSD's Major Programs Transparency Initiative and starting in FY2015, the AWACS Block 40/45 Upgrade (MDAP) was moved to WSC E34045. Prior year funding remains in WSC E00300.

FY2020 Plan: Program continues to complete block modification upgrades to the 40/45 configuration (E-3G). P7, P8 and P9 aircraft will commence Program Depot Maintenance (PDM) in FY2020 and receive and update from the older DMS variant. One (1) Block 30/35 aircraft (P23) will be inducted to be retrofitted to the latest Block 40/45 baseline configuration. The two (2) aircraft that began PDM in FY2019 (P21 and P22) will be delivered to the 552nd Air Control Wing (ACW) at Tinker AFB, OK in FY2020, bringing the total 40/45 (E-3G) configured aircraft to twenty-two (22). The Program will also induct two (2) older

Exhibit P-3a, Individual Modification: PB 2020 Air Force		Date: February 2019
Appropriation / Budget Activity / Budget Sub Activity: 3010F / 05 / 5	**P-1 Line Item Number / Title:** E34045 / Airborne Warning and Cntrl Sys (AWACS) 40/45	**Modification Number / Title:** 1 / BLOCK 40/45 BLOCK UPGRADE
ID Code (A=Service Ready, B=Not Service Ready) : A	**MDAP/MAIS Code:**	

DMS variant aircraft (L1 and L2) for Depot Field Team modification and deliver these in FY2020. Program will also procure and install Mission Crew Trainer Sets (MCTS) at the Distributed Mission Operations Center and the Virtual Test and Training Range. The Program will continue to meet emerging cyber security requirements. and execute an Interim Contractor Support (ICS) contract to maintain fielded aircraft in preparation for a transition to a long-term Contractor Logistics Support (CLS) contract to be awarded in
FY2020. The program will continue to support the 552nd ACW and field support infrastructure at the 962nd Air Control Squadron at Joint Base Elmendorf- Richardson, AK and the 961st Air Control Squadron at Kadena AFB, Japan.
Milestone/Development Status
11/08 - Completed Aircraft Block 40/45 Development (Milestone C/LRIP), 08/11 - Completed Aircraft Block 40/45 Pre-Production, 11/13 - Completed Development of MCMT, 02/14 - Completed Development of MCTS, 06/14 - Completed Development of DGS/GS, 06/14 - Last (6th) LRIP Jet Delivered, First Production Jet Inducted, 07/14 - IOC Declared by ACC/CC.

Milestone/Development Status

11/08 - Completed Aircraft Block 40/45 Development (Milestone C/LRIP), 08/11 - Completed Aircraft Block 40/45 Pre-Production, 11/13 - Completed Development of MCMT, 02/14 - Completed Development of MCTS, 06/14 - Completed Development of DGS/GS, 06/14 - Last (6th) LRIP Jet Delivered, First Production Jet Inducted, 07/14 - IOC Declared by ACC/CC.

Exhibit P-3a, Individual Modification: PB 2020 Air Force		Date: February 2019
Appropriation / Budget Activity / Budget Sub Activity: 3010F / 05 / 5	**P-1 Line Item Number / Title:** E34045 / Airborne Warning and Cntrl Sys (AWACS) 40/45	**Modification Number / Title:** 1 / BLOCK 40/45 BLOCK UPGRADE
ID Code (A=Service Ready, B=Not Service Ready) : A	**MDAP/MAIS Code:**	
Models of Systems Affected: E-3	**Modification Type:** Capability Improvement	**Related RDT&E PEs:** 0207417F

Financial Plan	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
	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												
Modification Item 1 of 1: Block 4045												
A Kits												
Recurring												
Block 4045:INSTALL KITS Group A (Active)	11 / 73.730	7 / 24.505	- / 0.000	- / 0.000	- / 0.000	- / 0.000	- / 0.000	- / 0.000	- / 0.000	- / 0.000	- / 0.000	18 / 98.235
Subtotal: Recurring	*- / 73.730*	*- / 24.505*	*- / 0.000*	*- / 0.000*	*- / 0.000*	*- / 0.000*	*- / 0.000*	*- / 0.000*	*- / 0.000*	*- / 0.000*	*- / 0.000*	*- / 98.235*
B Kits												
Recurring												
Block 4045:EQUIPMENT Group B (Active)	- / 57.120	- / 24.878	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 81.998
Subtotal: Recurring	*- / 57.120*	*- / 24.878*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / 81.998*
Subtotal: Block 4045	*- / 130.850*	*- / 49.383*	*- / 0.000*	*- / 0.000*	*- / 0.000*	*- / 0.000*	*- / 0.000*	*- / 0.000*	*- / 0.000*	*- / 0.000*	*- / 0.000*	*- / 180.233*
Subtotal: Procurement, All Modification Items	*- / 130.850*	*- / 49.383*	*- / 0.000*	*- / 0.000*	*- / 0.000*	*- / 0.000*	*- / 0.000*	*- / 0.000*	*- / 0.000*	*- / 0.000*	*- / 0.000*	*- / 180.233*
Support *(All Modification Items)*												
GROUP B: TOTAL NONRECURRING	- / 88.321	- / 0.000	- / 0.000	- / 0.000	- / 0.000	- / 0.000	- / 0.000	- / 0.000	- / 0.000	- / 0.000	- / 0.000	- / 88.321
Make New Selection	- / 119.166	- / 65.238	- / 23.416	- / 12.809	- / -	- / 12.809	- / 16.543	- / 21.203	- / -	- / -	- / -	- / 258.375
Change Orders	- / 0.000	- / 3.730	- / 1.828	- / 0.783	- / -	- / 0.783	- / 0.711	- / 0.806	- / -	- / -	- / -	- / 7.858
SIM/TRAINER	1 / 37.032	1 / 6.376	- / -	1 / 7.243	- / -	1 / 7.243	- / -	- / -	- / -	- / -	- / -	3 / 50.651
SUPPORT-EQUIP	- / 71.199	- / 3.335	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 74.534
ICS-Labor	- / 76.940	- / 0.000	- / 21.202	- / 6.077	- / -	- / 6.077	- / 7.141	- / 5.676	- / -	- / -	- / -	- / 117.036
OTHER GOVT	- / 12.463	- / 1.115	- / 0.804	- / 0.386	- / -	- / 0.386	- / 0.539	- / 0.564	- / -	- / -	- / -	- / 15.871
PMA - Other Gov't Costs	- / 11.570	- / 2.715	- / 1.408	- / 0.684	- / -	- / 0.684	- / 0.877	- / 0.807	- / -	- / -	- / -	- / 18.061
PMA - Contractor Services	- / 14.676	- / 3.868	- / 3.944	- / 2.197	- / -	- / 2.197	- / 3.476	- / 4.185	- / -	- / -	- / -	- / 32.346
Subtotal: Support	*1 / 431.367*	*1 / 86.377*	*- / 52.602*	*1 / 30.179*	*- / 0.000*	*1 / 30.179*	*- / 29.287*	*- / 33.241*	*- / 0.000*	*- / 0.000*	*- / 0.000*	*3 / 663.053*
Installation												
Modification Item 1 of 1: Block 4045	9 / 19.708	3 / 7.126	2 / 5.178	1 / 5.821	- / -	1 / 5.821	4 / 16.861	2 / 9.213	2 / 0.000	- / -	- / -	23 / 63.907
Subtotal: Installation	*9 / 19.708*	*3 / 7.126*	*2 / 5.178*	*1 / 5.821*	*- / -*	*1 / 5.821*	*4 / 16.861*	*2 / 9.213*	*2 / 0.000*	*- / -*	*- / -*	*23 / 63.907*
Total												
Total Cost (Procurement + Support + Installation)	**581.925**	**142.886**	**57.780**	**36.000**	**0.000**	**36.000**	**46.148**	**42.454**	**0.000**	**0.000**	**0.000**	**907.193**

Exhibit P-3a, Individual Modification: PB 2020 Air Force		Date: February 2019
Appropriation / Budget Activity / Budget Sub Activity: 3010F / 05 / 5	**P-1 Line Item Number / Title:** E34045 / Airborne Warning and Cntrl Sys (AWACS) 40/45	**Modification Number / Title:** 1 / BLOCK 40/45 BLOCK UPGRADE

ID Code (A=Service Ready, B=Not Service Ready) : A

MDAP/MAIS Code:

Modification Item 1 of 1: Block 4045

Manufacturer Information

Manufacturer Name: Boeing

Manufacturer Location: Seattle

Administrative Leadtime *(in Months)*: 5

Production Leadtime *(in Months)*: 16

Dates	FY 2018	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024
Contract Dates	Oct 2018						
Delivery Dates	Feb 2020						

Installation Information

Method of Implementation: Depot

Installation Cost	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
	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)*
Prior Years	9 / 19.708	3 / 7.126	2 / 5.178	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	14 / 32.012
FY 2018	- / -	- / -	- / -	1 / 5.821	- / -	1 / 5.821	4 / 16.861	2 / 9.213	2 / 0.000	- / -	- / -	9 / 31.895
FY 2019	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2020	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2021	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2022	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2023	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2024	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
To Complete	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
Total	9 / 19.708	3 / 7.126	2 / 5.178	1 / 5.821	- / -	1 / 5.821	4 / 16.861	2 / 9.213	2 / 0.000	- / -	- / -	23 / 63.907

Installation Schedule

	PYS	FY 2018				FY 2019				FY 2020				FY 2021				FY 2022				FY 2023				FY 2024				TC	Tot
		Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4		
In	4	-	-	2	1	-	1	1	2	1	-	1	-	1	2	1	1	-	-	-	-	-	-	-	-	-	-	-	-	0	18
Out	10	1	-	-	-	2	-	-	1	-	1	1	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0	18

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Exhibit P-40, Budget Line Item Justification: PB 2020 Air Force	Date: February 2019
Appropriation / Budget Activity / Budget Sub Activity: 3010F: Aircraft Procurement, Air Force / BA 05: Modification of Inservice Aircraft / BSA 5: Other Aircraft	**P-1 Line Item Number / Title:** FBLOST / Family of Beyond Line-of-Sight Terminals

ID Code (A=Service Ready, B=Not Service Ready): A	**Program Elements for Code B Items:** N/A	**Other Related Program Elements:** 0303001F, 0303601F
Line Item MDAP/MAIS Code: 199		

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 *(Units in Each)*	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost *($ in Millions)*	52.339	15.017	14.293	7.910	-	7.910	1.576	0.000	0.000	0.000	-	91.135
Less PY Advance Procurement *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) *($ in Millions)*	52.339	15.017	14.293	7.910	-	7.910	1.576	0.000	0.000	0.000	-	91.135
Plus CY Advance Procurement *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Total Obligation Authority *($ in Millions)*	**52.339**	**15.017**	**14.293**	**7.910**	**-**	**7.910**	**1.576**	**0.000**	**0.000**	**0.000**	**-**	**91.135**
(The following Resource Summary rows are for informational purposes only. The corresponding budget requests are documented elsewhere.)												
Initial Spares *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Flyaway Unit Cost *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Unit Cost *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-

Description:

The Family of Advanced Beyond Line-of-Sight Terminals (FAB-T) program replaces legacy Milstar terminals and provides Extremely High Frequency (EHF), protected high data rate communication for nuclear and conventional forces to include Presidential and National Voice Conferencing (PNVC). FAB-T will provide this new, highly secure, state-of-the-art capability for DoD platforms to include: Strategic platforms and airborne/ground command posts via Milstar; AEHF; and Enhanced Polar System (EPS) satellites. FAB-T terminals will also support the critical command and control (C2) of the Milstar, AEHF and EPS satellite constellations. In FY 2018, FAB-T awarded the FY 2018 Terminal buys, support platform installation activities, and provide Interim Contractor Support for existing fielded terminals. In FY 2020, FAB-T will continue to pursue activities that ensure FAB-T terminal interoperability with the full AEHF satellite constellation.

FAB-T CPT terminal requirement is 23 terminals. 17 have been programmed for in Low Rate Initial Production Buys (LRIP).

The Force Element Terminal (FET) subprogram provides a nuclear survivable terminal capable of communicating with the Milstar and AEHF satellites, and provides for survivable NC3 data transport services (EAM dissemination and force report back) for airborne platforms. The FET is for the B-52 and select RC-135 aircraft and will not provide satellite control or PNVC functionality.

PNVC communication Baseband Interface Group (BIG) equipment purchases will provide voice encoding/decoding and encryption/decryption via KY-280s for use with Milstar and Advanced EHF satellite communication networks. The Multi-Stream Summing Device (MSD-III) provides the audio summing capability of all twelve (12) networks and controls all the conference management data. It also serves as the primary audio interface between the Red Switch and the BIG. This summing device manages the messaging of information for channel access control and message control for conference initiation and termination. The equipment will support Senior Leader Conferencing via Survivable Emergency Communication Networks (SECN) digitization and support, secure, survivable voice conferencing capability for the President and national senior leaders.

Programs and projects in the space warfighting enterprise are evaluating ways to maximize innovation, resiliency, and our ability to rapidly respond to known and emerging threats. Space enterprise efforts aim to execute technology risk reduction efforts, integration of new or repurposed capabilities, enterprise decision-making tools, experimentation, and rapid prototyping and fielding via all appropriate acquisition authorities and contract mechanisms.

Funding for this exhibit is contained in PE 1203001F

Exhibit P-40, Budget Line Item Justification: PB 2020 Air Force		Date: February 2019
Appropriation / Budget Activity / Budget Sub Activity: 3010F: Aircraft Procurement, Air Force / BA 05: Modification of Inservice Aircraft / BSA 5: Other Aircraft	**P-1 Line Item Number / Title:** FBLOST / Family of Beyond Line-of-Sight Terminals	
ID Code (A=Service Ready, B=Not Service Ready): A	**Program Elements for Code B Items:** N/A	**Other Related Program Elements:** 0303001F, 0303601F
Line Item MDAP/MAIS Code: 199		

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.

Exhibit P-40, Budget Line Item Justification: PB 2020 Air Force	**Date:** February 2019
Appropriation / Budget Activity / Budget Sub Activity: 3010F: Aircraft Procurement, Air Force / BA 05: Modification of Inservice Aircraft / BSA 5: Other Aircraft	**P-1 Line Item Number / Title:** FBLOST / Family of Beyond Line-of-Sight Terminals

ID Code (A=Service Ready, B=Not Service Ready): A	**Program Elements for Code B Items:** N/A	**Other Related Program Elements:** 0303001F, 0303601F

Line Item MDAP/MAIS Code: 199

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) I ($ M)*	Quantity / Total Cost *(Each) I ($ M)*	Quantity / Total Cost *(Each) I ($ M)*	Quantity / Total Cost *(Each) I ($ M)*	Quantity / Total Cost *(Each) I ($ M)*	Quantity / Total Cost *(Each) I ($ M)*
P-3a	1 / Family of Beyond Line-of-Sight Terminals (Capability Improvement)		A		- / 52.339	- / 15.017	- / 14.293	- / 7.910	- / 0.000	- / 7.910
P-40	**Total Gross/Weapon System Cost**				**- / 52.339**	**- / 15.017**	**- / 14.293**	**- / 7.910**	**- / -**	**- / 7.910**

Exhibits Schedule					FY 2021	FY 2022	FY 2023	FY 2024	To Complete	Total
Exhibit Type	Title*	Subexhibits	ID CD	MDAP/ MAIS Code	Quantity / Total Cost *(Each) I ($ M)*	Quantity / Total Cost *(Each) I ($ M)*	Quantity / Total Cost *(Each) I ($ M)*	Quantity / Total Cost *(Each) I ($ M)*	Quantity / Total Cost *(Each) I ($ M)*	Quantity / Total Cost *(Each) I ($ M)*
P-3a	1 / Family of Beyond Line-of-Sight Terminals (Capability Improvement)		A		- / 1.576	- / 0.000	- / 0.000	- / 0.000	- / -	- / 91.135
P-40	**Total Gross/Weapon System Cost**				**- / 1.576**	**- / 0.000**	**- / 0.000**	**- / 0.000**	**- / -**	**- / 91.135**

*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:
Where applicable, justification for individual modifications is provided in the P-3A exhibits.

Exhibit P-3a, Individual Modification: PB 2020 Air Force		Date: February 2019
Appropriation / Budget Activity / Budget Sub Activity: 3010F / 05 / 5	**P-1 Line Item Number / Title:** FBLOST / Family of Beyond Line-of-Sight Terminals	**Modification Number / Title:** 1 / Family of Beyond Line-of-Sight Terminals
ID Code (A=Service Ready, B=Not Service Ready) : A	**MDAP/MAIS Code:**	

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 *(Units in Each)*	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost *($ in Millions)*	52.339	15.017	14.293	7.910	0.000	7.910	1.576	0.000	0.000	0.000	-	91.135
Less PY Advance Procurement *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) *($ in Millions)*	52.339	15.017	14.293	7.910	0.000	7.910	1.576	0.000	0.000	0.000	-	91.135
Plus CY Advance Procurement *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Total Obligation Authority *($ in Millions)*	**52.339**	**15.017**	**14.293**	**7.910**	**0.000**	**7.910**	**1.576**	**0.000**	**0.000**	**0.000**	**-**	**91.135**
(The following Resource Summary rows are for informational purposes only. The corresponding budget requests are documented elsewhere.)												
Initial Spares *($ in Millions)*	10.691	1.343	6.140	-	-	-	-	-	-	-	-	18.174
Gross/Weapon System Unit Cost *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-

Description:

The Family of Advanced Beyond Line-of-Sight Terminals (FAB-T) Command Post Terminal (CPT) program replaces legacy Milstar terminals and will provide Extremely High Frequency (EHF), protected high data rate communication for nuclear and conventional forces to include Presidential and National Voice Conferencing (PNVC). FAB-T will provide this new, highly secure, state-of-the-art capability for DoD platforms to include strategic platforms and airborne/ground command posts via Milstar, AEHF, and Enhanced Polar System (EPS) satellites. FAB-T terminals will also support the critical command and control (C2) of the Milstar, AEHF and EPS satellite constellations. FY 2018, FAB-T awarded the FY 2018 Terminal buys, support platform install activities, as well as provided Interim Contractor Support for the existing fielded terminals. In FY 2020, FAB-T will continue program office support, support platform install activities, as well as provided Interim Contractor Support for the existing fielded terminal and other related support activities. Rapidly respond to implement system resiliency and situational awareness necessary to operate in the contested space domain. Activities may include, but are not limited to program office support, studies, technical analysis, prototyping, etc.

FAB-T CPT terminal requirement is 23 terminals. 17 have been programmed for in Low Rate Initial Production Buys (LRIP).

PNVC communication Baseband Interface Group (BIG) purchases will provide voice encoding/decoding and encryption/decryption via KY-280s for use with Milstar and Advanced EHF satellite communication networks. The Multi-Stream Summing Device (MSD-III) provides the audio summing capability of all twelve(12) networks and controls all the conference management data. It also serves as the primary audio interface between the Red Switch and the BIG. This summing device manages the messaging of information for channel access control and message control for conference initiation and termination. This equipment will support Senior Leader Conferencing via Survivable Emergency Communication Networks (SECN) digitization and support, secure, survivable voice conferencing capability for the President and national senior leaders. PNVC will Continue program office support and other related support activities. Rapidly respond to implement system resiliency and situational awareness necessary to operate in the contested space domain. Activities may include, but are not limited to program office support, studies, technical analysis, prototyping, etc.

Milestone/Development Status

Production contract options to produce CPT terminals were exercised after a successful Milestone C decision was approved on September 1, 2015 and awarded September 14, 2015.

Exhibit P-3a, Individual Modification: PB 2020 Air Force		Date: February 2019
Appropriation / Budget Activity / Budget Sub Activity: 3010F / 05 / 5	**P-1 Line Item Number / Title:** FBLOST / Family of Beyond Line-of-Sight Terminals	**Modification Number / Title:** 1 / Family of Beyond Line-of-Sight Terminals
ID Code (A=Service Ready, B=Not Service Ready) : A	**MDAP/MAIS Code:**	
Models of Systems Affected: E-4, E-6	**Modification Type:** Capability Improvement	**Related RDT&E PEs:** 0303001F, 0303601F

Financial Plan	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
	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												
Modification Item 1 of 3: FAB-T												
B Kits												
Recurring												
FAB-T:EQUIPMENT Group B (Active)	15 / 51.243	4 / 8.750	4 / 8.750	- / -	- / -	- / -	0 / 0.000	- / -	- / -	- / -	- / -	23 / 68.743
Subtotal: Recurring	*- / 51.243*	*- / 8.750*	*- / 8.750*	*- / -*	*- / -*	*- / -*	*- / 0.000*	*- / -*	*- / -*	*- / -*	*- / -*	*- / 68.743*
Subtotal: FAB-T	*- / 51.243*	*- / 8.750*	*- / 8.750*	*- / -*	*- / -*	*- / -*	*- / 0.000*	*- / -*	*- / -*	*- / -*	*- / -*	*- / 68.743*
Modification Item 2 of 3: PNVC BIG												
B Kits												
Recurring												
PNVC BIG:EQUIPMENT Group B (Active)	- / -	10 / 1.929	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	10 / 1.929
Subtotal: Recurring	*- / -*	*- / 1.929*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / 1.929*
Subtotal: PNVC BIG	*- / -*	*- / 1.929*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / 1.929*
Modification Item 3 of 3: PNVC MSD-III												
B Kits												
Recurring												
PNVC MSD-III:EQUIPMENT Group B (Active)	- / -	10 / 0.535	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	10 / 0.535
Subtotal: Recurring	*- / -*	*- / 0.535*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / 0.535*
Subtotal: PNVC MSD-III	*- / -*	*- / 0.535*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / 0.535*
Subtotal: Procurement, All Modification Items	*- / 51.243*	*- / 11.214*	*- / 8.750*	*- / -*	*- / -*	*- / -*	*- / 0.000*	*- / -*	*- / -*	*- / -*	*- / -*	*- / 71.207*
Support *(All Modification Items)*												
GROUP A: TOTAL NONRECURRING	- / 0.000	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 0.000
A&AS	- / 1.094	- / 1.400	- / 1.423	- / 1.500	- / -	- / 1.500	- / 1.000	- / -	- / -	- / -	- / -	- / 6.417
OTHER GOVT	- / 0.002	- / 2.223	- / 1.000	- / 2.980	- / -	- / 2.980	- / 0.576	- / -	- / -	- / -	- / -	- / 6.781
Data	- / 0.000	- / 0.180	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 0.180
Type 1 Training	- / 0.000	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 0.000
ICS-Labor	- / 0.000	- / -	- / 3.120	- / 3.430	- / -	- / 3.430	- / -	- / -	- / -	- / -	- / -	- / 6.550
SUPPORT-EQUIP	- / 0.000	- / -	- / -	- / -	- / -	- / -	- / 0.000	- / -	- / -	- / -	- / -	- / 0.000
Subtotal: Support	*- / 1.096*	*- / 3.803*	*- / 5.543*	*- / 7.910*	*- / -*	*- / 7.910*	*- / 1.576*	*- / -*	*- / -*	*- / -*	*- / -*	*- / 19.928*
Installation												

Exhibit P-3a, Individual Modification: PB 2020 Air Force		Date: February 2019
Appropriation / Budget Activity / Budget Sub Activity: 3010F / 05 / 5	**P-1 Line Item Number / Title:** FBLOST / Family of Beyond Line-of-Sight Terminals	**Modification Number / Title:** 1 / Family of Beyond Line-of-Sight Terminals
ID Code (A=Service Ready, B=Not Service Ready) : A	**MDAP/MAIS Code:**	
Models of Systems Affected: E-4, E-6	**Modification Type:** Capability Improvement	**Related RDT&E PEs:** 0303001F, 0303601F

Financial Plan	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
	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)*
Subtotal: Installation	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
Total												
Total Cost (Procurement + Support + Installation)	**52.339**	**15.017**	**14.293**	**7.910**	**0.000**	**7.910**	**1.576**	**0.000**	**0.000**	**0.000**	**-**	**91.135**

Exhibit P-3a, Individual Modification: PB 2020 Air Force		Date: February 2019
Appropriation / Budget Activity / Budget Sub Activity: 3010F / 05 / 5	**P-1 Line Item Number / Title:** FBLOST / Family of Beyond Line-of-Sight Terminals	**Modification Number / Title:** 1 / Family of Beyond Line-of-Sight Terminals

ID Code (A=Service Ready, B=Not Service Ready) : A

MDAP/MAIS Code:

Modification Item 1 of 3: FAB-T

Manufacturer Information

Manufacturer Name: Raytheon

Manufacturer Location: Largo, FL

Administrative Leadtime *(in Months)*: 1

Production Leadtime *(in Months)*: 23

Dates	FY 2018	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024
Contract Dates	Sep 2018						
Delivery Dates	Aug 2020						

Installation Information

Method of Implementation (Organic): Org/Intermediate

Installation Quantity: 23

Exhibit P-3a, Individual Modification: PB 2020 Air Force		Date: February 2019
Appropriation / Budget Activity / Budget Sub Activity: 3010F / 05 / 5	**P-1 Line Item Number / Title:** FBLOST / Family of Beyond Line-of-Sight Terminals	**Modification Number / Title:** 1 / Family of Beyond Line-of-Sight Terminals

ID Code (A=Service Ready, B=Not Service Ready) : A

MDAP/MAIS Code:

Modification Item 2 of 3: PNVC BIG

Manufacturer Information

Manufacturer Name: General Dynamics

Manufacturer Location: Scottsdale, AZ

Administrative Leadtime *(in Months)*: 1

Production Leadtime *(in Months)*: 12

Dates	FY 2018	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024
Contract Dates	May 2019						
Delivery Dates	May 2020						

Installation Information

Method of Implementation (Organic): Org/Intermediate

Installation Quantity: 10

Exhibit P-3a, Individual Modification: PB 2020 Air Force		Date: February 2019
Appropriation / Budget Activity / Budget Sub Activity: 3010F / 05 / 5	**P-1 Line Item Number / Title:** FBLOST / Family of Beyond Line-of-Sight Terminals	**Modification Number / Title:** 1 / Family of Beyond Line-of-Sight Terminals

ID Code (A=Service Ready, B=Not Service Ready) : A	**MDAP/MAIS Code:**

Modification Item 3 of 3: PNVC MSD-III

Manufacturer Information

Manufacturer Name: Raytheon	Manufacturer Location: Largo, FL
Administrative Leadtime *(in Months)*: 1	Production Leadtime *(in Months)*: 12

Dates	FY 2018	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024
Contract Dates	Sep 2018						
Delivery Dates	Sep 2019						

Installation Information

Method of Implementation (Organic): Org/Intermediate	**Installation Quantity:** 10

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Exhibit P-40, Budget Line Item Justification: PB 2020 Air Force	Date: February 2019
Appropriation / Budget Activity / Budget Sub Activity: 3010F: Aircraft Procurement, Air Force / BA 05: Modification of Inservice Aircraft / BSA 5: Other Aircraft	**P-1 Line Item Number / Title:** H00100 / H-1

ID Code (A=Service Ready, B=Not Service Ready): B	**Program Elements for Code B Items:** 0101235F	**Other Related Program Elements:** 0101235F, 0401314F, 0804747F
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 *(Units in Each)*	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost *($ in Millions)*	24.522	3.730	11.824	3.817	-	3.817	3.887	3.965	2.855	2.020	-	56.620
Less PY Advance Procurement *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) *($ in Millions)*	24.522	3.730	11.824	3.817	-	3.817	3.887	3.965	2.855	2.020	-	56.620
Plus CY Advance Procurement *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Total Obligation Authority *($ in Millions)*	**24.522**	**3.730**	**11.824**	**3.817**	**-**	**3.817**	**3.887**	**3.965**	**2.855**	**2.020**	**-**	**56.620**
(The following Resource Summary rows are for informational purposes only. The corresponding budget requests are documented elsewhere.)												
Initial Spares *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Flyaway Unit Cost *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Unit Cost *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-

Description:

This line item funds modifications to UH-1N and UH-1H/TH-1H aircraft. The two-engine UH-1N is a light, utility helicopter primarily used for missile site and range support and distinguished visitor airlift support. There are 62 UH-1N aircraft in the inventory. They were built with an estimated service life of 10,000 flight hours and are not service limited due to on-going modifications and upgrades. There are 28 TH-1H aircraft in the inventory. They are used in the helicopter track for USAF Specialized Undergraduate Pilot Training. The TH-1H modernization modification provided a service life of 20 years, the last one was delivered in 2013.

Starting in FY19 the UH-1N Service Life Extension Program (SLEP) was added for a portion of the UH-1N fleet to address aging fleet problems to include: structural repairs, replacement of key systems based on structural fatigue, system obsolescence and a diminishing manufacturing industrial base. Additionally, this effort will address safety requirements to include: Federal Aviation Administration, DoD, engineering mandates and configuration changes. This effort includes funding for the UH-1N System Program Office (e.g., A&AS, support, travel). The funds budgeted FY 2019 - 2022 will enable the SLEP of up to 63 aircraft required to meet mission requirements until a UH-1N replacement helicopter can be fielded.

Funding may be used to address Diminishing Manufacturing Sources (DMS) issues.

Funding in this exhibit is contained in PE 0101235F, PE 0401314F, and PE 0804747F.

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.

Justification:
Where applicable, justification for individual modifications is provided in the P-3A exhibits.

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Exhibit P-40, Budget Line Item Justification: PB 2020 Air Force	Date: February 2019
Appropriation / Budget Activity / Budget Sub Activity: 3010F: Aircraft Procurement, Air Force / BA 05: Modification of Inservice Aircraft / BSA 5: Other Aircraft	**P-1 Line Item Number / Title:** H06000 / H-60

ID Code (A=Service Ready, B=Not Service Ready): B	**Program Elements for Code B Items:** 0207224F, 0207228F	**Other Related Program Elements:** 0207224F, 0207228F

Line Item MDAP/MAIS Code: None

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 *(Units in Each)*	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost *($ in Millions)*	777.269	75.989	92.026	20.879	0.000	20.879	59.604	24.591	34.409	39.056	3.960	1,127.783
Less PY Advance Procurement *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) *($ in Millions)*	777.269	75.989	92.026	20.879	0.000	20.879	59.604	24.591	34.409	39.056	3.960	1,127.783
Plus CY Advance Procurement *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Total Obligation Authority *($ in Millions)*	**777.269**	**75.989**	**92.026**	**20.879**	**0.000**	**20.879**	**59.604**	**24.591**	**34.409**	**39.056**	**3.960**	**1,127.783**
(The following Resource Summary rows are for informational purposes only. The corresponding budget requests are documented elsewhere.)												
Initial Spares *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Flyaway Unit Cost *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Unit Cost *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-

Description:

This line item funds modifications to the HH-60G helicopter. The HH-60G currently supports the Air Force's core function of Personnel Recovery. The primary mission of the HH-60G is to conduct day / night / marginal weather Combat Search and Rescue (CSAR) in order to recover isolated personnel in hostile or permissive environments. Potential mission areas include casualty evacuation (CASEVAC), medical evacuation (MEDEVAC), non-combatant evacuation operations, civil search and rescue, international aid, disaster humanitarian relief, and insertion/extraction of combat forces. There are currently 95 aircraft. The Operational Loss Replacement Mission Modification program will deliver 19 additional aircraft, bringing the fleet size up to 114 by 2Q FY20.

The modification efforts budgeted in FY20 provide safety/survivability upgrades, mission avionics upgrades, operational loss replacement mission modifications, and addresses obsolescence issues.

FY19 funding totals include $40.6M for Overseas Contingency Operations.

Funding may be used to address Diminishing Manufacturing Source issues.

Funding for this exhibit is contained in PE 0207228F.

In accordance with Section 1815 of the FY 2008 National Defense Authorization Act (P.L. 110-181), this item is necessary for use by the active and reserve components of the Armed Forces for homeland defense missions, domestic emergency responses, and providing military support to civil authorities.

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.

Secondary Distribution		FY 2018	FY 2019	FY 2020 Base	FY 2020 OCO	FY 2020 Total	FY 2021	FY 2022	FY 2023	FY 2024
AF	Quantity	-	-	-	-	-	-	-	-	-
	Total Obligation Authority	57.602	91.764	20.879	0.000	20.879	37.204	19.091	32.869	39.056

Exhibit P-40, Budget Line Item Justification: PB 2020 Air Force	Date: February 2019
Appropriation / Budget Activity / Budget Sub Activity: 3010F: Aircraft Procurement, Air Force / BA 05: Modification of Inservice Aircraft / BSA 5: Other Aircraft	**P-1 Line Item Number / Title:** H06000 / H-60

ID Code (A=Service Ready, B=Not Service Ready): B	Program Elements for Code B Items: 0207224F, 0207228F	Other Related Program Elements: 0207224F, 0207228F

Line Item MDAP/MAIS Code: None

Secondary Distribution		FY 2018	FY 2019	FY 2020 Base	FY 2020 OCO	FY 2020 Total	FY 2021	FY 2022	FY 2023	FY 2024
AFNG	Quantity	-	-	-	-	-	-	-	-	-
	Total Obligation Authority	15.873	0.171	-	0.000	0.000	11.900	2.200	1.540	-
AFR	Quantity	-	-	-	-	-	-	-	-	-
	Total Obligation Authority	2.514	0.091	-	-	-	10.500	3.300	-	-
Total: Secondary Distribution	**Quantity**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**
	Total Obligation Authority	**75.989**	**92.026**	**20.879**	**0.000**	**20.879**	**59.604**	**24.591**	**34.409**	**39.056**

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

Appropriation / Budget Activity / Budget Sub Activity:
3010F: Aircraft Procurement, Air Force / BA 05: Modification of Inservice Aircraft / BSA 5: Other Aircraft

P-1 Line Item Number / Title:
H06000 / H-60

ID Code (A=Service Ready, B=Not Service Ready): B | **Program Elements for Code B Items:** 0207224F, 0207228F | **Other Related Program Elements:** 0207224F, 0207228F

Line Item MDAP/MAIS Code: None

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) I ($ M)	Quantity / Total Cost (Each) I ($ M)	Quantity / Total Cost (Each) I ($ M)	Quantity / Total Cost (Each) I ($ M)	Quantity / Total Cost (Each) I ($ M)	Quantity / Total Cost (Each) I ($ M)
P-40a***	8254 / ALTITUDE HOLD AND HOVER SYSTEM (AHHS) (Capability Improvement)				- / 35.783	- / -	- / -	- / -	- / -	- / -
P-40a***	8563 / LIGHTWEIGHT AIRBORNE RECOVERY SYSTEM V12 UPGRADE (Capability Improvement)				- / 24.052	- / -	- / -	- / -	- / -	- / -
P-40a***	8564 / Control Display Unit (CDU) (Capability Improvement)				- / 20.834	- / 10.800	- / 0.110	- / -	- / -	- / -
P-40a***	8565 / Navigation System Upgrade (NSU) (Capability Improvement)				- / 61.562	- / 2.720	- / 1.210	- / 1.298	- / -	- / 1.298
P-40a***	8840 / Vibration Monitoring System (VMS) (Reliability & Maintainability)				- / 40.913	- / -	- / -	- / -	- / -	- / -
P-40a***	8844 / Multi-function Color Display (Capability Improvement)				- / 36.491	- / 3.330	- / 3.480	- / 2.610	- / -	- / 2.610
P-40a***	8850 / MODE 5 (Capability Improvement)				- / 22.423	- / 7.354	- / 2.485	- / 2.148	- / -	- / 2.148
P-40a***	8851 / Gun Replacement (Reliability & Maintainability)				- / 25.394	- / -	- / -	- / -	- / -	- / -
P-40a***	8852 / CSAR Avionics/Electrical Upgrade (Capability Improvement)				- / 16.397	- / 0.860	- / 0.780	- / 0.324	- / 0.000	- / 0.324
P-40a***	8853 / DEFENSIVE SYSTEM UPGRADE (Capability Improvement)				- / 15.029	- / -	- / 40.560	- / -	- / -	- / -
P-40a***	8856 / Block 162 (Service Life Extension)				- / 45.265	- / 3.125	- / 0.030	- / 3.370	- / -	- / 3.370
P-40a***	8857 / Rotor Brake (Capability Improvement)				- / 3.010	- / -	- / -	- / -	- / -	- / -
P-40a***	8859 / DVE Sensor (Capability Improvement)				- / 0.700	- / 1.240	- / 23.740	- / 3.186	- / -	- / 3.186
P-40a***	8861 / HH-60 DATALINKS (Capability Improvement)				- / 7.700	- / 2.661	- / 17.478	- / 0.550	- / -	- / 0.550
P-40a***	8862 / HH-60G Communication Suite Control Integration (Capability Improvement)				- / -	- / 4.490	- / 1.000	- / 0.540	- / -	- / 0.540
P-40a***	99999S / SERVICE BULLETINS (Other)				- / 0.091	- / -	- / -	- / -	- / -	- / -
P-40a***	99999X / Low Cost Modifications (Other)				- / 6.099	- / 0.920	- / 0.753	- / 0.210	- / -	- / 0.210
P-3a	8854 / HH-60 OLR Mission Modifications (Other)		B		- / 415.526	- / 38.489	- / 0.400	- / 6.643	- / 0.000	- / 6.643
P-40	**Total Gross/Weapon System Cost**				**- / 777.269**	**- / 75.989**	**- / 92.026**	**- / 20.879**	**- / 0.000**	**- / 20.879**

Exhibits Schedule					FY 2021	FY 2022	FY 2023	FY 2024	To Complete	Total
Exhibit Type	Title*	Subexhibits	ID CD	MDAP/ MAIS Code	Quantity / Total Cost (Each) I ($ M)	Quantity / Total Cost (Each) I ($ M)	Quantity / Total Cost (Each) I ($ M)	Quantity / Total Cost (Each) I ($ M)	Quantity / Total Cost (Each) I ($ M)	Quantity / Total Cost (Each) I ($ M)
P-40a***	8254 / ALTITUDE HOLD AND HOVER SYSTEM (AHHS) (Capability Improvement)				- / -	- / -	- / -	- / -	- / -	- / 35.783
P-40a***	8563 / LIGHTWEIGHT AIRBORNE RECOVERY SYSTEM V12 UPGRADE (Capability Improvement)				- / -	- / -	- / -	- / -	- / -	- / 24.052
P-40a***	8564 / Control Display Unit (CDU) (Capability Improvement)				- / -	- / -	- / -	- / -	- / -	- / 31.744
P-40a***	8565 / Navigation System Upgrade (NSU) (Capability Improvement)				- / 0.010	- / -	- / -	- / -	- / -	- / 66.800
P-40a***	8840 / Vibration Monitoring System (VMS) (Reliability & Maintainability)				- / -	- / -	- / -	- / -	- / -	- / 40.913
P-40a***	8844 / Multi-function Color Display (Capability Improvement)				- / 0.010	- / -	- / -	- / -	- / -	- / 45.921

Exhibit P-40, Budget Line Item Justification: PB 2020 Air Force	**Date:** February 2019
Appropriation / Budget Activity / Budget Sub Activity: 3010F: Aircraft Procurement, Air Force / BA 05: Modification of Inservice Aircraft / BSA 5: Other Aircraft	**P-1 Line Item Number / Title:** H06000 / H-60

ID Code (A=Service Ready, B=Not Service Ready): B | **Program Elements for Code B Items:** 0207224F, 0207228F | **Other Related Program Elements:** 0207224F, 0207228F

Line Item MDAP/MAIS Code: None

Exhibits Schedule					FY 2021	FY 2022	FY 2023	FY 2024	To Complete	Total
Exhibit Type	Title*	Subexhibits	ID CD	MDAP/ MAIS Code	Quantity / Total Cost *(Each) I ($ M)*	Quantity / Total Cost *(Each) I ($ M)*	Quantity / Total Cost *(Each) I ($ M)*	Quantity / Total Cost *(Each) I ($ M)*	Quantity / Total Cost *(Each) I ($ M)*	Quantity / Total Cost *(Each) I ($ M)*
P-40a***	8850 / MODE 5 (Capability Improvement)				- / -	- / -	- / -	- / -	- / -	- / 34.410
P-40a***	8851 / Gun Replacement (Reliability & Maintainability)				- / -	- / -	- / -	- / -	- / -	- / 25.394
P-40a***	8852 / CSAR Avionics/Electrical Upgrade (Capability Improvement)				- / -	- / -	- / -	- / -	- / -	- / 18.361
P-40a***	8853 / DEFENSIVE SYSTEM UPGRADE (Capability Improvement)				- / -	- / -	- / -	- / -	- / -	- / 55.589
P-40a***	8856 / Block 162 (Service Life Extension)				- / 3.210	- / 0.010	- / -	- / -	- / -	- / 55.010
P-40a***	8857 / Rotor Brake (Capability Improvement)				- / -	- / -	- / -	- / -	- / -	- / 3.010
P-40a***	8859 / DVE Sensor (Capability Improvement)				- / 36.656	- / 6.066	- / 17.557	- / 30.226	- / 3.960	- / 123.331
P-40a***	8861 / HH-60 DATALINKS (Capability Improvement)				- / 8.165	- / 9.865	- / 11.842	- / 4.790	- / -	- / 63.051
P-40a***	8862 / HH-60G Communication Suite Control Integration (Capability Improvement)				- / 5.693	- / 3.120	- / 3.540	- / 2.040	- / -	- / 20.423
P-40a***	99999S / SERVICE BULLETINS (Other)				- / -	- / -	- / -	- / -	- / -	- / 0.091
P-40a***	99999X / Low Cost Modifications (Other)				- / 1.410	- / 1.340	- / 1.470	- / 2.000	- / -	- / 14.202
P-3a	8854 / HH-60 OLR Mission Modifications (Other)		B		- / 4.450	- / 4.190	- / -	- / -	- / -	- / 469.698
P-40	**Total Gross/Weapon System Cost**				**- / 59.604**	**- / 24.591**	**- / 34.409**	**- / 39.056**	**- / 3.960**	**- / 1,127.783**

*** Although this is an Exhibit P-40a item, the actual exhibit is not included since all of the required information for this item is already being shown here.

*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:
Where applicable, justification for individual modifications is provided in the P-3A exhibits.

Exhibit P-3a, Individual Modification: PB 2020 Air Force		Date: February 2019
Appropriation / Budget Activity / Budget Sub Activity: 3010F / 05 / 5	**P-1 Line Item Number / Title:** H06000 / H-60	**Modification Number / Title:** 8854 / HH-60 OLR Mission Modifications
ID Code (A=Service Ready, B=Not Service Ready) : B	**MDAP/MAIS Code:**	

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 *(Units in Each)*	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost *($ in Millions)*	415.526	38.489	0.400	6.643	0.000	6.643	4.450	4.190	-	-	-	469.698
Less PY Advance Procurement *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) *($ in Millions)*	415.526	38.489	0.400	6.643	0.000	6.643	4.450	4.190	-	-	-	469.698
Plus CY Advance Procurement *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Total Obligation Authority *($ in Millions)*	**415.526**	**38.489**	**0.400**	**6.643**	**0.000**	**6.643**	**4.450**	**4.190**	**-**	**-**	**-**	**469.698**
(The following Resource Summary rows are for informational purposes only. The corresponding budget requests are documented elsewhere.)												
Initial Spares *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Unit Cost *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-

Description:

A Program Management Directive (PMD), dated 17 Jul 09 directed AFLCMC/WIU to accomplish the HH-60 Operational Loss Replacement (OLR) Mission Modification Program. The OLR program upgrades 19 Army UH-60L aircraft to the current Air Force HH-60G configuration, creating the Block 162 configuration. The MAJCOM reduced the quantity of OLR from 21 to 19 aircraft due to funding priorities. One OLR mission modification kit, made up of individual components for each system, will be installed per aircraft, for a total of 19 kits. This will require Non-Recurring Engineering (NRE) to develop a consolidated engineering package for installation. Two kits will be installed during this NRE and trial install effort. OLR will restore the HH-60G fleet to its program of record, increase mission capability, and provide attrition reserve to a fleet that has a 45.7% availability rate.

Required NRE, Prototype, Trial Install Kit Proof, Technical Data Updated and Modernization, and Software Lab support will be accomplished through existing US Army contracts where able. Additionally, reports will be requested in support of this effort that include but are not limited to: economic service life, aircraft system specification, information support and aircraft modernization.

The aircraft modification installation will be accomplished using a contractor facility. As a result of the age of the current aircraft, obsolescence is a major concern. Initial estimates indicate there are specific mission systems that need to be replaced including, but not limited to; CWR, Symbol Generator, ARC-210 Radios, and the APR-39(B)V2 Radar Warning Receiver. Replacements have been identified for many of these components; however, some NRE may be required for aircraft integration. Additional NRE may be required for other obsolete systems/components that are identified during the effort.

New components will require a software development node in order to modify the existing HH-60 software to accommodate the new aircraft components without impacting the legacy fleet. Qualification flight testing will be necessary to ensure the design for the new hardware and software is compatible with existing aircraft systems. Available program funding will be utilized to ensure the configuration remains common across the fleet. Finally, additional effort will be necessary to create modification instructions separate from the OLR Mission Modification Effort.

FY18 funding provides for 3 production installs, engine overhauls, and program management oversight. Production installs will be conducted via a contract to be awarded by the US Army Logistics Support Facility and are scheduled to begin in 4QFY16. Trial installation and kit proof kits and installs were procured as part of the non-recurring effort.

Milestone/Development Status

As part of the Operation Loss Replacement (OLR) Program, the HH-60G System Program Office (SPO) will convert 19 Army UH-60L aircraft to the current Air Force HH-60G Pave Hawk configuration. For the NRE/Prototype/Trial Install/Kit-proof, a delivery order was placed on an existing Army Logistics Support Facility (LSF) Indefinite Delivery Indefinite Quantity (IDIQ) contract. The remaining production kits were procured on a subsequent delivery order as several kit components are long lead items. FY15-funded installations were procured through another delivery order on the LSF contract. FY17 & FY18-funded installations will be placed on another delivery order via LSF or on an alternate contract vehicle.

Exhibit P-3a, Individual Modification: PB 2020 Air Force		Date: February 2019
Appropriation / Budget Activity / Budget Sub Activity: 3010F / 05 / 5	**P-1 Line Item Number / Title:** H06000 / H-60	**Modification Number / Title:** 8854 / HH-60 OLR Mission Modifications
ID Code (A=Service Ready, B=Not Service Ready) : B	**MDAP/MAIS Code:**	

Secondary Distribution		FY 2018	FY 2019	FY 2020 Base	FY 2020 OCO	FY 2020 Total	FY 2021	FY 2022	FY 2023	FY 2024
AF	Quantity	-	-	-	-	-	-	-	-	-
	Total Obligation Authority	24.939	0.400	6.643	-	6.643	4.450	4.190	-	-
AFNG	Quantity	-	-	-	-	-	-	-	-	-
	Total Obligation Authority	13.550	-	-	-	-	-	-	-	-
Total: Secondary Distribution	**Quantity**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**
	Total Obligation Authority	**38.489**	**0.400**	**6.643**	**0.000**	**6.643**	**4.450**	**4.190**	**-**	**-**

Exhibit P-3a, Individual Modification: PB 2020 Air Force		Date: February 2019
Appropriation / Budget Activity / Budget Sub Activity: 3010F / 05 / 5	**P-1 Line Item Number / Title:** H06000 / H-60	**Modification Number / Title:** 8854 / HH-60 OLR Mission Modifications
ID Code (A=Service Ready, B=Not Service Ready) : B	**MDAP/MAIS Code:**	
Models of Systems Affected: HH-60G	**Modification Type:** Other	**Related RDT&E PEs:**

Financial Plan	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
	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												
Modification Item 1 of 1: L2G KIT												
A Kits												
Recurring												
L2G KIT:INSTALL KITS Group A (Active)	3 / 11.275	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	3 / 11.275
L2G KIT:INSTALL KITS Group A (Guard)	16 / 68.902	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	16 / 68.902
Subtotal: Recurring	*- / 80.177*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / 80.177*
B Kits												
Recurring												
L2G KIT:EQUIPMENT Group B (Active)	2 / 18.270	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	2 / 18.270
L2G KIT:EQUIPMENT Group B (Guard)	17 / 109.429	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	17 / 109.429
Subtotal: Recurring	*- / 127.699*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / 127.699*
Subtotal: L2G KIT	*- / 207.876*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / 207.876*
Subtotal: Procurement, All Modification Items	*- / 207.876*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / 207.876*
Support *(All Modification Items)*												
GROUP A: TOTAL NONRECURRING	- / 19.722	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 19.722
GROUP B: TOTAL NONRECURRING	- / 11.500	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 11.500
Change Orders	- / 6.805	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 6.805
Data	- / 10.220	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 10.220
SIM/TRAINER	3 / 11.500	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	3 / 11.500
SUPPORT-EQUIP	- / 5.444	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 5.444
PMA - Contractor Services	- / 21.193	- / 1.900	- / 0.300	- / 0.300	- / -	- / 0.300	- / 0.710	- / 0.500	- / -	- / -	- / -	- / 24.903
PMA - Other Gov't Costs	- / 40.820	- / 0.100	- / 0.100	- / 0.100	- / -	- / 0.100	- / 0.050	- / 0.050	- / -	- / -	- / -	- / 41.220
OTHER GOVT	- / 29.227	- / 15.245	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 44.472
ICS-Labor	- / 2.483	- / 3.000	- / -	- / 6.243	- / -	- / 6.243	- / 3.690	- / 3.640	- / -	- / -	- / -	- / 19.056
ICS-Material	- / 0.736	- / 3.000	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 3.736
Subtotal: Support	*3 / 159.650*	*- / 23.245*	*- / 0.400*	*- / 6.643*	*- / -*	*- / 6.643*	*- / 4.450*	*- / 4.190*	*- / -*	*- / -*	*- / -*	*3 / 198.578*
Installation												
Modification Item 1 of 1: L2G KIT	12 / 48.000	7 / 15.244	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	19 / 63.244
Subtotal: Installation	*12 / 48.000*	*7 / 15.244*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*19 / 63.244*
Total												

Exhibit P-3a, Individual Modification: PB 2020 Air Force		Date: February 2019
Appropriation / Budget Activity / Budget Sub Activity: 3010F / 05 / 5	**P-1 Line Item Number / Title:** H06000 / H-60	**Modification Number / Title:** 8854 / HH-60 OLR Mission Modifications
ID Code (A=Service Ready, B=Not Service Ready) : B	**MDAP/MAIS Code:**	
Models of Systems Affected: HH-60G	**Modification Type:** Other	**Related RDT&E PEs:**

Financial Plan	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
	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)*
Total Cost (Procurement + Support + Installation)	**415.526**	**38.489**	**0.400**	**6.643**	**0.000**	**6.643**	**4.450**	**4.190**	**-**	**-**	**-**	**469.698**

Exhibit P-3a, Individual Modification: PB 2020 Air Force		Date: February 2019
Appropriation / Budget Activity / Budget Sub Activity: 3010F / 05 / 5	**P-1 Line Item Number / Title:** H06000 / H-60	**Modification Number / Title:** 8854 / HH-60 OLR Mission Modifications

ID Code (A=Service Ready, B=Not Service Ready) : B | **MDAP/MAIS Code:**

Modification Item 1 of 1: L2G KIT

Manufacturer Information

Manufacturer Name: Science and Engineering Inc | Manufacturer Location: AL

Administrative Leadtime *(in Months)*: 6 | Production Leadtime *(in Months)*: 24

Dates	FY 2018	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024
Contract Dates							
Delivery Dates							

Installation Information

Method of Implementation: Contractor Facility

Installation Cost	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
	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)*
Prior Years	12 / 48.000	7 / 15.244	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	19 / 63.244
FY 2018	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2019	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2020	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2021	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2022	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2023	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2024	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
To Complete	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
Total	12 / 48.000	7 / 15.244	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	19 / 63.244

Installation Schedule

	PYS	FY 2018				FY 2019				FY 2020				FY 2021				FY 2022				FY 2023				FY 2024				TC	Tot
		Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4		
In	12	2	2	3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0	19
Out	1	-	-	-	1	-	-	-	15	-	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0	19

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Exhibit P-40, Budget Line Item Justification: PB 2020 Air Force	Date: February 2019
Appropriation / Budget Activity / Budget Sub Activity: 3010F: Aircraft Procurement, Air Force / BA 05: Modification of Inservice Aircraft / BSA 5: Other Aircraft	**P-1 Line Item Number / Title:** HAWK00 / RQ-4 Mods

ID Code (A=Service Ready, B=Not Service Ready): B	Program Elements for Code B Items: 0305220F	Other Related Program Elements: 0305220F

Line Item MDAP/MAIS Code: 252

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 *(Units in Each)*	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost *($ in Millions)*	497.684	78.435	123.715	1.704	-	1.704	34.121	32.117	73.520	120.261	541.440	1,502.997
Less PY Advance Procurement *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) *($ in Millions)*	497.684	78.435	123.715	1.704	-	1.704	34.121	32.117	73.520	120.261	541.440	1,502.997
Plus CY Advance Procurement *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Total Obligation Authority *($ in Millions)*	**497.684**	**78.435**	**123.715**	**1.704**	**-**	**1.704**	**34.121**	**32.117**	**73.520**	**120.261**	**541.440**	**1,502.997**
(The following Resource Summary rows are for informational purposes only. The corresponding budget requests are documented elsewhere.)												
Initial Spares *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Flyaway Unit Cost *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Unit Cost *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-

Description:

The RQ-4 System provides high altitude, deep look, long-endurance Intelligence, Surveillance, and Reconnaissance (ISR) capability that complements space and other airborne collectors during peacetime, crisis, and war-fighting scenarios. The aircraft is an autonomous, high altitude, long-endurance, Remotely Piloted Aircraft (RPA). Currently, the active inventory consists of four (4) Block 20s which have been converted to Battlefield Airborne Communications Nodes (BACN), twenty (20) Block 30s, and ten (10) Block 40s. The ground segment includes the Mission Control Element (MCE) and the Launch Recovery Element (LRE). There are a total of twenty-one (21) active ground segments in the existing RQ-4 inventory. Two (2) additional production LREs were purchased in 2015 and have since been installed. The RQ-4 program will incorporate applicable synergies with other platforms, including the U.S. Navy Triton, and other RPA weapon systems.

The designed service life of the Block 30 RPAs is approximately 25 years with an average service life remaining of 13 years through 2032. The designed service life of the Block 40 RPAs is approximately 25 years with an average service life remaining of 15 years through 2034. The Program Office is exploring options to extend the service life.

The RQ-4B is the successor to the RQ-4A, and is designed to employ 3,000 pounds of payload and enable multi-intelligence (multi-INT) collecting. The RQ-4B has three configurations: Block 20, Block 30, and Block 40. Of the six (6) Block 20s that were built, four (4) remain and have since been converted to BACN. The Block 30 employs upgraded Synthetic Aperture Radar (SAR) and Electro-Optical/Infrared (EO/IR) sensors - Enhanced Integrated Sensor Suite (EISS) and integrates a wide spectrum signals intelligence (SIGINT) sensor, the Airborne Signals Intelligence Payload (ASIP). EISS and ASIP are used simultaneously to create a multi-INT platform. Additionally, the Block 30 are being equipped with an ISR Payload Adapter that enables the utilization of the MS-177 multi-spectral sensor which is the next generation of the Senior Year Electro-optical Reconnaissance-2(SYER-2) sensor currently flown on the U-2. The Block 40 integrates the Multi-Platform Radar Technology Insertion Program (MP-RTIP) radar that has Ground Moving Target Indicator (GMTI) capability. The ground segment includes the Mission Control Element (MCE) and the Launch Recovery Element (LRE). The support segment includes aerospace ground equipment, tech orders, spares, support equipment, and training to enable operation of the RQ-4 System.

To protect production schedules from Diminishing Manufacturing Sources (DMS) and material shortages issues, the program will perform schedule protection buys when appropriate. Funding may be used to alleviate DMS issues for which there are not sufficient Government spares and/or the ability to repair organically or commercially is not viable.

The RQ-4 system will be continually modified to maintain pace with evolving threats and increasing capabilities included in modernization efforts. FY20 funds will support modification efforts to include aircraft mods, enhanced weather capabilities, Mode 5/Automatic Dependent Surveillance-Broadcast (ADS-B), ASIP sensor interoperability enhancements and upgrades, other sensor enhancements, trainers, EISS interoperability enhancements and upgrades, on-board data storage, low cost modifications, retrofit support planning, change requests, structural modifications required to bring the Global Hawk aircraft up to current configurations, support equipment, other modification efforts to upgrade the Global Hawk fleet, as well as technology insertion activities in support of Better Buying Power initiatives.

Exhibit P-40, Budget Line Item Justification: PB 2020 Air Force		Date: February 2019
Appropriation / Budget Activity / Budget Sub Activity: 3010F: Aircraft Procurement, Air Force / BA 05: Modification of Inservice Aircraft / BSA 5: Other Aircraft	**P-1 Line Item Number / Title:** HAWK00 / RQ-4 Mods	
ID Code (A=Service Ready, B=Not Service Ready): B	**Program Elements for Code B Items:** 0305220F	**Other Related Program Elements:** 0305220F
Line Item MDAP/MAIS Code: 252		

Funding for this exhibit is contained in PE 0305220F.

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.

Secondary Distribution		FY 2018	FY 2019	FY 2020 Base	FY 2020 OCO	FY 2020 Total	FY 2021	FY 2022	FY 2023	FY 2024
AF	Quantity	-	-	-	-	-	-	-	-	-
	Total Obligation Authority	78.435	123.715	1.704	-	1.704	34.121	32.117	73.520	120.261
Total: Secondary Distribution	**Quantity**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**
	Total Obligation Authority	**78.435**	**123.715**	**1.704**	**-**	**1.704**	**34.121**	**32.117**	**73.520**	**120.261**

Exhibit P-40, Budget Line Item Justification: PB 2020 Air Force	**Date:** February 2019
Appropriation / Budget Activity / Budget Sub Activity: 3010F: Aircraft Procurement, Air Force / BA 05: Modification of Inservice Aircraft / BSA 5: Other Aircraft	**P-1 Line Item Number / Title:** HAWK00 / RQ-4 Mods

ID Code (A=Service Ready, B=Not Service Ready): B	**Program Elements for Code B Items:** 0305220F	**Other Related Program Elements:** 0305220F

Line Item MDAP/MAIS Code: 252

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-40a***	470018 / CSMP (Capability Improvement)				- / -	- / -	- / -	- / -	- / -	- / -
P-3a	470001 / GH Aircraft Mods (Capability Improvement)		B		- / 392.563	- / 39.600	- / 101.176	- / 0.000	- / 0.000	- / 0.000
P-3a	470003 / GH Ground Station Mods (Capability Improvement)		A		- / 15.523	- / -	- / -	- / -	- / -	- / -
P-3a	470008 / Enhanced Weather Capability (Capability Improvement)		B		- / 44.016	- / 0.000	- / 0.000	- / -	- / -	- / -
P-3a	470009 / ASIP Increment I (Capability Improvement)		B		- / 34.108	- / 0.000	- / 0.000	- / -	- / -	- / -
P-3a	470010 / SAR (Capability Improvement)		A		- / 3.640	- / 0.000	- / 0.000	- / 0.000	- / 0.000	- / 0.000
P-3a	470011 / ASIP Install/Calibration (Capability Improvement)		A		- / 4.834	- / 0.000	- / -	- / -	- / -	- / -
P-3a	470012 / MODE 5/ADS-B (Capability Improvement)		B		- / 0.000	- / 6.361	- / 2.687	- / 0.000	- / 0.000	- / 0.000
P-3a	470013 / Sensor Enhancements (Capability Improvement)		A		- / -	- / 30.474	- / 0.000	- / 0.000	- / 0.000	- / 0.000
P-3a	470016 / ADC/AFS Refresh (Capability Improvement)		B		- / -	- / 0.000	- / 0.000	- / 0.000	- / 0.000	- / 0.000
P-3a	470019 / Communication Interoperability/Enhancements (Capability Improvement)		A		- / 3.000	- / 0.000	- / 0.000	- / 0.000	- / 0.000	- / 0.000
P-3a	470020 / EISS Enhancements (Capability Improvement)		B		- / -	- / 0.000	- / 17.852	- / 0.000	- / 0.000	- / 0.000
P-3a	1 / Low Cost Modifications (Capability Improvement)		B		- / 0.000	- / 2.000	- / 2.000	- / 1.704	- / 0.000	- / 1.704
P-40	**Total Gross/Weapon System Cost**				**- / 497.684**	**- / 78.435**	**- / 123.715**	**- / 1.704**	**- / -**	**- / 1.704**

Exhibits Schedule					FY 2021	FY 2022	FY 2023	FY 2024	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-40a***	470018 / CSMP (Capability Improvement)				- / -	- / -	- / -	- / -	- / 491.390	- / 491.390
P-3a	470001 / GH Aircraft Mods (Capability Improvement)		B		- / 10.578	- / 30.117	- / 35.420	- / 106.561	- / 49.850	- / 765.865
P-3a	470003 / GH Ground Station Mods (Capability Improvement)		A		- / -	- / -	- / -	- / -	- / -	- / 15.523
P-3a	470008 / Enhanced Weather Capability (Capability Improvement)		B		- / -	- / -	- / -	- / -	- / -	- / 44.016
P-3a	470009 / ASIP Increment I (Capability Improvement)		B		- / -	- / -	- / -	- / -	- / -	- / 34.108
P-3a	470010 / SAR (Capability Improvement)		A		- / 0.000	- / -	- / -	- / -	- / -	- / 3.640
P-3a	470011 / ASIP Install/Calibration (Capability Improvement)		A		- / -	- / -	- / -	- / -	- / -	- / 4.834
P-3a	470012 / MODE 5/ADS-B (Capability Improvement)		B		- / 0.000	- / -	- / -	- / -	- / -	- / 9.048
P-3a	470013 / Sensor Enhancements (Capability Improvement)		A		- / 21.543	- / 0.000	- / -	- / -	- / -	- / 52.017
P-3a	470016 / ADC/AFS Refresh (Capability Improvement)		B		- / 0.000	- / 0.000	- / 36.100	- / 11.700	- / -	- / 47.800
P-3a	470019 / Communication Interoperability/Enhancements (Capability Improvement)		A		- / 0.000	- / 0.000	- / -	- / -	- / -	- / 3.000
P-3a	470020 / EISS Enhancements (Capability Improvement)		B		- / 0.000	- / 0.000	- / 0.000	- / -	- / -	- / 17.852
P-3a	1 / Low Cost Modifications (Capability Improvement)		B		- / 2.000	- / 2.000	- / 2.000	- / 2.000	- / 0.200	- / 13.904
P-40	**Total Gross/Weapon System Cost**				**- / 34.121**	**- / 32.117**	**- / 73.520**	**- / 120.261**	**- / 541.440**	**- / 1,502.997**

*** Although this is an Exhibit P-40a item, the actual exhibit is not included since all of the required information for this item is already being shown here.

Exhibit P-40, Budget Line Item Justification: PB 2020 Air Force		Date: February 2019
Appropriation / Budget Activity / Budget Sub Activity: 3010F: Aircraft Procurement, Air Force / BA 05: Modification of Inservice Aircraft / BSA 5: Other Aircraft	**P-1 Line Item Number / Title:** HAWK00 / RQ-4 Mods	
ID Code (A=Service Ready, B=Not Service Ready): B	**Program Elements for Code B Items:** 0305220F	**Other Related Program Elements:** 0305220F
Line Item MDAP/MAIS Code: 252		
*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:
Where applicable, justification for individual modifications is provided in the P-3A exhibits.

Exhibit P-3a, Individual Modification: PB 2020 Air Force		Date: February 2019
Appropriation / Budget Activity / Budget Sub Activity: 3010F / 05 / 5	**P-1 Line Item Number / Title:** HAWK00 / RQ-4 Mods	**Modification Number / Title:** 470001 / GH Aircraft Mods
ID Code (A=Service Ready, B=Not Service Ready) : B	**MDAP/MAIS Code:**	

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 *(Units in Each)*	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost *($ in Millions)*	392.563	39.600	101.176	0.000	0.000	0.000	10.578	30.117	35.420	106.561	49.850	765.865
Less PY Advance Procurement *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) *($ in Millions)*	392.563	39.600	101.176	0.000	0.000	0.000	10.578	30.117	35.420	106.561	49.850	765.865
Plus CY Advance Procurement *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Total Obligation Authority *($ in Millions)*	**392.563**	**39.600**	**101.176**	**0.000**	**0.000**	**0.000**	**10.578**	**30.117**	**35.420**	**106.561**	**49.850**	**765.865**
(The following Resource Summary rows are for informational purposes only. The corresponding budget requests are documented elsewhere.)												
Initial Spares *($ in Millions)*	0.750	-	-	0.746	-	0.746	3.330	0.000	0.000	13.297	0.000	18.123
Gross/Weapon System Unit Cost *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-

Description:

The Global Hawk System provides high altitude, deep look, long-endurance intelligence, surveillance, and reconnaissance (ISR) capability that complements space and other airborne collectors during peacetime, crisis, and war-fighting scenarios. The aircraft is an autonomous, high altitude, long-endurance, unmanned aircraft system (UAS) and must maintain interoperability with government and commercial communications systems and exploitation nodes within the AF and other DoD systems. The Global Hawk program will incorporate applicable synergies with other platforms, including the U.S. Navy's Triton, and other remotely piloted aircraft (RPA) weapon systems.

The Global Hawk system will be continually modified to maintain pace with evolving threats and increasing capabilities included in modernization efforts. These planned modifications include aircraft, payload, ground station/communications, and other retrofits to incorporate/modify capabilities and maintain interoperability across the RQ-4 mission area. Air Vehicle modifications are written to the Line Replaceable Unit (LRU) level, not the overarching Total Aircraft Breakdown.

This Mod will cover change requests, retrofit planning, Diminishing Manufacturing Source (DMS)and Reliability and Maintainability (R&M) retrofits, Integrated Functional Capability (IFC) retrofits, trainers, contested environment initiatives, test support, support equipment, studies, other government costs, and program support. This Mod may be used to cover the efforts required to bring the early production aircraft up to the current operational configuration.

Requirement source: Air Combat Command.

Note: Mod 470001 includes FY18 Congressional Add funding for RQ-4 Tactical Field Terminal Antennas and FY19 Congressional Add funding for additional BACN capability.

Milestone/Development Status

The RQ-4 program will continue to develop, test and implement aircraft, sensor, communications and ground station performance, interoperability, sustainability and safety enhancements and solutions for implementation on the RQ-4 platform and ground based systems in an effort to maintain and improve aircraft and payload availability effectiveness and reduce life-cycle costs.

Secondary Distribution		FY 2018	FY 2019	FY 2020 Base	FY 2020 OCO	FY 2020 Total	FY 2021	FY 2022	FY 2023	FY 2024
AF	Quantity	-	-	-	-	-	-	-	-	-
	Total Obligation Authority	39.600	101.176	0.000	-	0.000	10.578	30.117	35.420	106.561
Total:	**Quantity**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**

Exhibit P-3a, Individual Modification: PB 2020 Air Force		Date: February 2019
Appropriation / Budget Activity / Budget Sub Activity: 3010F / 05 / 5	**P-1 Line Item Number / Title:** HAWK00 / RQ-4 Mods	**Modification Number / Title:** 470001 / GH Aircraft Mods
ID Code (A=Service Ready, B=Not Service Ready) : B	**MDAP/MAIS Code:**	

Secondary Distribution		FY 2018	FY 2019	FY 2020 Base	FY 2020 OCO	FY 2020 Total	FY 2021	FY 2022	FY 2023	FY 2024
Secondary Distribution	Total Obligation Authority	39.600	101.176	0.000	0.000	0.000	10.578	30.117	35.420	106.561

Exhibit P-3a, Individual Modification: PB 2020 Air Force		Date: February 2019
Appropriation / Budget Activity / Budget Sub Activity: 3010F / 05 / 5	**P-1 Line Item Number / Title:** HAWK00 / RQ-4 Mods	**Modification Number / Title:** 470001 / GH Aircraft Mods
ID Code (A=Service Ready, B=Not Service Ready) : B	**MDAP/MAIS Code:**	
Models of Systems Affected: RQ-4	**Modification Type:** Capability Improvement	**Related RDT&E PEs:**

Financial Plan	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
	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												
Modification Item 1 of 1: Global Hawk Air Craft Mods												
A Kits												
Recurring												
Global Hawk Air Craft Mods:INSTALL KITS Group A (Active)	67 / 3.811	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	67 / 3.811
Subtotal: Recurring	*- / 3.811*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / 3.811*
B Kits												
Recurring												
Global Hawk Air Craft Mods:EQUIPMENT Group B (Active)	67 / 359.226	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	67 / 359.226
Subtotal: Recurring	*- / 359.226*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / 359.226*
Subtotal: Global Hawk Air Craft Mods	*- / 363.037*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / 363.037*
Subtotal: Procurement, All Modification Items	*- / 363.037*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / 363.037*
Support *(All Modification Items)*												
Change Orders	- / 3.288	- / 39.600	- / 101.176	- / 0.000	- / -	- / 0.000	- / 9.200	- / 28.670	- / 33.930	- / 105.071	- / 48.360	- / 369.295
Mod of Spares	9 / 0.875	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	9 / 0.875
OTHER GOVT	- / 5.100	- / 0.000	- / -	- / -	- / -	- / -	- / 1.378	- / 1.447	- / 1.490	- / 1.490	- / 1.490	- / 12.395
Subtotal: Support	*9 / 9.263*	*- / 39.600*	*- / 101.176*	*- / 0.000*	*- / -*	*- / 0.000*	*- / 10.578*	*- / 30.117*	*- / 35.420*	*- / 106.561*	*- / 49.850*	*9 / 382.565*
Installation												
Modification Item 1 of 1: Global Hawk Air Craft Mods	67 / 20.263	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	67 / 20.263
Subtotal: Installation	*67 / 20.263*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*67 / 20.263*
Total												
Total Cost (Procurement + Support + Installation)	**392.563**	**39.600**	**101.176**	**0.000**	**0.000**	**0.000**	**10.578**	**30.117**	**35.420**	**106.561**	**49.850**	**765.865**

Exhibit P-3a, Individual Modification: PB 2020 Air Force		Date: February 2019
Appropriation / Budget Activity / Budget Sub Activity: 3010F / 05 / 5	**P-1 Line Item Number / Title:** HAWK00 / RQ-4 Mods	**Modification Number / Title:** 470001 / GH Aircraft Mods
ID Code (A=Service Ready, B=Not Service Ready) : B	**MDAP/MAIS Code:**	

Modification Item 1 of 1: Global Hawk Air Craft Mods

Manufacturer Information

Manufacturer Name: Northrop Grumman	Manufacturer Location: Palmdale, California
Administrative Leadtime *(in Months)*: 3	Production Leadtime *(in Months)*: 6

Dates	FY 2018	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024
Contract Dates							
Delivery Dates							

Installation Information

Method of Implementation: Contract Field Team

Installation Cost	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
	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)*
Prior Years	67 / 20.263	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	67 / 20.263
FY 2018	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2019	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2020	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2021	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2022	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2023	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2024	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
To Complete	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
Total	67 / 20.263	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	67 / 20.263

Installation Schedule

		FY 2018				FY 2019				FY 2020				FY 2021				FY 2022				FY 2023				FY 2024					
	PYS	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	TC	Tot
In	67	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	67
Out	67	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	67

Exhibit P-3a, Individual Modification: PB 2020 Air Force		Date: February 2019
Appropriation / Budget Activity / Budget Sub Activity: 3010F / 05 / 5	**P-1 Line Item Number / Title:** HAWK00 / RQ-4 Mods	**Modification Number / Title:** 470003 / GH Ground Station Mods
ID Code (A=Service Ready, B=Not Service Ready) : A	**MDAP/MAIS Code:**	

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 *(Units in Each)*	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost *($ in Millions)*	15.523	-	-	-	-	-	-	-	-	-	-	15.523
Less PY Advance Procurement *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) *($ in Millions)*	15.523	-	-	-	-	-	-	-	-	-	-	15.523
Plus CY Advance Procurement *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Total Obligation Authority *($ in Millions)*	**15.523**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**15.523**
(The following Resource Summary rows are for informational purposes only. The corresponding budget requests are documented elsewhere.)												
Initial Spares *($ in Millions)*	-	-	-	-	-	-	-	3.504	-	-	-	3.504
Gross/Weapon System Unit Cost *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-

Description:

Mod 470003 included small modifications for the Global Hawk Ground Segment system.

No additional funding requested through the FYDP. Any small modifications will be addressed in the Low Cost Mod line (99999X) or other Mod line.

Milestone/Development Status

Block 10 and 20 are fielded and production is complete. Blocks 30-40 are in development. Block 20 first production lot was awarded in FY04, and entered development test in FY07. Block 40 was awarded in FY06. Ongoing modifications support emerging requirements and reliability, maintainability & availability issues.

Future ground station development blocks support the aircraft Block 30/40 development and fielding schedules. Ongoing modifications support emerging requirements and reliability, maintainability & availability issues.

Exhibit P-3a, Individual Modification: PB 2020 Air Force		Date: February 2019
Appropriation / Budget Activity / Budget Sub Activity: 3010F / 05 / 5	**P-1 Line Item Number / Title:** HAWK00 / RQ-4 Mods	**Modification Number / Title:** 470003 / GH Ground Station Mods
ID Code (A=Service Ready, B=Not Service Ready) : A	**MDAP/MAIS Code:**	
Models of Systems Affected: RQ-4	**Modification Type:** Capability Improvement	**Related RDT&E PEs:** 0305220F

Financial Plan	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
	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												
Modification Item 1 of 1: Ground Station Mods												
B Kits												
Recurring												
Ground Station Mods:EQUIPMENT Group B (Active)	19 / 14.100	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	19 / 14.100
Subtotal: Recurring	*- / 14.100*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / 14.100*
Subtotal: Ground Station Mods	*- / 14.100*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / 14.100*
Subtotal: Procurement, All Modification Items	*- / 14.100*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / 14.100*
Support *(All Modification Items)*												
OTHER GOVT	- / 0.523	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 0.523
Subtotal: Support	*- / 0.523*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / 0.523*
Installation												
Modification Item 1 of 1: Ground Station Mods	19 / 0.900	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	19 / 0.900
Subtotal: Installation	*19 / 0.900*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*19 / 0.900*
Total												
Total Cost (Procurement + Support + Installation)	**15.523**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**15.523**

Exhibit P-3a, Individual Modification: PB 2020 Air Force		Date: February 2019
Appropriation / Budget Activity / Budget Sub Activity: 3010F / 05 / 5	**P-1 Line Item Number / Title:** HAWK00 / RQ-4 Mods	**Modification Number / Title:** 470003 / GH Ground Station Mods
ID Code (A=Service Ready, B=Not Service Ready) : A	**MDAP/MAIS Code:**	

Modification Item 1 of 1: Ground Station Mods

Manufacturer Information

Manufacturer Name: Northrop Grumman	Manufacturer Location: Palmdale, CA
Administrative Leadtime *(in Months)*: 3	Production Leadtime *(in Months)*: 2

Dates	FY 2018	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024
Contract Dates							
Delivery Dates							

Installation Information

Method of Implementation: Contract Field Team

Installation Cost	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
	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)*
Prior Years	19 / 0.900	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	19 / 0.900
FY 2018	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2019	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2020	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2021	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2022	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2023	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2024	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
To Complete	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
Total	19 / 0.900	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	19 / 0.900

Installation Schedule

	PYS	FY 2018				FY 2019				FY 2020				FY 2021				FY 2022				FY 2023				FY 2024				TC	Tot
		Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4		
In	19	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0	19
Out	19	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0	19

Exhibit P-3a, Individual Modification: PB 2020 Air Force		Date: February 2019
Appropriation / Budget Activity / Budget Sub Activity: 3010F / 05 / 5	**P-1 Line Item Number / Title:** HAWK00 / RQ-4 Mods	**Modification Number / Title:** 470008 / Enhanced Weather Capability
ID Code (A=Service Ready, B=Not Service Ready) : B	**MDAP/MAIS Code:**	

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 *(Units in Each)*	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost *($ in Millions)*	44.016	0.000	0.000	-	-	-	-	-	-	-	-	44.016
Less PY Advance Procurement *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) *($ in Millions)*	44.016	0.000	0.000	-	-	-	-	-	-	-	-	44.016
Plus CY Advance Procurement *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Total Obligation Authority *($ in Millions)*	**44.016**	**0.000**	**0.000**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**44.016**
(The following Resource Summary rows are for informational purposes only. The corresponding budget requests are documented elsewhere.)												
Initial Spares *($ in Millions)*	1.614	-	0.000	-	-	-	-	-	-	-	-	1.614
Gross/Weapon System Unit Cost *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-

Description:

Enhanced Weather Capability provides improved situational awareness and performance in severe weather and increased mission capability by fielding the retrofit of onboard Weather Radar, Lightning Diverter Strips, increased engine performance, and minor communications enhancements concurrently developed with Weather Radar due to hardware & software development and fielding synergies.

This retrofit includes upgrade kits and installs on the following:
- Thirty-five (34) aircraft: twenty (20) Block 30, ten (10) Block 40, four (4) Block 20
- Thirteen (13) Launch & Recovery Elements (LRE)
- Eleven (11) Mission Control Elements (MCE)

The sum total of retrofit kits is one hundred twenty-three (123).

Weather Radar, minor communications, and other kits required to field the Enhanced Weather Capability procured within this Mod line. Certain modification kits have shorter lead times and can be accomplished quicker than the other retrofits. This impacts the phasing of kit buys and installs throughout the FYDP. Kits may be procured and installed in the same FY.

Requirement source: AF 1067.

Tech Specification placed on contract - 12 Mar 2015
PDR - 21-22 Jul 2015
CDR - 15-16 Sep 2015
Flight Test (All Blocks) - May 2016 - Jun 2018
DT Completion - Q3 FY18
Operational Test Complete (All Blocks) - Q1 FY19
IOT&E Completion - N/A

Design requirements and configuration are complete and agreed to through PDR and CDR. Software and Hardware qualification and testing are complete on the Hot Bench and approvals for temporary modification of test aircraft have been completed. Retrofit of Block 30 operational aircraft began at Beale AFB in Apr 2018 via depot level contract field team. Retrofit of the Block 40 and BACN operational aircraft will be completed at Grand Forks AFB via depot level contract field team.

Milestone/Development Status

Exhibit P-3a, Individual Modification: PB 2020 Air Force		Date: February 2019
Appropriation / Budget Activity / Budget Sub Activity: 3010F / 05 / 5	**P-1 Line Item Number / Title:** HAWK00 / RQ-4 Mods	**Modification Number / Title:** 470008 / Enhanced Weather Capability
ID Code (A=Service Ready, B=Not Service Ready) : B	**MDAP/MAIS Code:**	

The Block 30 aircraft completed developmental ground and flight testing in Jan 2017 and completed Operational Test August 2017. Block 40 completed Developmental Testing in Feb 2018. Battlefield Airborne Communication Node (BACN) Developmental testing was completed in Jun 2018.

Exhibit P-3a, Individual Modification: PB 2020 Air Force		Date: February 2019
Appropriation / Budget Activity / Budget Sub Activity: 3010F / 05 / 5	**P-1 Line Item Number / Title:** HAWK00 / RQ-4 Mods	**Modification Number / Title:** 470008 / Enhanced Weather Capability
ID Code (A=Service Ready, B=Not Service Ready) : B	**MDAP/MAIS Code:**	
Models of Systems Affected: RQ-4	**Modification Type:** Capability Improvement	**Related RDT&E PEs:** 0305220F

Financial Plan	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
	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)*
RDT&E PE #												
0305220F	- / 43.706	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 43.706
Procurement												
Modification Item 1 of 2: Group A Install Kits												
A Kits												
Recurring												
Group A Install Kits:INSTALL KITS Group A (Active)	123 / 5.813	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	123 / 5.813
Subtotal: Recurring	*- / 5.813*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / 5.813*
Subtotal: Group A Install Kits	*- / 5.813*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / 5.813*
Modification Item 2 of 2: Grp B Equipment												
B Kits												
Recurring												
Grp B Equipment:EQUIPMENT Group B (Active)	123 / 35.213	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	123 / 35.213
Subtotal: Recurring	*- / 35.213*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / 35.213*
Subtotal: Grp B Equipment	*- / 35.213*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / 35.213*
Subtotal: Procurement, All Modification Items	*- / 41.026*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / 41.026*
Installation												
Modification Item 2 of 2: Grp B Equipment	123 / 2.990	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	123 / 2.990
Subtotal: Installation	*123 / 2.990*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*123 / 2.990*
Total												
Total Cost (Procurement + Support + Installation)	**44.016**	**0.000**	**0.000**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**44.016**

Exhibit P-3a, Individual Modification: PB 2020 Air Force		Date: February 2019
Appropriation / Budget Activity / Budget Sub Activity: 3010F / 05 / 5	**P-1 Line Item Number / Title:** HAWK00 / RQ-4 Mods	**Modification Number / Title:** 470008 / Enhanced Weather Capability

ID Code (A=Service Ready, B=Not Service Ready) : B

MDAP/MAIS Code:

Modification Item 1 of 2: Group A Install Kits

Manufacturer Information

Manufacturer Name: Northrop Grumman

Manufacturer Location: Palmdale, California

Administrative Leadtime *(in Months)*: 11

Production Leadtime *(in Months)*: 6

Dates	FY 2018	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024
Contract Dates							
Delivery Dates							

Installation Information

Method of Implementation (Organic): Org/Intermediate

Installation Quantity: 0

Exhibit P-3a, Individual Modification: PB 2020 Air Force		Date: February 2019
Appropriation / Budget Activity / Budget Sub Activity: 3010F / 05 / 5	**P-1 Line Item Number / Title:** HAWK00 / RQ-4 Mods	**Modification Number / Title:** 470008 / Enhanced Weather Capability
ID Code (A=Service Ready, B=Not Service Ready) : B	**MDAP/MAIS Code:**	

Modification Item 2 of 2: Grp B Equipment

Manufacturer Information

Manufacturer Name: Northrop Grumman	Manufacturer Location: Palmdale, California
Administrative Leadtime *(in Months)*: 11	Production Leadtime *(in Months)*: 6

Dates	FY 2018	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024
Contract Dates							
Delivery Dates							

Installation Information

Method of Implementation: Contract Field Team

Installation Cost	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
	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)*
Prior Years	123 / 2.990	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	123 / 2.990
FY 2018	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2019	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2020	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2021	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2022	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2023	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2024	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
To Complete	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
Total	123 / 2.990	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	123 / 2.990

Installation Schedule

		FY 2018				FY 2019				FY 2020				FY 2021				FY 2022				FY 2023				FY 2024					
	PYS	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	TC	Tot
In	79	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0	79
Out	79	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0	79

Exhibit P-3a, Individual Modification: PB 2020 Air Force		Date: February 2019
Appropriation / Budget Activity / Budget Sub Activity: 3010F / 05 / 5	**P-1 Line Item Number / Title:** HAWK00 / RQ-4 Mods	**Modification Number / Title:** 470009 / ASIP Increment I
ID Code (A=Service Ready, B=Not Service Ready) : B	**MDAP/MAIS Code:**	

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 *(Units in Each)*	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost *($ in Millions)*	34.108	0.000	0.000	-	-	-	-	-	-	-	-	34.108
Less PY Advance Procurement *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) *($ in Millions)*	34.108	0.000	0.000	-	-	-	-	-	-	-	-	34.108
Plus CY Advance Procurement *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Total Obligation Authority *($ in Millions)*	**34.108**	**0.000**	**0.000**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**34.108**
(The following Resource Summary rows are for informational purposes only. The corresponding budget requests are documented elsewhere.)												
Initial Spares *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Unit Cost *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-

Description:

Airborne Signals Intelligence Payload (ASIP) Increment 1 incorporates additional signals and integrates advanced collection algorithms providing increased mission capability. It is a follow-on effort to the ASIP baseline program in compliance with SIGINT Capability Working Group priorities. The retrofit task implemented using the rotatable spares concept.

This program retrofits fifteen (15) Block 30 aircraft as well as twelve (12) spare chassis.

Milestone/Development Status

ISR Sensors group (AFLCMC/WINS) will initiate development effort, which will deliver hardware and software for initial testing and DT. The WINS development contract was awarded in Jun 15 with delivery in Nov 16. Global Hawk's NRE effort will support DT and procurement of modification kits. Retrofit kit procurement contract was awarded in Mar 2016.

Exhibit P-3a, Individual Modification: PB 2020 Air Force		Date: February 2019
Appropriation / Budget Activity / Budget Sub Activity: 3010F / 05 / 5	**P-1 Line Item Number / Title:** HAWK00 / RQ-4 Mods	**Modification Number / Title:** 470009 / ASIP Increment I
ID Code (A=Service Ready, B=Not Service Ready) : B	**MDAP/MAIS Code:**	
Models of Systems Affected: RQ-4	**Modification Type:** Capability Improvement	**Related RDT&E PEs:** 0305220F

Financial Plan	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
	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)*
RDT&E PE #												
0305220F	- / 0.123	- / 0.684	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 0.807
Procurement												
Modification Item 1 of 2: Group A Install Kits (2)												
A Kits												
Recurring												
Group A Install Kits:INSTALL KITS Group A (Active)	15 / 1.895	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	15 / 1.895
Subtotal: Recurring	*- / 1.895*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / 1.895*
Subtotal: Group A Install Kits (2)	*- / 1.895*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / 1.895*
Modification Item 2 of 2: Group B Equipment												
B Kits												
Recurring												
Group B Equipment:EQUIPMENT Group B (Active)	15 / 17.054	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	15 / 17.054
Subtotal: Recurring	*- / 17.054*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / 17.054*
Subtotal: Group B Equipment	*- / 17.054*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / 17.054*
Subtotal: Procurement, All Modification Items	*- / 18.949*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / 18.949*
Support *(All Modification Items)*												
Mod of Spare	12 / 15.159	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	12 / 15.159
Subtotal: Support	*12 / 15.159*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*12 / 15.159*
Installation												
Subtotal: Installation	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*
Total												
Total Cost (Procurement + Support + Installation)	**34.108**	**0.000**	**0.000**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**34.108**

Exhibit P-3a, Individual Modification: PB 2020 Air Force		Date: February 2019
Appropriation / Budget Activity / Budget Sub Activity: 3010F / 05 / 5	**P-1 Line Item Number / Title:** HAWK00 / RQ-4 Mods	**Modification Number / Title:** 470009 / ASIP Increment I

ID Code (A=Service Ready, B=Not Service Ready) : B | **MDAP/MAIS Code:**

Modification Item 1 of 2: Group A Install Kits (2)

Manufacturer Information

Manufacturer Name: Northrop Grumman | Manufacturer Location: Palmdale, California

Administrative Leadtime *(in Months)*: 5 | Production Leadtime *(in Months)*: 12

Dates	FY 2018	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024
Contract Dates							
Delivery Dates							

Installation Information

Method of Implementation (Organic): Org/Intermediate | **Installation Quantity:** 0

Exhibit P-3a, Individual Modification: PB 2020 Air Force		Date: February 2019
Appropriation / Budget Activity / Budget Sub Activity: 3010F / 05 / 5	**P-1 Line Item Number / Title:** HAWK00 / RQ-4 Mods	**Modification Number / Title:** 470009 / ASIP Increment I

ID Code (A=Service Ready, B=Not Service Ready) : B | **MDAP/MAIS Code:**

Modification Item 2 of 2: Group B Equipment

Manufacturer Information

Manufacturer Name: Northrop Grumman | Manufacturer Location: Palmdale, California

Administrative Leadtime *(in Months)*: 5 | Production Leadtime *(in Months)*: 12

Dates	FY 2018	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024
Contract Dates							
Delivery Dates							

Installation Information

Method of Implementation (Organic): Org/Intermediate | **Installation Quantity:** 0

Exhibit P-3a, Individual Modification: PB 2020 Air Force		Date: February 2019
Appropriation / Budget Activity / Budget Sub Activity: 3010F / 05 / 5	**P-1 Line Item Number / Title:** HAWK00 / RQ-4 Mods	**Modification Number / Title:** 470010 / SAR
ID Code (A=Service Ready, B=Not Service Ready) : A	**MDAP/MAIS Code:**	

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 *(Units in Each)*	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost *($ in Millions)*	3.640	0.000	0.000	0.000	0.000	0.000	0.000	-	-	-	-	3.640
Less PY Advance Procurement *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) *($ in Millions)*	3.640	0.000	0.000	0.000	0.000	0.000	0.000	-	-	-	-	3.640
Plus CY Advance Procurement *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Total Obligation Authority *($ in Millions)*	**3.640**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**-**	**-**	**-**	**-**	**3.640**
(The following Resource Summary rows are for informational purposes only. The corresponding budget requests are documented elsewhere.)												
Initial Spares *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Unit Cost *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-

Description:

Synthetic Aperture Radar (SAR) incorporates SAR selectable Point Image Mode, for Detected and Complex Imagery into the Enhanced Integrated Sensor Suite (EISS). Software was developed and incorporated into fielded Global Hawk Integrated Functional Capability (IFC) 4.0.1.1. This modification was implemented on all Block 20 and Block 30 aircraft to include necessary revisions to the technical documentation. The major effort for this modification was updating the Phase Distortion Tables (PDT) of the Enhanced Receiver Exciter Controller (EREC). A total of forty-four (44) ERECs will be rotated back to vendor for PDT update. Installation costs include calibration and other associated costs to update the PDTs.

Milestone/Development Status

The PDT table updates and fielding of ERECs occurred as a rotatable pool with a start date in Q4 FY16.

Exhibit P-3a, Individual Modification: PB 2020 Air Force		Date: February 2019
Appropriation / Budget Activity / Budget Sub Activity: 3010F / 05 / 5	**P-1 Line Item Number / Title:** HAWK00 / RQ-4 Mods	**Modification Number / Title:** 470010 / SAR
ID Code (A=Service Ready, B=Not Service Ready) : A	**MDAP/MAIS Code:**	
Models of Systems Affected: RQ-4	**Modification Type:** Capability Improvement	**Related RDT&E PEs:** 0305220F

Financial Plan	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
	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												
Modification Item 1 of 1: Group B Calibration/ Installation												
B Kits												
Recurring												
Group B Calibration/Installation:EQUIPMENT Group B (Active)	44 / 0.910	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	44 / 0.910
Subtotal: Recurring	- / *0.910*	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / *0.910*
Subtotal: Group B Calibration/Installation	- / *0.910*	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / *0.910*
Subtotal: Procurement, All Modification Items	- / *0.910*	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / *0.910*
Installation												
Modification Item 1 of 1: Group B Calibration/Installation	44 / 2.730	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	44 / 2.730
Subtotal: Installation	*44 / 2.730*	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	*44 / 2.730*
Total												
Total Cost (Procurement + Support + Installation)	**3.640**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**-**	**-**	**-**	**-**	**3.640**

Exhibit P-3a, Individual Modification: PB 2020 Air Force		Date: February 2019
Appropriation / Budget Activity / Budget Sub Activity: 3010F / 05 / 5	**P-1 Line Item Number / Title:** HAWK00 / RQ-4 Mods	**Modification Number / Title:** 470010 / SAR
ID Code (A=Service Ready, B=Not Service Ready) : A	**MDAP/MAIS Code:**	

Modification Item 1 of 1: Group B Calibration/Installation

Manufacturer Information

Manufacturer Name: Northrop Grumman	Manufacturer Location: Palmdale, California
Administrative Leadtime *(in Months)*: 5	Production Leadtime *(in Months)*: 1

Dates	FY 2018	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024
Contract Dates							
Delivery Dates							

Installation Information

Method of Implementation: Contractor Facility

Installation Cost	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
	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)*
Prior Years	44 / 2.730	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	44 / 2.730
FY 2018	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2019	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2020	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2021	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2022	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2023	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2024	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
To Complete	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
Total	44 / 2.730	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	44 / 2.730

Installation Schedule

	PYS	FY 2018				FY 2019				FY 2020				FY 2021				FY 2022				FY 2023				FY 2024				TC	Tot
		Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4		
In	44	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0	44
Out	44	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0	44

Exhibit P-3a, Individual Modification: PB 2020 Air Force		Date: February 2019
Appropriation / Budget Activity / Budget Sub Activity: 3010F / 05 / 5	**P-1 Line Item Number / Title:** HAWK00 / RQ-4 Mods	**Modification Number / Title:** 470011 / ASIP Install/Calibration
ID Code (A=Service Ready, B=Not Service Ready) : A	**MDAP/MAIS Code:**	

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 *(Units in Each)*	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost *($ in Millions)*	4.834	0.000	-	-	-	-	-	-	-	-	-	4.834
Less PY Advance Procurement *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) *($ in Millions)*	4.834	0.000	-	-	-	-	-	-	-	-	-	4.834
Plus CY Advance Procurement *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Total Obligation Authority *($ in Millions)*	**4.834**	**0.000**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**4.834**
(The following Resource Summary rows are for informational purposes only. The corresponding budget requests are documented elsewhere.)												
Initial Spares *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Unit Cost *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-

Description:

This program converts a total of eight (8) Block 30I air vehicles into Block 30M (Airborne Signals Intelligence Payload (ASIP) capable) air vehicles to meet Air Combat Command (ACC) requirements. The original retrofit plan was to convert eleven (11) Block 30I air vehicles into Block 30M capable air vehicles; however, this effort was halted by PB13. As a result, only three (3) of the eleven (11) Block 30Is were retrofitted.

The ASIP retrofit program was never restarted and certain critical Line Replaceable Units (LRUs) were directed to be redistributed within the USAF and cannot be reconstituted. This project will require the installation of Group A hardware at the Contractor facility followed by a significant calibration effort of at least three, 8+ hour flights per air vehicle. The current schedule includes one (1) ASIP provided as Government Furnished Equipment (GFE) by ACC and two (2) Lot 11 ASIP kits (Group A included with kits). These three (3) ASIP units are currently scheduled to install on the last three (3) air vehicles, making them Block 30Ms with the ASIP installed. If any additional ASIP sensors become available, they will also be installed as part of this effort.

This effort results in a minimum of three (3) Block 30M air vehicles, with the remaining quantity being Block 30M capable air vehicles.

Milestone/Development Status

Contract awarded Mar FY16.

Exhibit P-3a, Individual Modification: PB 2020 Air Force		Date: February 2019
Appropriation / Budget Activity / Budget Sub Activity: 3010F / 05 / 5	**P-1 Line Item Number / Title:** HAWK00 / RQ-4 Mods	**Modification Number / Title:** 470011 / ASIP Install/Calibration
ID Code (A=Service Ready, B=Not Service Ready) : A	**MDAP/MAIS Code:**	
Models of Systems Affected: RQ-4	**Modification Type:** Capability Improvement	**Related RDT&E PEs:** 0305220F

Financial Plan	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
	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												
Modification Item 1 of 1: Grp A Install Kits (6)												
A Kits												
Recurring												
Grp A Install Kits:INSTALL KITS Group A (Active)	6 / 0.920	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	6 / 0.920
Subtotal: Recurring	*- / 0.920*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / 0.920*
Subtotal: Grp A Install Kits (6)	*- / 0.920*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / 0.920*
Subtotal: Procurement, All Modification Items	*- / 0.920*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / 0.920*
Support *(All Modification Items)*												
Change Orders	- / 2.955	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 2.955
Subtotal: Support	*- / 2.955*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / 2.955*
Installation												
Modification Item 1 of 1: Grp A Install Kits (6)	6 / 0.959	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	6 / 0.959
Subtotal: Installation	*6 / 0.959*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*6 / 0.959*
Total												
Total Cost (Procurement + Support + Installation)	**4.834**	**0.000**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**4.834**

Exhibit P-3a, Individual Modification: PB 2020 Air Force		Date: February 2019
Appropriation / Budget Activity / Budget Sub Activity: 3010F / 05 / 5	**P-1 Line Item Number / Title:** HAWK00 / RQ-4 Mods	**Modification Number / Title:** 470011 / ASIP Install/Calibration

ID Code (A=Service Ready, B=Not Service Ready) : A | **MDAP/MAIS Code:**

Modification Item 1 of 1: Grp A Install Kits (6)

Manufacturer Information

Manufacturer Name: Northrop Grumman | Manufacturer Location: Palmdale, CA

Administrative Leadtime *(in Months)*: 12 | Production Leadtime *(in Months)*: 3

Dates	FY 2018	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024
Contract Dates							
Delivery Dates							

Installation Information

Method of Implementation: Contractor Facility

Installation Cost	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
	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)*
Prior Years	6 / 0.959	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	6 / 0.959
FY 2018	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2019	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2020	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2021	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2022	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2023	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2024	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
To Complete	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
Total	6 / 0.959	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	6 / 0.959

Installation Schedule

	PYS	FY 2018				FY 2019				FY 2020				FY 2021				FY 2022				FY 2023				FY 2024				TC	Tot
		Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4		
In	6	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0	6
Out	6	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0	6

Exhibit P-3a, Individual Modification: PB 2020 Air Force		Date: February 2019
Appropriation / Budget Activity / Budget Sub Activity: 3010F / 05 / 5	**P-1 Line Item Number / Title:** HAWK00 / RQ-4 Mods	**Modification Number / Title:** 470012 / MODE 5/ADS-B
ID Code (A=Service Ready, B=Not Service Ready) : B	**MDAP/MAIS Code:**	

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 *(Units in Each)*	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost *($ in Millions)*	0.000	6.361	2.687	0.000	0.000	0.000	0.000	-	-	-	-	9.048
Less PY Advance Procurement *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) *($ in Millions)*	0.000	6.361	2.687	0.000	0.000	0.000	0.000	-	-	-	-	9.048
Plus CY Advance Procurement *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Total Obligation Authority *($ in Millions)*	**0.000**	**6.361**	**2.687**	**0.000**	**0.000**	**0.000**	**0.000**	**-**	**-**	**-**	**-**	**9.048**
(The following Resource Summary rows are for informational purposes only. The corresponding budget requests are documented elsewhere.)												
Initial Spares *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Unit Cost *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-

Description:

Mode 5 is an enhancement to the legacy Mode 4 Identification, Friend or Foe (IFF) which has been in use since the mid-1950s for military identification. Mode 5 provides four graduated levels of data transmission with enhanced security protection and technology advances and includes question and answer identification/classified interrogation, position reporting capability, selective interrogation, and data exchange capability. The National Security Agency and Joint Chiefs of Staff have placed a mandate to replace Mode 4 with Mode 5 by 30 Jun 2020.

Automatic Dependent Surveillance-Broadcast (ADS-B) is a function for air vehicles that periodically transmits its state vector (positions/velocities) and other information to air traffic controllers. This allows air traffic controllers to know where the platform is as it enters a specific air space. Mode S, which gives more detailed information on the identity of aircraft to the air traffic controller, is also being implemented with this upgrade as part of the IFF hardware. ADS-B supports improved use of airspace and enhanced safety, and is required for use in the European theater by the International Civil Aviation Organization (European FAA). The Federal Aviation Administration (FAA) and DoD have mandated implementation by 1 January 2020.

This program will retrofit thirty-four (34) aircraft: four (4) Block 20, twenty (20) Block 30, and ten (10) Block 40 aircraft.

Projected milestones:
SRR - Completed Jun 2016
CDR - Completed Nov 2016
DT Begins - Feb 2019
OT Begins - Oct 2019
Fielding - Jun 2020
Retrofit - Mar 2020

Milestone/Development Status

Contract was awarded Mar 2016. Development is underway with a projected 38-month period of performance. The development will progress to a stage where the Contractor will be able to release documentation to commence kitting for retrofit. Therefore, certain retrofit activities will begin prior to full completion of development effort.

Secondary Distribution		FY 2018	FY 2019	FY 2020 Base	FY 2020 OCO	FY 2020 Total	FY 2021	FY 2022	FY 2023	FY 2024
AF	Quantity	-	-	-	-	-	-	-	-	-

Exhibit P-3a, Individual Modification: PB 2020 Air Force		Date: February 2019
Appropriation / Budget Activity / Budget Sub Activity: 3010F / 05 / 5	**P-1 Line Item Number / Title:** HAWK00 / RQ-4 Mods	**Modification Number / Title:** 470012 / MODE 5/ADS-B
ID Code (A=Service Ready, B=Not Service Ready) : B	**MDAP/MAIS Code:**	

Secondary Distribution		FY 2018	FY 2019	FY 2020 Base	FY 2020 OCO	FY 2020 Total	FY 2021	FY 2022	FY 2023	FY 2024
	Total Obligation Authority	6.361	2.687	-	-	-	-	-	-	-
Total: Secondary Distribution	**Quantity**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**
	Total Obligation Authority	**6.361**	**2.687**	**0.000**	**0.000**	**0.000**	**0.000**	**-**	**-**	**-**

Exhibit P-3a, Individual Modification: PB 2020 Air Force		Date: February 2019
Appropriation / Budget Activity / Budget Sub Activity: 3010F / 05 / 5	**P-1 Line Item Number / Title:** HAWK00 / RQ-4 Mods	**Modification Number / Title:** 470012 / MODE 5/ADS-B
ID Code (A=Service Ready, B=Not Service Ready) : B	**MDAP/MAIS Code:**	
Models of Systems Affected: RQ-4	**Modification Type:** Capability Improvement	**Related RDT&E PEs:** 0305220F

Financial Plan	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
	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)*
RDT&E PE #												
0305220F	- / 2.164	- / 0.139	- / 0.000	- / 0.000	- / -	- / 0.000	- / -	- / -	- / -	- / -	- / -	- / 2.303
Procurement												
Modification Item 1 of 1: Grp B Equipment (2)												
B Kits												
Recurring												
Grp B Equipment:EQUIPMENT Group B (Active)	- / -	24 / 5.363	10 / 2.259	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	34 / 7.622
Subtotal: Recurring	*- / -*	*- / 5.363*	*- / 2.259*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / 7.622*
Subtotal: Grp B Equipment (2)	*- / -*	*- / 5.363*	*- / 2.259*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / 7.622*
Subtotal: Procurement, All Modification Items	*- / -*	*- / 5.363*	*- / 2.259*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / 7.622*
Support *(All Modification Items)*												
Data	- / -	- / 0.069	- / 0.030	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 0.099
Subtotal: Support	*- / -*	*- / 0.069*	*- / 0.030*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / 0.099*
Installation												
Modification Item 1 of 1: Grp B Equipment (2)	- / -	24 / 0.929	10 / 0.398	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	34 / 1.327
Subtotal: Installation	*- / -*	*24 / 0.929*	*10 / 0.398*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*34 / 1.327*
Total												
Total Cost (Procurement + Support + Installation)	**0.000**	**6.361**	**2.687**	**0.000**	**0.000**	**0.000**	**0.000**	**-**	**-**	**-**	**-**	**9.048**

Exhibit P-3a, Individual Modification: PB 2020 Air Force		Date: February 2019
Appropriation / Budget Activity / Budget Sub Activity: 3010F / 05 / 5	**P-1 Line Item Number / Title:** HAWK00 / RQ-4 Mods	**Modification Number / Title:** 470012 / MODE 5/ADS-B
ID Code (A=Service Ready, B=Not Service Ready) : B	**MDAP/MAIS Code:**	

Modification Item 1 of 1: Grp B Equipment (2)

Manufacturer Information

Manufacturer Name: Northrop Grumman	Manufacturer Location: Palmdale, California
Administrative Leadtime *(in Months)*: 10	Production Leadtime *(in Months)*: 1

Dates	FY 2018	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024
Contract Dates	Aug 2018	Aug 2019					
Delivery Dates	Sep 2018	Sep 2019					

Installation Information

Method of Implementation: Contract Field Team

Installation Cost	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
	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)*
Prior Years	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2018	- / -	24 / 0.929	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	24 / 0.929
FY 2019	- / -	- / -	10 / 0.398	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	10 / 0.398
FY 2020	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2021	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2022	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2023	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2024	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
To Complete	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
Total	- / -	24 / 0.929	10 / 0.398	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	34 / 1.327

Installation Schedule

	PYS	FY 2018				FY 2019				FY 2020				FY 2021				FY 2022				FY 2023				FY 2024				TC	Tot
		Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4		
In	0	-	-	-	24	-	-	-	10	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0	34
Out	0	-	-	-	24	-	-	-	10	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0	34

Exhibit P-3a, Individual Modification: PB 2020 Air Force		Date: February 2019
Appropriation / Budget Activity / Budget Sub Activity: 3010F / 05 / 5	**P-1 Line Item Number / Title:** HAWK00 / RQ-4 Mods	**Modification Number / Title:** 470013 / Sensor Enhancements
ID Code (A=Service Ready, B=Not Service Ready) : A	**MDAP/MAIS Code:**	

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 *(Units in Each)*	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost *($ in Millions)*	-	30.474	0.000	0.000	0.000	0.000	21.543	0.000	-	-	-	52.017
Less PY Advance Procurement *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) *($ in Millions)*	-	30.474	0.000	0.000	0.000	0.000	21.543	0.000	-	-	-	52.017
Plus CY Advance Procurement *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Total Obligation Authority *($ in Millions)*	**-**	**30.474**	**0.000**	**0.000**	**0.000**	**0.000**	**21.543**	**0.000**	**-**	**-**	**-**	**52.017**
(The following Resource Summary rows are for informational purposes only. The corresponding budget requests are documented elsewhere.)												
Initial Spares *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Unit Cost *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-

Description:

This modification program includes the purchase and installation of Intelligence, Surveillance and Reconnaissance (ISR) Payload Adapters (IPAs), interface harnessing, Interchangeable Fairings (ICFs), as well as other related sensor enhancements. This Mod reflects nine (9) Blk 30 air vehicles to be retrofitted. IPAs provide a common air vehicle physical interface with an Open Mission Systems (OMS) software layer for payloads, which is expected to provide reduced cost and schedule air vehicle integration. IPAs to be installed on Airborne Signals Intelligence Payload (ASIP) capable aircraft.

Note: FY21 funding reflected in this exhibit represents contract options that align with planned program schedule.

Requirement source: CPD.

Milestone/Development Status

The NRE to install IPAs and harnessing onto the aircraft has been completed. ICF development work was awarded on contract in Aug 2018.

Secondary Distribution		FY 2018	FY 2019	FY 2020 Base	FY 2020 OCO	FY 2020 Total	FY 2021	FY 2022	FY 2023	FY 2024
AF	Quantity	-	-	-	-	-	-	-	-	-
	Total Obligation Authority	30.474	0.000	-	-	-	21.543	-	-	-
Total: Secondary Distribution	**Quantity**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**
	Total Obligation Authority	**30.474**	**0.000**	**0.000**	**0.000**	**0.000**	**21.543**	**0.000**	**-**	**-**

Exhibit P-3a, Individual Modification: PB 2020 Air Force		Date: February 2019
Appropriation / Budget Activity / Budget Sub Activity: 3010F / 05 / 5	**P-1 Line Item Number / Title:** HAWK00 / RQ-4 Mods	**Modification Number / Title:** 470013 / Sensor Enhancements
ID Code (A=Service Ready, B=Not Service Ready) : A	**MDAP/MAIS Code:**	
Models of Systems Affected: RQ-4	**Modification Type:** Capability Improvement	**Related RDT&E PEs:** 0305220F

Financial Plan	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
	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												
Modification Item 1 of 2: Grp A Install Kits												
A Kits												
Recurring												
Grp A Install Kits:INSTALL KITS Group A (Active)	- / -	3 / 3.822	- / 0.000	- / -	- / -	- / -	6 / 7.644	- / -	- / -	- / -	- / -	9 / 11.466
Subtotal: Recurring	*- / -*	*- / 3.822*	*- / 0.000*	*- / -*	*- / -*	*- / -*	*- / 7.644*	*- / -*	*- / -*	*- / -*	*- / -*	*- / 11.466*
Subtotal: Grp A Install Kits	*- / -*	*- / 3.822*	*- / 0.000*	*- / -*	*- / -*	*- / -*	*- / 7.644*	*- / -*	*- / -*	*- / -*	*- / -*	*- / 11.466*
Modification Item 2 of 2: Grp B Equipment (3)												
B Kits												
Recurring												
Grp B Equipment:EQUIPMENT Group B (Active)	- / -	3 / 6.534	0 / 0.000	- / -	- / -	- / -	6 / 13.068	- / -	- / -	- / -	- / -	9 / 19.602
Subtotal: Recurring	*- / -*	*- / 6.534*	*- / 0.000*	*- / -*	*- / -*	*- / -*	*- / 13.068*	*- / -*	*- / -*	*- / -*	*- / -*	*- / 19.602*
Subtotal: Grp B Equipment (3)	*- / -*	*- / 6.534*	*- / 0.000*	*- / -*	*- / -*	*- / -*	*- / 13.068*	*- / -*	*- / -*	*- / -*	*- / -*	*- / 19.602*
Subtotal: Procurement, All Modification Items	*- / -*	*- / 10.356*	*- / 0.000*	*- / -*	*- / -*	*- / -*	*- / 20.712*	*- / -*	*- / -*	*- / -*	*- / -*	*- / 31.068*
Support *(All Modification Items)*												
OTHER GOVT	- / -	- / 16.180	- / 0.000	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 16.180
Change Orders	- / -	- / 3.514	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 3.514
Subtotal: Support	*- / -*	*- / 19.694*	*- / 0.000*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / 19.694*
Installation												
Modification Item 2 of 2: Grp B Equipment (3)	- / -	3 / 0.424	- / -	- / -	- / -	- / -	6 / 0.831	- / -	- / -	- / -	- / -	9 / 1.255
Subtotal: Installation	*- / -*	*3 / 0.424*	*- / -*	*- / -*	*- / -*	*- / -*	*6 / 0.831*	*- / -*	*- / -*	*- / -*	*- / -*	*9 / 1.255*
Total												
Total Cost (Procurement + Support + Installation)	**-**	**30.474**	**0.000**	**0.000**	**0.000**	**0.000**	**21.543**	**0.000**	**-**	**-**	**-**	**52.017**

Exhibit P-3a, Individual Modification: PB 2020 Air Force		Date: February 2019
Appropriation / Budget Activity / Budget Sub Activity: 3010F / 05 / 5	**P-1 Line Item Number / Title:** HAWK00 / RQ-4 Mods	**Modification Number / Title:** 470013 / Sensor Enhancements
ID Code (A=Service Ready, B=Not Service Ready) : A	**MDAP/MAIS Code:**	

Modification Item 1 of 2: Grp A Install Kits

Manufacturer Information

Manufacturer Name: Northrop Grumman	Manufacturer Location: Palmdale, California
Administrative Leadtime *(in Months)*: 10	Production Leadtime *(in Months)*: 1

Dates	FY 2018	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024
Contract Dates	Aug 2018			Jun 2021			
Delivery Dates	Sep 2018			Jul 2021			

Installation Information

Method of Implementation (Organic): Org/Intermediate	**Installation Quantity:** 0

Exhibit P-3a, Individual Modification: PB 2020 Air Force		Date: February 2019
Appropriation / Budget Activity / Budget Sub Activity: 3010F / 05 / 5	**P-1 Line Item Number / Title:** HAWK00 / RQ-4 Mods	**Modification Number / Title:** 470013 / Sensor Enhancements
ID Code (A=Service Ready, B=Not Service Ready) : A	**MDAP/MAIS Code:**	

Modification Item 2 of 2: Grp B Equipment (3)

Manufacturer Information

Manufacturer Name: Northrop Grumman	Manufacturer Location: Palmdale, California
Administrative Leadtime *(in Months)*: 10	Production Leadtime *(in Months)*: 1

Dates	FY 2018	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024
Contract Dates	Aug 2018			Jun 2021			
Delivery Dates	Sep 2018			Jul 2021			

Installation Information

Method of Implementation: Contract Field Team

Installation Cost	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
	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)*
Prior Years	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2018	- / -	3 / 0.424	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	3 / 0.424
FY 2019	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2020	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2021	- / -	- / -	- / -	- / -	- / -	- / -	6 / 0.831	- / -	- / -	- / -	- / -	6 / 0.831
FY 2022	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2023	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2024	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
To Complete	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
Total	- / -	3 / 0.424	- / -	- / -	- / -	- / -	6 / 0.831	- / -	- / -	- / -	- / -	9 / 1.255

Installation Schedule

	PYS	FY 2018				FY 2019				FY 2020				FY 2021				FY 2022				FY 2023				FY 2024				TC	Tot
		Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4		
In	0	0	0	0	3	0	0	0	0	0	0	0	0	0	0	0	6	-	-	-	-	-	-	-	-	-	-	-	-	0	9
Out	0	0	0	0	3	0	0	0	0	0	0	0	0	0	0	0	6	-	-	-	-	-	-	-	-	-	-	-	-	0	9

Exhibit P-3a, Individual Modification: PB 2020 Air Force		Date: February 2019
Appropriation / Budget Activity / Budget Sub Activity: 3010F / 05 / 5	**P-1 Line Item Number / Title:** HAWK00 / RQ-4 Mods	**Modification Number / Title:** 470016 / ADC/AFS Refresh
ID Code (A=Service Ready, B=Not Service Ready) : B	**MDAP/MAIS Code:**	

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 *(Units in Each)*	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost *($ in Millions)*	-	0.000	0.000	0.000	0.000	0.000	0.000	0.000	36.100	11.700	-	47.800
Less PY Advance Procurement *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) *($ in Millions)*	-	0.000	0.000	0.000	0.000	0.000	0.000	0.000	36.100	11.700	-	47.800
Plus CY Advance Procurement *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Total Obligation Authority *($ in Millions)*	**-**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**36.100**	**11.700**	**-**	**47.800**
(The following Resource Summary rows are for informational purposes only. The corresponding budget requests are documented elsewhere.)												
Initial Spares *($ in Millions)*	-	-	-	-	-	-	-	-	1.770	-	-	1.770
Gross/Weapon System Unit Cost *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-

Description:

The onboard data recorder is a Commercial off the Shelf (COTS) line replaceable unit that provides the necessary interfaces, storage, and processing resources to record all forms (except SIGINT) of Global Hawk sensor data on board the unmanned aerial vehicle (UAV) with minimal impact to the aircraft communication, flight control, and avionics systems. The proposed recorder is an upgrade to the existing recorder (Air Data Computer) which is block specific. It has the potential to record platform data as well. This program will retrofit sixteen (16) units. Initial spares will also be procured as documented in the Initial Spares Justification documentation.

The Airborne File Server (AFS) retrofit will be included in an Integrated Functional Capability (IFC) program within Global Hawk. Retrofit quantities for AFS are now required beginning in FY23.

Requirement source: CPD

Projected PDR: Jan 2020
Projected CDR: Nov 2020
Projected DTE: Sep 2021
Projected OTE: Oct 2022

Milestone/Development Status

The airborne data storage device (AFS) is currently in the requirements development phase. The current plan is to integrate and test an airborne file server as part of the MS-177 sensor enhancement program. The objective is to field an airborne storage solution capable of meeting the storage needs of sensors on all blocks of GH air vehicles.

Secondary Distribution		FY 2018	FY 2019	FY 2020 Base	FY 2020 OCO	FY 2020 Total	FY 2021	FY 2022	FY 2023	FY 2024
AF	Quantity	-	-	-	-	-	-	-	-	-
	Total Obligation Authority	-	-	-	-	-	-	-	36.100	11.700
Total: Secondary Distribution	**Quantity**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**
	Total Obligation Authority	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**36.100**	**11.700**

Exhibit P-3a, Individual Modification: PB 2020 Air Force		Date: February 2019
Appropriation / Budget Activity / Budget Sub Activity: 3010F / 05 / 5	**P-1 Line Item Number / Title:** HAWK00 / RQ-4 Mods	**Modification Number / Title:** 470016 / ADC/AFS Refresh
ID Code (A=Service Ready, B=Not Service Ready) : B	**MDAP/MAIS Code:**	
Models of Systems Affected: RQ-4	**Modification Type:** Capability Improvement	**Related RDT&E PEs:** 0305220F

Financial Plan	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
	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)*
RDT&E PE #												
0305220F	- / -	- / 0.000	- / 7.399	- / 16.490	- / -	- / 16.490	- / 0.000	- / 0.000	- / -	- / -	- / -	- / 23.889
Procurement												
Modification Item 1 of 1: Grp B Equipment (4)												
B Kits												
Recurring												
Grp B Equipment:EQUIPMENT Group B (Active)	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	12 / 19.025	4 / 6.166	- / -	16 / 25.191
Subtotal: Recurring	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / 19.025*	*- / 6.166*	*- / -*	*- / 25.191*
Subtotal: Grp B Equipment (4)	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / 19.025*	*- / 6.166*	*- / -*	*- / 25.191*
Subtotal: Procurement, All Modification Items	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / 19.025*	*- / 6.166*	*- / -*	*- / 25.191*
Support *(All Modification Items)*												
Change Orders	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 1.805	- / 0.585	- / -	- / 2.390
OTHER GOVT	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 11.913	- / 3.861	- / -	- / 15.774
Subtotal: Support	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / 13.718*	*- / 4.446*	*- / -*	*- / 18.164*
Installation												
Modification Item 1 of 1: Grp B Equipment (4)	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	12 / 3.357	4 / 1.088	- / -	16 / 4.445
Subtotal: Installation	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*12 / 3.357*	*4 / 1.088*	*- / -*	*16 / 4.445*
Total												
Total Cost (Procurement + Support + Installation)	**-**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**36.100**	**11.700**	**-**	**47.800**

Exhibit P-3a, Individual Modification: PB 2020 Air Force		Date: February 2019
Appropriation / Budget Activity / Budget Sub Activity: 3010F / 05 / 5	**P-1 Line Item Number / Title:** HAWK00 / RQ-4 Mods	**Modification Number / Title:** 470016 / ADC/AFS Refresh
ID Code (A=Service Ready, B=Not Service Ready) : B	**MDAP/MAIS Code:**	

Modification Item 1 of 1: Grp B Equipment (4)

Manufacturer Information

Manufacturer Name: Northrop Grumman	Manufacturer Location: Palmdale, California
Administrative Leadtime *(in Months)*: 7	Production Leadtime *(in Months)*: 1

Dates	FY 2018	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024
Contract Dates						Oct 2022	Oct 2023
Delivery Dates						Sep 2023	Sep 2024

Installation Information

Method of Implementation: Contract Field Team

Installation Cost	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
	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)*
Prior Years	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2018	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2019	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2020	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2021	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2022	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2023	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	12 / 3.357	- / -	- / -	12 / 3.357
FY 2024	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	4 / 1.088	- / -	4 / 1.088
To Complete	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
Total	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	12 / 3.357	4 / 1.088	- / -	16 / 4.445

Installation Schedule

	PYS	FY 2018				FY 2019				FY 2020				FY 2021				FY 2022				FY 2023				FY 2024				TC	Tot
		Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4		
In	0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0	-	-	-	12	-	-	-	4	-	-	-	0	16
Out	0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0	-	-	-	-	-	-	12	-	-	-	4	0	16

Exhibit P-3a, Individual Modification: PB 2020 Air Force		Date: February 2019
Appropriation / Budget Activity / Budget Sub Activity: 3010F / 05 / 5	**P-1 Line Item Number / Title:** HAWK00 / RQ-4 Mods	**Modification Number / Title:** 470019 / Communication Interoperability/ Enhancements
ID Code (A=Service Ready, B=Not Service Ready) : A	**MDAP/MAIS Code:**	

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 *(Units in Each)*	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost *($ in Millions)*	3.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	-	-	-	3.000
Less PY Advance Procurement *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) *($ in Millions)*	3.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	-	-	-	3.000
Plus CY Advance Procurement *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Total Obligation Authority *($ in Millions)*	**3.000**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**-**	**-**	**-**	**3.000**
(The following Resource Summary rows are for informational purposes only. The corresponding budget requests are documented elsewhere.)												
Initial Spares *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Unit Cost *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-

Description:

In order to support multiple worldwide missions for remote split operations (RSO), a long-term SATCOM reach back capability is required. RSO dictate the need for a secure SATCOM C3 long-haul transmission capability enabling the physical separation of the SATCOM wideband antenna from the Mission Control Element (MCE). This solution must support use of all Ku and Extended Tether Pod (ETP) antennae authorized for use with Global Hawk. The expected result of this capability allows the transmission of C3 over existing long haul circuitry using Asynchronous Transfer Mode (ATM) and Ethernet, enabling the needed geographical separation required to conduct worldwide RSO.

In order to accommodate the communication interoperability/enhancements long term technical solution for reach-back monitoring and address the diminishing manufacturing source (DMS) for the AP4000, there's a need for a reach-back capability upgrade pair that replaces both the AP4000 and Broadmore 500.

This project will replace the AP4000 and Broadmore 500s in the MCEs and Launch Recovery Elements (LRE) with a pair of reach-back capability upgrades. This will address the short term diminishing manufacturing source for the AP4000s and also enable a long term technical solution for reach-back monitoring.

The Global Hawk Program office has an existing relationship with the Space and Naval Warfare Systems Command (SPAWAR), which will allow for the fastest and least expensive method to purchase and install the equipment. Funding will also be used to update documentation through the Contractor.

SPAWAR will purchase all equipment, parts, and materials required for thirty-four (34) upgrades.

Milestone/Development Status

Development installation, test, and checkout to be accomplished in 2018 and early 2019. The production assets can be purchased prior to full completion of development work.

Exhibit P-3a, Individual Modification: PB 2020 Air Force		Date: February 2019
Appropriation / Budget Activity / Budget Sub Activity: 3010F / 05 / 5	**P-1 Line Item Number / Title:** HAWK00 / RQ-4 Mods	**Modification Number / Title:** 470019 / Communication Interoperability/ Enhancements
ID Code (A=Service Ready, B=Not Service Ready) : A	**MDAP/MAIS Code:**	
Models of Systems Affected: RQ-4	**Modification Type:** Capability Improvement	**Related RDT&E PEs:** 0305220F

Financial Plan	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
	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												
Modification Item 1 of 2: Group B Equipment (4)												
B Kits												
Recurring												
Group B Equipment:EQUIPMENT Group B (Active)	34 / 1.750	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	34 / 1.750
Subtotal: Recurring	*- / 1.750*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / 1.750*
Subtotal: Group B Equipment (4)	*- / 1.750*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / 1.750*
Modification Item 2 of 2: Grp A Install Kits (5)												
A Kits												
Recurring												
Grp A Install Kits:INSTALL KITS Group A (Active)	34 / 0.450	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	34 / 0.450
Subtotal: Recurring	*- / 0.450*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / 0.450*
Subtotal: Grp A Install Kits (5)	*- / 0.450*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / 0.450*
Subtotal: Procurement, All Modification Items	*- / 2.200*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / 2.200*
Support *(All Modification Items)*												
Change Orders	- / 0.500	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 0.500
Subtotal: Support	*- / 0.500*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / 0.500*
Installation												
Modification Item 1 of 2: Group B Equipment (4)	34 / 0.300	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	34 / 0.300
Subtotal: Installation	*34 / 0.300*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*34 / 0.300*
Total												
Total Cost (Procurement + Support + Installation)	**3.000**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**-**	**-**	**-**	**3.000**

Exhibit P-3a, Individual Modification: PB 2020 Air Force		Date: February 2019
Appropriation / Budget Activity / Budget Sub Activity: 3010F / 05 / 5	**P-1 Line Item Number / Title:** HAWK00 / RQ-4 Mods	**Modification Number / Title:** 470019 / Communication Interoperability/ Enhancements

ID Code (A=Service Ready, B=Not Service Ready) : A

MDAP/MAIS Code:

Modification Item 1 of 2: Group B Equipment (4)

Manufacturer Information

Manufacturer Name: Northrop Grumman

Manufacturer Location: Palmdale, California

Administrative Leadtime *(in Months)*: 10

Production Leadtime *(in Months)*: 1

Dates	FY 2018	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024
Contract Dates							
Delivery Dates							

Installation Information

Method of Implementation: Contract Field Team

Installation Cost	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
	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)*
Prior Years	34 / 0.300	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	34 / 0.300
FY 2018	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2019	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2020	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2021	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2022	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2023	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2024	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
To Complete	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
Total	34 / 0.300	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	34 / 0.300

Installation Schedule

	PYS	FY 2018				FY 2019				FY 2020				FY 2021				FY 2022				FY 2023				FY 2024				TC	Tot
		Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4		
In	34	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0	34
Out	34	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0	34

Exhibit P-3a, Individual Modification: PB 2020 Air Force		Date: February 2019
Appropriation / Budget Activity / Budget Sub Activity: 3010F / 05 / 5	**P-1 Line Item Number / Title:** HAWK00 / RQ-4 Mods	**Modification Number / Title:** 470019 / Communication Interoperability/ Enhancements

ID Code (A=Service Ready, B=Not Service Ready) : A	**MDAP/MAIS Code:**

Modification Item 2 of 2: Grp A Install Kits (5)

Manufacturer Information

Manufacturer Name: Northrop Grumman	Manufacturer Location: Palmdale, California
Administrative Leadtime *(in Months)*: 10	Production Leadtime *(in Months)*: 1

Dates	FY 2018	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024
Contract Dates							
Delivery Dates							

Installation Information

Method of Implementation (Organic): Org/Intermediate	**Installation Quantity:** 0

Exhibit P-3a, Individual Modification: PB 2020 Air Force		Date: February 2019
Appropriation / Budget Activity / Budget Sub Activity: 3010F / 05 / 5	**P-1 Line Item Number / Title:** HAWK00 / RQ-4 Mods	**Modification Number / Title:** 470020 / EISS Enhancements
ID Code (A=Service Ready, B=Not Service Ready) : B	**MDAP/MAIS Code:**	

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 *(Units in Each)*	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost *($ in Millions)*	-	0.000	17.852	0.000	0.000	0.000	0.000	0.000	0.000	-	-	17.852
Less PY Advance Procurement *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) *($ in Millions)*	-	0.000	17.852	0.000	0.000	0.000	0.000	0.000	0.000	-	-	17.852
Plus CY Advance Procurement *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Total Obligation Authority *($ in Millions)*	**-**	**0.000**	**17.852**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**-**	**-**	**17.852**
(The following Resource Summary rows are for informational purposes only. The corresponding budget requests are documented elsewhere.)												
Initial Spares *($ in Millions)*	-	-	2.069	-	-	-	-	-	-	-	-	2.069
Gross/Weapon System Unit Cost *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-

Description:

The RQ-4 program is developing and testing several capability enhancements within the Enhanced Integrated Sensor Suite (EISS) to provide improved Intelligence gathering capabilities and performance. These enhancements will increase mission performance of the Enhanced EO/IR Receiver Unit (EERU) by fielding the retrofit of a new Electro Optical (EO) camera with greater range and photo gathering ability, higher data transmission rate and increased reliability.

This modification will include an upgrade from 8-bit to 12-bit digital images which increases National Imagery Interpretability Rating Scale (NIIRS) range and improves image quality in hazy atmospheric conditions. Additional performance and capability upgrades include improved resilience to cold storage down to -40 C instead of -10 C, elimination of intermittent noise and interference in images, and a more uniform image plane that will reduce the quilting effect in mosaicked composite images.

This retrofit includes upgrade kits and installs on twenty (19) Block 30 aircraft and twelve (12) spare modification kits, Government Furnished Property (GFP) repair, and focus and calibration efforts as required.

Also, six (6) Spare 501T cameras will be procured under Budget Program 16, Weapon System RQ-4 UAV procurement exhibits. Installation to be conducted organically. The FY19 quantity and cost shown reflect negotiated contract options.

Acquisition information:
Systems Requirement Review (SRR) - Mar 2018
Preliminary Design Review (PDR) - May 2018
Critical Design Review (CDR) - Sep 2018
Developmental Test & Evaluation (DTE) completion - Oct 2019
Technical Data Package (TDP) - Oct 2019
Requirement source: Diminishing Manufacturing Source (DMS)

Milestone/Development Status

RTD&E anticipated to last approx. 18-24 months. The objective is to begin retrofit activities immediately after completion of DT/OT in order to minimize any delay to the field.

Exhibit P-3a, Individual Modification: PB 2020 Air Force		Date: February 2019
Appropriation / Budget Activity / Budget Sub Activity: 3010F / 05 / 5	**P-1 Line Item Number / Title:** HAWK00 / RQ-4 Mods	**Modification Number / Title:** 470020 / EISS Enhancements
ID Code (A=Service Ready, B=Not Service Ready) : B	**MDAP/MAIS Code:**	

Secondary Distribution		FY 2018	FY 2019	FY 2020 Base	FY 2020 OCO	FY 2020 Total	FY 2021	FY 2022	FY 2023	FY 2024
AF	Quantity	-	-	-	-	-	-	-	-	-
	Total Obligation Authority	-	17.852	-	-	-	-	-	-	-
Total: Secondary Distribution	**Quantity**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**
	Total Obligation Authority	**0.000**	**17.852**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**-**

Exhibit P-3a, Individual Modification: PB 2020 Air Force		Date: February 2019
Appropriation / Budget Activity / Budget Sub Activity: 3010F / 05 / 5	**P-1 Line Item Number / Title:** HAWK00 / RQ-4 Mods	**Modification Number / Title:** 470020 / EISS Enhancements
ID Code (A=Service Ready, B=Not Service Ready) : B	**MDAP/MAIS Code:**	
Models of Systems Affected: RQ-4	**Modification Type:** Capability Improvement	**Related RDT&E PEs:** 0305220F

Financial Plan	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
	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)*
RDT&E PE #												
0305220F	- / -	- / 6.917	- / 8.309	- / 0.000	- / -	- / 0.000	- / 0.000	- / -	- / -	- / -	- / -	- / 15.226
Procurement												
Modification Item 1 of 1: Grp B Equipment (6)												
B Kits												
Recurring												
Grp B Equipment:EQUIPMENT Group B (Active)	- / -	- / -	20 / 5.238	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	20 / 5.238
Subtotal: Recurring	- / -	- / -	- / 5.238	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 5.238
Subtotal: Grp B Equipment (6)	- / -	- / -	- / 5.238	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 5.238
Subtotal: Procurement, All Modification Items	- / -	- / -	- / 5.238	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 5.238
Support *(All Modification Items)*												
OTHER GOVT	- / -	- / -	- / 2.110	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 2.110
Subtotal: Support	- / -	- / -	- / 2.110	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 2.110
Installation												
Modification Item 1 of 1: Grp B Equipment (6)	- / -	- / -	20 / 10.504	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	20 / 10.504
Subtotal: Installation	- / -	- / -	20 / 10.504	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	20 / 10.504
Total												
Total Cost (Procurement + Support + Installation)	**-**	**0.000**	**17.852**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**-**	**-**	**17.852**

Exhibit P-3a, Individual Modification: PB 2020 Air Force		Date: February 2019
Appropriation / Budget Activity / Budget Sub Activity: 3010F / 05 / 5	**P-1 Line Item Number / Title:** HAWK00 / RQ-4 Mods	**Modification Number / Title:** 470020 / EISS Enhancements
ID Code (A=Service Ready, B=Not Service Ready) : B	**MDAP/MAIS Code:**	

Modification Item 1 of 1: Grp B Equipment (6)

Manufacturer Information

Manufacturer Name: Raytheon Co.	Manufacturer Location: Waltham, MA
Administrative Leadtime *(in Months)*: 3	Production Leadtime *(in Months)*: 3

Dates	FY 2018	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024
Contract Dates		Jun 2019					
Delivery Dates		Sep 2019					

Installation Information

Method of Implementation: Contractor Facility

Installation Cost	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
	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)*
Prior Years	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2018	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2019	- / -	- / -	20 / 10.504	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	20 / 10.504
FY 2020	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2021	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2022	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2023	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2024	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
To Complete	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
Total	- / -	- / -	20 / 10.504	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	20 / 10.504

Installation Schedule

	PYS	FY 2018				FY 2019				FY 2020				FY 2021				FY 2022				FY 2023				FY 2024				TC	Tot
		Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4		
In	0	-	-	-	-	-	-	10	10	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0	20
Out	0	-	-	-	-	-	-	10	10	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0	20

Exhibit P-3a, Individual Modification: PB 2020 Air Force		Date: February 2019
Appropriation / Budget Activity / Budget Sub Activity: 3010F / 05 / 5	**P-1 Line Item Number / Title:** HAWK00 / RQ-4 Mods	**Modification Number / Title:** 1 / Low Cost Modifications
ID Code (A=Service Ready, B=Not Service Ready) : B	**MDAP/MAIS Code:**	

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 *(Units in Each)*	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost *($ in Millions)*	0.000	2.000	2.000	1.704	0.000	1.704	2.000	2.000	2.000	2.000	0.200	13.904
Less PY Advance Procurement *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) *($ in Millions)*	0.000	2.000	2.000	1.704	0.000	1.704	2.000	2.000	2.000	2.000	0.200	13.904
Plus CY Advance Procurement *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Total Obligation Authority *($ in Millions)*	**0.000**	**2.000**	**2.000**	**1.704**	**0.000**	**1.704**	**2.000**	**2.000**	**2.000**	**2.000**	**0.200**	**13.904**
(The following Resource Summary rows are for informational purposes only. The corresponding budget requests are documented elsewhere.)												
Initial Spares *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Unit Cost *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-

Description:

The RQ-4 fleet will be continually modified to maintain pace with the evolving threat and the increasing capabilities included in modernization efforts. Five (5) Low Cost modification programs are anticipated and necessary for continued operational support.

Milestone/Development Status

Low cost modifications will be required to correct product deficiencies and improve capabilities on the RQ-4 fleet.

Secondary Distribution		FY 2018	FY 2019	FY 2020 Base	FY 2020 OCO	FY 2020 Total	FY 2021	FY 2022	FY 2023	FY 2024
AF	Quantity	-	-	-	-	-	-	-	-	-
	Total Obligation Authority	2.000	2.000	1.704	-	1.704	2.000	2.000	2.000	2.000
Total: Secondary Distribution	**Quantity**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**
	Total Obligation Authority	**2.000**	**2.000**	**1.704**	**0.000**	**1.704**	**2.000**	**2.000**	**2.000**	**2.000**

Exhibit P-3a, Individual Modification: PB 2020 Air Force		Date: February 2019
Appropriation / Budget Activity / Budget Sub Activity: 3010F / 05 / 5	**P-1 Line Item Number / Title:** HAWK00 / RQ-4 Mods	**Modification Number / Title:** 1 / Low Cost Modifications
ID Code (A=Service Ready, B=Not Service Ready) : B	**MDAP/MAIS Code:**	
Models of Systems Affected: RQ-4	**Modification Type:** Capability Improvement	**Related RDT&E PEs:**

Financial Plan	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
	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												
Modification Item 1 of 2: Grp A Install Kits (4)												
A Kits												
Recurring												
Grp A Install Kits:INSTALL KITS Group A (Active)	- / -	1 / 0.200	1 / 0.200	1 / 0.200	- / -	1 / 0.200	1 / 0.200	1 / 0.200	1 / 0.200	1 / 0.200	- / -	7 / 1.400
Subtotal: Recurring	*- / -*	*- / 0.200*	*- / 0.200*	*- / 0.200*	*- / -*	*- / 0.200*	*- / 0.200*	*- / 0.200*	*- / 0.200*	*- / 0.200*	*- / -*	*- / 1.400*
Subtotal: Grp A Install Kits (4)	*- / -*	*- / 0.200*	*- / 0.200*	*- / 0.200*	*- / -*	*- / 0.200*	*- / 0.200*	*- / 0.200*	*- / 0.200*	*- / 0.200*	*- / -*	*- / 1.400*
Modification Item 2 of 2: Grp B Equipment (5)												
B Kits												
Recurring												
Grp B Equipment:EQUIPMENT Group B (Active)	- / -	1 / 1.800	1 / 1.600	1 / 1.304	- / -	1 / 1.304	1 / 1.600	1 / 1.600	1 / 1.600	1 / 1.600	- / -	7 / 11.104
Subtotal: Recurring	*- / -*	*- / 1.800*	*- / 1.600*	*- / 1.304*	*- / -*	*- / 1.304*	*- / 1.600*	*- / 1.600*	*- / 1.600*	*- / 1.600*	*- / -*	*- / 11.104*
Subtotal: Grp B Equipment (5)	*- / -*	*- / 1.800*	*- / 1.600*	*- / 1.304*	*- / -*	*- / 1.304*	*- / 1.600*	*- / 1.600*	*- / 1.600*	*- / 1.600*	*- / -*	*- / 11.104*
Subtotal: Procurement, All Modification Items	*- / -*	*- / 2.000*	*- / 1.800*	*- / 1.504*	*- / -*	*- / 1.504*	*- / 1.800*	*- / 1.800*	*- / 1.800*	*- / 1.800*	*- / -*	*- / 12.504*
Support *(All Modification Items)*												
Change Orders	- / 0.000	- / -	- / -	- / 0.000	- / -	- / 0.000	- / 0.000	- / 0.000	- / 0.000	- / -	- / -	- / 0.000
Subtotal: Support	*- / 0.000*	*- / -*	*- / -*	*- / 0.000*	*- / -*	*- / 0.000*	*- / 0.000*	*- / 0.000*	*- / 0.000*	*- / -*	*- / -*	*- / 0.000*
Installation												
Modification Item 1 of 2: Grp A Install Kits (4)	- / -	- / -	1 / 0.200	1 / 0.200	- / -	1 / 0.200	1 / 0.200	1 / 0.200	1 / 0.200	1 / 0.200	1 / 0.200	7 / 1.400
Subtotal: Installation	*- / -*	*- / -*	*1 / 0.200*	*1 / 0.200*	*- / -*	*1 / 0.200*	*1 / 0.200*	*1 / 0.200*	*1 / 0.200*	*1 / 0.200*	*1 / 0.200*	*7 / 1.400*
Total												
Total Cost (Procurement + Support + Installation)	**0.000**	**2.000**	**2.000**	**1.704**	**0.000**	**1.704**	**2.000**	**2.000**	**2.000**	**2.000**	**0.200**	**13.904**

Exhibit P-3a, Individual Modification: PB 2020 Air Force		Date: February 2019
Appropriation / Budget Activity / Budget Sub Activity: 3010F / 05 / 5	**P-1 Line Item Number / Title:** HAWK00 / RQ-4 Mods	**Modification Number / Title:** 1 / Low Cost Modifications
ID Code (A=Service Ready, B=Not Service Ready) : B	**MDAP/MAIS Code:**	

Modification Item 1 of 2: Grp A Install Kits (4)

Manufacturer Information

Manufacturer Name: Northrop Grumman	Manufacturer Location: Palmdale, California
Administrative Leadtime *(in Months)*: 1	Production Leadtime *(in Months)*: 12

Dates	FY 2018	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024
Contract Dates		Nov 2018	Nov 2019	Nov 2020	Nov 2021	Nov 2022	
Delivery Dates		Nov 2019	Nov 2020	Nov 2021	Nov 2022	Nov 2023	

Installation Information

Method of Implementation: Contractor Facility

Installation Cost	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
	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)*
Prior Years	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2018	- / -	- / -	1 / 0.200	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	1 / 0.200
FY 2019	- / -	- / -	- / -	1 / 0.200	- / -	1 / 0.200	- / -	- / -	- / -	- / -	- / -	1 / 0.200
FY 2020	- / -	- / -	- / -	- / -	- / -	- / -	1 / 0.200	- / -	- / -	- / -	- / -	1 / 0.200
FY 2021	- / -	- / -	- / -	- / -	- / -	- / -	- / -	1 / 0.200	- / -	- / -	- / -	1 / 0.200
FY 2022	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	1 / 0.200	- / -	- / -	1 / 0.200
FY 2023	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	1 / 0.200	- / -	1 / 0.200
FY 2024	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	1 / 0.200	1 / 0.200
To Complete	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
Total	- / -	- / -	1 / 0.200	1 / 0.200	- / -	1 / 0.200	1 / 0.200	1 / 0.200	1 / 0.200	1 / 0.200	1 / 0.200	7 / 1.400

Installation Schedule

	PYS	FY 2018				FY 2019				FY 2020				FY 2021				FY 2022				FY 2023				FY 2024				TC	Tot
		Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4		
In	0	0	0	1	0	0	0	1	0	0	0	1	0	0	0	1	0	0	0	1	0	0	0	1	0	0	0	1	0	1	8
Out	0	0	0	1	0	0	0	1	0	0	0	1	0	0	0	1	0	0	0	1	0	0	0	1	0	0	0	1	0	1	8

Exhibit P-3a, Individual Modification: PB 2020 Air Force		Date: February 2019
Appropriation / Budget Activity / Budget Sub Activity: 3010F / 05 / 5	**P-1 Line Item Number / Title:** HAWK00 / RQ-4 Mods	**Modification Number / Title:** 1 / Low Cost Modifications

ID Code (A=Service Ready, B=Not Service Ready) : B | **MDAP/MAIS Code:**

Modification Item 2 of 2: Grp B Equipment (5)

Manufacturer Information

Manufacturer Name: Northrop Grumman | Manufacturer Location: Palmdale, California

Administrative Leadtime *(in Months)*: 1 | Production Leadtime *(in Months)*: 12

Dates	FY 2018	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024
Contract Dates	Nov 2017	Nov 2018	Nov 2019	Nov 2020	Nov 2021	Nov 2022	Nov 2023
Delivery Dates	Nov 2018	Nov 2019	Nov 2020	Nov 2021	Nov 2022	Nov 2023	Nov 2024

Installation Information

Method of Implementation (Organic): Org/Intermediate | **Installation Quantity:** 0

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Exhibit P-40, Budget Line Item Justification: PB 2020 Air Force	Date: February 2019
Appropriation / Budget Activity / Budget Sub Activity: 3010F: Aircraft Procurement, Air Force / BA 05: Modification of Inservice Aircraft / BSA 5: Other Aircraft	**P-1 Line Item Number / Title:** HCMC00 / HC/MC-130 Modifications

ID Code (A=Service Ready, B=Not Service Ready): B	**Program Elements for Code B Items:** 0207224F, 0207230F	**Other Related Program Elements:** 0207224F, 0207230F
Line Item MDAP/MAIS Code: 257		

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 *(Units in Each)*	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost *($ in Millions)*	127.232	200.454	125.654	51.482	0.000	51.482	38.515	20.099	4.375	4.453	0.000	572.264
Less PY Advance Procurement *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) *($ in Millions)*	127.232	200.454	125.654	51.482	0.000	51.482	38.515	20.099	4.375	4.453	0.000	572.264
Plus CY Advance Procurement *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Total Obligation Authority *($ in Millions)*	**127.232**	**200.454**	**125.654**	**51.482**	**0.000**	**51.482**	**38.515**	**20.099**	**4.375**	**4.453**	**0.000**	**572.264**
(The following Resource Summary rows are for informational purposes only. The corresponding budget requests are documented elsewhere.)												
Initial Spares *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Flyaway Unit Cost *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Unit Cost *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-

Description:

HC/MC-130 Recapitalization will replace and augment the aging USAF fleets of combat rescue HC-130P/N, special operations MC-130E/P/H and AC-130H/U/W aircraft which are experiencing airworthiness, maintainability and operational limitations. This program provides a common baseline configuration aircraft.

The HC-130J aircraft provides combat search and rescue infiltration and exfiltration including aerial refueling of aircraft in combat search and rescue operations as well as acting as an airborne command post during rescue operations. The MC-130J can provide specialized mobility capability to position, supply, re-supply and recover specialized ground tactical units. This funding will support studies to reduce potential risks, potential Diminishing Manufacturing Sources (DMS) and obsolescence solutions, to include if optimal, life of type buys or bridge buys limited to the program of record quantity. The designed service life is 30 years and the average service life remaining for an HC-130J is 26.03 years and for an MC-130J is 25.55 years.

The modifications budgeted in FY20 will improve the reliability, maintainability, safety, mission performance, reduce logistics costs, and implement fleet upgrades and enhancements to meet emerging requirements for the HC/MC-130J aircraft and associated training systems. This modification permits the initiation and employment of rapid acquisition authorities to respond to emerging threats and requirements as needed.

Funding for this exhibit is contained in PE 0207224F (HC-130J) and PE 0207230F (MC-130J).

FY18 funding totals include $55.38M for Overseas Contingency Operations.
FY19 funding totals include $87.90M for Overseas Contingency Operations.

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.

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

Appropriation / Budget Activity / Budget Sub Activity:
3010F: Aircraft Procurement, Air Force / BA 05: Modification of Inservice Aircraft / BSA 5: Other Aircraft

P-1 Line Item Number / Title:
HCMC00 / HC/MC-130 Modifications

ID Code (A=Service Ready, B=Not Service Ready): B | **Program Elements for Code B Items:** 0207224F, 0207230F | **Other Related Program Elements:** 0207224F, 0207230F

Line Item MDAP/MAIS Code: 257

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-40a***	8760 / Trainers (No text provided.)				- / -	- / -	- / 3.000	- / -	- / -	- / -
P-40a***	99999X / Low Cost Modifications (Safety)				- / 8.147	- / -	- / 1.435	- / 1.000	- / -	- / 1.000
P-3a	5222 / HC/MC-130J Block 8.1 (Capability Improvement)		B		- / -	- / -	- / 32.109	- / 16.632	- / 0.000	- / 16.632
P-3a	8632 / MC-130J Increment 2 (Capability Improvement)		A		- / 37.393	- / 14.681	- / 1.190	- / 0.000	- / 0.000	- / 0.000
P-3a	8634 / HC-130J Common Configuration (Capability Improvement)		A		- / 31.607	- / 10.626	- / 0.000	- / 0.000	- / 0.000	- / 0.000
P-3a	8635 / HC-130J Personnel Locator System (Capability Improvement)		B		- / 16.044	- / 88.400	- / 0.000	- / 0.000	- / 0.000	- / 0.000
P-3a	8636 / HC-130J Situational Awareness (Capability Improvement)		B		- / 33.341	- / 14.895	- / 35.900	- / 12.411	- / 0.000	- / 12.411
P-3a	8639 / Wireless Intercom (Capability Improvement)		B		- / 0.700	- / 0.000	- / 11.100	- / 0.000	- / 0.000	- / 0.000
P-3a	8642 / (AbMN) Air borne Mission Networking (Capability Improvement)		A		- / -	- / 14.692	- / 0.000	- / 19.500	- / 0.000	- / 19.500
P-3a	8648 / ADS-B out Acceleration (Capability Improvement)		A		- / -	- / 1.780	- / 2.530	- / 1.939	- / 0.000	- / 1.939
P-3a	8652 / (RFCM) Radio Frequency Countermeasures (Capability Improvement)		B		- / 0.000	- / 55.380	- / 4.490	- / 0.000	- / 0.000	- / 0.000
P-3a	8658 / Paratroop Door (Capability Improvement)		B		- / 0.000	- / 0.000	- / 24.500	- / 0.000	- / 0.000	- / 0.000
P-3a	8659 / Broadband Antenna (Capability Improvement)		B		- / 0.000	- / 0.000	- / 9.400	- / 0.000	- / 0.000	- / 0.000
P-40	**Total Gross/Weapon System Cost**				**- / 127.232**	**- / 200.454**	**- / 125.654**	**- / 51.482**	**- / 0.000**	**- / 51.482**

Exhibits Schedule					FY 2021	FY 2022	FY 2023	FY 2024	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-40a***	8760 / Trainers (No text provided.)				- / -	- / -	- / -	- / -	- / -	- / 3.000
P-40a***	99999X / Low Cost Modifications (Safety)				- / 2.000	- / 1.000	- / 1.000	- / 0.916	- / -	- / 15.498
P-3a	5222 / HC/MC-130J Block 8.1 (Capability Improvement)		B		- / 0.966	- / 3.099	- / 3.375	- / 3.537	- / 0.000	- / 59.718
P-3a	8632 / MC-130J Increment 2 (Capability Improvement)		A		- / 0.000	- / 0.000	- / 0.000	- / 0.000	- / -	- / 53.264
P-3a	8634 / HC-130J Common Configuration (Capability Improvement)		A		- / 0.000	- / 0.000	- / 0.000	- / 0.000	- / -	- / 42.233
P-3a	8635 / HC-130J Personnel Locator System (Capability Improvement)		B		- / 0.000	- / -	- / -	- / -	- / -	- / 104.444
P-3a	8636 / HC-130J Situational Awareness (Capability Improvement)		B		- / 0.000	- / 0.000	- / 0.000	- / 0.000	- / 0.000	- / 96.547
P-3a	8639 / Wireless Intercom (Capability Improvement)		B		- / 0.000	- / 0.000	- / 0.000	- / 0.000	- / 0.000	- / 11.800
P-3a	8642 / (AbMN) Air borne Mission Networking (Capability Improvement)		A		- / 34.500	- / 16.000	- / 0.000	- / 0.000	- / -	- / 84.692
P-3a	8648 / ADS-B out Acceleration (Capability Improvement)		A		- / 0.000	- / 0.000	- / 0.000	- / 0.000	- / -	- / 6.249
P-3a	8652 / (RFCM) Radio Frequency Countermeasures (Capability Improvement)		B		- / 0.000	- / 0.000	- / 0.000	- / -	- / -	- / 59.870
P-3a	8658 / Paratroop Door (Capability Improvement)		B		- / 1.049	- / 0.000	- / 0.000	- / 0.000	- / -	- / 25.549
P-3a	8659 / Broadband Antenna (Capability Improvement)		B		- / 0.000	- / 0.000	- / 0.000	- / 0.000	- / -	- / 9.400
P-40	**Total Gross/Weapon System Cost**				**- / 38.515**	**- / 20.099**	**- / 4.375**	**- / 4.453**	**- / 0.000**	**- / 572.264**

*** Although this is an Exhibit P-40a item, the actual exhibit is not included since all of the required information for this item is already being shown here.

Exhibit P-40, Budget Line Item Justification: PB 2020 Air Force		Date: February 2019
Appropriation / Budget Activity / Budget Sub Activity: 3010F: Aircraft Procurement, Air Force / BA 05: Modification of Inservice Aircraft / BSA 5: Other Aircraft	**P-1 Line Item Number / Title:** HCMC00 / HC/MC-130 Modifications	
ID Code (A=Service Ready, B=Not Service Ready): B	**Program Elements for Code B Items:** 0207224F, 0207230F	**Other Related Program Elements:** 0207224F, 0207230F
Line Item MDAP/MAIS Code: 257		
*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:
Where applicable, justification for individual modifications is provided in the P-3A exhibits.

Exhibit P-3a, Individual Modification: PB 2020 Air Force		Date: February 2019
Appropriation / Budget Activity / Budget Sub Activity: 3010F / 05 / 5	**P-1 Line Item Number / Title:** HCMC00 / HC/MC-130 Modifications	**Modification Number / Title:** 5222 / HC/MC-130J Block 8.1
ID Code (A=Service Ready, B=Not Service Ready) : B	**MDAP/MAIS Code:**	

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 *(Units in Each)*	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost *($ in Millions)*	-	-	32.109	16.632	0.000	16.632	0.966	3.099	3.375	3.537	0.000	59.718
Less PY Advance Procurement *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) *($ in Millions)*	-	-	32.109	16.632	0.000	16.632	0.966	3.099	3.375	3.537	0.000	59.718
Plus CY Advance Procurement *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Total Obligation Authority *($ in Millions)*	**-**	**-**	**32.109**	**16.632**	**0.000**	**16.632**	**0.966**	**3.099**	**3.375**	**3.537**	**0.000**	**59.718**
(The following Resource Summary rows are for informational purposes only. The corresponding budget requests are documented elsewhere.)												
Initial Spares *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Unit Cost *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-

Description:

This program funds unique HC-130J integration requirements for the Block 8.1 program. The C-130J Program (PE 0401132F) provides the Block 8.1 requirements that are common to all C-130J aircraft. The program will deliver Communication, Navigation and Surveillance/Air Traffic Management (CNS/ATM) capabilities required for compliance with evolving international standards, thereby allowing HC-130J aircraft to operate in international airspace. It also incorporates capabilities such as Link-16, a new Flight Management System (FMS), Civil GPS Navigation and Data Link, Identification Friend or Foe (IFF) Transponder Mode-5, and Automatic Dependent Surveillance-Broadcast Out (ADS-B Out). To meet long-lead item requirements, procurement of some Block 7.0/8.1 kit items begin in FY19. 7/8.1 production installations begin in FY21.

In 2018 the USAF significantly revamped its HC-130J Block 8.1. upgrade strategy. The MC-130J was de-scoped from the current Block 8.1 program to allow the MC 130J to prioritize other (SOCOM-funded) modifications while allowing the USAF to move forward with Block 8.1 on the HC 130J.

The HC-130J Block 7.0/8.1 modification upgrade falls under the ACAT-1C HC/MC-130J Recapitalization Program. The HC-130J Block 7.0/8.1 retrofit installation program funds the Group A kits, installation of retrofit kits, delta kit components, and associated trainer efforts. The Common Core Group B kits are funded in the C-130J Block 8.1 program.

This program will retrofit 39 HC-130Js.

Milestone/Development Status

HC-130J Block 8.1 Trial Kit Install RDT&E effort started in FY16 to be completed in FY20.

Exhibit P-3a, Individual Modification: PB 2020 Air Force		Date: February 2019
Appropriation / Budget Activity / Budget Sub Activity: 3010F / 05 / 5	**P-1 Line Item Number / Title:** HCMC00 / HC/MC-130 Modifications	**Modification Number / Title:** 5222 / HC/MC-130J Block 8.1
ID Code (A=Service Ready, B=Not Service Ready) : B	**MDAP/MAIS Code:**	
Models of Systems Affected: HC-130J, MC-130J, AC-130J	**Modification Type:** Capability Improvement	**Related RDT&E PEs:** 0207224F

Financial Plan	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
	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												
Modification Item 1 of 1: Block 8-1 A Kit												
A Kits												
Recurring												
Block 8-1 A Kit:INSTALL KITS Group A (Active)	- / -	- / -	3 / 4.600	9 / 12.340	- / -	9 / 12.340	- / -	- / -	- / -	- / -	- / 0.000	12 / 16.940
Subtotal: Recurring	*- / -*	*- / -*	*- / 4.600*	*- / 12.340*	*- / -*	*- / 12.340*	*- / -*	*- / -*	*- / -*	*- / -*	*- / 0.000*	*- / 16.940*
Subtotal: Block 8-1 A Kit	*- / -*	*- / -*	*- / 4.600*	*- / 12.340*	*- / -*	*- / 12.340*	*- / -*	*- / -*	*- / -*	*- / -*	*- / 0.000*	*- / 16.940*
Subtotal: Procurement, All Modification Items	*- / -*	*- / -*	*- / 4.600*	*- / 12.340*	*- / -*	*- / 12.340*	*- / -*	*- / -*	*- / -*	*- / -*	*- / 0.000*	*- / 16.940*
Support *(All Modification Items)*												
GROUP A: TOTAL NONRECURRING	- / -	- / -	- / 0.000	- / -	- / -	- / -	- / -	- / 0.000	- / -	- / -	- / -	- / 0.000
OTHER GOVT	- / -	- / -	- / 23.000	- / 4.292	- / -	- / 4.292	- / 0.966	- / 2.099	- / 2.875	- / 3.537	- / -	- / 36.769
SUPPORT-EQUIP	- / -	- / -	- / 4.509	- / -	- / -	- / -	- / -	- / 1.000	- / 0.500	- / -	- / -	- / 6.009
Subtotal: Support	*- / -*	*- / -*	*- / 27.509*	*- / 4.292*	*- / -*	*- / 4.292*	*- / 0.966*	*- / 3.099*	*- / 3.375*	*- / 3.537*	*- / -*	*- / 42.778*
Installation												
Modification Item 1 of 1: Block 8-1 A Kit	- / -	- / -	3 / 0.000	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	3 / 0.000
Subtotal: Installation	*- / -*	*- / -*	*3 / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*3 / -*
Total												
Total Cost (Procurement + Support + Installation)	**-**	**-**	**32.109**	**16.632**	**0.000**	**16.632**	**0.966**	**3.099**	**3.375**	**3.537**	**0.000**	**59.718**

Exhibit P-3a, Individual Modification: PB 2020 Air Force		Date: February 2019
Appropriation / Budget Activity / Budget Sub Activity: 3010F / 05 / 5	**P-1 Line Item Number / Title:** HCMC00 / HC/MC-130 Modifications	**Modification Number / Title:** 5222 / HC/MC-130J Block 8.1

ID Code (A=Service Ready, B=Not Service Ready) : B

MDAP/MAIS Code:

Modification Item 1 of 1: Block 8-1 A Kit

Manufacturer Information

Manufacturer Name: Lockheed Martin

Manufacturer Location: Marietta/Greenville

Administrative Leadtime *(in Months)*: 5

Production Leadtime *(in Months)*: 24

Dates	FY 2018	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024
Contract Dates		Mar 2019	Mar 2020				
Delivery Dates		Mar 2021	Mar 2022				

Installation Information

Method of Implementation: Contractor Facility

Installation Cost	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
	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)*
Prior Years	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2018	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2019	- / -	- / -	3 / 0.000	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	3 / 0.000
FY 2020	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2021	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2022	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2023	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2024	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
To Complete	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
Total	- / -	- / -	3 / 0.000	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	3 / 0.000

Installation Schedule

	PYS	FY 2018				FY 2019				FY 2020				FY 2021				FY 2022				FY 2023				FY 2024				TC	Tot
		Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4		
In	0	-	-	-	-	-	-	-	-	-	-	-	-	-	3	-	-	-	3	3	3	-	-	-	-	-	-	-	-	0	12
Out	0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	3	-	-	-	3	3	3	-	-	-	-	-	-	-	0	12

Exhibit P-3a, Individual Modification: PB 2020 Air Force		Date: February 2019
Appropriation / Budget Activity / Budget Sub Activity: 3010F / 05 / 5	**P-1 Line Item Number / Title:** HCMC00 / HC/MC-130 Modifications	**Modification Number / Title:** 8632 / MC-130J Increment 2
ID Code (A=Service Ready, B=Not Service Ready) : A	**MDAP/MAIS Code:**	

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 *(Units in Each)*	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost *($ in Millions)*	37.393	14.681	1.190	0.000	0.000	0.000	0.000	0.000	0.000	0.000	-	53.264
Less PY Advance Procurement *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) *($ in Millions)*	37.393	14.681	1.190	0.000	0.000	0.000	0.000	0.000	0.000	0.000	-	53.264
Plus CY Advance Procurement *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Total Obligation Authority *($ in Millions)*	**37.393**	**14.681**	**1.190**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**-**	**53.264**
(The following Resource Summary rows are for informational purposes only. The corresponding budget requests are documented elsewhere.)												
Initial Spares *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Unit Cost *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-

Description:

The MC-130J Increment 2 modification brings 10 MC-130J Increment 1 aircraft up to the baseline Increment 2 configuration. Current funding includes but is not limited to completing the total requirement of 10 aircraft modifications, adding LAIRCM Group A provisions, crashworthy loadmaster seats,increased electrical power, installation of specific enhanced situational awareness modifications, modifying MC-130J training systems from Increment 1 to Increment 2. Additionally, this funding request includes, but is not limited to, supporting any safety of flight issues identified during the modification, OFP builds, training requirements, and potential DMS, to include if optimal, life of type buys or bridge buys limited to the program of record quantity. It also provides for the installation of specific SOF/PR modifications to the MC-130J aircraft. Note: Milestone dates are for kit delivery and installation schedule dates are for installation on aircraft.
4 MC-130J Increment 1 aircraft have been delivered to units as Increment 2.
LAIRCM LSPR modification was added in October 2017 to Increment 1 to Increment 2 modification for 7 aircraft.
Warranty TCTO was added to mod effort in December 2018 by unit request to avoid additional aircraft non-availability.

The Prior Years funding total includes $4.416M in Overseas Contingency Operations.

Mod# 8632

Milestone/Development Status

Increment 2 development is complete. The first Increment 2 aircraft produced was delivered off of the production line in the first quarter of FY13.

Exhibit P-3a, Individual Modification: PB 2020 Air Force		Date: February 2019
Appropriation / Budget Activity / Budget Sub Activity: 3010F / 05 / 5	**P-1 Line Item Number / Title:** HCMC00 / HC/MC-130 Modifications	**Modification Number / Title:** 8632 / MC-130J Increment 2
ID Code (A=Service Ready, B=Not Service Ready) : A	**MDAP/MAIS Code:**	
Models of Systems Affected: MC-130J	**Modification Type:** Capability Improvement	**Related RDT&E PEs:**

Financial Plan	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
	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												
Modification Item 1 of 1: Inc 1-2												
B Kits												
Recurring												
Inc 1-2:EQUIPMENT Group B (Active)	10 / 17.246	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	10 / 17.246
Subtotal: Recurring	*- / 17.246*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / 17.246*
Subtotal: Inc 1-2	*- / 17.246*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / 17.246*
Subtotal: Procurement, All Modification Items	*- / 17.246*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / 17.246*
Support *(All Modification Items)*												
Change Orders	- / -	- / 3.411	- / 1.190	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 4.601
SIM/TRAINER	3 / 2.381	2 / 7.854	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	5 / 10.235
Subtotal: Support	*3 / 2.381*	*2 / 11.265*	*- / 1.190*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*5 / 14.836*
Installation												
Modification Item 1 of 1: Inc 1-2	5 / 17.766	2 / 3.416	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	7 / 21.182
Subtotal: Installation	*5 / 17.766*	*2 / 3.416*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*7 / 21.182*
Total												
Total Cost (Procurement + Support + Installation)	**37.393**	**14.681**	**1.190**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**-**	**53.264**

Exhibit P-3a, Individual Modification: PB 2020 Air Force		Date: February 2019
Appropriation / Budget Activity / Budget Sub Activity: 3010F / 05 / 5	**P-1 Line Item Number / Title:** HCMC00 / HC/MC-130 Modifications	**Modification Number / Title:** 8632 / MC-130J Increment 2

ID Code (A=Service Ready, B=Not Service Ready) : A

MDAP/MAIS Code:

Modification Item 1 of 1: Inc 1-2

Manufacturer Information

Manufacturer Name: Lockheed Martin	Manufacturer Location: Marietta GA
Administrative Leadtime *(in Months)*: 3	Production Leadtime *(in Months)*: 12

Dates	FY 2018	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024
Contract Dates							
Delivery Dates							

Installation Information

Method of Implementation: Contractor Facility

Installation Cost	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
	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)*
Prior Years	5 / 17.766	2 / 3.416	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	7 / 21.182
FY 2018	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2019	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2020	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2021	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2022	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2023	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2024	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
To Complete	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
Total	5 / 17.766	2 / 3.416	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	7 / 21.182

Installation Schedule

	PYS	FY 2018				FY 2019				FY 2020				FY 2021				FY 2022				FY 2023				FY 2024				TC	Tot
		Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4		
In	5	-	1	1	1	1	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0	10
Out	4	-	1	1	1	1	1	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0	10

Exhibit P-3a, Individual Modification: PB 2020 Air Force		Date: February 2019
Appropriation / Budget Activity / Budget Sub Activity: 3010F / 05 / 5	**P-1 Line Item Number / Title:** HCMC00 / HC/MC-130 Modifications	**Modification Number / Title:** 8634 / HC-130J Common Configuration
ID Code (A=Service Ready, B=Not Service Ready) : A	**MDAP/MAIS Code:**	

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 *(Units in Each)*	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost *($ in Millions)*	31.607	10.626	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	-	42.233
Less PY Advance Procurement *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) *($ in Millions)*	31.607	10.626	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	-	42.233
Plus CY Advance Procurement *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Total Obligation Authority *($ in Millions)*	**31.607**	**10.626**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**-**	**42.233**
(The following Resource Summary rows are for informational purposes only. The corresponding budget requests are documented elsewhere.)												
Initial Spares *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Unit Cost *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-

Description:

The HC-130J Common Configuration/Block Upgrade modifications brings the first 2 HC-130J Increment 0 aircraft up to the baseline Increment 2 configuration which were completed in May 2018. Increment 2 includes but is not limited to adding LAIRCM Group A provisions, crashworthy loadmaster seats, increased electrical power. This program also includes upgrades to the Turret Units (TU) and Electronic Units (EU) with associated wiring harness and software which includes adding the additional fourth Communication, Identification, Navigation, Management Units (CNI-MUs) and Removable Memory Module (RMM) cards with combined Option X and CIP software. This includes but is not limited to correction of deficiency report items identified during production, bringing HC-130J training systems to the Increment 2 configuration, supporting OFP builds, potential DMS and obsolescence solutions, to include if optimal, life of type buys or bridge buys limited to the program of record quantity. This ensures total fleet commonality and avoids many Diminishing Manufacturing Sources issues. It also provides for the installation of specific special operation modifications to HC-130J aircraft. This HC-130J mod is related to the MC-130J Increment 2 Mod (Mod #8632) which brings 10 MC-130Js from the Increment 1 to the Increment 2 configuration.

Mod# 8634

Milestone/Development Status

HC-130J Increment 2 development completed in 2012.

Exhibit P-3a, Individual Modification: PB 2020 Air Force		Date: February 2019
Appropriation / Budget Activity / Budget Sub Activity: 3010F / 05 / 5	**P-1 Line Item Number / Title:** HCMC00 / HC/MC-130 Modifications	**Modification Number / Title:** 8634 / HC-130J Common Configuration
ID Code (A=Service Ready, B=Not Service Ready) : A	**MDAP/MAIS Code:**	
Models of Systems Affected: HC-130J	**Modification Type:** Capability Improvement	**Related RDT&E PEs:** 0207224F

Financial Plan	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
	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												
Modification Item 1 of 1: Inc 0-2 Common Configuration												
A Kits												
Recurring												
Inc 0-2 Common Configuration:INSTALL KITS Group A (Active)	2 / 6.078	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	2 / 6.078
Subtotal: Recurring	*- / 6.078*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / 6.078*
Subtotal: Inc 0-2 Common Configuration	*- / 6.078*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / 6.078*
Subtotal: Procurement, All Modification Items	*- / 6.078*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / 6.078*
Support *(All Modification Items)*												
GROUP A: TOTAL NONRECURRING	- / 9.008	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 9.008
SIM/TRAINER	1 / 0.427	4 / 6.711	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	5 / 7.138
SUPPORT-EQUIP	- / 1.513	- / 3.915	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 5.428
GFP	- / 2.708	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 2.708
Subtotal: Support	*1 / 13.656*	*4 / 10.626*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*5 / 24.282*
Installation												
Modification Item 1 of 1: Inc 0-2 Common Configuration	2 / 11.873	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	2 / 11.873
Subtotal: Installation	*2 / 11.873*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*2 / 11.873*
Total												
Total Cost (Procurement + Support + Installation)	**31.607**	**10.626**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**-**	**42.233**

Exhibit P-3a, Individual Modification: PB 2020 Air Force		Date: February 2019
Appropriation / Budget Activity / Budget Sub Activity: 3010F / 05 / 5	**P-1 Line Item Number / Title:** HCMC00 / HC/MC-130 Modifications	**Modification Number / Title:** 8634 / HC-130J Common Configuration

ID Code (A=Service Ready, B=Not Service Ready) : A

MDAP/MAIS Code:

Modification Item 1 of 1: Inc 0-2 Common Configuration

Manufacturer Information

Manufacturer Name: Lockheed Martin Aero

Manufacturer Location: Marietta Ga

Administrative Leadtime *(in Months)*: 0

Production Leadtime *(in Months)*: 12

Dates	FY 2018	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024
Contract Dates							
Delivery Dates							

Installation Information

Method of Implementation: Contractor Facility

Installation Cost	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
	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)*
Prior Years	2 / 11.873	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	2 / 11.873
FY 2018	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2019	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2020	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2021	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2022	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2023	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2024	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
To Complete	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
Total	2 / 11.873	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	2 / 11.873

Installation Schedule

	PYS	FY 2018				FY 2019				FY 2020				FY 2021				FY 2022				FY 2023				FY 2024				TC	Tot
		Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4		
In	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0	2
Out	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0	2

Exhibit P-3a, Individual Modification: PB 2020 Air Force		Date: February 2019
Appropriation / Budget Activity / Budget Sub Activity: 3010F / 05 / 5	**P-1 Line Item Number / Title:** HCMC00 / HC/MC-130 Modifications	**Modification Number / Title:** 8635 / HC-130J Personnel Locator System

ID Code (A=Service Ready, B=Not Service Ready) : B

MDAP/MAIS Code:

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 *(Units in Each)*	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost *($ in Millions)*	16.044	88.400	0.000	0.000	0.000	0.000	0.000	-	-	-	-	104.444
Less PY Advance Procurement *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) *($ in Millions)*	16.044	88.400	0.000	0.000	0.000	0.000	0.000	-	-	-	-	104.444
Plus CY Advance Procurement *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Total Obligation Authority *($ in Millions)*	**16.044**	**88.400**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**-**	**-**	**-**	**-**	**104.444**
(The following Resource Summary rows are for informational purposes only. The corresponding budget requests are documented elsewhere.)												
Initial Spares *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Unit Cost *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-

Description:

Congress rescinded $88.4M of FY18 OCO funding on 1 Oct 18. The FY 20 Budget request does not include any funding changes after 30 Sep 18. This $88.4M does not exist. The rescission will be reflected in the FY21 PB.

This is an update to the personnel recovery communication systems to include, but not limited to, the lightweight airborne recovery system (LARS). This update was driven by the limited ability of the previous systems to connect to the emergency beacon frequency of 406 MHz or to connect with existing and future military survival radios such as the Combat Survivor Evader Locator (CSEL)(AN/PRQ-7) or the AN/PRC-112). It is a secure system that uses two-way encrypted over-the-horizon data communications. The system has gone through DT and OT and has been approved for fielding. This effort includes but is not limited to kits, training, tech data, RSP's, OFP builds, and other government costs.
The LARS program will equip all 39 HC-130J aircraft that will be in the fleet. 33 kits and installs will be complete by the end of FY19. The remaining 6 aircraft will be coming off the production line in FY21/FY22 at which time the LARS kits and installs will be purchased.

Milestone/Development Status

N/A

Exhibit P-3a, Individual Modification: PB 2020 Air Force		Date: February 2019
Appropriation / Budget Activity / Budget Sub Activity: 3010F / 05 / 5	**P-1 Line Item Number / Title:** HCMC00 / HC/MC-130 Modifications	**Modification Number / Title:** 8635 / HC-130J Personnel Locator System
ID Code (A=Service Ready, B=Not Service Ready) : B	**MDAP/MAIS Code:**	
Models of Systems Affected: HC-130J	**Modification Type:** Capability Improvement	**Related RDT&E PEs:** 0207224F

Financial Plan	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
	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												
Modification Item 1 of 1: Personnel Locator System												
A Kits												
Recurring												
Personnel Locator System:INSTALL KITS Group A (Active)	36 / 1.099	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	36 / 1.099
Subtotal: Recurring	*- / 1.099*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / 1.099*
B Kits												
Recurring												
Personnel Locator System:EQUIPMENT Group B (Active)	27 / 6.938	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	27 / 6.938
Subtotal: Recurring	*- / 6.938*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / 6.938*
Subtotal: Personnel Locator System	*- / 8.037*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / 8.037*
Subtotal: Procurement, All Modification Items	*- / 8.037*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / 8.037*
Support *(All Modification Items)*												
GROUP A: TOTAL NONRECURRING	- / 0.599	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 0.599
Change Orders	- / -	- / 88.400	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 88.400
SIM/TRAINER	1 / 1.446	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	1 / 1.446
SUPPORT-EQUIP	- / 0.974	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 0.974
Subtotal: Support	*1 / 3.019*	*- / 88.400*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*1 / 91.419*
Installation												
Modification Item 1 of 1: Personnel Locator System	22 / 4.988	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	22 / 4.988
Subtotal: Installation	*22 / 4.988*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*22 / 4.988*
Total												
Total Cost (Procurement + Support + Installation)	**16.044**	**88.400**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**-**	**-**	**-**	**-**	**104.444**

Exhibit P-3a, Individual Modification: PB 2020 Air Force		Date: February 2019
Appropriation / Budget Activity / Budget Sub Activity: 3010F / 05 / 5	**P-1 Line Item Number / Title:** HCMC00 / HC/MC-130 Modifications	**Modification Number / Title:** 8635 / HC-130J Personnel Locator System

ID Code (A=Service Ready, B=Not Service Ready) : B

MDAP/MAIS Code:

Modification Item 1 of 1: Personnel Locator System

Manufacturer Information

Manufacturer Name: Unknown

Manufacturer Location: Unknown

Administrative Leadtime *(in Months)*: 5

Production Leadtime *(in Months)*: 4

Dates	FY 2018	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024
Contract Dates							
Delivery Dates							

Installation Information

Method of Implementation: Contract Field Team

Installation Cost	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
	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)*
Prior Years	22 / 4.988	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	22 / 4.988
FY 2018	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2019	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2020	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2021	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2022	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2023	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2024	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
To Complete	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
Total	22 / 4.988	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	22 / 4.988

Installation Schedule

		FY 2018				FY 2019				FY 2020				FY 2021				FY 2022				FY 2023				FY 2024					
	PYS	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	TC	Tot
In	26	-	-	4	-	-	-	4	-	-	-	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0	36
Out	19	-	7	4	-	-	-	4	-	-	-	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0	36

Exhibit P-3a, Individual Modification: PB 2020 Air Force		Date: February 2019
Appropriation / Budget Activity / Budget Sub Activity: 3010F / 05 / 5	**P-1 Line Item Number / Title:** HCMC00 / HC/MC-130 Modifications	**Modification Number / Title:** 8636 / HC-130J Situational Awareness
ID Code (A=Service Ready, B=Not Service Ready) : B	**MDAP/MAIS Code:**	

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 *(Units in Each)*	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost *($ in Millions)*	33.341	14.895	35.900	12.411	0.000	12.411	0.000	0.000	0.000	0.000	0.000	96.547
Less PY Advance Procurement *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) *($ in Millions)*	33.341	14.895	35.900	12.411	0.000	12.411	0.000	0.000	0.000	0.000	0.000	96.547
Plus CY Advance Procurement *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Total Obligation Authority *($ in Millions)*	**33.341**	**14.895**	**35.900**	**12.411**	**0.000**	**12.411**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**96.547**
(The following Resource Summary rows are for informational purposes only. The corresponding budget requests are documented elsewhere.)												
Initial Spares *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Unit Cost *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-

Description:

Equips HC-130J Personnel Recovery fleet with situational awareness capabilities to increase, maintain, and sustain the personnel recovery task force's ability to rapidly exchange secure information between disparate tactical network systems and enable onboard, real time situational awareness. The Situational Awareness Capabilities Upgrade (SACU) Program is implemented in phases.

SACU Phase 1A equips the HC-130J fleet with 5 situational awareness capabilities (Situational Awareness Data Link (SADL), Blue Force Tracking (BFT), PRC-117 High Performance Waveform (HPW), Air Force Tactical Receiver System-Ruggedized (AFTRS-R) and Joint Precision Aerial Delivery system (JPADS)) which were inherent in legacy aircraft. SACU Phase 1B equips the HC-130J fleet with Video Data Link and Special Communications Radios. SACU Phase 2 equips the HC-130J with Blue Force Tracking 2 (BFT-2), replaces Combat System Officer (CSO) laptops with solid state server and Video Display Terminal (VDT), Video Encoder, additional Ethernet connections in cargo area, and replaces the federated situational awareness software suite to include the Joint Mission Planning System (JMPS) interface.

This funding profile provides the support needed to procure and install for each of the 3 SACU phases on 39 HC-130J aircraft, as well as the field support required. Procurement will include Phase 1A (3 kits to cover the congressional added aircraft), Phase 1B (20 kits & installs), Phase 2 (20 kits & installs). This funding request includes but is not limited to potential support of: DMS and obsolescence solutions, to include (if optimal) life of type buys or bridge buys limited to the program of record quantity; Changes to existing SACU configurations and/or capabilities; Upgrades to simulators/training devices; Interim Contractor Support (ICS) requirements; and to address Field Support needs such as Training, Spares, and Support equipment.

Phases 1A, 1B and C together make up the SACU requirement. SACU is required on 39 HC-130Js

Milestone/Development Status:
Phase 1A - MS C, 17 Dec 15 - Completed 21 of 39 installs
Phase 1B - MS C, 31 May 16
Phase 2 - MS C, 17 Jan 18

The Prior Year Funding includes FY16 funds of $5.68M for Overseas Contingency Operations.
FY17 and FY18 program funding was baseline.
FY19 funding includes $35.90M for Overseas Contingency Operations.

Milestone/Development Status

N/A

Exhibit P-3a, Individual Modification: PB 2020 Air Force		Date: February 2019
Appropriation / Budget Activity / Budget Sub Activity: 3010F / 05 / 5	**P-1 Line Item Number / Title:** HCMC00 / HC/MC-130 Modifications	**Modification Number / Title:** 8636 / HC-130J Situational Awareness
ID Code (A=Service Ready, B=Not Service Ready) : B	**MDAP/MAIS Code:**	
Models of Systems Affected: HC-130J	**Modification Type:** Capability Improvement	**Related RDT&E PEs:** 0207224F

Financial Plan	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
	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												
Modification Item 1 of 1: Situational Awareness												
A Kits												
Recurring												
Situational Awareness:INSTALL KITS Group A (Active)	32 / 1.692	- / -	39 / 12.000	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	71 / 13.692
Subtotal: Recurring	*- / 1.692*	*- / -*	*- / 12.000*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / 13.692*
B Kits												
Recurring												
Situational Awareness:EQUIPMENT Group B (Active)	13 / 10.455	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	13 / 10.455
Subtotal: Recurring	*- / 10.455*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / 10.455*
Subtotal: Situational Awareness	*- / 12.147*	*- / -*	*- / 12.000*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / 24.147*
Subtotal: Procurement, All Modification Items	*- / 12.147*	*- / -*	*- / 12.000*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / 24.147*
Support *(All Modification Items)*												
GROUP A: TOTAL NONRECURRING	- / 11.790	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 11.790
PMA - Contractor Services	- / -	- / 0.332	- / -	- / 1.160	- / -	- / 1.160	- / -	- / -	- / -	- / -	- / -	- / 1.492
ICS-Labor	- / -	2 / 2.819	- / -	- / 3.700	- / -	- / 3.700	- / -	- / -	- / -	- / -	- / -	2 / 6.519
SIM/TRAINER	- / -	1 / 8.659	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	1 / 8.659
SUPPORT-EQUIP	- / 7.593	- / 3.085	- / -	- / 3.140	- / -	- / 3.140	- / -	- / -	- / -	- / -	- / -	- / 13.818
Subtotal: Support	*- / 19.383*	*3 / 14.895*	*- / -*	*- / 8.000*	*- / -*	*- / 8.000*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*3 / 42.278*
Installation												
Modification Item 1 of 1: Situational Awareness	19 / 1.811	13 / 0.000	39 / 23.900	0 / 4.411	- / -	0 / 4.411	- / -	- / -	- / -	- / -	- / -	71 / 30.122
Subtotal: Installation	*19 / 1.811*	*13 / -*	*39 / 23.900*	*- / 4.411*	*- / -*	*- / 4.411*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*71 / 30.122*
Total												
Total Cost (Procurement + Support + Installation)	**33.341**	**14.895**	**35.900**	**12.411**	**0.000**	**12.411**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**96.547**

Exhibit P-3a, Individual Modification: PB 2020 Air Force		Date: February 2019
Appropriation / Budget Activity / Budget Sub Activity: 3010F / 05 / 5	**P-1 Line Item Number / Title:** HCMC00 / HC/MC-130 Modifications	**Modification Number / Title:** 8636 / HC-130J Situational Awareness

ID Code (A=Service Ready, B=Not Service Ready) : B

MDAP/MAIS Code:

Modification Item 1 of 1: Situational Awareness

Manufacturer Information

Manufacturer Name: Lockheed Martin Aero

Manufacturer Location: Marietta, GA

Administrative Leadtime *(in Months)*: 3

Production Leadtime *(in Months)*: 4

Dates	FY 2018	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024
Contract Dates		Jan 2019					
Delivery Dates		May 2019					

Installation Information

Method of Implementation: Contractor Facility

Installation Cost	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
	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)*
Prior Years	19 / 1.811	13 / 0.000	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	32 / 1.811
FY 2018	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2019	- / -	- / -	39 / 23.900	0 / 4.411	- / -	0 / 4.411	- / -	- / -	- / -	- / -	- / -	39 / 28.311
FY 2020	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2021	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2022	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2023	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2024	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
To Complete	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
Total	19 / 1.811	13 / 0.000	39 / 23.900	0 / 4.411	- / -	0 / 4.411	- / -	- / -	- / -	- / -	- / -	71 / 30.122

Installation Schedule

	PYS	FY 2018				FY 2019				FY 2020				FY 2021				FY 2022				FY 2023				FY 2024				TC	Tot
		Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4		
In	19	-	-	6	7	4	4	4	6	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0	50
Out	19	-	-	6	7	4	4	4	6	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0	50

Exhibit P-3a, Individual Modification: PB 2020 Air Force		Date: February 2019
Appropriation / Budget Activity / Budget Sub Activity: 3010F / 05 / 5	**P-1 Line Item Number / Title:** HCMC00 / HC/MC-130 Modifications	**Modification Number / Title:** 8639 / Wireless Intercom
ID Code (A=Service Ready, B=Not Service Ready) : B	**MDAP/MAIS Code:**	

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 *(Units in Each)*	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost *($ in Millions)*	0.700	0.000	11.100	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	11.800
Less PY Advance Procurement *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) *($ in Millions)*	0.700	0.000	11.100	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	11.800
Plus CY Advance Procurement *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Total Obligation Authority *($ in Millions)*	**0.700**	**0.000**	**11.100**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**11.800**
(The following Resource Summary rows are for informational purposes only. The corresponding budget requests are documented elsewhere.)												
Initial Spares *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Unit Cost *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-

Description:

This is an update to inter-phone communication system (ICS) to include, but not limited to, the Integrated Secure Wireless Inter-phone Communication System (ISWICS). This update is a type 1 encrypted system that is compatible with approved headsets, helmets, and oxygen masks and allows the loadmaster and other crew to wirelessly communicate with crew members in normal, push-to-talk, and voice activated mode (VOX). In addition to added wireless capability to the current ICS this upgrade also allows maintenance and forward area refueling point (FARP) crew to utilize ICS rather than relying on hand signals. This effort includes but is not limited to kits, training, tech data, Readiness Spares Package (RSPs), Operational Flight Program (OFP) builds, and other government costs. This is a non-developmental, commercially off the shelf available system. Total requirement to be procured and installed is 134 on both the HC-130J and MC-130J aircraft.

The Prior Years Funding includes FY17 funds of $0.70M for Overseas Contingency Operations.
FY19 funding includes $11.10M for Overseas Contingency Operations.

Milestone/Development Status

This system will be going through Qualification Test and Evaluation (QT&E) testing in FY19 and then a decision to go to Operational Test (OT) and Full Rate Production (FRP) will be made.

Exhibit P-3a, Individual Modification: PB 2020 Air Force		Date: February 2019
Appropriation / Budget Activity / Budget Sub Activity: 3010F / 05 / 5	**P-1 Line Item Number / Title:** HCMC00 / HC/MC-130 Modifications	**Modification Number / Title:** 8639 / Wireless Intercom
ID Code (A=Service Ready, B=Not Service Ready) : B	**MDAP/MAIS Code:**	
Models of Systems Affected: HC-130J	**Modification Type:** Capability Improvement	**Related RDT&E PEs:** 0207224F, 0207230F

Financial Plan	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
	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												
Modification Item 1 of 1: Wireless Interphone Communication System												
B Kits												
Recurring												
Wireless Interphone Communication System:EQUIPMENT Group B (Active)	1 / 0.200	- / -	45 / 11.100	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	46 / 11.300
Subtotal: Recurring	*- / 0.200*	*- / -*	*- / 11.100*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / 11.300*
Subtotal: Wireless Interphone Communication System	*- / 0.200*	*- / -*	*- / 11.100*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / 11.300*
Subtotal: Procurement, All Modification Items	*- / 0.200*	*- / -*	*- / 11.100*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / 11.300*
Support *(All Modification Items)*												
PMA - Other Gov't Costs	0 / 0.500	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	0 / 0.500
Subtotal: Support	*0 / 0.500*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*0 / 0.500*
Installation												
Subtotal: Installation	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*
Total												
Total Cost (Procurement + Support + Installation)	**0.700**	**0.000**	**11.100**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**11.800**

Exhibit P-3a, Individual Modification: PB 2020 Air Force		Date: February 2019
Appropriation / Budget Activity / Budget Sub Activity: 3010F / 05 / 5	**P-1 Line Item Number / Title:** HCMC00 / HC/MC-130 Modifications	**Modification Number / Title:** 8639 / Wireless Intercom

ID Code (A=Service Ready, B=Not Service Ready) : B | **MDAP/MAIS Code:**

Modification Item 1 of 1: Wireless Interphone Communication System

Manufacturer Information

Manufacturer Name: Lockeheed Martin	Manufacturer Location: Marietta, GA
Administrative Leadtime *(in Months)*: 1	Production Leadtime *(in Months)*: 8

Dates	FY 2018	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024
Contract Dates		Jun 2019					
Delivery Dates		Feb 2020					

Installation Information

Method of Implementation (Organic): Org/Intermediate | **Installation Quantity:** 46

Exhibit P-3a, Individual Modification: PB 2020 Air Force		Date: February 2019
Appropriation / Budget Activity / Budget Sub Activity: 3010F / 05 / 5	**P-1 Line Item Number / Title:** HCMC00 / HC/MC-130 Modifications	**Modification Number / Title:** 8642 / (AbMN) Air borne Mission Networking

ID Code (A=Service Ready, B=Not Service Ready) : A

MDAP/MAIS Code:

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 *(Units in Each)*	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost *($ in Millions)*	-	14.692	0.000	19.500	0.000	19.500	34.500	16.000	0.000	0.000	-	84.692
Less PY Advance Procurement *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) *($ in Millions)*	-	14.692	0.000	19.500	0.000	19.500	34.500	16.000	0.000	0.000	-	84.692
Plus CY Advance Procurement *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Total Obligation Authority *($ in Millions)*	**-**	**14.692**	**0.000**	**19.500**	**0.000**	**19.500**	**34.500**	**16.000**	**0.000**	**0.000**	**-**	**84.692**
(The following Resource Summary rows are for informational purposes only. The corresponding budget requests are documented elsewhere.)												
Initial Spares *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Unit Cost *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-

Description:

This modification equips the AC/MC-130J with the service common hardware to satisfy AFSOC's communications tactical data link capability requirements as stated in the USSOCOM Airborne Mission Networking Capabilities Development Document, dated 6 January 2016. The hardware will provide Beyond Line of Site, Line of Site, and Full Motion Video datalink capabilities. The funding will provide service common hardware that will be permanently integrated in the AC/MC-130J aircraft as part of the USSOCOM AbMN modification. This funding request will support potential DMS and obsolescence solutions,to include if optimal, life of type buys or bridge buys limited to the program of record quantity. This program includes but is not limited to, kits, training, tech data, Readiness Spares Package (RSPs), and other government costs.

Requirement is 94 AC/MC-130J kits and installs (57 MC-130Js, 37 AC-130Js)

This modification was a FY18 New Start.

Milestone/Development Status

N/A

Exhibit P-3a, Individual Modification: PB 2020 Air Force		Date: February 2019
Appropriation / Budget Activity / Budget Sub Activity: 3010F / 05 / 5	**P-1 Line Item Number / Title:** HCMC00 / HC/MC-130 Modifications	**Modification Number / Title:** 8642 / (AbMN) Air borne Mission Networking
ID Code (A=Service Ready, B=Not Service Ready) : A	**MDAP/MAIS Code:**	
Models of Systems Affected: MC-130J	**Modification Type:** Capability Improvement	**Related RDT&E PEs:**

Financial Plan	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
	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												
Modification Item 1 of 1: AbMNGroup B												
B Kits												
Recurring												
AbMNGroup B:EQUIPMENT Group B (Active)	- / -	4 / 14.692	- / -	5 / 19.500	- / -	5 / 19.500	9 / 34.500	4 / 16.000	- / -	- / -	- / -	22 / 84.692
Subtotal: Recurring	*- / -*	*- / 14.692*	*- / -*	*- / 19.500*	*- / -*	*- / 19.500*	*- / 34.500*	*- / 16.000*	*- / -*	*- / -*	*- / -*	*- / 84.692*
Subtotal: AbMNGroup B	*- / -*	*- / 14.692*	*- / -*	*- / 19.500*	*- / -*	*- / 19.500*	*- / 34.500*	*- / 16.000*	*- / -*	*- / -*	*- / -*	*- / 84.692*
Subtotal: Procurement, All Modification Items	*- / -*	*- / 14.692*	*- / -*	*- / 19.500*	*- / -*	*- / 19.500*	*- / 34.500*	*- / 16.000*	*- / -*	*- / -*	*- / -*	*- / 84.692*
Installation												
Subtotal: Installation	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*
Total												
Total Cost (Procurement + Support + Installation)	**-**	**14.692**	**0.000**	**19.500**	**0.000**	**19.500**	**34.500**	**16.000**	**0.000**	**0.000**	**-**	**84.692**

Exhibit P-3a, Individual Modification: PB 2020 Air Force		Date: February 2019
Appropriation / Budget Activity / Budget Sub Activity: 3010F / 05 / 5	**P-1 Line Item Number / Title:** HCMC00 / HC/MC-130 Modifications	**Modification Number / Title:** 8642 / (AbMN) Air borne Mission Networking

ID Code (A=Service Ready, B=Not Service Ready) : A	**MDAP/MAIS Code:**

Modification Item 1 of 1: AbMNGroup B

Manufacturer Information

Manufacturer Name: Lockheed Martin	Manufacturer Location: Marietta, GA
Administrative Leadtime *(in Months)*: 3	Production Leadtime *(in Months)*: 5

Dates	FY 2018	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024
Contract Dates	Jan 2018						
Delivery Dates	Jun 2018						

Installation Information

Method of Implementation (Organic): Org/Intermediate	**Installation Quantity:** 22

Exhibit P-3a, Individual Modification: PB 2020 Air Force		Date: February 2019
Appropriation / Budget Activity / Budget Sub Activity: 3010F / 05 / 5	**P-1 Line Item Number / Title:** HCMC00 / HC/MC-130 Modifications	**Modification Number / Title:** 8648 / ADS-B out Acceleration
ID Code (A=Service Ready, B=Not Service Ready) : A	**MDAP/MAIS Code:**	

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 *(Units in Each)*	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost *($ in Millions)*	-	1.780	2.530	1.939	0.000	1.939	0.000	0.000	0.000	0.000	-	6.249
Less PY Advance Procurement *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) *($ in Millions)*	-	1.780	2.530	1.939	0.000	1.939	0.000	0.000	0.000	0.000	-	6.249
Plus CY Advance Procurement *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Total Obligation Authority *($ in Millions)*	**-**	**1.780**	**2.530**	**1.939**	**0.000**	**1.939**	**0.000**	**0.000**	**0.000**	**0.000**	**-**	**6.249**
(The following Resource Summary rows are for informational purposes only. The corresponding budget requests are documented elsewhere.)												
Initial Spares *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Unit Cost *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-

Description:

This funding is used to improve compliance with USG and international mandates that allow HC/MC-130Js to utilize US and international airspace. This includes, but is not limted to, the Automatic Dependent Surveillance-Broadcast (ADS-B) Out program. HC/MC-130J is a part of the C-130J ADS-B Acceleration program the made ADS-B Out a seperate program from the 7.0/8.1 Program. The C-130J ADS-B Out program addresses the Federal Aviation Administration/International Civil Aviation Organization (FAA/ICAO) Communications/Navigation/Surveillance and Air Traffic Management (CNS/ATM) mandate. Aircraft not installed with ADS-B Out during production will be modified immediately after production delivery, prior to delivery to units.

Milestone/Development Status

ADS-B will be cut into the production line in FY19.

Exhibit P-3a, Individual Modification: PB 2020 Air Force		Date: February 2019
Appropriation / Budget Activity / Budget Sub Activity: 3010F / 05 / 5	**P-1 Line Item Number / Title:** HCMC00 / HC/MC-130 Modifications	**Modification Number / Title:** 8648 / ADS-B out Acceleration
ID Code (A=Service Ready, B=Not Service Ready) : A	**MDAP/MAIS Code:**	
Models of Systems Affected: MC-130J	**Modification Type:** Capability Improvement	**Related RDT&E PEs:**

Financial Plan	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
	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												
Modification Item 1 of 1: Group A												
A Kits												
Recurring												
Group A:INSTALL KITS Group A (Active)	- / -	0 / 1.000	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	0 / 1.000
Subtotal: Recurring	*- / -*	*- / 1.000*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / 1.000*
Subtotal: Group A	*- / -*	*- / 1.000*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / 1.000*
Subtotal: Procurement, All Modification Items	*- / -*	*- / 1.000*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / 1.000*
Support *(All Modification Items)*												
PMA - Contractor Services	- / -	- / 0.780	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 0.780
OTHER GOVT	- / -	- / -	- / 2.530	- / 1.939	- / -	- / 1.939	- / -	- / -	- / -	- / -	- / -	- / 4.469
Subtotal: Support	*- / -*	*- / 0.780*	*- / 2.530*	*- / 1.939*	*- / -*	*- / 1.939*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / 5.249*
Installation												
Subtotal: Installation	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*
Total												
Total Cost (Procurement + Support + Installation)	**-**	**1.780**	**2.530**	**1.939**	**0.000**	**1.939**	**0.000**	**0.000**	**0.000**	**0.000**	**-**	**6.249**

Exhibit P-3a, Individual Modification: PB 2020 Air Force		Date: February 2019
Appropriation / Budget Activity / Budget Sub Activity: 3010F / 05 / 5	**P-1 Line Item Number / Title:** HCMC00 / HC/MC-130 Modifications	**Modification Number / Title:** 8648 / ADS-B out Acceleration

ID Code (A=Service Ready, B=Not Service Ready) : A

MDAP/MAIS Code:

Modification Item 1 of 1: Group A

Manufacturer Information

Manufacturer Name: Lockheed Martin

Manufacturer Location: Marietta, GA

Administrative Leadtime *(in Months)*: 1

Production Leadtime *(in Months)*: 5

Dates	FY 2018	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024
Contract Dates							
Delivery Dates							

Installation Information

Method of Implementation (Organic): Org/Intermediate

Installation Quantity: 0

Exhibit P-3a, Individual Modification: PB 2020 Air Force		Date: February 2019
Appropriation / Budget Activity / Budget Sub Activity: 3010F / 05 / 5	**P-1 Line Item Number / Title:** HCMC00 / HC/MC-130 Modifications	**Modification Number / Title:** 8652 / (RFCM) Radio Frequency Countermeasures
ID Code (A=Service Ready, B=Not Service Ready) : B	**MDAP/MAIS Code:**	

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 *(Units in Each)*	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost *($ in Millions)*	0.000	55.380	4.490	0.000	0.000	0.000	0.000	0.000	0.000	-	-	59.870
Less PY Advance Procurement *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) *($ in Millions)*	0.000	55.380	4.490	0.000	0.000	0.000	0.000	0.000	0.000	-	-	59.870
Plus CY Advance Procurement *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Total Obligation Authority *($ in Millions)*	**0.000**	**55.380**	**4.490**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**-**	**-**	**59.870**
(The following Resource Summary rows are for informational purposes only. The corresponding budget requests are documented elsewhere.)												
Initial Spares *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Unit Cost *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-

Description:

The HC-130J Radio Frequency Countermeasures (RFCM)program procures and installs ALQ-213A kits which allow the HC-130J to operate in contested environments. The RFCM program includes but is not limited to associated support requirements, OFP builds, training, spares, Diminishing Manufacturing Source (DMS) and Interim Contractor Support (ICS).

The requirement is for 39 HC-130Js. Current funding includes the 19 active duty HC-130J aircraft. Additionally, the Air National Guard and Reserve aircraft may be modified.

FY18 funds include $55.38M for Overseas Contingency Operations.

Milestone/Development Status

N/A

Exhibit P-3a, Individual Modification: PB 2020 Air Force		Date: February 2019
Appropriation / Budget Activity / Budget Sub Activity: 3010F / 05 / 5	**P-1 Line Item Number / Title:** HCMC00 / HC/MC-130 Modifications	**Modification Number / Title:** 8652 / (RFCM) Radio Frequency Countermeasures
ID Code (A=Service Ready, B=Not Service Ready) : B	**MDAP/MAIS Code:**	
Models of Systems Affected: HC-130J	**Modification Type:** Capability Improvement	**Related RDT&E PEs:** 0207224F

Financial Plan	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
	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												
Modification Item 1 of 1: RFCM												
A Kits												
Recurring												
RFCM:INSTALL KITS Group A (Active)	- / -	- / 15.000	0 / 1.000	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	0 / 16.000
Subtotal: Recurring	*- / -*	*- / 15.000*	*- / 1.000*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / 16.000*
B Kits												
Recurring												
RFCM:EQUIPMENT Group B (Active)	- / -	18 / 21.989	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	18 / 21.989
Subtotal: Recurring	*- / -*	*- / 21.989*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / 21.989*
Subtotal: RFCM	*- / -*	*- / 36.989*	*- / 1.000*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / 37.989*
Subtotal: Procurement, All Modification Items	*- / -*	*- / 36.989*	*- / 1.000*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / 37.989*
Support *(All Modification Items)*												
GROUP A: TOTAL NONRECURRING	- / -	- / 18.391	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 18.391
OTHER GOVT	- / -	- / -	- / 3.490	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 3.490
Change Orders	- / -	- / 0.000	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 0.000
Subtotal: Support	*- / -*	*- / 18.391*	*- / 3.490*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / 21.881*
Installation												
Subtotal: Installation	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*
Total												
Total Cost (Procurement + Support + Installation)	**0.000**	**55.380**	**4.490**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**-**	**-**	**59.870**

Exhibit P-3a, Individual Modification: PB 2020 Air Force		Date: February 2019
Appropriation / Budget Activity / Budget Sub Activity: 3010F / 05 / 5	**P-1 Line Item Number / Title:** HCMC00 / HC/MC-130 Modifications	**Modification Number / Title:** 8652 / (RFCM) Radio Frequency Countermeasures

ID Code (A=Service Ready, B=Not Service Ready) : B	**MDAP/MAIS Code:**

Modification Item 1 of 1: RFCM

Manufacturer Information

Manufacturer Name: TBD	Manufacturer Location: TBD
Administrative Leadtime *(in Months)*: 6	Production Leadtime *(in Months)*: 12

Dates	FY 2018	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024
Contract Dates	Apr 2018						
Delivery Dates	Apr 2019						

Installation Information

Method of Implementation (Organic): Org/Intermediate	**Installation Quantity:** 0

Exhibit P-3a, Individual Modification: PB 2020 Air Force		Date: February 2019
Appropriation / Budget Activity / Budget Sub Activity: 3010F / 05 / 5	**P-1 Line Item Number / Title:** HCMC00 / HC/MC-130 Modifications	**Modification Number / Title:** 8658 / Paratroop Door
ID Code (A=Service Ready, B=Not Service Ready) : B	**MDAP/MAIS Code:**	

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 *(Units in Each)*	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost *($ in Millions)*	0.000	0.000	24.500	0.000	0.000	0.000	1.049	0.000	0.000	0.000	-	25.549
Less PY Advance Procurement *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) *($ in Millions)*	0.000	0.000	24.500	0.000	0.000	0.000	1.049	0.000	0.000	0.000	-	25.549
Plus CY Advance Procurement *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Total Obligation Authority *($ in Millions)*	**0.000**	**0.000**	**24.500**	**0.000**	**0.000**	**0.000**	**1.049**	**0.000**	**0.000**	**0.000**	**-**	**25.549**
(The following Resource Summary rows are for informational purposes only. The corresponding budget requests are documented elsewhere.)												
Initial Spares *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Unit Cost *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-

Description:

HC-130J Upgraded Paratroop Door System will upgrade the paratroop door system that combines improved visual scanning, armor, and a spring-loaded counter balance system that alleviates damage to paratroop doors, facilitates operation, and egress with armor installed. Current funding includes but is not limited to purchasing kits to modify the active duty fleet, associated training, tech data, Readiness Spares Package (RSPs) and other government costs.

FY19 funds of $24.50M are for Overseas Contingency Operations.

Milestone/Development Status

Milestone

Exhibit P-3a, Individual Modification: PB 2020 Air Force		Date: February 2019
Appropriation / Budget Activity / Budget Sub Activity: 3010F / 05 / 5	**P-1 Line Item Number / Title:** HCMC00 / HC/MC-130 Modifications	**Modification Number / Title:** 8658 / Paratroop Door
ID Code (A=Service Ready, B=Not Service Ready) : B	**MDAP/MAIS Code:**	
Models of Systems Affected: HC-130J	**Modification Type:** Capability Improvement	**Related RDT&E PEs:** 0207224F

Financial Plan	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
	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												
Modification Item 1 of 1: Paratroop Kits												
A Kits												
Recurring												
Paratroop Kits:INSTALL KITS Group A (Active)	- / -	- / -	- / -	0 / 0.000	- / -	0 / 0.000	16 / 1.049	- / -	- / -	- / -	- / -	16 / 1.049
Subtotal: Recurring	- / -	- / -	- / -	- / 0.000	- / -	- / 0.000	- / 1.049	- / -	- / -	- / -	- / -	- / 1.049
Subtotal: Paratroop Kits	- / -	- / -	- / -	- / 0.000	- / -	- / 0.000	- / 1.049	- / -	- / -	- / -	- / -	- / 1.049
Subtotal: Procurement, All Modification Items	- / -	- / -	- / -	- / 0.000	- / -	- / 0.000	- / 1.049	- / -	- / -	- / -	- / -	- / 1.049
Support *(All Modification Items)*												
GROUP A: TOTAL NONRECURRING	- / -	- / -	- / 24.500	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 24.500
Subtotal: Support	- / -	- / -	- / 24.500	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 24.500
Installation												
Subtotal: Installation	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
Total												
Total Cost (Procurement + Support + Installation)	**0.000**	**0.000**	**24.500**	**0.000**	**0.000**	**0.000**	**1.049**	**0.000**	**0.000**	**0.000**	**-**	**25.549**

Exhibit P-3a, Individual Modification: PB 2020 Air Force		Date: February 2019
Appropriation / Budget Activity / Budget Sub Activity: 3010F / 05 / 5	**P-1 Line Item Number / Title:** HCMC00 / HC/MC-130 Modifications	**Modification Number / Title:** 8658 / Paratroop Door
ID Code (A=Service Ready, B=Not Service Ready) : B	**MDAP/MAIS Code:**	
Modification Item 1 of 1: Paratroop Kits		

Manufacturer Information

Manufacturer Name: TBD	Manufacturer Location: TBD
Administrative Leadtime *(in Months)*: 9	Production Leadtime *(in Months)*: 4

Dates	FY 2018	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024
Contract Dates		Jul 2019					
Delivery Dates		Nov 2019					

Installation Information

Method of Implementation (Organic): Org/Intermediate	**Installation Quantity:** 16

Exhibit P-3a, Individual Modification: PB 2020 Air Force		Date: February 2019
Appropriation / Budget Activity / Budget Sub Activity: 3010F / 05 / 5	**P-1 Line Item Number / Title:** HCMC00 / HC/MC-130 Modifications	**Modification Number / Title:** 8659 / Broadband Antenna
ID Code (A=Service Ready, B=Not Service Ready) : B	**MDAP/MAIS Code:**	

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 *(Units in Each)*	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost *($ in Millions)*	0.000	0.000	9.400	0.000	0.000	0.000	0.000	0.000	0.000	0.000	-	9.400
Less PY Advance Procurement *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) *($ in Millions)*	0.000	0.000	9.400	0.000	0.000	0.000	0.000	0.000	0.000	0.000	-	9.400
Plus CY Advance Procurement *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Total Obligation Authority *($ in Millions)*	**0.000**	**0.000**	**9.400**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**-**	**9.400**
(The following Resource Summary rows are for informational purposes only. The corresponding budget requests are documented elsewhere.)												
Initial Spares *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Unit Cost *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-

Description:

Equips the MC-130J with a Self-contained airborne satellite terminal that delivers high-speed IP communications (Full motion video and data uploads. Current funding includes but is not limited to, OFP (Operational Flight Program) builds, associated training, tech data, RSPs and other government costs required for installation on up to 6 aircraft.

FY19 funds include $9.4M for Overseas Contingency Operations.

Milestone/Development Status

Milestone

Exhibit P-3a, Individual Modification: PB 2020 Air Force		Date: February 2019
Appropriation / Budget Activity / Budget Sub Activity: 3010F / 05 / 5	**P-1 Line Item Number / Title:** HCMC00 / HC/MC-130 Modifications	**Modification Number / Title:** 8659 / Broadband Antenna
ID Code (A=Service Ready, B=Not Service Ready) : B	**MDAP/MAIS Code:**	
Models of Systems Affected: MC-130J	**Modification Type:** Capability Improvement	**Related RDT&E PEs:** 0207230F

Financial Plan	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
	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												
Modification Item 1 of 1: Group A Kits												
A Kits												
Recurring												
Group A Kits:INSTALL KITS Group A (Active)	- / -	- / -	6 / 9.400	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	6 / 9.400
Subtotal: Recurring	- / -	- / -	- / 9.400	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 9.400
Subtotal: Group A Kits	- / -	- / -	- / 9.400	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 9.400
Subtotal: Procurement, All Modification Items	- / -	- / -	- / 9.400	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 9.400
Installation												
Subtotal: Installation	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
Total												
Total Cost (Procurement + Support + Installation)	**0.000**	**0.000**	**9.400**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**0.000**	**-**	**9.400**

Exhibit P-3a, Individual Modification: PB 2020 Air Force		Date: February 2019
Appropriation / Budget Activity / Budget Sub Activity: 3010F / 05 / 5	**P-1 Line Item Number / Title:** HCMC00 / HC/MC-130 Modifications	**Modification Number / Title:** 8659 / Broadband Antenna
ID Code (A=Service Ready, B=Not Service Ready) : B	**MDAP/MAIS Code:**	

Modification Item 1 of 1: Group A Kits

Manufacturer Information

Manufacturer Name: Unknown	Manufacturer Location: Unknown
Administrative Leadtime *(in Months)*: 0	Production Leadtime *(in Months)*: 0

Dates	FY 2018	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024
Contract Dates							
Delivery Dates							

Installation Information

Method of Implementation (Organic): Org/Intermediate	**Installation Quantity:** 6

Exhibit P-40, Budget Line Item Justification: PB 2020 Air Force	Date: February 2019
Appropriation / Budget Activity / Budget Sub Activity: 3010F: Aircraft Procurement, Air Force / BA 05: Modification of Inservice Aircraft / BSA 5: Other Aircraft	**P-1 Line Item Number / Title:** OTHACF / Other Aircraft

ID Code (A=Service Ready, B=Not Service Ready): B	**Program Elements for Code B Items:** 0207224F, 0207701F, 0401897F	**Other Related Program Elements:** 0207224F, 0207249F, 0207701F, 0401897F

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 *(Units in Each)*	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost *($ in Millions)*	319.307	69.449	111.141	50.098	0.000	50.098	63.009	17.285	18.045	55.034	0.000	703.368
Less PY Advance Procurement *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) *($ in Millions)*	319.307	69.449	111.141	50.098	0.000	50.098	63.009	17.285	18.045	55.034	0.000	703.368
Plus CY Advance Procurement *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Total Obligation Authority *($ in Millions)*	**319.307**	**69.449**	**111.141**	**50.098**	**0.000**	**50.098**	**63.009**	**17.285**	**18.045**	**55.034**	**0.000**	**703.368**
(The following Resource Summary rows are for informational purposes only. The corresponding budget requests are documented elsewhere.)												
Initial Spares *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Flyaway Unit Cost *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Unit Cost *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-

Description:

FY19 funding totals include $29.2M for Overseas Contingency Operations. PE 0207249($22M ATP & Upgrades; $7.2M ATP Digital Video). PE 0207701F $10.400M for threat simulators for Nellis AFB Virtual Test Training Range.

This line item funds multiple modifications that apply to weapon systems funded at less than $2 million per year as well as weapon systems with much greater budgets. The overall goal of the modifications budgeted is to enhance capability and improve reliability and maintainability.

Funding contained in this platform's documentation directly aids simulator aircraft training systems training enterprise to continue its overall FYDP pilot production increase thus reducing the USAF Pilot Shortage.

FY 2019-FY 2023 funding for PE 0207701F, Full Combat Mission Training, Mod 8669, efforts were transferred to PE 0207133F, F-16, in order to transfer programmatic responsibilities and funding to the F-16 weapon system team.

Funding may be used to address Diminishing Manufacturing Sources (DMS) issues.

Funding for this exhibit contained in PE 0207224F, 0207249F, 0303601F, 0401897F.

In accordance with Section 1815 of the FY 2008 National Defense Authorization Act (P.L. 110-181), this item is necessary for use by the active and reserve components of the Armed Forces for homeland defense mission, domestic emergency responses, and providing military support to civilian authorities.

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.

Exhibit P-40, Budget Line Item Justification: PB 2020 Air Force	Date: February 2019
Appropriation / Budget Activity / Budget Sub Activity: 3010F: Aircraft Procurement, Air Force / BA 05: Modification of Inservice Aircraft / BSA 5: Other Aircraft	**P-1 Line Item Number / Title:** OTHACF / Other Aircraft

ID Code (A=Service Ready, B=Not Service Ready): B	Program Elements for Code B Items: 0207224F, 0207701F, 0401897F	Other Related Program Elements: 0207224F, 0207249F, 0207701F, 0401897F

Line Item MDAP/MAIS Code: N/A

Secondary Distribution		FY 2018	FY 2019	FY 2020 Base	FY 2020 OCO	FY 2020 Total	FY 2021	FY 2022	FY 2023	FY 2024
AF	Quantity	-	-	-	-	-	-	-	-	-
	Total Obligation Authority	69.449	111.143	50.098	0.000	50.098	63.009	17.285	18.045	55.034
AFNG	Quantity	-	-	-	-	-	-	-	-	-
	Total Obligation Authority	-	0.000	0.000	-	0.000	0.000	0.000	0.000	0.000
AFR	Quantity	-	-	-	-	-	-	-	-	-
	Total Obligation Authority	-	0.000	0.000	-	0.000	0.000	0.000	0.000	0.000
Total: Secondary Distribution	**Quantity**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**
	Total Obligation Authority	**69.449**	**111.143**	**50.098**	**0.000**	**50.098**	**63.009**	**17.285**	**18.045**	**55.034**

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

Appropriation / Budget Activity / Budget Sub Activity:
3010F: Aircraft Procurement, Air Force / BA 05: Modification of Inservice Aircraft / BSA 5: Other Aircraft

P-1 Line Item Number / Title:
OTHACF / Other Aircraft

ID Code (A=Service Ready, B=Not Service Ready): B

Program Elements for Code B Items: 0207224F, 0207701F, 0401897F

Other Related Program Elements: 0207224F, 0207249F, 0207701F, 0401897F

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-40a***	8669 / Full Combat Mission Training (Capability Improvement)				- / 62.527	- / 13.877	- / -	- / -	- / -	- / -
P-40a***	8670 / MAF Training (Capability Improvement)				- / 32.514	- / 1.172	- / 0.000	- / 0.100	- / 0.000	- / 0.100
P-40a***	8733 / Battlefield ABN Comm Node (BACN) (Other)				- / -	- / -	- / 28.906	- / -	- / -	- / -
P-40a***	8735 / DAS000 (ROBE) (Capability Improvement)				- / -	- / 10.381	- / 10.400	- / -	- / -	- / -
P-40a***	99999J / MISCELLANEOUS LOW COSTS MODS (Combat Developments) (Other)				- / 142.525	- / 0.162	- / 0.148	- / 4.616	- / -	- / 4.616
P-40a***	HH-60U / HH-60U (Capability Improvement)				- / 3.608	- / -	- / 0.000	- / 1.900	- / 0.000	- / 1.900
P-3a	8674 / ATP upgrade Legacy to SE (Other)		A		- / 41.179	- / 28.735	- / 36.303	- / 29.861	- / 0.000	- / 29.861
P-3a	8675 / ATP-SE Technology Insertion (Capability Improvement)		A		- / 36.954	- / 15.122	- / 35.386	- / 13.621	- / 0.000	- / 13.621
P-40	**Total Gross/Weapon System Cost**				**- / 319.307**	**- / 69.449**	**- / 111.141**	**- / 50.098**	**- / 0.000**	**- / 50.098**

Exhibits Schedule					FY 2021	FY 2022	FY 2023	FY 2024	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-40a***	8669 / Full Combat Mission Training (Capability Improvement)				- / -	- / -	- / -	- / -	- / -	- / 76.404
P-40a***	8670 / MAF Training (Capability Improvement)				- / 16.527	- / 0.099	- / 0.101	- / 0.103	- / -	- / 50.616
P-40a***	8733 / Battlefield ABN Comm Node (BACN) (Other)				- / -	- / -	- / -	- / -	- / -	- / 28.906
P-40a***	8735 / DAS000 (ROBE) (Capability Improvement)				- / -	- / -	- / -	- / -	- / -	- / 20.781
P-40a***	99999J / MISCELLANEOUS LOW COSTS MODS (Combat Developments) (Other)				- / 0.154	- / 0.157	- / 0.160	- / 0.163	- / -	- / 148.085
P-40a***	HH-60U / HH-60U (Capability Improvement)				- / 1.900	- / 1.900	- / 1.900	- / 1.900	- / 0.000	- / 13.108
P-3a	8674 / ATP upgrade Legacy to SE (Other)		A		- / 30.563	- / 0.987	- / 1.005	- / 1.023	- / 0.000	- / 169.656
P-3a	8675 / ATP-SE Technology Insertion (Capability Improvement)		A		- / 13.865	- / 14.142	- / 14.879	- / 51.845	- / 0.000	- / 195.814
P-40	**Total Gross/Weapon System Cost**				**- / 63.009**	**- / 17.285**	**- / 18.045**	**- / 55.034**	**- / 0.000**	**- / 703.368**

*** Although this is an Exhibit P-40a item, the actual exhibit is not included since all of the required information for this item is already being shown here.

*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:
Where applicable, justification for individual modifications is provided in the P-3A exhibits.

Exhibit P-3a, Individual Modification: PB 2020 Air Force		Date: February 2019
Appropriation / Budget Activity / Budget Sub Activity: 3010F / 05 / 5	**P-1 Line Item Number / Title:** OTHACF / Other Aircraft	**Modification Number / Title:** 8674 / ATP upgrade Legacy to SE
ID Code (A=Service Ready, B=Not Service Ready) : A	**MDAP/MAIS Code:**	

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 *(Units in Each)*	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost *($ in Millions)*	41.179	28.735	36.303	29.861	0.000	29.861	30.563	0.987	1.005	1.023	0.000	169.656
Less PY Advance Procurement *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) *($ in Millions)*	41.179	28.735	36.303	29.861	0.000	29.861	30.563	0.987	1.005	1.023	0.000	169.656
Plus CY Advance Procurement *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Total Obligation Authority *($ in Millions)*	**41.179**	**28.735**	**36.303**	**29.861**	**0.000**	**29.861**	**30.563**	**0.987**	**1.005**	**1.023**	**0.000**	**169.656**
(The following Resource Summary rows are for informational purposes only. The corresponding budget requests are documented elsewhere.)												
Initial Spares *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Unit Cost *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-

Description:

The LITENING and Sniper ATP contracts will address requirements centered on new capability as well as hardware and software upgrades necessary to align with the most current pod configuration. This would include host platform integration and test, modification of spares, correction of service life deficiencies, technical orders, repair data, studies, support of depot repair requirements and all modifications necessary to capitalize on the most current required capability. In addition, this requirement provides for program management support. Funds may be used to address emerging and short-notice Diminishing Manufacturing Sources and Material Shortages (DMSMS) issues.

Quantities will vary based on funding, negotiated prices and COCOM requirements.

Milestone/Development Status
ATP reached Full Operational Capability (FOC) July 2017

Milestone/Development Status

Legacy will incorporate SE capabilities already developed through the SE contract.

Secondary Distribution		FY 2018	FY 2019	FY 2020 Base	FY 2020 OCO	FY 2020 Total	FY 2021	FY 2022	FY 2023	FY 2024
AF	Quantity	-	-	-	-	-	-	-	-	-
	Total Obligation Authority	28.735	36.303	29.861	-	29.861	30.563	0.987	1.005	1.023
Total: Secondary Distribution	**Quantity**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**
	Total Obligation Authority	**28.735**	**36.303**	**29.861**	**0.000**	**29.861**	**30.563**	**0.987**	**1.005**	**1.023**

Exhibit P-3a, Individual Modification: PB 2020 Air Force		Date: February 2019
Appropriation / Budget Activity / Budget Sub Activity: 3010F / 05 / 5	**P-1 Line Item Number / Title:** OTHACF / Other Aircraft	**Modification Number / Title:** 8674 / ATP upgrade Legacy to SE
ID Code (A=Service Ready, B=Not Service Ready) : A	**MDAP/MAIS Code:**	
Models of Systems Affected: A-10, F-15C, F-15E, F-16, B-1, B-52	**Modification Type:** Other	**Related RDT&E PEs:** 0207249F

Financial Plan	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
	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												
Modification Item 1 of 1: Upgrade Kit												
A Kits												
Recurring												
Upgrade Kit:INSTALL KITS Group A (Active)	109 / 39.192	190 / 27.305	200 / 27.633	200 / 28.361	- / -	200 / 28.361	200 / 28.993	10 / 0.937	10 / 0.937	10 / 0.937	- / -	929 / 154.295
Subtotal: Recurring	*- / 39.192*	*- / 27.305*	*- / 27.633*	*- / 28.361*	*- / -*	*- / 28.361*	*- / 28.993*	*- / 0.937*	*- / 0.937*	*- / 0.937*	*- / -*	*- / 154.295*
Subtotal: Upgrade Kit	*- / 39.192*	*- / 27.305*	*- / 27.633*	*- / 28.361*	*- / -*	*- / 28.361*	*- / 28.993*	*- / 0.937*	*- / 0.937*	*- / 0.937*	*- / -*	*- / 154.295*
Subtotal: Procurement, All Modification Items	*- / 39.192*	*- / 27.305*	*- / 27.633*	*- / 28.361*	*- / -*	*- / 28.361*	*- / 28.993*	*- / 0.937*	*- / 0.937*	*- / 0.937*	*- / -*	*- / 154.295*
Support *(All Modification Items)*												
GROUP A: TOTAL NONRECURRING	- / -	- / -	- / 7.200	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 7.200
PMA - Contractor Services	- / 0.586	- / 0.860	- / 0.880	- / 0.900	- / -	- / 0.900	- / 0.940	- / 0.030	- / 0.030	- / 0.040	- / -	- / 4.266
PMA - Other Gov't Costs	- / 1.401	- / 0.570	- / 0.590	- / 0.600	- / -	- / 0.600	- / 0.630	- / 0.020	- / 0.038	- / 0.046	- / -	- / 3.895
Subtotal: Support	*- / 1.987*	*- / 1.430*	*- / 8.670*	*- / 1.500*	*- / -*	*- / 1.500*	*- / 1.570*	*- / 0.050*	*- / 0.068*	*- / 0.086*	*- / -*	*- / 15.361*
Installation												
Subtotal: Installation	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*
Total												
Total Cost (Procurement + Support + Installation)	**41.179**	**28.735**	**36.303**	**29.861**	**0.000**	**29.861**	**30.563**	**0.987**	**1.005**	**1.023**	**0.000**	**169.656**

Exhibit P-3a, Individual Modification: PB 2020 Air Force		Date: February 2019
Appropriation / Budget Activity / Budget Sub Activity: 3010F / 05 / 5	**P-1 Line Item Number / Title:** OTHACF / Other Aircraft	**Modification Number / Title:** 8674 / ATP upgrade Legacy to SE
ID Code (A=Service Ready, B=Not Service Ready) : A	**MDAP/MAIS Code:**	

Modification Item 1 of 1: Upgrade Kit

Manufacturer Information

Manufacturer Name: Lockheed Martin	Manufacturer Location: Orlando, FL
Administrative Leadtime *(in Months)*: 1	Production Leadtime *(in Months)*: 12

Dates	FY 2018	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024
Contract Dates	Mar 2018	Mar 2019	Mar 2020	Mar 2021	Mar 2022	Mar 2023	Mar 2024
Delivery Dates	Mar 2019	Mar 2020	Mar 2021	Mar 2022	Mar 2023	Mar 2024	Mar 2025

Manufacturer Name: Northrop Grumman	Manufacturer Location: Rolling Meadows, IL
Administrative Leadtime *(in Months)*: 1	Production Leadtime *(in Months)*: 12

Dates	FY 2018	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024
Contract Dates	Mar 2018	Mar 2019	Mar 2020	Mar 2021	Mar 2022	Mar 2023	Mar 2024
Delivery Dates	Mar 2019	Mar 2020	Mar 2021	Mar 2022	Mar 2023	Mar 2024	Mar 2025

Installation Information

Method of Implementation (Organic): Org/Intermediate	**Installation Quantity:** 1099

Exhibit P-3a, Individual Modification: PB 2020 Air Force		Date: February 2019
Appropriation / Budget Activity / Budget Sub Activity: 3010F / 05 / 5	**P-1 Line Item Number / Title:** OTHACF / Other Aircraft	**Modification Number / Title:** 8675 / ATP-SE Technology Insertion
ID Code (A=Service Ready, B=Not Service Ready) : A	**MDAP/MAIS Code:**	

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 *(Units in Each)*	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost *($ in Millions)*	36.954	15.122	35.386	13.621	0.000	13.621	13.865	14.142	14.879	51.845	0.000	195.814
Less PY Advance Procurement *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) *($ in Millions)*	36.954	15.122	35.386	13.621	0.000	13.621	13.865	14.142	14.879	51.845	0.000	195.814
Plus CY Advance Procurement *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Total Obligation Authority *($ in Millions)*	**36.954**	**15.122**	**35.386**	**13.621**	**0.000**	**13.621**	**13.865**	**14.142**	**14.879**	**51.845**	**0.000**	**195.814**
(The following Resource Summary rows are for informational purposes only. The corresponding budget requests are documented elsewhere.)												
Initial Spares *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Unit Cost *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-

Description:

This effort improves the critical capability of Combat Identification (CID). The LITENING and Sniper ATP contracts will address requirements centered on hardware and software upgrades and associated host platform integration (to include necessary test), modification of spares, correction of service life deficiencies, technical orders, repair data, studies and support of organic depot repair requirements. Modification of legacy pods to ATP-SE standards may be necessary for modifications. In addition, this requirement provides for program management support. Quantities will vary based on negotiated prices. Funds may be used to address emerging and short-notice Diminishing Manufacturing and Material Shortage (DMSMS) issues.

Milestone/Development Status
ATP reached Full Operational Capability (FOC) July 2017

Milestone/Development Status

Upgrades will incorporate capabilities developed by industry and through the SE contract.

Secondary Distribution		FY 2018	FY 2019	FY 2020 Base	FY 2020 OCO	FY 2020 Total	FY 2021	FY 2022	FY 2023	FY 2024
AF	Quantity	-	-	-	-	-	-	-	-	-
	Total Obligation Authority	15.122	35.386	13.621	-	13.621	13.865	14.142	14.879	51.845
Total: Secondary Distribution	**Quantity**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**
	Total Obligation Authority	**15.122**	**35.386**	**13.621**	**0.000**	**13.621**	**13.865**	**14.142**	**14.879**	**51.845**

Exhibit P-3a, Individual Modification: PB 2020 Air Force		Date: February 2019
Appropriation / Budget Activity / Budget Sub Activity: 3010F / 05 / 5	**P-1 Line Item Number / Title:** OTHACF / Other Aircraft	**Modification Number / Title:** 8675 / ATP-SE Technology Insertion
ID Code (A=Service Ready, B=Not Service Ready) : A	**MDAP/MAIS Code:**	
Models of Systems Affected: A-10, F-15C, F-15E, F-16, B-1, B-52	**Modification Type:** Capability Improvement	**Related RDT&E PEs:** 0207249F

Financial Plan	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
	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												
Modification Item 1 of 1: RBCI												
A Kits												
Recurring												
RBCI:INSTALL KITS Group A (Active)	13 / 36.954	152 / 13.302	144 / 11.586	144 / 10.821	- / -	144 / 10.821	134 / 11.065	72 / 11.342	- / 12.579	- / -	- / -	659 / 107.649
Subtotal: Recurring	*- / 36.954*	*- / 13.302*	*- / 11.586*	*- / 10.821*	*- / -*	*- / 10.821*	*- / 11.065*	*- / 11.342*	*- / 12.579*	*- / -*	*- / -*	*- / 107.649*
Subtotal: RBCI	*- / 36.954*	*- / 13.302*	*- / 11.586*	*- / 10.821*	*- / -*	*- / 10.821*	*- / 11.065*	*- / 11.342*	*- / 12.579*	*- / -*	*- / -*	*- / 107.649*
Subtotal: Procurement, All Modification Items	*- / 36.954*	*- / 13.302*	*- / 11.586*	*- / 10.821*	*- / -*	*- / 10.821*	*- / 11.065*	*- / 11.342*	*- / 12.579*	*- / -*	*- / -*	*- / 107.649*
Support *(All Modification Items)*												
GROUP A: TOTAL NONRECURRING	- / 0.000	- / -	- / 22.000	- / -	- / -	- / -	- / -	- / -	- / -	- / 51.345	- / -	- / 73.345
PMA - Contractor Services	- / -	- / -	- / 0.600	- / 0.600	- / -	- / 0.600	- / 0.600	- / 0.600	- / 0.600	- / -	- / -	- / 3.000
PMA - Other Gov't Costs	- / -	- / -	- / 0.200	- / 0.200	- / -	- / 0.200	- / 0.200	- / 0.200	- / 0.200	- / -	- / -	- / 1.000
Subtotal: Support	*- / 0.000*	*- / -*	*- / 22.800*	*- / 0.800*	*- / -*	*- / 0.800*	*- / 0.800*	*- / 0.800*	*- / 0.800*	*- / 51.345*	*- / -*	*- / 77.345*
Installation												
Modification Item 1 of 1: RBCI	- / -	13 / 1.820	76 / 1.000	148 / 2.000	- / -	148 / 2.000	144 / 2.000	144 / 2.000	98 / 1.500	36 / 0.500	- / -	659 / 10.820
Subtotal: Installation	*- / -*	*13 / 1.820*	*76 / 1.000*	*148 / 2.000*	*- / -*	*148 / 2.000*	*144 / 2.000*	*144 / 2.000*	*98 / 1.500*	*36 / 0.500*	*- / -*	*659 / 10.820*
Total												
Total Cost (Procurement + Support + Installation)	**36.954**	**15.122**	**35.386**	**13.621**	**0.000**	**13.621**	**13.865**	**14.142**	**14.879**	**51.845**	**0.000**	**195.814**

Exhibit P-3a, Individual Modification: PB 2020 Air Force		Date: February 2019
Appropriation / Budget Activity / Budget Sub Activity: 3010F / 05 / 5	**P-1 Line Item Number / Title:** OTHACF / Other Aircraft	**Modification Number / Title:** 8675 / ATP-SE Technology Insertion
ID Code (A=Service Ready, B=Not Service Ready) : A	**MDAP/MAIS Code:**	

Modification Item 1 of 1: RBCI

Manufacturer Information

Manufacturer Name: Lockheed Martin	Manufacturer Location: Orlando, FL
Administrative Leadtime *(in Months)*: 1	Production Leadtime *(in Months)*: 12

Dates	FY 2018	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024
Contract Dates	Jun 2018	Jun 2019	Jun 2020	Jun 2021	Jun 2022		
Delivery Dates	Jun 2019	Jun 2020	Jun 2021	Jun 2022	Jun 2023		

Manufacturer Name: Northrop Grumman	Manufacturer Location: Rolling Meadows, IL
Administrative Leadtime *(in Months)*: 1	Production Leadtime *(in Months)*: 12

Dates	FY 2018	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024
Contract Dates	Jun 2018	Jun 2019	Jun 2020	Jun 2021	Jun 2022		
Delivery Dates	Jun 2019	Jun 2020	Jun 2021	Jun 2022	Jun 2023		

Installation Information

Method of Implementation: Contractor Facility

Installation Cost	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
	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)*
Prior Years	- / -	13 / 1.820	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	13 / 1.820
FY 2018	- / -	- / -	76 / 1.000	76 / 1.000	- / -	76 / 1.000	- / -	- / -	- / -	- / -	- / -	152 / 2.000
FY 2019	- / -	- / -	- / -	72 / 1.000	- / -	72 / 1.000	72 / 1.000	- / -	- / -	- / -	- / -	144 / 2.000
FY 2020	- / -	- / -	- / -	- / -	- / -	- / -	72 / 1.000	72 / 1.000	- / -	- / -	- / -	144 / 2.000
FY 2021	- / -	- / -	- / -	- / -	- / -	- / -	- / -	72 / 1.000	62 / 1.000	- / -	- / -	134 / 2.000
FY 2022	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	36 / 0.500	36 / 0.500	- / -	72 / 1.000
FY 2023	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2024	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
To Complete	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
Total	- / -	13 / 1.820	76 / 1.000	148 / 2.000	- / -	148 / 2.000	144 / 2.000	144 / 2.000	98 / 1.500	36 / 0.500	- / -	659 / 10.820

Installation Schedule

	PYS	FY 2018				FY 2019				FY 2020				FY 2021				FY 2022				FY 2023				FY 2024				TC	Tot
		Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4		
In	0	-	-	13	-	-	-	38	38	38	38	36	36	36	36	36	36	36	36	36	36	36	26	18	18	18	18	-	-	0	659
Out	0	-	-	-	-	-	13	-	-	-	38	38	38	38	36	36	36	36	36	36	36	36	36	36	36	26	18	18	18	18	659

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Exhibit P-40, Budget Line Item Justification: PB 2020 Air Force	Date: February 2019
Appropriation / Budget Activity / Budget Sub Activity: 3010F: Aircraft Procurement, Air Force / BA 05: Modification of Inservice Aircraft / BSA 5: Other Aircraft	**P-1 Line Item Number / Title:** PRDTB2 / MQ-9 Mods

ID Code (A=Service Ready, B=Not Service Ready): B	**Program Elements for Code B Items:** 0205219F	**Other Related Program Elements:** 0205219F

Line Item MDAP/MAIS Code: 424

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 *(Units in Each)*	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost *($ in Millions)*	854.169	253.940	171.548	383.594	0.000	383.594	188.646	161.273	164.610	11.897	528.558	2,718.235
Less PY Advance Procurement *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) *($ in Millions)*	854.169	253.940	171.548	383.594	0.000	383.594	188.646	161.273	164.610	11.897	528.558	2,718.235
Plus CY Advance Procurement *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Total Obligation Authority *($ in Millions)*	**854.169**	**253.940**	**171.548**	**383.594**	**0.000**	**383.594**	**188.646**	**161.273**	**164.610**	**11.897**	**528.558**	**2,718.235**
(The following Resource Summary rows are for informational purposes only. The corresponding budget requests are documented elsewhere.)												
Initial Spares *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Flyaway Unit Cost *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Unit Cost *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-

Description:

The MQ-9 Reaper system is designed primarily to prosecute critical emerging Time Sensitive Targets (TSTs) as a radar-based attack asset with organic hard-kill capability (hunter-killer) and to perform Intelligence, Surveillance, Reconnaissance and Target Acquisition (ISR TA) as a secondary role. In the hunter-killer role, the aircraft employs multi-spectral sensors to automatically find, fix, and track ground targets using Automatic Target Cueing (ATC), and assess post-strike results. The basic MQ-9 Reaper system consists of the aircraft, sensors, a ground control station (GCS), communications equipment, weapon kits, support equipment, simulator and training devices, Readiness Spares Packages (RSP), technical data/training, and personnel required to operate, maintain, and sustain the system. The aircraft is designed to be modular and open-ended. Mission-specific equipment is employed in a 'plug-and-play' mission kit concept allowing specific aircraft and control station configurations to be tailored to fit mission needs. The MQ-9 aircraft will continue to be modified to ensure aircraft are standardized with the latest configuration. Additionally, the MQ-9 system will continue to evolve and upgrade its capabilities to satisfy new requirements and address Reliability and Maintainability (R&M) and safety issues as they arise. MQ-9 Mods also includes, but is not limited to, aircraft (including sensors), ground control station and ground support system retrofit to baseline configurations.

There are currently 167 Block 1 and 83 Block 5 MQ-9 (as of 27 Aug 2018) aircraft totaling 250 in the inventory with an estimated designed service life of 20,000 hours. Not all 250 aircraft will receive every modification. Modification quantities will vary due to attrition and aircraft being modified by other customers. For each P-3a the number of aircraft funded with baseline modification funding is identified.

Efforts in this modification summary and associated P-3A's have been broken out into several categories: Block 5 aircraft, Multi-Spectral Targeting System-B (MTS-B) High Definition (HD), Technology Insertion, MQ-9 Extended Range, MQ-9 Low Cost Mods, MQ-9 Field, Lynx Synthetic Aperture Radar (SAR), GCS Block 30, Reliability and Maintainability (R&M) enhancements, MQ-9 Upgrades, GCS Tech Refresh and Communication Enhancements.

This program will revise quantities based on updated user requirements, aircraft availability, and as funding permits. Funding may be used to address Diminishing Manufacturing Sources (DMS) and Non-Recurring Engineering (NRE) issues.

This program has associated Research, Development Test and Evaluation (RDT&E) AF funding in MQ-9 PE 0205219F.

Funding for this exhibit contained in PE 0205219F.

FY18 Totals include $56,400,000.00 in Overseas Contingency Operations (OCO).

Exhibit P-40, Budget Line Item Justification: PB 2020 Air Force		Date: February 2019
Appropriation / Budget Activity / Budget Sub Activity: 3010F: Aircraft Procurement, Air Force / BA 05: Modification of Inservice Aircraft / BSA 5: Other Aircraft	**P-1 Line Item Number / Title:** PRDTB2 / MQ-9 Mods	
ID Code (A=Service Ready, B=Not Service Ready): B	**Program Elements for Code B Items:** 0205219F	**Other Related Program Elements:** 0205219F
Line Item MDAP/MAIS Code: 424		

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.

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

Appropriation / Budget Activity / Budget Sub Activity:
3010F: Aircraft Procurement, Air Force / BA 05: Modification of Inservice Aircraft / BSA 5: Other Aircraft

P-1 Line Item Number / Title:
PRDTB2 / MQ-9 Mods

ID Code (A=Service Ready, B=Not Service Ready): B | **Program Elements for Code B Items:** 0205219F | **Other Related Program Elements:** 0205219F

Line Item MDAP/MAIS Code: 424

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) I ($ M)	Quantity / Total Cost (Each) I ($ M)	Quantity / Total Cost (Each) I ($ M)	Quantity / Total Cost (Each) I ($ M)	Quantity / Total Cost (Each) I ($ M)	Quantity / Total Cost (Each) I ($ M)
P-40a***	9171 / MQ-9 SLAM (Capability Improvement)				- / -	- / -	- / -	- / 0.100	- / -	- / 0.100
P-3a	9151 / Block 5 (Capability Improvement)		B		- / 73.247	- / 1.505	- / 13.711	- / 1.757	- / 0.000	- / 1.757
P-3a	9152 / MQ-9 Field (Capability Improvement)		B		- / 204.472	- / 40.027	- / 49.163	- / 39.925	- / 0.000	- / 39.925
P-3a	9154 / Lynx SAR (Capability Improvement)		B		- / 82.482	- / 13.655	- / 14.776	- / 1.096	- / 0.000	- / 1.096
P-3a	9155 / GCS Blk 30 (Capability Improvement)		B		- / 103.667	- / 18.205	- / 20.842	- / 22.590	- / 0.000	- / 22.590
P-3a	9159 / R&M enhancements (Reliability & Maintainability)		B		- / 71.433	- / 0.541	- / 1.704	- / 2.609	- / 0.000	- / 2.609
P-3a	9164 / Extended Range MQ-9 (Capability Improvement)		B		- / 176.514	- / 67.159	- / 53.531	- / 33.669	- / 0.000	- / 33.669
P-3a	9167 / MQ-9 Upgrade (Capability Improvement)		B		- / 129.334	- / 112.848	- / 15.821	- / 280.848	- / 0.000	- / 280.848
P-3a	1 / MQ-9 Low Cost Mods (Reliability & Maintainability)		B		- / 13.020	- / 0.000	- / 2.000	- / 1.000	- / 0.000	- / 1.000
P-40	**Total Gross/Weapon System Cost**				**- / 854.169**	**- / 253.940**	**- / 171.548**	**- / 383.594**	**- / 0.000**	**- / 383.594**

Exhibits Schedule					FY 2021	FY 2022	FY 2023	FY 2024	To Complete	Total
Exhibit Type	Title*	Subexhibits	ID CD	MDAP/ MAIS Code	Quantity / Total Cost (Each) I ($ M)	Quantity / Total Cost (Each) I ($ M)	Quantity / Total Cost (Each) I ($ M)	Quantity / Total Cost (Each) I ($ M)	Quantity / Total Cost (Each) I ($ M)	Quantity / Total Cost (Each) I ($ M)
P-40a***	9171 / MQ-9 SLAM (Capability Improvement)				- / 0.100	- / 0.100	- / 26.793	- / -	- / 144.888	- / 171.981
P-3a	9151 / Block 5 (Capability Improvement)		B		- / 0.874	- / 1.575	- / 7.504	- / 0.000	- / 4.984	- / 105.157
P-3a	9152 / MQ-9 Field (Capability Improvement)		B		- / 24.124	- / 1.604	- / 0.000	- / -	- / -	- / 359.315
P-3a	9154 / Lynx SAR (Capability Improvement)		B		- / 0.000	- / 0.000	- / 0.000	- / -	- / -	- / 112.009
P-3a	9155 / GCS Blk 30 (Capability Improvement)		B		- / 6.842	- / 0.000	- / 0.000	- / 0.000	- / -	- / 172.146
P-3a	9159 / R&M enhancements (Reliability & Maintainability)		B		- / 8.051	- / 10.030	- / 19.168	- / 0.000	- / 19.586	- / 133.122
P-3a	9164 / Extended Range MQ-9 (Capability Improvement)		B		- / 44.558	- / 23.778	- / 5.177	- / 0.000	- / 0.000	- / 404.386
P-3a	9167 / MQ-9 Upgrade (Capability Improvement)		B		- / 102.097	- / 122.186	- / 103.968	- / 11.897	- / 357.100	- / 1,236.099
P-3a	1 / MQ-9 Low Cost Mods (Reliability & Maintainability)		B		- / 2.000	- / 2.000	- / 2.000	- / 0.000	- / 2.000	- / 24.020
P-40	**Total Gross/Weapon System Cost**				**- / 188.646**	**- / 161.273**	**- / 164.610**	**- / 11.897**	**- / 528.558**	**- / 2,718.235**

*** Although this is an Exhibit P-40a item, the actual exhibit is not included since all of the required information for this item is already being shown here.

*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:
Where applicable, justification for individual modifications is provided in the P-3A exhibits.

Exhibit P-3a, Individual Modification: PB 2020 Air Force		Date: February 2019
Appropriation / Budget Activity / Budget Sub Activity: 3010F / 05 / 5	**P-1 Line Item Number / Title:** PRDTB2 / MQ-9 Mods	**Modification Number / Title:** 9151 / Block 5
ID Code (A=Service Ready, B=Not Service Ready) : B	**MDAP/MAIS Code:**	

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 *(Units in Each)*	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost *($ in Millions)*	73.247	1.505	13.711	1.757	0.000	1.757	0.874	1.575	7.504	0.000	4.984	105.157
Less PY Advance Procurement *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) *($ in Millions)*	73.247	1.505	13.711	1.757	0.000	1.757	0.874	1.575	7.504	0.000	4.984	105.157
Plus CY Advance Procurement *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Total Obligation Authority *($ in Millions)*	**73.247**	**1.505**	**13.711**	**1.757**	**0.000**	**1.757**	**0.874**	**1.575**	**7.504**	**0.000**	**4.984**	**105.157**
(The following Resource Summary rows are for informational purposes only. The corresponding budget requests are documented elsewhere.)												
Initial Spares *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Unit Cost *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-

Description:

This modification program includes 2 overarching projects:

Will upgrade all MQ-9 Block 1 aircraft and Block 15 Ground Control Station (GCS) with National Security Administration (NSA) Type 1 Encryption. This will include but not be limited to upgrading the secure communications for our aircraft.

The second project adding new capability into the MQ-9 Block 5 configuration. Specifically, the first effort ("Block 5 Modification Project 2) includes, but is not limited to: Vortex Block 5. Release 1 is covered under the "Block 5 modification program, the program office will modify 156 Block 5 aircraft.

Requirements for this modification are validated in the MQ-9 Capability Production Document dated 8 August 2006.

This program will revise quantities based on updated user requirements and as funding permits. Funding may be used to address Diminishing Manufacturing Sources (DMS) and Non-Recurring Engineering (NRE) issues.

Milestone/Development Status

MQ-9 Block 5 Critical Design Review (CDR) completed April 2011. Developmental Test was completed July 2015. FOT&E completed December 2016.

Exhibit P-3a, Individual Modification: PB 2020 Air Force		Date: February 2019
Appropriation / Budget Activity / Budget Sub Activity: 3010F / 05 / 5	**P-1 Line Item Number / Title:** PRDTB2 / MQ-9 Mods	**Modification Number / Title:** 9151 / Block 5
ID Code (A=Service Ready, B=Not Service Ready) : B	**MDAP/MAIS Code:**	
Models of Systems Affected: MQ-9	**Modification Type:** Capability Improvement	**Related RDT&E PEs:** 0205219F

Financial Plan	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
	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)*
RDT&E PE #												
0205219F	- / 1,235.423	- / 204.221	- / 194.746	- / 185.807	- / -	- / 185.807	- / 177.999	- / 169.807	- / -	- / -	- / -	- / 2,168.003
Procurement												
Modification Item 1 of 2: Blk 1 to Blk 5												
B Kits												
Recurring												
Blk 1 to Blk 5:EQUIPMENT Group B (Active)	- / -	- / -	- / -	14 / 0.057	- / -	14 / 0.057	14 / 0.590	36 / 0.891	48 / 2.124	- / -	48 / 3.100	160 / 6.762
Subtotal: Recurring	*- / -*	*- / -*	*- / -*	*- / 0.057*	*- / -*	*- / 0.057*	*- / 0.590*	*- / 0.891*	*- / 2.124*	*- / -*	*- / 3.100*	*- / 6.762*
Subtotal: Blk 1 to Blk 5	*- / -*	*- / -*	*- / -*	*- / 0.057*	*- / -*	*- / 0.057*	*- / 0.590*	*- / 0.891*	*- / 2.124*	*- / -*	*- / 3.100*	*- / 6.762*
Modification Item 2 of 2: Hybrid Release 1												
A Kits												
Recurring												
Hybrid Release 1:INSTALL KITS Group A (Active)	62 / 2.373	48 / 0.110	46 / 0.970	- / 0.513	- / -	- / 0.513	- / 0.070	- / 0.099	- / 0.226	- / -	- / -	156 / 4.361
Subtotal: Recurring	*- / 2.373*	*- / 0.110*	*- / 0.970*	*- / 0.513*	*- / -*	*- / 0.513*	*- / 0.070*	*- / 0.099*	*- / 0.226*	*- / -*	*- / -*	*- / 4.361*
B Kits												
Recurring												
Hybrid Release 1:EQUIPMENT Group B (Active)	62 / 10.304	48 / 0.980	46 / 11.100	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	156 / 22.384
Subtotal: Recurring	*- / 10.304*	*- / 0.980*	*- / 11.100*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / 22.384*
Subtotal: Hybrid Release 1	*- / 12.677*	*- / 1.090*	*- / 12.070*	*- / 0.513*	*- / -*	*- / 0.513*	*- / 0.070*	*- / 0.099*	*- / 0.226*	*- / -*	*- / -*	*- / 26.745*
Subtotal: Procurement, All Modification Items	*- / 12.677*	*- / 1.090*	*- / 12.070*	*- / 0.570*	*- / -*	*- / 0.570*	*- / 0.660*	*- / 0.990*	*- / 2.350*	*- / -*	*- / 3.100*	*- / 33.507*
Support *(All Modification Items)*												
OTHER GOVT	- / 59.290	- / 0.415	- / 1.531	- / 0.147	- / -	- / 0.147	- / 0.104	- / 0.395	- / 4.294	- / -	- / 1.344	- / 67.520
Subtotal: Support	*- / 59.290*	*- / 0.415*	*- / 1.531*	*- / 0.147*	*- / -*	*- / 0.147*	*- / 0.104*	*- / 0.395*	*- / 4.294*	*- / -*	*- / 1.344*	*- / 67.520*
Installation												
Modification Item 1 of 2: Blk 1 to Blk 5	- / -	- / -	- / -	14 / 1.040	- / -	14 / 1.040	14 / 0.110	36 / 0.190	48 / 0.860	- / -	48 / 0.540	160 / 2.740
Modification Item 2 of 2: Hybrid Release 1	14 / 1.280	12 / 0.000	48 / 0.110	48 / 0.000	- / -	48 / 0.000	34 / 0.000	- / -	- / -	- / -	- / -	156 / 1.390
Subtotal: Installation	*14 / 1.280*	*12 / -*	*48 / 0.110*	*62 / 1.040*	*- / -*	*62 / 1.040*	*48 / 0.110*	*36 / 0.190*	*48 / 0.860*	*- / -*	*48 / 0.540*	*316 / 4.130*
Total												
Total Cost (Procurement + Support + Installation)	**73.247**	**1.505**	**13.711**	**1.757**	**0.000**	**1.757**	**0.874**	**1.575**	**7.504**	**0.000**	**4.984**	**105.157**

Exhibit P-3a, Individual Modification: PB 2020 Air Force		Date: February 2019
Appropriation / Budget Activity / Budget Sub Activity: 3010F / 05 / 5	**P-1 Line Item Number / Title:** PRDTB2 / MQ-9 Mods	**Modification Number / Title:** 9151 / Block 5
ID Code (A=Service Ready, B=Not Service Ready) : B	**MDAP/MAIS Code:**	

Modification Item 1 of 2: Blk 1 to Blk 5

Manufacturer Information

Manufacturer Name: General Atomics ASI	Manufacturer Location: Poway, CA
Administrative Leadtime *(in Months)*: 1	Production Leadtime *(in Months)*: 6

Dates	FY 2018	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024
Contract Dates	Jun 2018	Jan 2019	Nov 2019	Jan 2021	Jan 2022	Jan 2023	
Delivery Dates	Dec 2018	Jul 2019	May 2020	Jul 2021	Jul 2022	Jul 2023	

Installation Information

Method of Implementation: Depot

Installation Cost	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
	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)*
Prior Years	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2018	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2019	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2020	- / -	- / -	- / -	14 / 1.040	- / -	14 / 1.040	- / -	- / -	- / -	- / -	- / -	14 / 1.040
FY 2021	- / -	- / -	- / -	- / -	- / -	- / -	14 / 0.110	- / -	- / -	- / -	- / -	14 / 0.110
FY 2022	- / -	- / -	- / -	- / -	- / -	- / -	- / -	36 / 0.190	- / -	- / -	- / -	36 / 0.190
FY 2023	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	48 / 0.860	- / -	- / -	48 / 0.860
FY 2024	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
To Complete	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	48 / 0.540	48 / 0.540
Total	- / -	- / -	- / -	14 / 1.040	- / -	14 / 1.040	14 / 0.110	36 / 0.190	48 / 0.860	- / -	48 / 0.540	160 / 2.740

Installation Schedule

	PYS	FY 2018				FY 2019				FY 2020				FY 2021				FY 2022				FY 2023				FY 2024				TC	Tot
		Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4		
In	0	-	-	-	-	-	-	-	-	-	4	5	5	3	3	4	4	9	9	9	9	12	12	12	12	-	-	-	-	48	160
Out	0	-	-	-	-	-	-	-	-	-	4	5	5	3	3	4	4	9	9	9	9	12	12	12	12	-	-	-	-	48	160

Exhibit P-3a, Individual Modification: PB 2020 Air Force		Date: February 2019
Appropriation / Budget Activity / Budget Sub Activity: 3010F / 05 / 5	**P-1 Line Item Number / Title:** PRDTB2 / MQ-9 Mods	**Modification Number / Title:** 9151 / Block 5

ID Code (A=Service Ready, B=Not Service Ready) : B | **MDAP/MAIS Code:**

Modification Item 2 of 2: Hybrid Release 1

Manufacturer Information

Manufacturer Name: General Atomics ASI | Manufacturer Location: Poway, CA

Administrative Leadtime *(in Months)*: 8 | Production Leadtime *(in Months)*: 6

Dates	FY 2018	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024
Contract Dates	Jun 2018	Jun 2019	Jun 2020	Jun 2021	Jun 2022	Jun 2023	
Delivery Dates	Dec 2018	Dec 2019	Dec 2020	Dec 2021	Dec 2022	Dec 2023	

Installation Information

Method of Implementation: Depot

Installation Cost	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
	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)*
Prior Years	14 / 1.280	12 / 0.000	36 / 0.000	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	62 / 1.280
FY 2018	- / -	- / -	12 / 0.110	36 / 0.000	- / -	36 / 0.000	- / -	- / -	- / -	- / -	- / -	48 / 0.110
FY 2019	- / -	- / -	- / -	12 / 0.000	- / -	12 / 0.000	34 / 0.000	- / -	- / -	- / -	- / -	46 / 0.000
FY 2020	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2021	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2022	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2023	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2024	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
To Complete	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
Total	14 / 1.280	12 / 0.000	48 / 0.110	48 / 0.000	- / -	48 / 0.000	34 / 0.000	- / -	- / -	- / -	- / -	156 / 1.390

Installation Schedule

	PYS	FY 2018				FY 2019				FY 2020				FY 2021				FY 2022				FY 2023				FY 2024				TC	Tot
		Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4		
In	14	-	-	-	12	12	12	12	12	12	12	12	12	12	12	10	-	-	-	-	-	-	-	-	-	-	-	-	-	0	156
Out	14	-	-	-	12	12	12	12	12	12	12	12	12	12	12	10	-	-	-	-	-	-	-	-	-	-	-	-	-	0	156

Exhibit P-3a, Individual Modification: PB 2020 Air Force		Date: February 2019
Appropriation / Budget Activity / Budget Sub Activity: 3010F / 05 / 5	**P-1 Line Item Number / Title:** PRDTB2 / MQ-9 Mods	**Modification Number / Title:** 9152 / MQ-9 Field
ID Code (A=Service Ready, B=Not Service Ready) : B	**MDAP/MAIS Code:**	

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 *(Units in Each)*	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost *($ in Millions)*	204.472	40.027	49.163	39.925	0.000	39.925	24.124	1.604	0.000	-	-	359.315
Less PY Advance Procurement *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) *($ in Millions)*	204.472	40.027	49.163	39.925	0.000	39.925	24.124	1.604	0.000	-	-	359.315
Plus CY Advance Procurement *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Total Obligation Authority *($ in Millions)*	**204.472**	**40.027**	**49.163**	**39.925**	**0.000**	**39.925**	**24.124**	**1.604**	**0.000**	**-**	**-**	**359.315**
(The following Resource Summary rows are for informational purposes only. The corresponding budget requests are documented elsewhere.)												
Initial Spares *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Unit Cost *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-

Description:

This modification is a portion of the field retrofit program that upgrades MQ-9 aircraft with enhanced capabilities and utilizes a field team to perform the modification. Upgrades that are part of this modification, include but are not limited to, include High Definition (HD) aircraft upgrades, Bomb Release Units (BRU)-71 bomb racks, Heavyweight Main Landing Gear (HMLG), VORTEX encrypted datalink, Stores Management System (SMS), Selective Availability Anti-Spoofing Module (SAASM), Cast sump, fuel bladders, Barrett Asymmetric Digital Data Link Computers (BADDC), Beyond Line of Site (BLOS), Global Positioning System (GPS) splitter, and use of Retrofit facility space. The associated costs reflect all costs associated with the multiple elements of the MQ-9 field retrofits.

The quantity of aircraft for each modification varies depending on when the capability was cut into production. This program will revise quantities based on updated user requirements and as funding permits. Funding may be used to address Diminishing Manufacturing Sources (DMS) and Non-Recurring Engineering (NRE) issues.

FY19 activities include but not limited to:
- Installs of 16 Heavy Weight Main Landing Gear Kits
- Modification/Installation of 49 Cast Sump/Fuel Bladders
- Modification/Installation of 36 Blk 1 BADDC (aircraft)
- Modification/Installation of 36 Blk 1 BADDC Ground Control Station (GCS)
- Modification/Installation of 36 Blk 1 BLOS/GPS Splitter

Milestone/Development Status

Development complete.

Exhibit P-3a, Individual Modification: PB 2020 Air Force		Date: February 2019
Appropriation / Budget Activity / Budget Sub Activity: 3010F / 05 / 5	**P-1 Line Item Number / Title:** PRDTB2 / MQ-9 Mods	**Modification Number / Title:** 9152 / MQ-9 Field
ID Code (A=Service Ready, B=Not Service Ready) : B	**MDAP/MAIS Code:**	
Models of Systems Affected: MQ-9	**Modification Type:** Capability Improvement	**Related RDT&E PEs:** 0205219F

Financial Plan	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
	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)*
RDT&E PE #												
0205219F	- / 1,235.423	- / 204.221	- / 194.746	- / 185.807	- / -	- / 185.807	- / 177.999	- / 169.807	- / -	- / -	- / -	- / 2,168.003
Procurement												
Modification Item 1 of 1: MQ-9 Field Mods												
A Kits												
Recurring												
MQ-9 Field Mods:INSTALL KITS Group A (Active)	424 / 19.001	147 / 2.772	120 / 4.265	108 / 3.500	- / -	108 / 3.500	18 / 1.924	- / -	- / -	- / -	- / -	817 / 31.462
Subtotal: Recurring	*- / 19.001*	*- / 2.772*	*- / 4.265*	*- / 3.500*	*- / -*	*- / 3.500*	*- / 1.924*	*- / -*	*- / -*	*- / -*	*- / -*	*- / 31.462*
B Kits												
Recurring												
MQ-9 Field Mods:EQUIPMENT Group B (Active)	424 / 167.884	147 / 24.822	120 / 38.445	108 / 32.005	- / -	108 / 32.005	18 / 18.148	- / -	- / -	- / -	- / -	817 / 281.304
Subtotal: Recurring	*- / 167.884*	*- / 24.822*	*- / 38.445*	*- / 32.005*	*- / -*	*- / 32.005*	*- / 18.148*	*- / -*	*- / -*	*- / -*	*- / -*	*- / 281.304*
Subtotal: MQ-9 Field Mods	*- / 186.885*	*- / 27.594*	*- / 42.710*	*- / 35.505*	*- / -*	*- / 35.505*	*- / 20.072*	*- / -*	*- / -*	*- / -*	*- / -*	*- / 312.766*
Subtotal: Procurement, All Modification Items	*- / 186.885*	*- / 27.594*	*- / 42.710*	*- / 35.505*	*- / -*	*- / 35.505*	*- / 20.072*	*- / -*	*- / -*	*- / -*	*- / -*	*- / 312.766*
Support *(All Modification Items)*												
OTHER GOVT	- / 6.586	- / 11.061	- / 5.503	- / 3.209	- / -	- / 3.209	- / 2.761	- / 0.000	- / -	- / -	- / -	- / 29.120
Subtotal: Support	*- / 6.586*	*- / 11.061*	*- / 5.503*	*- / 3.209*	*- / -*	*- / 3.209*	*- / 2.761*	*- / 0.000*	*- / -*	*- / -*	*- / -*	*- / 29.120*
Installation												
Modification Item 1 of 1: MQ-9 Field Mods	302 / 11.001	122 / 1.372	120 / 0.950	120 / 1.211	- / -	120 / 1.211	120 / 1.291	33 / 1.604	- / -	- / -	- / -	817 / 17.429
Subtotal: Installation	*302 / 11.001*	*122 / 1.372*	*120 / 0.950*	*120 / 1.211*	*- / -*	*120 / 1.211*	*120 / 1.291*	*33 / 1.604*	*- / -*	*- / -*	*- / -*	*817 / 17.429*
Total												
Total Cost (Procurement + Support + Installation)	**204.472**	**40.027**	**49.163**	**39.925**	**0.000**	**39.925**	**24.124**	**1.604**	**0.000**	**-**	**-**	**359.315**

Exhibit P-3a, Individual Modification: PB 2020 Air Force		Date: February 2019
Appropriation / Budget Activity / Budget Sub Activity: 3010F / 05 / 5	**P-1 Line Item Number / Title:** PRDTB2 / MQ-9 Mods	**Modification Number / Title:** 9152 / MQ-9 Field
ID Code (A=Service Ready, B=Not Service Ready) : B	**MDAP/MAIS Code:**	

Modification Item 1 of 1: MQ-9 Field Mods

Manufacturer Information

Manufacturer Name: General Atomics-ASI	Manufacturer Location: Poway, CA
Administrative Leadtime *(in Months)*: 8	Production Leadtime *(in Months)*: 12

Dates	FY 2018	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024
Contract Dates	Jun 2018	Jun 2019	Jun 2020	Jun 2021			
Delivery Dates	Jun 2019	Jun 2020	Jun 2021	Jun 2022			

Installation Information

Method of Implementation: Depot Field Team

Installation Cost	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
	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)*
Prior Years	302 / 11.001	122 / 1.372	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	424 / 12.373
FY 2018	- / -	- / -	120 / 0.950	27 / 0.000	- / -	27 / 0.000	- / -	- / -	- / -	- / -	- / -	147 / 0.950
FY 2019	- / -	- / -	- / -	93 / 1.211	- / -	93 / 1.211	27 / 0.000	- / -	- / -	- / -	- / -	120 / 1.211
FY 2020	- / -	- / -	- / -	- / -	- / -	- / -	93 / 1.291	15 / 0.000	- / -	- / -	- / -	108 / 1.291
FY 2021	- / -	- / -	- / -	- / -	- / -	- / -	- / -	18 / 1.604	- / -	- / -	- / -	18 / 1.604
FY 2022	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2023	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2024	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
To Complete	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
Total	302 / 11.001	122 / 1.372	120 / 0.950	120 / 1.211	- / -	120 / 1.211	120 / 1.291	33 / 1.604	- / -	- / -	- / -	817 / 17.429

Installation Schedule

		FY 2018				FY 2019				FY 2020				FY 2021				FY 2022				FY 2023				FY 2024					
	PYS	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	TC	Tot
In	302	30	31	30	31	30	30	30	30	30	30	30	30	30	30	30	30	18	15	-	-	-	-	-	-	-	-	-	-	0	817
Out	302	0	30	31	30	31	30	30	30	30	30	30	30	30	30	30	30	30	18	15	-	-	-	-	-	-	-	-	-	0	817

Exhibit P-3a, Individual Modification: PB 2020 Air Force		Date: February 2019
Appropriation / Budget Activity / Budget Sub Activity: 3010F / 05 / 5	**P-1 Line Item Number / Title:** PRDTB2 / MQ-9 Mods	**Modification Number / Title:** 9154 / Lynx SAR
ID Code (A=Service Ready, B=Not Service Ready) : B	**MDAP/MAIS Code:**	

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 *(Units in Each)*	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost *($ in Millions)*	82.482	13.655	14.776	1.096	0.000	1.096	0.000	0.000	0.000	-	-	112.009
Less PY Advance Procurement *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) *($ in Millions)*	82.482	13.655	14.776	1.096	0.000	1.096	0.000	0.000	0.000	-	-	112.009
Plus CY Advance Procurement *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Total Obligation Authority *($ in Millions)*	**82.482**	**13.655**	**14.776**	**1.096**	**0.000**	**1.096**	**0.000**	**0.000**	**0.000**	**-**	**-**	**112.009**
(The following Resource Summary rows are for informational purposes only. The corresponding budget requests are documented elsewhere.)												
Initial Spares *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Unit Cost *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-

Description:

The Lynx Block 20A Synthetic Aperture Radar (SAR) began production in July 2012. This effort will retrofit the 110 MQ-9 aircraft still equipped with the older Lynx Block 20 SAR with the current production configuration (LNXD22000-003-000) of the Lynx Block 20A. This effort also will retrofit/upgrade the Lynx Block 20A SAR produced in the earlier LNXD22000-001 and LNXD22000-002 configurations to the current production configuration. Retrofitting all Lynx radars to the current production configuration of the Lynx Block 20A SAR will enhance fielded capability, significantly improve reliability and maintainability, provide the capability to locate and track dismounted targets, use of retrofit facility space, resolve Diminishing Manufacturing Sources (DMS) issues with the fielded radars, address security concerns, and facilitate future growth of capabilities.

The requirement for this modification is validated in the MQ-9 Capabilities Production Document dated 8 August 2006.

This program supports all efforts to field the Lynx Block 20A SAR capability.

This program will revise quantities based on updated user requirements and as funding permits. Funding may be used to address DMS and Non-Recurring Engineering (NRE) issues.

Replacement of the Lynx Block 20 SAR is the cost driver in this modification; hence, the 110 Lynx Block 20A SARs produced for that purpose are what is shown in the schedule section of the P-3A.

Milestone/Development Status

The Lynx Block 20A SAR has completed initial development. It began production in July 2012 and was initially fielded on MQ-9 tail number AF4125 delivered 22 March 2013.

Exhibit P-3a, Individual Modification: PB 2020 Air Force		Date: February 2019
Appropriation / Budget Activity / Budget Sub Activity: 3010F / 05 / 5	**P-1 Line Item Number / Title:** PRDTB2 / MQ-9 Mods	**Modification Number / Title:** 9154 / Lynx SAR
ID Code (A=Service Ready, B=Not Service Ready) : B	**MDAP/MAIS Code:**	
Models of Systems Affected: MQ-9	**Modification Type:** Capability Improvement	**Related RDT&E PEs:** 0205219F

Financial Plan	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
	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)*
RDT&E PE #												
0205219F	- / 417.595	- / 204.221	- / 194.746	- / 185.807	- / -	- / 185.807	- / 177.999	- / 169.807	- / -	- / -	- / -	- / 1,350.175
Procurement												
Modification Item 1 of 1: Lynx SAR												
A Kits												
Recurring												
Lynx SAR:INSTALL KITS Group A (Active)	60 / 9.228	16 / 0.990	14 / 1.312	- / 1.008	- / -	- / 1.008	- / -	- / -	- / -	- / -	- / -	90 / 12.538
Subtotal: Recurring	*- / 9.228*	*- / 0.990*	*- / 1.312*	*- / 1.008*	*- / -*	*- / 1.008*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / 12.538*
B Kits												
Recurring												
Lynx SAR:EQUIPMENT Group B (Active)	60 / 70.380	16 / 8.892	14 / 11.810	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	90 / 91.082
Subtotal: Recurring	*- / 70.380*	*- / 8.892*	*- / 11.810*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / 91.082*
Subtotal: Lynx SAR	*- / 79.608*	*- / 9.882*	*- / 13.122*	*- / 1.008*	*- / -*	*- / 1.008*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / 103.620*
Subtotal: Procurement, All Modification Items	*- / 79.608*	*- / 9.882*	*- / 13.122*	*- / 1.008*	*- / -*	*- / 1.008*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / 103.620*
Support *(All Modification Items)*												
OTHER GOVT	- / 2.874	- / 3.773	- / 1.654	- / 0.088	- / -	- / 0.088	- / -	- / -	- / -	- / -	- / -	- / 8.389
Subtotal: Support	*- / 2.874*	*- / 3.773*	*- / 1.654*	*- / 0.088*	*- / -*	*- / 0.088*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / 8.389*
Installation												
Subtotal: Installation	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*
Total												
Total Cost (Procurement + Support + Installation)	**82.482**	**13.655**	**14.776**	**1.096**	**0.000**	**1.096**	**0.000**	**0.000**	**0.000**	**-**	**-**	**112.009**

Exhibit P-3a, Individual Modification: PB 2020 Air Force		Date: February 2019
Appropriation / Budget Activity / Budget Sub Activity: 3010F / 05 / 5	**P-1 Line Item Number / Title:** PRDTB2 / MQ-9 Mods	**Modification Number / Title:** 9154 / Lynx SAR

ID Code (A=Service Ready, B=Not Service Ready) : B | **MDAP/MAIS Code:**

Modification Item 1 of 1: Lynx SAR

Manufacturer Information

Manufacturer Name: General Atomics-ASI | Manufacturer Location: Poway, CA

Administrative Leadtime *(in Months)*: 2 | Production Leadtime *(in Months)*: 12

Dates	FY 2018	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024
Contract Dates	Dec 2018	Dec 2019					
Delivery Dates	Dec 2019	Dec 2020					

Installation Information

Method of Implementation (Organic): Org/Intermediate | **Installation Quantity:** 90

Exhibit P-3a, Individual Modification: PB 2020 Air Force		Date: February 2019
Appropriation / Budget Activity / Budget Sub Activity: 3010F / 05 / 5	**P-1 Line Item Number / Title:** PRDTB2 / MQ-9 Mods	**Modification Number / Title:** 9155 / GCS Blk 30
ID Code (A=Service Ready, B=Not Service Ready) : B	**MDAP/MAIS Code:**	

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 *(Units in Each)*	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost *($ in Millions)*	103.667	18.205	20.842	22.590	0.000	22.590	6.842	0.000	0.000	0.000	-	172.146
Less PY Advance Procurement *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) *($ in Millions)*	103.667	18.205	20.842	22.590	0.000	22.590	6.842	0.000	0.000	0.000	-	172.146
Plus CY Advance Procurement *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Total Obligation Authority *($ in Millions)*	**103.667**	**18.205**	**20.842**	**22.590**	**0.000**	**22.590**	**6.842**	**0.000**	**0.000**	**0.000**	**-**	**172.146**
(The following Resource Summary rows are for informational purposes only. The corresponding budget requests are documented elsewhere.)												
Initial Spares *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Unit Cost *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-

Description:

The Ground Control Station (GCS) Block 30 modernization retrofit program upgrades Fixed and Mobile GCS with new Linux processors, high definition displays, ergonomic improvements, Predator Primary Data Link (PPDL), 2nd ARC-210 radio capabilities, and Barrett Asymmetric Digital Data Link Computers (BADDC). Through an incremental approach, GCS modernization retrofits the legacy system with user-prioritized capabilities, use of retrofit facility space, to include significant Human-Machine Interface (HMI) improvements and reliability and maintenance enhancements. Unit costs vary due to the mix of fixed and mobile retrofits, which have varying costs.

Requirement for this modification is validated in the MQ-9 Capability Production Document dated 8 August 2006.

This modification supports all efforts required to field the Block 30 GCS capability and will revise quantities based upon user requirements, GCS Availability, and available funding. Funding may be used to address Diminishing Manufacturing Sources (DMS) and Non-Recurring Engineering (NRE) issues. Funding may be used to update simulators to current configuration.

Milestone/Development Status

GCS Block 30 Critical Design Review completed Apr 2011.

Test and evaluation was completed June 2013. Operation test was completed September 2016.

Exhibit P-3a, Individual Modification: PB 2020 Air Force		Date: February 2019
Appropriation / Budget Activity / Budget Sub Activity: 3010F / 05 / 5	**P-1 Line Item Number / Title:** PRDTB2 / MQ-9 Mods	**Modification Number / Title:** 9155 / GCS Blk 30
ID Code (A=Service Ready, B=Not Service Ready) : B	**MDAP/MAIS Code:**	
Models of Systems Affected: MQ-9	**Modification Type:** Capability Improvement	**Related RDT&E PEs:** 0205219F

Financial Plan	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
	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)*
RDT&E PE #												
0205219F	- / 1,235.423	- / 204.221	- / 194.746	- / 185.807	- / -	- / 185.807	- / 177.999	- / 169.807	- / -	- / -	- / -	- / 2,168.003
Procurement												
Modification Item 1 of 1: GCS Block 30												
A Kits												
Recurring												
GCS Block 30:INSTALL KITS Group A (Active)	52 / 11.486	12 / 0.346	12 / 0.349	10 / 1.341	- / -	10 / 1.341	- / 0.606	- / -	- / -	- / -	- / -	86 / 14.128
Subtotal: Recurring	*- / 11.486*	*- / 0.346*	*- / 0.349*	*- / 1.341*	*- / -*	*- / 1.341*	*- / 0.606*	*- / -*	*- / -*	*- / -*	*- / -*	*- / 14.128*
B Kits												
Recurring												
GCS Block 30:EQUIPMENT Group B (Active)	52 / 47.449	12 / 6.646	12 / 6.712	10 / 13.440	- / -	10 / 13.440	- / 5.453	- / -	- / -	- / -	- / -	86 / 79.700
Subtotal: Recurring	*- / 47.449*	*- / 6.646*	*- / 6.712*	*- / 13.440*	*- / -*	*- / 13.440*	*- / 5.453*	*- / -*	*- / -*	*- / -*	*- / -*	*- / 79.700*
Subtotal: GCS Block 30	*- / 58.935*	*- / 6.992*	*- / 7.061*	*- / 14.781*	*- / -*	*- / 14.781*	*- / 6.059*	*- / -*	*- / -*	*- / -*	*- / -*	*- / 93.828*
Subtotal: Procurement, All Modification Items	*- / 58.935*	*- / 6.992*	*- / 7.061*	*- / 14.781*	*- / -*	*- / 14.781*	*- / 6.059*	*- / -*	*- / -*	*- / -*	*- / -*	*- / 93.828*
Support *(All Modification Items)*												
Change Orders	- / 1.210	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 1.210
OTHER GOVT	- / 6.912	- / 5.030	- / 2.333	- / 1.815	- / -	- / 1.815	- / 0.783	- / -	- / -	- / -	- / -	- / 16.873
Subtotal: Support	*- / 8.122*	*- / 5.030*	*- / 2.333*	*- / 1.815*	*- / -*	*- / 1.815*	*- / 0.783*	*- / -*	*- / -*	*- / -*	*- / -*	*- / 18.083*
Installation												
Modification Item 1 of 1: GCS Block 30	31 / 36.610	16 / 6.183	11 / 11.448	12 / 5.994	- / -	12 / 5.994	12 / 0.000	4 / 0.000	- / -	- / -	- / -	86 / 60.235
Subtotal: Installation	*31 / 36.610*	*16 / 6.183*	*11 / 11.448*	*12 / 5.994*	*- / -*	*12 / 5.994*	*12 / -*	*4 / -*	*- / -*	*- / -*	*- / -*	*86 / 60.235*
Total												
Total Cost (Procurement + Support + Installation)	**103.667**	**18.205**	**20.842**	**22.590**	**0.000**	**22.590**	**6.842**	**0.000**	**0.000**	**0.000**	**-**	**172.146**

Exhibit P-3a, Individual Modification: PB 2020 Air Force		Date: February 2019
Appropriation / Budget Activity / Budget Sub Activity: 3010F / 05 / 5	**P-1 Line Item Number / Title:** PRDTB2 / MQ-9 Mods	**Modification Number / Title:** 9155 / GCS Blk 30
ID Code (A=Service Ready, B=Not Service Ready) : B	**MDAP/MAIS Code:**	

Modification Item 1 of 1: GCS Block 30

Manufacturer Information

Manufacturer Name: General Atomics-ASI	Manufacturer Location: Poway, CA
Administrative Leadtime *(in Months)*: 2	Production Leadtime *(in Months)*: 3

Dates	FY 2018	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024
Contract Dates	Dec 2017	Dec 2018	Dec 2019				
Delivery Dates	Mar 2018	Mar 2019	Mar 2020				

Installation Information

Method of Implementation: Depot Field Team

Installation Cost	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
	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)*
Prior Years	31 / 36.610	16 / 0.000	5 / 0.000	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	52 / 36.610
FY 2018	- / -	0 / 6.183	6 / 0.000	6 / 0.000	- / -	6 / 0.000	- / -	- / -	- / -	- / -	- / -	12 / 6.183
FY 2019	- / -	- / -	0 / 11.448	6 / 5.994	- / -	6 / 5.994	6 / 0.000	- / -	- / -	- / -	- / -	12 / 17.442
FY 2020	- / -	- / -	- / -	- / -	- / -	- / -	6 / 0.000	4 / 0.000	- / -	- / -	- / -	10 / 0.000
FY 2021	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2022	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2023	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2024	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
To Complete	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
Total	31 / 36.610	16 / 6.183	11 / 11.448	12 / 5.994	- / -	12 / 5.994	12 / 0.000	4 / 0.000	- / -	- / -	- / -	86 / 60.235

Installation Schedule

	PYS	FY 2018				FY 2019				FY 2020				FY 2021				FY 2022				FY 2023				FY 2024				TC	Tot
		Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4		
In	31	3	3	4	6	2	3	3	3	3	3	3	3	3	3	3	3	3	1	-	-	-	-	-	-	-	-	-	-	0	86
Out	27	3	3	3	4	4	3	4	3	3	3	3	3	3	3	3	3	3	3	2	-	-	-	-	-	-	-	-	-	0	86

Exhibit P-3a, Individual Modification: PB 2020 Air Force		Date: February 2019
Appropriation / Budget Activity / Budget Sub Activity: 3010F / 05 / 5	**P-1 Line Item Number / Title:** PRDTB2 / MQ-9 Mods	**Modification Number / Title:** 9159 / R&M enhancements
ID Code (A=Service Ready, B=Not Service Ready) : B	**MDAP/MAIS Code:**	

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 *(Units in Each)*	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost *($ in Millions)*	71.433	0.541	1.704	2.609	0.000	2.609	8.051	10.030	19.168	0.000	19.586	133.122
Less PY Advance Procurement *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) *($ in Millions)*	71.433	0.541	1.704	2.609	0.000	2.609	8.051	10.030	19.168	0.000	19.586	133.122
Plus CY Advance Procurement *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Total Obligation Authority *($ in Millions)*	**71.433**	**0.541**	**1.704**	**2.609**	**0.000**	**2.609**	**8.051**	**10.030**	**19.168**	**0.000**	**19.586**	**133.122**
(The following Resource Summary rows are for informational purposes only. The corresponding budget requests are documented elsewhere.)												
Initial Spares *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	2.080	2.080
Gross/Weapon System Unit Cost *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-

Description:

The purpose of this effort is to enable Reliability and Maintainability (R&M) modification for the MQ-9 aircraft, sensor payloads, Ground Control Station (GCS), and Simulators to improve component mean time between failure and maintenance action rate requirements driving down system sustainabilty cost over time. Current examples include, but are not limited to improved oil system sampling, new battery junction box, angle of attack probe, Ruggedized Aircraft Maintenance Test System (RAMTS), use of retrofit facility space, and improved power inverter. This effort address R&M issues identified by the Joint Reliability and Maintainability Evaluation Team (JRMET) and CAT I deficiency reports.

Requirement for this modification is validated in the MQ-9 Capability Production Document dated 8 August 2006. The quantity of aircraft for each Block 1 & Block 5 modification varies depending on when the capability was cut into production. The Electrical Safety Improvement Program (ESIP) modification will be modifying the remaining 167 Block 1 aircraft through FY18. ESIP Direct Drive Brushless Alternator (DDBA) costs are included in the R&M quantities as these are a current requirement to ensure the Reliability of the MQ-9 fleet. In FY18 and out, the R&M funding will be used to conduct other R&M modifications as required and quantities will vary based on funding and user requirements.

This program will revise quantities based on updated user requirements, Aircraft Availability, and as funding permits. Funding may be used to address Diminishing Manufacturing Sources (DMS) and Non-Recurring Engineering (NRE) issues.

Under this effort the Contractor will provide for the manufacture, installation, and acceptance test of reliability and maintainability modification on MQ-9 aircraft and ground based systems.

Milestone/Development Status

The MQ-9 program will continue to develop, test, and recommend reliability, maintainability, availability, sustainability, and safety enhancements and solutions for implementation on the MQ-9 platform and ground based systems in an effort to improve aircraft and payload availability and reduce lifecycle costs.

Exhibit P-3a, Individual Modification: PB 2020 Air Force		Date: February 2019
Appropriation / Budget Activity / Budget Sub Activity: 3010F / 05 / 5	**P-1 Line Item Number / Title:** PRDTB2 / MQ-9 Mods	**Modification Number / Title:** 9159 / R&M enhancements
ID Code (A=Service Ready, B=Not Service Ready) : B	**MDAP/MAIS Code:**	
Models of Systems Affected: MQ-9	**Modification Type:** Reliability & Maintainability	**Related RDT&E PEs:** 0205219F

Financial Plan	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
	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)*
RDT&E PE #												
0205219F	- / 1,235.423	- / 204.221	- / 194.746	- / 185.807	- / -	- / 185.807	- / 177.999	- / 169.807	- / -	- / -	- / -	- / 2,168.003
Procurement												
Modification Item 1 of 1: R&M Enhancements												
A Kits												
Recurring												
R&M Enhancements:INSTALL KITS Group A (Active)	170 / 6.928	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	170 / 6.928
Subtotal: Recurring	*- / 6.928*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / 6.928*
B Kits												
Recurring												
R&M Enhancements:EQUIPMENT Group B (Active)	170 / 59.957	- / 0.389	- / 1.291	- / 2.371	- / -	- / 2.371	- / 6.979	- / 7.218	- / 7.467	- / -	- / 13.770	170 / 99.442
Subtotal: Recurring	*- / 59.957*	*- / 0.389*	*- / 1.291*	*- / 2.371*	*- / -*	*- / 2.371*	*- / 6.979*	*- / 7.218*	*- / 7.467*	*- / -*	*- / 13.770*	*- / 99.442*
Subtotal: R&M Enhancements	*- / 66.885*	*- / 0.389*	*- / 1.291*	*- / 2.371*	*- / -*	*- / 2.371*	*- / 6.979*	*- / 7.218*	*- / 7.467*	*- / -*	*- / 13.770*	*- / 106.370*
Subtotal: Procurement, All Modification Items	*- / 66.885*	*- / 0.389*	*- / 1.291*	*- / 2.371*	*- / -*	*- / 2.371*	*- / 6.979*	*- / 7.218*	*- / 7.467*	*- / -*	*- / 13.770*	*- / 106.370*
Support *(All Modification Items)*												
OTHER GOVT	- / 4.548	- / 0.152	- / 0.413	- / 0.238	- / -	- / 0.238	- / 1.072	- / 2.812	- / 11.701	- / -	- / 5.816	- / 26.752
Subtotal: Support	*- / 4.548*	*- / 0.152*	*- / 0.413*	*- / 0.238*	*- / -*	*- / 0.238*	*- / 1.072*	*- / 2.812*	*- / 11.701*	*- / -*	*- / 5.816*	*- / 26.752*
Installation												
Subtotal: Installation	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*
Total												
Total Cost (Procurement + Support + Installation)	**71.433**	**0.541**	**1.704**	**2.609**	**0.000**	**2.609**	**8.051**	**10.030**	**19.168**	**0.000**	**19.586**	**133.122**

Exhibit P-3a, Individual Modification: PB 2020 Air Force		Date: February 2019
Appropriation / Budget Activity / Budget Sub Activity: 3010F / 05 / 5	**P-1 Line Item Number / Title:** PRDTB2 / MQ-9 Mods	**Modification Number / Title:** 9159 / R&M enhancements
ID Code (A=Service Ready, B=Not Service Ready) : B	**MDAP/MAIS Code:**	

Modification Item 1 of 1: R&M Enhancements

Manufacturer Information

Manufacturer Name: General Atomics ASI	Manufacturer Location: Poway CA
Administrative Leadtime *(in Months)*: 2	Production Leadtime *(in Months)*: 12

Dates	FY 2018	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024
Contract Dates							
Delivery Dates							

Installation Information

Method of Implementation (Organic): Org/Intermediate	**Installation Quantity:** 170

Exhibit P-3a, Individual Modification: PB 2020 Air Force		Date: February 2019
Appropriation / Budget Activity / Budget Sub Activity: 3010F / 05 / 5	**P-1 Line Item Number / Title:** PRDTB2 / MQ-9 Mods	**Modification Number / Title:** 9164 / Extended Range MQ-9
ID Code (A=Service Ready, B=Not Service Ready) : B	**MDAP/MAIS Code:**	

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 *(Units in Each)*	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost *($ in Millions)*	176.514	67.159	53.531	33.669	0.000	33.669	44.558	23.778	5.177	0.000	0.000	404.386
Less PY Advance Procurement *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) *($ in Millions)*	176.514	67.159	53.531	33.669	0.000	33.669	44.558	23.778	5.177	0.000	0.000	404.386
Plus CY Advance Procurement *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Total Obligation Authority *($ in Millions)*	**176.514**	**67.159**	**53.531**	**33.669**	**0.000**	**33.669**	**44.558**	**23.778**	**5.177**	**0.000**	**0.000**	**404.386**
(The following Resource Summary rows are for informational purposes only. The corresponding budget requests are documented elsewhere.)												
Initial Spares *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Unit Cost *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-

Description:

This program adds Extended Range (ER) capability to the MQ-9 aircraft. Candidate aircraft modifications include, but are not limited to, external fuel tanks with shipping containers, 4-bladed propeller with shipping containers, engine modifications, fuel system modifications, use of retrofit facility space, and software modifications. Current plan is to modify all MQ-9 aircraft to the ER configuration. This program will revise quantities based on updated user requirements and as funding permits. Funding may be used to address Diminishing Manufacturing Sources (DMS) and Non-Recurring Engineering (NRE) issues.

The ER modification will be modifying 165 Block 1 aircraft and 136 Block 5 aircraft per the users identified requirements. Overseas Contingency Operations (OCO) funded modifications will have the installations paid for at contract award, but installations will not occur until kits begin to deliver. All other program office installations will be paid for in the year the installations actually occur.

Requirement for this modification was validated by the Chairman of the Joint Chiefs of Staff in conjunction with the Warfighter Senior Integration Group in response to an Urgent Operational Need.

Milestone/Development Status

The Air Force delivered 44 modified Block 1 ER aircraft by July 2016 to meet a Joint Urgent Operational Need (JUON). The remaining Block 1 aircraft are programmed to be modified to the ER configuration. All Block 5 aircraft are programmed to be modified to the ER configuration.

Exhibit P-3a, Individual Modification: PB 2020 Air Force		Date: February 2019
Appropriation / Budget Activity / Budget Sub Activity: 3010F / 05 / 5	**P-1 Line Item Number / Title:** PRDTB2 / MQ-9 Mods	**Modification Number / Title:** 9164 / Extended Range MQ-9
ID Code (A=Service Ready, B=Not Service Ready) : B	**MDAP/MAIS Code:**	
Models of Systems Affected: MQ-9	**Modification Type:** Capability Improvement	**Related RDT&E PEs:** 0205219F

Financial Plan	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
	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)*
RDT&E PE #												
0205219F	- / 1,235.423	- / 204.221	- / 194.746	- / 185.807	- / -	- / 185.807	- / 177.999	- / 169.807	- / -	- / -	- / -	- / 2,168.003
Procurement												
Modification Item 1 of 1: Extended Range MQ-9												
A Kits												
Recurring												
Extended Range MQ-9:INSTALL KITS Group A (Active)	130 / 14.235	58 / 4.403	43 / 4.252	26 / 2.150	- / -	26 / 2.150	36 / 3.109	10 / 0.849	- / -	- / -	- / -	303 / 28.998
Subtotal: Recurring	*- / 14.235*	*- / 4.403*	*- / 4.252*	*- / 2.150*	*- / -*	*- / 2.150*	*- / 3.109*	*- / 0.849*	*- / -*	*- / -*	*- / -*	*- / 28.998*
B Kits												
Recurring												
Extended Range MQ-9:EQUIPMENT Group B (Active)	130 / 136.441	58 / 44.199	43 / 37.566	26 / 21.519	- / -	26 / 21.519	36 / 30.732	10 / 7.642	- / -	- / -	- / -	303 / 278.099
Subtotal: Recurring	*- / 136.441*	*- / 44.199*	*- / 37.566*	*- / 21.519*	*- / -*	*- / 21.519*	*- / 30.732*	*- / 7.642*	*- / -*	*- / -*	*- / -*	*- / 278.099*
Subtotal: Extended Range MQ-9	*- / 150.676*	*- / 48.602*	*- / 41.818*	*- / 23.669*	*- / -*	*- / 23.669*	*- / 33.841*	*- / 8.491*	*- / -*	*- / -*	*- / -*	*- / 307.097*
Subtotal: Procurement, All Modification Items	*- / 150.676*	*- / 48.602*	*- / 41.818*	*- / 23.669*	*- / -*	*- / 23.669*	*- / 33.841*	*- / 8.491*	*- / -*	*- / -*	*- / -*	*- / 307.097*
Support *(All Modification Items)*												
OTHER GOVT	- / 10.328	- / 18.557	- / 5.992	- / 2.706	- / -	- / 2.706	- / 5.100	- / 5.888	- / -	- / -	- / -	- / 48.571
Subtotal: Support	*- / 10.328*	*- / 18.557*	*- / 5.992*	*- / 2.706*	*- / -*	*- / 2.706*	*- / 5.100*	*- / 5.888*	*- / -*	*- / -*	*- / -*	*- / 48.571*
Installation												
Modification Item 1 of 1: Extended Range MQ-9	49 / 15.510	32 / 0.000	60 / 5.721	67 / 7.294	- / -	67 / 7.294	46 / 5.617	36 / 9.399	13 / 5.177	- / -	- / -	303 / 48.718
Subtotal: Installation	*49 / 15.510*	*32 / -*	*60 / 5.721*	*67 / 7.294*	*- / -*	*67 / 7.294*	*46 / 5.617*	*36 / 9.399*	*13 / 5.177*	*- / -*	*- / -*	*303 / 48.718*
Total												
Total Cost (Procurement + Support + Installation)	**176.514**	**67.159**	**53.531**	**33.669**	**0.000**	**33.669**	**44.558**	**23.778**	**5.177**	**0.000**	**0.000**	**404.386**

Exhibit P-3a, Individual Modification: PB 2020 Air Force		Date: February 2019
Appropriation / Budget Activity / Budget Sub Activity: 3010F / 05 / 5	**P-1 Line Item Number / Title:** PRDTB2 / MQ-9 Mods	**Modification Number / Title:** 9164 / Extended Range MQ-9

ID Code (A=Service Ready, B=Not Service Ready) : B

MDAP/MAIS Code:

Modification Item 1 of 1: Extended Range MQ-9

Manufacturer Information

Manufacturer Name: General Atomics - ASI

Manufacturer Location: Poway, CA

Administrative Leadtime *(in Months)*: 5

Production Leadtime *(in Months)*: 13

Dates	FY 2018	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024
Contract Dates	Mar 2018	Mar 2019	Mar 2020	Mar 2021	Mar 2022		
Delivery Dates	Apr 2019	Apr 2020	Apr 2021	Apr 2022	Apr 2023		

Installation Information

Method of Implementation: Depot

Installation Cost	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
	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)*
Prior Years	49 / 15.510	32 / 0.000	49 / 0.000	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	130 / 15.510
FY 2018	- / -	- / -	11 / 0.000	47 / 0.000	- / -	47 / 0.000	- / -	- / -	- / -	- / -	- / -	58 / 0.000
FY 2019	- / -	- / -	0 / 5.721	20 / 0.000	- / -	20 / 0.000	23 / 0.000	- / -	- / -	- / -	- / -	43 / 5.721
FY 2020	- / -	- / -	- / -	0 / 7.294	- / -	0 / 7.294	23 / 0.000	3 / 0.000	- / -	- / -	- / -	26 / 7.294
FY 2021	- / -	- / -	- / -	- / -	- / -	- / -	0 / 5.617	33 / 9.399	3 / 0.000	- / -	- / -	36 / 15.016
FY 2022	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	10 / 5.177	- / -	- / -	10 / 5.177
FY 2023	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2024	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
To Complete	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
Total	49 / 15.510	32 / 0.000	60 / 5.721	67 / 7.294	- / -	67 / 7.294	46 / 5.617	36 / 9.399	13 / 5.177	- / -	- / -	303 / 48.718

Installation Schedule

	PYS	FY 2018				FY 2019				FY 2020				FY 2021				FY 2022				FY 2023				FY 2024				TC	Tot
		Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4		
In	49	-	-	16	16	9	15	18	18	18	18	16	15	14	14	9	9	9	9	9	9	7	6	-	-	-	-	-	-	0	303
Out	49	-	-	16	16	9	9	15	18	18	18	18	16	15	14	14	9	9	9	9	9	9	4	-	-	-	-	-	-	0	303

Exhibit P-3a, Individual Modification: PB 2020 Air Force		Date: February 2019
Appropriation / Budget Activity / Budget Sub Activity: 3010F / 05 / 5	**P-1 Line Item Number / Title:** PRDTB2 / MQ-9 Mods	**Modification Number / Title:** 9167 / MQ-9 Upgrade
ID Code (A=Service Ready, B=Not Service Ready) : B	**MDAP/MAIS Code:**	

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 *(Units in Each)*	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost *($ in Millions)*	129.334	112.848	15.821	280.848	0.000	280.848	102.097	122.186	103.968	11.897	357.100	1,236.099
Less PY Advance Procurement *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) *($ in Millions)*	129.334	112.848	15.821	280.848	0.000	280.848	102.097	122.186	103.968	11.897	357.100	1,236.099
Plus CY Advance Procurement *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Total Obligation Authority *($ in Millions)*	**129.334**	**112.848**	**15.821**	**280.848**	**0.000**	**280.848**	**102.097**	**122.186**	**103.968**	**11.897**	**357.100**	**1,236.099**
(The following Resource Summary rows are for informational purposes only. The corresponding budget requests are documented elsewhere.)												
Initial Spares *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Unit Cost *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-

Description:

The MQ-9 Reaper Upgrade Program fields new capabilities in the MQ-9 fleet. This program integrates the approved MQ-9 Upgrade Agile Acquisition Strategy, the associated technology maturation efforts and fielding and sustainment of capabilities associated with Operational Flight Profile releases.

MQ-9 Unmanned Aircraft System retrofits those capabilities into the MQ-9 platform as required. Although the content of the OFP releases may change in response to changing mission requirements, at this time releases include, but are not limited to, adding high definition electro-optical/infra-red imagery with the DAS-4 sensor on the MQ-9 Block 5 fuselage, implementing VORTEX Phase II, replacing the Global Positioning System (GPS) with a differential GPS, implementing an Autonomous Systems upgrade, upgrading the datalinks to use the new Bandwidth Efficient Common Data Link (BE-CDL), and enhancing the Joint Direct Attack Munition (JDAM) Targeting capability. Due to the Agile Acquisition process, retrofit priorities will be determined and executed by Technology Maturation Effort (TME) maturity, Aircraft availability, and operational needs.

Requirement for this modification is validated in the MQ-9 Capability Production Document dated 8 August 2006.

This program will revise quantities based on updated user requirements and as funding permits. Funding may be used to address Diminishing Manufacturing Sources (DMS) and Non-Recurring Engineering (NRE) issues. There are no Group A costs as this is a Group B retrofit only for the DAS-4 Turret retrofits.

There are multiple capabilities (within each element of the P-3a) being added to the aircraft thus the quantities are overstated. Each element will be installed based upon fleet requirements to get to a baseline for that specific capability release.

The quantity of aircraft for each modification varies depending on when the capability was cut into production. For the DAS-4 retrofit, the program will modify 167 Block 1 and the remaining 68 Block 5 aircraft delivered without DAS-4. For the software release retrofits, the program will modify Block 5 aircraft as required.

Various components of the releases include, but are not limited to, the following: DAS-4 ,Technology
Insertion, VORTEX Ph II, BE-CDL, AH Cheeks, Differential GPS, Auto Takeoff and Landing Capabilities (ATLC), JDAM targeting, GCS Block 50 Tech refresh, flight payload separation.
In 2017, program 9167/MQ-9 Upgrade (Capability Improvement) was a new start.

FY18 OCO includes $56.4M for 26 DAS-4 upgrades.

Milestone/Development Status

Exhibit P-3a, Individual Modification: PB 2020 Air Force		Date: February 2019
Appropriation / Budget Activity / Budget Sub Activity: 3010F / 05 / 5	**P-1 Line Item Number / Title:** PRDTB2 / MQ-9 Mods	**Modification Number / Title:** 9167 / MQ-9 Upgrade
ID Code (A=Service Ready, B=Not Service Ready) : B	**MDAP/MAIS Code:**	

Development is ongoing for the Upgrade Program.

Exhibit P-3a, Individual Modification: PB 2020 Air Force		Date: February 2019
Appropriation / Budget Activity / Budget Sub Activity: 3010F / 05 / 5	P-1 Line Item Number / Title: PRDTB2 / MQ-9 Mods	Modification Number / Title: 9167 / MQ-9 Upgrade
ID Code (A=Service Ready, B=Not Service Ready) : B	MDAP/MAIS Code:	
Models of Systems Affected: MQ-9	Modification Type: Capability Improvement	Related RDT&E PEs: 0205219F

Financial Plan	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
	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)*
RDT&E PE #												
0205219F	- / 151.373	- / 204.221	- / 194.746	- / 185.807	- / -	- / 185.807	- / 177.999	- / 169.807	- / -	- / -	- / -	- / 1,083.953
Procurement												
Modification Item 1 of 2: DAS-4 EO/IR Sensor												
A Kits												
Recurring												
DAS-4 EO/IR Sensor:INSTALL KITS Group A (Active)	66 / 0.000	58 / 0.000	6 / 0.000	186 / 0.000	- / -	186 / 0.000	53 / 0.000	112 / 0.000	0 / 0.000	0 / 0.000	- / -	481 / 0.000
Subtotal: Recurring	*- / 0.000*	*- / 0.000*	*- / 0.000*	*- / 0.000*	*- / -*	*- / 0.000*	*- / 0.000*	*- / 0.000*	*- / 0.000*	*- / 0.000*	*- / -*	*- / 0.000*
B Kits												
Recurring												
DAS-4 EO/IR Sensor:EQUIPMENT Group B (Active)	66 / 125.990	58 / 109.549	6 / 12.504	186 / 246.209	- / -	186 / 246.209	53 / 52.751	112 / 51.550	- / -	- / -	- / -	481 / 598.553
Subtotal: Recurring	*- / 125.990*	*- / 109.549*	*- / 12.504*	*- / 246.209*	*- / -*	*- / 246.209*	*- / 52.751*	*- / 51.550*	*- / -*	*- / -*	*- / -*	*- / 598.553*
Subtotal: DAS-4 EO/IR Sensor	*- / 125.990*	*- / 109.549*	*- / 12.504*	*- / 246.209*	*- / -*	*- / 246.209*	*- / 52.751*	*- / 51.550*	*- / 0.000*	*- / 0.000*	*- / -*	*- / 598.553*
Modification Item 2 of 2: MQ-9 Upgrade												
A Kits												
Recurring												
MQ-9 Upgrade:INSTALL KITS Group A (Active)	- / -	- / -	- / -	- / -	- / -	- / -	14 / 2.165	48 / 6.883	48 / 5.567	48 / 11.897	- / -	158 / 26.512
Subtotal: Recurring	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / 2.165*	*- / 6.883*	*- / 5.567*	*- / 11.897*	*- / -*	*- / 26.512*
B Kits												
Recurring												
MQ-9 Upgrade:EQUIPMENT Group B (Active)	- / -	- / -	- / -	14 / 32.678	- / -	14 / 32.678	48 / 37.999	48 / 60.833	48 / 87.876	- / -	- / 357.100	158 / 576.486
Subtotal: Recurring	*- / -*	*- / -*	*- / -*	*- / 32.678*	*- / -*	*- / 32.678*	*- / 37.999*	*- / 60.833*	*- / 87.876*	*- / -*	*- / 357.100*	*- / 576.486*
Subtotal: MQ-9 Upgrade	*- / -*	*- / -*	*- / -*	*- / 32.678*	*- / -*	*- / 32.678*	*- / 40.164*	*- / 67.716*	*- / 93.443*	*- / 11.897*	*- / 357.100*	*- / 602.998*
Subtotal: Procurement, All Modification Items	*- / 125.990*	*- / 109.549*	*- / 12.504*	*- / 278.887*	*- / -*	*- / 278.887*	*- / 92.915*	*- / 119.266*	*- / 93.443*	*- / 11.897*	*- / 357.100*	*- / 1,201.551*
Support *(All Modification Items)*												
OTHER GOVT	- / 3.344	- / 3.299	- / 3.317	- / 1.961	- / -	- / 1.961	- / 1.132	- / 2.920	- / 2.956	- / -	- / -	- / 18.929
Subtotal: Support	*- / 3.344*	*- / 3.299*	*- / 3.317*	*- / 1.961*	*- / -*	*- / 1.961*	*- / 1.132*	*- / 2.920*	*- / 2.956*	*- / -*	*- / -*	*- / 18.929*
Installation												
Modification Item 2 of 2: MQ-9 Upgrade	- / -	- / -	- / -	- / -	- / -	- / -	1 / 8.050	13 / 0.000	48 / 7.569	48 / 0.000	48 / 0.000	158 / 15.619
Subtotal: Installation	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*1 / 8.050*	*13 / -*	*48 / 7.569*	*48 / 0.000*	*48 / 0.000*	*158 / 15.619*
Total												

Exhibit P-3a, Individual Modification: PB 2020 Air Force		Date: February 2019
Appropriation / Budget Activity / Budget Sub Activity: 3010F / 05 / 5	**P-1 Line Item Number / Title:** PRDTB2 / MQ-9 Mods	**Modification Number / Title:** 9167 / MQ-9 Upgrade
ID Code (A=Service Ready, B=Not Service Ready) : B	**MDAP/MAIS Code:**	
Models of Systems Affected: MQ-9	**Modification Type:** Capability Improvement	**Related RDT&E PEs:** 0205219F

Financial Plan	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
	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)*
Total Cost (Procurement + Support + Installation)	**129.334**	**112.848**	**15.821**	**280.848**	**0.000**	**280.848**	**102.097**	**122.186**	**103.968**	**11.897**	**357.100**	**1,236.099**

Exhibit P-3a, Individual Modification: PB 2020 Air Force		Date: February 2019
Appropriation / Budget Activity / Budget Sub Activity: 3010F / 05 / 5	**P-1 Line Item Number / Title:** PRDTB2 / MQ-9 Mods	**Modification Number / Title:** 9167 / MQ-9 Upgrade
ID Code (A=Service Ready, B=Not Service Ready) : B	**MDAP/MAIS Code:**	

Modification Item 1 of 2: DAS-4 EO/IR Sensor

Manufacturer Information

Manufacturer Name: Raytheon	Manufacturer Location: Poway, CA
Administrative Leadtime *(in Months)*: 5	Production Leadtime *(in Months)*: 10

Dates	FY 2018	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024
Contract Dates	Jan 2019	Jan 2020	Feb 2021	Feb 2022	Feb 2023	Feb 2024	Feb 2025
Delivery Dates	Nov 2019	Nov 2020	Dec 2021	Dec 2022	Dec 2023	Dec 2024	Dec 2025

Installation Information

Method of Implementation (Organic): Org/Intermediate	**Installation Quantity:** 481

Exhibit P-3a, Individual Modification: PB 2020 Air Force		Date: February 2019
Appropriation / Budget Activity / Budget Sub Activity: 3010F / 05 / 5	**P-1 Line Item Number / Title:** PRDTB2 / MQ-9 Mods	**Modification Number / Title:** 9167 / MQ-9 Upgrade
ID Code (A=Service Ready, B=Not Service Ready) : B	**MDAP/MAIS Code:**	

Modification Item 2 of 2: MQ-9 Upgrade

Manufacturer Information

Manufacturer Name: General Atomics, ASI	Manufacturer Location: Poway, CA
Administrative Leadtime *(in Months)*: 2	Production Leadtime *(in Months)*: 9

Dates	FY 2018	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024
Contract Dates	Jan 2018	Jan 2019	Dec 2019	Dec 2020	Jan 2022	Jan 2023	Jan 2024
Delivery Dates	Oct 2018	Oct 2019	Sep 2020	Sep 2021	Oct 2022	Oct 2023	Oct 2024

Installation Information

Method of Implementation: Depot

Installation Cost	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
	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)*
Prior Years	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2018	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2019	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2020	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2021	- / -	- / -	- / -	- / -	- / -	- / -	1 / 8.050	13 / 0.000	- / -	- / -	- / -	14 / 8.050
FY 2022	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	48 / 7.569	- / -	- / -	48 / 7.569
FY 2023	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	48 / 0.000	- / -	48 / 0.000
FY 2024	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	48 / 0.000	48 / 0.000
To Complete	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
Total	- / -	- / -	- / -	- / -	- / -	- / -	1 / 8.050	13 / 0.000	48 / 7.569	48 / 0.000	48 / 0.000	158 / 15.619

Installation Schedule

	PYS	FY 2018				FY 2019				FY 2020				FY 2021				FY 2022				FY 2023				FY 2024				TC	Tot
		Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4		
In	0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	2	3	4	4	12	12	12	12	12	12	12	12	48	158
Out	0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	2	3	4	4	12	12	12	12	12	12	12	12	48	158

Exhibit P-3a, Individual Modification: PB 2020 Air Force		Date: February 2019
Appropriation / Budget Activity / Budget Sub Activity: 3010F / 05 / 5	**P-1 Line Item Number / Title:** PRDTB2 / MQ-9 Mods	**Modification Number / Title:** 1 / MQ-9 Low Cost Mods
ID Code (A=Service Ready, B=Not Service Ready) : B	**MDAP/MAIS Code:**	

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 *(Units in Each)*	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost *($ in Millions)*	13.020	0.000	2.000	1.000	0.000	1.000	2.000	2.000	2.000	0.000	2.000	24.020
Less PY Advance Procurement *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) *($ in Millions)*	13.020	0.000	2.000	1.000	0.000	1.000	2.000	2.000	2.000	0.000	2.000	24.020
Plus CY Advance Procurement *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Total Obligation Authority *($ in Millions)*	**13.020**	**0.000**	**2.000**	**1.000**	**0.000**	**1.000**	**2.000**	**2.000**	**2.000**	**0.000**	**2.000**	**24.020**
(The following Resource Summary rows are for informational purposes only. The corresponding budget requests are documented elsewhere.)												
Initial Spares *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Unit Cost *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-

Description:

The purpose of this effort is to enable low cost modifications to be executed in a timely manner. This program will revise quantities based on updated user requirements and as funding permits. Funding may be used to address Diminishing Manufacturing Sources (DMS) and Non-Recurring Engineering (NRE) issues.

Note: Under this effort the contractor shall provide for the manufacture, installation, and acceptance test of low cost modifications onto MQ-9 aircraft and ground based systems.

Milestone/Development Status

On-going

Exhibit P-3a, Individual Modification: PB 2020 Air Force		Date: February 2019
Appropriation / Budget Activity / Budget Sub Activity: 3010F / 05 / 5	**P-1 Line Item Number / Title:** PRDTB2 / MQ-9 Mods	**Modification Number / Title:** 1 / MQ-9 Low Cost Mods
ID Code (A=Service Ready, B=Not Service Ready) : B	**MDAP/MAIS Code:**	
Models of Systems Affected: MQ-9	**Modification Type:** Reliability & Maintainability	**Related RDT&E PEs:** 0205219F

Financial Plan	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
	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)*
RDT&E PE #												
0205219F	- / 766.277	- / 204.221	- / 194.746	- / 185.807	- / -	- / 185.807	- / 177.999	- / 169.807	- / -	- / -	- / -	- / 1,698.857
Procurement												
Modification Item 1 of 1: MQ-9 Low Cost Mods												
A Kits												
Recurring												
MQ-9 Low Cost Mods:INSTALL KITS Group A (Active)	0 / 0.734	- / -	- / -	0 / 0.000	- / -	0 / 0.000	0 / 0.000	0 / 0.000	- / -	- / -	- / -	0 / 0.734
Subtotal: Recurring	*- / 0.734*	*- / -*	*- / -*	*- / 0.000*	*- / -*	*- / 0.000*	*- / 0.000*	*- / 0.000*	*- / -*	*- / -*	*- / -*	*- / 0.734*
B Kits												
Recurring												
MQ-9 Low Cost Mods:EQUIPMENT Group B (Active)	0 / 12.286	0 / 0.000	0 / 2.000	- / 1.000	- / -	- / 1.000	0 / 2.000	0 / 2.000	0 / 2.000	- / -	0 / 2.000	0 / 23.286
Subtotal: Recurring	*- / 12.286*	*- / 0.000*	*- / 2.000*	*- / 1.000*	*- / -*	*- / 1.000*	*- / 2.000*	*- / 2.000*	*- / 2.000*	*- / -*	*- / 2.000*	*- / 23.286*
Subtotal: MQ-9 Low Cost Mods	*- / 13.020*	*- / 0.000*	*- / 2.000*	*- / 1.000*	*- / -*	*- / 1.000*	*- / 2.000*	*- / 2.000*	*- / 2.000*	*- / -*	*- / 2.000*	*- / 24.020*
Subtotal: Procurement, All Modification Items	*- / 13.020*	*- / 0.000*	*- / 2.000*	*- / 1.000*	*- / -*	*- / 1.000*	*- / 2.000*	*- / 2.000*	*- / 2.000*	*- / -*	*- / 2.000*	*- / 24.020*
Installation												
Subtotal: Installation	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*
Total												
Total Cost (Procurement + Support + Installation)	**13.020**	**0.000**	**2.000**	**1.000**	**0.000**	**1.000**	**2.000**	**2.000**	**2.000**	**0.000**	**2.000**	**24.020**

Exhibit P-3a, Individual Modification: PB 2020 Air Force		Date: February 2019
Appropriation / Budget Activity / Budget Sub Activity: 3010F / 05 / 5	**P-1 Line Item Number / Title:** PRDTB2 / MQ-9 Mods	**Modification Number / Title:** 1 / MQ-9 Low Cost Mods

ID Code (A=Service Ready, B=Not Service Ready) : B

MDAP/MAIS Code:

Modification Item 1 of 1: MQ-9 Low Cost Mods

Manufacturer Information

Manufacturer Name: General Atomics - ASI

Manufacturer Location: Poway, CA

Administrative Leadtime *(in Months)*: 1

Production Leadtime *(in Months)*: 1

Dates	FY 2018	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024
Contract Dates							
Delivery Dates							

Installation Information

Method of Implementation (Organic): Org/Intermediate

Installation Quantity: 0

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Exhibit P-40, Budget Line Item Justification: PB 2020 Air Force	Date: February 2019
Appropriation / Budget Activity / Budget Sub Activity: 3010F: Aircraft Procurement, Air Force / BA 05: Modification of Inservice Aircraft / BSA 5: Other Aircraft	**P-1 Line Item Number / Title:** PRDTB3 / MQ-9 UAS Payloads

ID Code (A=Service Ready, B=Not Service Ready): B	Program Elements for Code B Items: 0305206F	Other Related Program Elements: 0305206F

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 *(Units in Each)*	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost *($ in Millions)*	22.905	5.000	16.000	-	19.800	19.800	19.800	0.000	0.000	0.000	-	83.505
Less PY Advance Procurement *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) *($ in Millions)*	22.905	5.000	16.000	-	19.800	19.800	19.800	0.000	0.000	0.000	-	83.505
Plus CY Advance Procurement *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Total Obligation Authority *($ in Millions)*	**22.905**	**5.000**	**16.000**	**-**	**19.800**	**19.800**	**19.800**	**0.000**	**0.000**	**0.000**	**-**	**83.505**
(The following Resource Summary rows are for informational purposes only. The corresponding budget requests are documented elsewhere.)												
Initial Spares *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Flyaway Unit Cost *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Unit Cost *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-

Description:

The Gorgon Stare system is a podded airborne sensor suite that provides city-sized wide area airborne surveillance and is integrated on specially-modified MQ-9 Reaper Remotely Piloted Aircraft (RPA). The Air Force Requirements Oversight Council (AFROC) approved Air Combat Command's recommendation to transition Gorgon Stare from a Quick Reaction Capability (QRC) to an Air Force Enduring Capability in November 2014. Gorgon Stare's requirements are documented in the Gorgon Stare Wide Area Airborne Sensor Capabilities Development Document (draft). The acquisition strategy for this Air Force podded sensor suite solution is sustainment of the currently fielded capabilities with any upgrades implemented via validated -1067s or Urgent Operational Needs.

As of second quarter FY 2018, the Air Force inventory for Gorgon stare includes the following: nine (9) Gorgon Stare pod sets, five (5) Gorgon Stare Mission Controllers (GSMCs), three (3) Gorgon Stare Archive Managers (GSAMs), nine (9) specially-modified MQ-9 Reaper RPAs, and one System Integration Laboratory (SIL).

FY 2019 includes $16M of Overseas Contingency Operations (OCO) funding.

FY 2020 includes $21.3M (spares included) of Overseas Contingency Operations (OCO) funding for Gorgon Stare.

The Gorgon Stare program is managed by the 645th Aeronautical Systems Group. Funding for this exhibit is contained in PE 0305206F.

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.

Exhibit P-40, Budget Line Item Justification: PB 2020 Air Force	**Date:** February 2019
Appropriation / Budget Activity / Budget Sub Activity: 3010F: Aircraft Procurement, Air Force / BA 05: Modification of Inservice Aircraft / BSA 5: Other Aircraft	**P-1 Line Item Number / Title:** PRDTB3 / MQ-9 UAS Payloads

ID Code (A=Service Ready, B=Not Service Ready): B	**Program Elements for Code B Items:** 0305206F	**Other Related Program Elements:** 0305206F

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) I ($ M)*	Quantity / Total Cost *(Each) I ($ M)*	Quantity / Total Cost *(Each) I ($ M)*	Quantity / Total Cost *(Each) I ($ M)*	Quantity / Total Cost *(Each) I ($ M)*	Quantity / Total Cost *(Each) I ($ M)*
P-3a	9169 / Gorgon Stare (Capability Improvement)		A		- / 22.905	- / 5.000	- / 16.000	- / 0.000	- / 19.800	- / 19.800
P-40	**Total Gross/Weapon System Cost**				**- / 22.905**	**- / 5.000**	**- / 16.000**	**- / -**	**- / 19.800**	**- / 19.800**

Exhibits Schedule					FY 2021	FY 2022	FY 2023	FY 2024	To Complete	Total
Exhibit Type	Title*	Subexhibits	ID CD	MDAP/ MAIS Code	Quantity / Total Cost *(Each) I ($ M)*	Quantity / Total Cost *(Each) I ($ M)*	Quantity / Total Cost *(Each) I ($ M)*	Quantity / Total Cost *(Each) I ($ M)*	Quantity / Total Cost *(Each) I ($ M)*	Quantity / Total Cost *(Each) I ($ M)*
P-3a	9169 / Gorgon Stare (Capability Improvement)		A		- / 19.800	- / 0.000	- / 0.000	- / 0.000	- / -	- / 83.505
P-40	**Total Gross/Weapon System Cost**				**- / 19.800**	**- / 0.000**	**- / 0.000**	**- / 0.000**	**- / -**	**- / 83.505**

*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:
Where applicable, justification for individual modifications is provided in the P-3A exhibits.

Exhibit P-3a, Individual Modification: PB 2020 Air Force		Date: February 2019
Appropriation / Budget Activity / Budget Sub Activity: 3010F / 05 / 5	**P-1 Line Item Number / Title:** PRDTB3 / MQ-9 UAS Payloads	**Modification Number / Title:** 9169 / Gorgon Stare
ID Code (A=Service Ready, B=Not Service Ready) : A	**MDAP/MAIS Code:**	

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 *(Units in Each)*	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost *($ in Millions)*	22.905	5.000	16.000	0.000	19.800	19.800	19.800	0.000	0.000	0.000	-	83.505
Less PY Advance Procurement *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) *($ in Millions)*	22.905	5.000	16.000	0.000	19.800	19.800	19.800	0.000	0.000	0.000	-	83.505
Plus CY Advance Procurement *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Total Obligation Authority *($ in Millions)*	**22.905**	**5.000**	**16.000**	**0.000**	**19.800**	**19.800**	**19.800**	**0.000**	**0.000**	**0.000**	**-**	**83.505**
(The following Resource Summary rows are for informational purposes only. The corresponding budget requests are documented elsewhere.)												
Initial Spares *($ in Millions)*	-	0.216	7.500	0.000	1.500	1.500	1.500	0.000	0.000	0.000	-	10.716
Gross/Weapon System Unit Cost *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-

Description:

The Gorgon Stare system is a podded airborne sensor suite that provides city-sized wide area airborne surveillance and is integrated on specially-modified MQ-9 Reaper Remotely Piloted Aircraft (RPA). The Air Force Requirements Oversight Council approved Air Combat Command's recommendation to transition Gorgon Stare from a Quick Reaction Capability (QRC) to an Air Force Enduring Capability in November 2014. Gorgon Stare's requirements are documented in the Gorgon Stare Wide Area Airborne Sensor Capabilities Development Document (draft). The acquisition strategy for this Air Force podded sensor suite solution is sustainment of the currently fielded capabilities with any upgrades implemented via validated -1067s or Urgent Operational Needs.

As of second quarter FY 2018, the Air Force inventory for Gorgon stare includes the following: nine (9) Gorgon Stare pod sets, five (5) Gorgon Stare Mission Controllers (GSMCs), three (3) Gorgon Stare Archive Managers (GSAMs), nine (9) specially-modified MQ-9 Reaper RPAs and one (1) System Integration Laboratory (SIL).

$5.0M of the FY2018 OCO funds will be used purchase MAVEN-related hardware.

$0.216M of the FY 2018 initial spares funding will be used to purchase spares.

Prior years funding includes a $20M Congressional Add and a $2.905M Below Threshold Reprogramming for the purchase of a tenth Gorgon Stare pod set. This pod set will be used as a spare as no additional MQ-9 RPAs are being specially-modified to host Gorgon Stare. Therefore, a Group A kit is not required for the tenth pod set at this time.

$16M of the FY 2019 Overseas Contingency Operations (OCO) funds identified in the Group B kit prices include $11M for a pod set processor upgrade and $5M for a data storage unit pod set upgrade. These upgrades will modify all nine (9) operational Gorgon Stare pod sets and the SIL to address end-of-life issues and improve capability. Install costs for these upgrades are minimal since they will be installed by onsite contractor logistics support personnel. There are no Group A kits associated with the data processor and data storage unit pod set upgrades.

$7.5M of the FY 2019 initial spares funding will be used for initial spares of the pod set processor and data storage unit pod set.

$15.2M of the FY 2020 OCO funds will be used to procure equipment for ten (10) Beyond Line of Sight (BLOS) B-Kits enabling a full freedom-of-maneuver capability, while supporting combat operations. There are no Group A kits associated with this upgrade.

$4.6M of the FY 2020 OCO funds will be used to procure equipment for three (3) B-Kits enabling full field tracking post-ingest exploitation capability. There are no Group A kits associated with this upgrade.

$1.5M of the FY 2020 initial spares funding will be used for initial spares of the BLOS equipment.

Exhibit P-3a, Individual Modification: PB 2020 Air Force		Date: February 2019
Appropriation / Budget Activity / Budget Sub Activity: 3010F / 05 / 5	**P-1 Line Item Number / Title:** PRDTB3 / MQ-9 UAS Payloads	**Modification Number / Title:** 9169 / Gorgon Stare
ID Code (A=Service Ready, B=Not Service Ready) : A	**MDAP/MAIS Code:**	

Due to Gorgon Stare's prolonged commitment to OCO, the acquisition program manager has the authority to redirect funding as necessary to meet current states and emerging Combatant Commander requirements to better meet the war fighting objectives.

The Gorgon Stare program is managed by the 645th Aeronautical Systems Group. Funding for this exhibit is contained in PE 0305206F.

Milestone/Development Status

Development of processor and data storage unit upgrades to be completed in FY 2019.

Exhibit P-3a, Individual Modification: PB 2020 Air Force		Date: February 2019
Appropriation / Budget Activity / Budget Sub Activity: 3010F / 05 / 5	**P-1 Line Item Number / Title:** PRDTB3 / MQ-9 UAS Payloads	**Modification Number / Title:** 9169 / Gorgon Stare
ID Code (A=Service Ready, B=Not Service Ready) : A	**MDAP/MAIS Code:**	
Models of Systems Affected: MQ-9	**Modification Type:** Capability Improvement	**Related RDT&E PEs:**

Financial Plan	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
	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												
Modification Item 1 of 1: Gorgon Stare												
B Kits												
Recurring												
Gorgon Stare:EQUIPMENT Group B (Active)	1 / 22.905	1 / 5.000	10 / 16.000	- / -	13 / 18.280	13 / 18.280	4 / 19.800	- / -	- / -	- / -	- / -	29 / 81.985
Subtotal: Recurring	*- / 22.905*	*- / 5.000*	*- / 16.000*	*- / -*	*- / 18.280*	*- / 18.280*	*- / 19.800*	*- / -*	*- / -*	*- / -*	*- / -*	*- / 81.985*
Subtotal: Gorgon Stare	*- / 22.905*	*- / 5.000*	*- / 16.000*	*- / -*	*- / 18.280*	*- / 18.280*	*- / 19.800*	*- / -*	*- / -*	*- / -*	*- / -*	*- / 81.985*
Subtotal: Procurement, All Modification Items	*- / 22.905*	*- / 5.000*	*- / 16.000*	*- / -*	*- / 18.280*	*- / 18.280*	*- / 19.800*	*- / -*	*- / -*	*- / -*	*- / -*	*- / 81.985*
Support *(All Modification Items)*												
GROUP B: TOTAL NONRECURRING	- / 0.000	- / 0.000	- / -	- / -	- / 0.000	- / 0.000	- / -	- / -	- / -	- / -	- / -	- / 0.000
Subtotal: Support	*- / 0.000*	*- / 0.000*	*- / -*	*- / -*	*- / 0.000*	*- / 0.000*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / 0.000*
Installation												
Modification Item 1 of 1: Gorgon Stare	- / -	- / -	- / -	11 / 0.000	0 / 1.520	11 / 1.520	14 / 0.000	- / -	4 / 0.000	- / -	- / -	29 / 1.520
Subtotal: Installation	*- / -*	*- / -*	*- / -*	*11 / 0.000*	*0 / 1.520*	*11 / 1.520*	*14 / 0.000*	*- / -*	*4 / 0.000*	*- / -*	*- / -*	*29 / 1.520*
Total												
Total Cost (Procurement + Support + Installation)	**22.905**	**5.000**	**16.000**	**0.000**	**19.800**	**19.800**	**19.800**	**0.000**	**0.000**	**0.000**	**-**	**83.505**

Exhibit P-3a, Individual Modification: PB 2020 Air Force		Date: February 2019
Appropriation / Budget Activity / Budget Sub Activity: 3010F / 05 / 5	**P-1 Line Item Number / Title:** PRDTB3 / MQ-9 UAS Payloads	**Modification Number / Title:** 9169 / Gorgon Stare
ID Code (A=Service Ready, B=Not Service Ready) : A	**MDAP/MAIS Code:**	

Modification Item 1 of 1: Gorgon Stare

Manufacturer Information

Manufacturer Name: SNC	Manufacturer Location: Sparks, NV
Administrative Leadtime *(in Months)*: 5	Production Leadtime *(in Months)*: 12

Dates	FY 2018	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024
Contract Dates	Mar 2019	Mar 2019	Jun 2020	May 2021			
Delivery Dates	Feb 2021	Mar 2020	Jun 2021	Apr 2023			

Installation Information

Method of Implementation: Contract Field Team

Installation Cost	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
	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)*
Prior Years	- / -	- / -	- / -	1 / 0.000	- / -	1 / 0.000	0 / 0.000	- / -	- / -	- / -	- / -	1 / 0.000
FY 2018	- / -	- / -	- / -	- / -	- / -	- / -	1 / 0.000	- / -	- / -	- / -	- / -	1 / 0.000
FY 2019	- / -	- / -	- / -	10 / 0.000	- / -	10 / 0.000	- / -	- / -	- / -	- / -	- / -	10 / 0.000
FY 2020	- / -	- / -	- / -	- / -	0 / 1.520	0 / 1.520	13 / 0.000	- / -	- / -	- / -	- / -	13 / 1.520
FY 2021	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	4 / 0.000	- / -	- / -	4 / 0.000
FY 2022	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2023	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2024	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
To Complete	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
Total	- / -	- / -	- / -	11 / 0.000	0 / 1.520	11 / 1.520	14 / 0.000	- / -	4 / 0.000	- / -	- / -	29 / 1.520

Installation Schedule

	PYS	FY 2018				FY 2019				FY 2020				FY 2021				FY 2022				FY 2023				FY 2024				TC	Tot
		Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4		
In	0	-	-	-	-	-	-	-	-	-	11	-	-	-	-	14	-	-	-	-	-	-	-	4	-	-	-	-	-	0	29
Out	0	-	-	-	-	-	-	-	-	-	11	-	-	-	-	14	-	-	-	-	-	-	-	4	-	-	-	-	-	0	29

Exhibit P-40, Budget Line Item Justification: PB 2020 Air Force	Date: February 2019
Appropriation / Budget Activity / Budget Sub Activity: 3010F: Aircraft Procurement, Air Force / BA 05: Modification of Inservice Aircraft / BSA 5: Other Aircraft	**P-1 Line Item Number / Title:** V02200 / CV-22 Mods

ID Code (A=Service Ready, B=Not Service Ready): A	Program Elements for Code B Items: N/A	Other Related Program Elements: 0401318F

Line Item MDAP/MAIS Code: 212

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 *(Units in Each)*	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost *($ in Millions)*	262.342	60.990	60.416	65.348	-	65.348	122.473	164.227	151.551	146.864	409.108	1,443.319
Less PY Advance Procurement *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) *($ in Millions)*	262.342	60.990	60.416	65.348	-	65.348	122.473	164.227	151.551	146.864	409.108	1,443.319
Plus CY Advance Procurement *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Total Obligation Authority *($ in Millions)*	**262.342**	**60.990**	**60.416**	**65.348**	**-**	**65.348**	**122.473**	**164.227**	**151.551**	**146.864**	**409.108**	**1,443.319**
(The following Resource Summary rows are for informational purposes only. The corresponding budget requests are documented elsewhere.)												
Initial Spares *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Flyaway Unit Cost *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Unit Cost *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-

Description:

The CV-22 is the Air Force Special Operations Forces (SOF) variant of the joint multi-mission V-22 tilt rotor aircraft. The CV-22 provides long-range, high-speed infiltration, exfiltration, and resupply to Special Forces teams in hostile, denied, and politically sensitive areas. The Navy is the lead service for the Joint V-22 program. The Joint Program Manager is responsible for managing all variants of the V-22. Department of the Navy (DoN) funds the development of the MV-22 and CMV-22. The Air Force funds the service-common portion of the CV-22 while United States Special Operations Command (USSOCOM) funds the development and procurement of SOF peculiar systems. The designed service life for the aircraft is 10,000 flying hours over 30 years.

Funding for this exhibit contained in PE 0401318F.

The primary modification budgeted in FY 2020 is the Block C/20 Upgrade.

Funding may be used to address Diminishing Manufacturing Source (DMS) and component obsolescence issues.

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.

Exhibit P-40, Budget Line Item Justification: PB 2020 Air Force	Date: February 2019
Appropriation / Budget Activity / Budget Sub Activity: 3010F: Aircraft Procurement, Air Force / BA 05: Modification of Inservice Aircraft / BSA 5: Other Aircraft	**P-1 Line Item Number / Title:** V02200 / CV-22 Mods

ID Code (A=Service Ready, B=Not Service Ready): A	Program Elements for Code B Items: N/A	Other Related Program Elements: 0401318F

Line Item MDAP/MAIS Code: 212

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-3a	8790 / Block 20 Upgrade (Capability Improvement)		A		- / 244.935	- / 58.991	- / 58.417	- / 63.349	- / 0.000	- / 63.349
P-3a	1 / Low Cost Modifications (Other)		A		- / 17.407	- / 1.999	- / 1.999	- / 1.999	- / 0.000	- / 1.999
P-40	**Total Gross/Weapon System Cost**				**- / 262.342**	**- / 60.990**	**- / 60.416**	**- / 65.348**	**- / -**	**- / 65.348**

Exhibits Schedule					FY 2021	FY 2022	FY 2023	FY 2024	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	8790 / Block 20 Upgrade (Capability Improvement)		A		- / 120.474	- / 162.228	- / 149.552	- / 144.865	- / 397.114	- / 1,399.925
P-3a	1 / Low Cost Modifications (Other)		A		- / 1.999	- / 1.999	- / 1.999	- / 1.999	- / 11.994	- / 43.394
P-40	**Total Gross/Weapon System Cost**				**- / 122.473**	**- / 164.227**	**- / 151.551**	**- / 146.864**	**- / 409.108**	**- / 1,443.319**

*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:
Where applicable, justification for individual modifications is provided in the P-3A exhibits.

Exhibit P-3a, Individual Modification: PB 2020 Air Force		Date: February 2019
Appropriation / Budget Activity / Budget Sub Activity: 3010F / 05 / 5	**P-1 Line Item Number / Title:** V02200 / CV-22 Mods	**Modification Number / Title:** 8790 / Block 20 Upgrade
ID Code (A=Service Ready, B=Not Service Ready) : A	**MDAP/MAIS Code:**	

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 *(Units in Each)*	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost *($ in Millions)*	244.935	58.991	58.417	63.349	0.000	63.349	120.474	162.228	149.552	144.865	397.114	1,399.925
Less PY Advance Procurement *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) *($ in Millions)*	244.935	58.991	58.417	63.349	0.000	63.349	120.474	162.228	149.552	144.865	397.114	1,399.925
Plus CY Advance Procurement *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Total Obligation Authority *($ in Millions)*	**244.935**	**58.991**	**58.417**	**63.349**	**0.000**	**63.349**	**120.474**	**162.228**	**149.552**	**144.865**	**397.114**	**1,399.925**
(The following Resource Summary rows are for informational purposes only. The corresponding budget requests are documented elsewhere.)												
Initial Spares *($ in Millions)*	-	0.882	0.241	-	-	-	6.583	10.946	3.500	-	-	22.152
Gross/Weapon System Unit Cost *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-

Description:

Funds the retrofit of fielded CV-22 aircraft, flight training systems, and systems integration laboratories to the Block C/20 configuration. Modifications encompass numerous engineering change proposals (ECP) that have, or will be placed on contract to address a variety of CV-22 weapon system requirements. Additionally, these funds implement production kits and other equipment resulting from related RDT&E projects in the CV-22 Block C/20 program, including nacelle improvements and enhanced self-deployment capabilities.

The Block C/20 modification program improves readiness, operational safety, suitability, and effectiveness, corrects deficiencies identified during operational testing and/or field operations, improves aircraft reliability/maintainability, enhances the aircraft's self-deployment capability, enables unrestricted access to worldwide airspace, and enhances the effectiveness of defensive aircraft survivability systems. Whenever possible, ECPs/kits are installed in blocks to minimize aircraft down time and maximize efficiency. Some ECPs/kits are being incorporated on aircraft as they progress through the production line. Individual P-3As indicate which modifications are implemented at the Contract Field Team (CFT) or Organizational/Intermediate levels. Installation schedules reflect only CFT installs.

Funds also modify and retrofit systems experiencing obsolescing and/or diminishing manufacturing source (DMS) issues, aircraft support equipment, training devices, flight simulators, flight test support, and software. Funding for DMS, flight test support, and software is included in the nonrecurring engineering cost category.

Milestone/Development Status

CV-22 program RDT&E funding in PE 0401318F provides for development and testing activities associated with the Block C/20 modifications, Nacelle Improvements, Enhanced Self-Deployment, and Future Capabilities.

Nacelle Improvements: Include improvements to the Infrared Suppressor (IRS), Electric Power System, Generator Control Unit (GCU); nacelle wiring, heat exchanger, engine health monitoring, nacelle structure, and performance buyback. Common nacelle improvements for both the CV-22 and MV-22 fleets will increase overall aircraft readiness/availability, reduce platform operating life cycle costs, and mitigate impacts to aircraft performance and survivability.

Enhanced Self-Deployment: Capabilities include improved ice protection, engine performance, navigation, communications, battle space awareness and networking; electronic warfare; weapons systems; defensive avionics systems and architecture; weight reduction initiatives; modular avionics/cyber security implementation; and changes to the underlying aircraft systems necessary to enable these capabilities.

Exhibit P-3a, Individual Modification: PB 2020 Air Force		Date: February 2019
Appropriation / Budget Activity / Budget Sub Activity: 3010F / 05 / 5	P-1 Line Item Number / Title: V02200 / CV-22 Mods	Modification Number / Title: 8790 / Block 20 Upgrade
ID Code (A=Service Ready, B=Not Service Ready) : A	MDAP/MAIS Code:	
Models of Systems Affected: CV-22	Modification Type: Capability Improvement	Related RDT&E PEs: 0401318F

Financial Plan	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
	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												
Modification Item 1 of 47: AC Bus Tie Impr												
A Kits												
Recurring												
AC Bus Tie Impr:INSTALL KITS Group A (Active)	34 / 0.163	11 / 0.055	6 / 0.030	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	51 / 0.248
Subtotal: Recurring	*- / 0.163*	*- / 0.055*	*- / 0.030*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / 0.248*
Subtotal: AC Bus Tie Impr	*- / 0.163*	*- / 0.055*	*- / 0.030*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / 0.248*
Modification Item 2 of 47: Advanced Multifunctional Display												
A Kits												
Recurring												
Advanced Multifunctional Display:INSTALL KITS Group A (Active)	- / -	- / -	- / -	- / -	- / -	- / -	- / -	12 / 1.200	12 / 1.200	12 / 1.200	16 / 1.700	52 / 5.300
Subtotal: Recurring	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / 1.200*	*- / 1.200*	*- / 1.200*	*- / 1.700*	*- / 5.300*
Subtotal: Advanced Multifunctional Display	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / 1.200*	*- / 1.200*	*- / 1.200*	*- / 1.700*	*- / 5.300*
Modification Item 3 of 47: Advanced Threat Warning System (JUON config)												
A Kits												
Recurring												
Advanced Threat Warning System (JUON config):INSTALL KITS Group A (Active)	23 / 4.724	5 / 1.300	- / -	12 / 3.400	- / -	12 / 3.400	12 / 3.400	- / -	- / -	- / -	- / -	52 / 12.824
Subtotal: Recurring	*- / 4.724*	*- / 1.300*	*- / -*	*- / 3.400*	*- / -*	*- / 3.400*	*- / 3.400*	*- / -*	*- / -*	*- / -*	*- / -*	*- / 12.824*
B Kits												
Recurring												
Advanced Threat Warning System (JUON config):EQUIPMENT Group B (Active)	23 / 20.698	5 / 9.300	- / -	12 / 9.300	- / -	12 / 9.300	12 / 9.300	- / -	- / -	- / -	- / -	52 / 48.598
Subtotal: Recurring	*- / 20.698*	*- / 9.300*	*- / -*	*- / 9.300*	*- / -*	*- / 9.300*	*- / 9.300*	*- / -*	*- / -*	*- / -*	*- / -*	*- / 48.598*
Subtotal: Advanced Threat Warning System (JUON config)	*- / 25.422*	*- / 10.600*	*- / -*	*- / 12.700*	*- / -*	*- / 12.700*	*- / 12.700*	*- / -*	*- / -*	*- / -*	*- / -*	*- / 61.422*
Modification Item 4 of 47: Advanced Threat Warning System (Series 2)												
A Kits												
Recurring												

Exhibit P-3a, Individual Modification: PB 2020 Air Force		Date: February 2019
Appropriation / Budget Activity / Budget Sub Activity: 3010F / 05 / 5	**P-1 Line Item Number / Title:** V02200 / CV-22 Mods	**Modification Number / Title:** 8790 / Block 20 Upgrade
ID Code (A=Service Ready, B=Not Service Ready) : A	**MDAP/MAIS Code:**	
Models of Systems Affected: CV-22	**Modification Type:** Capability Improvement	**Related RDT&E PEs:** 0401318F

Financial Plan	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
	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)*
Advanced Threat Warning System (Series 2):INSTALL KITS Group A (Active)	- / -	- / -	- / -	- / -	- / -	- / -	- / -	12 / 9.600	12 / 9.600	12 / 9.600	16 / 12.800	52 / 41.600
Subtotal: Recurring	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 9.600	- / 9.600	- / 9.600	- / 12.800	- / 41.600
Subtotal: Advanced Threat Warning System (Series 2)	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 9.600	- / 9.600	- / 9.600	- / 12.800	- / 41.600
Modification Item 5 of 47: Auto Dependent Surveillance-Broadcast ADSB/Out												
A Kits												
Recurring												
Auto Dependent Surveillance-Broadcast ADSB/Out:INSTALL KITS Group A (Active)	51 / 3.092	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	51 / 3.092
Subtotal: Recurring	- / 3.092	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 3.092
Subtotal: Auto Dependent Surveillance-Broadcast ADSB/Out	- / 3.092	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 3.092
Modification Item 6 of 47: Auxillary Power Unit (APU) K8/K9 Improvement												
A Kits												
Recurring												
Auxillary Power Unit (APU) K8/K9 Improvement:INSTALL KITS Group A (Active)	- / -	- / -	- / -	- / -	- / -	- / -	- / -	12 / 0.074	12 / 0.074	12 / 0.074	16 / 0.099	52 / 0.321
Subtotal: Recurring	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 0.074	- / 0.074	- / 0.074	- / 0.099	- / 0.321
Subtotal: Auxillary Power Unit (APU) K8/K9 Improvement	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 0.074	- / 0.074	- / 0.074	- / 0.099	- / 0.321
Modification Item 7 of 47: Blk C ECP901												
A Kits												
Recurring												
Blk C ECP901:INSTALL KITS Group A (Active)	21 / 14.765	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	21 / 14.765
Subtotal: Recurring	- / 14.765	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 14.765
Subtotal: Blk C ECP901	- / 14.765	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 14.765
Modification Item 8 of 47: Coanda Valve Reliability Improvement												
A Kits												
Recurring												
Coanda Valve Reliability Improvement:INSTALL KITS Group A (Active)	- / -	- / -	- / -	- / -	- / -	- / -	44 / 1.206	7 / 0.200	- / -	- / -	- / -	51 / 1.406

Exhibit P-3a, Individual Modification: PB 2020 Air Force		Date: February 2019
Appropriation / Budget Activity / Budget Sub Activity: 3010F / 05 / 5	P-1 Line Item Number / Title: V02200 / CV-22 Mods	Modification Number / Title: 8790 / Block 20 Upgrade
ID Code (A=Service Ready, B=Not Service Ready) : A	MDAP/MAIS Code:	
Models of Systems Affected: CV-22	Modification Type: Capability Improvement	Related RDT&E PEs: 0401318F

Financial Plan	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
	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)*
Subtotal: Recurring	- / -	- / -	- / -	- / -	- / -	- / -	- / 1.206	- / 0.200	- / -	- / -	- / -	- / 1.406
Subtotal: Coanda Valve Reliability Improvement	- / -	- / -	- / -	- / -	- / -	- / -	- / 1.206	- / 0.200	- / -	- / -	- / -	- / 1.406
Modification Item 9 of 47: Cockpit Voice Recorder ECP964												
A Kits												
Recurring												
Cockpit Voice Recorder ECP964:INSTALL KITS Group A (Active)	16 / 0.518	- / -	11 / 0.396	12 / 0.432	- / -	12 / 0.432	13 / 0.468	- / -	- / -	- / -	- / -	52 / 1.814
Subtotal: Recurring	- / 0.518	- / -	- / 0.396	- / 0.432	- / -	- / 0.432	- / 0.468	- / -	- / -	- / -	- / -	- / 1.814
Subtotal: Cockpit Voice Recorder ECP964	- / 0.518	- / -	- / 0.396	- / 0.432	- / -	- / 0.432	- / 0.468	- / -	- / -	- / -	- / -	- / 1.814
Modification Item 10 of 47: Co-Site ECP901												
A Kits												
Recurring												
Co-Site ECP901:INSTALL KITS Group A (Active)	34 / 16.519	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	34 / 16.519
Subtotal: Recurring	- / 16.519	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 16.519
Subtotal: Co-Site ECP901	- / 16.519	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 16.519
Modification Item 11 of 47: Data Transfer Unit Upgrade												
A Kits												
Recurring												
Data Transfer Unit Upgrade:INSTALL KITS Group A (Active)	- / -	25 / 0.500	26 / 0.520	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	51 / 1.020
Subtotal: Recurring	- / -	- / 0.500	- / 0.520	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 1.020
Subtotal: Data Transfer Unit Upgrade	- / -	- / 0.500	- / 0.520	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 1.020
Modification Item 12 of 47: Drive Tube ECP929												
A Kits												
Recurring												
Drive Tube ECP929:INSTALL KITS Group A (Active)	8 / 0.450	10 / 0.563	10 / 0.563	10 / 0.563	- / -	10 / 0.563	13 / 0.732	- / -	- / -	- / -	- / -	51 / 2.871
Subtotal: Recurring	- / 0.450	- / 0.563	- / 0.563	- / 0.563	- / -	- / 0.563	- / 0.732	- / -	- / -	- / -	- / -	- / 2.871
Subtotal: Drive Tube ECP929	- / 0.450	- / 0.563	- / 0.563	- / 0.563	- / -	- / 0.563	- / 0.732	- / -	- / -	- / -	- / -	- / 2.871
Modification Item 13 of 47: Electric Power System Upgrade (GCU)												
A Kits												

Exhibit P-3a, Individual Modification: PB 2020 Air Force		Date: February 2019
Appropriation / Budget Activity / Budget Sub Activity: 3010F / 05 / 5	P-1 Line Item Number / Title: V02200 / CV-22 Mods	Modification Number / Title: 8790 / Block 20 Upgrade
ID Code (A=Service Ready, B=Not Service Ready) : A	MDAP/MAIS Code:	
Models of Systems Affected: CV-22	Modification Type: Capability Improvement	Related RDT&E PEs: 0401318F

Financial Plan	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
	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)
Recurring												
Electric Power System Upgrade (GCU):INSTALL KITS Group A (Active)	- / -	- / -	- / -	- / -	- / -	- / -	- / -	45 / 1.890	33 / 1.386	26 / 1.092	- / -	104 / 4.368
Subtotal: Recurring	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / 1.890*	*- / 1.386*	*- / 1.092*	*- / -*	*- / 4.368*
Subtotal: Electric Power System Upgrade (GCU)	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / 1.890*	*- / 1.386*	*- / 1.092*	*- / -*	*- / 4.368*
Modification Item 14 of 47: Emergency O2 Bottle Gauge ECP527R1												
A Kits												
Recurring												
Emergency O2 Bottle Gauge ECP527R1:INSTALL KITS Group A (Active)	44 / 0.035	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	44 / 0.035
Subtotal: Recurring	*- / 0.035*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / 0.035*
Subtotal: Emergency O2 Bottle Gauge ECP527R1	*- / 0.035*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / 0.035*
Modification Item 15 of 47: Engine Thermo-Couple Wiring Harness ECP1075												
A Kits												
Recurring												
Engine Thermo-Couple Wiring Harness ECP1075:INSTALL KITS Group A (Active)	10 / 0.152	11 / 0.172	11 / 0.176	11 / 0.176	- / -	11 / 0.176	7 / 0.115	- / -	- / -	- / -	- / -	50 / 0.791
Subtotal: Recurring	*- / 0.152*	*- / 0.172*	*- / 0.176*	*- / 0.176*	*- / -*	*- / 0.176*	*- / 0.115*	*- / -*	*- / -*	*- / -*	*- / -*	*- / 0.791*
Subtotal: Engine Thermo-Couple Wiring Harness ECP1075	*- / 0.152*	*- / 0.172*	*- / 0.176*	*- / 0.176*	*- / -*	*- / 0.176*	*- / 0.115*	*- / -*	*- / -*	*- / -*	*- / -*	*- / 0.791*
Modification Item 16 of 47: Fuel Jettison ECP906												
A Kits												
Recurring												
Fuel Jettison ECP906:INSTALL KITS Group A (Active)	26 / 10.212	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	26 / 10.212
Subtotal: Recurring	*- / 10.212*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / 10.212*
Subtotal: Fuel Jettison ECP906	*- / 10.212*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / 10.212*
Modification Item 17 of 47: Fwd Looking Infrared Systems Electronics Unit (FLIR SEU)												
A Kits												
Recurring												
Fwd Looking Infrared Systems Electronics Unit (FLIR SEU):INSTALL KITS Group A (Active)	40 / 1.638	11 / 0.421	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	51 / 2.059

Exhibit P-3a, Individual Modification: PB 2020 Air Force		Date: February 2019
Appropriation / Budget Activity / Budget Sub Activity: 3010F / 05 / 5	**P-1 Line Item Number / Title:** V02200 / CV-22 Mods	**Modification Number / Title:** 8790 / Block 20 Upgrade
ID Code (A=Service Ready, B=Not Service Ready) : A	**MDAP/MAIS Code:**	
Models of Systems Affected: CV-22	**Modification Type:** Capability Improvement	**Related RDT&E PEs:** 0401318F

Financial Plan	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
	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)*
Subtotal: Recurring	- / 1.638	- / 0.421	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 2.059
Subtotal: Fwd Looking Infrared Systems Electronics Unit (FLIR SEU)	- / 1.638	- / 0.421	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 2.059
Modification Item 18 of 47: GAU-21 Gun												
A Kits												
Recurring												
GAU-21 Gun:INSTALL KITS Group A (Active)	100 / 2.007	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	100 / 2.007
Subtotal: Recurring	- / 2.007	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 2.007
Subtotal: GAU-21 Gun	- / 2.007	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 2.007
Modification Item 19 of 47: Gearbox Vibration Monitoring												
A Kits												
Recurring												
Gearbox Vibration Monitoring:INSTALL KITS Group A (Active)	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	12 / 2.064	12 / 2.064	28 / 4.816	52 / 8.944
Subtotal: Recurring	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 2.064	- / 2.064	- / 4.816	- / 8.944
Subtotal: Gearbox Vibration Monitoring	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 2.064	- / 2.064	- / 4.816	- / 8.944
Modification Item 20 of 47: Gen 5 Radio ECP866R1												
A Kits												
Recurring												
Gen 5 Radio ECP866R1:INSTALL KITS Group A (Active)	39 / 0.066	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	39 / 0.066
Subtotal: Recurring	- / 0.066	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 0.066
B Kits												
Recurring												
Gen 5 Radio ECP866R1:EQUIPMENT Group B (Active)	39 / 11.896	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	39 / 11.896
Subtotal: Recurring	- / 11.896	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 11.896
Subtotal: Gen 5 Radio ECP866R1	- / 11.962	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 11.962
Modification Item 21 of 47: Gen 6 Radio												
A Kits												
Recurring												
Gen 6 Radio:INSTALL KITS Group A (Active)	- / -	- / -	- / -	- / -	- / -	- / -	12 / 4.152	12 / 4.152	12 / 4.152	12 / 4.152	4 / 1.384	52 / 17.992
Subtotal: Recurring	- / -	- / -	- / -	- / -	- / -	- / -	- / 4.152	- / 4.152	- / 4.152	- / 4.152	- / 1.384	- / 17.992

Exhibit P-3a, Individual Modification: PB 2020 Air Force		Date: February 2019
Appropriation / Budget Activity / Budget Sub Activity: 3010F / 05 / 5	P-1 Line Item Number / Title: V02200 / CV-22 Mods	Modification Number / Title: 8790 / Block 20 Upgrade
ID Code (A=Service Ready, B=Not Service Ready) : A	MDAP/MAIS Code:	
Models of Systems Affected: CV-22	Modification Type: Capability Improvement	Related RDT&E PEs: 0401318F

Financial Plan	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
	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)
Subtotal: Gen 6 Radio	- / -	- / -	- / -	- / -	- / -	- / -	- / 4.152	- / 4.152	- / 4.152	- / 4.152	- / 1.384	- / 17.992
Modification Item 22 of 47: Gimbal Ring Joint Redesign ECP1001												
A Kits												
Recurring												
Gimbal Ring Joint Redesign ECP1001:INSTALL KITS Group A (Active)	- / -	- / -	- / -	- / -	- / -	- / -	- / -	10 / 0.450	10 / 0.510	12 / 0.612	19 / 0.982	51 / 2.554
Subtotal: Recurring	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 0.450	- / 0.510	- / 0.612	- / 0.982	- / 2.554
Subtotal: Gimbal Ring Joint Redesign ECP1001	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 0.450	- / 0.510	- / 0.612	- / 0.982	- / 2.554
Modification Item 23 of 47: GPS M-Code Upgrade												
A Kits												
Recurring												
GPS M-Code Upgrade:INSTALL KITS Group A (Active)	- / -	- / -	- / -	- / -	- / -	- / -	- / -	12 / 2.040	12 / 2.040	12 / 2.040	16 / 2.720	52 / 8.840
Subtotal: Recurring	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 2.040	- / 2.040	- / 2.040	- / 2.720	- / 8.840
Subtotal: GPS M-Code Upgrade	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 2.040	- / 2.040	- / 2.040	- / 2.720	- / 8.840
Modification Item 24 of 47: HF Radio (BLOS) ECP1041												
A Kits												
Recurring												
HF Radio (BLOS) ECP1041:INSTALL KITS Group A (Active)	11 / 1.459	11 / 2.034	11 / 2.191	11 / 2.420	- / -	11 / 2.420	6 / 1.315	- / -	- / -	- / -	- / -	50 / 9.419
Subtotal: Recurring	- / 1.459	- / 2.034	- / 2.191	- / 2.420	- / -	- / 2.420	- / 1.315	- / -	- / -	- / -	- / -	- / 9.419
Subtotal: HF Radio (BLOS) ECP1041	- / 1.459	- / 2.034	- / 2.191	- / 2.420	- / -	- / 2.420	- / 1.315	- / -	- / -	- / -	- / -	- / 9.419
Modification Item 25 of 47: IIS/Engine Air Particle Solution												
A Kits												
Recurring												
IIS/Engine Air Particle Solution:INSTALL KITS Group A (Active)	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	1 / 0.875	51 / 25.500	52 / 26.375
Subtotal: Recurring	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 0.875	- / 25.500	- / 26.375
Subtotal: IIS/Engine Air Particle Solution	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 0.875	- / 25.500	- / 26.375
Modification Item 26 of 47: Improved Engine Infrared Suppressor (IRS)												

Exhibit P-3a, Individual Modification: PB 2020 Air Force		Date: February 2019
Appropriation / Budget Activity / Budget Sub Activity: 3010F / 05 / 5	**P-1 Line Item Number / Title:** V02200 / CV-22 Mods	**Modification Number / Title:** 8790 / Block 20 Upgrade
ID Code (A=Service Ready, B=Not Service Ready) : A	**MDAP/MAIS Code:**	
Models of Systems Affected: CV-22	**Modification Type:** Capability Improvement	**Related RDT&E PEs:** 0401318F

Financial Plan	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
	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)*
A Kits												
Recurring												
Improved Engine Infrared Suppressor (IRS):INSTALL KITS Group A (Active)	- / -	- / -	- / -	- / -	- / -	- / -	- / -	12 / 6.096	12 / 6.096	12 / 6.096	16 / 8.128	52 / 26.416
Subtotal: Recurring	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / 6.096*	*- / 6.096*	*- / 6.096*	*- / 8.128*	*- / 26.416*
Subtotal: Improved Engine Infrared Suppressor (IRS)	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / 6.096*	*- / 6.096*	*- / 6.096*	*- / 8.128*	*- / 26.416*
Modification Item 27 of 47: Intel Broadcast Service - Back on the Glass Upgrade												
A Kits												
Recurring												
Intel Broadcast Service - Back on the Glass Upgrade:INSTALL KITS Group A (Active)	- / -	- / -	- / -	- / -	- / -	- / -	- / -	12 / 10.920	12 / 10.920	12 / 10.920	16 / 14.560	52 / 47.320
Subtotal: Recurring	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / 10.920*	*- / 10.920*	*- / 10.920*	*- / 14.560*	*- / 47.320*
Subtotal: Intel Broadcast Service - Back on the Glass Upgrade	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / 10.920*	*- / 10.920*	*- / 10.920*	*- / 14.560*	*- / 47.320*
Modification Item 28 of 47: MCOI CAPRE												
A Kits												
Recurring												
MCOI CAPRE:INSTALL KITS Group A (Active)	5 / 0.050	11 / 0.114	11 / 0.118	11 / 0.121	- / -	11 / 0.121	11 / 0.013	- / -	- / -	- / -	- / -	49 / 0.416
Subtotal: Recurring	*- / 0.050*	*- / 0.114*	*- / 0.118*	*- / 0.121*	*- / -*	*- / 0.121*	*- / 0.013*	*- / -*	*- / -*	*- / -*	*- / -*	*- / 0.416*
Subtotal: MCOI CAPRE	*- / 0.050*	*- / 0.114*	*- / 0.118*	*- / 0.121*	*- / -*	*- / 0.121*	*- / 0.013*	*- / -*	*- / -*	*- / -*	*- / -*	*- / 0.416*
Modification Item 29 of 47: MCOI ECP873												
A Kits												
Recurring												
MCOI ECP873:INSTALL KITS Group A (Active)	5 / 2.651	11 / 5.027	11 / 5.527	9 / 4.113	- / -	9 / 4.113	5 / 2.285	- / -	- / -	- / -	- / -	41 / 19.603
Subtotal: Recurring	*- / 2.651*	*- / 5.027*	*- / 5.527*	*- / 4.113*	*- / -*	*- / 4.113*	*- / 2.285*	*- / -*	*- / -*	*- / -*	*- / -*	*- / 19.603*
Subtotal: MCOI ECP873	*- / 2.651*	*- / 5.027*	*- / 5.527*	*- / 4.113*	*- / -*	*- / 4.113*	*- / 2.285*	*- / -*	*- / -*	*- / -*	*- / -*	*- / 19.603*
Modification Item 30 of 47: Mode 5 APX-119 ECP935												
A Kits												
Recurring												
Mode 5 APX-119 ECP935:INSTALL KITS Group A (Active)	36 / 2.288	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	36 / 2.288
Subtotal: Recurring	*- / 2.288*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / 2.288*

Exhibit P-3a, Individual Modification: PB 2020 Air Force		Date: February 2019
Appropriation / Budget Activity / Budget Sub Activity: 3010F / 05 / 5	**P-1 Line Item Number / Title:** V02200 / CV-22 Mods	**Modification Number / Title:** 8790 / Block 20 Upgrade
ID Code (A=Service Ready, B=Not Service Ready) : A	**MDAP/MAIS Code:**	
Models of Systems Affected: CV-22	**Modification Type:** Capability Improvement	**Related RDT&E PEs:** 0401318F

Financial Plan	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
	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)*
Subtotal: Mode 5 APX-119 ECP935	- / 2.288	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 2.288
Modification Item 31 of 47: Modular Avionics - Cyber												
A Kits												
Recurring												
Modular Avionics - Cyber:INSTALL KITS Group A (Active)	- / -	- / -	- / -	- / -	- / -	- / -	- / -	6 / 9.805	6 / 8.405	2 / 5.865	38 / 53.741	52 / 77.816
Subtotal: Recurring	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 9.805	- / 8.405	- / 5.865	- / 53.741	- / 77.816
Subtotal: Modular Avionics - Cyber	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 9.805	- / 8.405	- / 5.865	- / 53.741	- / 77.816
Modification Item 32 of 47: Nacelle Improvements												
A Kits												
Recurring												
Nacelle Improvements:INSTALL KITS Group A (Active)	- / -	- / -	- / -	1 / 7.000	- / -	1 / 7.000	12 / 66.000	12 / 66.000	12 / 66.000	12 / 66.000	3 / 21.000	52 / 292.000
Subtotal: Recurring	- / -	- / -	- / -	- / 7.000	- / -	- / 7.000	- / 66.000	- / 66.000	- / 66.000	- / 66.000	- / 21.000	- / 292.000
Subtotal: Nacelle Improvements	- / -	- / -	- / -	- / 7.000	- / -	- / 7.000	- / 66.000	- / 66.000	- / 66.000	- / 66.000	- / 21.000	- / 292.000
Modification Item 33 of 47: Nose Landing Gear ECP869												
A Kits												
Recurring												
Nose Landing Gear ECP869:INSTALL KITS Group A (Active)	14 / 0.091	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	14 / 0.091
Subtotal: Recurring	- / 0.091	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 0.091
Subtotal: Nose Landing Gear ECP869	- / 0.091	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 0.091
Modification Item 34 of 47: O2N2 Concentrator Sieve Bed Correction ECP1107												
A Kits												
Recurring												
O2N2 Concentrator Sieve Bed Correction ECP1107:INSTALL KITS Group A (Active)	5 / 0.108	10 / 0.122	10 / 0.124	10 / 0.127	- / -	10 / 0.127	10 / 0.129	6 / 0.080	- / -	- / -	- / -	51 / 0.690
Subtotal: Recurring	- / 0.108	- / 0.122	- / 0.124	- / 0.127	- / -	- / 0.127	- / 0.129	- / 0.080	- / -	- / -	- / -	- / 0.690
Subtotal: O2N2 Concentrator Sieve Bed Correction ECP1107	- / 0.108	- / 0.122	- / 0.124	- / 0.127	- / -	- / 0.127	- / 0.129	- / 0.080	- / -	- / -	- / -	- / 0.690
Modification Item 35 of 47: PRGB Atmospheric Protection ECP992												

Exhibit P-3a, Individual Modification: PB 2020 Air Force		Date: February 2019
Appropriation / Budget Activity / Budget Sub Activity: 3010F / 05 / 5	P-1 Line Item Number / Title: V02200 / CV-22 Mods	Modification Number / Title: 8790 / Block 20 Upgrade
ID Code (A=Service Ready, B=Not Service Ready) : A	MDAP/MAIS Code:	
Models of Systems Affected: CV-22	Modification Type: Capability Improvement	Related RDT&E PEs: 0401318F

Financial Plan	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
	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)*
A Kits												
Recurring												
PRGB Atmospheric Protection ECP992:INSTALL KITS Group A (Active)	16 / 0.100	17 / 0.106	18 / 0.112	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	51 / 0.318
Subtotal: Recurring	*- / 0.100*	*- / 0.106*	*- / 0.112*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / 0.318*
Subtotal: PRGB Atmospheric Protection ECP992	*- / 0.100*	*- / 0.106*	*- / 0.112*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / 0.318*
Modification Item 36 of 47: PRGB Input Quill/Clutch Redesign												
A Kits												
Recurring												
PRGB Input Quill/Clutch Redesign:INSTALL KITS Group A (Active)	- / -	- / -	- / -	12 / 0.600	- / -	12 / 0.600	12 / 0.600	12 / 0.600	12 / 0.600	- / -	- / -	48 / 2.400
Subtotal: Recurring	*- / -*	*- / -*	*- / -*	*- / 0.600*	*- / -*	*- / 0.600*	*- / 0.600*	*- / 0.600*	*- / 0.600*	*- / -*	*- / -*	*- / 2.400*
Subtotal: PRGB Input Quill/Clutch Redesign	*- / -*	*- / -*	*- / -*	*- / 0.600*	*- / -*	*- / 0.600*	*- / 0.600*	*- / 0.600*	*- / 0.600*	*- / -*	*- / -*	*- / 2.400*
Modification Item 37 of 47: Prop Rotor Hub Spring & Drive Link Impr												
A Kits												
Recurring												
Prop Rotor Hub Spring & Drive Link Impr:INSTALL KITS Group A (Active)	- / -	1 / 0.222	10 / 2.226	10 / 2.320	- / -	10 / 2.320	10 / 2.446	10 / 2.486	- / -	- / -	- / -	41 / 9.700
Subtotal: Recurring	*- / -*	*- / 0.222*	*- / 2.226*	*- / 2.320*	*- / -*	*- / 2.320*	*- / 2.446*	*- / 2.486*	*- / -*	*- / -*	*- / -*	*- / 9.700*
Subtotal: Prop Rotor Hub Spring & Drive Link Impr	*- / -*	*- / 0.222*	*- / 2.226*	*- / 2.320*	*- / -*	*- / 2.320*	*- / 2.446*	*- / 2.486*	*- / -*	*- / -*	*- / -*	*- / 9.700*
Modification Item 38 of 47: Rudder Reliability ECP1020												
A Kits												
Recurring												
Rudder Reliability ECP1020:INSTALL KITS Group A (Active)	32 / 0.109	6 / 0.034	8 / 0.046	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	46 / 0.189
Subtotal: Recurring	*- / 0.109*	*- / 0.034*	*- / 0.046*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / 0.189*
Subtotal: Rudder Reliability ECP1020	*- / 0.109*	*- / 0.034*	*- / 0.046*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / 0.189*
Modification Item 39 of 47: Satcom Antenna Mounting ECP901R2												
A Kits												
Recurring												

Exhibit P-3a, Individual Modification: PB 2020 Air Force		Date: February 2019
Appropriation / Budget Activity / Budget Sub Activity: 3010F / 05 / 5	P-1 Line Item Number / Title: V02200 / CV-22 Mods	Modification Number / Title: 8790 / Block 20 Upgrade
ID Code (A=Service Ready, B=Not Service Ready) : A	MDAP/MAIS Code:	
Models of Systems Affected: CV-22	Modification Type: Capability Improvement	Related RDT&E PEs: 0401318F

Financial Plan	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
	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)
Satcom Antenna Mounting ECP901R2:INSTALL KITS Group A (Active)	15 / 0.035	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	15 / 0.035
Subtotal: Recurring	- / 0.035	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 0.035
Subtotal: Satcom Antenna Mounting ECP901R2	- / 0.035	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 0.035
Modification Item 40 of 47: Satcom Beefy Cables Retrofit ECP901R2												
A Kits												
Recurring												
Satcom Beefy Cables Retrofit ECP901R2:INSTALL KITS Group A (Active)	26 / 0.136	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	26 / 0.136
Subtotal: Recurring	- / 0.136	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 0.136
Subtotal: Satcom Beefy Cables Retrofit ECP901R2	- / 0.136	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 0.136
Modification Item 41 of 47: Satcom Egg Beater Antenna ECP901R2												
A Kits												
Recurring												
Satcom Egg Beater Antenna ECP901R2:INSTALL KITS Group A (Active)	27 / 0.599	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	27 / 0.599
Subtotal: Recurring	- / 0.599	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 0.599
Subtotal: Satcom Egg Beater Antenna ECP901R2	- / 0.599	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 0.599
Modification Item 42 of 47: Satcom Troop Commander Panel ECP901R2												
A Kits												
Recurring												
Satcom Troop Commander Panel ECP901R2:INSTALL KITS Group A (Active)	20 / 0.018	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	20 / 0.018
Subtotal: Recurring	- / 0.018	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 0.018
Subtotal: Satcom Troop Commander Panel ECP901R2	- / 0.018	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 0.018
Modification Item 43 of 47: Shaft Driven Compressor (SDC) Improvement												
A Kits												
Recurring												
Shaft Driven Compressor (SDC) Improvement:INSTALL KITS Group A (Active)	- / -	- / -	- / -	- / -	- / -	- / -	15 / 0.450	15 / 0.450	15 / 0.450	7 / 0.210	- / -	52 / 1.560

Exhibit P-3a, Individual Modification: PB 2020 Air Force		Date: February 2019
Appropriation / Budget Activity / Budget Sub Activity: 3010F / 05 / 5	P-1 Line Item Number / Title: V02200 / CV-22 Mods	Modification Number / Title: 8790 / Block 20 Upgrade
ID Code (A=Service Ready, B=Not Service Ready) : A	MDAP/MAIS Code:	
Models of Systems Affected: CV-22	Modification Type: Capability Improvement	Related RDT&E PEs: 0401318F

Financial Plan	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
	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)
Subtotal: Recurring	- / -	- / -	- / -	- / -	- / -	- / -	- / 0.450	- / 0.450	- / 0.450	- / 0.210	- / -	- / 1.560
Subtotal: Shaft Driven Compressor (SDC) Improvement	- / -	- / -	- / -	- / -	- / -	- / -	- / 0.450	- / 0.450	- / 0.450	- / 0.210	- / -	- / 1.560
Modification Item 44 of 47: Swashplate Actuator ECP980												
A Kits												
Recurring												
Swashplate Actuator ECP980:INSTALL KITS Group A (Active)	46 / 0.074	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	46 / 0.074
Subtotal: Recurring	- / 0.074	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 0.074
Subtotal: Swashplate Actuator ECP980	- / 0.074	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 0.074
Modification Item 45 of 47: Troop Seat Pin ECP1167												
A Kits												
Recurring												
Troop Seat Pin ECP1167:INSTALL KITS Group A (Active)	- / -	- / -	- / -	- / -	- / -	- / -	30 / 0.084	21 / 0.059	- / -	- / -	- / -	51 / 0.143
Subtotal: Recurring	- / -	- / -	- / -	- / -	- / -	- / -	- / 0.084	- / 0.059	- / -	- / -	- / -	- / 0.143
Subtotal: Troop Seat Pin ECP1167	- / -	- / -	- / -	- / -	- / -	- / -	- / 0.084	- / 0.059	- / -	- / -	- / -	- / 0.143
Modification Item 46 of 47: Upper and Lower Rod Ends (Formerly Pitch Link)												
A Kits												
Recurring												
Upper and Lower Rod Ends (Formerly Pitch Link):INSTALL KITS Group A (Active)	- / -	- / -	- / -	12 / 0.960	- / -	12 / 0.960	12 / 0.960	12 / 0.960	15 / 1.200	- / -	- / -	51 / 4.080
Subtotal: Recurring	- / -	- / -	- / -	- / 0.960	- / -	- / 0.960	- / 0.960	- / 0.960	- / 1.200	- / -	- / -	- / 4.080
Subtotal: Upper and Lower Rod Ends (Formerly Pitch Link)	- / -	- / -	- / -	- / 0.960	- / -	- / 0.960	- / 0.960	- / 0.960	- / 1.200	- / -	- / -	- / 4.080
Modification Item 47 of 47: Wiring Harness ECP915												
A Kits												
Recurring												
Wiring Harness ECP915:INSTALL KITS Group A (Active)	35 / 0.608	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	35 / 0.608
Subtotal: Recurring	- / 0.608	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 0.608
Subtotal: Wiring Harness ECP915	- / 0.608	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 0.608

Exhibit P-3a, Individual Modification: PB 2020 Air Force		Date: February 2019
Appropriation / Budget Activity / Budget Sub Activity: 3010F / 05 / 5	**P-1 Line Item Number / Title:** V02200 / CV-22 Mods	**Modification Number / Title:** 8790 / Block 20 Upgrade
ID Code (A=Service Ready, B=Not Service Ready) : A	**MDAP/MAIS Code:**	
Models of Systems Affected: CV-22	**Modification Type:** Capability Improvement	**Related RDT&E PEs:** 0401318F

Financial Plan	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
	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)*
Subtotal: Procurement, All Modification Items	*- / 95.261*	*- / 19.970*	*- / 12.029*	*- / 31.532*	*- / -*	*- / 31.532*	*- / 93.655*	*- / 117.062*	*- / 114.697*	*- / 110.800*	*- / 147.430*	*- / 742.436*
Support *(All Modification Items)*												
GROUP A: TOTAL NONRECURRING	- / 45.489	- / 14.328	- / 13.593	- / 5.606	- / -	- / 5.606	- / 2.255	- / 6.239	- / 5.199	- / 7.896	- / 55.775	- / 156.380
PMA - Contractor Services	- / 20.513	- / 5.226	- / 6.913	- / 5.990	- / -	- / 5.990	- / 5.990	- / 5.990	- / 5.990	- / 5.990	- / 47.915	- / 110.517
Mod of Spares	- / 1.360	- / 0.576	- / 0.594	- / 0.250	- / -	- / 0.250	- / 0.250	- / 0.500	- / 0.250	- / 0.250	- / 11.775	- / 15.805
Data	- / 7.500	- / 2.500	- / 2.500	- / 0.500	- / -	- / 0.500	- / 1.000	- / 5.700	- / 2.875	- / 0.500	- / 10.605	- / 33.680
SIM/TRAINER	20 / 32.916	5 / 1.645	4 / 7.412	5 / 6.989	- / -	5 / 6.989	5 / 5.478	5 / 6.445	5 / 3.463	5 / 4.155	30 / 49.391	84 / 117.894
SUPPORT-EQUIP	- / 5.725	- / 2.638	- / 2.573	- / 0.500	- / -	- / 0.500	- / 0.500	- / 2.500	- / 0.500	- / 0.500	- / 9.000	- / 24.436
OTHER GOVT	- / 24.551	- / 9.826	- / 9.061	- / 8.222	- / -	- / 8.222	- / 8.287	- / 8.454	- / 8.726	- / 6.162	- / 51.314	- / 134.603
Subtotal: Support	*20 / 138.054*	*5 / 36.739*	*4 / 42.646*	*5 / 28.057*	*- / -*	*5 / 28.057*	*5 / 23.760*	*5 / 35.828*	*5 / 27.003*	*5 / 25.453*	*30 / 235.775*	*84 / 593.315*
Installation												
Modification Item 1 of 47: AC Bus Tie Impr	22 / 0.201	12 / 0.105	11 / 0.120	6 / 0.060	- / -	6 / 0.060	- / -	- / -	- / -	- / -	- / -	51 / 0.486
Modification Item 3 of 47: Advanced Threat Warning System (JUON config)	11 / 0.910	3 / 0.300	12 / 1.200	5 / 0.500	- / -	5 / 0.500	9 / 0.900	12 / 1.200	- / -	- / -	- / -	52 / 5.010
Modification Item 4 of 47: Advanced Threat Warning System (Series 2)	- / -	- / -	- / -	- / -	- / -	- / -	- / -	12 / 0.840	12 / 0.840	12 / 0.840	16 / 1.120	52 / 3.640
Modification Item 6 of 47: Auxillary Power Unit (APU) K8/ K9 Improvement	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	12 / 0.108	12 / 0.108	28 / 0.252	52 / 0.468
Modification Item 7 of 47: Blk C ECP901	18 / 2.841	3 / 0.488	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	21 / 3.329
Modification Item 9 of 47: Cockpit Voice Recorder ECP964	5 / 0.088	- / -	11 / 0.198	11 / 0.198	- / -	11 / 0.198	12 / 0.144	13 / 0.156	- / -	- / -	- / -	52 / 0.784
Modification Item 10 of 47: Co-Site ECP901	28 / 1.363	3 / 0.052	3 / 0.163	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	34 / 1.578
Modification Item 15 of 47: Engine Thermo-Couple Wiring Harness ECP1075	- / -	10 / 0.209	11 / 0.240	11 / 0.256	- / -	11 / 0.256	11 / 0.027	7 / 0.173	- / -	- / -	- / -	50 / 0.905
Modification Item 16 of 47: Fuel Jettison ECP906	26 / 3.679	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	26 / 3.679
Modification Item 19 of 47: Gearbox Vibration Monitoring	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	12 / 1.121	40 / 3.738	52 / 4.859
Modification Item 20 of 47: Gen 5 Radio ECP866R1	13 / 0.133	13 / 0.131	13 / 0.131	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	39 / 0.395
Modification Item 21 of 47: Gen 6 Radio	- / -	- / -	- / -	- / -	- / -	- / -	- / -	12 / 0.108	12 / 0.108	12 / 0.108	16 / 0.148	52 / 0.472
Modification Item 22 of 47: Gimbal Ring Joint Redesign ECP1001	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	10 / 0.300	10 / 0.360	31 / 1.116	51 / 1.776
Modification Item 24 of 47: HF Radio (BLOS) ECP1041	- / -	11 / 0.355	11 / 0.620	11 / 0.574	- / -	11 / 0.574	11 / 0.605	6 / 0.350	- / -	- / -	- / -	50 / 2.504
Modification Item 29 of 47: MCOI ECP873	- / -	5 / 0.329	11 / 0.931	11 / 0.959	- / -	11 / 0.959	9 / 0.988	5 / 0.028	- / -	- / -	- / -	41 / 3.235
Modification Item 32 of 47: Nacelle Improvements	- / -	- / -	- / -	1 / 0.500	- / -	1 / 0.500	- / -	12 / 6.000	12 / 6.000	12 / 6.000	15 / 7.500	52 / 26.000

Exhibit P-3a, Individual Modification: PB 2020 Air Force		Date: February 2019
Appropriation / Budget Activity / Budget Sub Activity: 3010F / 05 / 5	**P-1 Line Item Number / Title:** V02200 / CV-22 Mods	**Modification Number / Title:** 8790 / Block 20 Upgrade
ID Code (A=Service Ready, B=Not Service Ready) : A	**MDAP/MAIS Code:**	
Models of Systems Affected: CV-22	**Modification Type:** Capability Improvement	**Related RDT&E PEs:** 0401318F

Financial Plan	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
	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)*
Modification Item 33 of 47: Nose Landing Gear ECP869	14 / 0.098	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	14 / 0.098
Modification Item 37 of 47: Prop Rotor Hub Spring & Drive Link Impr	- / -	- / -	- / -	11 / 0.422	- / -	11 / 0.422	10 / 0.395	10 / 0.408	10 / 0.421	- / -	- / -	41 / 1.646
Modification Item 38 of 47: Rudder Reliability ECP1020	12 / 0.217	20 / 0.296	4 / 0.115	10 / 0.291	- / -	10 / 0.291	- / -	- / -	- / -	- / -	- / -	46 / 0.919
Modification Item 39 of 47: Satcom Antenna Mounting ECP901R2	15 / 0.100	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	15 / 0.100
Modification Item 40 of 47: Satcom Beefy Cables Retrofit ECP901R2	21 / 0.322	2 / 0.009	3 / 0.011	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	26 / 0.342
Modification Item 41 of 47: Satcom Egg Beater Antenna ECP901R2	21 / 0.058	2 / 0.008	4 / 0.013	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	27 / 0.079
Modification Item 42 of 47: Satcom Troop Commander Panel ECP901R2	20 / 0.110	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	20 / 0.110
Modification Item 43 of 47: Shaft Driven Compressor (SDC) Improvement	- / -	- / -	- / -	- / -	- / -	- / -	- / -	15 / 0.075	15 / 0.075	15 / 0.075	7 / 0.035	52 / 0.260
Modification Item 47 of 47: Wiring Harness ECP915	35 / 1.500	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	35 / 1.500
Subtotal: Installation	*261 / 11.620*	*84 / 2.282*	*94 / 3.742*	*77 / 3.760*	*- / -*	*77 / 3.760*	*62 / 3.059*	*104 / 9.338*	*83 / 7.852*	*85 / 8.612*	*153 / 13.909*	*1,003 / 64.174*
Total												
Total Cost (Procurement + Support + Installation)	**244.935**	**58.991**	**58.417**	**63.349**	**0.000**	**63.349**	**120.474**	**162.228**	**149.552**	**144.865**	**397.114**	**1,399.925**

Exhibit P-3a, Individual Modification: PB 2020 Air Force		Date: February 2019
Appropriation / Budget Activity / Budget Sub Activity: 3010F / 05 / 5	**P-1 Line Item Number / Title:** V02200 / CV-22 Mods	**Modification Number / Title:** 8790 / Block 20 Upgrade
ID Code (A=Service Ready, B=Not Service Ready) : A	**MDAP/MAIS Code:**	

Modification Item 1 of 47: AC Bus Tie Impr

Manufacturer Information

Manufacturer Name: Bell-Boeing	Manufacturer Location: Amarillo TX
Administrative Leadtime *(in Months)*: 6	Production Leadtime *(in Months)*: 6

Dates	FY 2018	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024
Contract Dates	Apr 2018	Apr 2019					
Delivery Dates	Oct 2018	Oct 2019					

Installation Information

Method of Implementation: Contract Field Team

Installation Cost	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
	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)*
Prior Years	22 / 0.201	12 / 0.105	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	34 / 0.306
FY 2018	- / -	- / -	11 / 0.120	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	11 / 0.120
FY 2019	- / -	- / -	- / -	6 / 0.060	- / -	6 / 0.060	- / -	- / -	- / -	- / -	- / -	6 / 0.060
FY 2020	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2021	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2022	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2023	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2024	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
To Complete	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
Total	22 / 0.201	12 / 0.105	11 / 0.120	6 / 0.060	- / -	6 / 0.060	- / -	- / -	- / -	- / -	- / -	51 / 0.486

Installation Schedule

	PYS	FY 2018				FY 2019				FY 2020				FY 2021				FY 2022				FY 2023				FY 2024				TC	Tot
		Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4		
In	22	6	6	-	-	5	6	-	-	-	3	3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0	51
Out	22	-	6	6	-	-	5	6	-	-	-	3	3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0	51

Exhibit P-3a, Individual Modification: PB 2020 Air Force		Date: February 2019
Appropriation / Budget Activity / Budget Sub Activity: 3010F / 05 / 5	**P-1 Line Item Number / Title:** V02200 / CV-22 Mods	**Modification Number / Title:** 8790 / Block 20 Upgrade
ID Code (A=Service Ready, B=Not Service Ready) : A	**MDAP/MAIS Code:**	

Modification Item 2 of 47: Advanced Multifunctional Display

Manufacturer Information

Manufacturer Name: TBD	Manufacturer Location: TBD
Administrative Leadtime *(in Months)*: 4	Production Leadtime *(in Months)*: 12

Dates	FY 2018	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024
Contract Dates					Feb 2022	Feb 2023	Feb 2024
Delivery Dates					Feb 2023	Feb 2024	Feb 2025

Installation Information

Method of Implementation (Organic): Org/Intermediate	**Installation Quantity:** 52

Exhibit P-3a, Individual Modification: PB 2020 Air Force		Date: February 2019
Appropriation / Budget Activity / Budget Sub Activity: 3010F / 05 / 5	**P-1 Line Item Number / Title:** V02200 / CV-22 Mods	**Modification Number / Title:** 8790 / Block 20 Upgrade
ID Code (A=Service Ready, B=Not Service Ready) : A	**MDAP/MAIS Code:**	

Modification Item 3 of 47: Advanced Threat Warning System (JUON config)

Manufacturer Information

Manufacturer Name: Northrop Grumman	Manufacturer Location: Falls Church, VA
Administrative Leadtime *(in Months)*: 10	Production Leadtime *(in Months)*: 12

Dates	FY 2018	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024
Contract Dates	Aug 2018		Aug 2020	Aug 2021			
Delivery Dates	Aug 2019		Aug 2021	Aug 2022			

Installation Information

Method of Implementation: Contract Field Team

Installation Cost	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
	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)*
Prior Years	11 / 0.910	3 / 0.300	9 / 0.900	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	23 / 2.110
FY 2018	- / -	- / -	3 / 0.300	2 / 0.200	- / -	2 / 0.200	- / -	- / -	- / -	- / -	- / -	5 / 0.500
FY 2019	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2020	- / -	- / -	- / -	3 / 0.300	- / -	3 / 0.300	9 / 0.900	- / -	- / -	- / -	- / -	12 / 1.200
FY 2021	- / -	- / -	- / -	- / -	- / -	- / -	- / -	12 / 1.200	- / -	- / -	- / -	12 / 1.200
FY 2022	- / -	- / -	- / -	- / -	- / -	- / -	- / -	0 / 0.000	- / -	- / -	- / -	0 / 0.000
FY 2023	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2024	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
To Complete	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
Total	11 / 0.910	3 / 0.300	12 / 1.200	5 / 0.500	- / -	5 / 0.500	9 / 0.900	12 / 1.200	- / -	- / -	- / -	52 / 5.010

Installation Schedule

		FY 2018				FY 2019				FY 2020				FY 2021				FY 2022				FY 2023				FY 2024					
	PYS	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	TC	Tot
In	11	-	-	-	3	3	3	3	3	2	1	1	1	2	3	2	2	3	3	3	3	-	-	-	-	-	-	-	-	0	52
Out	5	6	-	-	-	3	3	3	3	3	2	1	1	1	2	3	2	2	3	3	3	3	-	-	-	-	-	-	-	0	52

Exhibit P-3a, Individual Modification: PB 2020 Air Force		Date: February 2019
Appropriation / Budget Activity / Budget Sub Activity: 3010F / 05 / 5	**P-1 Line Item Number / Title:** V02200 / CV-22 Mods	**Modification Number / Title:** 8790 / Block 20 Upgrade
ID Code (A=Service Ready, B=Not Service Ready) : A	**MDAP/MAIS Code:**	

Modification Item 4 of 47: Advanced Threat Warning System (Series 2)

Manufacturer Information

Manufacturer Name: Northrup Grumman	Manufacturer Location: Falls Church, VA
Administrative Leadtime *(in Months)*: 10	Production Leadtime *(in Months)*: 12

Dates	FY 2018	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024
Contract Dates					Aug 2022	Aug 2023	Aug 2024
Delivery Dates					Aug 2023	Aug 2024	Aug 2025

Installation Information

Method of Implementation: Contract Field Team

Installation Cost	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
	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)*
Prior Years	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2018	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2019	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2020	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2021	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2022	- / -	- / -	- / -	- / -	- / -	- / -	- / -	12 / 0.840	- / -	- / -	- / -	12 / 0.840
FY 2023	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	12 / 0.840	- / -	- / -	12 / 0.840
FY 2024	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	12 / 0.840	- / -	12 / 0.840
To Complete	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	16 / 1.120	16 / 1.120
Total	- / -	- / -	- / -	- / -	- / -	- / -	- / -	12 / 0.840	12 / 0.840	12 / 0.840	16 / 1.120	52 / 3.640

Installation Schedule

	PYS	FY 2018				FY 2019				FY 2020				FY 2021				FY 2022				FY 2023				FY 2024				TC	Tot
		Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4		
In	0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	3	3	3	3	3	3	3	3	3	3	3	3	16	52
Out	0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	3	3	3	3	3	3	3	3	3	3	3	19	52

Exhibit P-3a, Individual Modification: PB 2020 Air Force		Date: February 2019
Appropriation / Budget Activity / Budget Sub Activity: 3010F / 05 / 5	**P-1 Line Item Number / Title:** V02200 / CV-22 Mods	**Modification Number / Title:** 8790 / Block 20 Upgrade

ID Code (A=Service Ready, B=Not Service Ready) : A	**MDAP/MAIS Code:**

Modification Item 5 of 47: Auto Dependent Surveillance-Broadcast ADSB/Out

Manufacturer Information

Manufacturer Name: iGATM	Manufacturer Location: Hanscom, MA
Administrative Leadtime *(in Months)*: 5	Production Leadtime *(in Months)*: 12

Dates	FY 2018	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024
Contract Dates							
Delivery Dates							

Installation Information

Method of Implementation (Organic): Org/Intermediate	**Installation Quantity:** 51

Exhibit P-3a, Individual Modification: PB 2020 Air Force		Date: February 2019
Appropriation / Budget Activity / Budget Sub Activity: 3010F / 05 / 5	**P-1 Line Item Number / Title:** V02200 / CV-22 Mods	**Modification Number / Title:** 8790 / Block 20 Upgrade

ID Code (A=Service Ready, B=Not Service Ready) : A

MDAP/MAIS Code:

Modification Item 6 of 47: Auxillary Power Unit (APU) K8/K9 Improvement

Manufacturer Information

Manufacturer Name: Bell-Boeing

Manufacturer Location: Amarillo TX

Administrative Leadtime *(in Months)*: 2

Production Leadtime *(in Months)*: 12

Dates	FY 2018	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024
Contract Dates					Dec 2022	Dec 2023	Dec 2024
Delivery Dates					Dec 2023	Dec 2024	Dec 2025

Installation Information

Method of Implementation: Contractor Facility

Installation Cost	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
	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)*
Prior Years	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2018	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2019	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2020	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2021	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2022	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	12 / 0.108	- / -	- / -	12 / 0.108
FY 2023	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	12 / 0.108	- / -	12 / 0.108
FY 2024	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	12 / 0.108	12 / 0.108
To Complete	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	16 / 0.144	16 / 0.144
Total	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	12 / 0.108	12 / 0.108	28 / 0.252	52 / 0.468

Installation Schedule

	PYS	FY 2018				FY 2019				FY 2020				FY 2021				FY 2022				FY 2023				FY 2024				TC	Tot
		Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4		
In	0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	3	3	3	3	3	3	3	3	28	52
Out	0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	3	3	3	3	3	3	3	31	52

Exhibit P-3a, Individual Modification: PB 2020 Air Force		Date: February 2019
Appropriation / Budget Activity / Budget Sub Activity: 3010F / 05 / 5	**P-1 Line Item Number / Title:** V02200 / CV-22 Mods	**Modification Number / Title:** 8790 / Block 20 Upgrade
ID Code (A=Service Ready, B=Not Service Ready) : A	**MDAP/MAIS Code:**	

Modification Item 7 of 47: Blk C ECP901

Manufacturer Information

Manufacturer Name: Bell-Boeing	Manufacturer Location: Amarillo TX
Administrative Leadtime *(in Months)*: 2	Production Leadtime *(in Months)*: 12

Dates	FY 2018	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024
Contract Dates							
Delivery Dates							

Installation Information

Method of Implementation: Contract Field Team

Installation Cost	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
	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)*
Prior Years	18 / 2.841	3 / 0.488	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	21 / 3.329
FY 2018	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2019	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2020	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2021	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2022	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2023	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2024	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
To Complete	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
Total	18 / 2.841	3 / 0.488	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	21 / 3.329

Installation Schedule

		FY 2018				FY 2019				FY 2020				FY 2021				FY 2022				FY 2023				FY 2024					
	PYS	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	TC	Tot
In	18	1	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0	21
Out	18	-	1	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0	21

Exhibit P-3a, Individual Modification: PB 2020 Air Force		Date: February 2019
Appropriation / Budget Activity / Budget Sub Activity: 3010F / 05 / 5	**P-1 Line Item Number / Title:** V02200 / CV-22 Mods	**Modification Number / Title:** 8790 / Block 20 Upgrade

ID Code (A=Service Ready, B=Not Service Ready) : A

MDAP/MAIS Code:

Modification Item 8 of 47: Coanda Valve Reliability Improvement

Manufacturer Information

Manufacturer Name: Bell-Boeing

Manufacturer Location: Amarillo TX

Administrative Leadtime *(in Months)*: 1

Production Leadtime *(in Months)*: 12

Dates	FY 2018	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024
Contract Dates				May 2021	May 2022		
Delivery Dates				May 2022	May 2023		

Installation Information

Method of Implementation (Organic): Org/Intermediate

Installation Quantity: 51

Exhibit P-3a, Individual Modification: PB 2020 Air Force		Date: February 2019
Appropriation / Budget Activity / Budget Sub Activity: 3010F / 05 / 5	**P-1 Line Item Number / Title:** V02200 / CV-22 Mods	**Modification Number / Title:** 8790 / Block 20 Upgrade
ID Code (A=Service Ready, B=Not Service Ready) : A	**MDAP/MAIS Code:**	

Modification Item 9 of 47: Cockpit Voice Recorder ECP964

Manufacturer Information

Manufacturer Name: Bell-Boeing	Manufacturer Location: Amarillo TX
Administrative Leadtime *(in Months)*: 1	Production Leadtime *(in Months)*: 11

Dates	FY 2018	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024
Contract Dates		Nov 2018	Dec 2019	Dec 2020			
Delivery Dates		Oct 2019	Nov 2020	Nov 2021			

Installation Information

Method of Implementation: Contract Field Team

Installation Cost	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
	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)*
Prior Years	5 / 0.088	- / -	11 / 0.198	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	16 / 0.286
FY 2018	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2019	- / -	- / -	- / -	11 / 0.198	- / -	11 / 0.198	- / -	- / -	- / -	- / -	- / -	11 / 0.198
FY 2020	- / -	- / -	- / -	- / -	- / -	- / -	12 / 0.144	- / -	- / -	- / -	- / -	12 / 0.144
FY 2021	- / -	- / -	- / -	- / -	- / -	- / -	- / -	13 / 0.156	- / -	- / -	- / -	13 / 0.156
FY 2022	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2023	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2024	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
To Complete	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
Total	5 / 0.088	- / -	11 / 0.198	11 / 0.198	- / -	11 / 0.198	12 / 0.144	13 / 0.156	- / -	- / -	- / -	52 / 0.784

Installation Schedule

	PYS	FY 2018				FY 2019				FY 2020				FY 2021				FY 2022				FY 2023				FY 2024				TC	Tot
		Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4		
In	5	-	-	-	-	3	3	3	2	3	3	3	2	3	3	3	3	4	3	3	3	-	-	-	-	-	-	-	-	0	52
Out	5	-	-	-	-	-	3	3	3	2	3	3	3	2	3	3	3	4	4	4	4	-	-	-	-	-	-	-	-	0	52

Exhibit P-3a, Individual Modification: PB 2020 Air Force		Date: February 2019
Appropriation / Budget Activity / Budget Sub Activity: 3010F / 05 / 5	**P-1 Line Item Number / Title:** V02200 / CV-22 Mods	**Modification Number / Title:** 8790 / Block 20 Upgrade
ID Code (A=Service Ready, B=Not Service Ready) : A	**MDAP/MAIS Code:**	

Modification Item 10 of 47: Co-Site ECP901

Manufacturer Information

Manufacturer Name: Bell-Boeing	Manufacturer Location: Amarillo TX
Administrative Leadtime *(in Months)*: 2	Production Leadtime *(in Months)*: 12

Dates	FY 2018	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024
Contract Dates							
Delivery Dates							

Installation Information

Method of Implementation: Contract Field Team

Installation Cost	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
	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)*
Prior Years	28 / 1.363	3 / 0.052	3 / 0.163	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	34 / 1.578
FY 2018	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2019	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2020	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2021	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2022	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2023	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2024	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
To Complete	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
Total	28 / 1.363	3 / 0.052	3 / 0.163	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	34 / 1.578

Installation Schedule

		FY 2018				FY 2019				FY 2020				FY 2021				FY 2022				FY 2023				FY 2024					
	PYS	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	TC	Tot
In	28	2	1	-	-	-	-	3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0	34
Out	27	1	2	1	-	-	-	-	3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0	34

Exhibit P-3a, Individual Modification: PB 2020 Air Force		Date: February 2019
Appropriation / Budget Activity / Budget Sub Activity: 3010F / 05 / 5	**P-1 Line Item Number / Title:** V02200 / CV-22 Mods	**Modification Number / Title:** 8790 / Block 20 Upgrade

ID Code (A=Service Ready, B=Not Service Ready) : A

MDAP/MAIS Code:

Modification Item 11 of 47: Data Transfer Unit Upgrade

Manufacturer Information

Manufacturer Name: Bell-Boeing

Manufacturer Location: Amarillo TX

Administrative Leadtime *(in Months)*: 4

Production Leadtime *(in Months)*: 12

Dates	FY 2018	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024
Contract Dates	Feb 2018	Feb 2019					
Delivery Dates	Feb 2019	Feb 2020					

Installation Information

Method of Implementation (Organic): Org/Intermediate

Installation Quantity: 51

Exhibit P-3a, Individual Modification: PB 2020 Air Force		Date: February 2019
Appropriation / Budget Activity / Budget Sub Activity: 3010F / 05 / 5	**P-1 Line Item Number / Title:** V02200 / CV-22 Mods	**Modification Number / Title:** 8790 / Block 20 Upgrade

ID Code (A=Service Ready, B=Not Service Ready) : A

MDAP/MAIS Code:

Modification Item 12 of 47: Drive Tube ECP929

Manufacturer Information

Manufacturer Name: Bell-Boeing

Manufacturer Location: Amarillo TX

Administrative Leadtime *(in Months)*: 2

Production Leadtime *(in Months)*: 3

Dates	FY 2018	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024
Contract Dates	Dec 2017	Dec 2018	Dec 2019	Dec 2021			
Delivery Dates	Mar 2018	Mar 2019	Mar 2020	Mar 2022			

Installation Information

Method of Implementation (Organic): Org/Intermediate

Installation Quantity: 51

Exhibit P-3a, Individual Modification: PB 2020 Air Force		Date: February 2019
Appropriation / Budget Activity / Budget Sub Activity: 3010F / 05 / 5	**P-1 Line Item Number / Title:** V02200 / CV-22 Mods	**Modification Number / Title:** 8790 / Block 20 Upgrade

ID Code (A=Service Ready, B=Not Service Ready) : A

MDAP/MAIS Code:

Modification Item 13 of 47: Electric Power System Upgrade (GCU)

Manufacturer Information

Manufacturer Name: Bell-Boeing

Manufacturer Location: Amarillo, TX

Administrative Leadtime *(in Months)*: 1

Production Leadtime *(in Months)*: 12

Dates	FY 2018	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024
Contract Dates					Dec 2021	Dec 2022	Dec 2023
Delivery Dates					Dec 2022	Dec 2023	Dec 2024

Installation Information

Method of Implementation (Organic): Org/Intermediate

Installation Quantity: 104

Exhibit P-3a, Individual Modification: PB 2020 Air Force		Date: February 2019
Appropriation / Budget Activity / Budget Sub Activity: 3010F / 05 / 5	**P-1 Line Item Number / Title:** V02200 / CV-22 Mods	**Modification Number / Title:** 8790 / Block 20 Upgrade

ID Code (A=Service Ready, B=Not Service Ready) : A

MDAP/MAIS Code:

Modification Item 14 of 47: Emergency O2 Bottle Gauge ECP527R1

Manufacturer Information

Manufacturer Name: Bell-Boeing

Manufacturer Location: Amarillo TX

Administrative Leadtime *(in Months)*: 9

Production Leadtime *(in Months)*: 14

Dates	FY 2018	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024
Contract Dates							
Delivery Dates							

Installation Information

Method of Implementation (Organic): Org/Intermediate

Installation Quantity: 44

Exhibit P-3a, Individual Modification: PB 2020 Air Force		Date: February 2019
Appropriation / Budget Activity / Budget Sub Activity: 3010F / 05 / 5	**P-1 Line Item Number / Title:** V02200 / CV-22 Mods	**Modification Number / Title:** 8790 / Block 20 Upgrade

ID Code (A=Service Ready, B=Not Service Ready) : A

MDAP/MAIS Code:

Modification Item 15 of 47: Engine Thermo-Couple Wiring Harness ECP1075

Manufacturer Information

Manufacturer Name: Bell-Boeing

Manufacturer Location: Amarillo TX

Administrative Leadtime *(in Months)*: 2

Production Leadtime *(in Months)*: 12

Dates	FY 2018	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024
Contract Dates	Dec 2017	Dec 2018	Dec 2019	Dec 2020			
Delivery Dates	Dec 2018	Dec 2019	Dec 2020	Dec 2021			

Installation Information

Method of Implementation: Contract Field Team

Installation Cost	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
	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)*
Prior Years	- / -	10 / 0.209	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	10 / 0.209
FY 2018	- / -	- / -	11 / 0.240	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	11 / 0.240
FY 2019	- / -	- / -	- / -	11 / 0.256	- / -	11 / 0.256	- / -	- / -	- / -	- / -	- / -	11 / 0.256
FY 2020	- / -	- / -	- / -	- / -	- / -	- / -	11 / 0.027	- / -	- / -	- / -	- / -	11 / 0.027
FY 2021	- / -	- / -	- / -	- / -	- / -	- / -	- / -	7 / 0.173	- / -	- / -	- / -	7 / 0.173
FY 2022	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2023	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2024	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
To Complete	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
Total	- / -	10 / 0.209	11 / 0.240	11 / 0.256	- / -	11 / 0.256	11 / 0.027	7 / 0.173	- / -	- / -	- / -	50 / 0.905

Installation Schedule

	PYS	FY 2018				FY 2019				FY 2020				FY 2021				FY 2022				FY 2023				FY 2024				TC	Tot
		Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4		
In	0	2	2	3	3	3	3	3	2	3	3	3	2	3	3	3	2	3	3	1	-	-	-	-	-	-	-	-	-	0	50
Out	0	-	2	2	3	3	3	3	3	2	3	3	3	2	3	3	3	2	3	3	1	-	-	-	-	-	-	-	-	0	50

Exhibit P-3a, Individual Modification: PB 2020 Air Force		Date: February 2019
Appropriation / Budget Activity / Budget Sub Activity: 3010F / 05 / 5	**P-1 Line Item Number / Title:** V02200 / CV-22 Mods	**Modification Number / Title:** 8790 / Block 20 Upgrade
ID Code (A=Service Ready, B=Not Service Ready) : A	**MDAP/MAIS Code:**	

Modification Item 16 of 47: Fuel Jettison ECP906

Manufacturer Information

Manufacturer Name: Bell-Boeing	Manufacturer Location: Amarillo TX
Administrative Leadtime *(in Months)*: 2	Production Leadtime *(in Months)*: 12

Dates	FY 2018	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024
Contract Dates							
Delivery Dates							

Installation Information

Method of Implementation: Contract Field Team

Installation Cost	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
	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)*
Prior Years	26 / 3.679	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	26 / 3.679
FY 2018	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2019	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2020	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2021	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2022	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2023	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2024	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
To Complete	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
Total	26 / 3.679	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	26 / 3.679

Installation Schedule

	PYS	FY 2018				FY 2019				FY 2020				FY 2021				FY 2022				FY 2023				FY 2024				TC	Tot
		Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4		
In	26	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0	26
Out	26	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0	26

Exhibit P-3a, Individual Modification: PB 2020 Air Force		Date: February 2019
Appropriation / Budget Activity / Budget Sub Activity: 3010F / 05 / 5	**P-1 Line Item Number / Title:** V02200 / CV-22 Mods	**Modification Number / Title:** 8790 / Block 20 Upgrade

ID Code (A=Service Ready, B=Not Service Ready) : A

MDAP/MAIS Code:

Modification Item 17 of 47: Fwd Looking Infrared Systems Electronics Unit (FLIR SEU)

Manufacturer Information

Manufacturer Name: Bell-Boeing	Manufacturer Location: Amarillo TX
Administrative Leadtime *(in Months)*: 1	Production Leadtime *(in Months)*: 12

Dates	FY 2018	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024
Contract Dates	Nov 2017						
Delivery Dates	Nov 2018						

Installation Information

Method of Implementation (Organic): Org/Intermediate	**Installation Quantity:** 51

Exhibit P-3a, Individual Modification: PB 2020 Air Force		Date: February 2019
Appropriation / Budget Activity / Budget Sub Activity: 3010F / 05 / 5	**P-1 Line Item Number / Title:** V02200 / CV-22 Mods	**Modification Number / Title:** 8790 / Block 20 Upgrade
ID Code (A=Service Ready, B=Not Service Ready) : A	**MDAP/MAIS Code:**	

Modification Item 18 of 47: GAU-21 Gun

Manufacturer Information

Manufacturer Name: Specialty CNC Incorporated	Manufacturer Location: Bloomington IN
Administrative Leadtime *(in Months)*: 0	Production Leadtime *(in Months)*: 0

Dates	FY 2018	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024
Contract Dates							
Delivery Dates							

Installation Information

Method of Implementation (Organic): Org/Intermediate	**Installation Quantity:** 100

Exhibit P-3a, Individual Modification: PB 2020 Air Force		Date: February 2019
Appropriation / Budget Activity / Budget Sub Activity: 3010F / 05 / 5	**P-1 Line Item Number / Title:** V02200 / CV-22 Mods	**Modification Number / Title:** 8790 / Block 20 Upgrade

ID Code (A=Service Ready, B=Not Service Ready) : A

MDAP/MAIS Code:

Modification Item 19 of 47: Gearbox Vibration Monitoring

Manufacturer Information

Manufacturer Name: Bell-Boeing

Manufacturer Location: Amarillo TX

Administrative Leadtime *(in Months)*: 2

Production Leadtime *(in Months)*: 12

Dates	FY 2018	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024
Contract Dates						Dec 2023	Dec 2024
Delivery Dates						Dec 2024	Dec 2025

Installation Information

Method of Implementation: Contractor Facility

Installation Cost	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
	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)*
Prior Years	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2018	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2019	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2020	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2021	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2022	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2023	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	12 / 1.121	- / -	12 / 1.121
FY 2024	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	12 / 1.121	12 / 1.121
To Complete	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	28 / 2.617	28 / 2.617
Total	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	12 / 1.121	40 / 3.738	52 / 4.859

Installation Schedule

	PYS	FY 2018				FY 2019				FY 2020				FY 2021				FY 2022				FY 2023				FY 2024				TC	Tot
		Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4		
In	0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	3	3	3	3	40	52
Out	0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	3	3	3	43	52

Exhibit P-3a, Individual Modification: PB 2020 Air Force		Date: February 2019
Appropriation / Budget Activity / Budget Sub Activity: 3010F / 05 / 5	**P-1 Line Item Number / Title:** V02200 / CV-22 Mods	**Modification Number / Title:** 8790 / Block 20 Upgrade
ID Code (A=Service Ready, B=Not Service Ready) : A	**MDAP/MAIS Code:**	

Modification Item 20 of 47: Gen 5 Radio ECP866R1

Manufacturer Information

Manufacturer Name: Bell-Boeing	Manufacturer Location: Amarillo TX
Administrative Leadtime *(in Months)*: 1	Production Leadtime *(in Months)*: 12

Dates	FY 2018	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024
Contract Dates							
Delivery Dates							

Installation Information

Method of Implementation: Contract Field Team

Installation Cost	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
	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)*
Prior Years	13 / 0.133	13 / 0.131	13 / 0.131	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	39 / 0.395
FY 2018	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2019	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2020	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2021	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2022	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2023	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2024	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
To Complete	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
Total	13 / 0.133	13 / 0.131	13 / 0.131	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	39 / 0.395

Installation Schedule

	PYS	FY 2018				FY 2019				FY 2020				FY 2021				FY 2022				FY 2023				FY 2024				TC	Tot
		Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4		
In	13	4	4	4	1	4	4	4	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0	39
Out	9	4	4	4	4	1	4	4	4	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0	39

Exhibit P-3a, Individual Modification: PB 2020 Air Force		Date: February 2019
Appropriation / Budget Activity / Budget Sub Activity: 3010F / 05 / 5	**P-1 Line Item Number / Title:** V02200 / CV-22 Mods	**Modification Number / Title:** 8790 / Block 20 Upgrade

ID Code (A=Service Ready, B=Not Service Ready) : A

MDAP/MAIS Code:

Modification Item 21 of 47: Gen 6 Radio

Manufacturer Information

Manufacturer Name: TBD

Manufacturer Location: Patuxent River, MD

Administrative Leadtime *(in Months)*: 6

Production Leadtime *(in Months)*: 10

Dates	FY 2018	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024
Contract Dates				Apr 2021	Apr 2022	Apr 2023	Apr 2024
Delivery Dates				Feb 2022	Feb 2023	Feb 2024	Feb 2025

Installation Information

Method of Implementation: Contractor Facility

Installation Cost	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
	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)*
Prior Years	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2018	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2019	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2020	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2021	- / -	- / -	- / -	- / -	- / -	- / -	- / -	12 / 0.108	- / -	- / -	- / -	12 / 0.108
FY 2022	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	12 / 0.108	- / -	- / -	12 / 0.108
FY 2023	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	12 / 0.108	- / -	12 / 0.108
FY 2024	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	12 / 0.108	12 / 0.108
To Complete	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	4 / 0.040	4 / 0.040
Total	- / -	- / -	- / -	- / -	- / -	- / -	- / -	12 / 0.108	12 / 0.108	12 / 0.108	16 / 0.148	52 / 0.472

Installation Schedule

	PYS	FY 2018				FY 2019				FY 2020				FY 2021				FY 2022				FY 2023				FY 2024				TC	Tot
		Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4		
In	0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	4	4	4	3	3	3	3	3	3	3	3	16	52
Out	0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	4	4	4	3	3	3	3	3	3	3	19	52

Exhibit P-3a, Individual Modification: PB 2020 Air Force		Date: February 2019
Appropriation / Budget Activity / Budget Sub Activity: 3010F / 05 / 5	**P-1 Line Item Number / Title:** V02200 / CV-22 Mods	**Modification Number / Title:** 8790 / Block 20 Upgrade

ID Code (A=Service Ready, B=Not Service Ready) : A | **MDAP/MAIS Code:**

Modification Item 22 of 47: Gimbal Ring Joint Redesign ECP1001

Manufacturer Information

Manufacturer Name: Bell-Boeing | Manufacturer Location: Amarillo TX

Administrative Leadtime *(in Months)*: 2 | Production Leadtime *(in Months)*: 12

Dates	FY 2018	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024
Contract Dates					Dec 2021	Dec 2022	Dec 2023
Delivery Dates					Dec 2022	Dec 2023	Dec 2024

Installation Information

Method of Implementation: Contract Field Team

Installation Cost	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
	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)*
Prior Years	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2018	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2019	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2020	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2021	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2022	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	10 / 0.300	- / -	- / -	10 / 0.300
FY 2023	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	10 / 0.360	- / -	10 / 0.360
FY 2024	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	12 / 0.432	12 / 0.432
To Complete	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	19 / 0.684	19 / 0.684
Total	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	10 / 0.300	10 / 0.360	31 / 1.116	51 / 1.776

Installation Schedule

	PYS	FY 2018				FY 2019				FY 2020				FY 2021				FY 2022				FY 2023				FY 2024				TC	Tot
		Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4		
In	0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	3	3	2	2	2	2	3	3	31	51
Out	0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	3	3	2	2	2	2	3	34	51

Exhibit P-3a, Individual Modification: PB 2020 Air Force		Date: February 2019
Appropriation / Budget Activity / Budget Sub Activity: 3010F / 05 / 5	**P-1 Line Item Number / Title:** V02200 / CV-22 Mods	**Modification Number / Title:** 8790 / Block 20 Upgrade

ID Code (A=Service Ready, B=Not Service Ready) : A

MDAP/MAIS Code:

Modification Item 23 of 47: GPS M-Code Upgrade

Manufacturer Information

Manufacturer Name: TBD

Manufacturer Location: TBD

Administrative Leadtime *(in Months)*: 6

Production Leadtime *(in Months)*: 12

Dates	FY 2018	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024
Contract Dates					Apr 2022	Apr 2023	Apr 2024
Delivery Dates					Apr 2023	Apr 2024	Apr 2025

Installation Information

Method of Implementation (Organic): Org/Intermediate

Installation Quantity: 52

Exhibit P-3a, Individual Modification: PB 2020 Air Force		Date: February 2019
Appropriation / Budget Activity / Budget Sub Activity: 3010F / 05 / 5	**P-1 Line Item Number / Title:** V02200 / CV-22 Mods	**Modification Number / Title:** 8790 / Block 20 Upgrade

ID Code (A=Service Ready, B=Not Service Ready) : A

MDAP/MAIS Code:

Modification Item 24 of 47: HF Radio (BLOS) ECP1041

Manufacturer Information

Manufacturer Name: Bell-Boeing

Manufacturer Location: Amarillo TX

Administrative Leadtime *(in Months)*: 8

Production Leadtime *(in Months)*: 11

Dates	FY 2018	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024
Contract Dates	Jun 2018	Jun 2019	Jun 2020	Jun 2021			
Delivery Dates	May 2019	May 2020	May 2021	May 2022			

Installation Information

Method of Implementation: Contract Field Team

Installation Cost	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
	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)*
Prior Years	- / -	11 / 0.355	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	11 / 0.355
FY 2018	- / -	- / -	11 / 0.620	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	11 / 0.620
FY 2019	- / -	- / -	- / -	11 / 0.574	- / -	11 / 0.574	- / -	- / -	- / -	- / -	- / -	11 / 0.574
FY 2020	- / -	- / -	- / -	- / -	- / -	- / -	11 / 0.605	- / -	- / -	- / -	- / -	11 / 0.605
FY 2021	- / -	- / -	- / -	- / -	- / -	- / -	- / -	6 / 0.350	- / -	- / -	- / -	6 / 0.350
FY 2022	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2023	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2024	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
To Complete	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
Total	- / -	11 / 0.355	11 / 0.620	11 / 0.574	- / -	11 / 0.574	11 / 0.605	6 / 0.350	- / -	- / -	- / -	50 / 2.504

Installation Schedule

	PYS	FY 2018				FY 2019				FY 2020				FY 2021				FY 2022				FY 2023				FY 2024				TC	Tot
		Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4		
In	0	-	-	5	6	-	-	6	5	2	3	3	3	3	3	3	2	2	2	2	-	-	-	-	-	-	-	-	-	0	50
Out	0	-	-	-	5	6	-	-	6	5	2	3	3	3	3	3	3	2	2	2	2	-	-	-	-	-	-	-	-	0	50

Exhibit P-3a, Individual Modification: PB 2020 Air Force		Date: February 2019
Appropriation / Budget Activity / Budget Sub Activity: 3010F / 05 / 5	**P-1 Line Item Number / Title:** V02200 / CV-22 Mods	**Modification Number / Title:** 8790 / Block 20 Upgrade
ID Code (A=Service Ready, B=Not Service Ready) : A	**MDAP/MAIS Code:**	

Modification Item 25 of 47: IIS/Engine Air Particle Solution

Manufacturer Information

Manufacturer Name: TBD	Manufacturer Location: TBD
Administrative Leadtime *(in Months)*: 5	Production Leadtime *(in Months)*: 3

Dates	FY 2018	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024
Contract Dates							Mar 2024
Delivery Dates							Jun 2024

Installation Information

Method of Implementation (Organic): Org/Intermediate	**Installation Quantity:** 52

Exhibit P-3a, Individual Modification: PB 2020 Air Force		Date: February 2019
Appropriation / Budget Activity / Budget Sub Activity: 3010F / 05 / 5	**P-1 Line Item Number / Title:** V02200 / CV-22 Mods	**Modification Number / Title:** 8790 / Block 20 Upgrade
ID Code (A=Service Ready, B=Not Service Ready) : A	**MDAP/MAIS Code:**	

Modification Item 26 of 47: Improved Engine Infrared Suppressor (IRS)

Manufacturer Information

Manufacturer Name: TBD	Manufacturer Location: TBD
Administrative Leadtime *(in Months)*: 2	Production Leadtime *(in Months)*: 12

Dates	FY 2018	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024
Contract Dates					Dec 2022	Dec 2023	Dec 2024
Delivery Dates					Dec 2023	Dec 2024	Dec 2025

Installation Information

Method of Implementation (Organic): Org/Intermediate	**Installation Quantity:** 52

Exhibit P-3a, Individual Modification: PB 2020 Air Force		Date: February 2019
Appropriation / Budget Activity / Budget Sub Activity: 3010F / 05 / 5	**P-1 Line Item Number / Title:** V02200 / CV-22 Mods	**Modification Number / Title:** 8790 / Block 20 Upgrade

ID Code (A=Service Ready, B=Not Service Ready) : A

MDAP/MAIS Code:

Modification Item 27 of 47: Intel Broadcast Service - Back on the Glass Upgrade

Manufacturer Information

Manufacturer Name: Bell-Boeing

Manufacturer Location: Amarillo TX

Administrative Leadtime *(in Months)*: 5

Production Leadtime *(in Months)*: 3

Dates	FY 2018	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024
Contract Dates					Mar 2022	Mar 2023	Mar 2024
Delivery Dates					Jun 2022	Jun 2023	Jun 2024

Installation Information

Method of Implementation (Organic): Org/Intermediate

Installation Quantity: 52

Exhibit P-3a, Individual Modification: PB 2020 Air Force		Date: February 2019
Appropriation / Budget Activity / Budget Sub Activity: 3010F / 05 / 5	**P-1 Line Item Number / Title:** V02200 / CV-22 Mods	**Modification Number / Title:** 8790 / Block 20 Upgrade

ID Code (A=Service Ready, B=Not Service Ready) : A

MDAP/MAIS Code:

Modification Item 28 of 47: MCOI CAPRE

Manufacturer Information

Manufacturer Name: Prototype Integration Facility

Manufacturer Location: Huntsville AL

Administrative Leadtime *(in Months)*: 2

Production Leadtime *(in Months)*: 12

Dates	FY 2018	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024
Contract Dates	Dec 2017	Dec 2018	Dec 2019	Dec 2020			
Delivery Dates	Dec 2018	Dec 2019	Dec 2020	Dec 2021			

Installation Information

Method of Implementation (Organic): Org/Intermediate

Installation Quantity: 49

Exhibit P-3a, Individual Modification: PB 2020 Air Force		Date: February 2019
Appropriation / Budget Activity / Budget Sub Activity: 3010F / 05 / 5	**P-1 Line Item Number / Title:** V02200 / CV-22 Mods	**Modification Number / Title:** 8790 / Block 20 Upgrade
ID Code (A=Service Ready, B=Not Service Ready) : A	**MDAP/MAIS Code:**	

Modification Item 29 of 47: MCOI ECP873

Manufacturer Information

Manufacturer Name: Elbit Systems	Manufacturer Location: Fort Worth, TX
Administrative Leadtime *(in Months)*: 2	Production Leadtime *(in Months)*: 12

Dates	FY 2018	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024
Contract Dates	Dec 2017	Dec 2018	Dec 2019	Dec 2020			
Delivery Dates	Dec 2018	Dec 2019	Dec 2020	Dec 2021			

Installation Information

Method of Implementation: Contract Field Team

Installation Cost	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
	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)*
Prior Years	- / -	5 / 0.329	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	5 / 0.329
FY 2018	- / -	- / -	11 / 0.931	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	11 / 0.931
FY 2019	- / -	- / -	- / -	11 / 0.959	- / -	11 / 0.959	- / -	- / -	- / -	- / -	- / -	11 / 0.959
FY 2020	- / -	- / -	- / -	- / -	- / -	- / -	9 / 0.988	- / -	- / -	- / -	- / -	9 / 0.988
FY 2021	- / -	- / -	- / -	- / -	- / -	- / -	- / -	5 / 0.028	- / -	- / -	- / -	5 / 0.028
FY 2022	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2023	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2024	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
To Complete	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
Total	- / -	5 / 0.329	11 / 0.931	11 / 0.959	- / -	11 / 0.959	9 / 0.988	5 / 0.028	- / -	- / -	- / -	41 / 3.235

Installation Schedule

	PYS	FY 2018				FY 2019				FY 2020				FY 2021				FY 2022				FY 2023				FY 2024				TC	Tot
		Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4		
In	0	1	1	1	2	2	3	3	3	2	3	3	3	2	2	2	3	3	2	-	-	-	-	-	-	-	-	-	-	0	41
Out	0	-	1	1	1	2	2	3	3	3	2	3	3	3	2	2	2	3	3	2	-	-	-	-	-	-	-	-	-	0	41

Exhibit P-3a, Individual Modification: PB 2020 Air Force		Date: February 2019
Appropriation / Budget Activity / Budget Sub Activity: 3010F / 05 / 5	**P-1 Line Item Number / Title:** V02200 / CV-22 Mods	**Modification Number / Title:** 8790 / Block 20 Upgrade

ID Code (A=Service Ready, B=Not Service Ready) : A

MDAP/MAIS Code:

Modification Item 30 of 47: Mode 5 APX-119 ECP935

Manufacturer Information

Manufacturer Name: Raytheon

Manufacturer Location: Aberdeen Proving Grounds MD

Administrative Leadtime *(in Months)*: 2

Production Leadtime *(in Months)*: 10

Dates	FY 2018	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024
Contract Dates							
Delivery Dates							

Installation Information

Method of Implementation (Organic): Org/Intermediate

Installation Quantity: 36

Exhibit P-3a, Individual Modification: PB 2020 Air Force		Date: February 2019
Appropriation / Budget Activity / Budget Sub Activity: 3010F / 05 / 5	**P-1 Line Item Number / Title:** V02200 / CV-22 Mods	**Modification Number / Title:** 8790 / Block 20 Upgrade

ID Code (A=Service Ready, B=Not Service Ready) : A

MDAP/MAIS Code:

Modification Item 31 of 47: Modular Avionics - Cyber

Manufacturer Information

Manufacturer Name: TBD

Manufacturer Location: TBD

Administrative Leadtime *(in Months)*: 5

Production Leadtime *(in Months)*: 12

Dates	FY 2018	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024
Contract Dates					Mar 2022	Mar 2023	Mar 2024
Delivery Dates					Mar 2023	Mar 2024	Mar 2025

Installation Information

Method of Implementation (Organic): Org/Intermediate

Installation Quantity: 52

Exhibit P-3a, Individual Modification: PB 2020 Air Force		Date: February 2019
Appropriation / Budget Activity / Budget Sub Activity: 3010F / 05 / 5	**P-1 Line Item Number / Title:** V02200 / CV-22 Mods	**Modification Number / Title:** 8790 / Block 20 Upgrade

ID Code (A=Service Ready, B=Not Service Ready) : A

MDAP/MAIS Code:

Modification Item 32 of 47: Nacelle Improvements

Manufacturer Information

Manufacturer Name: Bell-Boeing

Manufacturer Location: Amarillo TX

Administrative Leadtime *(in Months)*: 5

Production Leadtime *(in Months)*: 3

Dates	FY 2018	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024
Contract Dates			Mar 2020	Mar 2021	Mar 2022	Mar 2023	Mar 2024
Delivery Dates			Jun 2020	Jun 2021	Jun 2022	Jun 2023	Jun 2024

Installation Information

Method of Implementation: Contract Field Team

Installation Cost	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
	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)*
Prior Years	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2018	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2019	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2020	- / -	- / -	- / -	1 / 0.500	- / -	1 / 0.500	- / -	- / -	- / -	- / -	- / -	1 / 0.500
FY 2021	- / -	- / -	- / -	- / -	- / -	- / -	- / -	12 / 6.000	- / -	- / -	- / -	12 / 6.000
FY 2022	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	12 / 6.000	- / -	- / -	12 / 6.000
FY 2023	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	12 / 6.000	- / -	12 / 6.000
FY 2024	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	12 / 6.000	12 / 6.000
To Complete	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	3 / 1.500	3 / 1.500
Total	- / -	- / -	- / -	1 / 0.500	- / -	1 / 0.500	- / -	12 / 6.000	12 / 6.000	12 / 6.000	15 / 7.500	52 / 26.000

Installation Schedule

	PYS	FY 2018				FY 2019				FY 2020				FY 2021				FY 2022				FY 2023				FY 2024				TC	Tot
		Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4		
In	0	-	-	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-	4	4	4	2	4	4	2	2	4	4	2	15	52
Out	0	-	-	-	-	-	-	-	-	-	-	-	1	-	-	-	-	-	-	4	4	4	2	4	4	2	2	4	4	17	52

Exhibit P-3a, Individual Modification: PB 2020 Air Force		Date: February 2019
Appropriation / Budget Activity / Budget Sub Activity: 3010F / 05 / 5	**P-1 Line Item Number / Title:** V02200 / CV-22 Mods	**Modification Number / Title:** 8790 / Block 20 Upgrade

ID Code (A=Service Ready, B=Not Service Ready) : A

MDAP/MAIS Code:

Modification Item 33 of 47: Nose Landing Gear ECP869

Manufacturer Information

Manufacturer Name: Bell-Boeing

Manufacturer Location: Amarillo TX

Administrative Leadtime *(in Months)*: 1

Production Leadtime *(in Months)*: 3

Dates	FY 2018	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024
Contract Dates							
Delivery Dates							

Installation Information

Method of Implementation: Contractor Facility

Installation Cost	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
	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)*
Prior Years	14 / 0.098	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	14 / 0.098
FY 2018	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2019	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2020	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2021	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2022	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2023	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2024	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
To Complete	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
Total	14 / 0.098	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	14 / 0.098

Installation Schedule

	PYS	FY 2018				FY 2019				FY 2020				FY 2021				FY 2022				FY 2023				FY 2024				TC	Tot
		Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4		
In	14	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0	14
Out	14	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0	14

Exhibit P-3a, Individual Modification: PB 2020 Air Force		Date: February 2019
Appropriation / Budget Activity / Budget Sub Activity: 3010F / 05 / 5	**P-1 Line Item Number / Title:** V02200 / CV-22 Mods	**Modification Number / Title:** 8790 / Block 20 Upgrade

ID Code (A=Service Ready, B=Not Service Ready) : A

MDAP/MAIS Code:

Modification Item 34 of 47: O2N2 Concentrator Sieve Bed Correction ECP1107

Manufacturer Information

Manufacturer Name: Bell-Boeing

Manufacturer Location: Amarillo, TX

Administrative Leadtime *(in Months)*: 5

Production Leadtime *(in Months)*: 3

Dates	FY 2018	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024
Contract Dates	Mar 2018	Mar 2019	Mar 2020	Mar 2021	Mar 2022		
Delivery Dates	Jun 2018	Jun 2019	Jun 2020	Jun 2021	Jun 2022		

Installation Information

Method of Implementation (Organic): Org/Intermediate

Installation Quantity: 51

Exhibit P-3a, Individual Modification: PB 2020 Air Force		Date: February 2019
Appropriation / Budget Activity / Budget Sub Activity: 3010F / 05 / 5	**P-1 Line Item Number / Title:** V02200 / CV-22 Mods	**Modification Number / Title:** 8790 / Block 20 Upgrade

ID Code (A=Service Ready, B=Not Service Ready) : A

MDAP/MAIS Code:

Modification Item 35 of 47: PRGB Atmospheric Protection ECP992

Manufacturer Information

Manufacturer Name: Bell-Boeing

Manufacturer Location: Amarillo TX

Administrative Leadtime *(in Months)*: 6

Production Leadtime *(in Months)*: 18

Dates	FY 2018	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024
Contract Dates	Apr 2018	Apr 2019					
Delivery Dates	Oct 2019	Oct 2020					

Installation Information

Method of Implementation (Organic): Org/Intermediate

Installation Quantity: 51

Exhibit P-3a, Individual Modification: PB 2020 Air Force		Date: February 2019
Appropriation / Budget Activity / Budget Sub Activity: 3010F / 05 / 5	**P-1 Line Item Number / Title:** V02200 / CV-22 Mods	**Modification Number / Title:** 8790 / Block 20 Upgrade

ID Code (A=Service Ready, B=Not Service Ready) : A

MDAP/MAIS Code:

Modification Item 36 of 47: PRGB Input Quill/Clutch Redesign

Manufacturer Information

Manufacturer Name: Bell-Boeing

Manufacturer Location: Amarillo TX

Administrative Leadtime *(in Months)*: 5

Production Leadtime *(in Months)*: 12

Dates	FY 2018	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024
Contract Dates			Mar 2020	Mar 2021	Mar 2022	Mar 2023	
Delivery Dates			Mar 2021	Mar 2022	Mar 2023	Mar 2024	

Installation Information

Method of Implementation (Organic): Org/Intermediate

Installation Quantity: 48

Exhibit P-3a, Individual Modification: PB 2020 Air Force		Date: February 2019
Appropriation / Budget Activity / Budget Sub Activity: 3010F / 05 / 5	**P-1 Line Item Number / Title:** V02200 / CV-22 Mods	**Modification Number / Title:** 8790 / Block 20 Upgrade
ID Code (A=Service Ready, B=Not Service Ready) : A	**MDAP/MAIS Code:**	

Modification Item 37 of 47: Prop Rotor Hub Spring & Drive Link Impr

Manufacturer Information

Manufacturer Name: Bell-Boeing	Manufacturer Location: Amarillo TX
Administrative Leadtime *(in Months)*: 2	Production Leadtime *(in Months)*: 12

Dates	FY 2018	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024
Contract Dates	Dec 2017	Dec 2018	Dec 2019	Dec 2020	Dec 2021		
Delivery Dates	Dec 2018	Dec 2019	Dec 2020	Dec 2021	Dec 2022		

Installation Information

Method of Implementation: Contract Field Team

Installation Cost	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
	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)*
Prior Years	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2018	- / -	- / -	- / -	1 / 0.038	- / -	1 / 0.038	- / -	- / -	- / -	- / -	- / -	1 / 0.038
FY 2019	- / -	- / -	- / -	10 / 0.384	- / -	10 / 0.384	- / -	- / -	- / -	- / -	- / -	10 / 0.384
FY 2020	- / -	- / -	- / -	- / -	- / -	- / -	10 / 0.395	- / -	- / -	- / -	- / -	10 / 0.395
FY 2021	- / -	- / -	- / -	- / -	- / -	- / -	- / -	10 / 0.408	- / -	- / -	- / -	10 / 0.408
FY 2022	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	10 / 0.421	- / -	- / -	10 / 0.421
FY 2023	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2024	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
To Complete	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
Total	- / -	- / -	- / -	11 / 0.422	- / -	11 / 0.422	10 / 0.395	10 / 0.408	10 / 0.421	- / -	- / -	41 / 1.646

Installation Schedule

	PYS	FY 2018				FY 2019				FY 2020				FY 2021				FY 2022				FY 2023				FY 2024				TC	Tot
		Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4		
In	0	-	-	-	-	-	-	-	-	3	3	3	2	2	2	3	3	3	3	2	2	3	3	2	2	-	-	-	-	0	41
Out	0	-	-	-	-	-	-	-	-	-	3	3	3	2	2	2	3	3	3	3	2	2	3	3	2	2	-	-	-	0	41

Exhibit P-3a, Individual Modification: PB 2020 Air Force		Date: February 2019
Appropriation / Budget Activity / Budget Sub Activity: 3010F / 05 / 5	**P-1 Line Item Number / Title:** V02200 / CV-22 Mods	**Modification Number / Title:** 8790 / Block 20 Upgrade
ID Code (A=Service Ready, B=Not Service Ready) : A	**MDAP/MAIS Code:**	

Modification Item 38 of 47: Rudder Reliability ECP1020

Manufacturer Information

Manufacturer Name: Bell-Boeing	Manufacturer Location: Amarillo TX
Administrative Leadtime *(in Months)*: 2	Production Leadtime *(in Months)*: 12

Dates	FY 2018	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024
Contract Dates	Dec 2017	Dec 2018					
Delivery Dates	Dec 2018	Dec 2019					

Installation Information

Method of Implementation: Contract Field Team

Installation Cost	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
	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)*
Prior Years	12 / 0.217	20 / 0.296	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	32 / 0.513
FY 2018	- / -	- / -	4 / 0.115	2 / 0.058	- / -	2 / 0.058	- / -	- / -	- / -	- / -	- / -	6 / 0.173
FY 2019	- / -	- / -	- / -	8 / 0.233	- / -	8 / 0.233	- / -	- / -	- / -	- / -	- / -	8 / 0.233
FY 2020	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2021	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2022	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2023	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2024	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
To Complete	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
Total	12 / 0.217	20 / 0.296	4 / 0.115	10 / 0.291	- / -	10 / 0.291	- / -	- / -	- / -	- / -	- / -	46 / 0.919

Installation Schedule

	PYS	FY 2018				FY 2019				FY 2020				FY 2021				FY 2022				FY 2023				FY 2024				TC	Tot
		Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4		
In	12	4	4	6	6	2	2	-	-	2	2	2	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0	46
Out	12	-	4	4	6	6	2	2	-	-	2	2	2	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0	46

Exhibit P-3a, Individual Modification: PB 2020 Air Force		Date: February 2019
Appropriation / Budget Activity / Budget Sub Activity: 3010F / 05 / 5	**P-1 Line Item Number / Title:** V02200 / CV-22 Mods	**Modification Number / Title:** 8790 / Block 20 Upgrade
ID Code (A=Service Ready, B=Not Service Ready) : A	**MDAP/MAIS Code:**	

Modification Item 39 of 47: Satcom Antenna Mounting ECP901R2

Manufacturer Information

Manufacturer Name: Bell-Boeing	Manufacturer Location: Amarillo TX
Administrative Leadtime *(in Months)*: 2	Production Leadtime *(in Months)*: 12

Dates	FY 2018	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024
Contract Dates							
Delivery Dates							

Installation Information

Method of Implementation: Contract Field Team

Installation Cost	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
	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)*
Prior Years	15 / 0.100	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	15 / 0.100
FY 2018	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2019	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2020	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2021	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2022	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2023	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2024	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
To Complete	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
Total	15 / 0.100	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	15 / 0.100

Installation Schedule

		FY 2018				FY 2019				FY 2020				FY 2021				FY 2022				FY 2023				FY 2024					
	PYS	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	TC	Tot
In	15	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0	15
Out	15	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0	15

Exhibit P-3a, Individual Modification: PB 2020 Air Force		Date: February 2019
Appropriation / Budget Activity / Budget Sub Activity: 3010F / 05 / 5	**P-1 Line Item Number / Title:** V02200 / CV-22 Mods	**Modification Number / Title:** 8790 / Block 20 Upgrade
ID Code (A=Service Ready, B=Not Service Ready) : A	**MDAP/MAIS Code:**	

Modification Item 40 of 47: Satcom Beefy Cables Retrofit ECP901R2

Manufacturer Information

Manufacturer Name: Bell-Boeing	Manufacturer Location: Amarillo TX
Administrative Leadtime *(in Months)*: 2	Production Leadtime *(in Months)*: 6

Dates	FY 2018	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024
Contract Dates							
Delivery Dates							

Installation Information

Method of Implementation: Contract Field Team

Installation Cost	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
	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)*
Prior Years	21 / 0.322	2 / 0.009	3 / 0.011	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	26 / 0.342
FY 2018	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2019	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2020	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2021	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2022	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2023	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2024	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
To Complete	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
Total	21 / 0.322	2 / 0.009	3 / 0.011	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	26 / 0.342

Installation Schedule

		FY 2018				FY 2019				FY 2020				FY 2021				FY 2022				FY 2023				FY 2024					
	PYS	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	TC	Tot
In	21	-	-	2	-	-	-	3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0	26
Out	21	-	-	-	2	-	-	-	3	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0	26

Exhibit P-3a, Individual Modification: PB 2020 Air Force		Date: February 2019
Appropriation / Budget Activity / Budget Sub Activity: 3010F / 05 / 5	**P-1 Line Item Number / Title:** V02200 / CV-22 Mods	**Modification Number / Title:** 8790 / Block 20 Upgrade
ID Code (A=Service Ready, B=Not Service Ready) : A	**MDAP/MAIS Code:**	

Modification Item 41 of 47: Satcom Egg Beater Antenna ECP901R2

Manufacturer Information

Manufacturer Name: Bell-Boeing	Manufacturer Location: Amarillo TX
Administrative Leadtime *(in Months)*: 3	Production Leadtime *(in Months)*: 3

Dates	FY 2018	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024
Contract Dates							
Delivery Dates							

Installation Information

Method of Implementation: Contract Field Team

Installation Cost	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
	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)*
Prior Years	21 / 0.058	2 / 0.008	4 / 0.013	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	27 / 0.079
FY 2018	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2019	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2020	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2021	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2022	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2023	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2024	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
To Complete	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
Total	21 / 0.058	2 / 0.008	4 / 0.013	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	27 / 0.079

Installation Schedule

		FY 2018				FY 2019				FY 2020				FY 2021				FY 2022				FY 2023				FY 2024					
	PYS	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	TC	Tot
In	21	-	-	2	-	-	-	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0	27
Out	21	-	-	-	2	-	-	-	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0	27

Exhibit P-3a, Individual Modification: PB 2020 Air Force		Date: February 2019
Appropriation / Budget Activity / Budget Sub Activity: 3010F / 05 / 5	**P-1 Line Item Number / Title:** V02200 / CV-22 Mods	**Modification Number / Title:** 8790 / Block 20 Upgrade
ID Code (A=Service Ready, B=Not Service Ready) : A	**MDAP/MAIS Code:**	

Modification Item 42 of 47: Satcom Troop Commander Panel ECP901R2

Manufacturer Information

Manufacturer Name: Bell-Boeing	Manufacturer Location: Amarillo TX
Administrative Leadtime *(in Months)*: 2	Production Leadtime *(in Months)*: 12

Dates	FY 2018	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024
Contract Dates							
Delivery Dates							

Installation Information

Method of Implementation: Contract Field Team

Installation Cost	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
	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)*
Prior Years	20 / 0.110	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	20 / 0.110
FY 2018	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2019	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2020	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2021	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2022	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2023	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2024	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
To Complete	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
Total	20 / 0.110	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	20 / 0.110

Installation Schedule

		FY 2018				FY 2019				FY 2020				FY 2021				FY 2022				FY 2023				FY 2024					
	PYS	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	TC	Tot
In	20	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0	20
Out	20	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0	20

Exhibit P-3a, Individual Modification: PB 2020 Air Force		Date: February 2019
Appropriation / Budget Activity / Budget Sub Activity: 3010F / 05 / 5	**P-1 Line Item Number / Title:** V02200 / CV-22 Mods	**Modification Number / Title:** 8790 / Block 20 Upgrade

ID Code (A=Service Ready, B=Not Service Ready) : A

MDAP/MAIS Code:

Modification Item 43 of 47: Shaft Driven Compressor (SDC) Improvement

Manufacturer Information

Manufacturer Name: Bell-Boeing

Manufacturer Location: Amarillo TX

Administrative Leadtime *(in Months)*: 7

Production Leadtime *(in Months)*: 12

Dates	FY 2018	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024
Contract Dates				May 2021	May 2022	May 2023	May 2024
Delivery Dates				May 2022	May 2023	May 2024	May 2025

Installation Information

Method of Implementation: Contractor Facility

Installation Cost	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
	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)*
Prior Years	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2018	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2019	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2020	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2021	- / -	- / -	- / -	- / -	- / -	- / -	- / -	15 / 0.075	- / -	- / -	- / -	15 / 0.075
FY 2022	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	15 / 0.075	- / -	- / -	15 / 0.075
FY 2023	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	15 / 0.075	- / -	15 / 0.075
FY 2024	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	7 / 0.035	7 / 0.035
To Complete	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
Total	- / -	- / -	- / -	- / -	- / -	- / -	- / -	15 / 0.075	15 / 0.075	15 / 0.075	7 / 0.035	52 / 0.260

Installation Schedule

	PYS	FY 2018				FY 2019				FY 2020				FY 2021				FY 2022				FY 2023				FY 2024				TC	Tot
		Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4		
In	0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	3	4	4	4	4	4	4	3	3	4	4	4	7	52
Out	0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	3	4	4	4	4	4	4	3	3	4	4	11	52

Exhibit P-3a, Individual Modification: PB 2020 Air Force		Date: February 2019
Appropriation / Budget Activity / Budget Sub Activity: 3010F / 05 / 5	**P-1 Line Item Number / Title:** V02200 / CV-22 Mods	**Modification Number / Title:** 8790 / Block 20 Upgrade

ID Code (A=Service Ready, B=Not Service Ready) : A

MDAP/MAIS Code:

Modification Item 44 of 47: Swashplate Actuator ECP980

Manufacturer Information

Manufacturer Name: Bell-Boeing

Manufacturer Location: Amarillo TX

Administrative Leadtime *(in Months)*: 7

Production Leadtime *(in Months)*: 12

Dates	FY 2018	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024
Contract Dates							
Delivery Dates							

Installation Information

Method of Implementation (Organic): Org/Intermediate

Installation Quantity: 46

Exhibit P-3a, Individual Modification: PB 2020 Air Force		Date: February 2019
Appropriation / Budget Activity / Budget Sub Activity: 3010F / 05 / 5	**P-1 Line Item Number / Title:** V02200 / CV-22 Mods	**Modification Number / Title:** 8790 / Block 20 Upgrade

ID Code (A=Service Ready, B=Not Service Ready) : A

MDAP/MAIS Code:

Modification Item 45 of 47: Troop Seat Pin ECP1167

Manufacturer Information

Manufacturer Name: Bell-Boeing

Manufacturer Location: Amarillo TX

Administrative Leadtime *(in Months)*: 1

Production Leadtime *(in Months)*: 12

Dates	FY 2018	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024
Contract Dates				Nov 2021	Nov 2022		
Delivery Dates				Nov 2022	Nov 2023		

Installation Information

Method of Implementation (Organic): Org/Intermediate

Installation Quantity: 51

Exhibit P-3a, Individual Modification: PB 2020 Air Force		Date: February 2019
Appropriation / Budget Activity / Budget Sub Activity: 3010F / 05 / 5	**P-1 Line Item Number / Title:** V02200 / CV-22 Mods	**Modification Number / Title:** 8790 / Block 20 Upgrade

ID Code (A=Service Ready, B=Not Service Ready) : A

MDAP/MAIS Code:

Modification Item 46 of 47: Upper and Lower Rod Ends (Formerly Pitch Link)

Manufacturer Information

Manufacturer Name: Bell-Boeing

Manufacturer Location: Amarillo TX

Administrative Leadtime *(in Months)*: 5

Production Leadtime *(in Months)*: 12

Dates	FY 2018	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024
Contract Dates			Mar 2020	Mar 2021	Mar 2022	Mar 2023	
Delivery Dates			Mar 2021	Mar 2022	Mar 2023	Mar 2024	

Installation Information

Method of Implementation (Organic): Org/Intermediate

Installation Quantity: 51

Exhibit P-3a, Individual Modification: PB 2020 Air Force		Date: February 2019
Appropriation / Budget Activity / Budget Sub Activity: 3010F / 05 / 5	**P-1 Line Item Number / Title:** V02200 / CV-22 Mods	**Modification Number / Title:** 8790 / Block 20 Upgrade
ID Code (A=Service Ready, B=Not Service Ready) : A	**MDAP/MAIS Code:**	

Modification Item 47 of 47: Wiring Harness ECP915

Manufacturer Information

Manufacturer Name: Bell-Boeing	Manufacturer Location: Amarillo TX
Administrative Leadtime *(in Months)*: 4	Production Leadtime *(in Months)*: 3

Dates	FY 2018	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024
Contract Dates							
Delivery Dates							

Installation Information

Method of Implementation: Contract Field Team

Installation Cost	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
	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)*
Prior Years	35 / 1.500	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	35 / 1.500
FY 2018	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2019	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2020	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2021	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2022	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2023	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2024	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
To Complete	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
Total	35 / 1.500	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	35 / 1.500

Installation Schedule

	PYS	FY 2018				FY 2019				FY 2020				FY 2021				FY 2022				FY 2023				FY 2024				TC	Tot
		Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4		
In	35	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0	35
Out	35	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0	35

Exhibit P-3a, Individual Modification: PB 2020 Air Force		Date: February 2019
Appropriation / Budget Activity / Budget Sub Activity: 3010F / 05 / 5	**P-1 Line Item Number / Title:** V02200 / CV-22 Mods	**Modification Number / Title:** 1 / Low Cost Modifications
ID Code (A=Service Ready, B=Not Service Ready) : A	**MDAP/MAIS Code:**	

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 *(Units in Each)*	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost *($ in Millions)*	17.407	1.999	1.999	1.999	0.000	1.999	1.999	1.999	1.999	1.999	11.994	43.394
Less PY Advance Procurement *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) *($ in Millions)*	17.407	1.999	1.999	1.999	0.000	1.999	1.999	1.999	1.999	1.999	11.994	43.394
Plus CY Advance Procurement *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Total Obligation Authority *($ in Millions)*	**17.407**	**1.999**	**1.999**	**1.999**	**0.000**	**1.999**	**1.999**	**1.999**	**1.999**	**1.999**	**11.994**	**43.394**
(The following Resource Summary rows are for informational purposes only. The corresponding budget requests are documented elsewhere.)												
Initial Spares *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Unit Cost *($ in Millions)*	-	-	-	-	-	-	-	-	-	-	-	-

Description:

This funds low cost modifications for CV-22 weapon system and training devices that are necessary to maintain operational safety, suitability, and effectiveness.

Milestone/Development Status

N/A

Exhibit P-3a, Individual Modification: PB 2020 Air Force		Date: February 2019
Appropriation / Budget Activity / Budget Sub Activity: 3010F / 05 / 5	**P-1 Line Item Number / Title:** V02200 / CV-22 Mods	**Modification Number / Title:** 1 / Low Cost Modifications
ID Code (A=Service Ready, B=Not Service Ready) : A	**MDAP/MAIS Code:**	
Models of Systems Affected: CV-22	**Modification Type:** Other	**Related RDT&E PEs:** 0401318F

Financial Plan	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
	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												
Modification Item 1 of 1: LCM												
A Kits												
Recurring												
LCM:INSTALL KITS Group A (Active)	0 / 17.407	- / 1.999	- / 1.999	- / 1.999	- / -	- / 1.999	- / 1.999	- / 1.999	- / 1.999	- / 1.999	- / 11.994	0 / 43.394
Subtotal: Recurring	*- / 17.407*	*- / 1.999*	*- / 1.999*	*- / 1.999*	*- / -*	*- / 1.999*	*- / 1.999*	*- / 1.999*	*- / 1.999*	*- / 1.999*	*- / 11.994*	*- / 43.394*
Subtotal: LCM	*- / 17.407*	*- / 1.999*	*- / 1.999*	*- / 1.999*	*- / -*	*- / 1.999*	*- / 1.999*	*- / 1.999*	*- / 1.999*	*- / 1.999*	*- / 11.994*	*- / 43.394*
Subtotal: Procurement, All Modification Items	*- / 17.407*	*- / 1.999*	*- / 1.999*	*- / 1.999*	*- / -*	*- / 1.999*	*- / 1.999*	*- / 1.999*	*- / 1.999*	*- / 1.999*	*- / 11.994*	*- / 43.394*
Installation												
Subtotal: Installation	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*	*- / -*
Total												
Total Cost (Procurement + Support + Installation)	**17.407**	**1.999**	**1.999**	**1.999**	**0.000**	**1.999**	**1.999**	**1.999**	**1.999**	**1.999**	**11.994**	**43.394**

Exhibit P-3a, Individual Modification: PB 2020 Air Force		Date: February 2019
Appropriation / Budget Activity / Budget Sub Activity: 3010F / 05 / 5	**P-1 Line Item Number / Title:** V02200 / CV-22 Mods	**Modification Number / Title:** 1 / Low Cost Modifications

ID Code (A=Service Ready, B=Not Service Ready) : A

MDAP/MAIS Code:

Modification Item 1 of 1: LCM

Manufacturer Information

Manufacturer Name: Bell-Boeing

Manufacturer Location: Amarillo TX

Administrative Leadtime *(in Months)*: 0

Production Leadtime *(in Months)*: 0

Dates	FY 2018	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024
Contract Dates							
Delivery Dates							

Installation Information

Method of Implementation (Organic): Org/Intermediate

Installation Quantity: 0