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**Department of Defense
Fiscal Year (FY) 2022 Budget Estimates**

May 2021



Army

*Justification Book of
Aircraft Procurement, Army*

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Army • Budget Estimates FY 2022 • Procurement

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Cost Statement

The following Justification Books were prepared at a cost of \$472,560: Aircraft (ACFT), Missile (MSLS), Weapons & Tracked Combat Vehicles (WTCV), Ammunition (AMMO), Other Procurement Army (OPA) 1 - Tactical & Support Vehicles, Other Procurement Army (OPA) 2 – Communications & Electronics, Other Procurement Army (OPA) 3 & 4 - Other Support Equipment & Spares, Research, Development, Test and Evaluation (RDTE) for: Budget Activity 1, Budget Activity 2, Budget Activity 3, Budget Activity 4, Budget Activity 5A, Budget Activity 5B, Budget Activity 5C, Budget Activity 6, Budget Activity 7, and Budget Activity 8.

AIRCRAFT PROCUREMENT, ARMY

Appropriation Language

For construction, procurement, production, modification, and modernization of aircraft, equipment, including ordnance, ground handling equipment, spare parts, and accessories therefor; specialized equipment and training devices; expansion of public and private plants, including the land necessary therefor, for the foregoing purposes, and such lands and interests therein, may be acquired, and construction prosecuted thereon prior to approval of title; and procurement and installation of equipment, appliances, and machine tools in public and private plants; reserve plant and Government and contractor-owned equipment layaway; and other expenses necessary for the foregoing purposes, \$2,806,452,000 to remain available for obligation until September 30, 2024.

The FY 2022 Overseas Contingency Operations accounted for in the base budget are as follows:

- Direct War Costs accounted for in the Base Budget: \$245,841,000: Direct War costs are those combat or direct combat support costs that will not continue to be expended once combat operations end at major contingency locations.
- Enduring Costs accounted for in the Base Budget: \$15,999,000: Enduring Requirements are enduring in-theater and in CONUS costs that will likely remain after combat operations cease, and have previously been funded in OCO.
- FY 2021 includes Division C, Title IX and Division J, Title IV of the Consolidated Appropriations Act, 2021 (P.L. 116-260).
- FY 2020 includes Division A, Title IX ad X of the Consolidated Appropriations Act, 2020 (P.L. 116-93), Division F, Title IV and V from the Further Consolidated Appropriations Act, 2020 (P.L. 116-94) and the Coronavirus Aid, Relief and Economic Security Act (P.L. 116-136).

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Department of the Army
 FY 2022 President's Budget
 Exhibit P-1 FY 2022 President's Budget
 Total Obligational Authority
 (Dollars in Thousands)

03 May 2021

Appropriation -----	FY 2020 Total -----	FY 2021 Total -----	FY 2022 Total -----
Aircraft Procurement, Army	4,444,803	4,052,454	2,806,452
Total Department of the Army	4,444,803	4,052,454	2,806,452

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Department of the Army
 FY 2022 President's Budget
 Exhibit P-1 FY 2022 President's Budget
 Total Obligational Authority
 (Dollars in Thousands)

03 May 2021

Appropriation: Aircraft Procurement, Army

Budget Activity -----	FY 2020 Total -----	FY 2021 Total -----	FY 2022 Total -----
01. Aircraft	3,236,156	2,773,606	1,818,684
02. Modification of Aircraft	719,064	688,300	452,376
04. Support Equipment and Facilities	489,583	590,548	535,392
Total Aircraft Procurement, Army	4,444,803	4,052,454	2,806,452

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Department of the Army
 FY 2022 President's Budget
 Exhibit P-1 FY 2022 President's Budget
 Total Obligational Authority
 (Dollars in Thousands)

03 May 2021

Appropriation: 2031A Aircraft Procurement, Army

Line No	Item Nomenclature	Ident Code	FY 2020 Total		FY 2021 Total		FY 2022 Total		S e c
			Quantity	Cost	Quantity	Cost	Quantity	Cost	
Budget Activity 01: Aircraft									

Fixed Wing									
1	Utility F/W Aircraft				1	82,000			U
2	MQ-1 UAV	A	9	144,000	1	110,000			U
3	Future UAS Family	A		12,100		1,100			U
4	SMALL UNMANNED AIRCRAFT SYSTEM	A		21,420		16,551	16,005		U
Rotary									
5	Spectrum Army Video	A		9,270					U
6	Helicopter, Light Utility (LUH)	A	3	37,000					U
7	AH-64 Apache Block IIIA Reman Less: Advance Procurement (PY)	A	49	(993,780) (-174,550)	50	(982,897) (-190,870)	30	(673,596) (-169,460)	U U
				819,230		792,027	504,136		
8	AH-64 Apache Block IIIA Reman Advance Procurement (CY) C (FY 2020 for FY 2021) (M) C (FY 2021 for FY 2022) (M) C (FY 2022 for FY 2023) (M)			190,870 (190,870)		169,460 (169,460)	192,230		U U
							(192,230)		
9	AH-64 Apache Block IIIB New Build Less: Advance Procurement (PY)	A		(58,600) (-58,600)	2	(69,154)			U U
						69,154			

P-122BAS: FY 2022 President's Budget (Total Base Published Version), as of May 3, 2021 at 09:49:39

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Department of the Army
 FY 2022 President's Budget
 Exhibit P-1 FY 2022 President's Budget
 Total Obligational Authority
 (Dollars in Thousands)

03 May 2021

Appropriation: 2031A Aircraft Procurement, Army

Line No	Item Nomenclature	Ident Code	FY 2020 Total		FY 2021 Total		FY 2022 Total		S e c
			Quantity	Cost	Quantity	Cost	Quantity	Cost	
10	UH-60 Blackhawk M Model (MYP) Less: Advance Procurement (PY)		74	(1,526,971) (-111,563)	42	(943,584) (-81,488)	24	(717,690) (-87,427)	U
				1,415,408		862,096		630,263	
11	UH-60 Blackhawk M Model (MYP) Advance Procurement (CY) C (FY 2020 for FY 2021) (M) C (FY 2021 for FY 2022) (M) C (FY 2022 for FY 2023) (M)			79,572 (79,572)		87,427 (87,427)		146,068 (146,068)	U
12	UH-60 Black Hawk L and V Models	A	25	169,290	24	165,197	24	166,205	U
13	CH-47 Helicopter Less: Advance Procurement (PY)	A	9	(176,729) (-20,778)	12	(446,408) (-46,186)	6	(163,590) (-18,372)	U
				155,951		400,222		145,218	
14	CH-47 Helicopter Advance Procurement (CY) C (FY 2020 for FY 2021) (M) C (FY 2021 for FY 2022) (M) C (FY 2022 for FY 2023) (M)			46,186 (46,186)		18,372 (18,372)		18,559 (18,559)	U
15	Spectrum Army SUAS	A		135,859					U
Total Aircraft				3,236,156		2,773,606		1,818,684	

Budget Activity 02: Modification of Aircraft

Modification of Aircraft

16	Universal Ground Control Equipment (UAS)	A		2,090		7,509			U
17	Gray Eagle Mods2	A		14,699		30,280		3,143	U
18	MULTI SENSOR ABN RECON			115,449		158,384		127,665	U
19	AH-64 MODS	A		58,172		99,816		118,560	U
20	CH-47 Cargo Helicopter Mods (MYP)			11,785		15,548		9,918	U

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Department of the Army
 FY 2022 President's Budget
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 Total Obligational Authority
 (Dollars in Thousands)

03 May 2021

Appropriation: 2031A Aircraft Procurement, Army

Line No	Item Nomenclature	Ident Code	FY 2020 Total		FY 2021 Total		FY 2022 Total		S e c
			Quantity	Cost	Quantity	Cost	Quantity	Cost	
21	GRCS SEMA MODS	A		6,427		2,947		2,762	U
22	ARL SEMA MODS	A		6,566		9,598		9,437	U
23	EMARSS SEMA MODS	A		43,139		28,912		1,568	U
24	Utility/Cargo Airplane Mods			21,838		13,868		8,530	U
25	Utility Helicopter Mods			16,744		40,842		15,826	U
26	Network And Mission Plan	A		98,236		77,432		29,206	U
27	Comms, Nav Surveillance	A		164,315		101,355		58,117	U
28	Degraded Visual Environment	A		49,450		1,916			U
29	Aviation ASSURED PNT	A				53,509		47,028	U
30	GATM Rollup	A		30,966		12,180		16,776	U
31	RQ-7 UAV MODS	A		68,983		30,000			U
32	UAS MODS	A		10,205		4,204		3,840	U
Total Modification of Aircraft				719,064		688,300		452,376	

Budget Activity 04: Support Equipment and Facilities

Ground Support Avionics

33	Aircraft Survivability Equipment			52,297		44,455		64,561	U
34	Survivability CM			8,388		8,035		5,104	U
35	CMWS	A		144,218		159,729		148,570	U
36	Common Infrared Countermeasures (CIRCM)	A	101	178,094	120	266,517	101	240,412	U

Other Support

37	Avionics Support Equipment			1,422		1,789			U
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Department of the Army
 FY 2022 President's Budget
 Exhibit P-1 FY 2022 President's Budget
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 (Dollars in Thousands)

03 May 2021

Appropriation: 2031A Aircraft Procurement, Army

Line No	Item Nomenclature	Ident Code	FY 2020 Total		FY 2021 Total		FY 2022 Total		S e c
			Quantity	Cost	Quantity	Cost	Quantity	Cost	
38	Common Ground Equipment			18,624		17,584		13,561	U
39	Aircrew Integrated Systems			48,610		54,793		41,425	U
40	Air Traffic Control			32,738		26,408		21,759	U
41	Launcher, 2.75 Rocket			2,201		2,256			U
42	Launcher Guided Missile: Longbow Hellfire XM2	A		2,991		8,982			U
Total Support Equipment and Facilities				489,583		590,548		535,392	
Total Aircraft Procurement, Army				4,444,803		4,052,454		2,806,452	

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Appropriation 2031A: Aircraft Procurement, Army

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1	01	10	9440A11300	Utility F/W Aircraft.....	1
2	01	10	9670A00005	MQ-1 UAV.....	2
3	01	10	9672A00510	Future UAS Family.....	3
4	01	10	9675A00010	SMALL UNMANNED AIRCRAFT SYSTEM.....	5
5	01	20	3167A09999	Spectrum Army Video.....	14
6	01	20	4742A05001	Helicopter, Light Utility (LUH).....	15
7	01	20	5757A05111	AH-64 Apache Block IIIA Reman.....	17
8	01	20	5757A05111	AH-64 Apache Block IIIA Reman, Advance Procurement.....	29
9	01	20	5840A05133	AH-64 Apache Block IIIB New Build.....	33
10	01	20	6771AA0005	UH-60 Blackhawk M Model (MYP).....	38
11	01	20	6771AA0005	UH-60 Blackhawk M Model (MYP), Advance Procurement.....	48
12	01	20	6773A05009	UH-60 Black Hawk L and V Models.....	52
13	01	20	6775A05101	CH-47 Helicopter.....	58
14	01	20	6775A05101	CH-47 Helicopter, Advance Procurement.....	70
15	01	20	9990A19900	Spectrum Army SUAS.....	74

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16	02	10	0028A02706	Universal Ground Control Equipment (UAS).....	75
17	02	10	0756AA6601	Gray Eagle Mods2.....	76
18	02	10	1036AZ2001	MULTI SENSOR ABN RECON.....	78
19	02	10	2706AA6605	AH-64 MODS.....	105
20	02	10	3264AA0252	CH-47 Cargo Helicopter Mods (MYP).....	119
21	02	10	3403A02111	GRCS SEMA MODS.....	137
22	02	10	3404A02110	ARL SEMA MODS.....	139
23	02	10	3405A02112	EMARSS SEMA MODS.....	145
24	02	10	4194AA0270	Utility/Cargo Airplane Mods.....	147
25	02	10	6949AA0480	Utility Helicopter Mods.....	152
26	02	10	8658AA0712	Network And Mission Plan.....	170
27	02	10	8659AA0723	Comms, Nav Surveillance.....	183
28	02	10	8660A00713	Degraded Visual Environment.....	202
29	02	10	8662A01006	Aviation ASSURED PNT.....	203
30	02	10	8859AA0711	GATM Rollup.....	213
31	02	10	9555A00018	RQ-7 UAV MODS.....	228

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Appropriation 2031A: Aircraft Procurement, Army

Line #	BA	BSA	Line Item Number	Line Item Title	Page
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Appropriation 2031A: Aircraft Procurement, Army

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34	04	10	5044AZ3507	Survivability CM.....	246
35	04	10	5397AZ3517	CMWS.....	251
36	04	10	5399AZ3537	Common Infrared Countermeasures (CIRCM).....	263
37	04	30	0832AZ3000	Avionics Support Equipment.....	276
38	04	30	5212AZ3100	Common Ground Equipment.....	277
39	04	30	6380AZ3110	Aircrew Integrated Systems.....	281
40	04	30	6818AA0050	Air Traffic Control.....	285
41	04	30	9154A50100	Launcher, 2.75 Rocket.....	290
42	04	30	9157J01200	Launcher Guided Missile: Longbow Hellfire XM299.....	291

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AH-64 Apache Block IIIA Reman, Advance Procurement	5757A05111	8	01	20.....	29
AH-64 Apache Block IIIB New Build	5840A05133	9	01	20.....	33
AH-64 MODS	2706AA6605	19	02	10.....	105
ARL SEMA MODS	3404A02110	22	02	10.....	139
Air Traffic Control	6818AA0050	40	04	30.....	285
Aircraft Survivability Equipment	3632AZ3504	33	04	10.....	232
Aircrew Integrated Systems	6380AZ3110	39	04	30.....	281
Aviation ASSURED PNT	8662A01006	29	02	10.....	203
Avionics Support Equipment	0832AZ3000	37	04	30.....	276
CH-47 Cargo Helicopter Mods (MYP)	3264AA0252	20	02	10.....	119
CH-47 Helicopter	6775A05101	13	01	20.....	58
CH-47 Helicopter, Advance Procurement	6775A05101	14	01	20.....	70
CMWS	5397AZ3517	35	04	10.....	251
Common Ground Equipment	5212AZ3100	38	04	30.....	277
Common Infrared Countermeasures (CIRCM)	5399AZ3537	36	04	10.....	263
Comms, Nav Surveillance	8659AA0723	27	02	10.....	183

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EMARSS SEMA MODS	3405A02112	23	02	10.....	145
Future UAS Family	9672A00510	3	01	10.....	3
GATM Rollup	8859AA0711	30	02	10.....	213
GRCS SEMA MODS	3403A02111	21	02	10.....	137
Gray Eagle Mods2	0756AA6601	17	02	10.....	76
Helicopter, Light Utility (LUH)	4742A05001	6	01	20.....	15
Launcher Guided Missile: Longbow Hellfire XM299	9157J01200	42	04	30.....	291
Launcher, 2.75 Rocket	9154A50100	41	04	30.....	290
MQ-1 UAV	9670A00005	2	01	10.....	2
MULTI SENSOR ABN RECON	1036AZ2001	18	02	10.....	78
Network And Mission Plan	8658AA0712	26	02	10.....	170
RQ-7 UAV MODS	9555A00018	31	02	10.....	228
SMALL UNMANNED AIRCRAFT SYSTEM	9675A00010	4	01	10.....	5
Spectrum Army SUAS	9990A19900	15	01	20.....	74
Spectrum Army Video	3167A09999	5	01	20.....	14
Survivability CM	5044AZ3507	34	04	10.....	246
UAS MODS	9556A01002	32	02	10.....	230
UH-60 Black Hawk L and V Models	6773A05009	12	01	20.....	52
UH-60 Blackhawk M Model (MYP)	6771AA0005	10	01	20.....	38

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Line Item Title	Line Item Number	Line #	BA	BSA	Page
UH-60 Blackhawk M Model (MYP), Advance Procurement	6771AA0005	11	01	20.....	48
Universal Ground Control Equipment (UAS)	0028A02706	16	02	10.....	75
Utility F/W Aircraft	9440A11300	1	01	10.....	1
Utility Helicopter Mods	6949AA0480	25	02	10.....	152
Utility/Cargo Airplane Mods	4194AA0270	24	02	10.....	147

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

Lookup Matrix by Model

Model:	UH-60 A and L	
P-3a Individual Modifications		
Modification Number	Modification Title	Applies to Multiple Models
A05009	UH-60 Black Hawk L and V Models	No

Model:	ARL	
P-3a Individual Modifications		
Modification Number	Modification Title	Applies to Multiple Models
AZ2050	ARL PAYLOADS	No

Model:	See individual Mods	
P-3a Individual Modifications		
Modification Number	Modification Title	Applies to Multiple Models
AZ2052	GUARDRAIL PAYLOADS	No

Model:	EMARSS	
P-3a Individual Modifications		
Modification Number	Modification Title	Applies to Multiple Models
AZ2054	EMARSS PAYLOADS	No
AA0712	Network And Mission Plan	Yes

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

Model:	Saturn Arch	
P-3a Individual Modifications		
Modification Number	Modification Title	Applies to Multiple Models
AZ2056	ABN ISR MODS (MIP)	No

Model:	Longbow Apache	
P-3a Individual Modifications		
Modification Number	Modification Title	Applies to Multiple Models
AA6606	AH-64 APACHE MODS	No

Model:	CH-47	
P-3a Individual Modifications		
Modification Number	Modification Title	Applies to Multiple Models
AA0252	CH-47 Cargo Helicopter Mods (MYP)	No

Model:	ARL SEMA Modifications	
P-3a Individual Modifications		
Modification Number	Modification Title	Applies to Multiple Models
A02110	ARL SEMA MODS	No

Model:	All series Army fixed wing aircraft	
P-3a Individual Modifications		
Modification Number	Modification Title	Applies to Multiple Models
AA0270	Utility/Cargo Airplane Mods	No

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

Model:	UH-60	
P-3a Individual Modifications		
Modification Number	Modification Title	Applies to Multiple Models
AA0492	UTILITY HELICOPTER MODS	Yes

Model:	UH-72	
P-3a Individual Modifications		
Modification Number	Modification Title	Applies to Multiple Models
AA0492	UTILITY HELICOPTER MODS	Yes
AA0712	Network And Mission Plan	Yes

Model:	AH-64D/E	
P-3a Individual Modifications		
Modification Number	Modification Title	Applies to Multiple Models
AA0712	Network And Mission Plan	Yes
AA0723	Comms, Nav Surveillance	Yes
A01006	Aviation ASSURED PNT	Yes

Model:	CH-47D/F	
P-3a Individual Modifications		
Modification Number	Modification Title	Applies to Multiple Models
AA0712	Network And Mission Plan	Yes

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

Model:	UH-60A/L/M/Q/V	
P-3a Individual Modifications		
Modification Number	Modification Title	Applies to Multiple Models
AA0712	Network And Mission Plan	Yes

Model:	HH-60L/M	
P-3a Individual Modifications		
Modification Number	Modification Title	Applies to Multiple Models
AA0712	Network And Mission Plan	Yes

Model:	UAS	
P-3a Individual Modifications		
Modification Number	Modification Title	Applies to Multiple Models
AA0712	Network And Mission Plan	Yes
AA0723	Comms, Nav Surveillance	Yes
A01006	Aviation ASSURED PNT	Yes
AA0704	GATM - Rotary Wing Aircraft	Yes

Model:	UH/HH-60A/L	
P-3a Individual Modifications		
Modification Number	Modification Title	Applies to Multiple Models
AA0723	Comms, Nav Surveillance	Yes
A01006	Aviation ASSURED PNT	Yes

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

Model: UH/HH/MH-60M		
P-3a Individual Modifications		
Modification Number	Modification Title	Applies to Multiple Models
AA0723	Comms, Nav Surveillance	Yes
A01006	Aviation ASSURED PNT	Yes

Model: CH-47D		
P-3a Individual Modifications		
Modification Number	Modification Title	Applies to Multiple Models
AA0723	Comms, Nav Surveillance	Yes
A01006	Aviation ASSURED PNT	Yes

Model: CH/MH-47F		
P-3a Individual Modifications		
Modification Number	Modification Title	Applies to Multiple Models
AA0723	Comms, Nav Surveillance	Yes
A01006	Aviation ASSURED PNT	Yes

Model: LUH		
P-3a Individual Modifications		
Modification Number	Modification Title	Applies to Multiple Models
AA0723	Comms, Nav Surveillance	Yes
A01006	Aviation ASSURED PNT	Yes

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

Model:	UH&HH60A/L	
P-3a Individual Modifications		
Modification Number	Modification Title	Applies to Multiple Models
AA0704	GATM - Rotary Wing Aircraft	Yes

Model:	CH47D/F	
P-3a Individual Modifications		
Modification Number	Modification Title	Applies to Multiple Models
AA0704	GATM - Rotary Wing Aircraft	Yes

Model:	UH60M	
P-3a Individual Modifications		
Modification Number	Modification Title	Applies to Multiple Models
AA0704	GATM - Rotary Wing Aircraft	Yes

Model:	MH47G	
P-3a Individual Modifications		
Modification Number	Modification Title	Applies to Multiple Models
AA0704	GATM - Rotary Wing Aircraft	Yes

Model:	MH60M	
P-3a Individual Modifications		
Modification Number	Modification Title	Applies to Multiple Models
AA0704	GATM - Rotary Wing Aircraft	Yes

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

Model: A/MH6		
P-3a Individual Modifications		
Modification Number	Modification Title	Applies to Multiple Models
AA0704	GATM - Rotary Wing Aircraft	Yes

Model: AH64A/D/E		
P-3a Individual Modifications		
Modification Number	Modification Title	Applies to Multiple Models
AA0704	GATM - Rotary Wing Aircraft	Yes

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

Funding (\$ M)

P-3a Modification Title	PYS	FY 2020	FY 2021	FY 2022 Base	FY 2022 OCO	FY 2022 Total	FY 2023	FY 2024	FY 2025	FY 2026
Exhibit P-3a										
UH-60 Black Hawk L and V Models	10,439.951	169.290	165.197	166.205	-	166.205	-	-	-	-
ARL PAYLOADS	1,196.182	77.895	78.561	81.989	-	81.989	-	-	-	-
GUARDRAIL PAYLOADS	95.572	25.408	25.869	18.554	-	18.554	-	-	-	-
EMARSS PAYLOADS	79.257	12.146	12.174	9.912	-	9.912	-	-	-	-
ABN ISR MODS (MIP)	-	-	41.780	17.210	-	17.210	-	-	-	-
AH-64 APACHE MODS	8,995.516	58.172	99.816	118.560	-	118.560	-	-	-	-
CH-47 Cargo Helicopter Mods (MYP)	11,070.153	11.785	15.548	9.918	-	9.918	-	-	-	-
ARL SEMA MODS	74.262	6.566	9.598	9.437	-	9.437	-	-	-	-
Utility/Cargo Airplane Mods	385.839	21.838	13.868	8.530	-	8.530	-	-	-	-
UTILITY HELICOPTER MODS	1,679.761	16.744	40.842	15.826	-	15.826	-	-	-	-
Network And Mission Plan	852.101	98.236	77.432	29.206	-	29.206	-	-	-	-
Comms, Nav Surveillance	877.147	164.315	101.355	58.117	-	58.117	-	-	-	-
Aviation ASSURED PNT	-	-	53.509	47.028	-	47.028	-	-	-	-
GATM - Rotary Wing Aircraft	734.334	30.966	12.180	16.776	-	16.776	-	-	-	-
Totals (Total Obligation Authority)										
Total Obligation Authority	36,480.075	693.361	747.729	607.268	0.000	607.268	0.000	0.000	0.000	0.000

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Exhibit P-40, Budget Line Item Justification: PB 2022 Army **Date:** May 2021

Appropriation / Budget Activity / Budget Sub Activity: 2031A: Aircraft Procurement, Army / BA 01: Aircraft / BSA 10: Fixed Wing **P-1 Line Item Number / Title:** 9440A11300 / Utility F/W Aircraft

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

Line Item MDAP/MAIS Code: N/A

Resource Summary	Prior Years	FY 2020	FY 2021	FY 2022 Base	FY 2022 OCO	FY 2022 Total	FY 2023	FY 2024	FY 2025	FY 2026	To Complete	Total
Procurement Quantity (<i>Units in Each</i>)	40	0	1	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost (<i>\$ in Millions</i>)	367.287	-	82.000	-	-	-	-	-	-	-	-	-
Less PY Advance Procurement (<i>\$ in Millions</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) (<i>\$ in Millions</i>)	367.287	-	82.000	-	-	-	-	-	-	-	-	-
Plus CY Advance Procurement (<i>\$ in Millions</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Total Obligation Authority (<i>\$ in Millions</i>)	367.287	-	82.000	-	-	-	-	-	-	-	-	-

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

Initial Spares (<i>\$ in Millions</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Flyaway Unit Cost (<i>\$ in Thousands</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Unit Cost (<i>\$ in Thousands</i>)	9,182.175	-	82,000.000	-	-	-	-	-	-	-	-	-

Description:

The budget line funds the acquisition of Army Fixed Wing Aircraft in support of mission requirements, training, and other support activities. Fixed Wing Aircraft will be capable of self-deploying over extended ranges; provide CONUS/OCONUS time sensitive movement of key personnel and equipment; support to homeland defense/security operations; support to civil and military authorities. This budget line also provides for the acquisition of new commercial-off-the-shelf (COTS), modified COTS, and non-developmental Fixed Wing Aircraft systems including used aircraft systems.

Secondary Distribution	FY 2020	FY 2021	FY 2022 Base	FY 2022 OCO	FY 2022 Total	FY 2023	FY 2024	FY 2025	FY 2026
Army									
Quantity	-	1	-	-	-	-	-	-	-
Total Obligation Authority	-	82.000	-	-	-	-	-	-	-
Total:									
Secondary Distribution									
Quantity	-	1	-	-	-	-	-	-	-
Total Obligation Authority	-	82.000	-	-	-	-	-	-	-

Justification:

President's Budget 2022 submission for Utility F/W Aircraft is zero (\$0).

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Exhibit P-40, Budget Line Item Justification: PB 2022 Army **Date:** May 2021

Appropriation / Budget Activity / Budget Sub Activity: 2031A: Aircraft Procurement, Army / BA 01: Aircraft / BSA 10: Fixed Wing **P-1 Line Item Number / Title:** 9670A00005 / MQ-1 UAV

ID Code (A=Service Ready, B=Not Service Ready): A **Program Elements for Code B Items:** N/A **Other Related Program Elements:** 0305204A, 0305219A

Line Item MDAP/MAIS Code: N/A

Resource Summary	Prior Years	FY 2020	FY 2021	FY 2022 Base	FY 2022 OCO	FY 2022 Total	FY 2023	FY 2024	FY 2025	FY 2026	To Complete	Total
Procurement Quantity (<i>Units in Each</i>)	266	9	1	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost (<i>\$ in Millions</i>)	3,606.293	144.000	110.000	-	-	-	-	-	-	-	-	-
Less PY Advance Procurement (<i>\$ in Millions</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) (<i>\$ in Millions</i>)	3,606.293	144.000	110.000	-	-	-	-	-	-	-	-	-
Plus CY Advance Procurement (<i>\$ in Millions</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Total Obligation Authority (<i>\$ in Millions</i>)	3,606.293	144.000	110.000	-	-	-	-	-	-	-	-	-

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

Initial Spares (<i>\$ in Millions</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Flyaway Unit Cost (<i>\$ in Thousands</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Unit Cost (<i>\$ in Thousands</i>)	13,557.492	16,000.000	110,000.000	-	-	-	-	-	-	-	-	-

Description:

The MQ-1C Gray Eagle provides reconnaissance, surveillance, intelligence, target acquisition, communications relay, electronic warfare, attack, battle damage assessment, manned-unmanned teaming capabilities and command and control missions providing dedicated mission configured Unmanned Aircraft System (UAS) support to assigned and other Army/Joint Force units based upon commander's priorities. The MQ-1C Gray Eagle is a dedicated, multi-mission UAS fielded to 11 Army Combat Aviation Brigades (CAB), two (2) Army Intelligence and Security Command (INSCOM) units, and two (2) Army Special Operations Command (USASOC) units.

The MQ-1C Gray Eagle system consists of 12 Aircraft, 12 Satellite Communication (SATCOM) Air Data Terminals (SADT), six (6) Universal Ground Control Stations (UGCS), seven (7) Universal Ground Data Terminals (UGDT), three (3) Satellite Ground Data Terminals (SGDT), one (1) Mobile Ground Control Station (MGCS), three (3) Automatic Take-Off & Landing System's (ATLS), standard equipment package, Ground Based Sense And Avoid (GBSAA), and payloads to include; Electro-Optical/Infrared Laser Range Finder/Laser Designator (EO/IR/LD HD), Synthetic Aperture Radar/Ground Moving Target Indicator (SAR/GMTI), communication relay, and Government Furnished Equipment.

4 May 2017, the Army approved an Army Acquisition Objective (AAO) adjustment to bring the total requirement to 204 MQ-1C Gray Eagle aircraft.

Secondary Distribution		FY 2020	FY 2021	FY 2022 Base	FY 2022 OCO	FY 2022 Total	FY 2023	FY 2024	FY 2025	FY 2026
Army	Quantity	9	1	-	-	-	-	-	-	-
	Total Obligation Authority	144.000	110.000	-	-	-	-	-	-	-
Total: Secondary Distribution	Quantity	9	1	-	-	-	-	-	-	-
	Total Obligation Authority	144.000	110.000	-	-	-	-	-	-	-

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Exhibit P-40, Budget Line Item Justification: PB 2022 Army **Date:** May 2021

Appropriation / Budget Activity / Budget Sub Activity: 2031A: Aircraft Procurement, Army / BA 01: Aircraft / BSA 10: Fixed Wing **P-1 Line Item Number / Title:** 9672A00510 / Future UAS Family

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

Line Item MDAP/MAIS Code: N/A

Resource Summary	Prior Years	FY 2020	FY 2021	FY 2022 Base	FY 2022 OCO	FY 2022 Total	FY 2023	FY 2024	FY 2025	FY 2026	To Complete	Total
Procurement Quantity (<i>Units in Each</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost (<i>\$ in Millions</i>)	-	12.100	1.100	-	-	-	-	-	-	-	-	-
Less PY Advance Procurement (<i>\$ in Millions</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) (<i>\$ in Millions</i>)	-	12.100	1.100	-	-	-	-	-	-	-	-	-
Plus CY Advance Procurement (<i>\$ in Millions</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Total Obligation Authority (<i>\$ in Millions</i>)	-	12.100	1.100	-	-	-	-	-	-	-	-	-

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

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

Description:

Note - FY2020, this effort was executed under budget line item 0013A01310 / Tactical Unmanned Aircraft System (TUAS).

The Future Unmanned Aircraft System (FUAS) is a critical system in the multi-domain operations concept that will employ cross-domain capabilities at all echelons and allow ground based forces to project power from land into other domains to defeat highly capable enemies, secure terrain, and consolidate gains. FUAS encompasses an array of capabilities from platoon soldiers to Division Commanders.

The Future Vertical Lift Cross Functional Team (FVL CFT) oversaw a demonstration effort in FY 2019 - 2021 that informed the Future Tactical Unmanned Aircraft System (FTUAS) requirement to develop capability that will ultimately replace the RQ-7Bv2 Shadow TUAS within the Brigade Combat Team (BCT) formation. The 12-month demonstration included 20 Soldier touchpoints (new equipment training, field training exercises, and Combat Training Center rotations) across five BCTs and included the training of 61 operators and 56 maintainers. The demonstration resulted in over 1,500 flight hours across more than 500 separate flights to inform the FTUAS Abbreviated Capability Development Document (A-CDD) that goes to an AROC in 3QFY2021. As part of the program development, the program will request Middle Tier Acquisition authority in 3QFY2022 to conduct Rapid Prototyping.

The FVL CFT FUAS line of effort will be comprised of multiple components including the FTUAS for the BCT, Air Launched Effects (ALE) and Scalable Control Interface (SCI). The FTUAS seeks to replace the RQ-7Bv2 Shadow assets within the BCTs. Key attributes of the FTUAS focus on Rapid Deployability, Expeditionary Maneuver, and Mobility for adaptive and agile operations. FTUAS will consist of an aircraft subsystem that will include the airframe, propulsion, avionics, communications, navigation, and software systems; aircraft-specific ground support equipment including power generation, transportation, or command and control equipment; aircraft software; and required engineering, logistics, and programmatic support. Manned, optionally- manned, and unmanned systems will penetrate defense-in-depth environments by employing ALE with teaming and swarming effects to detect, decoy, jam RADAR and communications, conduct cyber-attack, spoof and jam GPS, and kinetic engagement.

Secondary Distribution		FY 2020	FY 2021	FY 2022 Base	FY 2022 OCO	FY 2022 Total	FY 2023	FY 2024	FY 2025	FY 2026
Army	Quantity	-	-	-	-	-	-	-	-	-
	Total Obligation Authority	12.100	1.100	-	-	-	-	-	-	-
Total: Secondary Distribution	Quantity	-	-	-	-	-	-	-	-	-
	Total Obligation Authority	12.100	1.100	-	-	-	-	-	-	-

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Exhibit P-40, Budget Line Item Justification: PB 2022 Army		Date: May 2021
Appropriation / Budget Activity / Budget Sub Activity: 2031A: Aircraft Procurement, Army / BA 01: Aircraft / BSA 10: Fixed Wing		P-1 Line Item Number / Title: 9672A00510 / Future UAS Family
ID Code (A=Service Ready, B=Not Service Ready):	Program Elements for Code B Items: N/A	Other Related Program Elements: N/A
Line Item MDAP/MAIS Code: N/A		

Justification:
There is no Base Procurement funding in FY22.

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.

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Exhibit P-40, Budget Line Item Justification: PB 2022 Army **Date:** May 2021

Appropriation / Budget Activity / Budget Sub Activity: 2031A: Aircraft Procurement, Army / BA 01: Aircraft / BSA 10: Fixed Wing **P-1 Line Item Number / Title:** 9675A00010 / SMALL UNMANNED AIRCRAFT SYSTEM

ID Code (A=Service Ready, B=Not Service Ready): **Program Elements for Code B Items:** N/A **Other Related Program Elements:** 0305232A, 0604101A, 0605205A

Line Item MDAP/MAIS Code: N/A

Resource Summary	Prior Years	FY 2020	FY 2021	FY 2022 Base	FY 2022 OCO	FY 2022 Total	FY 2023	FY 2024	FY 2025	FY 2026	To Complete	Total
Procurement Quantity (<i>Units in Each</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost (<i>\$ in Millions</i>)	299.560	21.420	16.551	16.005	-	16.005	-	-	-	-	-	-
Less PY Advance Procurement (<i>\$ in Millions</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) (<i>\$ in Millions</i>)	299.560	21.420	16.551	16.005	-	16.005	-	-	-	-	-	-
Plus CY Advance Procurement (<i>\$ in Millions</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Total Obligation Authority (<i>\$ in Millions</i>)	299.560	21.420	16.551	16.005	-	16.005	-	-	-	-	-	-

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

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

Description:

The Rucksack Portable Unmanned Aircraft System (RPUAS) Family of Small Unmanned Aircraft Systems (FoSUAS) provides the battalion and below ground maneuver elements with an organic, on-demand, asset to develop situational awareness, enhance force protection, and secure routes, points, and areas. The system provides the small unit commander an organic and responsive reconnaissance and targeting capability with real-time Full Motion Video and sensor data. The RPUAS FoSUAS includes a combination of three separate hand-launched mission specific configurable aircraft that do not require an improved launch/recovery. The three separate mission specific configurable Unmanned Aircraft (UA) are the Short Range Reconnaissance (SRR), the Medium Range Reconnaissance (MRR), and the Long Range Reconnaissance (LRR).

Secondary Distribution	FY 2020	FY 2021	FY 2022 Base	FY 2022 OCO	FY 2022 Total	FY 2023	FY 2024	FY 2025	FY 2026
Army									
Quantity	-	-	-	-	-	-	-	-	-
Total Obligation Authority	21.420	16.551	16.005	-	16.005	-	-	-	-
Total:									
Secondary Distribution									
Quantity	-	-	-	-	-	-	-	-	-
Total Obligation Authority	21.420	16.551	16.005	-	16.005	-	-	-	-

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Exhibit P-40, Budget Line Item Justification: PB 2022 Army		Date: May 2021
Appropriation / Budget Activity / Budget Sub Activity: 2031A: Aircraft Procurement, Army / BA 01: Aircraft / BSA 10: Fixed Wing		P-1 Line Item Number / Title: 9675A00010 / SMALL UNMANNED AIRCRAFT SYSTEM
ID Code (A=Service Ready, B=Not Service Ready):	Program Elements for Code B Items: N/A	Other Related Program Elements: 0305232A, 0604101A, 0605205A

Line Item MDAP/MAIS Code: N/A

Exhibits Schedule					Prior Years	FY 2020	FY 2021	FY 2022 Base	FY 2022 OCO	FY 2022 Total
Exhibit Type	Title*	Subexhibits	ID CD	MDAP/MAIS Code	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)
P-5	A00010 / SMALL UNMANNED AIRCRAFT SYSTEM	P-5a, P-21			- / 299.560	- / 21.420	- / 16.551	- / 16.005	- / -	- / 16.005
P-40	Total Gross/Weapon System Cost				- / 299.560	- / 21.420	- / 16.551	- / 16.005	- / -	- / 16.005

*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:
Justification: FY2022 Base procurement dollars in the amount of \$16.005 million supports procurement of 410 Short Range Reconnaissance (SRR) Systems (system consists of 2 air vehicles, 1 Handheld Ground Control Station (HGCS), Digital Data Link (DDL) and Electro-Optical/Infrared (EO/IR) Payload). Remaining funding is for initial spares packages, training, fielding, technical and program support.

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.

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Exhibit P-5, Cost Analysis: PB 2022 Army		Date: May 2021
Appropriation / Budget Activity / Budget Sub Activity: 2031A / 01 / 10	P-1 Line Item Number / Title: 9675A00010 / SMALL UNMANNED AIRCRAFT SYSTEM	Item Number / Title [DODIC]: A00010 / SMALL UNMANNED AIRCRAFT SYSTEM

ID Code (A=Service Ready, B=Not Service Ready) :	MDAP/MAIS Code:
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Resource Summary	Prior Years	FY 2020	FY 2021	FY 2022 Base	FY 2022 OCO	FY 2022 Total
Procurement Quantity (Units in Each)	-	-	-	-	-	-
Gross/Weapon System Cost (\$ in Millions)	299.560	21.420	16.551	16.005	-	16.005
Less PY Advance Procurement (\$ in Millions)	-	-	-	-	-	-
Net Procurement (P-1) (\$ in Millions)	299.560	21.420	16.551	16.005	-	16.005
Plus CY Advance Procurement (\$ in Millions)	-	-	-	-	-	-
Total Obligation Authority (\$ in Millions)	299.560	21.420	16.551	16.005	-	16.005

(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 Thousands)	-	-	-	-	-	-

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

Cost Elements	Prior Years			FY 2020			FY 2021			FY 2022 Base			FY 2022 OCO			FY 2022 Total		
	Unit Cost (\$ K)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ K)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ K)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ K)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ K)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ K)	Qty (Each)	Total Cost (\$ M)
Flyaway Cost																		
Recurring Cost																		
RQ-11 B Raven Air Vehicle, GCS/RVT, EO	9.856	6,525	64.309	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
RQ-11B Raven Initial Spares Package (ISP)	3.843	6,525	25.077	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
RQ-11B Raven Operator Training	-	-	18.051	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
RQ-11B Other System Hardware	-	-	22.271	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
RQ-11B Digital Data Link Retrofit	41.665	1,318	54.914	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
RQ-11B Gimbal Payload Retrofit	33.690	1,128	38.002	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
RQ-11B Government Furnished Equipment (GFE)	-	-	6.825	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
RQ-11B Other Government Agencies/ Core	-	-	12.863	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
RQ-11B Technical	-	-	11.291	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
RQ-11B Logistics (fielding)	-	-	10.557	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

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Exhibit P-5, Cost Analysis: PB 2022 Army		Date: May 2021
Appropriation / Budget Activity / Budget Sub Activity: 2031A / 01 / 10	P-1 Line Item Number / Title: 9675A00010 / SMALL UNMANNED AIRCRAFT SYSTEM	Item Number / Title [DODIC]: A00010 / SMALL UNMANNED AIRCRAFT SYSTEM
ID Code (A=Service Ready, B=Not Service Ready) :		MDAP/MAIS Code:

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

Cost Elements	Prior Years			FY 2020			FY 2021			FY 2022 Base			FY 2022 OCO			FY 2022 Total		
	Unit Cost (\$ K)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ K)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ K)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ K)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ K)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ K)	Qty (Each)	Total Cost (\$ M)
SRR Initial Spares Package (ISP)	-	-	-	-	-	4.500	-	-	0.733	-	-	0.320	-	-	-	-	-	0.320
SRR Training	-	-	-	-	-	0.657	-	-	0.723	-	-	0.732	-	-	-	-	-	0.732
SRR Logistics (Fielding)	-	-	-	-	-	0.405	-	-	0.388	-	-	0.326	-	-	-	-	-	0.326
SRR Technical Spt	-	-	-	-	-	0.180	-	-	0.172	-	-	0.258	-	-	-	-	-	0.258
SRR Program Spt	-	-	-	-	-	0.180	-	-	0.173	-	-	0.248	-	-	-	-	-	0.248
<i>Subtotal: Recurring Cost</i>	-	-	264.160	-	-	5.922	-	-	2.189	-	-	1.884	-	-	-	-	-	1.884
<i>Subtotal: Flyaway Cost</i>	-	-	264.160	-	-	5.922	-	-	2.189	-	-	1.884	-	-	-	-	-	1.884
Hardware Cost																		
Recurring Cost																		
RQ-11B Raven Systems ^(t)	177.000	200	35.400	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Short Range Reconnaissance (SRR) Systems ^(t)	-	-	-	34.440	450	15.498	34.441	417	14.362	34.441	410	14.121	-	-	-	34.441	410	14.121
<i>Subtotal: Recurring Cost</i>	-	-	35.400	-	-	15.498	-	-	14.362	-	-	14.121	-	-	-	-	-	14.121
<i>Subtotal: Hardware Cost</i>	-	-	35.400	-	-	15.498	-	-	14.362	-	-	14.121	-	-	-	-	-	14.121
Gross/Weapon System Cost	-	-	299.560	-	-	21.420	-	-	16.551	-	-	16.005	-	-	-	-	-	16.005

Remarks:
SRR hardware unit cost (\$34.441 in thousands) is for 1 SRR system (1 system consists of 2 SRR air vehicles, 1 Handheld Ground Control Station (HGCS), Digital Data Link (DDL) and Electro-Optical/Infrared (EO/IR) Payload).

Secondary Distribution		FY 2020	FY 2021	FY 2022 Base	FY 2022 OCO	FY 2022 Total
Army	Quantity	-	-	-	-	-
	Total Obligation Authority	21.420	16.551	16.005	-	16.005
Total:	Quantity	-	-	-	-	-
Secondary Distribution	Total Obligation Authority	21.420	16.551	16.005	-	16.005

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

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Exhibit P-5a, Procurement History and Planning: PB 2022 Army							Date: May 2021					
Appropriation / Budget Activity / Budget Sub Activity: 2031A / 01 / 10			P-1 Line Item Number / Title: 9675A00010 / SMALL UNMANNED AIRCRAFT SYSTEM				Item Number / Title [DODIC]: A00010 / SMALL UNMANNED AIRCRAFT SYSTEM					

Cost Elements	O C O	FY	Contractor and Location	Method/Type or Funding Vehicle	Location of PCO	Award Date	Date of First Delivery	Qty (Each)	Unit Cost (\$ K)	Specs Avail Now?	Date Revision Available	RFP Issue Date
RQ-11B Raven Systems		2019	AeroVironment, INC / Simi Valley, CA	SS / IDIQ	ACC - New Jersey	Feb 2019	Jul 2019	200	177.000	Y	Jul 2018	Jan 2019
Short Range Reconnaissance (SRR) Systems ^(†)		2020	TBD: Competitive / TBD	C / IDIQ	ACC - Redstone	Mar 2021	May 2021	450	34.440	N		Feb 2021
Short Range Reconnaissance (SRR) Systems ^(†)		2021	TBD: Competitive / TBD	C / IDIQ	ACC - Redstone	Apr 2021	May 2021	417	34.441	N		Feb 2021
Short Range Reconnaissance (SRR) Systems ^(†)		2022	TBD: Competitive / TBD	C / IDIQ	ACC - Redstone	Apr 2022	May 2022	410	34.441	N		Dec 2021

^(†) indicates the presence of a P-21

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Exhibit P-21, Production Schedule: PB 2022 Army															Date: May 2021														
Appropriation / Budget Activity / Budget Sub Activity: 2031A / 01 / 10										P-1 Line Item Number / Title: 9675A00010 / SMALL UNMANNED AIRCRAFT SYSTEM										Item Number / Title [DODIC]: A00010 / SMALL UNMANNED AIRCRAFT SYSTEM									

Cost Elements <i>(Units in Each)</i>						Fiscal Year 2019												Fiscal Year 2020												B A L A N C E	
O C C O	M F R #	FY	SERVICE	PROC QTY	ACCEPT PRIOR TO 1 OCT 2018	BAL DUE AS OF 1 OCT	Calendar Year 2019												Calendar Year 2020												
							O C T	N O V	D E C	J A N	F E B	M A R	A P R	M A Y	J U N	J U L	A U G	S E P	O C T	N O V	D E C	J A N	F E B	M A R	A P R	M A Y	J U N	J U L	A U G		S E P
Short Range Reconnaissance (SRR) Systems																															
	1	2020	ARMY	450	0	450																							450		
	1	2021	ARMY	417	0	417																							417		
	1	2022	ARMY	410	0	410																							410		
							O C T	N O V	D E C	J A N	F E B	M A R	A P R	M A Y	J U N	J U L	A U G	S E P	O C T	N O V	D E C	J A N	F E B	M A R	A P R	M A Y	J U N	J U L	A U G	S E P	

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Exhibit P-21, Production Schedule: PB 2022 Army															Date: May 2021														
Appropriation / Budget Activity / Budget Sub Activity: 2031A / 01 / 10										P-1 Line Item Number / Title: 9675A00010 / SMALL UNMANNED AIRCRAFT SYSTEM										Item Number / Title [DODIC]: A00010 / SMALL UNMANNED AIRCRAFT SYSTEM									

Cost Elements <i>(Units in Each)</i>						Fiscal Year 2021												Fiscal Year 2022												B A L A N C E	
O C C O	M F R #	FY	SERVICE	PROC QTY	ACCEPT PRIOR TO 1 OCT 2020	BAL DUE AS OF 1 OCT	Calendar Year 2021												Calendar Year 2022												
							O C T	N O V	D E C	J A N	F E B	M A R	A P R	M A Y	J U N	J U L	A U G	S E P	O C T	N O V	D E C	J A N	F E B	M A R	A P R	M A Y	J U N	J U L	A U G		S E P
Short Range Reconnaissance (SRR) Systems																															
	1	2020	ARMY	450	0	450																								0	
	1	2021	ARMY	417	0	417																								0	
	1	2022	ARMY	410	0	410																								238	
							O C T	N O V	D E C	J A N	F E B	M A R	A P R	M A Y	J U N	J U L	A U G	S E P	O C T	N O V	D E C	J A N	F E B	M A R	A P R	M A Y	J U N	J U L	A U G	S E P	

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Exhibit P-21, Production Schedule: PB 2022 Army												Date: May 2021											
Appropriation / Budget Activity / Budget Sub Activity: 2031A / 01 / 10						P-1 Line Item Number / Title: 9675A00010 / SMALL UNMANNED AIRCRAFT SYSTEM												Item Number / Title [DODIC]: A00010 / SMALL UNMANNED AIRCRAFT SYSTEM					

Cost Elements <i>(Units in Each)</i>						Fiscal Year 2023												Fiscal Year 2024												B A L A N C E	
O C C O	M F R #	FY	SERVICE	PROC QTY	ACCEPT PRIOR TO 1 OCT 2022	BAL DUE AS OF 1 OCT	Calendar Year 2023												Calendar Year 2024												
							O C T	N O V	D E C	J A N	F E B	M A R	A P R	M A Y	J U N	J U L	A U G	S E P	O C T	N O V	D E C	J A N	F E B	M A R	A P R	M A Y	J U N	J U L	A U G		S E P
Short Range Reconnaissance (SRR) Systems																															
	1	2020	ARMY	450	450	0																							0		
	1	2021	ARMY	417	417	0																							0		
	1	2022	ARMY	410	172	238	34	34	34	34	34	34	34																0		
							O C T	N O V	D E C	J A N	F E B	M A R	A P R	M A Y	J U N	J U L	A U G	S E P	O C T	N O V	D E C	J A N	F E B	M A R	A P R	M A Y	J U N	J U L	A U G	S E P	

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Exhibit P-21, Production Schedule: PB 2022 Army		Date: May 2021
Appropriation / Budget Activity / Budget Sub Activity: 2031A / 01 / 10		P-1 Line Item Number / Title: 9675A00010 / SMALL UNMANNED AIRCRAFT SYSTEM
		Item Number / Title [DODIC]: A00010 / SMALL UNMANNED AIRCRAFT SYSTEM

MFR Ref #	Manufacturer Name - Location	Production Rates (Each / Month)			Procurement Leadtime (Months)							
		MSR For 2022	1-8-5 For 2022	MAX For 2022	Initial				Reorder			
					ALT Prior to Oct 1	ALT After Oct 1	Manufacturing PLT	Total After Oct 1	ALT Prior to Oct 1	ALT After Oct 1	Manufacturing PLT	Total After Oct 1
1	TBD: Competitive - TBD	30	60	80	3	4	6	10	0	3	1	4

Remarks:
 FY 20 Procurement of SRR Air Vehicles was delayed due to COVID-19 impacts. The scheduled Limited User Test (LUT) was postponed resulting in a later decision to select the candidate system that would be used to fulfill the SRR requirement. Request for Production Proposal (RPP) release now planned for 2nd Quarter FY 21. Contract award planned for 3rd Quarter FY 21.

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

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Exhibit P-40, Budget Line Item Justification: PB 2022 Army **Date:** May 2021

Appropriation / Budget Activity / Budget Sub Activity: 2031A: Aircraft Procurement, Army / BA 01: Aircraft / BSA 20: Rotary **P-1 Line Item Number / Title:** 3167A09999 / Spectrum Army Video

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

Line Item MDAP/MAIS Code: N/A

Resource Summary	Prior Years	FY 2020	FY 2021	FY 2022 Base	FY 2022 OCO	FY 2022 Total	FY 2023	FY 2024	FY 2025	FY 2026	To Complete	Total
Procurement Quantity (<i>Units in Each</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost (<i>\$ in Millions</i>)	28.022	9.270	-	-	-	-	-	-	-	-	-	-
Less PY Advance Procurement (<i>\$ in Millions</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) (<i>\$ in Millions</i>)	28.022	9.270	-	-	-	-	-	-	-	-	-	-
Plus CY Advance Procurement (<i>\$ in Millions</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Total Obligation Authority (<i>\$ in Millions</i>)	28.022	9.270	-	-	-	-	-	-	-	-	-	-

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

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

Description:

The Commercial Spectrum Enhancement Act (CSEA) Title II, Public Law 108-494, dated December 23, 2004, established the Spectrum Relocation Fund (SRF) to provide Federal agencies a mechanism to recover the costs associated with relocating communication systems from spectrum bands which were auctioned for commercial purposes.

- The SRF is funded with proceeds from Federal Communications Commission (FCC) conducted auctions of spectrum licenses.
- SRF funds have an indefinite obligation period and remain available until expended (X Year).
- The Department of Defense (DoD) Information Officer (CIO) executes oversight of the DoD spectrum relocation and sharing efforts.

Secondary Distribution	FY 2020	FY 2021	FY 2022 Base	FY 2022 OCO	FY 2022 Total	FY 2023	FY 2024	FY 2025	FY 2026
Army									
Quantity	-	-	-	-	-	-	-	-	-
Total Obligation Authority	9.270	-	-	-	-	-	-	-	-
Total:									
Secondary Distribution									
Quantity	-	-	-	-	-	-	-	-	-
Total Obligation Authority	9.270	-	-	-	-	-	-	-	-

Justification:

The Tactical-Video (TAC-V) Downlink system is an integral component of the Security and Support (S&S) mission set of capabilities. The system consists of the video transmitter and antenna suite which are mounted on the UH-72 Lakota aircraft, the ground-based receiver antenna array, and a ground operator handheld receiver/display device for dismounted operations.

The systems allows the platform to transmit streaming video to the operator on the ground that receives, records, displays, and can play back real-time full motion video imagery and moving map metadata. This system is utilized in the support of state and federal law enforcement agencies, emergency first responders, and border patrol and customs agencies and as such, it is vital that this capability remain available to those agencies.

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Exhibit P-40, Budget Line Item Justification: PB 2022 Army **Date:** May 2021

Appropriation / Budget Activity / Budget Sub Activity: 2031A: Aircraft Procurement, Army / BA 01: Aircraft / BSA 20: Rotary **P-1 Line Item Number / Title:** 4742A05001 / Helicopter, Light Utility (LUH)

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

Line Item MDAP/MAIS Code: N/A

Resource Summary	Prior Years	FY 2020	FY 2021	FY 2022 Base	FY 2022 OCO	FY 2022 Total	FY 2023	FY 2024	FY 2025	FY 2026	To Complete	Total
Procurement Quantity (<i>Units in Each</i>)	476	3	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost (<i>\$ in Millions</i>)	3,149.382	37.000	-	-	-	-	-	-	-	-	-	-
Less PY Advance Procurement (<i>\$ in Millions</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) (<i>\$ in Millions</i>)	3,149.382	37.000	-	-	-	-	-	-	-	-	-	-
Plus CY Advance Procurement (<i>\$ in Millions</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Total Obligation Authority (<i>\$ in Millions</i>)	3,149.382	37.000	-	-	-	-	-	-	-	-	-	-

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

Initial Spares (<i>\$ in Millions</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Flyaway Unit Cost (<i>\$ in Thousands</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Unit Cost (<i>\$ in Thousands</i>)	6,616.349	12,333.333	-	-	-	-	-	-	-	-	-	-

Description:

The UH-72 platform will provide the flexibility to respond to Homeland Security (HLS) requirements, conduct civil search and rescue operations, support damage assessment, support test and training centers, perform generating force missions, augment the HH-60 Medical Evacuation (MEDEVAC) aircraft, and provide support to CONUS counterdrug operations. The UH-72 will conduct general support utility helicopter missions and execute tasks as part of an integrated effort with other joint services, government agencies, and non-governmental organizations. The UH-72 provides time-sensitive transport of supplies or key personnel, air mobility to assist civil authorities through the execution of search and rescue or disaster relief operations, advanced warning/detection of external threats to include threats to our borders, augmentation of air ambulance capabilities, and limited command and control operations in the conduct of HLS. As part of the Aviation Restructure Initiative (ARI) the UH-72 became the primary training aircraft at the US Army Aviation Center of Excellence (USAACE) in Ft Rucker. The UH-72 program is currently in full rate production.

Secondary Distribution	FY 2020	FY 2021	FY 2022 Base	FY 2022 OCO	FY 2022 Total	FY 2023	FY 2024	FY 2025	FY 2026
ANG									
Quantity	3	-	-	-	-	-	-	-	-
Total Obligation Authority	37.000	-	-	-	-	-	-	-	-
Total:									
Secondary Distribution									
Quantity	3	-	-	-	-	-	-	-	-
Total Obligation Authority	37.000	-	-	-	-	-	-	-	-

Justification:

-- FY20 \$27 million via Congressional funding supports procurement of 3 UH-72 Lakota aircraft
 -- FY20 \$10 million via Congressional funding supports the expandable rotorcraft diagnostics
 -- FY19 \$34 million via Congressional funding supports procurement of 4 UH-72 Lakota aircraft.
 -- FY18 base procurement dollars in the amount of \$197.501 million supports procurement of 23 UH-72 Lakota aircraft, fielding, and program management for one year. \$90 million of the \$197.501 million arrived via Congressional funding and supports procurement of 11 UH-72 Lakota aircraft.

-- ADM Signed 31 March 2021 to support procurement of remaining 1 AC. Anticipated date of award April 2021.

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Exhibit P-40, Budget Line Item Justification: PB 2022 Army		Date: May 2021
Appropriation / Budget Activity / Budget Sub Activity: 2031A: Aircraft Procurement, Army / BA 01: Aircraft / BSA 20: Rotary		P-1 Line Item Number / Title: 4742A05001 / Helicopter, Light Utility (LUH)
ID Code (A=Service Ready, B=Not Service Ready):	Program Elements for Code B Items: N/A	Other Related Program Elements: N/A
Line Item MDAP/MAIS Code: N/A		

-- Of the "Prior years" quantity,
16 of the FY16 aircraft buy were delivered in FY17-FY18,
23 of the FY17 aircraft buy were delivered in FY18-FY19,
12 of the FY18 aircraft buy will be delivered in FY19-FY20, and
11 of the FY18 aircraft buy will be delivered in FY21-FY22 (Awarded July 2020).
4 of the FY19 aircraft buy will be delivered in FY21-FY22 (Awarded July 2020).
2 of the FY20 aircraft buy will be delivered in FY21-FY22 (Awarded July 2020).

-- Current Army Acquisition Objective is 478 aircraft and the current Army Procurement Objective is 480 aircraft.
-- Total procurement quantity of 480 includes two attrited aircraft. Two High-Altitude Army National Guard Aviation Training Site aircraft procured with National Guard Bureau funding are not inclusive in total program funding.

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.

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Exhibit P-40, Budget Line Item Justification: PB 2022 Army **Date:** May 2021

Appropriation / Budget Activity / Budget Sub Activity: 2031A: Aircraft Procurement, Army / BA 01: Aircraft / BSA 20: Rotary **P-1 Line Item Number / Title:** 5757A05111 / AH-64 Apache Block IIIA Reman

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

Line Item MDAP/MAIS Code: 202

Resource Summary	Prior Years	FY 2020	FY 2021	FY 2022 Base	FY 2022 OCO	FY 2022 Total	FY 2023	FY 2024	FY 2025	FY 2026	To Complete	Total
Procurement Quantity (<i>Units in Each</i>)	384	49	50	30	-	30	-	-	-	-	-	-
Gross/Weapon System Cost (<i>\$ in Millions</i>)	7,855.070	993.780	982.897	673.596	-	673.596	-	-	-	-	-	-
Less PY Advance Procurement (<i>\$ in Millions</i>)	1,398.096	174.550	190.870	169.460	-	169.460	-	-	-	-	-	-
Net Procurement (P-1) (<i>\$ in Millions</i>)	6,456.974	819.230	792.027	504.136	-	504.136	-	-	-	-	-	-
Plus CY Advance Procurement (<i>\$ in Millions</i>)	1,572.646	190.870	169.460	192.230	-	192.230	-	-	-	-	-	-
Total Obligation Authority (<i>\$ in Millions</i>)	8,029.620	1,010.100	961.487	696.366	-	696.366	-	-	-	-	-	-

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

Initial Spares (<i>\$ in Millions</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Flyaway Unit Cost (<i>\$ in Thousands</i>)	114.080	18.780	17.270	18.800	-	18.800	-	-	-	-	-	-
Gross/Weapon System Unit Cost (<i>\$ in Thousands</i>)	20,455.911	20,281.224	19,657.940	22,453.200	-	22,453.200	-	-	-	-	-	-

Description:

AH-64E Reman is a complete remanufacture using a new airframe and meets all the requirements for Army and Joint interoperability goals for the future and adds significant combat capability while addressing obsolescence issues, ensuring the aircraft remains a viable combat multiplier beyond its lifecycle. The Army's only heavy attack helicopter, the AH-64E is fully digital with the latest technologies, adding significant combat capability to the aircraft. The AH-64E Apache is implementing an incremental design and fielding strategy as noted in the approved Capability Production Document (CPD). AH-64E Capability Version 1 includes Improved Drive and Propulsion System, Composite Main Rotor Blades (CMRB), Unmanned Aircraft System (UAS) Level III-IV Control, Improved Communications Suite, Improved Electronics / Modular Open Systems Approach, and Radar Electronics Unit (REU). Capability Version 4 includes Link 16, Air to Air to Ground (AAG) Video Relay, System Level Embedded Diagnostics (SLED), and provisions for Reduced-Size Crashworthy External Fuel Systems (RCEFS). Capability Version 6 includes Fire Control Radar (FCR) enhancements, Maritime Targeting Mode, Expanded Link-16, Image Blending, Multi-Mode Laser (MML), and Interactive Electronic Technical Manual (IETM) Upgrade. Production Lots 1-4 are Version 1 capable, Production Lots 5-8 are Version 4 capable, and Version 6 is included into the remaining Production Lots beginning with Production Lot 9. Upgrades are integrated as incremental block modifications. Other associated Government Furnished Equipment (GFE) such as the Modernized Radar Frequency Interferometer (M-RFI), Radar Electronics Unit (REU), and Manned/Unmanned Teaming Extended Capability (MUMT-X) will be procured and provided in accordance with the basis of issue plan. The program addresses operational shortfalls identified during real-world combat missions, meets Apache Capability Production Document (CPD) requirements for modernization, and provides necessary training, initial spares, and Peculiar Ground Support Equipment (PGSE). AH-64E aircraft entered the fleet in 2012.

"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."

Secondary Distribution		FY 2020	FY 2021	FY 2022 Base	FY 2022 OCO	FY 2022 Total	FY 2023	FY 2024	FY 2025	FY 2026
Army	Quantity	25	26	30	-	30	-	-	-	-
	Total Obligation Authority	515.273	499.513	696.366	-	696.366	-	-	-	-
ANG	Quantity	24	24	-	-	-	-	-	-	-
	Total Obligation Authority	494.827	461.974	-	-	-	-	-	-	-
Total: Secondary Distribution	Quantity	49	50	30	-	30	-	-	-	-
	Total Obligation Authority	1,010.100	961.487	696.366	-	696.366	-	-	-	-

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Exhibit P-40, Budget Line Item Justification: PB 2022 Army **Date:** May 2021

Appropriation / Budget Activity / Budget Sub Activity: 2031A: Aircraft Procurement, Army / BA 01: Aircraft / BSA 20: Rotary **P-1 Line Item Number / Title:** 5757A05111 / AH-64 Apache Block IIIA Reman

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

Line Item MDAP/MAIS Code: 202

Exhibits Schedule					Prior Years	FY 2020	FY 2021	FY 2022 Base	FY 2022 OCO	FY 2022 Total
Exhibit Type	Title*	Subexhibits	ID CD	MDAP/MAIS Code	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)
P-5	A05111 / AH-64 Apache Block IIIA Reman	P-5a, P-21			384 / 7,855.070	49 / 993.780	50 / 982.897	30 / 673.596	- / -	30 / 673.596
P-40	Total Gross/Weapon System Cost				384 / 7,855.070	49 / 993.780	50 / 982.897	30 / 673.596	- / -	30 / 673.596

*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:
 FY22 Base procurement dollars in the amount of \$696.366 millions supports Advance Procurement (AP), Full Rate Production (FRP) of AH-64E Apache Reman aircraft and associated support. This program was restructured in 2010 from the single AH-64E Apache (A05111) into two separate programs, AH-64E Apache Reman (A05111) and AH-64E Apache New Build (A05133).
 The Apache Reman Program assumes a cost sharing with the New Build Program in accordance with the New Build Army Program Baseline (APB).
 The current AH-64E Apache Remanufacture and New Build Army Procurement Objective (APO) is 791 Aircraft. The total AH-64E (Remanufacture and New Build) Army Acquisition Objective (AAO) is 812 Aircraft.
 The Apache Reman Program quantities and associated funding include a Multi-year contract from FY17- FY21 and assumes approval for a subsequent Multi-year contract in FY22 through FY26. The Apache Reman and New Build Programs are planning continued production of aircraft through FY2027 to meet the Army Procurement Objective (APO).
 Currently the total lead time (time from when first materials must be committed to aircraft delivery) is in excess of 24 months. The Cost Assessment and Program Evaluation (CAPE) Independent Cost Estimate (ICE) utilized 18% to 22% for Advance Procurement (AP). Each year's AP can be divided into 2 segments: 1) Government Furnished Equipment (GFE) such as engines, sensors and avionics and 2) Contractor Furnished Equipment (CFE). Material includes production components to support deliveries, provisioning material, pre-modification effort, and any potential termination liability costs. Long lead items include, but not limited to, such items as the Main Rotor Drive Shaft, Composite Main Rotor Blade, Improved Drive System, and Composite Stabilator IAW Financial Management Regulation (FMR) 7000.14-R.
 The Economical Production Rate of 98 aircraft per year is the maximum capacity at Full Rate Production assuming a 1-8-5 shift. This requirement is driven primarily by the production rate associated with current fuselage tooling capabilities. In order to increase the 1-8-5 (single shift) production rate, additional tooling must be procured. Capacity can be expanded to 144 aircraft per year with additional investment.

Comments:
 "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."

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Exhibit P-5, Cost Analysis: PB 2022 Army		Date: May 2021
Appropriation / Budget Activity / Budget Sub Activity: 2031A / 01 / 20		P-1 Line Item Number / Title: 5757A05111 / AH-64 Apache Block IIIA Reman
		Item Number / Title [DODIC]: A05111 / AH-64 Apache Block IIIA Reman

ID Code (A=Service Ready, B=Not Service Ready) :	MDAP/MAIS Code:
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Resource Summary	Prior Years	FY 2020	FY 2021	FY 2022 Base	FY 2022 OCO	FY 2022 Total
Procurement Quantity (Units in Each)	384	49	50	30	-	30
Gross/Weapon System Cost (\$ in Millions)	7,855.070	993.780	982.897	673.596	-	673.596
Less PY Advance Procurement (\$ in Millions)	1,398.096	174.550	190.870	169.460	-	169.460
Net Procurement (P-1) (\$ in Millions)	6,456.974	819.230	792.027	504.136	-	504.136
Plus CY Advance Procurement (\$ in Millions)	1,572.646	190.870	169.460	192.230	-	192.230
Total Obligation Authority (\$ in Millions)	8,029.620	1,010.100	961.487	696.366	-	696.366

(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 Thousands)	20,455.911	20,281.224	19,657.940	22,453.200	-	22,453.200

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

Cost Elements	Prior Years			FY 2020			FY 2021			FY 2022 Base			FY 2022 OCO			FY 2022 Total		
	Unit Cost (\$ K)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ K)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ K)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ K)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ K)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ K)	Qty (Each)	Total Cost (\$ M)
Flyaway Cost																		
Recurring Cost																		
CFE ^(†)	15,395.521	388	5,973.462	13,969.796	49	684.520	13,915.120	50	695.756	15,215.967	30	456.479	-	-	-	15,215.967	30	456.479
GFE	2,956.198	388	1,147.005	3,784.592	49	185.445	3,454.340	50	172.717	3,699.433	30	110.983	-	-	-	3,699.433	30	110.983
Non-Recurring Costs	-	-	239.705	-	-	3.723	-	-	3.860	-	-	3.937	-	-	-	-	-	3.937
Support Equipment	-	-	105.832	-	-	21.741	-	-	19.794	-	-	18.386	-	-	-	-	-	18.386
Other Costs	-	-	302.218	-	-	84.899	-	-	75.868	-	-	74.031	-	-	-	-	-	74.031
Initial Spares	-	-	86.848	-	-	13.452	-	-	14.902	-	-	9.780	-	-	-	-	-	9.780
<i>Subtotal: Recurring Cost</i>	<i>-</i>	<i>-</i>	<i>7,855.070</i>	<i>-</i>	<i>-</i>	<i>993.780</i>	<i>-</i>	<i>-</i>	<i>982.897</i>	<i>-</i>	<i>-</i>	<i>673.596</i>	<i>-</i>	<i>-</i>	<i>-</i>	<i>-</i>	<i>-</i>	<i>673.596</i>
<i>Subtotal: Flyaway Cost</i>	<i>-</i>	<i>-</i>	<i>7,855.070</i>	<i>-</i>	<i>-</i>	<i>993.780</i>	<i>-</i>	<i>-</i>	<i>982.897</i>	<i>-</i>	<i>-</i>	<i>673.596</i>	<i>-</i>	<i>-</i>	<i>-</i>	<i>-</i>	<i>-</i>	<i>673.596</i>
Gross/Weapon System Cost	20,455.911	384	7,855.070	20,281.224	49	993.780	19,657.940	50	982.897	22,453.200	30	673.596	-	-	-	22,453.200	30	673.596

Remarks:

Other Costs is inclusive of the Apache PM cost share that is allocated by percentage across each funding line. Yearly adjustments in Other Costs correspond to increases or decreases across all Apache PM funding lines.

Secondary Distribution		FY 2020	FY 2021	FY 2022 Base	FY 2022 OCO	FY 2022 Total
Army	Quantity	25	26	30	-	30
	Total Obligation Authority	515.273	499.513	696.366	-	696.366

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Exhibit P-5, Cost Analysis: PB 2022 Army		Date: May 2021
Appropriation / Budget Activity / Budget Sub Activity: 2031A / 01 / 20	P-1 Line Item Number / Title: 5757A05111 / AH-64 Apache Block IIIA Reman	Item Number / Title [DODIC]: A05111 / AH-64 Apache Block IIIA Reman

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

Secondary Distribution		FY 2020	FY 2021	FY 2022 Base	FY 2022 OCO	FY 2022 Total
ANG	Quantity	24	24	-	-	-
	Total Obligation Authority	494.827	461.974	-	-	-
Total:	Quantity	49	50	30	-	30
Secondary Distribution	Total Obligation Authority	1,010.100	961.487	696.366	-	696.366

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

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Exhibit P-5a, Procurement History and Planning: PB 2022 Army							Date: May 2021					
Appropriation / Budget Activity / Budget Sub Activity: 2031A / 01 / 20			P-1 Line Item Number / Title: 5757A05111 / AH-64 Apache Block IIIA Reman				Item Number / Title [DODIC]: A05111 / AH-64 Apache Block IIIA Reman					

Cost Elements	O C O	FY	Contractor and Location	Method/Type or Funding Vehicle	Location of PCO	Award Date	Date of First Delivery	Qty (Each)	Unit Cost (\$ K)	Specs Avail Now?	Date Revision Available	RFP Issue Date
CFE ^(†)		2014	The Boeing Company / Mesa, AZ	SS / FPIF	AMCOM	Mar 2014	Feb 2015	35	15,570.229	Y		Jul 2012
CFE ^(†)		2015	The Boeing Company / Mesa, AZ	SS / FPIF	AMCOM	Mar 2015	Feb 2016	53	14,679.510	Y		Aug 2014
CFE ^(†)		2016	The Boeing Company / Mesa, AZ	SS / FPIF	AMCOM	Mar 2016	Jan 2017	64	13,759.470	Y		Aug 2014
CFE		2017	The Boeing Company / Mesa, AZ	SS / FFP	AMCOM	Mar 2017	Jan 2019	52	13,565.810	Y		Aug 2015
CFE ^(†)		2018	The Boeing Company / Mesa, AZ	SS / FFP	AMCOM	Mar 2018	Jul 2019	48	12,956.958	Y		Aug 2015
CFE ^(†)		2019	The Boeing Company / Mesa, AZ	SS / FFP	AMCOM	Mar 2019	Jul 2020	48	13,794.229	Y		Aug 2015
CFE ^(†)		2020	The Boeing Company / Mesa, AZ	SS / FFP	AMCOM	Mar 2020	May 2021	49	13,969.796	Y		Aug 2015
CFE ^(†)		2021	The Boeing Company / Mesa, AZ	SS / FFP	AMCOM	Mar 2021	Jun 2022	50	13,915.120	Y		Aug 2015
CFE ^(†)		2022	The Boeing Company / Mesa, AZ	SS / FFP	AMCOM	Mar 2022	Jun 2023	30	15,215.967	Y		

^(†) indicates the presence of a P-21

Remarks:

Major Contractor Furnished Equipment (CFE) cost drivers include, but not limited to, the Fuselage, Transmission, and Composite Main Rotor Blades. Major Government Furnished Equipment (GFE) includes engines, Embedded Global Positioning System Inertial Navigation Systems (EGIs), Radar Electronics Unit (REU), Modernized Target Acquisition Designation System (MTADS)/Pilot Night Vision System (PNVS) and Manned/Unmanned Teaming Extended Capability (MUMT-X). Other Cost includes Support Equipment, Peculiar Ground Support Equipment (PGSE), and Government Program Management Support.

Delivery schedules appear to extend beyond the 12 month period for the following reasons: Yearly procurement consist of AH-64E Remanufactured and New Build aircraft. Both variants are awarded on different contract line items. While each of these efforts deliver all of their aircraft within a 12 month span, they do not deliver within the same 12 month time period.

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Exhibit P-21, Production Schedule: PB 2022 Army		Date: May 2021
Appropriation / Budget Activity / Budget Sub Activity: 2031A / 01 / 20		P-1 Line Item Number / Title: 5757A05111 / AH-64 Apache Block IIIA Reman
		Item Number / Title [DODIC]: A05111 / AH-64 Apache Block IIIA Reman

Cost Elements <i>(Units in Each)</i>					Fiscal Year 2014												Fiscal Year 2015												BALANCE		
O C C #	M F R #	FY	SERVICE	PROC QTY	ACCEPT PRIOR TO 1 OCT 2013	BAL DUE AS OF 1 OCT	Calendar Year 2014												Calendar Year 2015												
							O C T	N O V	D E C	J A N	F E B	M A R	A P R	M A Y	J U N	J U L	A U G	S E P	O C T	N O V	D E C	J A N	F E B	M A R	A P R	M A Y	J U N	J U L		A U G	S E P
CFE																															
Prior Years Deliveries: 88																															
1		2014	ARMY	35	0	35																								9	
1		2015	ARMY	53	0	53																								53	
1		2016	ARMY	64	0	64																								64	
1		2018	ARMY	48	0	48																								48	
1		2019	ARMY	48	0	48																								48	
1		2020	ARMY	49	0	49																								49	
1		2021	ARMY	50	0	50																								50	
1		2022	ARMY	30	0	30																								30	

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Exhibit P-21, Production Schedule: PB 2022 Army															Date: May 2021														
Appropriation / Budget Activity / Budget Sub Activity: 2031A / 01 / 20										P-1 Line Item Number / Title: 5757A05111 / AH-64 Apache Block IIIA Reman										Item Number / Title [DODIC]: A05111 / AH-64 Apache Block IIIA Reman									

Cost Elements <i>(Units in Each)</i>					Fiscal Year 2016														Fiscal Year 2017														BALANCE		
O C O	M F R #	FY	SERVICE	PROC QTY	ACCEPT PRIOR TO 1 OCT 2015	BAL DUE AS OF 1 OCT	Calendar Year 2016														Calendar Year 2017														
							O C T	N O V	D E C	J A N	F E B	M A R	A P R	M A Y	J U N	J U L	A U G	S E P	O C T	N O V	D E C	J A N	F E B	M A R	A P R	M A Y	J U N	J U L	A U G	S E P					
CFE																																			
Prior Years Deliveries: 88																																			
1		2014	ARMY	35	26	9	3	3	3																									0	
1		2015	ARMY	53	0	53	-	-	-	-	3	4	4	3	2	3	2	2	2	3	4	3	-	-	-	-	-	-	-	-	-	-	18		
1		2016	ARMY	64	0	64						A	-	-	-	-	-	-	-	-	-	1	4	4	4	5	5	5	5	5	5	26			
1		2018	ARMY	48	0	48																										48			
1		2019	ARMY	48	0	48																										48			
1		2020	ARMY	49	0	49																										49			
1		2021	ARMY	50	0	50																										50			
1		2022	ARMY	30	0	30																										30			
							O C T	N O V	D E C	J A N	F E B	M A R	A P R	M A Y	J U N	J U L	A U G	S E P	O C T	N O V	D E C	J A N	F E B	M A R	A P R	M A Y	J U N	J U L	A U G	S E P					

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Exhibit P-21, Production Schedule: PB 2022 Army				Date: May 2021							
Appropriation / Budget Activity / Budget Sub Activity: 2031A / 01 / 20				P-1 Line Item Number / Title: 5757A05111 / AH-64 Apache Block IIIA Reman				Item Number / Title [DODIC]: A05111 / AH-64 Apache Block IIIA Reman			

Cost Elements <i>(Units in Each)</i>						Fiscal Year 2018												Fiscal Year 2019												BALANCE	
O C O #	M F R #	FY	SERVICE	PROC QTY	ACCEPT PRIOR TO 1 OCT 2017	BAL DUE AS OF 1 OCT	Calendar Year 2018												Calendar Year 2019												
							O C T	N O V	D E C	J A N	F E B	M A R	A P R	M A Y	J U N	J U L	A U G	S E P	O C T	N O V	D E C	J A N	F E B	M A R	A P R	M A Y	J U N	J U L	A U G		S E P
CFE																															
Prior Years Deliveries: 88																															
1		2014	ARMY	35	35	0																							0		
1		2015	ARMY	53	35	18	-	-	-	-	1	6	6	5															0		
1		2016	ARMY	64	38	26	5	5	5	6	5																	0			
1		2018	ARMY	48	0	48						A	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1	4	4	39	
1		2019	ARMY	48	0	48																						48			
1		2020	ARMY	49	0	49																						49			
1		2021	ARMY	50	0	50																						50			
1		2022	ARMY	30	0	30																						30			
							O C T	N O V	D E C	J A N	F E B	M A R	A P R	M A Y	J U N	J U L	A U G	S E P	O C T	N O V	D E C	J A N	F E B	M A R	A P R	M A Y	J U N	J U L	A U G	S E P	

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Exhibit P-21, Production Schedule: PB 2022 Army															Date: May 2021														
Appropriation / Budget Activity / Budget Sub Activity: 2031A / 01 / 20										P-1 Line Item Number / Title: 5757A05111 / AH-64 Apache Block IIIA Reman										Item Number / Title [DODIC]: A05111 / AH-64 Apache Block IIIA Reman									

Cost Elements <i>(Units in Each)</i>						Fiscal Year 2020										Fiscal Year 2021										BALANCE				
O C O #	M F R #	FY	SERVICE	PROC QTY	ACCEPT PRIOR TO 1 OCT 2019	BAL DUE AS OF 1 OCT	Calendar Year 2020										Calendar Year 2021													
							O C T	N O V	D E C	J A N	F E B	M A R	A P R	M A Y	J U N	J U L	A U G	S E P	O C T	N O V	D E C	J A N	F E B	M A R	A P R		M A Y	J U N	J U L	A U G
CFE																														
Prior Years Deliveries: 88																														
1		2014	ARMY	35	35	0																						0		
1		2015	ARMY	53	53	0																						0		
1		2016	ARMY	64	64	0																						0		
1		2018	ARMY	48	9	39	5	4	4	5	4	4	4	4	5													0		
1		2019	ARMY	48	0	48	-	-	-	-	-	-	-	-	5	5	5	5	4	4	5	5	5	5				0		
1		2020	ARMY	49	0	49																						24		
1		2021	ARMY	50	0	50																						50		
1		2022	ARMY	30	0	30																						30		
							O C T	N O V	D E C	J A N	F E B	M A R	A P R	M A Y	J U N	J U L	A U G	S E P	O C T	N O V	D E C	J A N	F E B	M A R	A P R	M A Y	J U N	J U L	A U G	S E P

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Exhibit P-21, Production Schedule: PB 2022 Army															Date: May 2021									
Appropriation / Budget Activity / Budget Sub Activity: 2031A / 01 / 20										P-1 Line Item Number / Title: 5757A05111 / AH-64 Apache Block IIIA Reman										Item Number / Title [DODIC]: A05111 / AH-64 Apache Block IIIA Reman				

Cost Elements <i>(Units in Each)</i>						Fiscal Year 2022												Fiscal Year 2023												BALANCE	
O C C #	M F R #	FY	SERVICE	PROC QTY	ACCEPT PRIOR TO 1 OCT 2021	BAL DUE AS OF 1 OCT	Calendar Year 2022												Calendar Year 2023												
							O C T	N O V	D E C	J A N	F E B	M A R	A P R	M A Y	J U N	J U L	A U G	S E P	O C T	N O V	D E C	J A N	F E B	M A R	A P R	M A Y	J U N	J U L	A U G		S E P

CFE																																
Prior Years Deliveries: 88																																
1	2014	ARMY	35	35	0																								0			
1	2015	ARMY	53	53	0																								0			
1	2016	ARMY	64	64	0																								0			
1	2018	ARMY	48	48	0																								0			
1	2019	ARMY	48	48	0																								0			
1	2020	ARMY	49	25	24	5	4	4	5	5	1																		0			
1	2021	ARMY	50	0	50	-	-	-	-	-	-	-	-	4	4	4	5	4	4	4	4	4	4	4	4	4	5	4	0			
1	2022	ARMY	30	0	30							A	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	4	5	5	4	12

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Exhibit P-21, Production Schedule: PB 2022 Army															Date: May 2021														
Appropriation / Budget Activity / Budget Sub Activity: 2031A / 01 / 20										P-1 Line Item Number / Title: 5757A05111 / AH-64 Apache Block IIIA Reman										Item Number / Title [DODIC]: A05111 / AH-64 Apache Block IIIA Reman									

Cost Elements <i>(Units in Each)</i>						Fiscal Year 2024												Fiscal Year 2025												BALANCE	
O C C #	M F R #	FY	SERVICE	PROC QTY	ACCEPT PRIOR TO 1 OCT 2023	BAL DUE AS OF 1 OCT	Calendar Year 2024												Calendar Year 2025												
							O C T	N O V	D E C	J A N	F E B	M A R	A P R	M A Y	J U N	J U L	A U G	S E P	O C T	N O V	D E C	J A N	F E B	M A R	A P R	M A Y	J U N	J U L	A U G		S E P

CFE																													
Prior Years Deliveries: 88																													
1	2014	ARMY	35	35	0																								0
1	2015	ARMY	53	53	0																								0
1	2016	ARMY	64	64	0																								0
1	2018	ARMY	48	48	0																								0
1	2019	ARMY	48	48	0																								0
1	2020	ARMY	49	49	0																								0
1	2021	ARMY	50	50	0																								0
1	2022	ARMY	30	18	12	4	4	4																					0
						O C T	N O V	D E C	J A N	F E B	M A R	A P R	M A Y	J U N	J U L	A U G	S E P	O C T	N O V	D E C	J A N	F E B	M A R	A P R	M A Y	J U N	J U L	A U G	S E P

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Exhibit P-21, Production Schedule: PB 2022 Army		Date: May 2021
Appropriation / Budget Activity / Budget Sub Activity: 2031A / 01 / 20		P-1 Line Item Number / Title: 5757A05111 / AH-64 Apache Block IIIA Reman
		Item Number / Title [DODIC]: A05111 / AH-64 Apache Block IIIA Reman

MFR Ref #	Manufacturer Name - Location	Production Rates (Each / Month)			Procurement Leadtime (Months)							
		MSR For 2022	1-8-5 For 2022	MAX For 2022	Initial				Reorder			
					ALT Prior to Oct 1	ALT After Oct 1	Manufacturing PLT	Total After Oct 1	ALT Prior to Oct 1	ALT After Oct 1	Manufacturing PLT	Total After Oct 1
1	The Boeing Company - Mesa, AZ	48	98	144	0	11	13	24	0	6	12	18

"A" in the Delivery Schedule indicates the Contract Award Date.

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

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Exhibit P-40, Advance Procurement Budget Line Item Justification: PB 2022 Army							Date: May 2021					
Appropriation / Budget Activity / Budget Sub Activity: 2031A: Aircraft Procurement, Army / BA 01: Aircraft / BSA 20: Rotary							P-1 Line Item Number / Title: 5757A05111 / AH-64 Apache Block IIIA Reman					
Program Elements for Code B Items: N/A							Other Related Program Elements: N/A					
Line Item MDAP/MAIS Code: 202												

Resource Summary	Prior Years	FY 2020	FY 2021	FY 2022 Base	FY 2022 OCO	FY 2022 Total	FY 2023	FY 2024	FY 2025	FY 2026	To Complete	Total
Gross/Weapon System Cost (<i>\$ in Millions</i>)	1,572.646	190.870	169.460	192.230	-	192.230	-	-	-	-	-	-
Net Procurement (P-1) (<i>\$ in Millions</i>)	1,572.646	190.870	169.460	192.230	-	192.230	-	-	-	-	-	-
Total Obligation Authority (<i>\$ in Millions</i>)	1,572.646	190.870	169.460	192.230	-	192.230	-	-	-	-	-	-

Description:

AH-64E Reman is a complete remanufacture using a new airframe and meets all the requirements for Army and Joint interoperability goals for the future and adds significant combat capability while addressing obsolescence issues, ensuring the aircraft remains a viable combat multiplier beyond its lifecycle. The Army's only heavy attack helicopter, the AH-64E is fully digital with the latest technologies, adding significant combat capability to the aircraft. The AH-64E Apache is implementing an incremental design and fielding strategy as noted in the approved Capability Production Document (CPD). AH-64E Capability Version 1 includes Improved Drive and Propulsion System, Composite Main Rotor Blades (CMRB), Unmanned Aircraft System (UAS) Level III-IV Control, Improved Communications Suite, Improved Electronics / Modular Open Systems Approach, and Radar Electronics Unit (REU). Capability Version 4 includes Link 16, Air to Air to Ground (AAG) Video Relay, System Level Embedded Diagnostics (SLED), and provisions for Reduced-Size Crashworthy External Fuel Systems (RCEFS). Capability Version 6 includes Fire Control Radar (FCR) enhancements, Maritime Targeting Mode, Expanded Link-16, Image Blending, Multi-Mode Laser (MML), and Interactive Electronic Technical Manual (IETM) Upgrade. Production Lots 1-4 are Version 1 capable, Production Lots 5-8 are Version 4 capable, and Version 6 is included into the remaining Production Lots beginning with Production Lot 9. Upgrades are integrated as incremental block modifications. Other associated Government Furnished Equipment (GFE) such as the, Modernized Radar Frequency Interferometer (M-RFI), Radar Electronics Unit (REU), and Manned/Unmanned Teaming Extended Capability (MUMT-X) will be procured and provided in accordance with the basis of issue plan. The program addresses operational shortfalls identified during real-world combat missions, meets Apache Capability Production Document (CPD) requirements for modernization, and provides necessary training, initial spares, and Peculiar Ground Support Equipment (PGSE). AH-64E aircraft entered the fleet in 2012.

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Exhibit P-40, Advance Procurement Budget Line Item Justification: PB 2022 Army **Date:** May 2021

Appropriation / Budget Activity / Budget Sub Activity: 2031A: Aircraft Procurement, Army / BA 01: Aircraft / BSA 20: Rotary **P-1 Line Item Number / Title:** 5757A05111 / AH-64 Apache Block IIIA Reman

Program Elements for Code B Items: N/A **Other Related Program Elements:** N/A

Line Item MDAP/MAIS Code: 202

Exhibits Schedule				Prior Years	FY 2020	FY 2021	FY 2022 Base	FY 2022 OCO	FY 2022 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	A05111 / AH-64 Apache Block IIIA Reman			384 / 1,572.646	49 / 190.870	50 / 169.460	30 / 192.230	- / -	30 / 192.230
P-40	Total Gross/Weapon System Cost			384 / 1,572.646	49 / 190.870	50 / 169.460	30 / 192.230	- / -	30 / 192.230

*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:
 FY22 Base procurement dollars in the amount of \$696.366 millions supports Advance Procurement (AP), Full Rate Production (FRP) of AH-64E Apache Reman aircraft and associated support. This program was restructured in 2010 from the single AH-64E Apache (A05111) into two separate programs, AH-64E Apache Reman (A05111) and AH-64E Apache New Build (A05133).

The Apache Reman Program assumes a cost sharing with the New Build Program in accordance with the New Build Army Program Baseline (APB).

The current AH-64E Apache Remanufacture and New Build Army Procurement Objective (APO) is 791 Aircraft. The total AH-64E (Remanufacture and New Build) Army Acquisition Objective (AAO) is 812 Aircraft.

The Apache Reman Program quantities and associated funding include a Multi-year contract from FY17- FY21 and assumes approval for a subsequent Multi-year contract in FY22 through FY26. The Apache Reman and New Build Programs are planning continued production of aircraft through FY2027 to meet the Army Procurement Objective (APO).

Currently the total lead time (time from when first materials must be committed to aircraft delivery) is in excess of 24 months. The Cost Assessment and Program Evaluation (CAPE) Independent Cost Estimate (ICE) utilized 18% to 22% for Advance Procurement (AP). Each year's AP can be divided into 2 segments: 1) Government Furnished Equipment (GFE) such as engines, sensors and avionics and 2) Contractor Furnished Equipment (CFE). Material includes production components to support deliveries, provisioning material, pre-modification effort, and any potential termination liability costs. Long lead items include, but not limited to, such items as the Main Rotor Drive Shaft, Composite Main Rotor Blade, Improved Drive System, and Composite Stabilator IAW Financial Management Regulation (FMR) 7000.14-R.

The Economical Production Rate of 98 aircraft per year is the maximum capacity at Full Rate Production assuming a 1-8-5 shift. This requirement is driven primarily by the production rate associated with current fuselage tooling capabilities. In order to increase the 1-8-5 (single shift) production rate, additional tooling must be procured. Capacity can be expanded to 144 aircraft per year with additional investment.

Comments:
 "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."

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Exhibit P-10, Advance Procurement Requirements Analysis (page 1 - Budget Funding Justification): PB 2022 Army					Date: May 2021	
Appropriation / Budget Activity / Budget Sub Activity: 2031A / 01 / 20		P-1 Line Item Number / Title: 5757A05111 / AH-64 Apache Block IIIA Reman			P-5 Number / Title: A05111 / AH-64 Apache Block IIIA Reman	
First System (2022) Award Date: July 2009		First System (2022) Completion Date: November 2011			Interval Between Systems: 1 Months	
AH-64 Apache Block IIIA Reman		Production Leadtime <i>(Months)</i>	Prior Years <i>(Each)</i>	FY 2020 <i>(Each)</i>	FY 2021 <i>(Each)</i>	FY 2022 <i>(Each)</i>
Quantity			384	49	50	30
Cost Elements		When Required <i>(Months)</i>	Prior Years <i>(\$ M)</i>	FY 2020 <i>(\$ M)</i>	FY 2021 <i>(\$ M)</i>	FY 2022 <i>(\$ M)</i>
Other						
CFE		6	1,092.425	190.870	169.460	192.230
GFE		6	480.221	-	-	-
<i>Total: Other</i>			<i>1,572.646</i>	<i>190.870</i>	<i>169.460</i>	<i>192.230</i>
Total Advance Procurement/Obligation Authority			1,572.646	190.870	169.460	192.230

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Exhibit P-10, Advance Procurement Requirements Analysis (page 2 - Budget Funding Justification): PB 2022 Army						Date: May 2021	
Appropriation / Budget Activity / Budget Sub Activity: 2031A / 01 / 20		P-1 Line Item Number / Title: 5757A05111 / AH-64 Apache Block IIIA Reman				P-5 Number / Title: A05111 / AH-64 Apache Block IIIA Reman	
		FY 2022					
Cost Elements	QPA <i>(Each)</i>	Production Leadtime <i>(Months)</i>	Unit Cost <i>(\$ K)</i>	Contract Forecast Date	2022 Qty <i>(Each)</i>	For FY	Total Cost Request <i>(\$ M)</i>
Other							
CFE	26						192.230
GFE	26						-
<i>Total: Other</i>							192.230
Total Advance Procurement/Obligation Authority							192.230

Description:
 Currently the total lead time (time from when first materials must be committed to aircraft delivery) is in excess of 24 months. The Cost Assessment and Program Evaluation (CAPE) Independent Cost Estimate (ICE) utilized 18% to 22% for Advance Procurement (AP) for single year contracts. Each year's AP can be divided into 2 segments: 1) Government Furnished Equipment (GFE) such as engines, sensors and avionics and 2) Contractor Furnished Equipment (CFE). Material includes production components to support deliveries, provisioning material, pre-modification effort, and any potential termination liability costs. Long lead items include the Main Rotor Drive Shaft, Composite Main Rotor Blade, Improved Drive System, and Composite Stabilator.

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Exhibit P-40, Budget Line Item Justification: PB 2022 Army **Date:** May 2021

Appropriation / Budget Activity / Budget Sub Activity: 2031A: Aircraft Procurement, Army / BA 01: Aircraft / BSA 20: Rotary **P-1 Line Item Number / Title:** 5840A05133 / AH-64 Apache Block IIIB New Build

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

Line Item MDAP/MAIS Code: 437

Resource Summary	Prior Years	FY 2020	FY 2021	FY 2022 Base	FY 2022 OCO	FY 2022 Total	FY 2023	FY 2024	FY 2025	FY 2026	To Complete	Total
Procurement Quantity (<i>Units in Each</i>)	79	0	2	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost (<i>\$ in Millions</i>)	2,297.944	58.600	69.154	-	-	-	-	-	-	-	-	-
Less PY Advance Procurement (<i>\$ in Millions</i>)	228.207	58.600	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) (<i>\$ in Millions</i>)	2,069.737	0.000	69.154	-	-	-	-	-	-	-	-	-
Plus CY Advance Procurement (<i>\$ in Millions</i>)	286.807	-	-	-	-	-	-	-	-	-	-	-
Total Obligation Authority (<i>\$ in Millions</i>)	2,356.544	0.000	69.154	-	-	-	-	-	-	-	-	-

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

Initial Spares (<i>\$ in Millions</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Flyaway Unit Cost (<i>\$ in Thousands</i>)	93.720	21.990	34.120	-	-	-	-	-	-	-	-	-
Gross/Weapon System Unit Cost (<i>\$ in Thousands</i>)	29,087.899	-	34,577.000	-	-	-	-	-	-	-	-	-

Description:

The AH-64E Apache New Build aircraft is the same configuration as the AH-64E Remanufacture aircraft and procured using the same contracts. While the AH-64E Remanufacture program inducts aging AH-64D aircraft into a remanufacture production line, the AH-64E New Build program assembles all new components resulting in completely new aircraft at the end of the production process. These aircraft are procured at a significantly higher cost because they include all new components. A new build Modernized Target Acquisition Designation Sight / Pilot Night Vision Sensor (MTADS/PNVS) system will be procured and provided with each aircraft. Other associated Government Furnished Equipment (GFE) such as the Fire Control Radar (FCR), Modernized Radar Frequency Interferometer (M-RFI), Radar Electronics Unit (REU), and Manned/Unmanned Teaming Extended Capability (MUMT-X) will be procured and provided in accordance with the basis of issue plan.

Secondary Distribution	FY 2020	FY 2021	FY 2022 Base	FY 2022 OCO	FY 2022 Total	FY 2023	FY 2024	FY 2025	FY 2026
Army									
Quantity	-	2	-	-	-	-	-	-	-
Total Obligation Authority	-	69.154	-	-	-	-	-	-	-
Total:									
Secondary Distribution									
Quantity	-	2	-	-	-	-	-	-	-
Total Obligation Authority	-	69.154	-	-	-	-	-	-	-

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Exhibit P-40, Budget Line Item Justification: PB 2022 Army **Date:** May 2021

Appropriation / Budget Activity / Budget Sub Activity: 2031A: Aircraft Procurement, Army / BA 01: Aircraft / BSA 20: Rotary **P-1 Line Item Number / Title:** 5840A05133 / AH-64 Apache Block IIIB New Build

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

Line Item MDAP/MAIS Code: 437

Exhibits Schedule					Prior Years	FY 2020	FY 2021	FY 2022 Base	FY 2022 OCO	FY 2022 Total
Exhibit Type	Title*	Subexhibits	ID CD	MDAP/MAIS Code	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)
P-5	A05133 / AH-64 Apache Block IIIB New Build	P-5a			79 / 2,297.944	0 / 58.600	2 / 69.154	- / -	- / -	- / -
P-40	Total Gross/Weapon System Cost				79 / 2,297.944	0 / 58.600	2 / 69.154	- / -	- / -	- / -

*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:

This program was restructured in 2010 from the single AH-64E Apache (A05111) into two separate programs, AH-64E Apache Reman (A05111) and AH-64E Apache New Build (A05133).

The current AH-64E Apache Remanufacture and New Build Army Procurement Objective (APO) is 791 Aircraft. The total AH-64E (Remanufacture and New Build) Army Acquisition Objective (AAO) is 812 Aircraft.

Additionally, the New Build program funding includes Congressionally appropriated Overseas Contingency Operations (OCO) funding to procure New Build aircraft to fill aircraft shortages due to combat attrition and training loss. OCO funding does not provide advance procurement for long lead items for these aircraft.

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Exhibit P-5, Cost Analysis: PB 2022 Army		Date: May 2021
Appropriation / Budget Activity / Budget Sub Activity: 2031A / 01 / 20	P-1 Line Item Number / Title: 5840A05133 / AH-64 Apache Block IIIB New Build	Item Number / Title [DODIC]: A05133 / AH-64 Apache Block IIIB New Build

ID Code (A=Service Ready, B=Not Service Ready) :	MDAP/MAIS Code:
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Resource Summary	Prior Years	FY 2020	FY 2021	FY 2022 Base	FY 2022 OCO	FY 2022 Total
Procurement Quantity (Units in Each)	79	0	2	-	-	-
Gross/Weapon System Cost (\$ in Millions)	2,297.944	58.600	69.154	-	-	-
Less PY Advance Procurement (\$ in Millions)	228.207	58.600	-	-	-	-
Net Procurement (P-1) (\$ in Millions)	2,069.737	0.000	69.154	-	-	-
Plus CY Advance Procurement (\$ in Millions)	286.807	-	-	-	-	-
Total Obligation Authority (\$ in Millions)	2,356.544	0.000	69.154	-	-	-

(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 Thousands)	29,087.899	-	34,577.000	-	-	-

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

Cost Elements	Prior Years			FY 2020			FY 2021			FY 2022 Base			FY 2022 OCO			FY 2022 Total		
	Unit Cost (\$ K)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ K)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ K)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ K)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ K)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ K)	Qty (Each)	Total Cost (\$ M)
Flyaway Cost																		
Recurring Cost																		
CFE ^(†)	18,554.455	77	1,428.693	-	-	58.600	19,688.500	2	39.377	-	-	-	-	-	-	-	-	-
GFE	9,283.662	77	714.842	-	-	-	12,051.500	2	24.103	-	-	-	-	-	-	-	-	-
Other Costs	-	-	125.669	-	-	-	-	-	4.984	-	-	-	-	-	-	-	-	-
Initial Spares	-	-	18.740	-	-	-	-	-	0.690	-	-	-	-	-	-	-	-	-
Subtotal: Recurring Cost	-	-	2,287.944	-	-	58.600	-	-	69.154	-	-	-	-	-	-	-	-	-
Non Recurring Cost																		
Non-Recurring Cost	-	-	10.000	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Subtotal: Non Recurring Cost	-	-	10.000	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Subtotal: Flyaway Cost	-	-	2,297.944	-	-	58.600	-	-	69.154	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost	29,087.899	79	2,297.944	-	0	58.600	34,577.000	2	69.154	-	-	-	-	-	-	-	-	-

Secondary Distribution		FY 2020	FY 2021	FY 2022 Base	FY 2022 OCO	FY 2022 Total
Army	Quantity	-	2	-	-	-
	Total Obligation Authority	-	69.154	-	-	-
Total:	Quantity	0	2	-	-	-

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Exhibit P-5, Cost Analysis: PB 2022 Army		Date: May 2021
Appropriation / Budget Activity / Budget Sub Activity: 2031A / 01 / 20	P-1 Line Item Number / Title: 5840A05133 / AH-64 Apache Block IIIB New Build	Item Number / Title [DODIC]: A05133 / AH-64 Apache Block IIIB New Build

ID Code (A=Service Ready, B=Not Service Ready) :	MDAP/MAIS Code:
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Secondary Distribution		FY 2020	FY 2021	FY 2022 Base	FY 2022 OCO	FY 2022 Total
Secondary Distribution	Total Obligation Authority	0.000	69.154	-	-	-

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

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Exhibit P-5a, Procurement History and Planning: PB 2022 Army							Date: May 2021					
Appropriation / Budget Activity / Budget Sub Activity: 2031A / 01 / 20			P-1 Line Item Number / Title: 5840A05133 / AH-64 Apache Block IIIB New Build				Item Number / Title [DODIC]: A05133 / AH-64 Apache Block IIIB New Build					

Cost Elements	O C O	FY	Contractor and Location	Method/Type or Funding Vehicle	Location of PCO	Award Date	Date of First Delivery	Qty <i>(Each)</i>	Unit Cost <i>(\$ K)</i>	Specs Avail Now?	Date Revision Available	RFP Issue Date
CFE		2013	The Boeing Company / Mesa	SS / FPIF	AMCOM	Mar 2014	Sep 2014	13	16,375.300	Y		Jul 2012
CFE		2014	The Boeing Company / Mesa	SS / FPIF	AMCOM	Sep 2014	Nov 2016	4	16,873.700	Y		Jul 2014
CFE		2017	The Boeing Company / Mesa	SS / FFP	AMCOM	Sep 2017	Dec 2019	8	17,850.380	Y		Apr 2015
CFE		2018	The Boeing Company / Mesa	SS / FFP	AMCOM	Aug 2018	Sep 2020	31	20,401.387	Y		Apr 2015
CFE		2019	The Boeing Company / Mesa	SS / FFP	AMCOM	Jan 2019	Feb 2022	18	16,573.778	Y		Apr 2015
CFE	✓	2021	The Boeing Company / Mesa	SS / FFP	AMCOM	Feb 2021	Dec 2022	2	19,688.500	Y		Apr 2015

Remarks:
Major Contractor Furnished Equipment (CFE) cost drivers include the Fuselage, Transmission, and Composite Main Rotor Blades. Government Furnished Equipment (GFE) includes engines, Embedded Global Positioning System Inertial Navigation Systems (EGIs), Radar Electronics Unit (REU), Modernized Target Acquisition Designation System (MTADS)/Pilot Night Vision System (PNVS) and Manned/Unmanned Teaming Extended Capability (MUMT-X). Other Cost includes Support Equipment, Peculiar Ground Support (PGSE), and Government Program Management Support.

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Exhibit P-40, Budget Line Item Justification: PB 2022 Army **Date:** May 2021

Appropriation / Budget Activity / Budget Sub Activity: 2031A: Aircraft Procurement, Army / BA 01: Aircraft / BSA 20: Rotary **P-1 Line Item Number / Title:** 6771AA0005 / UH-60 Blackhawk M Model (MYP)

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

Line Item MDAP/MAIS Code: N/A

Resource Summary	Prior Years	FY 2020	FY 2021	FY 2022 Base	FY 2022 OCO	FY 2022 Total	FY 2023	FY 2024	FY 2025	FY 2026	To Complete	Total
Procurement Quantity (<i>Units in Each</i>)	1,049	74	42	24	-	24	-	-	-	-	-	-
Gross/Weapon System Cost (<i>\$ in Millions</i>)	18,802.436	1,526.971	943.584	717.690	-	717.690	-	-	-	-	-	-
Less PY Advance Procurement (<i>\$ in Millions</i>)	4,178.178	111.563	81.488	87.427	-	87.427	-	-	-	-	-	-
Net Procurement (P-1) (<i>\$ in Millions</i>)	14,624.258	1,415.408	862.096	630.263	-	630.263	-	-	-	-	-	-
Plus CY Advance Procurement (<i>\$ in Millions</i>)	4,291.657	79.572	87.427	146.068	-	146.068	-	-	-	-	-	-
Total Obligation Authority (<i>\$ in Millions</i>)	18,915.915	1,494.980	949.523	776.331	-	776.331	-	-	-	-	-	-

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

Initial Spares (<i>\$ in Millions</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Flyaway Unit Cost (<i>\$ in Thousands</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Unit Cost (<i>\$ in Thousands</i>)	17,924.153	20,634.743	22,466.286	29,903.750	-	29,903.750	-	-	-	-	-	-

Description:

The Utility Helicopter (UH)-60M Black Hawk Helicopter serves as the Army's utility helicopter for the near and midterm force and is in line with the Army's Modernization Strategy, the National Military Strategy, and the National Defense Strategy. The UH-60M Black Hawk is a digital networked platform with greater range and lift to support maneuver Commanders through air assault, general support command and control, and aeromedical evacuation. Full rate production for this new build helicopter began in 2007. The current UH-60 Army Acquisition Objective (AAO) is 2,135 which will be obtained by procuring a combination 1375 UH-60M and 760 UH-60L to UH-60V conversion models. The UH-60M Black Hawk, with the integrated Medical Evacuation (MEDEVAC) Mission Equipment Package (MEP) kit, provides day/night and adverse weather emergency evacuation of casualties. The integration of the MEDEVAC MEP into the UH-60M changes the nomenclature to the HH-60M.

Secondary Distribution	FY 2020	FY 2021	FY 2022 Base	FY 2022 OCO	FY 2022 Total	FY 2023	FY 2024	FY 2025	FY 2026
Army	8	13	-	-	-	-	-	-	-
Total Obligation Authority	163.810	306.562	-	-	-	-	-	-	-
ANG	66	29	24	-	24	-	-	-	-
Total Obligation Authority	1,331.170	642.961	776.331	-	776.331	-	-	-	-
Total:	74	42	24	-	24	-	-	-	-
Secondary Distribution	1,494.980	949.523	776.331	-	776.331	-	-	-	-

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Exhibit P-40, Budget Line Item Justification: PB 2022 Army **Date:** May 2021

Appropriation / Budget Activity / Budget Sub Activity: 2031A: Aircraft Procurement, Army / BA 01: Aircraft / BSA 20: Rotary **P-1 Line Item Number / Title:** 6771AA0005 / UH-60 Blackhawk M Model (MYP)

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

Line Item MDAP/MAIS Code: N/A

Exhibits Schedule				Prior Years	FY 2020	FY 2021	FY 2022 Base	FY 2022 OCO	FY 2022 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)	
P-5	A05002 / UH-60 BLACK HAWK (MYP)	P-5a, P-21			1,049 / 18,802.436	74 / 1,526.971	42 / 943.584	24 / 717.690	- / -	24 / 717.690
P-40	Total Gross/Weapon System Cost				1,049 / 18,802.436	74 / 1,526.971	42 / 943.584	24 / 717.690	- / -	24 / 717.690

*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:
 FY 2022 Base procurement dollars in the amount of \$776.331 million supports the procurement of 24 Aircraft (A/C) (9 UH-60M and 15 HH-60M).
 FY 2021 Appropriations Conference Mark included 6 additional A/C, an increase of \$119.098 million to procure 6 HH-60M A/C for the National Guard, increasing the total to 42 A/C for FY 2021.
 Note: The Multi-Year 9 (MY IX) contract versus 5 single year contracts for FY 2017 through FY 2021 is projected to yield a 15.4% cost avoidance (\$638.292 million).
 In accordance with section 1815 of the FY 2008 NDAA (Public Law (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.
 Two additional aircraft in FY 2015 and three additional aircraft in FY 2016 were procured as a result of the Black Hawk Exchange and Sales Team (BEST) program. The Army Acquisition Executive approved BEST program avoids demilitarization and divestment cost and applies non-appropriated funding proceeds received from the divestiture of non-excess, obsolete H-60 aircraft towards the procurement of replacement H-60M aircraft. The authorities and policies to execute and administer the BEST program are provided in section 503, title 40, U.S. Code and Army Regulation 725-1.
 Four UH-60M aircraft were procured utilizing proceeds from the BEST program reprogrammed to FY 2017 funding on the A05002 funding line.
 Four UH-60M aircraft were procured utilizing proceeds from the BEST program reprogrammed to FY 2018 funding on the A05002 funding line.
 Two UH-60M aircraft were procured utilizing proceeds from the BEST program reprogrammed to FY 2019 funding on the A05002 funding line.

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Exhibit P-5, Cost Analysis: PB 2022 Army		Date: May 2021
Appropriation / Budget Activity / Budget Sub Activity: 2031A / 01 / 20		P-1 Line Item Number / Title: 6771AA0005 / UH-60 Blackhawk M Model (MYP)
		Item Number / Title [DODIC]: A05002 / UH-60 BLACK HAWK (MYP)

ID Code (A=Service Ready, B=Not Service Ready) :				MDAP/MAIS Code:			
Resource Summary		Prior Years	FY 2020	FY 2021	FY 2022 Base	FY 2022 OCO	FY 2022 Total
Procurement Quantity (<i>Units in Each</i>)		1,049	74	42	24	-	24
Gross/Weapon System Cost (<i>\$ in Millions</i>)		18,802.436	1,526.971	943.584	717.690	-	717.690
Less PY Advance Procurement (<i>\$ in Millions</i>)		4,178.178	111.563	81.488	87.427	-	87.427
Net Procurement (P-1) (<i>\$ in Millions</i>)		14,624.258	1,415.408	862.096	630.263	-	630.263
Plus CY Advance Procurement (<i>\$ in Millions</i>)		4,291.657	79.572	87.427	146.068	-	146.068
Total Obligation Authority (<i>\$ in Millions</i>)		18,915.915	1,494.980	949.523	776.331	-	776.331
<i>(The following Resource Summary rows are for informational purposes only. The corresponding budget requests are documented elsewhere.)</i>							
Initial Spares (<i>\$ in Millions</i>)		-	-	-	-	-	-
Gross/Weapon System Unit Cost (<i>\$ in Thousands</i>)		17,924.153	20,634.743	22,466.286	29,903.750	-	29,903.750

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

Cost Elements	Prior Years			FY 2020			FY 2021			FY 2022 Base			FY 2022 OCO			FY 2022 Total		
	Unit Cost (\$ K)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ K)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ K)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ K)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ K)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ K)	Qty (Each)	Total Cost (\$ M)
Flyaway Cost																		
Recurring Cost																		
Airframes/CFE ^(†)	12,269.554	1,053	12,919.840	14,867.365	74	1,100.185	14,960.119	42	628.325	19,191.917	24	460.606	-	-	-	19,191.917	24	460.606
Engines/Accessories	711.724	2,106	1,498.890	816.824	148	120.890	830.393	84	69.753	1,294.042	48	62.114	-	-	-	1,294.042	48	62.114
Avionics (GFE)	-	-	704.640	-	-	63.275	-	-	25.800	-	-	19.138	-	-	-	-	-	19.138
Other GFE	-	-	398.873	-	-	25.431	-	-	14.059	-	-	13.683	-	-	-	-	-	13.683
<i>Subtotal: Recurring Cost</i>	<i>-</i>	<i>-</i>	<i>15,522.243</i>	<i>-</i>	<i>-</i>	<i>1,309.781</i>	<i>-</i>	<i>-</i>	<i>737.937</i>	<i>-</i>	<i>-</i>	<i>555.541</i>	<i>-</i>	<i>-</i>	<i>-</i>	<i>-</i>	<i>-</i>	<i>555.541</i>
Non Recurring Cost																		
ECO (All FLYAWAY Components)	-	-	509.743	-	-	49.331	-	-	25.423	-	-	19.180	-	-	-	-	-	19.180
Other Costs (Mission Equipment)	-	-	772.623	-	-	34.828	-	-	45.382	-	-	33.372	-	-	-	-	-	33.372
Tooling Equipment	-	-	99.639	-	-	0.179	-	-	0.031	-	-	7.540	-	-	-	-	-	7.540
Other Nonrecurring Cost	-	-	87.108	-	-	1.494	-	-	0.777	-	-	0.649	-	-	-	-	-	0.649
<i>Subtotal: Non Recurring Cost</i>	<i>-</i>	<i>-</i>	<i>1,469.113</i>	<i>-</i>	<i>-</i>	<i>85.832</i>	<i>-</i>	<i>-</i>	<i>71.613</i>	<i>-</i>	<i>-</i>	<i>60.741</i>	<i>-</i>	<i>-</i>	<i>-</i>	<i>-</i>	<i>-</i>	<i>60.741</i>
<i>Subtotal: Flyaway Cost</i>	<i>-</i>	<i>-</i>	<i>16,991.356</i>	<i>-</i>	<i>-</i>	<i>1,395.613</i>	<i>-</i>	<i>-</i>	<i>809.550</i>	<i>-</i>	<i>-</i>	<i>616.282</i>	<i>-</i>	<i>-</i>	<i>-</i>	<i>-</i>	<i>-</i>	<i>616.282</i>
Support - Data Cost																		
Technical Publications	-	-	38.972	-	-	3.801	-	-	3.870	-	-	3.931	-	-	-	-	-	3.931
<i>Subtotal: Support - Data Cost</i>	<i>-</i>	<i>-</i>	<i>38.972</i>	<i>-</i>	<i>-</i>	<i>3.801</i>	<i>-</i>	<i>-</i>	<i>3.870</i>	<i>-</i>	<i>-</i>	<i>3.931</i>	<i>-</i>	<i>-</i>	<i>-</i>	<i>-</i>	<i>-</i>	<i>3.931</i>
Support - Fielding Cost																		

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Exhibit P-5, Cost Analysis: PB 2022 Army												Date: May 2021					
Appropriation / Budget Activity / Budget Sub Activity: 2031A / 01 / 20						P-1 Line Item Number / Title: 6771AA0005 / UH-60 Blackhawk M Model (MYP)						Item Number / Title [DODIC]: A05002 / UH-60 BLACK HAWK (MYP)					
ID Code (A=Service Ready, B=Not Service Ready) :												MDAP/MAIS Code:					

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

Cost Elements	Prior Years			FY 2020			FY 2021			FY 2022 Base			FY 2022 OCO			FY 2022 Total		
	Unit Cost (\$ K)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ K)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ K)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ K)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ K)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ K)	Qty (Each)	Total Cost (\$ M)
Fielding	-	-	799.968	-	-	64.006	-	-	68.164	-	-	51.486	-	-	-	-	-	51.486
<i>Subtotal: Support - Fielding Cost</i>	-	-	799.968	-	-	64.006	-	-	68.164	-	-	51.486	-	-	-	-	-	51.486
Support - Program Management Cost																		
Government Management	-	-	491.052	-	-	30.450	-	-	30.956	-	-	31.194	-	-	-	-	-	31.194
<i>Subtotal: Support - Program Management Cost</i>	-	-	491.052	-	-	30.450	-	-	30.956	-	-	31.194	-	-	-	-	-	31.194
Support - Training Cost																		
Equipment	-	-	481.088	-	-	33.101	-	-	31.044	-	-	14.797	-	-	-	-	-	14.797
<i>Subtotal: Support - Training Cost</i>	-	-	481.088	-	-	33.101	-	-	31.044	-	-	14.797	-	-	-	-	-	14.797
Gross/Weapon System Cost	17,924.153	1,049	18,802.436	20,634.743	74	1,526.971	22,466.286	42	943.584	29,903.750	24	717.690	-	-	-	29,903.750	24	717.690

Remarks:

FY 2021 Appropriations Conference Mark included 6 additional A/C, an increase of \$119.098 million to procure 6 HH-60M A/C for the National Guard, increasing the total to 42 A/C for FY 2021.

FY 2020 Appropriations Conference Mark included 1 additional A/C, an increase of \$20.864 million to replace a National Guard training loss, increasing the total to 74 A/C for FY 2020.

Core Civilian Manpower was moved to a separate Acquisition Operations and Maintenance (O&M) funding line in FY 2019 reducing the Support - Program Management Cost requirement for A05002 UH-60 Black Hawk (MYP) funding line.

Secondary Distribution		FY 2020	FY 2021	FY 2022 Base	FY 2022 OCO	FY 2022 Total
Army	Quantity	8	13	-	-	-
	Total Obligation Authority	163.810	306.562	-	-	-
ANG	Quantity	66	29	24	-	24
	Total Obligation Authority	1,331.170	642.961	776.331	-	776.331
Total: Secondary Distribution	Quantity	74	42	24	-	24
	Total Obligation Authority	1,494.980	949.523	776.331	-	776.331

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

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Exhibit P-5a, Procurement History and Planning: PB 2022 Army **Date:** May 2021

Appropriation / Budget Activity / Budget Sub Activity: 2031A / 01 / 20	P-1 Line Item Number / Title: 6771AA0005 / UH-60 Blackhawk M Model (MYP)	Item Number / Title [DODIC]: A05002 / UH-60 BLACK HAWK (MYP)
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Cost Elements	O C O	FY	Contractor and Location	Method/Type or Funding Vehicle	Location of PCO	Award Date	Date of First Delivery	Qty <i>(Each)</i>	Unit Cost <i>(\$ K)</i>	Specs Avail Now?	Date Revision Available	RFP Issue Date
Airframes/CFE ^(†)		2017	Sikorsky Aircraft / Stratford CT	SS / FFP	AMCOM	Jun 2017	Oct 2017	61	14,150.710	Y		Apr 2014
Airframes/CFE ^(†)		2018	Sikorsky Aircraft / Stratford CT	SS / FFP	AMCOM	Dec 2017	Jul 2018	57	14,706.193	Y		Apr 2014
Airframes/CFE ^(†)		2019	Sikorsky Aircraft / Stratford CT	SS / FFP	AMCOM	Dec 2018	Jul 2019	58	15,554.431	Y		Apr 2014
Airframes/CFE ^(†)		2020	Sikorsky Aircraft / Stratford CT	SS / FFP	AMCOM	Dec 2019	Jul 2020	74	14,867.365	Y		Apr 2014
Airframes/CFE ^(†)		2021	Sikorsky Aircraft / Stratford CT	SS / FFP	AMCOM	Dec 2020	Jul 2021	42	14,960.119	Y		Apr 2014
Airframes/CFE ^(†)		2022	Sikorsky Aircraft / Stratford CT	SS / FFP	AMCOM	Dec 2021	Jul 2022	24	19,191.917	Y		Aug 2018

^(†) indicates the presence of a P-21

Remarks:

FY 2017 began the current five (5) year multi-year (MY9) contract for the H-60Ms.

Delivery schedules appear to extend beyond the 12 month period for the following reasons:

Yearly procurements consist of UH-60M, HH-60M and supplemental aircraft. Each of the three are awarded on different contract line items. While each of these efforts deliver all of their aircraft within a 12 month span, they do not deliver within the same 12 month time period.

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Exhibit P-21, Production Schedule: PB 2022 Army	Date: May 2021
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Appropriation / Budget Activity / Budget Sub Activity: 2031A / 01 / 20	P-1 Line Item Number / Title: 6771AA0005 / UH-60 Blackhawk M Model (MYP)	Item Number / Title [DODIC]: A05002 / UH-60 BLACK HAWK (MYP)
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<i>Cost Elements</i> <small>(Units in Each)</small>						Fiscal Year 2017												Fiscal Year 2018												BALANCE				
O C O	M F R #	FY	SERVICE	PROC QTY	ACCEPT PRIOR TO 1 OCT 2016	BAL DUE AS OF 1 OCT	Calendar Year 2017												Calendar Year 2018															
							O C T	N O V	D E C	J A N	F E B	M A R	A P R	M A Y	J U N	J U L	A U G	S E P	O C T	N O V	D E C	J A N	F E B	M A R	A P R	M A Y	J U N	J U L	A U G		S E P			
Airframes/CFE																																		
Prior Years Deliveries: 877																																		
1	2017	ARMY		61	0	61																												
1	2017	FMS (+)		6	0	6																												
1	2017	Total		67	0	67																												
1	2018	ARMY		57	0	57																												
1	2018	FMS (+)		19	0	19																												
1	2018	Total		76	0	76																												
1	2019	ARMY		58	0	58																												
1	2019	FMS (+)		12	0	12																												
1	2019	Total		70	0	70																												
1	2020	ARMY		74	0	74																												
1	2020	FMS (+)		12	0	12																												
1	2020	Total		86	0	86																												
1	2021	ARMY		42	0	42																												
1	2021	FMS (+)		6	0	6																												
1	2021	Total		48	0	48																												
1	2022	ARMY		24	0	24																												

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Exhibit P-21, Production Schedule: PB 2022 Army **Date:** May 2021

Appropriation / Budget Activity / Budget Sub Activity: 2031A / 01 / 20 **P-1 Line Item Number / Title:** 6771AA0005 / UH-60 Blackhawk M Model (MYP) **Item Number / Title [DODIC]:** A05002 / UH-60 BLACK HAWK (MYP)

Cost Elements <i>(Units in Each)</i>					Fiscal Year 2019													Fiscal Year 2020													BALANCE		
O C O	M F R #	FY	SERVICE	PROC QTY	ACCEPT PRIOR TO 1 OCT 2018	BAL DUE AS OF 1 OCT	Calendar Year 2019													Calendar Year 2020													
							O C T	N O V	D E C	J A N	F E B	M A R	A P R	M A Y	J U N	J U L	A U G	S E P	O C T	N O V	D E C	J A N	F E B	M A R	A P R	M A Y	J U N	J U L	A U G	S E P			
Airframes/CFE																																	
Prior Years Deliveries: 877																																	
1	2017	ARMY	61	61	0	-	-	-	-																				0				
1	2017	FMS (†)	6	0	6	-	2	3	1																				0				
1	2017	Total	67	61	6	-	2	3	1	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0				
1	2018	ARMY	57	15	42	8	6	5	4	5	4	3	3	4														0					
1	2018	FMS (†)	19	5	14	-	-	-	1	2	2	4	3	2														0					
1	2018	Total	76	20	56	8	6	5	5	7	6	7	6	6	-	-	-	-	-	-	-	-	-	-	-	-	-	0					
1	2019	ARMY	58	0	58										7	7	7	6	4	3	4	5	4	4	4	3		0					
1	2019	FMS (†)	12	0	12															2	2	1	1	2	2	1	1	0					
1	2019	Total	70	0	70										7	7	7	6	6	5	5	6	6	6	5	4	-	0					
1	2020	ARMY	74	0	74																					6	6	6	56				
1	2020	FMS (†)	12	0	12																					1	1	3	7				
1	2020	Total	86	0	86																					7	7	9	63				
1	2021	ARMY	42	0	42																							42					
1	2021	FMS (†)	6	0	6																							6					
1	2021	Total	48	0	48																							48					
1	2022	ARMY	24	0	24																							24					

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Exhibit P-21, Production Schedule: PB 2022 Army **Date:** May 2021

Appropriation / Budget Activity / Budget Sub Activity: 2031A / 01 / 20 **P-1 Line Item Number / Title:** 6771AA0005 / UH-60 Blackhawk M Model (MYP) **Item Number / Title [DODIC]:** A05002 / UH-60 BLACK HAWK (MYP)

Cost Elements <i>(Units in Each)</i>						Fiscal Year 2021													Fiscal Year 2022													BALANCE	
O C O	M F R #	FY	SERVICE	PROC QTY	ACCEPT PRIOR TO 1 OCT 2020	BAL DUE AS OF 1 OCT	Calendar Year 2021													Calendar Year 2022													
							O C T	N O V	D E C	J A N	F E B	M A R	A P R	M A Y	J U N	J U L	A U G	S E P	O C T	N O V	D E C	J A N	F E B	M A R	A P R	M A Y	J U N	J U L	A U G	S E P			
Airframes/CFE																																	
Prior Years Deliveries: 877																																	
1	2017	ARMY	61	61	0																									0			
1	2017	FMS (+)	6	6	0																									0			
1	2017	Total	67	67	0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0				
1	2018	ARMY	57	57	0																									0			
1	2018	FMS (+)	19	19	0																									0			
1	2018	Total	76	76	0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0				
1	2019	ARMY	58	58	0																									0			
1	2019	FMS (+)	12	12	0																									0			
1	2019	Total	70	70	0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0				
1	2020	ARMY	74	18	56	6	6	6	6	6	6	7	7	6																0			
1	2020	FMS (+)	12	5	7	1	1	1	1	1	2	-	-	-																0			
1	2020	Total	86	23	63	7	7	7	7	7	8	7	7	6	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0				
1	2021	ARMY	42	0	42			A	-	-	-	-	-	-	3	3	3	3	3	3	3	3	3	3	3	3	3	3	0				
1	2021	FMS (+)	6	0	6			A2	-	-	-	2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0				
1	2021	Total	48	0	48			2	-	-	-	2	-	-	3	3	3	3	3	3	3	3	3	3	3	3	3	-	0				
1	2022	ARMY	24	0	24																A	-	-	-	-	-	-	2	2	18			

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Exhibit P-21, Production Schedule: PB 2022 Army **Date:** May 2021

Appropriation / Budget Activity / Budget Sub Activity: 2031A / 01 / 20 **P-1 Line Item Number / Title:** 6771AA0005 / UH-60 Blackhawk M Model (MYP) **Item Number / Title [DODIC]:** A05002 / UH-60 BLACK HAWK (MYP)

Cost Elements <i>(Units in Each)</i>						Fiscal Year 2023												Fiscal Year 2024												BALANCE	
O C O	M F R #	FY	SERVICE	PROC QTY	ACCEPT PRIOR TO 1 OCT 2022	BAL DUE AS OF 1 OCT	Calendar Year 2023												Calendar Year 2024												
							O C T	N O V	D E C	J A N	F E B	M A R	A P R	M A Y	J U N	J U L	A U G	S E P	O C T	N O V	D E C	J A N	F E B	M A R	A P R	M A Y	J U N	J U L	A U G		S E P
Airframes/CFE																															
Prior Years Deliveries: 877																															
1	2017	ARMY	61	61	0																								0		
1	2017	FMS (+)	6	6	0																								0		
1	2017	Total	67	67	0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0		
1	2018	ARMY	57	57	0																								0		
1	2018	FMS (+)	19	19	0																								0		
1	2018	Total	76	76	0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0		
1	2019	ARMY	58	58	0																								0		
1	2019	FMS (+)	12	12	0																								0		
1	2019	Total	70	70	0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0		
1	2020	ARMY	74	74	0																								0		
1	2020	FMS (+)	12	12	0																								0		
1	2020	Total	86	86	0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0		
1	2021	ARMY	42	42	0																								0		
1	2021	FMS (+)	6	6	0																								0		
1	2021	Total	48	48	0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0		
1	2022	ARMY	24	6	18																								0		

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Exhibit P-21, Production Schedule: PB 2022 Army		Date: May 2021
Appropriation / Budget Activity / Budget Sub Activity: 2031A / 01 / 20		P-1 Line Item Number / Title: 6771AA0005 / UH-60 Blackhawk M Model (MYP)
		Item Number / Title [DODIC]: A05002 / UH-60 BLACK HAWK (MYP)

MFR Ref #	Manufacturer Name - Location	Production Rates (Each / Year)			Procurement Leadtime (Months)							
		MSR For 2022	1-8-5 For 2022	MAX For 2022	Initial				Reorder			
					ALT Prior to Oct 1	ALT After Oct 1	Manufacturing PLT	Total After Oct 1	ALT Prior to Oct 1	ALT After Oct 1	Manufacturing PLT	Total After Oct 1
1	Sikorsky Aircraft - Stratford CT	18	96	120	8	3	6	9	0	3	6	9

Remarks:
Please refer to President's Budget 2017 Exhibit MYP-1, Multiyear Procurement Criteria, UH-60M/HH-60M BLACK HAWK Helicopter Multiyear IX (ARMY) for minimum and maximum procurement quantities under the Multi-Year IX Contract.

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

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

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Exhibit P-40, Advance Procurement Budget Line Item Justification: PB 2022 Army							Date: May 2021					
Appropriation / Budget Activity / Budget Sub Activity: 2031A: Aircraft Procurement, Army / BA 01: Aircraft / BSA 20: Rotary					P-1 Line Item Number / Title: 6771AA0005 / UH-60 Blackhawk M Model (MYP)							
Program Elements for Code B Items: N/A					Other Related Program Elements: N/A							

Line Item MDAP/MAIS Code: N/A

Resource Summary	Prior Years	FY 2020	FY 2021	FY 2022 Base	FY 2022 OCO	FY 2022 Total	FY 2023	FY 2024	FY 2025	FY 2026	To Complete	Total
Gross/Weapon System Cost (<i>\$ in Millions</i>)	4,291.657	79.572	87.427	146.068	-	146.068	-	-	-	-	-	-
Net Procurement (P-1) (<i>\$ in Millions</i>)	4,291.657	79.572	87.427	146.068	-	146.068	-	-	-	-	-	-
Total Obligation Authority (<i>\$ in Millions</i>)	4,291.657	79.572	87.427	146.068	-	146.068	-	-	-	-	-	-

Description:

The Advance Procurement (AP) for the UH-60M Black Hawk is separated into two main components: 1. Government Furnished Equipment (GFE) and 2. Contractor Furnished Equipment (CFE).

1. The AP GFE includes turbo-shaft engines, multi-function displays, Embedded Global Positioning System Inertial Navigation System (EGI), Heads Up Display (HUD) Aviation Night vision Imaging System (AN/AVS-7) communication and navigation avionics, radios, antennas, radio receiver transmitters, speech security equipment, UH-60M and MEDEVAC flyaway equipment. These GFE components are UH-60M direct procurement items. The AP GFE provided by PM Aviation Mission Systems and Architecture (AMSA) includes the AN/ARC-231 receiver/transmitter, Improved Data Modem (IDM), signal comparator, and Common Missile Warning System (CMWS). The AP Aircraft Survivability Equipment items procured by the Communications and Electronics Command (CECOM).

2. The CFE AP includes long lead production components to support deliveries, provisioning material, pre-modification effort, and any potential termination liability costs. Long lead items include, but not limited to, such items as the airframe and composite rotor blades.

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Exhibit P-40, Advance Procurement Budget Line Item Justification: PB 2022 Army **Date:** May 2021

Appropriation / Budget Activity / Budget Sub Activity: 2031A: Aircraft Procurement, Army / BA 01: Aircraft / BSA 20: Rotary **P-1 Line Item Number / Title:** 6771AA0005 / UH-60 Blackhawk M Model (MYP)

Program Elements for Code B Items: N/A **Other Related Program Elements:** N/A

Line Item MDAP/MAIS Code: N/A

Exhibits Schedule				Prior Years	FY 2020	FY 2021	FY 2022 Base	FY 2022 OCO	FY 2022 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	A05002 / UH-60 BLACK HAWK (MYP)			1,049 / 4,291.657	74 / 79.572	42 / 87.427	24 / 146.068	- / -	24 / 146.068
P-40	Total Gross/Weapon System Cost			1,049 / 4,291.657	74 / 79.572	42 / 87.427	24 / 146.068	- / -	24 / 146.068

*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:
 FY 2021 Appropriations Conference Mark included 6 additional A/C, an increase of \$119.098 million to procure 6 HH-60M A/C for the National Guard, increasing the total to 42 A/C for FY 2021.
 FY 2020 Appropriations Conference Mark included 1 additional A/C, an increase of \$20.864 million to replace a National Guard training loss, increasing the total to 74 A/C for FY 2020.

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Exhibit P-10, Advance Procurement Requirements Analysis (page 1 - Budget Funding Justification): PB 2022 Army					Date: May 2021		
Appropriation / Budget Activity / Budget Sub Activity: 2031A / 01 / 20			P-1 Line Item Number / Title: 6771AA0005 / UH-60 Blackhawk M Model (MYP)			P-5 Number / Title: A05002 / UH-60 BLACK HAWK (MYP)	
First System (2022) Award Date: May 2005		First System (2022) Completion Date: June 2006			Interval Between Systems: 18 Months		
UH-60 BLACK HAWK (MYP)		Production Leadtime <i>(Months)</i>	Prior Years <i>(Each)</i>	FY 2020 <i>(Each)</i>	FY 2021 <i>(Each)</i>	FY 2022 <i>(Each)</i>	
Quantity			1,049	74	42	24	
Cost Elements		When Required <i>(Months)</i>	Prior Years <i>(\$ M)</i>	FY 2020 <i>(\$ M)</i>	FY 2021 <i>(\$ M)</i>	FY 2022 <i>(\$ M)</i>	
Other							
Prior Year		-	2,531.426	-	-	-	
Airframe - Contractor Furnished Equipment (CFE)		6	842.018	25.893	31.330	72.310	
Auxiliary Power Unit (APU)		3	44.397	2.735	2.858	-	
Engines		3	687.449	42.100	43.997	42.184	
Embedded GPS Inertial (EGI)		3	107.562	6.790	7.096	6.555	
Heads Up Display (HUD) AVS-7		3	34.195	2.054	2.146	1.230	
Avionics - Communication / Navigation		3	44.610	-	-	19.786	
Blade Fold Kits		3	-	-	-	1.774	
Seat Pallets		3	-	-	-	0.167	
Multi-Function Operator Seat (MFOS)		3	-	-	-	0.652	
Signal Data Converter (SDC)		3	-	-	-	1.410	
<i>Total: Other</i>			4,291.657	79.572	87.427	146.068	
Total Advance Procurement/Obligation Authority			4,291.657	79.572	87.427	146.068	

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Exhibit P-10, Advance Procurement Requirements Analysis (page 2 - Budget Funding Justification): PB 2022 Army		Date: May 2021
Appropriation / Budget Activity / Budget Sub Activity: 2031A / 01 / 20	P-1 Line Item Number / Title: 6771AA0005 / UH-60 Blackhawk M Model (MYP)	P-5 Number / Title: A05002 / UH-60 BLACK HAWK (MYP)

Cost Elements	QPA (Each)	FY 2022					Total Cost Request (\$ M)
		Production Leadtime (Months)	Unit Cost (\$ K)	Contract Forecast Date	2022 Qty (Each)	For FY	
Other							
Prior Year	-						-
Airframe - Contractor Furnished Equipment (CFE)	1						72.310
Auxiliary Power Unit (APU)	1						-
Engines	2						42.184
Embedded GPS Inertial (EGI)	2						6.555
Heads Up Display (HUD) AVS-7	2						1.230
Avionics - Communication / Navigation	1						19.786
Blade Fold Kits	2						1.774
Seat Pallets	1						0.167
Multi-Function Operator Seat (MFOS)	2						0.652
Signal Data Converter (SDC)	1						1.410
<i>Total: Other</i>							146.068
Total Advance Procurement/Obligation Authority							146.068

Description:
 The Advance procurement estimate was revised in support of the Multi-Year X contract award. The result was the addition of blade fold kits, seat pallets, avionics, multi-function operator seats and the signal data converter. Additionally, the Auxiliary Power Unit will transition from Government Furnished Equipment to Contractor Furnished Equipment for the MY X time frame and the long lead requirement will be included in the airframe advance procurement requirement.

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Exhibit P-40, Budget Line Item Justification: PB 2022 Army **Date:** May 2021

Appropriation / Budget Activity / Budget Sub Activity: 2031A: Aircraft Procurement, Army / BA 01: Aircraft / BSA 20: Rotary **P-1 Line Item Number / Title:** 6773A05009 / UH-60 Black Hawk L and V Models

ID Code (A=Service Ready, B=Not Service Ready): **Program Elements for Code B Items:** N/A **Other Related Program Elements:** 0607136A

Line Item MDAP/MAIS Code: N/A

Resource Summary	Prior Years	FY 2020	FY 2021	FY 2022 Base	FY 2022 OCO	FY 2022 Total	FY 2023	FY 2024	FY 2025	FY 2026	To Complete	Total
Procurement Quantity (<i>Units in Each</i>)	1,133	25	24	24	-	24	-	-	-	-	-	-
Gross/Weapon System Cost (<i>\$ in Millions</i>)	10,439.951	169.290	165.197	166.205	-	166.205	-	-	-	-	-	-
Less PY Advance Procurement (<i>\$ in Millions</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) (<i>\$ in Millions</i>)	10,439.951	169.290	165.197	166.205	-	166.205	-	-	-	-	-	-
Plus CY Advance Procurement (<i>\$ in Millions</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Total Obligation Authority (<i>\$ in Millions</i>)	10,439.951	169.290	165.197	166.205	-	166.205	-	-	-	-	-	-

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

Initial Spares (<i>\$ in Millions</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Flyaway Unit Cost (<i>\$ in Thousands</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Unit Cost (<i>\$ in Thousands</i>)	9,214.432	6,771.600	6,883.208	6,925.208	-	6,925.208	-	-	-	-	-	-

Description:

UH-60 A and L Models include UH-60 A to L conversions in FY16 through FY18 and UH-60L Digital, now designated as UH-60V. Production for UH-60V began in FY18. The UH-60 BLACKHAWK helicopter is the Army's utility helicopter for the near and midterm force. It is a twin engine, single rotor, four bladed utility helicopter used for air assault, general support, command & control, and aero-medical evacuations (MEDEVAC). The UH-60 is joint force capable, providing 24 hour/day support including operations at night and in adverse weather conditions. The UH-60 is designed to carry a crew of four plus eleven combat equipped troops or an external load up to 9,000 pounds. The UH-60 BLACK HAWK was fielded in 1978 as a replacement for the UH-1. From 1978 to 1988, UH-60As were produced. In 1989 production of UH-60Ls with improved engines and drive train began. In 2007, full rate production of UH-60Ms began which provided a digital cockpit, digital Flight Management System (FMS), improved engine, and wide-cord main rotor blades. The UH-60V provides an integrated digital map, integrated performance planning, common functionality and commonality of training with UH-60M. Re-allocation of UH-60 V kits will be accomplished during future Army prioritization efforts.

Secondary Distribution		FY 2020	FY 2021	FY 2022 Base	FY 2022 OCO	FY 2022 Total	FY 2023	FY 2024	FY 2025	FY 2026
Army	Quantity	2	1	-	-	-	-	-	-	-
	Total Obligation Authority	13.540	7.200	-	-	-	-	-	-	-
ANG	Quantity	23	23	24	-	24	-	-	-	-
	Total Obligation Authority	155.750	157.997	166.205	-	166.205	-	-	-	-
Total:	Quantity	25	24	24	-	24	-	-	-	-
Secondary Distribution	Total Obligation Authority	169.290	165.197	166.205	-	166.205	-	-	-	-

UNCLASSIFIED

Exhibit P-40, Budget Line Item Justification: PB 2022 Army **Date:** May 2021

Appropriation / Budget Activity / Budget Sub Activity: 2031A: Aircraft Procurement, Army / BA 01: Aircraft / BSA 20: Rotary **P-1 Line Item Number / Title:** 6773A05009 / UH-60 Black Hawk L and V Models

ID Code (A=Service Ready, B=Not Service Ready): **Program Elements for Code B Items:** N/A **Other Related Program Elements:** 0607136A

Line Item MDAP/MAIS Code: N/A

Exhibits Schedule					Prior Years	FY 2020	FY 2021	FY 2022 Base	FY 2022 OCO	FY 2022 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	A05009 / UH-60 Black Hawk L and V Models (Operational)				1,133 / 10,439.951	25 / 169.290	24 / 165.197	24 / 166.205	- / -	24 / 166.205
P-40	Total Gross/Weapon System Cost				1,133 / 10,439.951	25 / 169.290	24 / 165.197	24 / 166.205	- / -	24 / 166.205

*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:
 FY22 base procurement dollars in the amount of \$166.205 million will procure 24 UH-60Vs. The UH-60 A to L conversion program expands the current UH-60 A to A recapitalization/rebuild program to a UH-60 A to L recapitalization/rebuild program. Effective in FY16, all A to L conversions and UH-60V conversions will be procured under this line, A05009. Prior to FY16 the funding for UH-60 A to L conversions was utilized under Black Hawk Modifications line AA0492.

The current H-60 Black Hawk Army Acquisition Objective (AAO) is 2,135 which is obtained by procuring a combination of 1,375 new 60M and 760 Recapitalized (A/LV) aircraft.

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.

Re-allocation of UH-60 V kits will be accomplished during future Army prioritization efforts.

UNCLASSIFIED

Exhibit P-3a, Individual Modification: PB 2022 Army		Date: May 2021
Appropriation / Budget Activity / Budget Sub Activity: 2031A / 01 / 20	P-1 Line Item Number / Title: 6773A05009 / UH-60 Black Hawk L and V Models	Modification Number / Title: A05009 / UH-60 Black Hawk L and V Models

ID Code (A=Service Ready, B=Not Service Ready) :	MDAP/MAIS Code:
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Resource Summary	Prior Years	FY 2020	FY 2021	FY 2022 Base	FY 2022 OCO	FY 2022 Total
Procurement Quantity (<i>Units in Each</i>)	1,133	25	24	24	-	24
Gross/Weapon System Cost (<i>\$ in Millions</i>)	10,439.951	169.290	165.197	166.205	-	166.205
Less PY Advance Procurement (<i>\$ in Millions</i>)	-	-	-	-	-	-
Net Procurement (P-1) (<i>\$ in Millions</i>)	10,439.951	169.290	165.197	166.205	-	166.205
Plus CY Advance Procurement (<i>\$ in Millions</i>)	-	-	-	-	-	-
Total Obligation Authority (<i>\$ in Millions</i>)	10,439.951	169.290	165.197	166.205	-	166.205

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

Initial Spares (<i>\$ in Millions</i>)	-	-	-	-	-	-
Gross/Weapon System Unit Cost (<i>\$ in Thousands</i>)	9,214.432	6,771.600	6,883.208	6,925.208	-	6,925.208

Description:

UH-60 A and L Models includes UH-60 A to L conversions and the UH-60L Digital conversions, now designated as UH-60V.

UH-60V aircraft cost includes all digital components and their associated cost, as well as Engineering Changes, Systems Engineering and Program Management, Trainers, Data and Fielding.

Any decrements in FY22 and out will result in less 60V kits being procured.

Secondary Distribution		FY 2020	FY 2021	FY 2022 Base	FY 2022 OCO	FY 2022 Total
Army	Quantity	2	1	-	-	-
	Total Obligation Authority	13.540	7.200	-	-	-
ANG	Quantity	23	23	24	-	24
	Total Obligation Authority	155.750	157.997	166.205	-	166.205
Total:	Quantity	25	24	24	-	24
Secondary Distribution	Total Obligation Authority	169.290	165.197	166.205	-	166.205

UNCLASSIFIED

Exhibit P-3a, Individual Modification: PB 2022 Army					Date: May 2021	
Appropriation / Budget Activity / Budget Sub Activity: 2031A / 01 / 20			P-1 Line Item Number / Title: 6773A05009 / UH-60 Black Hawk L and V Models		Modification Number / Title: A05009 / UH-60 Black Hawk L and V Models	
ID Code (A=Service Ready, B=Not Service Ready) :				MDAP/MAIS Code:		
Models of Systems Affected: UH-60 A and L		Modification Type: Operational		Related RDT&E PEs:		
Financial Plan	Prior Years	FY 2020	FY 2021	FY 2022 Base	FY 2022 OCO	FY 2022 Total
	Qty (Each) / Total Cost (\$ M)	Qty (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						
<i>Modification Item 1 of 2: UH-60A to UH-60L Conversions</i>						
A Kits						
Recurring						
Other						
	1,109 / 10,271.250	- / -	- / -	- / -	- / -	- / -
<i>Subtotal: Recurring</i>						
	1,109 / 10,271.250	- / -	- / -	- / -	- / -	- / -
<i>Subtotal: UH-60A to UH-60L Conversions</i>						
	1,109 / 10,271.250	- / -	- / -	- / -	- / -	- / -
<i>Modification Item 2 of 2: UH-60V</i>						
A Kits						
Recurring						
Other						
	24 / 146.819	25 / 152.150	24 / 146.447	24 / 156.067	- / -	24 / 156.067
<i>Subtotal: Recurring</i>						
	24 / 146.819	25 / 152.150	24 / 146.447	24 / 156.067	- / -	24 / 156.067
<i>Subtotal: UH-60V</i>						
	24 / 146.819	25 / 152.150	24 / 146.447	24 / 156.067	- / -	24 / 156.067
<i>Subtotal: Procurement, All Modification Items</i>						
	1,133 / 10,418.069	25 / 152.150	24 / 146.447	24 / 156.067	- / -	24 / 156.067
Installation						
<i>Modification Item 1 of 2: UH-60A to UH-60L Conversions</i>						
	1,110 / -	- / -	- / -	- / -	- / -	- / -
<i>Modification Item 2 of 2: UH-60V</i>						
	24 / 21.882	25 / 17.140	24 / 18.750	24 / 10.138	- / -	24 / 10.138
<i>Subtotal: Installation</i>						
	1,134 / 21.882	25 / 17.140	24 / 18.750	24 / 10.138	- / -	24 / 10.138
Total						
Total Cost (Procurement + Support + Installation)						
	10,439.951	169.290	165.197	166.205	-	166.205

UNCLASSIFIED

Exhibit P-3a, Individual Modification: PB 2022 Army		Date: May 2021
Appropriation / Budget Activity / Budget Sub Activity: 2031A / 01 / 20	P-1 Line Item Number / Title: 6773A05009 / UH-60 Black Hawk L and V Models	Modification Number / Title: A05009 / UH-60 Black Hawk L and V Models

ID Code (A=Service Ready, B=Not Service Ready) :	MDAP/MAIS Code:
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Modification Item 1 of 2: UH-60A to UH-60L Conversions

Manufacturer Information

Manufacturer Name: Corpus Christi Army Depot	Manufacturer Location: Corpus Christi Army Depot
Administrative Leadtime (in Months):	Production Leadtime (in Months): 12

Dates	FY 2020	FY 2021	FY 2022
Contract Dates			
Delivery Dates			

Installation Information

Method of Implementation: Depot

Installation Cost	Prior Years	FY 2020	FY 2021	FY 2022 Base	FY 2022 OCO	FY 2022 Total
	Qty (Each) / Total Cost (\$ M)	Qty (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	1,080 / 0.000	- / -	- / -	- / -	- / -	- / -
FY 2020	30 / 0.000	- / -	- / -	- / -	- / -	- / -
FY 2021	0 / 0.000	- / -	- / -	- / -	- / -	- / -
FY 2022	0 / 0.000	- / -	- / -	- / -	- / -	- / -
Total	1,110 / 0.000	- / -	- / -	- / -	- / -	- / -

Installation Schedule

	PYS	FY 2020				FY 2021				FY 2022			
		Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4
In	90	-	-	-	-	-	-	-	-	-	-	-	-
Out	90	-	-	-	-	-	-	-	-	-	-	-	-

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Exhibit P-3a, Individual Modification: PB 2022 Army		Date: May 2021
Appropriation / Budget Activity / Budget Sub Activity: 2031A / 01 / 20	P-1 Line Item Number / Title: 6773A05009 / UH-60 Black Hawk L and V Models	Modification Number / Title: A05009 / UH-60 Black Hawk L and V Models

ID Code (A=Service Ready, B=Not Service Ready) :	MDAP/MAIS Code:
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Modification Item 2 of 2: UH-60V

Manufacturer Information

Manufacturer Name: Prototype Integration Facility/Northrop Grumman/CCAD	Manufacturer Location: Huntsville AL/ Woodland Hills CA/Corpus Christi TX
Administrative Leadtime (in Months): 1	Production Leadtime (in Months): 12

Dates	FY 2020	FY 2021	FY 2022
Contract Dates	Oct 2019	Oct 2020	Oct 2021
Delivery Dates	Oct 2020	Oct 2021	Oct 2022

Installation Information

Method of Implementation: Various

Installation Cost	Prior Years	FY 2020	FY 2021	FY 2022 Base	FY 2022 OCO	FY 2022 Total
	Qty (Each) / Total Cost (\$ M)	Qty (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	24 / 21.882	- / -	- / -	- / -	- / -	- / -
FY 2020	- / -	25 / 17.140	- / -	- / -	- / -	- / -
FY 2021	- / -	- / -	24 / 18.750	- / -	- / -	- / -
FY 2022	- / -	- / -	- / -	24 / 10.138	- / -	24 / 10.138
Total	24 / 21.882	25 / 17.140	24 / 18.750	24 / 10.138	- / -	24 / 10.138

Installation Schedule

	PYS	FY 2020				FY 2021				FY 2022			
		Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4
In	24	6	6	6	7	6	6	6	6	6	6	6	6
Out	6	4	4	5	5	6	6	6	7	6	6	6	6

UNCLASSIFIED

Exhibit P-40, Budget Line Item Justification: PB 2022 Army **Date:** May 2021

Appropriation / Budget Activity / Budget Sub Activity: 2031A: Aircraft Procurement, Army / BA 01: Aircraft / BSA 20: Rotary **P-1 Line Item Number / Title:** 6775A05101 / CH-47 Helicopter

ID Code (A=Service Ready, B=Not Service Ready): **Program Elements for Code B Items:** N/A **Other Related Program Elements:** 0607137A

Line Item MDAP/MAIS Code: N/A

Resource Summary	Prior Years	FY 2020	FY 2021	FY 2022 Base	FY 2022 OCO	FY 2022 Total	FY 2023	FY 2024	FY 2025	FY 2026	To Complete	Total
Procurement Quantity (<i>Units in Each</i>)	364	9	12	6	-	6	-	-	-	-	-	-
Gross/Weapon System Cost (<i>\$ in Millions</i>)	10,246.669	176.729	446.408	163.590	-	163.590	-	-	-	-	-	-
Less PY Advance Procurement (<i>\$ in Millions</i>)	666.232	20.778	46.186	18.372	-	18.372	-	-	-	-	-	-
Net Procurement (P-1) (<i>\$ in Millions</i>)	9,580.437	155.951	400.222	145.218	-	145.218	-	-	-	-	-	-
Plus CY Advance Procurement (<i>\$ in Millions</i>)	687.010	46.186	18.372	18.559	-	18.559	-	-	-	-	-	-
Total Obligation Authority (<i>\$ in Millions</i>)	10,267.447	202.137	418.594	163.777	-	163.777	-	-	-	-	-	-

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

Initial Spares (<i>\$ in Millions</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Flyaway Unit Cost (<i>\$ in Thousands</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Unit Cost (<i>\$ in Thousands</i>)	28,150.190	19,636.556	37,200.667	27,265.000	-	27,265.000	-	-	-	-	-	-

Description:

The CH-47F Chinook is a twin-turbine, tandem-rotor, heavy-lift transport helicopter with a useful load of up to 25,000 pounds. As the Army's only heavy lift helicopter, the CH-47F Improved Cargo helicopter is an essential component of the Army's Joint All Domain Battle framework. The CH-47F and MH-47G helicopters perform over 95% of the Army's heavy lift missions up to 25,000 pounds. The Chinook fleet has multiple missions including: transport troops (air assault), supply and resupply, weapons, equipment and other cargo operations. Operating throughout theater in combat, combat support, and combat service support roles. The CH-47F is vital to Overseas Contingency Operations and Homeland Security needs of our nation. Secondary missions include medical evacuation, aircraft recovery, parachute drops, disaster relief, and search and rescue. These aircraft are fielded to heavy lift companies contained within Combat Aviation Brigades and Special Operations Aviation. The CH-47F and MH-47G aircraft is expected to remain the Army's heavy lift helicopter for the next several decades. To maintain the Chinook, the Army's only heavy-lift cargo helicopter, the CH-47F Block II program will insert critical and affordable technologies into the Chinook fleet to affordably maintain the platform's operational capabilities while continuing to meet the Warfighter requirements. Key improvements include a strengthened airframe which introduces commonality with the MH-47G and improvements to rotor, fuel and electrical systems which will improve safety and reliability for the aircraft. Along with providing a significantly increased capability to the field, the program includes provisions for anticipated future upgrades as well as weight and cost savings initiatives to ensure the Army has a platform with the flexibility and performance needed to meet the needs of Joint All Domain Operations until a Heavy Future Vertical Lift variant is fielded.

The CH-47F Block I PM is fielding and training Combat Aviation Brigades (CABs) and NG/USAR units using a New Equipment Training team.

The H-47 Block II PM ReNew and New Build programs rebuild or replace 73 MH-47G Block I Special Operations Aircraft and 465 CH-47F Block I aircraft to the Block II configuration.

PM Cargo procurement lines provide the common portion of funding for the Special Operations Aircraft, MH-47G. CH-47F Block II Product Office, in conjunction with Technology Applications Program Office (TAPO), is replacing the aging fleet of MH-47G aircraft that has airframe components dating back more than 45 years. The MH-47G program, while complementary to the CH-47F Block II program, is a separately managed Technology Applications Program Office (TAPO) ARSOAC program with a stand-alone Acquisition Strategy. The current Army Acquisition Objective (AAO) is 550 aircraft.

Secondary Distribution	FY 2020	FY 2021	FY 2022 Base	FY 2022 OCO	FY 2022 Total	FY 2023	FY 2024	FY 2025	FY 2026
Army									
Quantity	9	12	6	-	6	-	-	-	-
Total Obligation Authority	202.137	418.594	163.777	-	163.777	-	-	-	-
Total:									
Quantity	9	12	6	-	6	-	-	-	-

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Exhibit P-40, Budget Line Item Justification: PB 2022 Army							Date: May 2021		
Appropriation / Budget Activity / Budget Sub Activity: 2031A: Aircraft Procurement, Army / BA 01: Aircraft / BSA 20: Rotary					P-1 Line Item Number / Title: 6775A05101 / CH-47 Helicopter				
ID Code (A=Service Ready, B=Not Service Ready):			Program Elements for Code B Items: N/A			Other Related Program Elements: 0607137A			
Line Item MDAP/MAIS Code: N/A									

Secondary Distribution		FY 2020	FY 2021	FY 2022 Base	FY 2022 OCO	FY 2022 Total	FY 2023	FY 2024	FY 2025	FY 2026
Secondary Distribution	Total Obligation Authority	202.137	418.594	163.777	-	163.777	-	-	-	-

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UNCLASSIFIED

Exhibit P-40, Budget Line Item Justification: PB 2022 Army **Date:** May 2021

Appropriation / Budget Activity / Budget Sub Activity: 2031A: Aircraft Procurement, Army / BA 01: Aircraft / BSA 20: Rotary **P-1 Line Item Number / Title:** 6775A05101 / CH-47 Helicopter

ID Code (A=Service Ready, B=Not Service Ready): **Program Elements for Code B Items:** N/A **Other Related Program Elements:** 0607137A

Line Item MDAP/MAIS Code: N/A

Exhibits Schedule					Prior Years	FY 2020	FY 2021	FY 2022 Base	FY 2022 OCO	FY 2022 Total
Exhibit Type	Title*	Subexhibits	ID CD	MDAP/MAIS Code	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)
P-5	A05008 / CH-47 NEW BUILD			278	199 / 5,570.777	1 / 25.000	1 / 50.472	- / -	- / -	- / -
P-5	A05105 / CH-47 SLEP	P-5a, P-21			165 / 4,675.892	8 / 151.729	11 / 395.936	6 / 163.590	- / -	6 / 163.590
P-40	Total Gross/Weapon System Cost				364 / 10,246.669	9 / 176.729	12 / 446.408	6 / 163.590	- / -	6 / 163.590

*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:
 FY 2022 Base procurement dollars in the amount of \$163.777 million supports only Army common material funding for 6 MH-47G variant ReNew aircraft in the amount of \$145.218 million and Advance Procurement supporting FY 2023 production quantities (6) in the amount of \$18.559 million.

*FY 2022 does not include retrofit funding for previously delivered aircraft.

Note: FY 2021 the correct amount for Advanced Procurement is \$47.372M. The error was discovered after the P-1 was locked and could not be corrected.

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.

UNCLASSIFIED

Exhibit P-5, Cost Analysis: PB 2022 Army **Date:** May 2021

Appropriation / Budget Activity / Budget Sub Activity: 2031A / 01 / 20	P-1 Line Item Number / Title: 6775A05101 / CH-47 Helicopter	Item Number / Title [DODIC]: A05008 / CH-47 NEW BUILD
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ID Code (A=Service Ready, B=Not Service Ready) : **MDAP/MAIS Code:** 278

Resource Summary	Prior Years	FY 2020	FY 2021	FY 2022 Base	FY 2022 OCO	FY 2022 Total
Procurement Quantity (Units in Each)	199	1	1	-	-	-
Gross/Weapon System Cost (\$ in Millions)	5,570.777	25.000	50.472	-	-	-
Less PY Advance Procurement (\$ in Millions)	32.759	-	-	-	-	-
Net Procurement (P-1) (\$ in Millions)	5,538.018	25.000	50.472	-	-	-
Plus CY Advance Procurement (\$ in Millions)	32.759	-	-	-	-	-
Total Obligation Authority (\$ in Millions)	5,570.777	25.000	50.472	-	-	-

(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 Thousands)	27,993.854	25,000.000	50,472.000	-	-	-

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

Cost Elements	Prior Years			FY 2020			FY 2021			FY 2022 Base			FY 2022 OCO			FY 2022 Total		
	Unit Cost (\$ K)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ K)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ K)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ K)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ K)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ K)	Qty (Each)	Total Cost (\$ M)
Flyaway Cost																		
Recurring Cost																		
Airframes/CFE	20,737.174	195	4,043.749	-	-	-	34,700.000	1	34.700	-	-	-	-	-	-	-	-	-
Engine/Accessories	1,432.530	362	518.576	-	-	-	1,901.500	2	3.803	-	-	-	-	-	-	-	-	-
CFE Avionics	-	-	193.501	-	-	-	-	-	2.473	-	-	-	-	-	-	-	-	-
GFE	-	-	359.704	-	-	-	-	-	5.865	-	-	-	-	-	-	-	-	-
ECO (Flyaway)	-	-	82.513	-	-	-	-	-	1.499	-	-	-	-	-	-	-	-	-
Nonrecurring/SEPM/FDT	-	-	150.310	-	-	-	-	-	2.132	-	-	-	-	-	-	-	-	-
PSE	-	-	22.019	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Publications/Tech Data	-	-	8.725	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
ECO (Support Items)	-	-	4.253	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Post Deployment Software Support	-	-	83.862	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Initial Spares	-	-	3.565	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Airframes/CFE MH-47G SOA Aircraft (Army Common)	25,000.000	4	100.000	25,000.000	1	25.000	-	-	-	-	-	-	-	-	-	-	-	-
Subtotal: Recurring Cost	-	-	5,570.777	-	-	25.000	-	-	50.472	-	-	-	-	-	-	-	-	-
Subtotal: Flyaway Cost	-	-	5,570.777	-	-	25.000	-	-	50.472	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost	27,993.854	199	5,570.777	25,000.000	1	25.000	50,472.000	1	50.472	-	-	-	-	-	-	-	-	-

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Exhibit P-5, Cost Analysis: PB 2022 Army		Date: May 2021
Appropriation / Budget Activity / Budget Sub Activity: 2031A / 01 / 20	P-1 Line Item Number / Title: 6775A05101 / CH-47 Helicopter	Item Number / Title [DODIC]: A05008 / CH-47 NEW BUILD
ID Code (A=Service Ready, B=Not Service Ready) :		MDAP/MAIS Code: 278

Remarks:
 FY20 funded the Army common portion of a combat loss replacement of an MH-47G.
 FY21 funds the complete replacement of a CH-47F combat loss replacement.

Secondary Distribution		FY 2020	FY 2021	FY 2022 Base	FY 2022 OCO	FY 2022 Total
Army	Quantity	1	1	-	-	-
	Total Obligation Authority	25.000	50.472	-	-	-
Total:	Quantity	1	1	-	-	-
Secondary Distribution	Total Obligation Authority	25.000	50.472	-	-	-

UNCLASSIFIED

Exhibit P-5, Cost Analysis: PB 2022 Army		Date: May 2021
Appropriation / Budget Activity / Budget Sub Activity: 2031A / 01 / 20	P-1 Line Item Number / Title: 6775A05101 / CH-47 Helicopter	Item Number / Title [DODIC]: A05105 / CH-47 SLEP

ID Code (A=Service Ready, B=Not Service Ready) :	MDAP/MAIS Code:
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Resource Summary	Prior Years	FY 2020	FY 2021	FY 2022 Base	FY 2022 OCO	FY 2022 Total
Procurement Quantity (Units in Each)	165	8	11	6	-	6
Gross/Weapon System Cost (\$ in Millions)	4,675.892	151.729	395.936	163.590	-	163.590
Less PY Advance Procurement (\$ in Millions)	633.473	20.778	46.186	18.372	-	18.372
Net Procurement (P-1) (\$ in Millions)	4,042.419	130.951	349.750	145.218	-	145.218
Plus CY Advance Procurement (\$ in Millions)	654.251	46.186	18.372	18.559	-	18.559
Total Obligation Authority (\$ in Millions)	4,696.670	177.137	368.122	163.777	-	163.777

(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 Thousands)	28,338.739	18,966.125	35,994.182	27,265.000	-	27,265.000

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

Cost Elements	Prior Years			FY 2020			FY 2021			FY 2022 Base			FY 2022 OCO			FY 2022 Total		
	Unit Cost (\$ K)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ K)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ K)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ K)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ K)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ K)	Qty (Each)	Total Cost (\$ M)
Flyaway Cost																		
Recurring Cost																		
CH-47D to CH-47F Conversion	28,909.695	154	4,452.093	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
MH-47G Block I to Block II Army Common Funding ^(†)	18,378.182	11	202.160	18,966.125	8	151.729	27,211.833	6	163.271	27,265.000	6	163.590	-	-	-	27,265.000	6	163.590
MH-47G Block II Retrofits	-	-	-	-	-	-	-	-	15.665	-	-	-	-	-	-	-	-	-
<i>Subtotal: Recurring Cost</i>	-	-	4,654.253	-	-	151.729	-	-	178.936	-	-	163.590	-	-	-	-	-	163.590
<i>Subtotal: Flyaway Cost</i>	-	-	4,654.253	-	-	151.729	-	-	178.936	-	-	163.590	-	-	-	-	-	163.590
Hardware Cost																		
Non Recurring Cost																		
CH-47 Block I to Block II	-	-	21.639	-	-	-	37,600.000	5	188.000	-	-	-	-	-	-	-	-	-
CH-47 Avionics (Advanced Procurement)	-	-	-	-	-	-	-	-	11.600	-	-	-	-	-	-	-	-	-
CH-47 Airframe (Advanced Procurement)	-	-	-	-	-	-	-	-	17.400	-	-	-	-	-	-	-	-	-
<i>Subtotal: Non Recurring Cost</i>	-	-	21.639	-	-	-	-	-	217.000	-	-	-	-	-	-	-	-	-
<i>Subtotal: Hardware Cost</i>	-	-	21.639	-	-	-	-	-	217.000	-	-	-	-	-	-	-	-	-

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Exhibit P-5, Cost Analysis: PB 2022 Army												Date: May 2021					
Appropriation / Budget Activity / Budget Sub Activity: 2031A / 01 / 20						P-1 Line Item Number / Title: 6775A05101 / CH-47 Helicopter						Item Number / Title [DODIC]: A05105 / CH-47 SLEP					
ID Code (A=Service Ready, B=Not Service Ready) :												MDAP/MAIS Code:					

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

Cost Elements	Prior Years			FY 2020			FY 2021			FY 2022 Base			FY 2022 OCO			FY 2022 Total		
	Unit Cost (\$ K)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ K)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ K)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ K)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ K)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ K)	Qty (Each)	Total Cost (\$ M)
Gross/Weapon System Cost	28,338.739	165	4,675.892	18,966.125	8	151.729	35,994.182	11	395.936	27,265.000	6	163.590	-	-	-	27,265.000	6	163.590

Remarks:

The CH-47F Block II procurement costs, MH-47G Block II Army common procurement costs, and MH-47G Block II retrofits costs share this funding line. The MH-47G Block II Army Common funding unit cost is not the same as the CH-47F Block II unit cost. The retrofit common component procurement cost support some previously delivered lots of MH-47G Block II aircraft. The combination of the three different procurement cost and quantities on one line cause incorrect gross weapon system cost.

FY2021 Non Recurring Cost: FY2020 Congressional Increase for \$28.000 million provides additional Advanced Procurement funds to support the Army's procurement of the CH-47F Block II program as certified in July 2017 Milestone B decision. This additional advanced procurement increased the Gross Weapon System Cost top line in FY2021. This funding is identified under cost element titled CH-47 Block I to Block II. Funding to support retrofit of some previously delivered MH-47G Block II aircraft with fully Block II Common Components is included in FY 2021 in the amount of \$15.665 million, this additional procurement activity increased the Gross Weapon System Cost top line and Unit Cost in FY 2021. This funding is identified under cost element titled MH-47G Block II Retrofits.

Secondary Distribution		FY 2020	FY 2021	FY 2022 Base	FY 2022 OCO	FY 2022 Total
Army	Quantity	8	11	6	-	6
	Total Obligation Authority	177.137	368.122	163.777	-	163.777
Total:	Quantity	8	11	6	-	6
Secondary Distribution	Total Obligation Authority	177.137	368.122	163.777	-	163.777

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

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Exhibit P-5a, Procurement History and Planning: PB 2022 Army **Date:** May 2021

Appropriation / Budget Activity / Budget Sub Activity: 2031A / 01 / 20	P-1 Line Item Number / Title: 6775A05101 / CH-47 Helicopter	Item Number / Title [DODIC]: A05105 / CH-47 SLEP
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Cost Elements	O C O	FY	Contractor and Location	Method/Type or Funding Vehicle	Location of PCO	Award Date	Date of First Delivery	Qty <i>(Each)</i>	Unit Cost <i>(\$ K)</i>	Specs Avail Now?	Date Revision Available	RFP Issue Date
MH-47G Block I to Block II Army Common Funding ^(†)		2018	Boeing / Philadelphia PA	SS / CPFF	Fort Eustis	Jul 2018	Aug 2020	4	18,000.000	Y		Nov 2016
MH-47G Block I to Block II Army Common Funding ^(†)		2019	Boeing / Philadelphia PA	SS / CPFF	Fort Eustis	Jul 2019	Aug 2021	7	18,594.286	Y		Nov 2016
MH-47G Block I to Block II Army Common Funding ^(†)		2020	Boeing / Philadelphia PA	SS / CPFF	Fort Eustis	Jul 2020	Aug 2022	8	18,966.125	Y		Nov 2016
MH-47G Block I to Block II Army Common Funding ^(†)		2021	Boeing / Philadelphia PA	SS / CPFF	Fort Eustis	Jul 2021	Aug 2023	6	27,211.833	Y		Nov 2016

^(†) indicates the presence of a P-21

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Exhibit P-21, Production Schedule: PB 2022 Army	Date: May 2021
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Appropriation / Budget Activity / Budget Sub Activity: 2031A / 01 / 20	P-1 Line Item Number / Title: 6775A05101 / CH-47 Helicopter	Item Number / Title [DODIC]: A05105 / CH-47 SLEP
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Cost Elements <i>(Units in Each)</i>						Fiscal Year 2018												Fiscal Year 2019												BALANCE		
O C C O	M F R #	FY	SERVICE	PROC QTY	ACCEPT PRIOR TO 1 OCT 2017	BAL DUE AS OF 1 OCT	Calendar Year 2018												Calendar Year 2019													
							O C T	N O V	D E C	J A N	F E B	M A R	A P R	M A Y	J U N	J U L	A U G	S E P	O C T	N O V	D E C	J A N	F E B	M A R	A P R	M A Y	J U N	J U L	A U G		S E P	
MH-47G Block I to Block II Army Common Funding																																
	1	2018	ARMY	4	0	4											A	-	-	-	-	-	-	-	-	-	-	-	-	-	4	
	1	2019	ARMY	7	0	7																							A	-	-	7
	1	2020	ARMY	8	0	8																									8	
	1	2021	ARMY	6	0	6																									6	

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Exhibit P-21, Production Schedule: PB 2022 Army **Date:** May 2021

Appropriation / Budget Activity / Budget Sub Activity: 2031A / 01 / 20	P-1 Line Item Number / Title: 6775A05101 / CH-47 Helicopter	Item Number / Title [DODIC]: A05105 / CH-47 SLEP
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Cost Elements <i>(Units in Each)</i>					Fiscal Year 2020												Fiscal Year 2021												BALANCE		
O C C #	M F R #	FY	SERVICE	PROC QTY	ACCEP T P R I O R T O 1 O C T 2 0 1 9	BAL D U E A S O F 1 O C T	Calendar Year 2020												Calendar Year 2021												
							O C T	N O V	D E C	J A N	F E B	M A R	A P R	M A Y	J U N	J U L	A U G	S E P	O C T	N O V	D E C	J A N	F E B	M A R	A P R	M A Y	J U N	J U L		A U G	S E P
MH-47G Block I to Block II Army Common Funding																															
1		2018	ARMY	4	0	4	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0		
1		2019	ARMY	7	0	7	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	4	3	0	
1		2020	ARMY	8	0	8									A	-	-	-	-	-	-	-	-	-	-	-	-	-	8		
1		2021	ARMY	6	0	6																					A	-	-	6	
							O C T	N O V	D E C	J A N	F E B	M A R	A P R	M A Y	J U N	J U L	A U G	S E P	O C T	N O V	D E C	J A N	F E B	M A R	A P R	M A Y	J U N	J U L	A U G	S E P	

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Exhibit P-21, Production Schedule: PB 2022 Army **Date:** May 2021

Appropriation / Budget Activity / Budget Sub Activity: 2031A / 01 / 20	P-1 Line Item Number / Title: 6775A05101 / CH-47 Helicopter	Item Number / Title [DODIC]: A05105 / CH-47 SLEP
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Cost Elements <i>(Units in Each)</i>						Fiscal Year 2022												Fiscal Year 2023												BALANCE	
O C C #	M F R #	FY	SERVICE	PROC QTY	ACCEPT PRIOR TO 1 OCT 2021	BAL DUE AS OF 1 OCT	Calendar Year 2022												Calendar Year 2023												
							O C T	N O V	D E C	J A N	F E B	M A R	A P R	M A Y	J U N	J U L	A U G	S E P	O C T	N O V	D E C	J A N	F E B	M A R	A P R	M A Y	J U N	J U L	A U G		S E P
MH-47G Block I to Block II Army Common Funding																															
1		2018	ARMY	4	4	0																							0		
1		2019	ARMY	7	7	0																							0		
1		2020	ARMY	8	0	8	-	-	-	-	-	-	-	-	-	-	4	4											0		
1		2021	ARMY	6	0	6	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	3	3	0		
							O C T	N O V	D E C	J A N	F E B	M A R	A P R	M A Y	J U N	J U L	A U G	S E P	O C T	N O V	D E C	J A N	F E B	M A R	A P R	M A Y	J U N	J U L	A U G	S E P	

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Exhibit P-21, Production Schedule: PB 2022 Army	Date: May 2021
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Appropriation / Budget Activity / Budget Sub Activity: 2031A / 01 / 20	P-1 Line Item Number / Title: 6775A05101 / CH-47 Helicopter	Item Number / Title [DODIC]: A05105 / CH-47 SLEP
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MFR Ref #	Manufacturer Name - Location	Production Rates (Each / Year)			Procurement Leadtime (Months)							
		MSR For 2022	1-8-5 For 2022	MAX For 2022	Initial				Reorder			
					ALT Prior to Oct 1	ALT After Oct 1	Manufacturing PLT	Total After Oct 1	ALT Prior to Oct 1	ALT After Oct 1	Manufacturing PLT	Total After Oct 1
1	Boeing - Philadelphia PA	18	18	72	11	10	25	35	0	0	0	0

Remarks:

All PM Cargo procurement funding and production schedules currently support the Army common portion of funding to rebuild or replace 73 MH-47G Block I Special Operations Aircraft.

CH-47F Block II Product Office, in conjunction with Technology Applications Program Office (TAPO), is replacing the aging fleet of MH-47G aircraft that has airframe components dating back more than 45 years. The MH-47G program, while complementary to the CH-47F Block II program, is a separately managed Technology Applications Program Office (TAPO) ARSOAC program with a stand-alone Acquisition Strategy.

"A" in the Delivery Schedule indicates the Contract Award Date.

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

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Exhibit P-40, Advance Procurement Budget Line Item Justification: PB 2022 Army							Date: May 2021					
Appropriation / Budget Activity / Budget Sub Activity: 2031A: Aircraft Procurement, Army / BA 01: Aircraft / BSA 20: Rotary							P-1 Line Item Number / Title: 6775A05101 / CH-47 Helicopter					
Program Elements for Code B Items: N/A							Other Related Program Elements: 0607137A					
Line Item MDAP/MAIS Code: N/A												

Resource Summary	Prior Years	FY 2020	FY 2021	FY 2022 Base	FY 2022 OCO	FY 2022 Total	FY 2023	FY 2024	FY 2025	FY 2026	To Complete	Total
Gross/Weapon System Cost (<i>\$ in Millions</i>)	687.010	46.186	18.372	18.559	-	18.559	-	-	-	-	-	-
Net Procurement (P-1) (<i>\$ in Millions</i>)	687.010	46.186	18.372	18.559	-	18.559	-	-	-	-	-	-
Total Obligation Authority (<i>\$ in Millions</i>)	687.010	46.186	18.372	18.559	-	18.559	-	-	-	-	-	-

Description:

The CH-47F Chinook is a twin-turbine, tandem-rotor, heavy lift transport helicopter with a useful load of up to 25,000 pounds.

To maintain the Chinook, the Army's only heavy-lift cargo helicopter, the CH-47F Block II program will insert critical and affordable technologies into the Chinook fleet to affordably maintain the platform's operational capabilities while continuing to meet the Warfighter requirements. Key improvements include the Advanced Chinook Rotor Blade, upgraded transmissions and rotor heads, and strengthened airframes to increase payload across the full spectrum of operational environments. Other improvements include an upgraded electrical system and higher capacity fuel tanks along with aircraft software updates. The 11 September 2015 Program Delegation Acquisition Decision Memorandum (ADM) designated the CH-47F Block II as an Acquisition Category (ACAT) 1C program with the Milestone Decision Authority (MDA) delegated to the Secretary of the Army. The EMD Phase began in 2017 following the Milestone (MS) B decision in July 2017.

PM Cargo procurement lines provide the common portion of funding for the Special Operations Aircraft, MH-47G. CH-47F Block II in conjunction with Technology Applications Program Office (TAPO) is replacing the aging fleet of MH-47G aircraft that has airframe components dating back more than 45 years. The MH-47G program, while complementary to the Block II program, is a separately managed Technology Applications Program Office (TAPO) ARSOAC program with a stand-alone Acquisition Strategy. The current Army Acquisition Objective (AAO) is 550 aircraft.

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Exhibit P-40, Advance Procurement Budget Line Item Justification: PB 2022 Army		Date: May 2021
Appropriation / Budget Activity / Budget Sub Activity: 2031A: Aircraft Procurement, Army / BA 01: Aircraft / BSA 20: Rotary		P-1 Line Item Number / Title: 6775A05101 / CH-47 Helicopter
Program Elements for Code B Items: N/A		Other Related Program Elements: 0607137A

Line Item MDAP/MAIS Code: N/A									
Exhibits Schedule				Prior Years	FY 2020	FY 2021	FY 2022 Base	FY 2022 OCO	FY 2022 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	A05105 / CH-47 SLEP			165 / 654.251	8 / 46.186	11 / 18.372	6 / 18.559	- / -	6 / 18.559
P-40	Total Gross/Weapon System Cost			364 / 687.010	9 / 46.186	12 / 18.372	6 / 18.559	- / -	6 / 18.559

*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:
 FY 2022 Advanced procurement dollars in the amount of \$18.559 million will procure the MH-47G common portion of the airframe advance procurement requirement.
 *FY 2022 does not include CH-47F advance procurement funding (FY 2021 advance procurement funding included CH-47F Block II \$29.000 million and MH-47G Block II \$18.186 million)
 Note: FY 2021 the correct amount for Advanced Procurement is \$47.372M. The error was discovered after the P-1 was locked and could not be corrected.
 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.

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Exhibit P-10, Advance Procurement Requirements Analysis (page 1 - Budget Funding Justification): PB 2022 Army					Date: May 2021		
Appropriation / Budget Activity / Budget Sub Activity: 2031A / 01 / 20			P-1 Line Item Number / Title: 6775A05101 / CH-47 Helicopter			P-5 Number / Title: A05105 / CH-47 SLEP	
First System (2022) Award Date: December 2003		First System (2022) Completion Date: December 2006			Interval Between Systems: 2 Months		
CH-47 SLEP		Production Leadtime <i>(Months)</i>	Prior Years <i>(Each)</i>	FY 2020 <i>(Each)</i>	FY 2021 <i>(Each)</i>	FY 2022 <i>(Each)</i>	
Quantity			165	8	11	6	
Cost Elements		When Required <i>(Months)</i>	Prior Years <i>(\$ M)</i>	FY 2020 <i>(\$ M)</i>	FY 2021 <i>(\$ M)</i>	FY 2022 <i>(\$ M)</i>	
CFE							
MH-47 Avionics		16	285.386	7.274	7.349	7.424	
MH-47 Airframe		14	368.865	10.912	11.023	11.135	
CH-47 Avionics		-	-	11.200	-	-	
CH-47 Airframe		-	-	16.800	-	-	
<i>Total: CFE</i>			<i>654.251</i>	<i>46.186</i>	<i>18.372</i>	<i>18.559</i>	
Total Advance Procurement/Obligation Authority			654.251	46.186	18.372	18.559	

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Exhibit P-10, Advance Procurement Requirements Analysis (page 2 - Budget Funding Justification): PB 2022 Army **Date:** May 2021

Appropriation / Budget Activity / Budget Sub Activity: 2031A / 01 / 20	P-1 Line Item Number / Title: 6775A05101 / CH-47 Helicopter	P-5 Number / Title: A05105 / CH-47 SLEP
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Cost Elements	QPA <i>(Each)</i>	FY 2022					Total Cost Request <i>(\$ M)</i>
		Production Leadtime <i>(Months)</i>	Unit Cost <i>(\$ K)</i>	Contract Forecast Date	2022 Qty <i>(Each)</i>	For FY	
CFE							
MH-47 Avionics	1						7.424
MH-47 Airframe	1						11.135
CH-47 Avionics	-						-
CH-47 Airframe	-						-
<i>Total: CFE</i>							18.559
Total Advance Procurement/Obligation Authority							18.559

Description:
N/A

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Exhibit P-40, Budget Line Item Justification: PB 2022 Army **Date:** May 2021

Appropriation / Budget Activity / Budget Sub Activity: 2031A: Aircraft Procurement, Army / BA 01: Aircraft / BSA 20: Rotary **P-1 Line Item Number / Title:** 9990A19900 / Spectrum Army SUAS

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

Line Item MDAP/MAIS Code: N/A

Resource Summary	Prior Years	FY 2020	FY 2021	FY 2022 Base	FY 2022 OCO	FY 2022 Total	FY 2023	FY 2024	FY 2025	FY 2026	To Complete	Total
Procurement Quantity (<i>Units in Each</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost (<i>\$ in Millions</i>)	186.721	135.859	-	-	-	-	-	-	-	-	-	-
Less PY Advance Procurement (<i>\$ in Millions</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) (<i>\$ in Millions</i>)	186.721	135.859	-	-	-	-	-	-	-	-	-	-
Plus CY Advance Procurement (<i>\$ in Millions</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Total Obligation Authority (<i>\$ in Millions</i>)	186.721	135.859	-	-	-	-	-	-	-	-	-	-

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

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

Description:

The Commercial Spectrum Enhancement Act (CSEA) Title II, Public Law 108-494, dated December 23, 2004, established the Spectrum Relocation Fund (SRF) to provide Federal agencies a mechanism to recover the costs associated with relocating communication systems from spectrum bands which were auctioned for commercial purposes.

- The SRF is funded with proceeds from Federal Communications Commission (FCC) conducted auctions of spectrum licenses.
- SRF funds have an indefinite obligation period and remain available until expended (X Year).
- The Department of Defense (DoD) Information Officer (CIO) executes oversight of the DoD spectrum relocation and sharing efforts.

Secondary Distribution		FY 2020	FY 2021	FY 2022 Base	FY 2022 OCO	FY 2022 Total	FY 2023	FY 2024	FY 2025	FY 2026
Army	Quantity	-	-	-	-	-	-	-	-	-
	Total Obligation Authority	135.859	-	-	-	-	-	-	-	-
Total: Secondary Distribution	Quantity	-	-	-	-	-	-	-	-	-
	Total Obligation Authority	135.859	-	-	-	-	-	-	-	-

Justification:

Manned Unmanned Teaming provides Apache Block AH-64 attack helicopters the ability to display real time sensor video from UAS sensors, battlefield sensors or onboard sensor video to the Apache Aircrews. The use of the onboard or off-board sensor video by the warfighter dramatically reduces engagement timelines and increases situational awareness.

The budget request for Spectrum Army Small Unmanned Aerial Systems (SUAS) will fund the Manned/Unmanned teaming with the change in Small UAS frequency which encompasses a wide range of activity including modification, integration, testing, and production of MUUMT-X, MUUMT-2 and ROVER 6 radios.

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Exhibit P-40, Budget Line Item Justification: PB 2022 Army **Date:** May 2021

Appropriation / Budget Activity / Budget Sub Activity: 2031A: Aircraft Procurement, Army / BA 02: Modification of Aircraft / BSA 10: Modification of Aircraft	P-1 Line Item Number / Title: 0028A02706 / Universal Ground Control Equipment (UAS)
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ID Code (A=Service Ready, B=Not Service Ready):	Program Elements for Code B Items: N/A	Other Related Program Elements: N/A
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Line Item MDAP/MAIS Code: N/A

Resource Summary	Prior Years	FY 2020	FY 2021	FY 2022 Base	FY 2022 OCO	FY 2022 Total	FY 2023	FY 2024	FY 2025	FY 2026	To Complete	Total
Procurement Quantity (<i>Units in Each</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost (<i>\$ in Millions</i>)	42.032	2.090	7.509	-	-	-	-	-	-	-	-	-
Less PY Advance Procurement (<i>\$ in Millions</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) (<i>\$ in Millions</i>)	42.032	2.090	7.509	-	-	-	-	-	-	-	-	-
Plus CY Advance Procurement (<i>\$ in Millions</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Total Obligation Authority (<i>\$ in Millions</i>)	42.032	2.090	7.509	-	-	-	-	-	-	-	-	-

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

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

Description:

Scalable Control Interface (SCI) will be the primary means of Command and Control (C2) for Program of Record Army Unmanned Aircraft Systems (UAS). SCI software will be hosted on Mission Command devices in both ground and airborne platforms serving as nodes on the Integrated Tactical Network to retrieve and provide data. SCI distributes UAS capabilities by greatly increasing the number of UAS control devices available to Soldiers and Commanders through the depth of the battlefield. SCI provides simultaneous control of multiple aircraft from a single node. SCI leverages a Modular Operating System Approach (MOSA) to software in order to reduce time and cost to integrate new hardware and software in response to the dynamic future operating environment.

Deployment of SCI will include, but is not limited to, devices in the Mobile/Handheld Computing Environment (such as Nett Warrior), Mounted Computing Environment (such as Mounted Family of Computer Systems - MFoCS), and Command Post Computing Environment (such as Tactical Server Infrastructure - TSI). SCI will integrate decision-aiding, autonomy, and artificial intelligence as they mature technically, in order to support MDO tenets and enable Many-to-Many (vice 1 controller: 1 UAS) Control/use of UAS assets and reduce cognitive workload.

Secondary Distribution	FY 2020	FY 2021	FY 2022 Base	FY 2022 OCO	FY 2022 Total	FY 2023	FY 2024	FY 2025	FY 2026
Army									
Quantity	-	-	-	-	-	-	-	-	-
Total Obligation Authority	2.090	7.509	-	-	-	-	-	-	-
Total:									
Secondary Distribution									
Quantity	-	-	-	-	-	-	-	-	-
Total Obligation Authority	2.090	7.509	-	-	-	-	-	-	-

Justification:

FY2021 SCI (Formerly Universal Product) Base funding of \$7.509 million will be used to continue the fielding of S-788 Modernized Server Kits for Shadow Block III, stepping stone for SCI capable shelters in the field (119 Kits). These Kits will support current Universal Ground Control Station (UGCS) operations while providing processing power and capability for operations in a MDO Environment.

UNCLASSIFIED

Exhibit P-40, Budget Line Item Justification: PB 2022 Army **Date:** May 2021

Appropriation / Budget Activity / Budget Sub Activity: 2031A: Aircraft Procurement, Army / BA 02: Modification of Aircraft / BSA 10: Modification of Aircraft	P-1 Line Item Number / Title: 0756AA6601 / Gray Eagle Mods2
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ID Code (A=Service Ready, B=Not Service Ready):	Program Elements for Code B Items: N/A	Other Related Program Elements: 0305204A, 0305219A
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Line Item MDAP/MAIS Code: N/A

Resource Summary	Prior Years	FY 2020	FY 2021	FY 2022 Base	FY 2022 OCO	FY 2022 Total	FY 2023	FY 2024	FY 2025	FY 2026	To Complete	Total
Procurement Quantity (<i>Units in Each</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost (<i>\$ in Millions</i>)	263.442	14.699	30.280	3.143	-	3.143	-	-	-	-	-	-
Less PY Advance Procurement (<i>\$ in Millions</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) (<i>\$ in Millions</i>)	263.442	14.699	30.280	3.143	-	3.143	-	-	-	-	-	-
Plus CY Advance Procurement (<i>\$ in Millions</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Total Obligation Authority (<i>\$ in Millions</i>)	263.442	14.699	30.280	3.143	-	3.143	-	-	-	-	-	-

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

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

Description:

The MQ-1C Gray Eagle provides the Army with an Extended Range, Multi-Purpose (ERMP) Unmanned Aircraft System (UAS); capable of executing reconnaissance, security, attack, and intelligence collection missions in the range of military operations (ROMO). Sensors/payloads include an Electro-Optical/Infrared/Laser Designator (EO/IR/LD), Synthetic Aperture Radar/Moving Target Indicator (SAR/MTI), Signals Intelligence (SIGINT), and HELLFIRE missiles; providing a near all-weather mission capability. MQ-1C Gray Eagle is a dedicated, assured, multi-mission Unmanned Aircraft System (UAS) fielded to all Army Divisions, Intelligence and Security Command and Army Special Operations Command in support of the commander's warfighting priorities and Aviation Force 1.1 capabilities enabling Multi-Domain Operations (MDO).

The MQ-1C Gray Eagle Modification/Product Improvement Program (PIP) funding is required for Datalinks and Avionics modernization. Datalinks and Avionics modernization involves the procurement of new SATCOM ground and air vehicle equipment, new air vehicle avionics, and system re-architecture through the partitioning and updating of software to allow for the separation of critical and non-critical functions. This modernization effort will enable multi-band communication for Beyond Line of Sight data transmission, replace obsolete processors, and improve system processing and increase both throughput and memory capability. PIP funding also supports multi-phased integration efforts of hardware and software procurement in support of Army Assured-Positioning Navigation and Timing (A-PNT) requirements to allow the MQ-1C Gray Eagle to survive, persist, and thrive in GPS denied environments. This funding will support the procurement, development, and integration that is necessary for Link-16 on the MQ-1C. These upgrades improve operations in contested environments, address obsolescence, and establish an architecture that enables integration of future payloads to support Multi-Domain Operations.

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.

Secondary Distribution	FY 2020	FY 2021	FY 2022 Base	FY 2022 OCO	FY 2022 Total	FY 2023	FY 2024	FY 2025	FY 2026
Army									
Quantity	-	-	-	-	-	-	-	-	-
Total Obligation Authority	14.699	30.280	3.143	-	3.143	-	-	-	-
Total:									
Secondary Distribution									
Quantity	-	-	-	-	-	-	-	-	-
Total Obligation Authority	14.699	30.280	3.143	-	3.143	-	-	-	-

UNCLASSIFIED

Exhibit P-40, Budget Line Item Justification: PB 2022 Army		Date: May 2021
Appropriation / Budget Activity / Budget Sub Activity: 2031A: Aircraft Procurement, Army / BA 02: Modification of Aircraft / BSA 10: Modification of Aircraft		P-1 Line Item Number / Title: 0756AA6601 / Gray Eagle Mods2
ID Code (A=Service Ready, B=Not Service Ready):	Program Elements for Code B Items: N/A	Other Related Program Elements: 0305204A, 0305219A
Line Item MDAP/MAIS Code: N/A		

Justification:

FY2022 Base Procurement dollars in the amount of \$3.143M supports the procurement of the Critical Avionics and Datalinks equipment, which supports transition of the SATCOM datalink to a multiband frequency. Acquisition and repair of GFE, as well as procurement of aircraft kits, to support test and evaluation efforts will be funded.

The MQ-1C Gray Eagle Modification/Product Improvement Program (PIP) funding is required for Datalinks and Avionics modernization. Datalinks and Avionics modernization involves the procurement of new SATCOM ground and air vehicle equipment, new air vehicle avionics, and system re-architecture through the partitioning and updating of software to allow for the separation of critical and non-critical functions. This modernization effort will enable multi-band communication for Beyond Line of Sight data transmission, replace obsolete processors, and improve system processing and increase both throughput and memory capability. PIP funding also supports multi-phased integration efforts of hardware and software procurement in support of Army Assured-Positioning Navigation and Timing (A-PNT) requirements to allow the MQ-1C Gray Eagle to survive, persist, and thrive in GPS denied environments. This effort fully integrates Link-16, increases operational reach, and meets objectives all while reducing cognitive burden for the Soldier. These upgrades improve operations in contested environments, address obsolescence, and establish an architecture that enables integration of future payloads to support Multi-Domain Operations.

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Exhibit P-40, Budget Line Item Justification: PB 2022 Army **Date:** May 2021

Appropriation / Budget Activity / Budget Sub Activity: 2031A: Aircraft Procurement, Army / BA 02: Modification of Aircraft / BSA 10: Modification of Aircraft	P-1 Line Item Number / Title: 1036AZ2001 / MULTI SENSOR ABN RECON
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ID Code (A=Service Ready, B=Not Service Ready):	Program Elements for Code B Items: N/A	Other Related Program Elements: N/A
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Line Item MDAP/MAIS Code: N/A

Resource Summary	Prior Years	FY 2020	FY 2021	FY 2022 Base	FY 2022 OCO	FY 2022 Total	FY 2023	FY 2024	FY 2025	FY 2026	To Complete	Total
Procurement Quantity <i>(Units in Each)</i>	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost <i>(\$ in Millions)</i>	1,371.011	115.449	158.384	127.665	-	127.665	-	-	-	-	-	-
Less PY Advance Procurement <i>(\$ in Millions)</i>	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) <i>(\$ in Millions)</i>	1,371.011	115.449	158.384	127.665	-	127.665	-	-	-	-	-	-
Plus CY Advance Procurement <i>(\$ in Millions)</i>	-	-	-	-	-	-	-	-	-	-	-	-
Total Obligation Authority <i>(\$ in Millions)</i>	1,371.011	115.449	158.384	127.665	-	127.665	-	-	-	-	-	-

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

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

Description:

AZ2001 Multi Sensor ABN Recon (MIP) is the Parent Line to Airborne Reconnaissance Low - Enhanced (MIP)(ARL-E) (AZ2050), Guardrail Payloads (MIP) (AZ2052), EMARSS Payloads (MIP)(AZ2054), and the Army ABN ISR Modifications (AZ2056).

Airborne Reconnaissance Low - Enhanced (ARL-E) is a worldwide self-deployable airborne Intelligence Surveillance Reconnaissance (ISR) system designed for timely, accurate, assured support to tactical forces over the full spectrum of operations. This system is a De Havilland DHC-8 aircraft replacing the DHC-7 IAW the Aerial ISR (AISR) 2020 Strategy. ARL-E will enhance the ARL-M sensor capability sets through the procurement of new and refurbished sensors to meet the ARL-E Capabilities Production Document (CPD) requirements. It provides a persistent capability to include: Broad-Area Surveillance and/or Focused Stare on Target Areas of Interest (Point or Objective Targets), Electro-Optical/Infrared (EO/IR)/Full-Motion Video (FMV), Multi-Mode Radar, Robust Communications Intelligence (COMINT), on-Board Collection, Analysis, Sensor Cross Cue and dissemination through Distributed Common Ground System-Army (DCGS-A) Enabled workstations. ARL-E will be assigned to the U.S. Army Intelligence and Security Command's Aerial ISR Brigade providing AISR support to combatant commanders. For the overall system, the Army Acquisition Objective and the Army Procurement Objective, is nine (9). The Mission Equipment Package (MEP) objective is eight (8).

This funding line supports the procurement and modernization of eight (8) complete MEP sets, which includes the following sensors: one (1) COMINT subsystem capable of supporting theater net centric geo-location efforts, two (2) High Definition FMV sensors and one (1) Improved Synthetic Aperture Radar / Ground Moving Target Indicator (SAR/GMTI) radar subsystem or one (1) SAR/Dismounted Moving Target Indicator (DMTI) subsystem. The MEP will also include four (4) DCGS-A workstations, one (1) set of communication equipment (mission radios, Beyond line of Site (BLOS) and Line of Site (LOS) Data links). ARL-E will be capable of rapid installation of sensors in a plug and play, quick connect/disconnect, mounting system to allow various combinations of sensor-types in support of a wide-range of theater operations. All MEPs will include the infrastructure to plug and play a Hyper-spectral imagery (HSI) Payload purchased under a QRC program. Future Growth capabilities include: Wide-Area Aerial Surveillance (WAAS), Light Detection and Ranging (LiDAR) and Foliage Penetration Radar (FOPEN).

The overall Airborne Reconnaissance Low-Enhanced (ARL-E) procurement/modernization efforts are found in the following three (3) lines; AZ2050 ARL Payloads (Project Manager Sensors - Aerial Intelligence), A02109, ARL-E SEMA (MIP) and A02110 ARL-E SEMA Mods (MIP) (Fixed Wing Project Office). Separate funding lines support the Army Acquisition Executive's directive, codified in the October 28, 2011 memorandum, to assign overall acquisition lead for manned airborne Intelligence systems to Program Executive Officer for Aviation; and overall sensor, processing, exploitation, and dissemination responsibilities to Program Executive Officer for Intelligence, Electronic Warfare, and Sensors.

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Exhibit P-40, Budget Line Item Justification: PB 2022 Army **Date:** May 2021

Appropriation / Budget Activity / Budget Sub Activity: 2031A: Aircraft Procurement, Army / BA 02: Modification of Aircraft / BSA 10: Modification of Aircraft	P-1 Line Item Number / Title: 1036AZ2001 / MULTI SENSOR ABN RECON
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ID Code (A=Service Ready, B=Not Service Ready):	Program Elements for Code B Items: N/A	Other Related Program Elements: N/A
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Line Item MDAP/MAIS Code: N/A

The Guardrail Common Sensor (GRCS) is an airborne Signals Intelligence (SIGINT) Collection and Location System capable of providing Tactical Commanders Near-Real Time intelligence. It provides a persistent capability to detect, locate and classify/identify critical targets with a relevant degree of timeliness and accuracy. GRCS is assigned to two (2) U.S. Army Intelligence and Security Command's Aerial Exploitation Battalions, providing Aerial Intelligence, Surveillance and Reconnaissance (AISR) support to combatant commanders. The Army's Acquisition Objective/Army's Procurement Objective (AAO/APO) is 19 RC-12X; seven (7) fielded to 3rd MI BN; seven (7) fielded to the 204th MI BN, and five (5) pilot trainers to support Force Generation. The five (5) trainers are not equipped with Primary Mission Equipment (PME).

The overall GRCS procurement/modernization efforts are found in the following two lines: AZ2052 Guardrail Payloads (MIP) and A02111 GRCS SEMA MODS (MIP). Separate funding lines support the Army Acquisition Executive's directive, codified in the October 28, 2011 memorandum, to assign overall acquisition lead for manned airborne Intelligence systems to Program Executive Office for Aviation; and overall sensor, processing, exploitation, and dissemination responsibilities to Program Executive Officer for Intelligence, Electronic Warfare, and Sensors.

GRCS is currently the most capable Army AISR system that provides SIGINT capabilities to support long range targeting of near-peer threats in an A2AD environment.

RDT&E and procurement funding currently planned will address obsolescence issues for critical SIGINT capabilities on the GRCS platform. These investments ensure GRCS AISR support in the A2AD environment is not impacted, which would prevent critical intelligence collection at large standoff which is needed to address long range targeting of near-peer threats and maintain system relevancy.

The Enhanced Medium Altitude Reconnaissance and Surveillance System (EMARSS) is the Army's newest generation C-12 based, direct support, manned airborne intelligence collection, processing, and targeting support system. It provides a persistent capability to detect, locate, classify/identify, and track surface targets with a high degree of timeliness and accuracy. EMARSS is assigned to the U.S. Army Intelligence and Security Command's Aerial Exploitation Battalions, providing Aerial Intelligence, Surveillance and Reconnaissance support to combatant commanders. EMARSS is also assigned to the United States Army Training and Doctrine Command (TRADOC) in support of training at the US Army Intelligence Center of Excellence (USAICoE). The Army Acquisition Objective for EMARSS is 36 systems, with an Army Procurement Objective of 24, to include the following variants: eight (8) EMARSS-G (Geo-INT); four (4) EMARSS-V (Vehicle and Dismount Exploitation Radar, VaDER); eight (8) EMARSS-M (Multi-INT); and four (4) EMARSS-S (SIGINT). In response to the Congressional plus up, the approved Directed Requirements document provides for up to 2 EMARSS-E aircraft.

Each EMARSS variant has a distinct Mission Equipment Package (MEP). This funding line supports the pre-planned product improvements of the following sensor capabilities: SIGINT; Electro-optical/Infrared (EO/IR)/Full Motion Video (FMV); Communications Intelligence (COMINT) to include Big Iron; Wide Area Aerial Surveillance (WAAS); Light Imaging Detection and Ranging (LiDAR) and improved Synthetic Aperture RADAR / Moving Target Indicator (SAR/MTI) RADAR; line-of-site (LOS) and beyond line-of-site (BLOS) communications; and Processing Exploitation and Dissemination (PED) supporting two Distributed Common Ground System - Army (DCGS-A) enabled operator workstations.

The overall EMARSS procurement/modernization efforts are found in the following two lines; AZ2054 EMARSS Payloads (Project Manager Sensors - Aerial Intelligence) and A02112 EMARSS SEMA Mods (Fixed Wing Project Office). Separate funding lines support the Army Acquisition Executive's directive, codified in the October 28, 2011 memorandum, to assign overall acquisition lead for manned airborne Intelligence systems to Program Executive Officer for Aviation; and overall sensor, processing, exploitation, and dissemination responsibilities to Program Executive Officer for Intelligence, Electronic Warfare, and Sensors.

EMARSS transitioned from A02005.

The Army ABN ISR Modifications line is to support aircraft modifications for planes in theater supporting Overseas Contingency Operations.

Secondary Distribution		FY 2020	FY 2021	FY 2022 Base	FY 2022 OCO	FY 2022 Total	FY 2023	FY 2024	FY 2025	FY 2026
Army	Quantity	-	-	-	-	-	-	-	-	-
	Total Obligation Authority	115.449	158.384	127.665	-	127.665	-	-	-	-
Total:	Quantity	-	-	-	-	-	-	-	-	-

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Exhibit P-40, Budget Line Item Justification: PB 2022 Army **Date:** May 2021

Appropriation / Budget Activity / Budget Sub Activity: 2031A: Aircraft Procurement, Army / BA 02: Modification of Aircraft / BSA 10: Modification of Aircraft	P-1 Line Item Number / Title: 1036AZ2001 / MULTI SENSOR ABN RECON
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ID Code (A=Service Ready, B=Not Service Ready):	Program Elements for Code B Items: N/A	Other Related Program Elements: N/A
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Line Item MDAP/MAIS Code: N/A

Secondary Distribution		FY 2020	FY 2021	FY 2022 Base	FY 2022 OCO	FY 2022 Total	FY 2023	FY 2024	FY 2025	FY 2026
Secondary Distribution	Total Obligation Authority	115.449	158.384	127.665	-	127.665	-	-	-	-

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Exhibit P-40, Budget Line Item Justification: PB 2022 Army **Date:** May 2021

Appropriation / Budget Activity / Budget Sub Activity:
2031A: Aircraft Procurement, Army / BA 02: Modification of Aircraft / BSA 10: Modification of Aircraft

P-1 Line Item Number / Title:
1036AZ2001 / MULTI SENSOR ABN RECON

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

Line Item MDAP/MAIS Code: N/A

Exhibits Schedule					Prior Years	FY 2020	FY 2021	FY 2022 Base	FY 2022 OCO	FY 2022 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	AZ2050 / ARL PAYLOADS (Operational)				- / 1,196.182	- / 77.895	- / 78.561	- / 81.989	- / -	- / 81.989
P-3a	AZ2052 / GUARDRAIL PAYLOADS (U)				- / 95.572	- / 25.408	- / 25.869	- / 18.554	- / -	- / 18.554
P-3a	AZ2054 / EMARSS PAYLOADS (x)				- / 79.257	- / 12.146	- / 12.174	- / 9.912	- / -	- / 9.912
P-3a	AZ2056 / ABN ISR MODS (MIP) (Operational)				- / -	- / -	- / 41.780	- / 17.210	- / -	- / 17.210
P-40	Total Gross/Weapon System Cost				- / 1,371.011	- / 115.449	- / 158.384	- / 127.665	- / -	- / 127.665

*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:
FY 2022 funding to support the overall ARL-E effort are found in the following two lines: AZ2050 ARL Payloads and A02110 ARL SEMA Mods (Project Manager Fixed Wing (PM FW) (separate form).

The purpose of ARL-E AZ2050 is to procure, upgrade, test and integrate sensors; communications architecture for sensor information exploitation and dissemination; test, nonrecurring engineering, and integration in support of the ARL-E Payload program ensuring ARL-E is rapidly deployable world-wide against current, new, and emerging threats.

ARL-E FY 2022 Base procurement dollars in the amount of \$36.111 million supports aircraft integration and flight testing for aircraft 6, communications equipment and associated hardware for aircraft 7.

ARL-E FY 2022 Direct War funding in the amount of \$45.878 million supports aircraft modifications, Mission Equipment Package (MEP) System Integration Lab (SIL) integration, Integrated Contractor Logistics Support and Training, and the procurement of communications intelligence (COMINT) sensors and Distributed Common Ground Sensor- Army (DCGS-A) enabled workstations for aircraft 7.

The schedule (in/out) reflects the start of MEP SIL testing and completion of aircraft integration efforts.

FY 2022 funding to support the overall GRCS efforts are found in the following two lines; AZ2052 GRCS Payloads (Project Manager Sensors - Aerial Intelligence (PM SAI)) and A02111 GRCS SEMA (Project Manager Fixed Wing (PM FW)) (separate form).

The purpose of GRCS AZ2052 is to procure, upgrade, and integrate SIGINT sensors, as well as the communications suite, and processing, exploitation and dissemination equipment on Guardrail. This will ensure Guardrail is rapidly-deployable, world-wide, against current, new, and emerging threats.

GRCS FY 2022 Base procurement dollars in the amount of \$18.596 million supports procurement for GRCS advanced signal enhancement efforts and integration & testing of the signal enhancement infrastructure for GRCS updated SIGINT sensor capabilities including multiple COMINT and ELINT sensors. Funding also supports required program management.

The purpose of EMARSS AZ2054 is to support the procurement and upgrade of the following sensor payload capabilities: Signals Intelligence (SIGINT); Electro-optical/Infrared (EO/IR)/Full Motion Video (FMV); a Communications Intelligence (COMINT) to include Big Iron; Wide Area Aerial Surveillance (WAAS); Light Imaging Detection and Ranging (LiDAR) and improved Synthetic Aperture Radar / Moving Target Indicator (SAR/MTI) radar; line-of-site (LOS) and beyond line-of-site (BLOS) communications; Processing Exploitation and Dissemination (PED) supporting two Distributed Common Ground System - Army (DCGS-A) enabled operator workstations; and pre-planned product improvements.

EMARSS FY 2022 Enduring Operations funding in the amount of \$9.912 million supports sensor procurements, integration, installation, and testing that enable modern signals SIGINT updates on EMARSS.

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Exhibit P-40, Budget Line Item Justification: PB 2022 Army		Date: May 2021
Appropriation / Budget Activity / Budget Sub Activity: 2031A: Aircraft Procurement, Army / BA 02: Modification of Aircraft / BSA 10: Modification of Aircraft		P-1 Line Item Number / Title: 1036AZ2001 / MULTI SENSOR ABN RECON
ID Code (A=Service Ready, B=Not Service Ready):	Program Elements for Code B Items: N/A	Other Related Program Elements: N/A
Line Item MDAP/MAIS Code: N/A		
<p>FY 2022 Enduring Operations funding in the amount of \$1.566 million supports sensor Guardrail payloads</p> <p>ABN ISR Mods (MIP) FY 2022 Direct War funding in the amount of \$17.210 million supports aircraft which require military and civilian avionics upgrades to support compliance with current and future requirements, to ensure the aircraft avionics avoid obsolescence, to enable the aircraft to remain capable and sustainable in the future for deployed aircraft and to support future integration efforts supporting A-ISR modernization in the Multi-Domain Operations (MDO) environment. In support of Joint Urgent Operational Needs Statement (JUON) CC-0541.</p> <p>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.</p> <p>All funding is in Active Component.</p>		

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Exhibit P-3a, Individual Modification: PB 2022 Army		Date: May 2021
Appropriation / Budget Activity / Budget Sub Activity: 2031A / 02 / 10	P-1 Line Item Number / Title: 1036AZ2001 / MULTI SENSOR ABN RECON	Modification Number / Title: AZ2050 / ARL PAYLOADS

ID Code (A=Service Ready, B=Not Service Ready) :	MDAP/MAIS Code:
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Resource Summary	Prior Years	FY 2020	FY 2021	FY 2022 Base	FY 2022 OCO	FY 2022 Total
Procurement Quantity (<i>Units in Each</i>)	-	-	-	-	-	-
Gross/Weapon System Cost (<i>\$ in Millions</i>)	1,196.182	77.895	78.561	81.989	-	81.989
Less PY Advance Procurement (<i>\$ in Millions</i>)	-	-	-	-	-	-
Net Procurement (P-1) (<i>\$ in Millions</i>)	1,196.182	77.895	78.561	81.989	-	81.989
Plus CY Advance Procurement (<i>\$ in Millions</i>)	-	-	-	-	-	-
Total Obligation Authority (<i>\$ in Millions</i>)	1,196.182	77.895	78.561	81.989	-	81.989

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

Initial Spares (<i>\$ in Millions</i>)	-	-	-	-	-	-
Gross/Weapon System Unit Cost (<i>\$ in Thousands</i>)	299,045.500	77,895.000	78,561.000	81,989.000	-	81,989.000

Description:

ARL-E FY 2022 Base procurement dollars in the amount of \$36.111 million supports aircraft integration and flight testing for aircraft 6, communications equipment and associated hardware for aircraft 7.

ARL-E FY 2022 Direct War/Enduring Operations funding in the amount of \$45.878 million supports aircraft modifications, Mission Equipment Package (MEP) System Integration Lab (SIL) integration, Integrated Contractor Logistics Support and Training, and the procurement of communications intelligence (COMINT) sensors and Distributed Common Ground Sensor- Army (DCGS-A) enabled workstations for aircraft 7.

The schedule (in/out) reflects the start of MEP SIL testing and the completion of aircraft integration/required test events.

Secondary Distribution		FY 2020	FY 2021	FY 2022 Base	FY 2022 OCO	FY 2022 Total
Army	Quantity	-	-	-	-	-
	Total Obligation Authority	77.895	78.561	81.989	-	81.989
Total:	Quantity	-	-	-	-	-
Secondary Distribution	Total Obligation Authority	77.895	78.561	81.989	-	81.989

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Exhibit P-3a, Individual Modification: PB 2022 Army					Date: May 2021		
Appropriation / Budget Activity / Budget Sub Activity: 2031A / 02 / 10			P-1 Line Item Number / Title: 1036AZ2001 / MULTI SENSOR ABN RECON			Modification Number / Title: AZ2050 / ARL PAYLOADS	
ID Code (A=Service Ready, B=Not Service Ready) :				MDAP/MAIS Code:			
Models of Systems Affected: ARL		Modification Type: Operational			Related RDT&E PEs:		
Financial Plan	Prior Years	FY 2020	FY 2021	FY 2022 Base	FY 2022 OCO	FY 2022 Total	
	Qty (Each) / Total Cost (\$ M)	Qty (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: ARL Enhanced (ARL-E)							
A Kits							
Recurring							
System Test & Eval support	- / 27.672	- / 11.525	- / 12.500	- / 5.447	- / -	- / 5.447	
Program Mgt	- / 36.892	- / 5.544	- / 7.945	- / 6.516	- / -	- / 6.516	
Spares	- / 3.967	- / -	- / 5.750	- / 4.755	- / -	- / 4.755	
Training and Documentation	- / 9.610	- / 2.000	- / 7.605	- / 2.000	- / -	- / 2.000	
Field Support	- / 9.076	- / 17.854	- / 14.477	- / 7.136	- / -	- / 7.136	
Aircraft Standardization	- / 13.791	- / 2.294	- / -	- / -	- / -	- / -	
Aircraft Modification	- / 7.619	- / 3.900	- / 9.000	- / 5.560	- / -	- / 5.560	
Subtotal: Recurring	- / 108.627	- / 33.117	- / 47.277	- / 31.414	- / -	- / 31.414	
Non-Recurring							
Non Recurring Engineering	- / 22.302	- / -	- / -	- / -	- / -	- / -	
Subtotal: Non-Recurring	- / 22.302	- / -	- / -	- / -	- / -	- / -	
B Kits							
Recurring							
Upgrade MX-20D SWIR sensors	- / 6.342	- / -	- / -	- / 2.350	- / -	- / 2.350	
SAR/DMTI sensor	- / 25.250	- / -	- / -	- / -	- / -	- / -	
Communications procurement	- / 14.680	- / 11.014	- / 2.751	- / 3.043	- / -	- / 3.043	
LRR	- / 25.494	- / 14.976	- / -	- / -	- / -	- / -	
COMINT	- / 35.283	- / -	- / 16.183	- / -	- / -	- / -	
HSI upgrade	- / 1.701	- / -	- / -	- / -	- / -	- / -	
DCGS-A Workstations	- / 49.367	- / -	- / 5.850	- / 5.872	- / -	- / 5.872	
Upgrade MX-20HD Sensors	- / 3.805	- / -	- / -	- / 1.650	- / -	- / 1.650	
MEP/PED System Integration Lab (SIL)	- / 54.656	- / 8.672	- / 16.500	- / 17.160	- / -	- / 17.160	
Subtotal: Recurring	- / 216.578	- / 24.662	- / 31.284	- / 30.075	- / -	- / 30.075	
Non-Recurring							
LRR Information Assurance	- / 5.910	- / -	- / -	- / -	- / -	- / -	
Subtotal: Non-Recurring	- / 5.910	- / -	- / -	- / -	- / -	- / -	
Subtotal: ARL Enhanced (ARL-E)	- / 353.417	- / 57.779	- / 78.561	- / 61.489	- / -	- / 61.489	
Subtotal: Procurement, All Modification Items	- / 353.417	- / 57.779	- / 78.561	- / 61.489	- / -	- / 61.489	
Installation							

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Exhibit P-3a, Individual Modification: PB 2022 Army					Date: May 2021	
Appropriation / Budget Activity / Budget Sub Activity: 2031A / 02 / 10			P-1 Line Item Number / Title: 1036AZ2001 / MULTI SENSOR ABN RECON		Modification Number / Title: AZ2050 / ARL PAYLOADS	
ID Code (A=Service Ready, B=Not Service Ready) :				MDAP/MAIS Code:		
Models of Systems Affected: ARL		Modification Type: Operational			Related RDT&E PEs:	
Financial Plan	Prior Years	FY 2020	FY 2021	FY 2022 Base	FY 2022 OCO	FY 2022 Total
	Qty (Each) / Total Cost (\$ M)	Qty (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: ARL Enhanced (ARL-E)	4 / 842.765	1 / 20.116	- / -	1 / 20.500	- / -	1 / 20.500
<i>Subtotal: Installation</i>	4 / 842.765	1 / 20.116	- / -	1 / 20.500	- / -	1 / 20.500
Total						
Total Cost (Procurement + Support + Installation)	1,196.182	77.895	78.561	81.989	-	81.989

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Exhibit P-3a, Individual Modification: PB 2022 Army **Date:** May 2021

Appropriation / Budget Activity / Budget Sub Activity: 2031A / 02 / 10	P-1 Line Item Number / Title: 1036AZ2001 / MULTI SENSOR ABN RECON	Modification Number / Title: AZ2050 / ARL PAYLOADS
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ID Code (A=Service Ready, B=Not Service Ready) :	MDAP/MAIS Code:
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Modification Item 1 of 1: ARL Enhanced (ARL-E)

Manufacturer Information

Manufacturer Name: Leidos		Manufacturer Location: Maryland	
Administrative Leadtime (in Months): 6		Production Leadtime (in Months): 24	
Dates	FY 2020	FY 2021	FY 2022
Contract Dates			
Delivery Dates	Aug 2020	Nov 2021	Feb 2022

Installation Information

Method of Implementation: Contractor

Installation Cost	Prior Years	FY 2020	FY 2021	FY 2022 Base	FY 2022 OCO	FY 2022 Total
	Qty (Each) / Total Cost (\$ M)	Qty (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 / 842.765	- / -	- / -	- / -	- / -	- / -
FY 2020	- / -	1 / 20.116	- / -	- / -	- / -	- / -
FY 2021	0 / 0.000	- / -	- / -	- / -	- / -	- / -
FY 2022	- / -	- / -	- / -	1 / 20.500	- / -	1 / 20.500
Total	4 / 842.765	1 / 20.116	- / -	1 / 20.500	- / -	1 / 20.500

Installation Schedule

	PYS	FY 2020				FY 2021				FY 2022			
		Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4
In	5	-	-	-	-	-	1	-	-	-	1	-	-
Out	-	-	-	-	1	1	-	1	1	-	1	-	-

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Exhibit P-3a, Individual Modification: PB 2022 Army					Date: May 2021		
Appropriation / Budget Activity / Budget Sub Activity: 2031A / 02 / 10		P-1 Line Item Number / Title: 1036AZ2001 / MULTI SENSOR ABN RECON			Modification Number / Title: AZ2052 / GUARDRAIL PAYLOADS		
ID Code (A=Service Ready, B=Not Service Ready) :				MDAP/MAIS Code:			
Resource Summary		Prior Years	FY 2020	FY 2021	FY 2022 Base	FY 2022 OCO	FY 2022 Total
Procurement Quantity (<i>Units in Each</i>)		-	-	-	-	-	-
Gross/Weapon System Cost (<i>\$ in Millions</i>)		95.572	25.408	25.869	18.554	-	18.554
Less PY Advance Procurement (<i>\$ in Millions</i>)		-	-	-	-	-	-
Net Procurement (P-1) (<i>\$ in Millions</i>)		95.572	25.408	25.869	18.554	-	18.554
Plus CY Advance Procurement (<i>\$ in Millions</i>)		-	-	-	-	-	-
Total Obligation Authority (<i>\$ in Millions</i>)		95.572	25.408	25.869	18.554	-	18.554
<i>(The following Resource Summary rows are for informational purposes only. The corresponding budget requests are documented elsewhere.)</i>							
Initial Spares (<i>\$ in Millions</i>)		-	-	-	-	-	-
Gross/Weapon System Unit Cost (<i>\$ in Thousands</i>)		-	-	8,623.000	6,184.667	-	6,184.667

Description:

The Guardrail Common Sensor (GRCS) is an airborne Signals Intelligence (SIGINT) Collection and Location System capable of providing Tactical Commanders Near-Real Time intelligence. It provides a persistent capability to detect, locate and classify/identify critical targets with a relevant degree of timeliness and accuracy. GRCS is assigned to two (2) U.S. Army Intelligence and Security Command's Aerial Exploitation Battalions, providing Aerial Intelligence, Surveillance and Reconnaissance (AISR) support to combatant commanders. The Army's Acquisition Objective/Army's Procurement Objective (AAO/APO) is 19 RC-12X; seven (7) fielded to 3rd MI BN; seven (7) fielded to the 204th MI BN, and five (5) pilot trainers to support Force Generation. The five (5) trainers are not equipped with Primary Mission Equipment (PME).

The overall GRCS procurement/modernization efforts are found in the following two lines: AZ2052 Guardrail Payloads (MIP) and A02111 GRCS SEMA MODS (MIP). Separate funding lines support the Army Acquisition Executive's directive, codified in the October 28, 2011 memorandum, to assign overall acquisition lead for manned airborne Intelligence systems to Program Executive Office for Aviation; and overall sensor, processing, exploitation, and dissemination responsibilities to Program Executive Officer for Intelligence, Electronic Warfare, and Sensors.

GRCS FY 2022 Base procurement dollars in the amount of \$18.596 million supports procurement for GRCS advanced signal enhancement efforts and integration & testing of the signal enhancement infrastructure for GRCS updated SIGINT sensor capabilities including multiple COMINT and ELINT sensors. Funding also supports required program management.

GRCS is currently the most capable Army AISR system that provides SIGINT capabilities to support long range targeting of near-peer threats in an A2AD environment. RDT&E and procurement funding currently planned will address obsolescence issues for critical SIGINT capabilities on the GRCS platform. These investments ensure GRCS AISR support in the A2AD environment is not impacted, which would prevent critical intelligence collection at large standoff which is needed to address long range targeting of near-peer threats and maintain system relevancy.

Note #1: ELINT Sensor Upgrades work and installation costs FY 2020 and beyond are consolidated into GRCS SIGINT Suite Modification [GSSM].

Note #2: Modification schedule subject to change based on operational mission requirements.

Note #3: Guardrail program funding results in GSSM modifications to 4 fully upgraded aircraft and 2 partially upgraded aircraft.

Note #4: All materials purchased FY18-20 were for GSSM upgrades to 6 aircraft.

Note #5: GSSM consists of 6 payloads where sparing is a variety of sub-components therefore no quantities are listed.

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Exhibit P-3a, Individual Modification: PB 2022 Army **Date:** May 2021

Appropriation / Budget Activity / Budget Sub Activity: 2031A / 02 / 10	P-1 Line Item Number / Title: 1036AZ2001 / MULTI SENSOR ABN RECON	Modification Number / Title: AZ2052 / GUARDRAIL PAYLOADS
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ID Code (A=Service Ready, B=Not Service Ready) : **MDAP/MAIS Code:**

Secondary Distribution		FY 2020	FY 2021	FY 2022 Base	FY 2022 OCO	FY 2022 Total
Army	Quantity	-	-	-	-	-
	Total Obligation Authority	25.408	25.869	18.554	-	18.554
Total: Secondary Distribution	Quantity	-	-	-	-	-
	Total Obligation Authority	25.408	25.869	18.554	-	18.554

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Exhibit P-3a, Individual Modification: PB 2022 Army					Date: May 2021	
Appropriation / Budget Activity / Budget Sub Activity: 2031A / 02 / 10			P-1 Line Item Number / Title: 1036AZ2001 / MULTI SENSOR ABN RECON		Modification Number / Title: AZ2052 / GUARDRAIL PAYLOADS	
ID Code (A=Service Ready, B=Not Service Ready) :				MDAP/MAIS Code:		
Models of Systems Affected: See individual Mods		Modification Type: U		Related RDT&E PEs:		
Financial Plan	Prior Years	FY 2020	FY 2021	FY 2022 Base	FY 2022 OCO	FY 2022 Total
	Qty (Each) / Total Cost (\$ M)	Qty (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: CHALS-SD Sensor Upgrades						
B Kits						
Recurring						
Pilots	- / 0.500	- / -	- / -	- / -	- / -	- / -
PMO/MWO	- / 1.963	- / -	- / -	- / -	- / -	- / -
Sensor Hardware & Materials	7 / 11.104	- / -	- / -	- / -	- / -	- / -
Spares	3 / 3.005	- / -	- / -	- / -	- / -	- / -
Subtotal: Recurring	10 / 16.572	- / -	- / -	- / -	- / -	- / -
Non-Recurring						
Non-Recurring Engineering	- / 6.405	- / -	- / -	- / -	- / -	- / -
Subtotal: Non-Recurring	- / 6.405	- / -	- / -	- / -	- / -	- / -
Subtotal: CHALS-SD Sensor Upgrades	10 / 22.977	- / -	- / -	- / -	- / -	- / -
Modification Item 2 of 6: ELINT Sensor Upgrades						
B Kits						
Recurring						
Pilots	- / 0.100	- / -	- / -	- / -	- / -	- / -
Program Mgt	- / 1.921	- / -	- / -	- / -	- / -	- / -
Sensors - Material & Hardware	7 / 14.750	- / -	- / -	- / -	- / -	- / -
Spares	2 / 3.910	- / -	- / -	- / -	- / -	- / -
Subtotal: Recurring	9 / 20.681	- / -	- / -	- / -	- / -	- / -
Non-Recurring						
Non-Recurring Engineering	- / 8.579	- / -	- / -	- / -	- / -	- / -
Subtotal: Non-Recurring	- / 8.579	- / -	- / -	- / -	- / -	- / -
Subtotal: ELINT Sensor Upgrades	9 / 29.260	- / -	- / -	- / -	- / -	- / -
Modification Item 3 of 6: GRCS SIGINT Suite Modification						
B Kits						
Recurring						
Pilots	- / -	- / 0.194	- / 0.326	- / 0.400	- / -	- / 0.400
Program Management	- / -	- / 0.278	- / 0.216	- / 0.331	- / -	- / 0.331
Sensors: Material & Hardware	- / -	6 / 10.360	- / -	- / -	- / -	- / -
Spares Procurement	- / -	- / 1.900	- / 2.800	- / 3.550	- / -	- / 3.550

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Exhibit P-3a, Individual Modification: PB 2022 Army					Date: May 2021	
Appropriation / Budget Activity / Budget Sub Activity: 2031A / 02 / 10			P-1 Line Item Number / Title: 1036AZ2001 / MULTI SENSOR ABN RECON		Modification Number / Title: AZ2052 / GUARDRAIL PAYLOADS	
ID Code (A=Service Ready, B=Not Service Ready) :				MDAP/MAIS Code:		
Models of Systems Affected: See individual Mods		Modification Type: U		Related RDT&E PEs:		
Financial Plan	Prior Years	FY 2020	FY 2021	FY 2022 Base	FY 2022 OCO	FY 2022 Total
	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)
Interim Contractor Support	- / -	- / 11.156	- / 12.021	- / 14.457	- / -	- / 14.457
Other Government Agency Support	- / -	- / 0.344	- / 0.200	- / 0.200	- / -	- / 0.200
Subtotal: Recurring	- / -	6 / 14.232	- / 5.563	- / 8.938	- / -	- / 8.938
Non-Recurring						
Non-Recurring Engineering	- / -	- / 11.176	- / -	- / 0.400	- / -	- / 0.400
Subtotal: Non-Recurring	- / -	- / 11.176	- / -	- / 0.400	- / -	- / 0.400
Subtotal: GRCS SIGINT Suite Modification	- / -	6 / 25.408	- / 5.563	- / 9.338	- / -	- / 9.338
Modification Item 4 of 6: USFK ONS						
Subtotal: USFK ONS	- / 0.000	- / -	- / -	- / -	- / -	- / -
Modification Item 5 of 6: LS						
A Kits						
Recurring						
PMO, I&T, Spares	- / 5.825	- / -	- / -	- / -	- / -	- / -
Subtotal: Recurring	- / 5.825	- / -	- / -	- / -	- / -	- / -
Non-Recurring						
Software, Accreditation, OGS	- / 6.300	- / -	- / -	- / -	- / -	- / -
Subtotal: Non-Recurring	- / 6.300	- / -	- / -	- / -	- / -	- / -
Subtotal: LS	- / 12.125	- / -	- / -	- / -	- / -	- / -
Modification Item 6 of 6: Full Motion Video (FMV)						
A Kits						
Recurring						
Fielding/Training	- / 0.400	- / -	- / -	- / -	- / -	- / -
PM Costs	- / 1.988	- / -	- / -	- / -	- / -	- / -
Spares	- / 1.893	- / -	- / -	- / -	- / -	- / -
FSR Support	- / 2.028	- / -	- / -	- / -	- / -	- / -
Pilot Support	- / 0.300	- / -	- / -	- / -	- / -	- / -
Subtotal: Recurring	- / 6.609	- / -	- / -	- / -	- / -	- / -
B Kits						
Recurring						
Kit Quantity (Camera Reset)	1 / 3.073	- / -	- / -	- / -	- / -	- / -
Subtotal: Recurring	1 / 3.073	- / -	- / -	- / -	- / -	- / -
Subtotal: Full Motion Video (FMV)	1 / 9.682	- / -	- / -	- / -	- / -	- / -
Subtotal: Procurement, All Modification Items	20 / 74.044	6 / 25.408	- / 5.563	- / 9.338	- / -	- / 9.338

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Exhibit P-3a, Individual Modification: PB 2022 Army					Date: May 2021	
Appropriation / Budget Activity / Budget Sub Activity: 2031A / 02 / 10			P-1 Line Item Number / Title: 1036AZ2001 / MULTI SENSOR ABN RECON		Modification Number / Title: AZ2052 / GUARDRAIL PAYLOADS	
ID Code (A=Service Ready, B=Not Service Ready) :				MDAP/MAIS Code:		
Models of Systems Affected: See individual Mods		Modification Type: U		Related RDT&E PEs:		
Financial Plan	Prior Years	FY 2020	FY 2021	FY 2022 Base	FY 2022 OCO	FY 2022 Total
	Qty (Each) / Total Cost (\$ M)	Qty (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						
<i>Modification Item 1 of 6:</i> CHALS-SD Sensor Upgrades	- / 0.100	- / -	- / -	- / -	- / -	- / -
<i>Modification Item 2 of 6:</i> ELINT Sensor Upgrades	2 / 3.867	- / -	- / -	- / -	- / -	- / -
<i>Modification Item 3 of 6:</i> GRCS SIGINT Suite Modification	- / -	- / -	3 / 20.306	2 / 9.216	- / -	2 / 9.216
<i>Modification Item 4 of 6:</i> USFK ONS	- / 1.402	- / -	- / -	- / -	- / -	- / -
<i>Modification Item 5 of 6:</i> LS	- / 5.375	- / -	- / -	- / -	- / -	- / -
<i>Modification Item 6 of 6:</i> Full Motion Video (FMV)	5 / 10.784	- / -	- / -	- / -	- / -	- / -
<i>Subtotal: Installation</i>	7 / 21.528	- / -	3 / 20.306	2 / 9.216	- / -	2 / 9.216
Total						
Total Cost (Procurement + Support + Installation)	95.572	25.408	25.869	18.554	-	18.554

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Exhibit P-3a, Individual Modification: PB 2022 Army **Date:** May 2021

Appropriation / Budget Activity / Budget Sub Activity: 2031A / 02 / 10	P-1 Line Item Number / Title: 1036AZ2001 / MULTI SENSOR ABN RECON	Modification Number / Title: AZ2052 / GUARDRAIL PAYLOADS
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ID Code (A=Service Ready, B=Not Service Ready) : **MDAP/MAIS Code:**

Modification Item 1 of 6: CHALS-SD Sensor Upgrades

Manufacturer Information

Manufacturer Name: ACET	Manufacturer Location: APG, MD
Administrative Leadtime (in Months): 4	Production Leadtime (in Months): 18

Dates	FY 2020	FY 2021	FY 2022
Contract Dates			
Delivery Dates			

Installation Information

Method of Implementation: Contractor

Installation Cost	Prior Years	FY 2020	FY 2021	FY 2022 Base	FY 2022 OCO	FY 2022 Total
	Qty (Each) / Total Cost (\$ M)	Qty (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 / 0.100	- / -	- / -	- / -	- / -	- / -
FY 2020	0 / 0.000	- / -	- / -	- / -	- / -	- / -
FY 2021	0 / 0.000	- / -	- / -	- / -	- / -	- / -
FY 2022	0 / 0.000	- / -	- / -	- / -	- / -	- / -
Total	0 / 0.100	- / -	- / -	- / -	- / -	- / -

Installation Schedule

PYS	FY 2020				FY 2021				FY 2022				
	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	
In	-	-	-	-	-	-	2	-	-	-	2	-	-
Out	-	-	-	-	-	-	-	-	-	-	-	2	-

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Exhibit P-3a, Individual Modification: PB 2022 Army	Date: May 2021
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Appropriation / Budget Activity / Budget Sub Activity: 2031A / 02 / 10	P-1 Line Item Number / Title: 1036AZ2001 / MULTI SENSOR ABN RECON	Modification Number / Title: AZ2052 / GUARDRAIL PAYLOADS
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ID Code (A=Service Ready, B=Not Service Ready) :	MDAP/MAIS Code:
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Modification Item 2 of 6: ELINT Sensor Upgrades

Manufacturer Information

Manufacturer Name: SNC EIS	Manufacturer Location: Los Gatos, CA		
Administrative Leadtime (in Months): 3	Production Leadtime (in Months): 12		
Dates	FY 2020	FY 2021	FY 2022
Contract Dates			
Delivery Dates	Aug 2020		

Installation Information

Method of Implementation: Contractor

Installation Cost	Prior Years	FY 2020	FY 2021	FY 2022 Base	FY 2022 OCO	FY 2022 Total
	Qty (Each) / Total Cost (\$ M)	Qty (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 / 3.867	- / -	- / -	- / -	- / -	- / -
FY 2020	0 / 0.000	- / -	- / -	- / -	- / -	- / -
FY 2021	0 / 0.000	- / -	- / -	- / -	- / -	- / -
FY 2022	0 / 0.000	- / -	- / -	- / -	- / -	- / -
Total	2 / 3.867	- / -	- / -	- / -	- / -	- / -

Installation Schedule

PYS	FY 2020				FY 2021				FY 2022			
	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4
In	2	-	-	-	-	-	-	-	-	-	-	-
Out	-	-	-	-	2	-	-	-	-	-	-	-

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Exhibit P-3a, Individual Modification: PB 2022 Army **Date:** May 2021

Appropriation / Budget Activity / Budget Sub Activity: 2031A / 02 / 10	P-1 Line Item Number / Title: 1036AZ2001 / MULTI SENSOR ABN RECON	Modification Number / Title: AZ2052 / GUARDRAIL PAYLOADS
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ID Code (A=Service Ready, B=Not Service Ready) :	MDAP/MAIS Code:
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Modification Item 3 of 6: GRCS SIGINT Suite Modification

Manufacturer Information

Manufacturer Name: AASKI	Manufacturer Location: Tinton Falls, NJ
Administrative Leadtime (in Months): 6	Production Leadtime (in Months): 12

Dates	FY 2020	FY 2021	FY 2022
Contract Dates		Aug 2020	Jun 2020
Delivery Dates			

Installation Information

Method of Implementation: TBD

Installation Cost	Prior Years	FY 2020	FY 2021	FY 2022 Base	FY 2022 OCO	FY 2022 Total
	Qty (Each) / Total Cost (\$ M)	Qty (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	- / -	- / -	- / -	- / -	- / -
FY 2020	0 / 0.000	- / -	- / -	- / -	- / -	- / -
FY 2021	- / -	- / -	3 / 20.306	- / -	- / -	- / -
FY 2022	0 / 0.000	- / -	- / -	- / -	- / -	- / -
Total	- / -	- / -	3 / 20.306	2 / 9.216	- / -	2 / 9.216

Installation Schedule

PYS	Q1	FY 2020				FY 2021				FY 2022			
		Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	
In	-	-	-	-	-	-	-	2	-	-	2	-	-
Out	-	-	-	-	-	-	-	-	-	-	-	2	-

UNCLASSIFIED

Exhibit P-3a, Individual Modification: PB 2022 Army	Date: May 2021
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Appropriation / Budget Activity / Budget Sub Activity: 2031A / 02 / 10	P-1 Line Item Number / Title: 1036AZ2001 / MULTI SENSOR ABN RECON	Modification Number / Title: AZ2052 / GUARDRAIL PAYLOADS
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ID Code (A=Service Ready, B=Not Service Ready) :	MDAP/MAIS Code:
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Modification Item 4 of 6: USFK ONS

Manufacturer Information

Manufacturer Name: ACET	Manufacturer Location: APG		
Administrative Leadtime (in Months):	Production Leadtime (in Months): 9		
Dates	FY 2020	FY 2021	FY 2022
Contract Dates			
Delivery Dates			

Installation Information

Method of Implementation: PASS Contract W175PT-10-D-D420 KZ01

Installation Cost	Prior Years	FY 2020	FY 2021	FY 2022 Base	FY 2022 OCO	FY 2022 Total
	Qty (Each) / Total Cost (\$ M)	Qty (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	- / -	- / -	- / -	- / -	- / -
FY 2020	0 / 0.000	- / -	- / -	- / -	- / -	- / -
FY 2021	0 / 1.402	- / -	- / -	- / -	- / -	- / -
FY 2022	0 / 0.000	- / -	- / -	- / -	- / -	- / -
Total	0 / 1.402	- / -	- / -	- / -	- / -	- / -

Installation Schedule

PYS	In	Out	FY 2020				FY 2021				FY 2022			
			Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4
	14		-	-	-	-	-	-	-	-	-	-	-	-
		-	-	14	-	-	-	-	-	-	-	-	-	-

UNCLASSIFIED

Exhibit P-3a, Individual Modification: PB 2022 Army **Date:** May 2021

Appropriation / Budget Activity / Budget Sub Activity: 2031A / 02 / 10	P-1 Line Item Number / Title: 1036AZ2001 / MULTI SENSOR ABN RECON	Modification Number / Title: AZ2052 / GUARDRAIL PAYLOADS
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ID Code (A=Service Ready, B=Not Service Ready) :	MDAP/MAIS Code:
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Modification Item 5 of 6: LS

Manufacturer Information

Manufacturer Name: ACET	Manufacturer Location: APG, MD
Administrative Leadtime (in Months):	Production Leadtime (in Months): 18

Dates	FY 2020	FY 2021	FY 2022
Contract Dates			
Delivery Dates			

Installation Information

Method of Implementation: TBD

Installation Cost	Prior Years	FY 2020	FY 2021	FY 2022 Base	FY 2022 OCO	FY 2022 Total
	Qty (Each) / Total Cost (\$ M)	Qty (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 / 5.375	- / -	- / -	- / -	- / -	- / -
FY 2020	0 / 0.000	- / -	- / -	- / -	- / -	- / -
FY 2021	0 / 0.000	- / -	- / -	- / -	- / -	- / -
FY 2022	0 / 0.000	- / -	- / -	- / -	- / -	- / -
Total	0 / 5.375	- / -	- / -	- / -	- / -	- / -

Installation Schedule

PYS	In	Out	FY 2020				FY 2021				FY 2022					
			Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4		
	2		-	-	-	-	-	-	-	-	-	-	-	-	-	-
	2		-	-	-	-	-	-	-	-	-	-	-	-	-	-

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Exhibit P-3a, Individual Modification: PB 2022 Army	Date: May 2021
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Appropriation / Budget Activity / Budget Sub Activity: 2031A / 02 / 10	P-1 Line Item Number / Title: 1036AZ2001 / MULTI SENSOR ABN RECON	Modification Number / Title: AZ2052 / GUARDRAIL PAYLOADS
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ID Code (A=Service Ready, B=Not Service Ready) :	MDAP/MAIS Code:
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Modification Item 6 of 6: Full Motion Video (FMV)

Manufacturer Information

Manufacturer Name: Northrup Grumman	Manufacturer Location: Sacramento, CA		
Administrative Leadtime (in Months): 1	Production Leadtime (in Months): 12		
Dates	FY 2020	FY 2021	FY 2022
Contract Dates			
Delivery Dates			

Installation Information

Method of Implementation: TBD

Installation Cost	Prior Years	FY 2020	FY 2021	FY 2022 Base	FY 2022 OCO	FY 2022 Total
	Qty (Each) / Total Cost (\$ M)	Qty (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 / 5.457	- / -	- / -	- / -	- / -	- / -
FY 2020	0 / 0.000	- / -	- / -	- / -	- / -	- / -
FY 2021	2 / 5.327	- / -	- / -	- / -	- / -	- / -
FY 2022	0 / 0.000	- / -	- / -	- / -	- / -	- / -
Total	5 / 10.784	- / -	- / -	- / -	- / -	- / -

Installation Schedule

	PYS	FY 2020				FY 2021				FY 2022			
		Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4
In	5	-	-	-	-	-	-	-	-	-	-	-	-
Out	5	-	-	-	-	-	-	-	-	-	-	-	-

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Exhibit P-3a, Individual Modification: PB 2022 Army		Date: May 2021
Appropriation / Budget Activity / Budget Sub Activity: 2031A / 02 / 10	P-1 Line Item Number / Title: 1036AZ2001 / MULTI SENSOR ABN RECON	Modification Number / Title: AZ2054 / EMARSS PAYLOADS

ID Code (A=Service Ready, B=Not Service Ready) :			MDAP/MAIS Code:			
Resource Summary	Prior Years	FY 2020	FY 2021	FY 2022 Base	FY 2022 OCO	FY 2022 Total
Procurement Quantity (<i>Units in Each</i>)	-	-	-	-	-	-
Gross/Weapon System Cost (<i>\$ in Millions</i>)	79.257	12.146	12.174	9.912	-	9.912
Less PY Advance Procurement (<i>\$ in Millions</i>)	-	-	-	-	-	-
Net Procurement (P-1) (<i>\$ in Millions</i>)	79.257	12.146	12.174	9.912	-	9.912
Plus CY Advance Procurement (<i>\$ in Millions</i>)	-	-	-	-	-	-
Total Obligation Authority (<i>\$ in Millions</i>)	79.257	12.146	12.174	9.912	-	9.912
<i>(The following Resource Summary rows are for informational purposes only. The corresponding budget requests are documented elsewhere.)</i>						
Initial Spares (<i>\$ in Millions</i>)	-	-	-	-	-	-
Gross/Weapon System Unit Cost (<i>\$ in Thousands</i>)	-	-	2,434.800	-	-	-

Description:

The Enhanced Medium Altitude Reconnaissance and Surveillance System (EMARSS) is the Army's newest generation C-12 based, direct support, manned airborne intelligence collection, processing, and targeting support system. It provides a persistent capability to detect, locate, classify/identify, and track surface targets with a high degree of timeliness and accuracy. EMARSS is assigned to the U.S. Army Intelligence and Security Command's Aerial Exploitation Battalions, providing Aerial Intelligence, Surveillance and Reconnaissance support to combatant commanders. EMARSS is also assigned to the United States Army Training and Doctrine Command (TRADOC) in support of training at the US Army Intelligence Center of Excellence (USAICoE). The Army Acquisition Objective for EMARSS is 36 systems, with an Army Procurement Objective of 24, to include the following variants: eight (8) EMARSS-G (Geo-INT); four (4) EMARSS-V (Vehicle and Dismount Exploitation Radar, VaDER); eight (8) EMARSS-M (Multi-INT); and four (4) EMARSS-S (SIGINT).

This funding line supports the procurement and upgrade of the following sensor payload capabilities: Signals Intelligence (SIGINT); Electro-optical/Infrared (EO/IR)/Full Motion Video (FMV); a Communications Intelligence (COMINT) to include Big Iron; Wide Area Aerial Surveillance (WAAS); Light Imaging Detection and Ranging (LiDAR) and improved Synthetic Aperture Radar / Moving Target Indicator (SAR/MTI) radar; line-of-site (LOS) and beyond line-of-site (BLOS) communications; Processing Exploitation and Dissemination (PED) supporting two Distributed Common Ground System - Army (DCGS-A) enabled operator workstations; and pre-planned product improvements.

FY 2022 Direct War/Enduring Operations procurement funds in the amount of \$9.870 million supports sensor procurement, integration, installation, and testing that enable SIGINT modernization and obsolescence mitigation on EMARSS.

Note #1: Sensor procurements (A-Kits/B-Kits) included under ?Mods in Service: SIGINT Upgrades? in prior years. Sensor procurement (quantities/cost) have been segregated into lines under A-Kits and B-Kits Recurring Costs in FY 2020 and 2021.

Note #2: Due to the variation of sensors and capabilities per variant, unit cost and sensor quantities per SIGINT system upgrade and installation differs significantly between EMARSS-V, M and S.

Note #3: Installation Quantities through FY 2021 calculated per procured sensor. Installation quantities FY 2022 and beyond calculated per aircraft.

Note #4: Modification schedule subject to change based on operational mission requirements.

Secondary Distribution		FY 2020	FY 2021	FY 2022 Base	FY 2022 OCO	FY 2022 Total
Army	Quantity	-	-	-	-	-
	Total Obligation Authority	12.146	12.174	9.912	-	9.912

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Exhibit P-3a, Individual Modification: PB 2022 Army				Date: May 2021		
Appropriation / Budget Activity / Budget Sub Activity: 2031A / 02 / 10		P-1 Line Item Number / Title: 1036AZ2001 / MULTI SENSOR ABN RECON		Modification Number / Title: AZ2054 / EMARSS PAYLOADS		
ID Code (A=Service Ready, B=Not Service Ready) :			MDAP/MAIS Code:			
Secondary Distribution		FY 2020	FY 2021	FY 2022 Base	FY 2022 OCO	FY 2022 Total
Total:	Quantity	-	-	-	-	-
Secondary Distribution	Total Obligation Authority	12.146	12.174	9.912	-	9.912

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Exhibit P-3a, Individual Modification: PB 2022 Army					Date: May 2021		
Appropriation / Budget Activity / Budget Sub Activity: 2031A / 02 / 10			P-1 Line Item Number / Title: 1036AZ2001 / MULTI SENSOR ABN RECON			Modification Number / Title: AZ2054 / EMARSS PAYLOADS	
ID Code (A=Service Ready, B=Not Service Ready) :				MDAP/MAIS Code:			
Models of Systems Affected: EMARSS		Modification Type: x			Related RDT&E PEs:		
Financial Plan	Prior Years	FY 2020	FY 2021	FY 2022 Base	FY 2022 OCO	FY 2022 Total	
	Qty (Each) / Total Cost (\$ M)	Qty (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: EMARSS Payloads							
A Kits							
Recurring							
MEP Contractor Testing	- / 3.800	- / 0.789	- / 0.772	- / 0.636	- / -	- / 0.636	
GFE / Initial Spares	4 / 10.216	- / -	- / -	- / -	- / -	- / -	
PMO and SETA Support	- / 3.561	- / 0.275	- / 0.225	- / 0.224	- / -	- / 0.224	
Engineering Support	- / 5.923	- / 0.927	- / 0.950	- / 0.920	- / -	- / 0.920	
Mods in Service: SIGINT Upgrades	- / 9.344	- / -	- / -	- / -	- / -	- / -	
TSA OPT Integration	- / 6.000	- / -	- / -	- / -	- / -	- / -	
Simulated Training Interface	- / -	- / 0.260	- / 1.556	- / -	- / -	- / -	
A-Kit Procurements: SIGINT Sensors	- / -	- / 1.000	1 / 2.140	- / -	- / -	- / -	
Subtotal: Recurring	4 / 38.844	- / 3.251	1 / 5.643	- / 1.780	- / -	- / 1.780	
Non-Recurring							
Non-Recurring Engineering	- / -	- / 2.180	- / -	- / -	- / -	- / -	
Subtotal: Non-Recurring	- / -	- / 2.180	- / -	- / -	- / -	- / -	
B Kits							
Recurring							
SIGINT Sensors	- / -	5 / 4.712	4 / 3.137	- / -	- / -	- / -	
Subtotal: Recurring	- / -	5 / 4.712	4 / 3.137	- / -	- / -	- / -	
Non-Recurring							
MARSS 13 Upgrade	1 / 8.600	- / -	- / -	- / -	- / -	- / -	
RESET WAAS for EMARSS-G	- / 8.625	- / -	- / -	- / -	- / -	- / -	
Subtotal: Non-Recurring	1 / 17.225	- / -	- / -	- / -	- / -	- / -	
Subtotal: EMARSS Payloads	5 / 56.069	5 / 10.143	5 / 8.780	- / 1.780	- / -	- / 1.780	
Subtotal: Procurement, All Modification Items	5 / 56.069	5 / 10.143	5 / 8.780	- / 1.780	- / -	- / 1.780	
Installation							
Modification Item 1 of 1: EMARSS Payloads							
	6 / 23.188	5 / 2.003	4 / 3.394	4 / 8.132	- / -	4 / 8.132	
Subtotal: Installation	6 / 23.188	5 / 2.003	4 / 3.394	4 / 8.132	- / -	4 / 8.132	
Total							
Total Cost (Procurement + Support + Installation)	79.257	12.146	12.174	9.912	-	9.912	

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Exhibit P-3a, Individual Modification: PB 2022 Army **Date:** May 2021

Appropriation / Budget Activity / Budget Sub Activity: 2031A / 02 / 10	P-1 Line Item Number / Title: 1036AZ2001 / MULTI SENSOR ABN RECON	Modification Number / Title: AZ2054 / EMARSS PAYLOADS
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ID Code (A=Service Ready, B=Not Service Ready) :	MDAP/MAIS Code:
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Modification Item 1 of 1: EMARSS Payloads

Manufacturer Information

Manufacturer Name: Various		Manufacturer Location: Various	
Administrative Leadtime (in Months): 8		Production Leadtime (in Months): 12	
Dates	FY 2020	FY 2021	FY 2022
Contract Dates		Jan 2021	Apr 2022
Delivery Dates		Mar 2021	Jul 2023

Installation Information

Method of Implementation: EMARSS Modifications

Installation Cost	Prior Years	FY 2020	FY 2021	FY 2022 Base	FY 2022 OCO	FY 2022 Total
	Qty (Each) / Total Cost (\$ M)	Qty (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 / 5.188	- / -	- / -	- / -	- / -	- / -
FY 2020	3 / 11.200	5 / 2.003	- / -	- / -	- / -	- / -
FY 2021	2 / 6.800	- / -	4 / 3.394	- / -	- / -	- / -
FY 2022	- / -	- / -	- / -	4 / 8.132	- / -	4 / 8.132
Total	6 / 23.188	5 / 2.003	4 / 3.394	4 / 8.132	- / -	4 / 8.132

Installation Schedule

	PYS	FY 2020				FY 2021				FY 2022			
		Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4
In	1	-	-	-	1	-	3	1	1	1	1	1	2
Out	1	-	-	-	1	-	3	1	-	-	1	1	2

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Exhibit P-3a, Individual Modification: PB 2022 Army		Date: May 2021
Appropriation / Budget Activity / Budget Sub Activity: 2031A / 02 / 10	P-1 Line Item Number / Title: 1036AZ2001 / MULTI SENSOR ABN RECON	Modification Number / Title: AZ2056 / ABN ISR MODS (MIP)

ID Code (A=Service Ready, B=Not Service Ready) :			MDAP/MAIS Code:				
Resource Summary	Prior Years	FY 2020	FY 2021	FY 2022 Base	FY 2022 OCO	FY 2022 Total	
Procurement Quantity (<i>Units in Each</i>)	-	-	-	-	-	-	
Gross/Weapon System Cost (<i>\$ in Millions</i>)	-	-	41.780	17.210	-	17.210	
Less PY Advance Procurement (<i>\$ in Millions</i>)	-	-	-	-	-	-	
Net Procurement (P-1) (<i>\$ in Millions</i>)	-	-	41.780	17.210	-	17.210	
Plus CY Advance Procurement (<i>\$ in Millions</i>)	-	-	-	-	-	-	
Total Obligation Authority (<i>\$ in Millions</i>)	-	-	41.780	17.210	-	17.210	
<i>(The following Resource Summary rows are for informational purposes only. The corresponding budget requests are documented elsewhere.)</i>							
Initial Spares (<i>\$ in Millions</i>)	-	-	-	-	-	-	
Gross/Weapon System Unit Cost (<i>\$ in Thousands</i>)	-	-	-	-	-	-	

Description:

This funding supports manned airborne Intelligence, Surveillance and Reconnaissance (ISR) system providing a capability to detect, locate, classify/identify, and track surface targets in day/night, near-all-weather conditions with a high degree of timeliness and accuracy. Efforts can support Medium Altitude Reconnaissance and Surveillance System (MARSS), Saturn Arch, Enhanced Medium Reconnaissance and Surveillance System (EMARSS), and the High Attitude Detection and Exploitation System (HADES).

ABN ISR Mods (MIP) FY22 procurement dollars in the amount of \$17.210 million supports aircraft which require military and civilian avionics upgrades to support compliance with current and future requirements, to ensure the aircraft avionics avoid obsolescence, and to enable the aircraft to remain capable and sustainable in the future for deployed aircraft and future integration efforts supporting A-ISR modernization in the Multi-Domain Operations (MDO) environment. Funding also provides for communications, navigations, and surveillance (CNS); aircraft survivability equipment (ASE) performance and the integration of the AISR MEP, as well as obsolescence issues involved with the transition from QRC to POR in regards to platform survivability equipment such as the Navy AAR-47 changing to Army AAR-57, BFT to BFT-2, and the APX-119 Transponder and Air Launch Effects (ALE).

Secondary Distribution		FY 2020	FY 2021	FY 2022 Base	FY 2022 OCO	FY 2022 Total
Army	Quantity	-	-	-	-	-
	Total Obligation Authority	-	41.780	17.210	-	17.210
Total: Secondary Distribution	Quantity	-	-	-	-	-
	Total Obligation Authority	-	41.780	17.210	-	17.210

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Exhibit P-3a, Individual Modification: PB 2022 Army					Date: May 2021	
Appropriation / Budget Activity / Budget Sub Activity: 2031A / 02 / 10			P-1 Line Item Number / Title: 1036AZ2001 / MULTI SENSOR ABN RECON		Modification Number / Title: AZ2056 / ABN ISR MODS (MIP)	
ID Code (A=Service Ready, B=Not Service Ready) :				MDAP/MAIS Code:		
Models of Systems Affected: Saturn Arch		Modification Type: Operational			Related RDT&E PEs:	
Financial Plan	Prior Years	FY 2020	FY 2021	FY 2022 Base	FY 2022 OCO	FY 2022 Total
	Qty (Each) / Total Cost (\$ M)	Qty (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						
<i>Modification Item 1 of 1: ABN ISR Mods</i>						
A Kits						
Recurring						
Aircraft Survivability Equipment	- / -	- / -	- / 13.418	- / -	- / -	- / -
Communications Navigation Surveillance	- / -	- / -	- / 18.362	- / -	- / -	- / -
Modifications in Service	- / -	- / -	- / -	- / 17.210	- / -	- / 17.210
<i>Subtotal: Recurring</i>	- / -	- / -	- / 11.780	- / 17.210	- / -	- / 17.210
B Kits						
Recurring						
Hyperspectral Imaging Sensor	- / -	- / -	3 / 30.000	- / -	- / -	- / -
<i>Subtotal: Recurring</i>	- / -	- / -	3 / 30.000	- / -	- / -	- / -
<i>Subtotal: ABN ISR Mods</i>	- / -	- / -	3 / 41.780	- / 17.210	- / -	- / 17.210
<i>Subtotal: Procurement, All Modification Items</i>	- / -	- / -	3 / 41.780	- / 17.210	- / -	- / 17.210
Installation						
<i>Subtotal: Installation</i>	- / -	- / -	- / -	- / -	- / -	- / -
Total						
Total Cost (Procurement + Support + Installation)	-	-	41.780	17.210	-	17.210

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Exhibit P-3a, Individual Modification: PB 2022 Army		Date: May 2021	
Appropriation / Budget Activity / Budget Sub Activity: 2031A / 02 / 10		P-1 Line Item Number / Title: 1036AZ2001 / MULTI SENSOR ABN RECON	
ID Code (A=Service Ready, B=Not Service Ready) :		MDAP/MAIS Code:	
Modification Item 1 of 1: ABN ISR Mods			
Manufacturer Information			
Manufacturer Name: TBD		Manufacturer Location: TBD	
Administrative Leadtime (in Months):		Production Leadtime (in Months):	
Dates	FY 2020	FY 2021	FY 2022
Contract Dates		Nov 2020	
Delivery Dates			
Installation Information			
Method of Implementation (Organic): Contractor		Installation Quantity: 0	

UNCLASSIFIED

Exhibit P-40, Budget Line Item Justification: PB 2022 Army **Date:** May 2021

Appropriation / Budget Activity / Budget Sub Activity: 2031A: Aircraft Procurement, Army / BA 02: Modification of Aircraft / BSA 10: Modification of Aircraft	P-1 Line Item Number / Title: 2706AA6605 / AH-64 MODS
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ID Code (A=Service Ready, B=Not Service Ready):	Program Elements for Code B Items: N/A	Other Related Program Elements: N/A
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Line Item MDAP/MAIS Code: N/A

Resource Summary	Prior Years	FY 2020	FY 2021	FY 2022 Base	FY 2022 OCO	FY 2022 Total	FY 2023	FY 2024	FY 2025	FY 2026	To Complete	Total
Procurement Quantity (<i>Units in Each</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost (<i>\$ in Millions</i>)	8,995.516	58.172	99.816	118.560	-	118.560	-	-	-	-	-	-
Less PY Advance Procurement (<i>\$ in Millions</i>)	180.439	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) (<i>\$ in Millions</i>)	8,815.077	58.172	99.816	118.560	-	118.560	-	-	-	-	-	-
Plus CY Advance Procurement (<i>\$ in Millions</i>)	180.439	-	-	-	-	-	-	-	-	-	-	-
Total Obligation Authority (<i>\$ in Millions</i>)	8,995.516	58.172	99.816	118.560	-	118.560	-	-	-	-	-	-

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

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

Description:

The AH-64 Mods program is required to address operational mandates and obsolescence. It is necessary for the continued relevance, resilience, operational performance and readiness of the Army's attack helicopter fleet. The AH-64 Mods Program allows for near-term operationally driven improvements to the Apache fleet, focusing on deployment lessons learned, and reliability improvements. Improvements will occur to the Airframe, Armament, Communications, Manned / Unmanned Teaming, Navigation, Sensors, Survivability, Support Elements, and Training Systems. Examples of modifications include Selected Component Recapitalization, Airframe and Sensor Capability upgrades, procurement of Modernized Day Sensor Assembly (M-DSAs) components, initial procurement of Modernized Radar-Frequency Interferometer (MRFI), Software upgrades, Condition Based Maintenance (CBM), trainer concurrency, Computer/Processing and Data Display and Control upgrades. The AH-64D/AH-64E inventory crossover point (approx.400 AH-64D / 400 AH-64E) will occur in 2021. These modernization efforts are required to ensure the Longbow Apache remains a ready and relevant Warfighter asset. The AH-64 Mods program is critical to ensure the Apache maintains its current level of capability.

Secondary Distribution	FY 2020	FY 2021	FY 2022 Base	FY 2022 OCO	FY 2022 Total	FY 2023	FY 2024	FY 2025	FY 2026
Army	Quantity	-	-	-	-	-	-	-	-
	Total Obligation Authority	58.172	99.816	118.560	-	118.560	-	-	-
Total: Secondary Distribution	Quantity	-	-	-	-	-	-	-	-
	Total Obligation Authority	58.172	99.816	118.560	-	118.560	-	-	-

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Exhibit P-40, Budget Line Item Justification: PB 2022 Army **Date:** May 2021

Appropriation / Budget Activity / Budget Sub Activity: 2031A: Aircraft Procurement, Army / BA 02: Modification of Aircraft / BSA 10: Modification of Aircraft **P-1 Line Item Number / Title:** 2706AA6605 / AH-64 MODS

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

Line Item MDAP/MAIS Code: N/A

Exhibits Schedule					Prior Years	FY 2020	FY 2021	FY 2022 Base	FY 2022 OCO	FY 2022 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	AA6606 / AH-64 APACHE MODS (Operational & Reliability Improvements and Resolve Obsolescence Issues)				- / 8,995.516	- / 58.172	- / 99.816	- / 118.560	- / -	- / 118.560
P-40	Total Gross/Weapon System Cost				- / 8,995.516	- / 58.172	- / 99.816	- / 118.560	- / -	- / 118.560

*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:
 FY2022 Base procurement dollars in the amount of \$118.560 million supports modification and service life extension efforts for the Airframe, Armament, Manned/Unmanned Teaming, Mission Command, Sensors, Survivability, Support Elements, and Training Systems. This also includes procurement of Modernized Day Sensor Assemblies (MDSAs). This also includes funding to Federate the Spike NLOS (Non Line Of Sight) missile system for the directed requirement.

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Exhibit P-3a, Individual Modification: PB 2022 Army		Date: May 2021
Appropriation / Budget Activity / Budget Sub Activity: 2031A / 02 / 10	P-1 Line Item Number / Title: 2706AA6605 / AH-64 MODS	Modification Number / Title: AA6606 / AH-64 APACHE MODS

ID Code (A=Service Ready, B=Not Service Ready) :			MDAP/MAIS Code:			
Resource Summary	Prior Years	FY 2020	FY 2021	FY 2022 Base	FY 2022 OCO	FY 2022 Total
Procurement Quantity (<i>Units in Each</i>)	-	-	-	-	-	-
Gross/Weapon System Cost (<i>\$ in Millions</i>)	8,995.516	58.172	99.816	118.560	-	118.560
Less PY Advance Procurement (<i>\$ in Millions</i>)	180.439	-	-	-	-	-
Net Procurement (P-1) (<i>\$ in Millions</i>)	8,815.077	58.172	99.816	118.560	-	118.560
Plus CY Advance Procurement (<i>\$ in Millions</i>)	180.439	-	-	-	-	-
Total Obligation Authority (<i>\$ in Millions</i>)	8,995.516	58.172	99.816	118.560	-	118.560
<i>(The following Resource Summary rows are for informational purposes only. The corresponding budget requests are documented elsewhere.)</i>						
Initial Spares (<i>\$ in Millions</i>)	-	-	-	-	-	-
Gross/Weapon System Unit Cost (<i>\$ in Thousands</i>)	-	-	-	-	-	-

Description:

Airframe includes modifications to the Structural Subsystems, Propulsion/Drive/Rotor Systems, Health Monitoring System, and Recap Support/Kits. Structural Subsystems modifications include improvements to the assembled structural and aerodynamic components of the air vehicle to include the fuselage and associated manual flight control systems, rotor equipment, landing gear and associated equipment, environmental controls, racks, mounts, intersystem cables and distribution boxes. Propulsion/Drive/Rotor Systems together with Engine Electronic Digital Engine Control Unit (EDECU) and Common Hydro-Mechanical Unit (CHMU) provides the capability to carry a heavier combat payload and allow for enhanced performance in high-altitude, hot climates. Landing Gear improvements (High Performance Shock Struts (HPSS)) will improve the aircraft crash survivability and allows for a heavier aircraft with greater combat loads. Provides sustainment, support and maintenance for the Apache test aircraft.

Mission Command includes modifications and/or upgrades to the various Apache processors and displays. Mission Computer / Processing modifications and/or upgrades include improvements to the master data processing unit(s) responsible for coordinating and directing the major avionics mission systems. System Simulation and Software Integration (S3I) Crew Station Working Group (CSWG) provides support for an AH-64E Engineering Analysis Cockpit as part of the Advance Prototyping and Engineering Experimentation (APBEX2) Lab to support continuous Operational Flight Program (OFP) software sustainment and product improvement. Battlefield Operations and Support System (BOSS) supports developmental / formal test to ensure interoperability and assists in certification testing of the Apache data link implementation. Data Link Test Tools (DLTT) supports developmental / formal test to ensure interoperability and assists in certification testing of the Apache data link implementation.

Sensors includes modifications, operational improvements, and/or mitigation of capability issues to the Apache Sensor suite, which includes the MTADS/PNV/S and the Modernized Day Sensor Assembly (MDSA). MDSA replaces the legacy DSA components, adding a laser pointer, eye safe laser, and high definition color-camera capability. MDSA also includes the Modernized Laser Rangefinder/Designator (M-LFRD) which provides enhanced laser ranging, improved target designation, and target tracking capability by holding a stabilized laser beam on a distant stationary or moving point target for a precise handoff to precision guided weapons. M-LFRD replaces the obsolete Laser Transceiver Unit, which mitigates ongoing risk, improves reliability and maintainability, and reduces operations and support costs. MDSA funding enables system procurement / production, software integration, tooling, and test equipment procurement.

Support Elements include the modification and production of those items, which are not part of the aircraft system but are required to maintain, service, or calibrate the aircraft systems or portions of the aircraft system while not directly engaged in the performance of its mission and will not be in the inventory for support of other weapon systems. Post Production Organic support establishes Depot Pilot Programs at Corpus Christi Army Depot (CCAD) and Tobyhanna Army Depot (TYAD) for selected Depot Level Repairables (DLR) as part of the Original Equipment Manufacturer (OEM) to Depot Transition. Post Production Organic Support (PPOS) provides Depot Maintenance Plant Equipment, Special Tools and Test Equipment, labor training and associated technical data for future repairs once the DLR has transitioned to the depot. PPOS improves Repair Turn Around Time and retain depot maintenance capabilities.

Training Systems include deliverable training services, Operator and Maintainer training devices, accessories, training aids, equipment, and parts used to facilitate instruction through which personnel will learn to operate and maintain the system with maximum efficiency. Examples include Operator / Maintainer Training (aircraft/classroom) devices, Cyber/RMF activities and new systems integration/concurrency to the suite of training devices/systems, and updates to allow individual/team training tasks and collective training. Efforts include the production and upgrade of deliverable and fielded training systems, devices and equipment; updates to associated device/product hardware and software in the form of 3D Virtual Immersive Training, 3D models and desktop crew station emulation capability.

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Exhibit P-3a, Individual Modification: PB 2022 Army	Date: May 2021
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Appropriation / Budget Activity / Budget Sub Activity: 2031A / 02 / 10	P-1 Line Item Number / Title: 2706AA6605 / AH-64 MODS	Modification Number / Title: AA6606 / AH-64 APACHE MODS
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ID Code (A=Service Ready, B=Not Service Ready) :	MDAP/MAIS Code:
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Apache will Federate the Spike NLOS (Non Line Of Sight) missile system by providing Program Management, Systems Engineering, Development Test, Live Fire Test, Life Cycle Management and Integrated Logistics. This effort will support the directed requirement for the AH-64D/E interim Long Range Precision Munition (LRPM) solution. The Army will optimize the Aviation munitions portfolio as part of this strategy creating reinvestment opportunities to close existing lethality gaps by making the portfolio sufficiently lethal for both manned and unmanned platforms against a broad range of increasingly more sophisticated threats. The Spike NLOS Kit consists of a bus controller, video recorder, weapons controller panel, hand control grip, weapons processor, communication pod, power relay box and associated wiring harnesses. Final fielded configuration will include 18 kits and 3 spares.

The Other Support costs that are identified in each Modification Item are proportionately shared between all Apache funding lines. These costs are for personnel that perform duties associated with Safety, Compliance, Training, Product Support, Engineering Services, and Logistics.

		FY 2020	FY 2021	FY 2022 Base	FY 2022 OCO	FY 2022 Total
Secondary Distribution	Quantity	-	-	-	-	-
	Total Obligation Authority	58.172	99.816	118.560	-	118.560
Total: Secondary Distribution	Quantity	-	-	-	-	-
	Total Obligation Authority	58.172	99.816	118.560	-	118.560

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Exhibit P-3a, Individual Modification: PB 2022 Army					Date: May 2021	
Appropriation / Budget Activity / Budget Sub Activity: 2031A / 02 / 10			P-1 Line Item Number / Title: 2706AA6605 / AH-64 MODS		Modification Number / Title: AA6606 / AH-64 APACHE MODS	
ID Code (A=Service Ready, B=Not Service Ready) :				MDAP/MAIS Code:		
Models of Systems Affected: Longbow Apache		Modification Type: Operational & Reliability Improvements and Resolve Obsolescence Issues			Related RDT&E PEs:	
Financial Plan	Prior Years	FY 2020	FY 2021	FY 2022 Base	FY 2022 OCO	FY 2022 Total
	Qty (Each) / Total Cost (\$ M)	Qty (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 7: Airframe						
A Kits						
Recurring						
Structural Subsystems	- / 12.535	- / -	- / -	- / -	- / -	- / -
Health Monitoring System	- / 34.664	- / 18.500	- / 10.036	- / 10.237	- / -	- / 10.237
RESET / MEP Kits	- / 135.147	- / 21.322	- / 20.647	- / 15.658	- / -	- / 15.658
Other Support	- / 6.443	- / 1.909	- / 3.004	- / 3.913	- / -	- / 3.913
Subtotal: Recurring	- / 188.789	- / 31.731	- / 33.687	- / 29.808	- / -	- / 29.808
Subtotal: Airframe	- / 188.789	- / 31.731	- / 33.687	- / 29.808	- / -	- / 29.808
Modification Item 2 of 7: Mission Command						
A Kits						
Recurring						
Processors	- / 54.097	- / 8.499	- / 10.811	- / 27.411	- / -	- / 27.411
Displays	- / 17.186	- / -	- / -	- / -	- / -	- / -
Other Support	- / 4.109	- / 0.699	- / 1.058	- / 4.086	- / -	- / 4.086
Subtotal: Recurring	- / 65.392	- / 9.198	- / 11.869	- / 31.497	- / -	- / 31.497
Subtotal: Mission Command	- / 65.392	- / 9.198	- / 11.869	- / 31.497	- / -	- / 31.497
Modification Item 3 of 7: Sensors						
A Kits						
Recurring						
MTADS/PNVS	- / 37.896	- / -	- / -	- / -	- / -	- / -
M-RFI	27 / 43.338	- / -	- / -	- / -	- / -	- / -
Other Support	- / 123.320	- / -	- / 0.891	- / 1.936	- / -	- / 1.936
Sensor Modernization	- / -	- / -	- / 0.221	- / 0.153	- / -	- / 0.153
Subtotal: Recurring	27 / 104.554	- / -	- / 1.112	- / 2.089	- / -	- / 2.089
B Kits						
Recurring						
M-LRFD	150 / 49.834	- / -	- / -	- / -	- / -	- / -
M-DSA	304 / 362.202	- / -	6 / 8.879	10 / 12.831	- / -	10 / 12.831
Subtotal: Recurring	454 / 412.036	- / -	6 / 8.879	10 / 12.831	- / -	10 / 12.831
Subtotal: Sensors	481 / 516.590	- / -	6 / 9.991	10 / 14.920	- / -	10 / 14.920

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Exhibit P-3a, Individual Modification: PB 2022 Army					Date: May 2021	
Appropriation / Budget Activity / Budget Sub Activity: 2031A / 02 / 10			P-1 Line Item Number / Title: 2706AA6605 / AH-64 MODS		Modification Number / Title: AA6606 / AH-64 APACHE MODS	
ID Code (A=Service Ready, B=Not Service Ready) :				MDAP/MAIS Code:		
Models of Systems Affected: Longbow Apache		Modification Type: Operational & Reliability Improvements and Resolve Obsolescence Issues			Related RDT&E PEs:	
Financial Plan	Prior Years	FY 2020	FY 2021	FY 2022 Base	FY 2022 OCO	FY 2022 Total
	Qty (Each) / Total Cost (\$ M)	Qty (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 7: Training Systems						
A Kits						
Recurring						
Operator Devices	- / 97.426	- / 9.186	- / 0.673	- / 0.686	- / -	- / 0.686
Maintainer Devices	- / 24.371	- / 6.746	- / 3.925	- / 4.003	- / -	- / 4.003
Other Support	- / 10.599	- / 1.311	- / 0.610	- / 0.921	- / -	- / 0.921
Courseware and Devices	- / -	- / -	- / 1.628	- / 1.488	- / -	- / 1.488
Subtotal: Recurring	- / 132.396	- / 17.243	- / 6.836	- / 7.098	- / -	- / 7.098
Subtotal: Training Systems	- / 132.396	- / 17.243	- / 6.836	- / 7.098	- / -	- / 7.098
Modification Item 5 of 7: Hellfire Missile Launchers						
A Kits						
Recurring						
Hellfire Missile Launchers	- / 50.000	- / -	- / -	- / -	- / -	- / -
Subtotal: Recurring	- / 50.000	- / -	- / -	- / -	- / -	- / -
Subtotal: Hellfire Missile Launchers	- / 50.000	- / -	- / -	- / -	- / -	- / -
Modification Item 6 of 7: AH-64 Mods Prior Year Cost						
A Kits						
Recurring						
AH-64 Mods Prior Year Cost	- / 8,042.349	- / -	- / -	- / -	- / -	- / -
Subtotal: Recurring	- / 8,042.349	- / -	- / -	- / -	- / -	- / -
Subtotal: AH-64 Mods Prior Year Cost	- / 8,042.349	- / -	- / -	- / -	- / -	- / -
Modification Item 7 of 7: Spike NLOS Integration						
A Kits						
Recurring						
Spike NLOS Integration	- / -	- / -	15 / 37.433	6 / 35.237	- / -	6 / 35.237
Subtotal: Recurring	- / -	- / -	15 / 37.433	6 / 35.237	- / -	6 / 35.237
Subtotal: Spike NLOS Integration	- / -	- / -	15 / 37.433	6 / 35.237	- / -	6 / 35.237
Subtotal: Procurement, All Modification Items	481 / 8,995.516	- / 58.172	21 / 99.816	16 / 118.560	- / -	16 / 118.560
Installation						
Modification Item 1 of 7: Airframe	1 / -	- / -	- / -	- / -	- / -	- / -
Modification Item 2 of 7: Mission Command	1 / -	- / -	- / -	- / -	- / -	- / -

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Exhibit P-3a, Individual Modification: PB 2022 Army **Date:** May 2021

Appropriation / Budget Activity / Budget Sub Activity: 2031A / 02 / 10	P-1 Line Item Number / Title: 2706AA6605 / AH-64 MODS	Modification Number / Title: AA6606 / AH-64 APACHE MODS
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ID Code (A=Service Ready, B=Not Service Ready) : **MDAP/MAIS Code:**

Models of Systems Affected: Longbow Apache **Modification Type:** Operational & Reliability Improvements and Resolve Obsolescence Issues **Related RDT&E PEs:**

Financial Plan	Prior Years	FY 2020	FY 2021	FY 2022 Base	FY 2022 OCO	FY 2022 Total
	Qty (Each) / Total Cost (\$ M)	Qty (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 3 of 7: Sensors	481 / -	- / -	- / -	10 / -	- / -	10 / -
Modification Item 4 of 7: Training Systems	1 / -	- / -	- / -	- / -	- / -	- / -
Modification Item 5 of 7: Hellfire Missile Launchers	1 / -	- / -	- / -	- / -	- / -	- / -
Modification Item 6 of 7: AH-64 Mods Prior Year Cost	1 / -	- / -	- / -	- / -	- / -	- / -
<i>Subtotal: Installation</i>	<i>486 / -</i>	<i>- / -</i>	<i>- / -</i>	<i>10 / -</i>	<i>- / -</i>	<i>10 / -</i>
Total						
Total Cost (Procurement + Support + Installation)	8,995.516	58.172	99.816	118.560	-	118.560

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Exhibit P-3a, Individual Modification: PB 2022 Army	Date: May 2021
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Appropriation / Budget Activity / Budget Sub Activity: 2031A / 02 / 10	P-1 Line Item Number / Title: 2706AA6605 / AH-64 MODS	Modification Number / Title: AA6606 / AH-64 APACHE MODS
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ID Code (A=Service Ready, B=Not Service Ready) :	MDAP/MAIS Code:
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Modification Item 1 of 7: Airframe

Manufacturer Information

Manufacturer Name: Various	Manufacturer Location: Various		
Administrative Leadtime (in Months):	Production Leadtime (in Months):		
Dates	FY 2020	FY 2021	FY 2022
Contract Dates			
Delivery Dates			

Installation Information

Method of Implementation: Modifications

Installation Cost	Prior Years	FY 2020	FY 2021	FY 2022 Base	FY 2022 OCO	FY 2022 Total
	Qty (Each) / Total Cost (\$ M)	Qty (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	- / -	- / -	- / -	- / -	- / -
FY 2020	0 / 0.000	- / -	- / -	- / -	- / -	- / -
FY 2021	0 / 0.000	- / -	- / -	- / -	- / -	- / -
FY 2022	0 / 0.000	- / -	- / -	- / -	- / -	- / -
Total	1 / 0.000	- / -	- / -	- / -	- / -	- / -

Installation Schedule

PYS	In	Out	FY 2020				FY 2021				FY 2022			
			Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4
	1		-	-	-	-	-	-	-	-	-	-	-	-
		1	-	-	-	-	-	-	-	-	-	-	-	-

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Exhibit P-3a, Individual Modification: PB 2022 Army **Date:** May 2021

Appropriation / Budget Activity / Budget Sub Activity: 2031A / 02 / 10	P-1 Line Item Number / Title: 2706AA6605 / AH-64 MODS	Modification Number / Title: AA6606 / AH-64 APACHE MODS
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ID Code (A=Service Ready, B=Not Service Ready) :	MDAP/MAIS Code:
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Modification Item 2 of 7: Mission Command

Manufacturer Information

Manufacturer Name: Various		Manufacturer Location: Various	
Administrative Leadtime (in Months):		Production Leadtime (in Months):	
Dates	FY 2020	FY 2021	FY 2022
Contract Dates			
Delivery Dates			

Installation Information

Method of Implementation: .

Installation Cost	Prior Years	FY 2020	FY 2021	FY 2022 Base	FY 2022 OCO	FY 2022 Total
	Qty (Each) / Total Cost (\$ M)	Qty (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	- / -	- / -	- / -	- / -	- / -
FY 2020	0 / 0.000	- / -	- / -	- / -	- / -	- / -
FY 2021	0 / 0.000	- / -	- / -	- / -	- / -	- / -
FY 2022	0 / 0.000	- / -	- / -	- / -	- / -	- / -
Total	1 / 0.000	- / -	- / -	- / -	- / -	- / -

Installation Schedule

	PYS	FY 2020				FY 2021				FY 2022			
		Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4
In	1	-	-	-	-	-	-	-	-	-	-	-	-
Out	1	-	-	-	-	-	-	-	-	-	-	-	-

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Exhibit P-3a, Individual Modification: PB 2022 Army		Date: May 2021
Appropriation / Budget Activity / Budget Sub Activity: 2031A / 02 / 10	P-1 Line Item Number / Title: 2706AA6605 / AH-64 MODS	Modification Number / Title: AA6606 / AH-64 APACHE MODS

ID Code (A=Service Ready, B=Not Service Ready) :	MDAP/MAIS Code:
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Modification Item 3 of 7: Sensors

Manufacturer Information

Manufacturer Name: Various		Manufacturer Location: Various	
Administrative Leadtime (in Months): 2		Production Leadtime (in Months): 24	
Dates	FY 2020	FY 2021	FY 2022
Contract Dates	Jun 2020	Jun 2021	Jun 2022
Delivery Dates	Oct 2021	Jul 2021	Jul 2022

Installation Information

Method of Implementation: Modifications

Installation Cost	Prior Years	FY 2020	FY 2021	FY 2022 Base	FY 2022 OCO	FY 2022 Total
	Qty (Each) / Total Cost (\$ M)	Qty (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	303 / 0.000	- / -	- / -	- / -	- / -	- / -
FY 2020	120 / 0.000	- / -	- / -	- / -	- / -	- / -
FY 2021	58 / 0.000	- / -	- / -	- / -	- / -	- / -
FY 2022	0 / 0.000	- / -	- / -	- / -	- / -	- / -
Total	481 / 0.000	- / -	- / -	10 / 0.000	- / -	10 / 0.000

Installation Schedule

	PYS	FY 2020				FY 2021				FY 2022			
		Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4
In	481	7	-	-	-	5	6	4	4	3	3	3	2
Out	303	21	19	41	39	26	-	13	19	3	4	-	-

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Exhibit P-3a, Individual Modification: PB 2022 Army **Date:** May 2021

Appropriation / Budget Activity / Budget Sub Activity: 2031A / 02 / 10	P-1 Line Item Number / Title: 2706AA6605 / AH-64 MODS	Modification Number / Title: AA6606 / AH-64 APACHE MODS
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ID Code (A=Service Ready, B=Not Service Ready) : **MDAP/MAIS Code:**

Modification Item 4 of 7: Training Systems

Manufacturer Information

Manufacturer Name: Boeing / LSI Inc Manufacturer Location: St. Louis, MO / Jacksonville, FL

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

Dates	FY 2020	FY 2021	FY 2022
Contract Dates			
Delivery Dates			

Installation Information

Method of Implementation: Field Retrofits

Installation Cost	Prior Years	FY 2020	FY 2021	FY 2022 Base	FY 2022 OCO	FY 2022 Total
	Qty (Each) / Total Cost (\$ M)	Qty (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	- / -	- / -	- / -	- / -	- / -
FY 2020	0 / 0.000	- / -	- / -	- / -	- / -	- / -
FY 2021	0 / 0.000	- / -	- / -	- / -	- / -	- / -
FY 2022	0 / 0.000	- / -	- / -	- / -	- / -	- / -
Total	1 / 0.000	- / -	- / -	- / -	- / -	- / -

Installation Schedule

	PYS	FY 2020				FY 2021				FY 2022			
		Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4
In	1	-	-	-	-	-	-	-	-	-	-	-	-
Out	1	-	-	-	-	-	-	-	-	-	-	-	-

UNCLASSIFIED

Exhibit P-3a, Individual Modification: PB 2022 Army		Date: May 2021
Appropriation / Budget Activity / Budget Sub Activity: 2031A / 02 / 10	P-1 Line Item Number / Title: 2706AA6605 / AH-64 MODS	Modification Number / Title: AA6606 / AH-64 APACHE MODS

ID Code (A=Service Ready, B=Not Service Ready) :	MDAP/MAIS Code:
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Modification Item 5 of 7: Hellfire Missile Launchers

Manufacturer Information

Manufacturer Name: Lockheed Martin Missiles and Fire Control		Manufacturer Location: Orlando, Florida	
Administrative Leadtime (in Months):		Production Leadtime (in Months):	
Dates	FY 2020	FY 2021	FY 2022
Contract Dates			
Delivery Dates			

Installation Information

Method of Implementation: Arment

Installation Cost	Prior Years	FY 2020	FY 2021	FY 2022 Base	FY 2022 OCO	FY 2022 Total
	Qty (Each) / Total Cost (\$ M)	Qty (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	- / -	- / -	- / -	- / -	- / -
FY 2020	0 / 0.000	- / -	- / -	- / -	- / -	- / -
FY 2021	0 / 0.000	- / -	- / -	- / -	- / -	- / -
FY 2022	0 / 0.000	- / -	- / -	- / -	- / -	- / -
Total	1 / 0.000	- / -	- / -	- / -	- / -	- / -

Installation Schedule

	PYS	FY 2020				FY 2021				FY 2022			
		Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4
In	1	-	-	-	-	-	-	-	-	-	-	-	-
Out	1	-	-	-	-	-	-	-	-	-	-	-	-

UNCLASSIFIED

Exhibit P-3a, Individual Modification: PB 2022 Army	Date: May 2021
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Appropriation / Budget Activity / Budget Sub Activity: 2031A / 02 / 10	P-1 Line Item Number / Title: 2706AA6605 / AH-64 MODS	Modification Number / Title: AA6606 / AH-64 APACHE MODS
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ID Code (A=Service Ready, B=Not Service Ready) :	MDAP/MAIS Code:
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Modification Item 6 of 7: AH-64 Mods Prior Year Cost

Manufacturer Information

Manufacturer Name: Various	Manufacturer Location: Various		
Administrative Leadtime (in Months):	Production Leadtime (in Months):		
Dates	FY 2020	FY 2021	FY 2022
Contract Dates			
Delivery Dates			

Installation Information

Method of Implementation: Modifications

Installation Cost	Prior Years	FY 2020	FY 2021	FY 2022 Base	FY 2022 OCO	FY 2022 Total
	Qty (Each) / Total Cost (\$ M)	Qty (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	- / -	- / -	- / -	- / -	- / -
FY 2020	0 / 0.000	- / -	- / -	- / -	- / -	- / -
FY 2021	0 / 0.000	- / -	- / -	- / -	- / -	- / -
FY 2022	0 / 0.000	- / -	- / -	- / -	- / -	- / -
Total	1 / 0.000	- / -	- / -	- / -	- / -	- / -

Installation Schedule

PYS	In	FY 2020				FY 2021				FY 2022			
		Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4
	1	-	-	-	-	-	-	-	-	-	-	-	-
	1	-	-	-	-	-	-	-	-	-	-	-	-

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Exhibit P-3a, Individual Modification: PB 2022 Army		Date: May 2021	
Appropriation / Budget Activity / Budget Sub Activity: 2031A / 02 / 10		P-1 Line Item Number / Title: 2706AA6605 / AH-64 MODS	
Modification Number / Title: AA6606 / AH-64 APACHE MODS			
ID Code (A=Service Ready, B=Not Service Ready) :		MDAP/MAIS Code:	
Modification Item 7 of 7: Spike NLOS Integration			
Manufacturer Information			
Manufacturer Name: TBD		Manufacturer Location: TBD	
Administrative Leadtime (in Months):		Production Leadtime (in Months):	
Dates	FY 2020	FY 2021	FY 2022
Contract Dates			
Delivery Dates			
Installation Information			
Method of Implementation (Organic): TBD		Installation Quantity: 0	

UNCLASSIFIED

Exhibit P-40, Budget Line Item Justification: PB 2022 Army **Date:** May 2021

Appropriation / Budget Activity / Budget Sub Activity: 2031A: Aircraft Procurement, Army / BA 02: Modification of Aircraft / BSA 10: Modification of Aircraft	P-1 Line Item Number / Title: 3264AA0252 / CH-47 Cargo Helicopter Mods (MYP)
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ID Code (A=Service Ready, B=Not Service Ready):	Program Elements for Code B Items: N/A	Other Related Program Elements: N/A
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Line Item MDAP/MAIS Code: 278

Resource Summary	Prior Years	FY 2020	FY 2021	FY 2022 Base	FY 2022 OCO	FY 2022 Total	FY 2023	FY 2024	FY 2025	FY 2026	To Complete	Total
Procurement Quantity (<i>Units in Each</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost (<i>\$ in Millions</i>)	11,070.153	11.785	15.548	9.918	-	9.918	-	-	-	-	-	-
Less PY Advance Procurement (<i>\$ in Millions</i>)	1,168.857	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) (<i>\$ in Millions</i>)	9,901.296	11.785	15.548	9.918	-	9.918	-	-	-	-	-	-
Plus CY Advance Procurement (<i>\$ in Millions</i>)	1,168.857	-	-	-	-	-	-	-	-	-	-	-
Total Obligation Authority (<i>\$ in Millions</i>)	11,070.153	11.785	15.548	9.918	-	9.918	-	-	-	-	-	-

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

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

Description:

The CH-47F Chinook, the Army's only heavy lift helicopter, is an essential component of the Army's Multi-Domain Battle framework.

The major modifications to the CH-47F include: the development, test, and fielding of updates for the Common Avionics Architecture System (CAAS) and the Digital Automatic Flight Control System (DAFCS) that provide improvements in cyber security, COMSEC, and aircraft handling qualities; the fielding of the Cargo Platform Health Environment (CPHE), the Improved Vibration Control System to COMPOS 2 & 3, Training Aids Devices Simulators and Simulations (TADSS) concurrency with the fleet, equipment refresh, the enduring requirement for software enhancement, and avionics hardware refresh and safety improvements. The Block I aircraft, with provisions for anticipated upgrades, is postured to support the rigorous demands of Multi-Domain Operations.

Avionics updates and safety improvements to maintain the H-47 Avionics and Software systems include: the Common Avionics Architecture System (CAAS), the Digital Automatic Flight Control System (DAFCS), and the Cargo Platform Health Environment (CPHE) systems. Requirements driven by changes in military interoperability, cyber security threats, and commercial airspace navigation require software systems updates, testing, integration, training and logistics support. The funding priorities are the development, testing, and fielding of improvements in cyber security, aircraft handling qualities, Degraded Visual Environment (DVE) performance, COMSEC improvements, A-PNT integration, multi-core processors, and expansion of the flexibility provided by the CAAS Modular Open Systems Architecture. The rapid pace of change in the commercial electronics hardware market, the evolving cyber security threats, and the requirement to remain interoperable, create a need for recurring updates to the design of avionics hardware and software.

Training Aids, Devices, Simulators, and Simulations (TADSS) system computers and projectors require a technical refresh. If any of these systems fail, all TADSS devices (Transportable Flight Proficiency Simulator (TFPS), Chinook Maintenance Trainer (CHMT), Chinook Avionics Trainer (CAT), and Virtual Interactive Environment (VIE)) will not function, negatively impacting aircrew and maintainer training and availability at the unit level. The CATs require concurrency upgrades to match the CH-47F CAAS V9.4 and DAFCS 3.3 fleet configuration enhancements.

Secondary Distribution	FY 2020	FY 2021	FY 2022 Base	FY 2022 OCO	FY 2022 Total	FY 2023	FY 2024	FY 2025	FY 2026
Army	Quantity	-	-	-	-	-	-	-	-
	Total Obligation Authority	11.785	13.514	7.851	-	7.851	-	-	-
ANG	Quantity	-	-	-	-	-	-	-	-

UNCLASSIFIED

Exhibit P-40, Budget Line Item Justification: PB 2022 Army							Date: May 2021			
Appropriation / Budget Activity / Budget Sub Activity: 2031A: Aircraft Procurement, Army / BA 02: Modification of Aircraft / BSA 10: Modification of Aircraft					P-1 Line Item Number / Title: 3264AA0252 / CH-47 Cargo Helicopter Mods (MYP)					
ID Code (A=Service Ready, B=Not Service Ready):			Program Elements for Code B Items: N/A			Other Related Program Elements: N/A				
Line Item MDAP/MAIS Code: 278										

Secondary Distribution		FY 2020	FY 2021	FY 2022 Base	FY 2022 OCO	FY 2022 Total	FY 2023	FY 2024	FY 2025	FY 2026
	Total Obligation Authority	-	2.034	2.067	-	2.067	-	-	-	-
Total:	Quantity	-	-	-	-	-	-	-	-	-
Secondary Distribution	Total Obligation Authority	11.785	15.548	9.918	-	9.918	-	-	-	-

UNCLASSIFIED

Exhibit P-40, Budget Line Item Justification: PB 2022 Army **Date:** May 2021

Appropriation / Budget Activity / Budget Sub Activity:
2031A: Aircraft Procurement, Army / BA 02: Modification of Aircraft / BSA 10: Modification of Aircraft

P-1 Line Item Number / Title:
3264AA0252 / CH-47 Cargo Helicopter Mods (MYP)

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

Line Item MDAP/MAIS Code: 278

Exhibits Schedule					Prior Years	FY 2020	FY 2021	FY 2022 Base	FY 2022 OCO	FY 2022 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	AA0252 / CH-47 Cargo Helicopter Mods (MYP) (Unclassified)				- / 11,070.153	- / 11.785	- / 15.548	- / 9.918	- / -	- / 9.918
P-40	Total Gross/Weapon System Cost				- / 11,070.153	- / 11.785	- / 15.548	- / 9.918	- / -	- / 9.918

*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:
FY2022 Base procurement dollars in the amount of \$9.918 million supports avionics updates and safety improvements fielded across the fleet.

Funding procures critical avionics updates and safety improvements to maintain the H-47 Avionics and Software systems including the Common Avionics Architecture System (CAAS) and the Digital Automatic Flight Control System (DAFCS). Requirements driven by changes in military interoperability, cyber security threats, and commercial airspace navigation require software systems updates, testing, integration, training and logistics support. The funding priorities are the development, testing, and fielding of improvements in cyber security, aircraft handling qualities, Degraded Visual Environment (DVE) performance, COMSEC improvements, A-PNT integration, multi-core processors, and expansion of the flexibility provided by the CAAS Modular Open Systems Architecture.

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

UNCLASSIFIED

Exhibit P-3a, Individual Modification: PB 2022 Army		Date: May 2021
Appropriation / Budget Activity / Budget Sub Activity: 2031A / 02 / 10	P-1 Line Item Number / Title: 3264AA0252 / CH-47 Cargo Helicopter Mods (MYP)	Modification Number / Title: AA0252 / CH-47 Cargo Helicopter Mods (MYP)

ID Code (A=Service Ready, B=Not Service Ready) :	MDAP/MAIS Code:
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Resource Summary	Prior Years	FY 2020	FY 2021	FY 2022 Base	FY 2022 OCO	FY 2022 Total
Procurement Quantity (<i>Units in Each</i>)	-	-	-	-	-	-
Gross/Weapon System Cost (<i>\$ in Millions</i>)	11,070.153	11.785	15.548	9.918	-	9.918
Less PY Advance Procurement (<i>\$ in Millions</i>)	1,168.857	-	-	-	-	-
Net Procurement (P-1) (<i>\$ in Millions</i>)	9,901.296	11.785	15.548	9.918	-	9.918
Plus CY Advance Procurement (<i>\$ in Millions</i>)	1,168.857	-	-	-	-	-
Total Obligation Authority (<i>\$ in Millions</i>)	11,070.153	11.785	15.548	9.918	-	9.918

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

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

Description:

Avionics updates and safety improvements to maintain the H-47 Avionics and Software systems include: the Common Avionics Architecture System (CAAS), the Digital Automatic Flight Control System (DAFCS), and the Cargo Platform Health Environment (CPHE) systems. Requirements driven by changes in military interoperability, cyber security threats, and commercial airspace navigation require software systems updates, testing, integration, training and logistics support. The funding priorities are the development, testing, and fielding of improvements in cyber security, aircraft handling qualities, Degraded Visual Environment (DVE) performance, COMSEC improvements, A-PNT integration, multi-core processors, and expansion of the flexibility provided by the CAAS Modular Open Systems Architecture.

CAAS provides the primary interface to the pilots for all aircraft systems. It monitors aircraft health, provides sophisticated navigation and communication capabilities, and provides tactical situational awareness and interoperability. The DAFCS provides aircraft stability and handling qualities necessary for safe aircraft handling in a variety of environmental and weather conditions. The CPHE system provides the mechanism to complete necessary rotor track and balance activities, evaluate drivetrain vibration levels for maintenance purposes, and record and evaluate the data necessary to have a Condition Based Maintenance and a Health and Usage Monitoring program. These three systems run on specialized computers that primarily consist of commercial electronic components. The rapid pace of change in the commercial electronics hardware market, the evolving cyber security threats, and the requirement to remain interoperable, create a need for recurring updates to the design of avionics hardware and software.

Secondary Distribution		FY 2020	FY 2021	FY 2022 Base	FY 2022 OCO	FY 2022 Total
Army	Quantity	-	-	-	-	-
	Total Obligation Authority	11.785	13.514	7.851	-	7.851
ANG	Quantity	-	-	-	-	-
	Total Obligation Authority	-	2.034	2.067	-	2.067
Total: Secondary Distribution	Quantity	-	-	-	-	-
	Total Obligation Authority	11.785	15.548	9.918	-	9.918

UNCLASSIFIED

Exhibit P-3a, Individual Modification: PB 2022 Army					Date: May 2021	
Appropriation / Budget Activity / Budget Sub Activity: 2031A / 02 / 10			P-1 Line Item Number / Title: 3264AA0252 / CH-47 Cargo Helicopter Mods (MYP)		Modification Number / Title: AA0252 / CH-47 Cargo Helicopter Mods (MYP)	
ID Code (A=Service Ready, B=Not Service Ready) :				MDAP/MAIS Code:		
Models of Systems Affected: CH-47		Modification Type: Unclassified			Related RDT&E PEs:	
Financial Plan	Prior Years	FY 2020	FY 2021	FY 2022 Base	FY 2022 OCO	FY 2022 Total
	Qty (Each) / Total Cost (\$ M)	Qty (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 10: Block I Software Safety & Avionics Upgrades						
A Kits						
Non-Recurring						
Avionics Updates (CAAS, DAFCS, CPHE)	- / 7.512	- / 10.607	- / 7.472	- / 4.085	- / -	- / 4.085
Safety Impr (DVE, SW Corrections, Cyber)	- / -	- / 11.178	- / 4.966	- / 2.723	- / -	- / 2.723
Subtotal: Non-Recurring	- / 7.512	- / 11.785	- / 12.438	- / 6.808	- / -	- / 6.808
B Kits						
Recurring						
SEPM	- / 0.295	- / -	- / 3.110	- / 3.110	- / -	- / 3.110
Subtotal: Recurring	- / 0.295	- / -	- / 3.110	- / 3.110	- / -	- / 3.110
Subtotal: Block I Software Safety & Avionics Upgrades	- / 7.807	- / 11.785	- / 15.548	- / 9.918	- / -	- / 9.918
Modification Item 2 of 10: Block I Improved Vibration Control System (IVCS)						
A Kits						
Recurring						
Kits	70 / 129.373	- / -	- / -	- / -	- / -	- / -
PM Support	- / 1.275	- / -	- / -	- / -	- / -	- / -
Subtotal: Recurring	70 / 130.648	- / -	- / -	- / -	- / -	- / -
Subtotal: Block I Improved Vibration Control System (IVCS)	70 / 130.648	- / -	- / -	- / -	- / -	- / -
Modification Item 3 of 10: Block I CH-47 Safety Mods \$5M or Less						
A Kits						
Recurring						
Voltage Standing Wave Ratio (VSWR)	- / 2.239	- / -	- / -	- / -	- / -	- / -
FCTS (FADEC Continuity Test Set)	- / 6.430	- / -	- / -	- / -	- / -	- / -
Misc Mods	- / 15.592	- / -	- / -	- / -	- / -	- / -
Swashplate Assembly	- / 0.575	- / -	- / -	- / -	- / -	- / -
Hook Load Measuring System	- / 10.000	- / -	- / -	- / -	- / -	- / -
Engine Air Particle Separator (EAPS)	- / 21.195	- / -	- / -	- / -	- / -	- / -
PM Support	- / 11.776	- / -	- / -	- / -	- / -	- / -

UNCLASSIFIED

Exhibit P-3a, Individual Modification: PB 2022 Army					Date: May 2021		
Appropriation / Budget Activity / Budget Sub Activity: 2031A / 02 / 10			P-1 Line Item Number / Title: 3264AA0252 / CH-47 Cargo Helicopter Mods (MYP)			Modification Number / Title: AA0252 / CH-47 Cargo Helicopter Mods (MYP)	
ID Code (A=Service Ready, B=Not Service Ready) :				MDAP/MAIS Code:			
Models of Systems Affected: CH-47		Modification Type: Unclassified			Related RDT&E PEs:		
Financial Plan	Prior Years	FY 2020	FY 2021	FY 2022 Base	FY 2022 OCO	FY 2022 Total	
	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	
Frangible Fuel Fitting	- / 10.000	- / -	- / -	- / -	- / -	- / -	
<i>Subtotal: Recurring</i>	- / 77.807	- / -	- / -	- / -	- / -	- / -	
Non-Recurring							
Critical Safety Issues	1 / 7.414	- / -	- / -	- / -	- / -	- / -	
<i>Subtotal: Non-Recurring</i>	1 / 7.414	- / -	- / -	- / -	- / -	- / -	
<i>Subtotal: Block I CH-47 Safety Mods \$5M or Less</i>	1 / 85.221	- / -	- / -	- / -	- / -	- / -	
Modification Item 4 of 10: Block I Cargo Platform Health Environment (CPHE)							
A Kits							
Recurring							
Kits Type 1	- / 2,515.579	- / -	- / -	- / -	- / -	- / -	
Kits Type 2	- / 554.381	- / -	- / -	- / -	- / -	- / -	
CPHE Software Upgrade	- / 595.796	- / -	- / -	- / -	- / -	- / -	
Services	- / 57.549	- / -	- / -	- / -	- / -	- / -	
PM Support	- / 1.170	- / -	- / -	- / -	- / -	- / -	
<i>Subtotal: Recurring</i>	- / 3,724.475	- / -	- / -	- / -	- / -	- / -	
Non-Recurring							
NRE	- / 6.750	- / -	- / -	- / -	- / -	- / -	
<i>Subtotal: Non-Recurring</i>	- / 6.750	- / -	- / -	- / -	- / -	- / -	
<i>Subtotal: Block I Cargo Platform Health Environment (CPHE)</i>	- / 3,731.225	- / -	- / -	- / -	- / -	- / -	
Modification Item 5 of 10: Improved Troop Seats (ITS)							
A Kits							
Recurring							
Installation Kits	- / 14.653	- / -	- / -	- / -	- / -	- / -	
<i>Subtotal: Recurring</i>	- / 14.653	- / -	- / -	- / -	- / -	- / -	
<i>Subtotal: Improved Troop Seats (ITS)</i>	- / 14.653	- / -	- / -	- / -	- / -	- / -	
Modification Item 6 of 10: Block I Adjustable Pitch Change Link							
A Kits							
Recurring							
Pitch Change Links	- / 2.311	- / -	- / -	- / -	- / -	- / -	

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Exhibit P-3a, Individual Modification: PB 2022 Army					Date: May 2021		
Appropriation / Budget Activity / Budget Sub Activity: 2031A / 02 / 10			P-1 Line Item Number / Title: 3264AA0252 / CH-47 Cargo Helicopter Mods (MYP)			Modification Number / Title: AA0252 / CH-47 Cargo Helicopter Mods (MYP)	
ID Code (A=Service Ready, B=Not Service Ready) :				MDAP/MAIS Code:			
Models of Systems Affected: CH-47		Modification Type: Unclassified			Related RDT&E PEs:		
Financial Plan	Prior Years	FY 2020	FY 2021	FY 2022 Base	FY 2022 OCO	FY 2022 Total	
	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	
PM Support	- / 0.158	- / -	- / -	- / -	- / -	- / -	
<i>Subtotal: Recurring</i>	- / 2.469	- / -	- / -	- / -	- / -	- / -	
Non-Recurring							
NRE	- / 15.582	- / -	- / -	- / -	- / -	- / -	
<i>Subtotal: Non-Recurring</i>	- / 15.582	- / -	- / -	- / -	- / -	- / -	
<i>Subtotal: Block I Adjustable Pitch Change Link</i>	- / 18.051	- / -	- / -	- / -	- / -	- / -	
Modification Item 7 of 10: Block I COOLS & COOLS BPS							
A Kits							
Recurring							
Cargo Handling Floor System	- / 1,854.411	- / -	- / -	- / -	- / -	- / -	
Ballistic Protection System (BPS)	- / 333.768	- / -	- / -	- / -	- / -	- / -	
PM Support	- / 4.408	- / -	- / -	- / -	- / -	- / -	
Cargo Handling Floor System (OCO)	- / 29.300	- / -	- / -	- / -	- / -	- / -	
PM Support (OCO)	- / 8.010	- / -	- / -	- / -	- / -	- / -	
<i>Subtotal: Recurring</i>	- / 2,229.897	- / -	- / -	- / -	- / -	- / -	
<i>Subtotal: Block I COOLS & COOLS BPS</i>	- / 2,229.897	- / -	- / -	- / -	- / -	- / -	
Modification Item 8 of 10: Block I Engine Improvements							
A Kits							
Recurring							
T55 Engine Control Unit Prog (ECU)	- / 45.000	- / -	- / -	- / -	- / -	- / -	
New Engines	- / 4,495.000	- / -	- / -	- / -	- / -	- / -	
P3 Check Valve	- / 4.900	- / -	- / -	- / -	- / -	- / -	
Next Generation Torque System	- / 14.500	- / -	- / -	- / -	- / -	- / -	
Logistics	- / 39.953	- / -	- / -	- / -	- / -	- / -	
ECU Upgrade	- / 5.760	- / -	- / -	- / -	- / -	- / -	
RIMFIRE	- / 2.159	- / -	- / -	- / -	- / -	- / -	
PM Admin Support	- / 4.613	- / -	- / -	- / -	- / -	- / -	
<i>Subtotal: Recurring</i>	- / 4,611.885	- / -	- / -	- / -	- / -	- / -	
Non-Recurring							
ECP NRE/Incorporation	- / 1.062	- / -	- / -	- / -	- / -	- / -	
<i>Subtotal: Non-Recurring</i>	- / 1.062	- / -	- / -	- / -	- / -	- / -	

UNCLASSIFIED

Exhibit P-3a, Individual Modification: PB 2022 Army					Date: May 2021	
Appropriation / Budget Activity / Budget Sub Activity: 2031A / 02 / 10			P-1 Line Item Number / Title: 3264AA0252 / CH-47 Cargo Helicopter Mods (MYP)		Modification Number / Title: AA0252 / CH-47 Cargo Helicopter Mods (MYP)	
ID Code (A=Service Ready, B=Not Service Ready) :				MDAP/MAIS Code:		
Models of Systems Affected: CH-47		Modification Type: Unclassified			Related RDT&E PEs:	
Financial Plan	Prior Years	FY 2020	FY 2021	FY 2022 Base	FY 2022 OCO	FY 2022 Total
	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)
<i>Subtotal: Block I Engine Improvements</i>	- / 4,612.947	- / -	- / -	- / -	- / -	- / -
Modification Item 9 of 10: Block I Aircraft Component Parts-Marking (UID)						
A Kits						
Non-Recurring						
Component Markings	- / 37.506	- / -	- / -	- / -	- / -	- / -
<i>Subtotal: Non-Recurring</i>	- / 37.506	- / -	- / -	- / -	- / -	- / -
<i>Subtotal: Block I Aircraft Component Parts-Marking (UID)</i>	- / 37.506	- / -	- / -	- / -	- / -	- / -
Modification Item 10 of 10: Block I Systems Optimization & Payload Restoration						
A Kits						
Recurring						
PM Support	- / 17.853	- / -	- / -	- / -	- / -	- / -
<i>Subtotal: Recurring</i>	- / 17.853	- / -	- / -	- / -	- / -	- / -
Non-Recurring						
NRE	- / 157.065	- / -	- / -	- / -	- / -	- / -
<i>Subtotal: Non-Recurring</i>	- / 157.065	- / -	- / -	- / -	- / -	- / -
<i>Subtotal: Block I Systems Optimization & Payload Restoration</i>	- / 164.918	- / -	- / -	- / -	- / -	- / -
<i>Subtotal: Procurement, All Modification Items</i>	71 / 11,032.873	- / 11.785	- / 15.548	- / 9.918	- / -	- / 9.918
Installation						
Modification Item 2 of 10: Block I Improved Vibration Control System (IVCS)	175 / 5.144	- / -	- / -	- / -	- / -	- / -
Modification Item 4 of 10: Block I Cargo Platform Health Environment (CPHE)	216 / 12.569	- / -	- / -	- / -	- / -	- / -
Modification Item 7 of 10: Block I COOLS & COOLS BPS	264 / 19.567	- / -	- / -	- / -	- / -	- / -
<i>Subtotal: Installation</i>	655 / 37.280	- / -	- / -	- / -	- / -	- / -
Total						
Total Cost (Procurement + Support + Installation)	11,070.153	11.785	15.548	9.918	-	9.918

UNCLASSIFIED

Exhibit P-3a, Individual Modification: PB 2022 Army		Date: May 2021	
Appropriation / Budget Activity / Budget Sub Activity: 2031A / 02 / 10		P-1 Line Item Number / Title: 3264AA0252 / CH-47 Cargo Helicopter Mods (MYP)	
		Modification Number / Title: AA0252 / CH-47 Cargo Helicopter Mods (MYP)	
ID Code (A=Service Ready, B=Not Service Ready) :		MDAP/MAIS Code:	
Modification Item 1 of 10: Block I Software Safety & Avionics Upgrades			
Manufacturer Information			
Manufacturer Name: TBD		Manufacturer Location: TBD	
Administrative Leadtime (in Months):		Production Leadtime (in Months):	
Dates	FY 2020	FY 2021	FY 2022
Contract Dates			
Delivery Dates			
Installation Information			
Method of Implementation (Organic): TBD		Installation Quantity: 462	

UNCLASSIFIED

Exhibit P-3a, Individual Modification: PB 2022 Army		Date: May 2021
Appropriation / Budget Activity / Budget Sub Activity: 2031A / 02 / 10	P-1 Line Item Number / Title: 3264AA0252 / CH-47 Cargo Helicopter Mods (MYP)	Modification Number / Title: AA0252 / CH-47 Cargo Helicopter Mods (MYP)

ID Code (A=Service Ready, B=Not Service Ready) :	MDAP/MAIS Code:
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Modification Item 2 of 10: Block I Improved Vibration Control System (IVCS)

Manufacturer Information

Manufacturer Name: Boeing	Manufacturer Location: Ridley Park PA
Administrative Leadtime (in Months): 6	Production Leadtime (in Months): 6

Dates	FY 2020	FY 2021	FY 2022
Contract Dates			
Delivery Dates			

Installation Information

Method of Implementation: Various

Installation Cost	Prior Years	FY 2020	FY 2021	FY 2022 Base	FY 2022 OCO	FY 2022 Total
	Qty (Each) / Total Cost (\$ M)	Qty (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	105 / 0.189	- / -	- / -	- / -	- / -	- / -
FY 2020	70 / 4.955	- / -	- / -	- / -	- / -	- / -
FY 2021	0 / 0.000	- / -	- / -	- / -	- / -	- / -
FY 2022	0 / 0.000	- / -	- / -	- / -	- / -	- / -
Total	175 / 5.144	- / -	- / -	- / -	- / -	- / -

Installation Schedule

	PYS	FY 2020				FY 2021				FY 2022			
		Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4
In	129	46	-	-	-	-	-	-	-	-	-	-	-
Out	105	-	12	12	12	12	12	10	-	-	-	-	-

UNCLASSIFIED

Exhibit P-3a, Individual Modification: PB 2022 Army		Date: May 2021	
Appropriation / Budget Activity / Budget Sub Activity: 2031A / 02 / 10		P-1 Line Item Number / Title: 3264AA0252 / CH-47 Cargo Helicopter Mods (MYP)	
		Modification Number / Title: AA0252 / CH-47 Cargo Helicopter Mods (MYP)	
ID Code (A=Service Ready, B=Not Service Ready) :		MDAP/MAIS Code:	
Modification Item 3 of 10: Block I CH-47 Safety Mods \$5M or Less			
Manufacturer Information			
Manufacturer Name: TBD		Manufacturer Location: TBD	
Administrative Leadtime (in Months):		Production Leadtime (in Months):	
Dates	FY 2020	FY 2021	FY 2022
Contract Dates			
Delivery Dates			
Installation Information			
Method of Implementation (Organic): Various		Installation Quantity: 0	

UNCLASSIFIED

Exhibit P-3a, Individual Modification: PB 2022 Army		Date: May 2021
Appropriation / Budget Activity / Budget Sub Activity: 2031A / 02 / 10	P-1 Line Item Number / Title: 3264AA0252 / CH-47 Cargo Helicopter Mods (MYP)	Modification Number / Title: AA0252 / CH-47 Cargo Helicopter Mods (MYP)

ID Code (A=Service Ready, B=Not Service Ready) :	MDAP/MAIS Code:
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Modification Item 4 of 10: Block I Cargo Platform Health Environment (CPHE)

Manufacturer Information

Manufacturer Name: Boeing	Manufacturer Location: Ridley Park, PA
Administrative Leadtime (in Months): 3	Production Leadtime (in Months): 6

Dates	FY 2020	FY 2021	FY 2022
Contract Dates			
Delivery Dates			

Installation Information

Method of Implementation: Various

Installation Cost	Prior Years	FY 2020	FY 2021	FY 2022 Base	FY 2022 OCO	FY 2022 Total
	Qty (Each) / Total Cost (\$ M)	Qty (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	216 / 12.569	- / -	- / -	- / -	- / -	- / -
FY 2020	0 / 0.000	- / -	- / -	- / -	- / -	- / -
FY 2021	0 / 0.000	- / -	- / -	- / -	- / -	- / -
FY 2022	0 / 0.000	- / -	- / -	- / -	- / -	- / -
Total	216 / 12.569	- / -	- / -	- / -	- / -	- / -

Installation Schedule

	PYS	FY 2020				FY 2021				FY 2022			
		Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4
In	108	-	-	-	-	-	-	-	-	-	-	-	-
Out	108	-	-	-	-	-	-	-	-	-	-	-	-

UNCLASSIFIED

Exhibit P-3a, Individual Modification: PB 2022 Army		Date: May 2021	
Appropriation / Budget Activity / Budget Sub Activity: 2031A / 02 / 10		P-1 Line Item Number / Title: 3264AA0252 / CH-47 Cargo Helicopter Mods (MYP)	
		Modification Number / Title: AA0252 / CH-47 Cargo Helicopter Mods (MYP)	
ID Code (A=Service Ready, B=Not Service Ready) :		MDAP/MAIS Code:	
Modification Item 5 of 10: Improved Troop Seats (ITS)			
Manufacturer Information			
Manufacturer Name: Boeing		Manufacturer Location: Ridley Park, PA	
Administrative Leadtime (in Months): 4		Production Leadtime (in Months): 12	
Dates	FY 2020	FY 2021	FY 2022
Contract Dates			
Delivery Dates			
Installation Information			
Method of Implementation (Organic): Various		Installation Quantity: 0	

UNCLASSIFIED

Exhibit P-3a, Individual Modification: PB 2022 Army		Date: May 2021	
Appropriation / Budget Activity / Budget Sub Activity: 2031A / 02 / 10		P-1 Line Item Number / Title: 3264AA0252 / CH-47 Cargo Helicopter Mods (MYP)	
		Modification Number / Title: AA0252 / CH-47 Cargo Helicopter Mods (MYP)	
ID Code (A=Service Ready, B=Not Service Ready) :		MDAP/MAIS Code:	
Modification Item 6 of 10: Block I Adjustable Pitch Change Link			
Manufacturer Information			
Manufacturer Name: Boeing		Manufacturer Location: Ridley Park, PA	
Administrative Leadtime (in Months):		Production Leadtime (in Months):	
Dates	FY 2020	FY 2021	FY 2022
Contract Dates			
Delivery Dates			
Installation Information			
Method of Implementation (Organic): User Installed		Installation Quantity: 0	

UNCLASSIFIED

Exhibit P-3a, Individual Modification: PB 2022 Army		Date: May 2021
Appropriation / Budget Activity / Budget Sub Activity: 2031A / 02 / 10	P-1 Line Item Number / Title: 3264AA0252 / CH-47 Cargo Helicopter Mods (MYP)	Modification Number / Title: AA0252 / CH-47 Cargo Helicopter Mods (MYP)

ID Code (A=Service Ready, B=Not Service Ready) :	MDAP/MAIS Code:
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Modification Item 7 of 10: Block I COOLS & COOLS BPS

Manufacturer Information

Manufacturer Name: Boeing	Manufacturer Location: Ridley Park, PA
Administrative Leadtime (in Months): 1	Production Leadtime (in Months): 1

Dates	FY 2020	FY 2021	FY 2022
Contract Dates			
Delivery Dates			

Installation Information

Method of Implementation: Various

Installation Cost	Prior Years	FY 2020	FY 2021	FY 2022 Base	FY 2022 OCO	FY 2022 Total
	Qty (Each) / Total Cost (\$ M)	Qty (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	264 / 19.567	- / -	- / -	- / -	- / -	- / -
FY 2020	0 / 0.000	- / -	- / -	- / -	- / -	- / -
FY 2021	0 / 0.000	- / -	- / -	- / -	- / -	- / -
FY 2022	0 / 0.000	- / -	- / -	- / -	- / -	- / -
Total	264 / 19.567	- / -	- / -	- / -	- / -	- / -

Installation Schedule

	PYS	FY 2020				FY 2021				FY 2022			
		Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4
In	264	-	-	-	-	-	-	-	-	-	-	-	-
Out	264	-	-	-	-	-	-	-	-	-	-	-	-

UNCLASSIFIED

Exhibit P-3a, Individual Modification: PB 2022 Army		Date: May 2021	
Appropriation / Budget Activity / Budget Sub Activity: 2031A / 02 / 10		P-1 Line Item Number / Title: 3264AA0252 / CH-47 Cargo Helicopter Mods (MYP)	
		Modification Number / Title: AA0252 / CH-47 Cargo Helicopter Mods (MYP)	
ID Code (A=Service Ready, B=Not Service Ready) :		MDAP/MAIS Code:	
Modification Item 8 of 10: Block I Engine Improvements			
Manufacturer Information			
Manufacturer Name: Honeywell Inc		Manufacturer Location: Phoenix, AZ	
Administrative Leadtime (in Months):		Production Leadtime (in Months):	
Dates	FY 2020	FY 2021	FY 2022
Contract Dates			
Delivery Dates			
Installation Information			
Method of Implementation (Organic): Various		Installation Quantity: 0	

UNCLASSIFIED

Exhibit P-3a, Individual Modification: PB 2022 Army		Date: May 2021	
Appropriation / Budget Activity / Budget Sub Activity: 2031A / 02 / 10		P-1 Line Item Number / Title: 3264AA0252 / CH-47 Cargo Helicopter Mods (MYP)	
		Modification Number / Title: AA0252 / CH-47 Cargo Helicopter Mods (MYP)	
ID Code (A=Service Ready, B=Not Service Ready) :		MDAP/MAIS Code:	
Modification Item 9 of 10: Block I Aircraft Component Parts-Marking (UID)			
Manufacturer Information			
Manufacturer Name: TBD		Manufacturer Location: TBD	
Administrative Leadtime (in Months):		Production Leadtime (in Months):	
Dates	FY 2020	FY 2021	FY 2022
Contract Dates			
Delivery Dates			
Installation Information			
Method of Implementation (Organic): Various		Installation Quantity: 0	

UNCLASSIFIED

Exhibit P-3a, Individual Modification: PB 2022 Army		Date: May 2021	
Appropriation / Budget Activity / Budget Sub Activity: 2031A / 02 / 10		P-1 Line Item Number / Title: 3264AA0252 / CH-47 Cargo Helicopter Mods (MYP)	
		Modification Number / Title: AA0252 / CH-47 Cargo Helicopter Mods (MYP)	
ID Code (A=Service Ready, B=Not Service Ready) :		MDAP/MAIS Code:	
Modification Item 10 of 10: Block I Systems Optimization & Payload Restoration			
Manufacturer Information			
Manufacturer Name: TBD		Manufacturer Location: TBD	
Administrative Leadtime (in Months):		Production Leadtime (in Months):	
Dates	FY 2020	FY 2021	FY 2022
Contract Dates			
Delivery Dates			
Installation Information			
Method of Implementation (Organic): Various		Installation Quantity: 0	

UNCLASSIFIED

Exhibit P-40, Budget Line Item Justification: PB 2022 Army **Date:** May 2021

Appropriation / Budget Activity / Budget Sub Activity: 2031A: Aircraft Procurement, Army / BA 02: Modification of Aircraft / BSA 10: Modification of Aircraft	P-1 Line Item Number / Title: 3403A02111 / GRCS SEMA MODS
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ID Code (A=Service Ready, B=Not Service Ready):	Program Elements for Code B Items: N/A	Other Related Program Elements: N/A
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Line Item MDAP/MAIS Code: N/A

Resource Summary	Prior Years	FY 2020	FY 2021	FY 2022 Base	FY 2022 OCO	FY 2022 Total	FY 2023	FY 2024	FY 2025	FY 2026	To Complete	Total
Procurement Quantity (<i>Units in Each</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost (<i>\$ in Millions</i>)	19.152	6.427	2.947	2.762	-	2.762	-	-	-	-	-	-
Less PY Advance Procurement (<i>\$ in Millions</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) (<i>\$ in Millions</i>)	19.152	6.427	2.947	2.762	-	2.762	-	-	-	-	-	-
Plus CY Advance Procurement (<i>\$ in Millions</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Total Obligation Authority (<i>\$ in Millions</i>)	19.152	6.427	2.947	2.762	-	2.762	-	-	-	-	-	-

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

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

Description:

The RC-12X Guardrail Common Sensor (GRCS) is a fixed-wing, airborne Communications Intelligence (COMINT) and Electronic Intelligence (ELINT) collection and precision targeting location system. GRCS provides a persistent capability to detect, locate and classify/identify high value targets with a relevant degree of timeliness and accuracy. GRCS is assigned to two (2) U.S. Army Intelligence and Security Command (INSCOM) Aerial Exploitation Battalions providing Aerial Intelligence, Surveillance and Reconnaissance (AISR) support to combatant commanders. The Army's Acquisition Objective/Army's Procurement Objective is 19 RC-12X; seven (7) fielded to 3rd MI; and seven (7) fielded to the 204th MI, and five (5) trainers within Training and Doctrine Command (TRADOC) and INSCOM.

This funding line supports Army RC-12X aircraft performing the AISR mission. It provides for the procurement and associated testing of civil and military aircraft equipment and future integration efforts. These modifications address all Department of Defense (DoD) mandated safety equipment to current and evolving international and Army Standards. These modifications ensure continued worldwide deployment capability and safe operations. Lastly, this line supports future modifications in service.

The overall GRCS procurement/modernization efforts are found in the following two lines: AZ2052 Guardrail Payloads (Aircraft Procurement Army (APA) Military Intelligence Program (MIP) P-1 Line #18) and A02111 GRCS SEMA MODS (Aircraft Procurement Army (APA) Military Intelligence Program (MIP) P-1 Line #21). Separate funding lines support the Army Acquisition Executive's directive, codified in the October 28, 2011 memorandum, to assign overall acquisition lead for manned airborne intelligence systems to Program Executive Office for Aviation; and overall sensor, processing, exploitation, and dissemination responsibilities to Program Executive Officer for Intelligence, Electronic Warfare, and Sensors.

Secondary Distribution	FY 2020	FY 2021	FY 2022 Base	FY 2022 OCO	FY 2022 Total	FY 2023	FY 2024	FY 2025	FY 2026
Army									
Quantity	-	-	-	-	-	-	-	-	-
Total Obligation Authority	6.427	2.947	2.762	-	2.762	-	-	-	-
Total:									
Secondary Distribution									
Quantity	-	-	-	-	-	-	-	-	-
Total Obligation Authority	6.427	2.947	2.762	-	2.762	-	-	-	-

Justification:

UNCLASSIFIED

Exhibit P-40, Budget Line Item Justification: PB 2022 Army		Date: May 2021
Appropriation / Budget Activity / Budget Sub Activity: 2031A: Aircraft Procurement, Army / BA 02: Modification of Aircraft / BSA 10: Modification of Aircraft		P-1 Line Item Number / Title: 3403A02111 / GRCS SEMA MODS
ID Code (A=Service Ready, B=Not Service Ready):	Program Elements for Code B Items: N/A	Other Related Program Elements: N/A
Line Item MDAP/MAIS Code: N/A		
FY22 base procurement funding in the amount of \$2.762 million will support RC-12X aircraft modifications to integrate the 1st Phase Assured Position, Navigation and Timing (A-PNT) solutions; Information Assurance support for aircraft systems; and RC-12X modifications in service. This line also funds the modifications to the communications suite.		
All COMPO 1. 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.		

UNCLASSIFIED

Exhibit P-40, Budget Line Item Justification: PB 2022 Army **Date:** May 2021

Appropriation / Budget Activity / Budget Sub Activity: 2031A: Aircraft Procurement, Army / BA 02: Modification of Aircraft / BSA 10: Modification of Aircraft	P-1 Line Item Number / Title: 3404A02110 / ARL SEMA MODS
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ID Code (A=Service Ready, B=Not Service Ready):	Program Elements for Code B Items: N/A	Other Related Program Elements: N/A
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Line Item MDAP/MAIS Code: N/A

Resource Summary	Prior Years	FY 2020	FY 2021	FY 2022 Base	FY 2022 OCO	FY 2022 Total	FY 2023	FY 2024	FY 2025	FY 2026	To Complete	Total
Procurement Quantity (<i>Units in Each</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost (<i>\$ in Millions</i>)	74.262	6.566	9.598	9.437	-	9.437	-	-	-	-	-	-
Less PY Advance Procurement (<i>\$ in Millions</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) (<i>\$ in Millions</i>)	74.262	6.566	9.598	9.437	-	9.437	-	-	-	-	-	-
Plus CY Advance Procurement (<i>\$ in Millions</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Total Obligation Authority (<i>\$ in Millions</i>)	74.262	6.566	9.598	9.437	-	9.437	-	-	-	-	-	-

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

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

Description:

Airborne Reconnaissance Low - Enhanced (ARL-E) is a worldwide self-deployable airborne Intelligence Surveillance Reconnaissance (ISR) system designed for timely, accurate, assured support to tactical forces over the full spectrum of operations. This system is a De Havilland DHC-8 aircraft replacing the DHC-7 IAW the Aerial ISR (AISR) 2020 Strategy. ARL-E will enhance the ARL-M sensor capability sets through the procurement of new and refurbished sensors to meet the ARL-E Capabilities Production Document (CPD) requirements. It provides a persistent capability to include: Broad-Area Surveillance and/or Focused Stare on Target Areas of Interest (Point or Objective Targets), Electro-Optical/Infrared (EO/IR)/Full-Motion Video (FMV) , Multi-Mode Radar, Robust Communications Intelligence (COMINT), on-Board Collection, Analysis, Sensor Cross Cue and dissemination through Distributed Common Ground System-Army (DCGS-A) enabled workstations. ARL-E will be assigned to the U.S. Army Intelligence and Security Command (INSCOM) Aerial ISR Brigade providing AISR support to combatant commanders. For the overall system, the Army Acquisition Objective and the Army Procurement Objective, is nine (9). The Mission Equipment Package (MEP) objective is eight (8).

The funding line supports the conversion of Government Owned Contractor Operated (GOCO) Quick Reaction Capability (QRC) DeHavilland (DHC) 8-315 Aerial Intelligence Surveillance & Reconnaissance aircraft systems, leveraging seven (7) Saturn Arch (SA) and two (2) Desert Owls (DO). It provides for the following: the procurement of replacement and spare engines; procurement and associated testing of civil and military aircraft equipment and future integration efforts supporting A-ISR modernization in the Multi-Domain Operations (MDO) environment. These modifications address all Department of Defense (DoD) mandated safety equipment to current and evolving international and Army Standards. These modifications ensure continued worldwide deployment capability and safe operations. Lastly, this line supports future modifications in services which includes Assured Position, Navigation and Timing (A-PNT).

Separate funding lines support the Army Acquisition Executive's directive, codified in the October 28, 2011 memorandum, to assign overall acquisition lead for manned airborne Intelligence systems to Program Executive Officer for Aviation; and overall sensor, processing, exploitation, and dissemination responsibilities to Program Executive Officer for Intelligence, Electronic Warfare, and Sensors. The A02110 ARL SEMA Mods (Aircraft Procurement Army (APA) Military Intelligence Program (MIP) P-1 Line #22) budget line provides for aircraft modification and AZ2050 ARL Payloads (Aircraft Procurement Army (APA) Military Intelligence Program (MIP) P-1 Line #18) provides for sensors.

Secondary Distribution	FY 2020	FY 2021	FY 2022 Base	FY 2022 OCO	FY 2022 Total	FY 2023	FY 2024	FY 2025	FY 2026
Army									
Quantity	-	-	-	-	-	-	-	-	-
Total Obligation Authority	6.566	9.598	9.437	-	9.437	-	-	-	-

UNCLASSIFIED

Exhibit P-40, Budget Line Item Justification: PB 2022 Army **Date:** May 2021

Appropriation / Budget Activity / Budget Sub Activity: 2031A: Aircraft Procurement, Army / BA 02: Modification of Aircraft / BSA 10: Modification of Aircraft	P-1 Line Item Number / Title: 3404A02110 / ARL SEMA MODS
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ID Code (A=Service Ready, B=Not Service Ready):	Program Elements for Code B Items: N/A	Other Related Program Elements: N/A
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Line Item MDAP/MAIS Code: N/A

Secondary Distribution		FY 2020	FY 2021	FY 2022 Base	FY 2022 OCO	FY 2022 Total	FY 2023	FY 2024	FY 2025	FY 2026
Total:	Quantity	-	-	-	-	-	-	-	-	-
Secondary Distribution	Total Obligation Authority	6.566	9.598	9.437	-	9.437	-	-	-	-

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UNCLASSIFIED

Exhibit P-40, Budget Line Item Justification: PB 2022 Army **Date:** May 2021

Appropriation / Budget Activity / Budget Sub Activity: 2031A: Aircraft Procurement, Army / BA 02: Modification of Aircraft / BSA 10: Modification of Aircraft	P-1 Line Item Number / Title: 3404A02110 / ARL SEMA MODS
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ID Code (A=Service Ready, B=Not Service Ready):	Program Elements for Code B Items: N/A	Other Related Program Elements: N/A
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Line Item MDAP/MAIS Code: N/A

Exhibits Schedule					Prior Years	FY 2020	FY 2021	FY 2022 Base	FY 2022 OCO	FY 2022 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	A02110 / ARL SEMA MODS (Unclassified)				- / 74.262	- / 6.566	- / 9.598	- / 9.437	- / -	- / 9.437
P-40	Total Gross/Weapon System Cost				- / 74.262	- / 6.566	- / 9.598	- / 9.437	- / -	- / 9.437

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

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

Justification:

The FY22 base procurement funding in the amount of \$9.437 million will be utilized to address Multi-Domain Operations (MDO) requirements and fund the cockpit and Aircraft Survivability Equipment (ASE) integration of one aircraft, final ASE integration on a second aircraft, continued ISR platform system verification, system fielding and procurement of vital aircraft spares. The funding will begin the Pre-planned product improvements (P3I) for one aircraft in the ARL-E fleet, including additional system modernizations such as Communications, Navigation, and Surveillance (CNS).

P3a prior year through FY22 quantities are for ASE and cockpit integration. Beyond FY22, quantities are for pre-planned product modifications in service to previously delivered aircraft.

FY21 P3a manufacturer name and location are for ASE integration contract only. Manufacturers for FYDP modifications are to be determined.

All COMPO 1 Active. 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

UNCLASSIFIED

Exhibit P-3a, Individual Modification: PB 2022 Army		Date: May 2021
Appropriation / Budget Activity / Budget Sub Activity: 2031A / 02 / 10	P-1 Line Item Number / Title: 3404A02110 / ARL SEMA MODS	Modification Number / Title: A02110 / ARL SEMA MODS

ID Code (A=Service Ready, B=Not Service Ready) :	MDAP/MAIS Code:
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Resource Summary	Prior Years	FY 2020	FY 2021	FY 2022 Base	FY 2022 OCO	FY 2022 Total
Procurement Quantity (<i>Units in Each</i>)	-	-	-	-	-	-
Gross/Weapon System Cost (<i>\$ in Millions</i>)	74.262	6.566	9.598	9.437	-	9.437
Less PY Advance Procurement (<i>\$ in Millions</i>)	-	-	-	-	-	-
Net Procurement (P-1) (<i>\$ in Millions</i>)	74.262	6.566	9.598	9.437	-	9.437
Plus CY Advance Procurement (<i>\$ in Millions</i>)	-	-	-	-	-	-
Total Obligation Authority (<i>\$ in Millions</i>)	74.262	6.566	9.598	9.437	-	9.437

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

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

Description:

Airborne Reconnaissance Low - Enhanced (ARL-E) is a worldwide self-deployable airborne Intelligence Surveillance Reconnaissance (ISR) system designed for timely, accurate, assured support to tactical forces over the full spectrum of operations. This system is a De Havilland DHC-8 aircraft replacing the DHC-7 IAW the Aerial ISR (AISR) 2020 Strategy. ARL-E will enhance the ARL-M sensor capability sets through the procurement of new and refurbished sensors to meet the ARL-E Capabilities Production Document (CPD) requirements. It provides a persistent capability to include: Broad-Area Surveillance and/or Focused Stare on Target Areas of Interest (Point or Objective Targets), Electro-Optical/Infrared (EO/IR)/Full-Motion Video (FMV), Multi-Mode Radar, Robust Communications Intelligence (COMINT), on-Board Collection, Analysis, Sensor Cross Cue and dissemination through Distributed Common Ground System-Army (DCGS-A) enabled workstations. ARL-E will be assigned to the U.S. Army INSCOM Aerial ISR Brigade providing AISR support to combatant commanders. For the overall system, the Army Acquisition Objective and the Army Procurement Objective, is nine (9). The Mission Equipment Package (MEP) objective is eight (8).

The funding line supports the conversion of Government Owned Contractor Operated (GOCO) Quick Reaction Capability (QRC) DeHavilland (DHC) 8-315 Aerial Intelligence Surveillance & Reconnaissance aircraft systems, leveraging seven (7) Saturn Arch (SA) and two (2) Desert Owls (DO). It provides for the following: the procurement of replacement and spare engines; procurement and associated testing of civil and military aircraft equipment, and future integration efforts. These modifications address all Department of Defense (DoD) mandated safety equipment to current and evolving international and Army Standards. These modifications ensure continued worldwide deployment capability and safe operations. Lastly, this line supports future modifications in services which includes Assured Position, Navigation and Timing (A-PNT).

Secondary Distribution		FY 2020	FY 2021	FY 2022 Base	FY 2022 OCO	FY 2022 Total
Army	Quantity	-	-	-	-	-
	Total Obligation Authority	6.566	9.598	9.437	-	9.437
Total: Secondary Distribution	Quantity	-	-	-	-	-
	Total Obligation Authority	6.566	9.598	9.437	-	9.437

UNCLASSIFIED

Exhibit P-3a, Individual Modification: PB 2022 Army						Date: May 2021	
Appropriation / Budget Activity / Budget Sub Activity: 2031A / 02 / 10			P-1 Line Item Number / Title: 3404A02110 / ARL SEMA MODS			Modification Number / Title: A02110 / ARL SEMA MODS	
ID Code (A=Service Ready, B=Not Service Ready) :				MDAP/MAIS Code:			
Models of Systems Affected: ARL SEMA Modifications		Modification Type: Unclassified			Related RDT&E PEs:		
Financial Plan	Prior Years	FY 2020	FY 2021	FY 2022 Base	FY 2022 OCO	FY 2022 Total	
	Qty (Each) / Total Cost (\$ M)	Qty (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							
<i>Modification Item 1 of 1: ARL SEMA Mods</i>							
A Kits							
Recurring							
PMO	- / 12.789	- / 0.558	- / 0.816	- / 0.802	- / -	- / 0.802	
Spares	- / 7.042	- / -	- / 2.724	- / 3.007	- / -	- / 3.007	
System T&E Support	- / 18.478	- / -	- / -	- / 0.159	- / -	- / 0.159	
Training and Documentation	- / 0.096	- / 0.037	- / 0.038	- / 0.200	- / -	- / 0.200	
<i>Subtotal: Recurring</i>	<i>- / 38.405</i>	<i>- / 0.595</i>	<i>- / 3.578</i>	<i>- / 4.168</i>	<i>- / -</i>	<i>- / 4.168</i>	
<i>Subtotal: ARL SEMA Mods</i>	<i>- / 38.405</i>	<i>- / 0.595</i>	<i>- / 3.578</i>	<i>- / 4.168</i>	<i>- / -</i>	<i>- / 4.168</i>	
<i>Subtotal: Procurement, All Modification Items</i>	<i>- / 38.405</i>	<i>- / 0.595</i>	<i>- / 3.578</i>	<i>- / 4.168</i>	<i>- / -</i>	<i>- / 4.168</i>	
Installation							
<i>Modification Item 1 of 1: ARL SEMA Mods</i>							
	8 / 35.857	1 / 5.971	1 / 6.020	2 / 5.269	- / -	2 / 5.269	
<i>Subtotal: Installation</i>	<i>8 / 35.857</i>	<i>1 / 5.971</i>	<i>1 / 6.020</i>	<i>2 / 5.269</i>	<i>- / -</i>	<i>2 / 5.269</i>	
Total							
Total Cost (Procurement + Support + Installation)	74.262	6.566	9.598	9.437	-	9.437	

UNCLASSIFIED

Exhibit P-3a, Individual Modification: PB 2022 Army							Date: May 2021						
Appropriation / Budget Activity / Budget Sub Activity: 2031A / 02 / 10				P-1 Line Item Number / Title: 3404A02110 / ARL SEMA MODS				Modification Number / Title: A02110 / ARL SEMA MODS					
ID Code (A=Service Ready, B=Not Service Ready) :							MDAP/MAIS Code:						
Modification Item 1 of 1: ARL SEMA Mods													
Manufacturer Information													
Manufacturer Name: LEIDOS							Manufacturer Location: Bridgewater, VA						
Administrative Leadtime (in Months): 3							Production Leadtime (in Months): 12						
Dates		FY 2020				FY 2021				FY 2022			
Contract Dates													
Delivery Dates		Aug 2020				Aug 2021				Aug 2022			
Installation Information													
Method of Implementation: ARL SEMA Mods													
Installation Cost		Prior Years		FY 2020		FY 2021		FY 2022 Base		FY 2022 OCO		FY 2022 Total	
		Qty (Each) / Total Cost (\$ M)		Qty (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 / 35.857		- / -		- / -		- / -		- / -		- / -	
FY 2020		- / -		1 / 5.971		- / -		- / -		- / -		- / -	
FY 2021		- / -		- / -		1 / 6.020		- / -		- / -		- / -	
FY 2022		- / -		- / -		- / -		2 / 5.269		- / -		2 / 5.269	
Total		8 / 35.857		1 / 5.971		1 / 6.020		2 / 5.269		- / -		2 / 5.269	
Installation Schedule													
	PYS	FY 2020				FY 2021				FY 2022			
		Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4
In	8	-	-	-	1	-	-	-	1	-	-	2	-
Out	6	-	-	-	2	-	-	-	1	-	-	-	1

UNCLASSIFIED

Exhibit P-40, Budget Line Item Justification: PB 2022 Army **Date:** May 2021

Appropriation / Budget Activity / Budget Sub Activity: 2031A: Aircraft Procurement, Army / BA 02: Modification of Aircraft / BSA 10: Modification of Aircraft	P-1 Line Item Number / Title: 3405A02112 / EMARSS SEMA MODS
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ID Code (A=Service Ready, B=Not Service Ready):	Program Elements for Code B Items: N/A	Other Related Program Elements: N/A
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Line Item MDAP/MAIS Code: N/A

Resource Summary	Prior Years	FY 2020	FY 2021	FY 2022 Base	FY 2022 OCO	FY 2022 Total	FY 2023	FY 2024	FY 2025	FY 2026	To Complete	Total
Procurement Quantity (<i>Units in Each</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost (<i>\$ in Millions</i>)	196.952	43.139	28.912	1.568	-	1.568	-	-	-	-	-	-
Less PY Advance Procurement (<i>\$ in Millions</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) (<i>\$ in Millions</i>)	196.952	43.139	28.912	1.568	-	1.568	-	-	-	-	-	-
Plus CY Advance Procurement (<i>\$ in Millions</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Total Obligation Authority (<i>\$ in Millions</i>)	196.952	43.139	28.912	1.568	-	1.568	-	-	-	-	-	-

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

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

Description:

The Enhanced Medium Altitude Reconnaissance and Surveillance System (EMARSS) is the Army's newest generation C-12 based, direct support, manned airborne intelligence collection, processing, and targeting support system. It provides a persistent capability to detect, locate, classify/identify, and track surface targets with a high degree of timeliness and accuracy. EMARSS is assigned to the U.S. Army Intelligence and Security Command (INSCOM) Aerial Exploitation Battalions, providing Aerial Intelligence, Surveillance and Reconnaissance support to combatant commanders. EMARSS is also assigned to the United States Army Training and Doctrine Command (TRADOC) in support of training at the US Army Intelligence Center of Excellence (USAICoE). The Army Acquisition Objective for EMARSS is 36 systems, with an Army Procurement Objective of 24, to include the following variants: eight (8) EMARSS-G (Geo-INT); four (4) EMARSS-V (Vehicle and Dismount Exploitation Radar, VaDER); eight (8) EMARSS-M (Multi-INT); and four (4) EMARSS-S (SIGINT). Congressional Plus-up for EMARSS-E aircraft.

The budget line supports the conversion of Special Electronic Mission Aircraft (SEMA) Government-owned Quick Reaction Capability (QRC) Aerial Intelligence Surveillance & Reconnaissance (AISR) systems: Liberty Project Aircraft (LPA), Constant Hawk (CH) and Tactical Operations (TACOP), VaDER (Vehicle and Dismount exploitation Radar) into Enhanced Medium Altitude Reconnaissance and Surveillance Systems (EMARSS) Capabilities Production Document (CPD) compliant systems. It provides for the following: the procurement of replacement and spare engines; procurement and associated testing of civil and military aircraft equipment; and integration/installation of ISR Mission Equipment Package (MEP) and future integration efforts supporting A-ISR modernization in the Multi-Domain Operations (MDO) environment. These modifications address all Department of Defense (DoD) mandated safety equipment to current and evolving international and Army Standards. These modifications ensure continued worldwide deployment capability and safe operations. Lastly, this line supports future modifications in service.

The overall EMARSS procurement/modernization efforts are found in the following two lines; AZ2054 EMARSS Payloads (Aircraft Procurement Army (APA) Military Intelligence Program (MIP) P-1 Line #18) line provides for sensors and A02112 EMARSS SEMA Mods (Aircraft Procurement Army (APA) Military Intelligence Program (MIP) P-1 Line #23) provides for aircraft modifications. Separate funding lines support the Army Acquisition Executive's directive, codified in the October 28, 2011 memorandum, to assign overall acquisition lead for manned airborne intelligence systems to Program Executive Officer for Aviation; and overall sensor, processing, exploitation, and dissemination responsibilities to Program Executive Officer for Intelligence, Electronic Warfare, and Sensors.

Secondary Distribution	FY 2020	FY 2021	FY 2022 Base	FY 2022 OCO	FY 2022 Total	FY 2023	FY 2024	FY 2025	FY 2026
Army									
Quantity	-	-	-	-	-	-	-	-	-
Total Obligation Authority	43.139	28.912	1.568	-	1.568	-	-	-	-

UNCLASSIFIED

Exhibit P-40, Budget Line Item Justification: PB 2022 Army **Date:** May 2021

Appropriation / Budget Activity / Budget Sub Activity: 2031A: Aircraft Procurement, Army / BA 02: Modification of Aircraft / BSA 10: Modification of Aircraft	P-1 Line Item Number / Title: 3405A02112 / EMARSS SEMA MODS
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ID Code (A=Service Ready, B=Not Service Ready):	Program Elements for Code B Items: N/A	Other Related Program Elements: N/A
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Line Item MDAP/MAIS Code: N/A

Secondary Distribution		FY 2020	FY 2021	FY 2022 Base	FY 2022 OCO	FY 2022 Total	FY 2023	FY 2024	FY 2025	FY 2026
Total:	Quantity	-	-	-	-	-	-	-	-	-
Secondary Distribution	Total Obligation Authority	43.139	28.912	1.568	-	1.568	-	-	-	-

Justification:
 FY22 Base Procurement dollars in the amount of \$1.568 million supports modifications in service, such as the procurement of Mission Enhancement Kits (MEK). Mission Enhancement kits include PT6A-67A engines, light weight composite propellers, light weight lithium ion batteries and anti-lock braking system which are designed to increase endurance, increase safety, and reduce risk in the extreme environmental conditions of high altitude combined with hot temperature conditions. Mission Enhancement Kits will increase operational capability by allowing the aircraft to carry more fuel, which equates to more time on station. Modifications in service also include modernized avionics, such as Assured Position, Navigation and Timing (A-PNT), cockpit management unit, Blue Force Tracking-Aviation (BFT-AVN) to BFT-2 conversion, APX-123 Transponder to APX-119 Transponder and Aircraft Survivability Equipment (ASE) integration.

All COMPO 1 Active. 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.

UNCLASSIFIED

Exhibit P-40, Budget Line Item Justification: PB 2022 Army **Date:** May 2021

Appropriation / Budget Activity / Budget Sub Activity: 2031A: Aircraft Procurement, Army / BA 02: Modification of Aircraft / BSA 10: Modification of Aircraft	P-1 Line Item Number / Title: 4194AA0270 / Utility/Cargo Airplane Mods
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ID Code (A=Service Ready, B=Not Service Ready):	Program Elements for Code B Items: N/A	Other Related Program Elements: N/A
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Line Item MDAP/MAIS Code: N/A

Resource Summary	Prior Years	FY 2020	FY 2021	FY 2022 Base	FY 2022 OCO	FY 2022 Total	FY 2023	FY 2024	FY 2025	FY 2026	To Complete	Total
Procurement Quantity (<i>Units in Each</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost (<i>\$ in Millions</i>)	385.839	21.838	13.868	8.530	-	8.530	-	-	-	-	-	-
Less PY Advance Procurement (<i>\$ in Millions</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) (<i>\$ in Millions</i>)	385.839	21.838	13.868	8.530	-	8.530	-	-	-	-	-	-
Plus CY Advance Procurement (<i>\$ in Millions</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Total Obligation Authority (<i>\$ in Millions</i>)	385.839	21.838	13.868	8.530	-	8.530	-	-	-	-	-	-

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

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

Description:

The budget line supports the updates and modernization of Army Fixed Wing Aircraft communication, navigation, surveillance, survivability equipment, and Department of Defense (DoD) mandated safety equipment to current and evolving international and Army standards. The budget line provides for the procurement of replacement and spare engines for Fixed Wing Aircraft. In addition, it provides for the procurement and associated testing of civil and military aircraft modification equipment. This budget line will also be used to modify Fixed Wing Aircraft to include Engineer, Furnish and Install (EF&I) of modifications as a complete contractual effort. It also leverages Federal Aviation Administration (FAA) supplemental type certificates (STC) that are already in existence and applies STCs to aircraft modifications. These modifications ensure continued worldwide deployment capability and safe operations. This Procurement line funds aircraft modifications for all three (3) Compos; Active, Army National Guard, and Army Reserve.

Secondary Distribution	FY 2020	FY 2021	FY 2022 Base	FY 2022 OCO	FY 2022 Total	FY 2023	FY 2024	FY 2025	FY 2026
Army	Quantity	-	-	-	-	-	-	-	-
	Total Obligation Authority	21.838	10.397	8.530	-	8.530	-	-	-
ANG	Quantity	-	-	-	-	-	-	-	-
	Total Obligation Authority	-	3.471	-	-	-	-	-	-
Total: Secondary Distribution	Quantity	-	-	-	-	-	-	-	-
	Total Obligation Authority	21.838	13.868	8.530	-	8.530	-	-	-

UNCLASSIFIED

Exhibit P-40, Budget Line Item Justification: PB 2022 Army **Date:** May 2021

Appropriation / Budget Activity / Budget Sub Activity: 2031A: Aircraft Procurement, Army / BA 02: Modification of Aircraft / BSA 10: Modification of Aircraft	P-1 Line Item Number / Title: 4194AA0270 / Utility/Cargo Airplane Mods
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ID Code (A=Service Ready, B=Not Service Ready):	Program Elements for Code B Items: N/A	Other Related Program Elements: N/A
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Line Item MDAP/MAIS Code: N/A

Exhibits Schedule					Prior Years	FY 2020	FY 2021	FY 2022 Base	FY 2022 OCO	FY 2022 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	AA0270 / Utility/Cargo Airplane Mods (Rationalization, Standardization, Interoperability, Compatibility, Simplification)				- / 385.839	- / 21.838	- / 13.868	- / 8.530	- / -	- / 8.530
P-40	Total Gross/Weapon System Cost				- / 385.839	- / 21.838	- / 13.868	- / 8.530	- / -	- / 8.530

*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:
 FY 2022 Direct War funding in the amount of \$8.530 million supports modification of the Fixed Wing Aircraft to include Communications, Navigation and Surveillance (CNS) and Aircraft Survivability Equipment (ASE) and future integration efforts supporting survivability in the Multi-Domain Operations (MDO) environment.

In addition, equipment included in the modifications will enhance the safety of passengers and crew. The upgrades will also permit the Army Fixed Wing Aircraft to operate in compliance with other existing and emerging regulations. As requirement for new avionics equipment continue, aircraft delays and airspace exclusions are likely for aircraft not properly equipped. Upgrade of communication and navigation systems will enhance reliability and maintainability, thereby improving aircraft availability for mission requirements. The associated aircraft modifications will assure worldwide deployability for those required to deploy. This Procurement line funds aircraft modifications for all three (3) Compos; Active, Army National Guard, and Army Reserve.

Average unit cost on the P-3a are variable and dependent upon aircraft selection and requirements.

Comments:
 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.

UNCLASSIFIED

Exhibit P-3a, Individual Modification: PB 2022 Army		Date: May 2021
Appropriation / Budget Activity / Budget Sub Activity: 2031A / 02 / 10	P-1 Line Item Number / Title: 4194AA0270 / Utility/Cargo Airplane Mods	Modification Number / Title: AA0270 / Utility/Cargo Airplane Mods

ID Code (A=Service Ready, B=Not Service Ready) :	MDAP/MAIS Code:
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Resource Summary	Prior Years	FY 2020	FY 2021	FY 2022 Base	FY 2022 OCO	FY 2022 Total
Procurement Quantity (<i>Units in Each</i>)	-	-	-	-	-	-
Gross/Weapon System Cost (<i>\$ in Millions</i>)	385.839	21.838	13.868	8.530	-	8.530
Less PY Advance Procurement (<i>\$ in Millions</i>)	-	-	-	-	-	-
Net Procurement (P-1) (<i>\$ in Millions</i>)	385.839	21.838	13.868	8.530	-	8.530
Plus CY Advance Procurement (<i>\$ in Millions</i>)	-	-	-	-	-	-
Total Obligation Authority (<i>\$ in Millions</i>)	385.839	21.838	13.868	8.530	-	8.530

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

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

Description:

The budget line supports the updates and modernization of Army Fixed Wing Aircraft communication, navigation, surveillance, survivability equipment, and Department of Defense (DoD) mandated safety equipment to current and evolving international and Army standards. The budget line provides for the procurement of replacement and spare engines for fixed wing aircraft. In addition, it provides for the procurement and associated testing of civil and military aircraft modification equipment. This budget line will also be used to modify fixed wing aircraft to include Engineer, Furnish and Install (EF&I) of modifications as a complete contractual effort. It also leverages Federal Aviation Administration (FAA) supplemental type certificates (STC) that are already in existence and applies STCs to aircraft modifications. These modifications ensure continued worldwide deployment capability and safe operations. This Procurement line funds aircraft modifications for all three (3) Compos; Active, Army National Guard, and Army Reserve.

Average unit cost on the P-3a are variable and dependent upon aircraft selection and requirements.

Secondary Distribution		FY 2020	FY 2021	FY 2022 Base	FY 2022 OCO	FY 2022 Total
Army	Quantity	-	-	-	-	-
	Total Obligation Authority	21.838	10.397	8.530	-	8.530
ANG	Quantity	-	-	-	-	-
	Total Obligation Authority	-	3.471	-	-	-
Total:	Quantity	-	-	-	-	-
Secondary Distribution	Total Obligation Authority	21.838	13.868	8.530	-	8.530

UNCLASSIFIED

Exhibit P-3a, Individual Modification: PB 2022 Army						Date: May 2021	
Appropriation / Budget Activity / Budget Sub Activity: 2031A / 02 / 10			P-1 Line Item Number / Title: 4194AA0270 / Utility/Cargo Airplane Mods			Modification Number / Title: AA0270 / Utility/Cargo Airplane Mods	
ID Code (A=Service Ready, B=Not Service Ready) :				MDAP/MAIS Code:			
Models of Systems Affected: All series Army fixed wing aircraft			Modification Type: Rationalization, Standardization, Interoperability, Compatibility, Simplification			Related RDT&E PEs:	
Financial Plan	Prior Years	FY 2020	FY 2021	FY 2022 Base	FY 2022 OCO	FY 2022 Total	
	Qty (Each) / Total Cost (\$ M)	Qty (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							
<i>Modification Item 1 of 1: Fixed Wing Aircraft Modifications</i>							
A Kits							
Recurring							
Installation Kits	329 / 229.257	10 / 12.158	8 / 6.272	- / -	- / -	- / -	
Data	- / 1.914	- / 0.119	- / 0.070	- / -	- / -	- / -	
Program Management	- / 4.527	- / 1.315	- / 1.179	- / -	- / -	- / -	
Modifications in Service	- / -	- / -	- / -	- / 8.530	- / -	- / 8.530	
<i>Subtotal: Recurring</i>	<i>329 / 235.698</i>	<i>10 / 13.592</i>	<i>8 / 7.521</i>	<i>- / 8.530</i>	<i>- / -</i>	<i>- / 8.530</i>	
<i>Subtotal: Fixed Wing Aircraft Modifications</i>	<i>329 / 235.698</i>	<i>10 / 13.592</i>	<i>8 / 7.521</i>	<i>- / 8.530</i>	<i>- / -</i>	<i>- / 8.530</i>	
<i>Subtotal: Procurement, All Modification Items</i>	<i>329 / 235.698</i>	<i>10 / 13.592</i>	<i>8 / 7.521</i>	<i>- / 8.530</i>	<i>- / -</i>	<i>- / 8.530</i>	
Installation							
<i>Modification Item 1 of 1: Fixed Wing Aircraft Modifications</i>							
<i>Subtotal: Installation</i>	<i>329 / 150.141</i>	<i>10 / 8.246</i>	<i>8 / 6.347</i>	<i>- / -</i>	<i>- / -</i>	<i>- / -</i>	
Total							
Total Cost (Procurement + Support + Installation)	385.839	21.838	13.868	8.530	-	8.530	

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Exhibit P-3a, Individual Modification: PB 2022 Army							Date: May 2021						
Appropriation / Budget Activity / Budget Sub Activity: 2031A / 02 / 10				P-1 Line Item Number / Title: 4194AA0270 / Utility/Cargo Airplane Mods				Modification Number / Title: AA0270 / Utility/Cargo Airplane Mods					
ID Code (A=Service Ready, B=Not Service Ready) :							MDAP/MAIS Code:						
Modification Item 1 of 1: Fixed Wing Aircraft Modifications													
Manufacturer Information													
Manufacturer Name: Multiple Commercial Vendors							Manufacturer Location: TBD						
Administrative Leadtime (in Months): 2							Production Leadtime (in Months): 6						
Dates		FY 2020				FY 2021				FY 2022			
Contract Dates		Dec 2019				Dec 2020							
Delivery Dates		Jun 2020				Jun 2021							
Installation Information													
Method of Implementation: Contractor													
Installation Cost		Prior Years		FY 2020		FY 2021		FY 2022 Base		FY 2022 OCO		FY 2022 Total	
		Qty (Each) / Total Cost (\$ M)		Qty (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		329 / 150.141		- / -		- / -		- / -		- / -		- / -	
FY 2020		- / -		10 / 8.246		- / -		- / -		- / -		- / -	
FY 2021		- / -		- / -		8 / 6.347		- / -		- / -		- / -	
FY 2022		0 / 0.000		- / -		- / -		- / -		- / -		- / -	
Total		329 / 150.141		10 / 8.246		8 / 6.347		- / -		- / -		- / -	
Installation Schedule													
	PYS	FY 2020				FY 2021				FY 2022			
		Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4
In	329	2	2	3	3	2	2	2	2	-	-	-	-
Out	326	3	2	2	3	3	2	2	2	2	-	-	-

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Exhibit P-40, Budget Line Item Justification: PB 2022 Army **Date:** May 2021

Appropriation / Budget Activity / Budget Sub Activity: 2031A: Aircraft Procurement, Army / BA 02: Modification of Aircraft / BSA 10: Modification of Aircraft	P-1 Line Item Number / Title: 6949AA0480 / Utility Helicopter Mods
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ID Code (A=Service Ready, B=Not Service Ready):	Program Elements for Code B Items: N/A	Other Related Program Elements: N/A
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Line Item MDAP/MAIS Code: N/A

Resource Summary	Prior Years	FY 2020	FY 2021	FY 2022 Base	FY 2022 OCO	FY 2022 Total	FY 2023	FY 2024	FY 2025	FY 2026	To Complete	Total
Procurement Quantity (<i>Units in Each</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost (<i>\$ in Millions</i>)	1,679.761	16.744	40.842	15.826	-	15.826	-	-	-	-	-	-
Less PY Advance Procurement (<i>\$ in Millions</i>)	13.500	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) (<i>\$ in Millions</i>)	1,666.261	16.744	40.842	15.826	-	15.826	-	-	-	-	-	-
Plus CY Advance Procurement (<i>\$ in Millions</i>)	13.500	-	-	-	-	-	-	-	-	-	-	-
Total Obligation Authority (<i>\$ in Millions</i>)	1,679.761	16.744	40.842	15.826	-	15.826	-	-	-	-	-	-

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

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

Description:

Utility Helicopter Mods include modifications to the UH-60 Black Hawk and the UH-72A Lakota helicopters. The UH-60 Black Hawk helicopter is the Army's utility helicopter for the near and midterm force. It is a twin engine, single rotor, four bladed utility helicopter used for air assault, general support, command & control, and aero-medical evacuations (MEDEVAC). The UH-60 is joint force capable, providing 24 hour/day support including operations at night and in adverse weather conditions. The UH-60 is designed to carry a crew of four plus eleven combat equipped troops or an external load up to 9,000 pounds. The UH-60 Black Hawk was fielded in 1978 as a replacement for the UH-1. From 1978 to 1988, UH-60As were produced. In 1989 production of UH-60Ls with improved engines and drive train began. In 2007, full rate production of UH-60Ms began which provided a digital cockpit, digital Flight Management System (FMS), improved engine, and wide-cord main rotor blades. The UH-72A Lakota helicopter provides general aviation support for aviation units in the active and reserve components.

Secondary Distribution	FY 2020	FY 2021	FY 2022 Base	FY 2022 OCO	FY 2022 Total	FY 2023	FY 2024	FY 2025	FY 2026
Army	Quantity	-	-	-	-	-	-	-	-
	Total Obligation Authority	16.744	40.842	15.826	-	15.826	-	-	-
Total: Secondary Distribution	Quantity	-	-	-	-	-	-	-	-
	Total Obligation Authority	16.744	40.842	15.826	-	15.826	-	-	-

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Exhibit P-40, Budget Line Item Justification: PB 2022 Army **Date:** May 2021

Appropriation / Budget Activity / Budget Sub Activity:
2031A: Aircraft Procurement, Army / BA 02: Modification of Aircraft / BSA 10: Modification of Aircraft

P-1 Line Item Number / Title:
6949AA0480 / Utility Helicopter Mods

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

Line Item MDAP/MAIS Code: N/A

Exhibits Schedule					Prior Years	FY 2020	FY 2021	FY 2022 Base	FY 2022 OCO	FY 2022 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	AA0492 / UTILITY HELICOPTER MODS (Operational)				- / 1,679.761	- / 16.744	- / 40.842	- / 15.826	- / -	- / 15.826
P-40	Total Gross/Weapon System Cost				- / 1,679.761	- / 16.744	- / 40.842	- / 15.826	- / -	- / 15.826

*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:

FY22 Base Procurement dollars in the amount of \$14.568 million will procure and install Upturned Exhaust Systems I/II (UES I/II). The Upturned Exhaust System I/II (UES I/II) provides a Safety, Reliability, Maintainability, and reduced Weight improvement over the current UES design. It also provides the following benefits: Substantial reductions in IR signature to counter emerging threats; Common hardware across all H-60 platforms; and 100% organic reparability.

FY22 Base Procurement dollars in the amount of \$1.258 million will procure 60 kVA Generators. The UH-60L/M/V 60kVA generator provides additional power for future systems such as Common Infrared Countermeasure (CIRCM), Degraded Visual Environment (DVE), and the Future Waveform Radio.

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.

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Exhibit P-3a, Individual Modification: PB 2022 Army		Date: May 2021
Appropriation / Budget Activity / Budget Sub Activity: 2031A / 02 / 10	P-1 Line Item Number / Title: 6949AA0480 / Utility Helicopter Mods	Modification Number / Title: AA0492 / UTILITY HELICOPTER MODS

ID Code (A=Service Ready, B=Not Service Ready) :			MDAP/MAIS Code:			
Resource Summary	Prior Years	FY 2020	FY 2021	FY 2022 Base	FY 2022 OCO	FY 2022 Total
Procurement Quantity (<i>Units in Each</i>)	-	-	-	-	-	-
Gross/Weapon System Cost (<i>\$ in Millions</i>)	1,679.761	16.744	40.842	15.826	-	15.826
Less PY Advance Procurement (<i>\$ in Millions</i>)	13.500	-	-	-	-	-
Net Procurement (P-1) (<i>\$ in Millions</i>)	1,666.261	16.744	40.842	15.826	-	15.826
Plus CY Advance Procurement (<i>\$ in Millions</i>)	13.500	-	-	-	-	-
Total Obligation Authority (<i>\$ in Millions</i>)	1,679.761	16.744	40.842	15.826	-	15.826
<i>(The following Resource Summary rows are for informational purposes only. The corresponding budget requests are documented elsewhere.)</i>						
Initial Spares (<i>\$ in Millions</i>)	-	-	-	-	-	-
Gross/Weapon System Unit Cost (<i>\$ in Thousands</i>)	-	-	-	-	-	-

Description:

FY22 Base Procurement dollars in the amount of \$14.568 million will procure and install Upturned Exhaust Systems I/II (UES I/II). The Upturned Exhaust System I/II (UES I/II) provides a Safety, Reliability, Maintainability, and reduced Weight improvement over the current UES design. It also provides the following benefits: Substantial reductions in IR signature to counter emerging threats; Common hardware across all H-60 platforms; and 100% organic reparability.

FY22 Base Procurement dollars in the amount of \$1.258 million will procure 60 kVA Generators. The UH-60L/M/V 60kVA generator provides additional power for future systems such as Common Infrared Countermeasure (CIRCM), Degraded Visual Environment (DVE), and the Future Waveform Radio.

Secondary Distribution		FY 2020	FY 2021	FY 2022 Base	FY 2022 OCO	FY 2022 Total
Army	Quantity	-	-	-	-	-
	Total Obligation Authority	16.744	40.842	15.826	-	15.826
Total:	Quantity	-	-	-	-	-
Secondary Distribution	Total Obligation Authority	16.744	40.842	15.826	-	15.826

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Exhibit P-3a, Individual Modification: PB 2022 Army						Date: May 2021	
Appropriation / Budget Activity / Budget Sub Activity: 2031A / 02 / 10			P-1 Line Item Number / Title: 6949AA0480 / Utility Helicopter Mods			Modification Number / Title: AA0492 / UTILITY HELICOPTER MODS	
ID Code (A=Service Ready, B=Not Service Ready) :					MDAP/MAIS Code:		
Models of Systems Affected: UH-60, UH-72			Modification Type: Operational			Related RDT&E PEs:	
Financial Plan	Prior Years	FY 2020	FY 2021	FY 2022 Base	FY 2022 OCO	FY 2022 Total	
	Qty (Each) / Total Cost (\$ M)	Qty (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 11: UH-60A to UH-60L Conversion							
A Kits							
Recurring							
other	276 / 379.162	- / -	- / -	- / -	- / -	- / -	
Subtotal: Recurring	276 / 379.162	- / -	- / -	- / -	- / -	- / -	
Non-Recurring							
other	- / 1970.656	- / -	- / -	- / -	- / -	- / -	
Subtotal: Non-Recurring	- / 1970.656	- / -	- / -	- / -	- / -	- / -	
Subtotal: UH-60A to UH-60L Conversion	276 / 1,349.818	- / -	- / -	- / -	- / -	- / -	
Modification Item 2 of 11: External High Speed Hoist							
A Kits							
Recurring							
Other	285 / 82.321	- / -	- / -	- / -	- / -	- / -	
Subtotal: Recurring	285 / 82.321	- / -	- / -	- / -	- / -	- / -	
Subtotal: External High Speed Hoist	285 / 82.321	- / -	- / -	- / -	- / -	- / -	
Modification Item 3 of 11: Backup Altitude Indicators							
A Kits							
Recurring							
Kit Quantity	265 / 14.000	- / -	- / -	- / -	- / -	- / -	
Subtotal: Recurring	265 / 14.000	- / -	- / -	- / -	- / -	- / -	
Subtotal: Backup Altitude Indicators	265 / 14.000	- / -	- / -	- / -	- / -	- / -	
Modification Item 4 of 11: Crashworthy External Fuel System (CEFS)							
A Kits							
Recurring							
A-Kits (A/L)	822 / 45.857	- / -	- / -	- / -	- / -	- / -	
A-Kits (GFE to Production)	32 / 2.599	- / -	- / -	- / -	- / -	- / -	
A-Kits (GFE to SAR Acft)	10 / 0.600	- / -	- / -	- / -	- / -	- / -	
B-kits	431 / 56.200	- / -	- / -	- / -	- / -	- / -	
Support Equipment/Other	- / 34.563	- / -	- / -	- / -	- / -	- / -	
Subtotal: Recurring	1,295 / 139.819	- / -	- / -	- / -	- / -	- / -	

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Exhibit P-3a, Individual Modification: PB 2022 Army					Date: May 2021		
Appropriation / Budget Activity / Budget Sub Activity: 2031A / 02 / 10			P-1 Line Item Number / Title: 6949AA0480 / Utility Helicopter Mods			Modification Number / Title: AA0492 / UTILITY HELICOPTER MODS	
ID Code (A=Service Ready, B=Not Service Ready) :				MDAP/MAIS Code:			
Models of Systems Affected: UH-60, UH-72		Modification Type: Operational			Related RDT&E PEs:		
Financial Plan	Prior Years	FY 2020	FY 2021	FY 2022 Base	FY 2022 OCO	FY 2022 Total	
	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	
<i>Subtotal: Crashworthy External Fuel System (CEFS)</i>	1,295 / 139.819	- / -	- / -	- / -	- / -	- / -	
Modification Item 5 of 11: Engine Inlet Barrier Filter (EIBF)							
A Kits							
Recurring							
EIBF A-Kit	30 / 0.840	- / -	- / -	- / -	- / -	- / -	
<i>Subtotal: Recurring</i>	30 / 0.840	- / -	- / -	- / -	- / -	- / -	
B Kits							
Recurring							
EIBF B-Kit	50 / 5.500	- / -	- / -	- / -	- / -	- / -	
<i>Subtotal: Recurring</i>	50 / 5.500	- / -	- / -	- / -	- / -	- / -	
<i>Subtotal: Engine Inlet Barrier Filter (EIBF)</i>	80 / 6.340	- / -	- / -	- / -	- / -	- / -	
Modification Item 6 of 11: Enhanced Ballistic Armor Protection System (EBAPS)							
A Kits							
Recurring							
EBAPs Kit	227 / 20.640	77 / 10.000	71 / 10.000	- / -	- / -	- / -	
Other	- / 15.000	- / -	- / -	- / -	- / -	- / -	
<i>Subtotal: Recurring</i>	227 / 25.640	77 / 10.000	71 / 10.000	- / -	- / -	- / -	
<i>Subtotal: Enhanced Ballistic Armor Protection System (EBAPS)</i>	227 / 25.640	77 / 10.000	71 / 10.000	- / -	- / -	- / -	
Modification Item 7 of 11: UH-72 Sustainability Improvements							
A Kits							
Non-Recurring							
UH-72 Sustainability Improvements	- / 10.000	- / -	- / -	- / -	- / -	- / -	
<i>Subtotal: Non-Recurring</i>	- / 10.000	- / -	- / -	- / -	- / -	- / -	
<i>Subtotal: UH-72 Sustainability Improvements</i>	- / 10.000	- / -	- / -	- / -	- / -	- / -	
Modification Item 8 of 11: UH-60M Weight Reduction - Tail Rotor System Design							
A Kits							
Non-Recurring							
UH-60M Weight Reduction Tail Rotor Desig	- / 16.000	- / -	- / 15.000	- / -	- / -	- / -	
<i>Subtotal: Non-Recurring</i>	- / 16.000	- / -	- / 15.000	- / -	- / -	- / -	

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Exhibit P-3a, Individual Modification: PB 2022 Army					Date: May 2021	
Appropriation / Budget Activity / Budget Sub Activity: 2031A / 02 / 10			P-1 Line Item Number / Title: 6949AA0480 / Utility Helicopter Mods		Modification Number / Title: AA0492 / UTILITY HELICOPTER MODS	
ID Code (A=Service Ready, B=Not Service Ready) :				MDAP/MAIS Code:		
Models of Systems Affected: UH-60, UH-72		Modification Type: Operational			Related RDT&E PEs:	
Financial Plan	Prior Years	FY 2020	FY 2021	FY 2022 Base	FY 2022 OCO	FY 2022 Total
	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)
<i>Subtotal: UH-60M Weight Reduction - Tail Rotor System Design</i>	- / 6.000	- / -	- / 5.000	- / -	- / -	- / -
Modification Item 9 of 11: Electronic Standby Instrument System (ESIS)						
A Kits						
Recurring						
A Kit Recurring	33 / 4.877	- / -	- / -	- / -	- / -	- / -
<i>Subtotal: Recurring</i>	33 / 4.877	- / -	- / -	- / -	- / -	- / -
B Kits						
Recurring						
B Kit Recurring	26 / 4.804	- / -	- / -	- / -	- / -	- / -
<i>Subtotal: Recurring</i>	26 / 4.804	- / -	- / -	- / -	- / -	- / -
<i>Subtotal: Electronic Standby Instrument System (ESIS)</i>	59 / 9.681	- / -	- / -	- / -	- / -	- / -
Modification Item 10 of 11: Generators 60 kVA						
A Kits						
Recurring						
Generator A-Kits	- / -	- / -	38 / 0.359	8 / 0.078	- / -	8 / 0.078
<i>Subtotal: Recurring</i>	- / -	- / -	38 / 0.359	8 / 0.078	- / -	8 / 0.078
B Kits						
Recurring						
Generator B-Kits	90 / 12.615	- / -	38 / 5.181	8 / 1.113	- / -	8 / 1.113
<i>Subtotal: Recurring</i>	90 / 12.615	- / -	38 / 5.181	8 / 1.113	- / -	8 / 1.113
<i>Subtotal: Generators 60 kVA</i>	90 / 12.615	- / -	76 / 5.540	16 / 1.191	- / -	16 / 1.191
Modification Item 11 of 11: Upturned Exhaust System I and II (UES I/II)						
B Kits						
Recurring						
UES I B Kit Recurring	- / -	- / -	26 / 5.091	- / -	- / -	- / -
UES II B Kit Recurring	- / -	- / -	32 / 8.377	50 / 13.299	- / -	50 / 13.299
<i>Subtotal: Recurring</i>	- / -	- / -	58 / 13.468	50 / 13.299	- / -	50 / 13.299
Non-Recurring						
UES I B Kit Non-Recurring	- / 1.000	- / -	- / -	- / -	- / -	- / -
<i>Subtotal: Non-Recurring</i>	- / 1.000	- / -	- / -	- / -	- / -	- / -

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Exhibit P-3a, Individual Modification: PB 2022 Army						Date: May 2021	
Appropriation / Budget Activity / Budget Sub Activity: 2031A / 02 / 10			P-1 Line Item Number / Title: 6949AA0480 / Utility Helicopter Mods			Modification Number / Title: AA0492 / UTILITY HELICOPTER MODS	
ID Code (A=Service Ready, B=Not Service Ready) :					MDAP/MAIS Code:		
Models of Systems Affected: UH-60, UH-72			Modification Type: Operational			Related RDT&E PEs:	
Financial Plan	Prior Years	FY 2020	FY 2021	FY 2022 Base	FY 2022 OCO	FY 2022 Total	
	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)
<i>Subtotal: Upturned Exhaust System I and II (UES I/II)</i>	- / 1.000	- / -	58 / 13.468	50 / 13.299	- / -	50 / 13.299	
<i>Subtotal: Procurement, All Modification Items</i>	2,577 / 1,657.234	77 / 10.000	205 / 34.008	66 / 14.490	- / -	66 / 14.490	
Installation							
Modification Item 4 of 11: Crashworthy External Fuel System (CEFS)	431 / 6.279	- / -	- / -	- / -	- / -	- / -	- / -
Modification Item 5 of 11: Engine Inlet Barrier Filter (EIBF)	30 / 3.513	- / -	- / -	- / -	- / -	- / -	- / -
Modification Item 9 of 11: Electronic Standby Instrument System (ESIS)	162 / 12.735	84 / 6.744	62 / 5.076	- / -	- / -	- / -	- / -
Modification Item 10 of 11: Generators 60 kVA	- / -	- / -	38 / 0.315	8 / 0.067	- / -	8 / 0.067	
Modification Item 11 of 11: Upturned Exhaust System I and II (UES I/II)	- / -	- / -	58 / 1.443	50 / 1.269	- / -	50 / 1.269	
<i>Subtotal: Installation</i>	623 / 22.527	84 / 6.744	158 / 6.834	58 / 1.336	- / -	58 / 1.336	
Total							
Total Cost (Procurement + Support + Installation)	1,679.761	16.744	40.842	15.826	-	15.826	

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Exhibit P-3a, Individual Modification: PB 2022 Army		Date: May 2021	
Appropriation / Budget Activity / Budget Sub Activity: 2031A / 02 / 10		P-1 Line Item Number / Title: 6949AA0480 / Utility Helicopter Mods	
Modification Number / Title: AA0492 / UTILITY HELICOPTER MODS			
ID Code (A=Service Ready, B=Not Service Ready) :		MDAP/MAIS Code:	
Modification Item 1 of 11: UH-60A to UH-60L Conversion			
Manufacturer Information			
Manufacturer Name: Corpus Christi Army Depot		Manufacturer Location: Corpus Christi, TX	
Administrative Leadtime (in Months):		Production Leadtime (in Months):	
Dates	FY 2020	FY 2021	FY 2022
Contract Dates			
Delivery Dates			
Installation Information			
Method of Implementation (Organic): Depot		Installation Quantity: 0	

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Exhibit P-3a, Individual Modification: PB 2022 Army		Date: May 2021	
Appropriation / Budget Activity / Budget Sub Activity: 2031A / 02 / 10		P-1 Line Item Number / Title: 6949AA0480 / Utility Helicopter Mods	
Modification Number / Title: AA0492 / UTILITY HELICOPTER MODS			
ID Code (A=Service Ready, B=Not Service Ready) :		MDAP/MAIS Code:	
Modification Item 2 of 11: External High Speed Hoist			
Manufacturer Information			
Manufacturer Name: Breeze Eastern, Inc		Manufacturer Location: Whippany, NJ	
Administrative Leadtime (in Months):		Production Leadtime (in Months):	
Dates	FY 2020	FY 2021	FY 2022
Contract Dates			
Delivery Dates			
Installation Information			
Method of Implementation (Organic): Organic		Installation Quantity: 0	

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Exhibit P-3a, Individual Modification: PB 2022 Army		Date: May 2021	
Appropriation / Budget Activity / Budget Sub Activity: 2031A / 02 / 10		P-1 Line Item Number / Title: 6949AA0480 / Utility Helicopter Mods	
Modification Number / Title: AA0492 / UTILITY HELICOPTER MODS			
ID Code (A=Service Ready, B=Not Service Ready) :		MDAP/MAIS Code:	
Modification Item 3 of 11: Backup Altitude Indicators			
Manufacturer Information			
Manufacturer Name: PIF		Manufacturer Location: Redstone Arsenal, AL	
Administrative Leadtime (in Months):		Production Leadtime (in Months):	
Dates	FY 2020	FY 2021	FY 2022
Contract Dates			
Delivery Dates			
Installation Information			
Method of Implementation (Organic): Organic		Installation Quantity: 0	

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Exhibit P-3a, Individual Modification: PB 2022 Army	Date: May 2021
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Appropriation / Budget Activity / Budget Sub Activity: 2031A / 02 / 10	P-1 Line Item Number / Title: 6949AA0480 / Utility Helicopter Mods	Modification Number / Title: AA0492 / UTILITY HELICOPTER MODS
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ID Code (A=Service Ready, B=Not Service Ready) :	MDAP/MAIS Code:
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Modification Item 4 of 11: Crashworthy External Fuel System (CEFS)

Manufacturer Information

Manufacturer Name: Robertson Fuel Systems, LLC	Manufacturer Location: Tempe, AZ
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Administrative Leadtime (in Months):	Production Leadtime (in Months):
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	FY 2020	FY 2021	FY 2022
Dates			
Contract Dates			
Delivery Dates			

Installation Information

Method of Implementation: Organic

Installation Cost	Prior Years	FY 2020	FY 2021	FY 2022 Base	FY 2022 OCO	FY 2022 Total
	Qty (Each) / Total Cost (\$ M)	Qty (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	431 / 6.279	- / -	- / -	- / -	- / -	- / -
FY 2020	0 / 0.000	- / -	- / -	- / -	- / -	- / -
FY 2021	0 / 0.000	- / -	- / -	- / -	- / -	- / -
FY 2022	0 / 0.000	- / -	- / -	- / -	- / -	- / -
Total	431 / 6.279	- / -	- / -	- / -	- / -	- / -

Installation Schedule

	PYS	FY 2020				FY 2021				FY 2022			
		Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4
In	431	-	-	-	-	-	-	-	-	-	-	-	-
Out	431	-	-	-	-	-	-	-	-	-	-	-	-

UNCLASSIFIED

Exhibit P-3a, Individual Modification: PB 2022 Army		Date: May 2021
Appropriation / Budget Activity / Budget Sub Activity: 2031A / 02 / 10	P-1 Line Item Number / Title: 6949AA0480 / Utility Helicopter Mods	Modification Number / Title: AA0492 / UTILITY HELICOPTER MODS

ID Code (A=Service Ready, B=Not Service Ready) :	MDAP/MAIS Code:
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Modification Item 5 of 11: Engine Inlet Barrier Filter (EIBF)

Manufacturer Information

Manufacturer Name: Donaldson Aerospace & Defense		Manufacturer Location: Chesterfield, MO	
Administrative Leadtime (in Months): 1		Production Leadtime (in Months): 12	
Dates	FY 2020	FY 2021	FY 2022
Contract Dates			
Delivery Dates			

Installation Information

Method of Implementation: Various

Installation Cost	Prior Years	FY 2020	FY 2021	FY 2022 Base	FY 2022 OCO	FY 2022 Total
	Qty (Each) / Total Cost (\$ M)	Qty (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	- / -	- / -	- / -	- / -	- / -
FY 2020	30 / 3.513	- / -	- / -	- / -	- / -	- / -
FY 2021	0 / 0.000	- / -	- / -	- / -	- / -	- / -
FY 2022	0 / 0.000	- / -	- / -	- / -	- / -	- / -
Total	30 / 3.513	- / -	- / -	- / -	- / -	- / -

Installation Schedule

	PYS	FY 2020				FY 2021				FY 2022			
		Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4
In	1	-	-	-	-	-	-	-	-	-	-	-	-
Out	1	-	-	-	-	-	-	-	-	-	-	-	-

UNCLASSIFIED

Exhibit P-3a, Individual Modification: PB 2022 Army		Date: May 2021	
Appropriation / Budget Activity / Budget Sub Activity: 2031A / 02 / 10		P-1 Line Item Number / Title: 6949AA0480 / Utility Helicopter Mods	
Modification Number / Title: AA0492 / UTILITY HELICOPTER MODS			
ID Code (A=Service Ready, B=Not Service Ready) :		MDAP/MAIS Code:	
Modification Item 6 of 11: Enhanced Ballistic Armor Protection System (EBAPS)			
Manufacturer Information			
Manufacturer Name: The Protective Group, Inc.		Manufacturer Location: Miami Lakes, FL	
Administrative Leadtime (in Months):		Production Leadtime (in Months):	
Dates	FY 2020	FY 2021	FY 2022
Contract Dates			
Delivery Dates			
Installation Information			
Method of Implementation (Organic): Organic		Installation Quantity: 0	

UNCLASSIFIED

Exhibit P-3a, Individual Modification: PB 2022 Army		Date: May 2021	
Appropriation / Budget Activity / Budget Sub Activity: 2031A / 02 / 10		P-1 Line Item Number / Title: 6949AA0480 / Utility Helicopter Mods	
Modification Number / Title: AA0492 / UTILITY HELICOPTER MODS			
ID Code (A=Service Ready, B=Not Service Ready) :		MDAP/MAIS Code:	
Modification Item 7 of 11: UH-72 Sustainability Improvements			
Manufacturer Information			
Manufacturer Name: Undetermined		Manufacturer Location: Undetermined	
Administrative Leadtime (in Months):		Production Leadtime (in Months):	
Dates	FY 2020	FY 2021	FY 2022
Contract Dates			
Delivery Dates			
Installation Information			
Method of Implementation (Organic): Various		Installation Quantity: 0	

UNCLASSIFIED

Exhibit P-3a, Individual Modification: PB 2022 Army		Date: May 2021	
Appropriation / Budget Activity / Budget Sub Activity: 2031A / 02 / 10		P-1 Line Item Number / Title: 6949AA0480 / Utility Helicopter Mods	
Modification Number / Title: AA0492 / UTILITY HELICOPTER MODS			
ID Code (A=Service Ready, B=Not Service Ready) :		MDAP/MAIS Code:	
Modification Item 8 of 11: UH-60M Weight Reduction - Tail Rotor System Design			
Manufacturer Information			
Manufacturer Name: United Technologies Corp.		Manufacturer Location: Brea, CA	
Administrative Leadtime (in Months):		Production Leadtime (in Months):	
Dates	FY 2020	FY 2021	FY 2022
Contract Dates			
Delivery Dates			
Installation Information			
Method of Implementation (Organic): Various		Installation Quantity: 0	

UNCLASSIFIED

Exhibit P-3a, Individual Modification: PB 2022 Army **Date:** May 2021

Appropriation / Budget Activity / Budget Sub Activity: 2031A / 02 / 10	P-1 Line Item Number / Title: 6949AA0480 / Utility Helicopter Mods	Modification Number / Title: AA0492 / UTILITY HELICOPTER MODS
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ID Code (A=Service Ready, B=Not Service Ready) :	MDAP/MAIS Code:
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Modification Item 9 of 11: Electronic Standby Instrument System (ESIS)

Manufacturer Information

Manufacturer Name: L3 Harris	Manufacturer Location: Grand Rapids, MI		
Administrative Leadtime (in Months): 6	Production Leadtime (in Months): 12		
Dates	FY 2020	FY 2021	FY 2022
Contract Dates		Mar 2021	
Delivery Dates		Mar 2022	

Installation Information

Method of Implementation: Various

Installation Cost	Prior Years	FY 2020	FY 2021	FY 2022 Base	FY 2022 OCO	FY 2022 Total
	Qty (Each) / Total Cost (\$ M)	Qty (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	80 / 6.292	- / -	- / -	- / -	- / -	- / -
FY 2020	82 / 6.443	- / -	- / -	- / -	- / -	- / -
FY 2021	- / -	84 / 6.744	- / -	- / -	- / -	- / -
FY 2022	- / -	- / -	62 / 5.076	- / -	- / -	- / -
Total	162 / 12.735	84 / 6.744	62 / 5.076	- / -	- / -	- / -

Installation Schedule

	PYS	FY 2020				FY 2021				FY 2022			
		Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4
In	-	-	-	-	-	-	-	-	-	-	-	-	-
Out	-	-	-	-	-	-	-	-	-	-	-	-	-

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Exhibit P-3a, Individual Modification: PB 2022 Army	Date: May 2021
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Appropriation / Budget Activity / Budget Sub Activity: 2031A / 02 / 10	P-1 Line Item Number / Title: 6949AA0480 / Utility Helicopter Mods	Modification Number / Title: AA0492 / UTILITY HELICOPTER MODS
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ID Code (A=Service Ready, B=Not Service Ready) :	MDAP/MAIS Code:
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Modification Item 10 of 11: Generators 60 kVA

Manufacturer Information

Manufacturer Name: Honeywell Aerospace	Manufacturer Location: Tucson, AZ		
Administrative Leadtime (in Months):	Production Leadtime (in Months):		
Dates	FY 2020	FY 2021	FY 2022
Contract Dates			
Delivery Dates			

Installation Information

Method of Implementation: Various

Installation Cost	Prior Years	FY 2020	FY 2021	FY 2022 Base	FY 2022 OCO	FY 2022 Total
	Qty (Each) / Total Cost (\$ M)	Qty (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	- / -	- / -	- / -	- / -	- / -
FY 2020	0 / 0.000	- / -	- / -	- / -	- / -	- / -
FY 2021	- / -	- / -	38 / 0.315	- / -	- / -	- / -
FY 2022	- / -	- / -	- / -	8 / 0.067	- / -	8 / 0.067
Total	- / -	- / -	38 / 0.315	8 / 0.067	- / -	8 / 0.067

Installation Schedule

PYS	FY 2020				FY 2021				FY 2022			
	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4
In	-	-	-	-	-	-	-	-	-	-	-	-
Out	-	-	-	-	-	-	-	-	-	-	-	-

UNCLASSIFIED

Exhibit P-3a, Individual Modification: PB 2022 Army		Date: May 2021
Appropriation / Budget Activity / Budget Sub Activity: 2031A / 02 / 10	P-1 Line Item Number / Title: 6949AA0480 / Utility Helicopter Mods	Modification Number / Title: AA0492 / UTILITY HELICOPTER MODS

ID Code (A=Service Ready, B=Not Service Ready) :	MDAP/MAIS Code:
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Modification Item 11 of 11: Upturned Exhaust System I and II (UES I/II)

Manufacturer Information

Manufacturer Name: Sikorsky		Manufacturer Location: Stratford, CT	
Administrative Leadtime (in Months): 6		Production Leadtime (in Months): 12	
Dates	FY 2020	FY 2021	FY 2022
Contract Dates		Mar 2021	Mar 2022
Delivery Dates		Mar 2022	Mar 2023

Installation Information

Method of Implementation: Various

Installation Cost	Prior Years	FY 2020	FY 2021	FY 2022 Base	FY 2022 OCO	FY 2022 Total
	Qty (Each) / Total Cost (\$ M)	Qty (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	- / -	- / -	- / -	- / -	- / -
FY 2020	0 / 0.000	- / -	- / -	- / -	- / -	- / -
FY 2021	- / -	- / -	58 / 1.443	- / -	- / -	- / -
FY 2022	0 / 0.000	- / -	- / -	- / -	- / -	- / -
Total	- / -	- / -	58 / 1.443	50 / 1.269	- / -	50 / 1.269

Installation Schedule

	PYS	FY 2020				FY 2021				FY 2022			
		Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4
In	-	-	-	-	-	-	-	-	-	-	-	-	-
Out	-	-	-	-	-	-	-	-	-	-	-	-	-

UNCLASSIFIED

Exhibit P-40, Budget Line Item Justification: PB 2022 Army **Date:** May 2021

Appropriation / Budget Activity / Budget Sub Activity: 2031A: Aircraft Procurement, Army / BA 02: Modification of Aircraft / BSA 10: Modification of Aircraft	P-1 Line Item Number / Title: 8658AA0712 / Network And Mission Plan
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ID Code (A=Service Ready, B=Not Service Ready):	Program Elements for Code B Items: N/A	Other Related Program Elements: 0604201A
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Line Item MDAP/MAIS Code: N/A

Resource Summary	Prior Years	FY 2020	FY 2021	FY 2022 Base	FY 2022 OCO	FY 2022 Total	FY 2023	FY 2024	FY 2025	FY 2026	To Complete	Total
Procurement Quantity (<i>Units in Each</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost (<i>\$ in Millions</i>)	852.101	98.236	77.432	29.206	-	29.206	-	-	-	-	-	-
Less PY Advance Procurement (<i>\$ in Millions</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) (<i>\$ in Millions</i>)	852.101	98.236	77.432	29.206	-	29.206	-	-	-	-	-	-
Plus CY Advance Procurement (<i>\$ in Millions</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Total Obligation Authority (<i>\$ in Millions</i>)	852.101	98.236	77.432	29.206	-	29.206	-	-	-	-	-	-

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

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

Description:

The Network and Mission Plan budget line includes the Aviation Mission Planning System (AMPS), the Improved Data Modem (IDM), and the Aircraft Notebook (ACN).

AMPS supports pre-mission planning and rehearsal, including route planning, communications planning, and aircraft configuration. It receives data from multiple sources and provides that data digitally to the aircraft to support aviation missions. That data is loaded onto the aircraft platforms utilizing a Data Transfer Device initializing the communication, navigation, and weapons systems on the aircraft. Common Operating Environment (COE) Convergence will enable AMPS hosting on Command Post, Mounted, and Mobile hardware and will extend mission planning services to the tactical edge. Dynamic interconnected integration with Army Aviation systems will enhance situational understanding, risk assessment, and Air-Ground Integration to enable Joint All Domain Operations (JADO) and Joint All Domain Command and Control (JADC2). The AMPS program includes management of the Centralized Aviation Flight Records System (CAFRS). CAFRS cloud migration will reduce training burden and manual process overhead, increase ease of use, access to and management of flight record data to meet Army data migration strategy cloud computing goals. The AMPS program also manages and supports FliteScene Software licenses, maintenance agreements, and related engineering services. FliteScene is a digital map technology application that provides enhanced navigation capabilities to the military flight crew and enhances mission effectiveness.

The Improved Data Modem (IDM) is the common solution for digitizing Army Aviation and is fielded on every modernized, rotary-wing Army aircraft, including the CH-47 Chinook, AH-64 Apache and UH-60 Black Hawk. The IDM provides the Army rotary wing fleet with critical communication capabilities, enables connectivity to multiple radios used by rotary-wing aircraft and the Blue Force Tracking transceiver, and provides the means for rapid data transfer and messaging. The Aviation Mission Common Server (AMCS) effort is a replacement and capability upgrade for the current Army IDM-401. The AMCS provides the future architecture, hardware, and software capabilities for the next generation of IDM functionality and expanded mission processing. The AMCS will provide Army aviation a hardware and software Modular Open System Architecture digital backbone that aligns with the Future Vertical Lift (FVL) Architecture Framework (FAF) which will support Joint All Domain Operations on the Multi-Domain Battlefield.

The ACN is an Army Aviation program required for the completion of aviation maintenance activities and the documentation required to maintain airworthiness for all Army aircraft. Aircraft maintainers use ACN to record maintenance actions, order parts, and report readiness. It implements Army Aviation policy and procedures and integrates with other reporting systems to reduce manual entries and increase data accuracy. The ACN is being fielded to all Army Aviation units, Rotary-wing, Fixed-wing and Unmanned Aircraft System equipped units and will completely replace the Unit Level Logistics System - Aviation (Enhanced) and Unmanned Aircraft Systems - Initiative systems.

This exhibit is for a budget line that procures multiple items and does not have a single Army Acquisition Objective..

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Exhibit P-40, Budget Line Item Justification: PB 2022 Army							Date: May 2021			
Appropriation / Budget Activity / Budget Sub Activity: 2031A: Aircraft Procurement, Army / BA 02: Modification of Aircraft / BSA 10: Modification of Aircraft					P-1 Line Item Number / Title: 8658AA0712 / Network And Mission Plan					
ID Code (A=Service Ready, B=Not Service Ready):			Program Elements for Code B Items: N/A			Other Related Program Elements: 0604201A				
Line Item MDAP/MAIS Code: N/A										

Secondary Distribution		FY 2020	FY 2021	FY 2022 Base	FY 2022 OCO	FY 2022 Total	FY 2023	FY 2024	FY 2025	FY 2026
Army	Quantity	-	-	-	-	-	-	-	-	-
	Total Obligation Authority	57.960	44.427	29.206	-	29.206	-	-	-	-
ANG	Quantity	-	-	-	-	-	-	-	-	-
	Total Obligation Authority	33.400	29.747	-	-	-	-	-	-	-
AR	Quantity	-	-	-	-	-	-	-	-	-
	Total Obligation Authority	6.876	3.258	-	-	-	-	-	-	-
Total:	Quantity	-	-	-	-	-	-	-	-	-
Secondary Distribution	Total Obligation Authority	98.236	77.432	29.206	-	29.206	-	-	-	-

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Exhibit P-40, Budget Line Item Justification: PB 2022 Army **Date:** May 2021

Appropriation / Budget Activity / Budget Sub Activity:
2031A: Aircraft Procurement, Army / BA 02: Modification of Aircraft / BSA 10: Modification of Aircraft

P-1 Line Item Number / Title:
8658AA0712 / Network And Mission Plan

ID Code (A=Service Ready, B=Not Service Ready): **Program Elements for Code B Items:** N/A **Other Related Program Elements:** 0604201A

Line Item MDAP/MAIS Code: N/A

Exhibits Schedule					Prior Years	FY 2020	FY 2021	FY 2022 Base	FY 2022 OCO	FY 2022 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	AA0712 / Network And Mission Plan (Rationalization, Standardization, Interoperability, Compatibility, Simplification)				- / 852.101	- / 98.236	- / 77.432	- / 29.206	- / -	- / 29.206
P-40	Total Gross/Weapon System Cost				- / 852.101	- / 98.236	- / 77.432	- / 29.206	- / -	- / 29.206

*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:
FY 2022 Base procurement dollars in the amount of \$10.777 million funds AMPS software revisions necessary to support Army Aviation's existing and emerging aircraft variants. This is critical to enable Air-Ground Integration, enhance interoperability, and increase commonality with Army Mission Command, Common Operating Environment convergence, Joint All Domain Operations (JADO), and Joint All Domain Command and Control (JADC2). Aviation is a critical enabler for JADO; greater synchronization of Aviation planning by the COE Converged AMPS will enable commanders to place the decisive force at the critical point on the battlefield to facilitate success of JADC2.

FY 2022 Base procurement dollars in the amount of \$11.590 million supports the procurement of IDM-401 B-Kits to upgrade the fleet from the IDM-304 and IDM-304B variants, provide necessary Government Furnished Equipment to rotary-wing fleet platform production lines, and to provide a technology refresh to the IDM hardware and its own production line. The funding will also address modifications to the IDM application software. The funding will maintain compliance with cybersecurity requirements and enhance the functionality of the IDM to support Army Networking initiatives for integrating new radios and mission command modernization. Uninterrupted delivery of IDM-401 units is essential to support Army Aircraft production lines and modification work order installations. The IDM 401 materials, to include long lead items, are procured through the Defense Logistics Agency and the assembly/production of the IDM-401 hardware takes place at the Letterkenny Army Depot and the IDM software is installed by the U.S. Army Combat Capabilities Development Command Aviation & Missile Center, Systems Simulation, Software and Installation Directorate.

FY 2022 Base procurement dollars in the amount of \$6.839 million supports the initial AMCS production activities, software integration and procurement of Low Rate Initial Production units.

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.

Comments:
AMPS Mission Command Convergence will reduce the need for future hardware procurement.

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Exhibit P-3a, Individual Modification: PB 2022 Army		Date: May 2021
Appropriation / Budget Activity / Budget Sub Activity: 2031A / 02 / 10	P-1 Line Item Number / Title: 8658AA0712 / Network And Mission Plan	Modification Number / Title: AA0712 / Network And Mission Plan

ID Code (A=Service Ready, B=Not Service Ready) :			MDAP/MAIS Code:			
Resource Summary	Prior Years	FY 2020	FY 2021	FY 2022 Base	FY 2022 OCO	FY 2022 Total
Procurement Quantity <i>(Units in Each)</i>	-	-	-	-	-	-
Gross/Weapon System Cost <i>(\$ in Millions)</i>	852.101	98.236	77.432	29.206	-	29.206
Less PY Advance Procurement <i>(\$ in Millions)</i>	-	-	-	-	-	-
Net Procurement (P-1) <i>(\$ in Millions)</i>	852.101	98.236	77.432	29.206	-	29.206
Plus CY Advance Procurement <i>(\$ in Millions)</i>	-	-	-	-	-	-
Total Obligation Authority <i>(\$ in Millions)</i>	852.101	98.236	77.432	29.206	-	29.206
<i>(The following Resource Summary rows are for informational purposes only. The corresponding budget requests are documented elsewhere.)</i>						
Initial Spares <i>(\$ in Millions)</i>	-	-	-	-	-	-
Gross/Weapon System Unit Cost <i>(\$ in Thousands)</i>	-	-	-	-	-	-

Description:

The Network and Mission Plan budget line includes the Aviation Mission Planning System (AMPS), the Improved Data Modem (IDM), and the Aircraft Notebook (ACN).

AMPS supports pre-mission planning and rehearsal, including route planning, communications planning, and aircraft configuration. It receives data from multiple sources and provides that data digitally to the aircraft to support aviation missions. That data is loaded onto the aircraft platforms utilizing a Data Transfer Device initializing the communication, navigation, and weapons systems on the aircraft. Common Operating Environment (COE) Convergence will enable AMPS hosting on Command Post, Mounted, and Mobile hardware and will extend mission planning services to the tactical edge. Dynamic interconnected integration with Army Aviation systems will enhance situational understanding, risk assessment, and Air-Ground Integration to enable Joint All Domain Operations (JADO) and Joint All Domain Command and Control (JADC2). The AMPS program includes management of the Centralized Aviation Flight Records System (CAFRS). CAFRS cloud migration will reduce training burden and manual process overhead, increase ease of use, access to and management of flight record data to meet Army data migration strategy cloud computing goals. The AMPS program also manages and supports FliteScene Software licenses, maintenance agreements, and related engineering services. FliteScene is a digital map technology application that provides enhanced navigation capabilities to the military flight crew and enhances mission effectiveness.

The Improved Data Modem (IDM) is the common solution for digitizing Army Aviation and is fielded on every modernized, rotary-wing Army aircraft, including the CH-47 Chinook, AH-64 Apache and UH-60 Black Hawk. The IDM provides the Army rotary wing fleet with critical communication capabilities, enables connectivity to multiple radios used by rotary-wing aircraft and the Blue Force Tracking transceiver, and provides the means for rapid data transfer and messaging. The Aviation Mission Common Server (AMCS) effort is a replacement and capability upgrade for the current Army IDM-401. The AMCS provides the future architecture, hardware, and software capabilities for the next generation of IDM functionality and expanded mission processing. The AMCS will provide Army aviation a hardware and software Modular Open System Architecture digital backbone that aligns with the Future Vertical Lift (FVL) Architecture Framework (FAF) which will support Joint All Domain Operations on the Multi-Domain Battlefield.

The ACN is an Army Aviation program required for the completion of aviation maintenance activities and the documentation required to maintain airworthiness for all Army aircraft. Aircraft maintainers use ACN to record maintenance actions, order parts, and report readiness. It implements Army Aviation policy and procedures and integrates with other reporting systems to reduce manual entries and increase data accuracy. The ACN is being fielded to all Army Aviation units, Rotary-wing, Fixed-wing and Unmanned Aircraft System equipped units and will completely replace the Unit Level Logistics System - Aviation (Enhanced) and Unmanned Aircraft Systems - Initiative systems.

This exhibit is for a budget line that procures multiple items and does not have a single Army Acquisition Objective.

FY 2022 Base procurement dollars in the amount of \$10.777 million funds AMPS software revisions necessary to support Army Aviation's existing and emerging aircraft variants. This is critical to enable Air-Ground Integration, enhance interoperability, and increase commonality with Army Mission Command, Common Operating Environment convergence, Joint All Domain Operations (JADO), and Joint All Domain Command and Control (JADC2). Aviation is a critical enabler for JADO; greater synchronization of Aviation planning by the COE Converged AMPS will enable commanders to place the decisive force at the critical point on the battlefield to facilitate success of JADC2.

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Exhibit P-3a, Individual Modification: PB 2022 Army		Date: May 2021
Appropriation / Budget Activity / Budget Sub Activity: 2031A / 02 / 10	P-1 Line Item Number / Title: 8658AA0712 / Network And Mission Plan	Modification Number / Title: AA0712 / Network And Mission Plan

ID Code (A=Service Ready, B=Not Service Ready) :	MDAP/MAIS Code:
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FY 2022 Base procurement dollars in the amount of \$11.590 million supports the procurement of IDM-401 B-Kits to upgrade the fleet from the IDM-304 and IDM-304B variants, provide necessary Government Furnished Equipment to rotary-wing fleet platform production lines, and to provide a technology refresh to the IDM hardware and its own production line. The funding will also address modifications to the IDM application software. The funding will maintain compliance with cybersecurity requirements and enhance the functionality of the IDM to support Army Networking initiatives for integrating new radios and mission command modernization. Uninterrupted delivery of IDM-401 units is essential to support Army Aircraft production lines and modification work order installations. The IDM 401 materials, to include long lead items, are procured through the Defense Logistics Agency and the assembly/production of the IDM-401 hardware takes place at the Letterkenny Army Depot and the IDM software is installed by the U.S. Army Combat Capabilities Development Command Aviation & Missile Center, Systems Simulation, Software and Installation Directorate.

FY 2022 Base procurement dollars in the amount of \$6.839 million supports the initial AMCS production activities, software integration and procurement of Low Rate Initial Production units.

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.

Secondary Distribution		FY 2020	FY 2021	FY 2022 Base	FY 2022 OCO	FY 2022 Total
Army	Quantity	-	-	-	-	-
	Total Obligation Authority	57.960	44.427	29.206	-	29.206
ANG	Quantity	-	-	-	-	-
	Total Obligation Authority	33.400	29.747	-	-	-
AR	Quantity	-	-	-	-	-
	Total Obligation Authority	6.876	3.258	-	-	-
Total:	Quantity	-	-	-	-	-
Secondary Distribution	Total Obligation Authority	98.236	77.432	29.206	-	29.206

UNCLASSIFIED

Exhibit P-3a, Individual Modification: PB 2022 Army					Date: May 2021	
Appropriation / Budget Activity / Budget Sub Activity: 2031A / 02 / 10			P-1 Line Item Number / Title: 8658AA0712 / Network And Mission Plan		Modification Number / Title: AA0712 / Network And Mission Plan	
ID Code (A=Service Ready, B=Not Service Ready) :				MDAP/MAIS Code:		
Models of Systems Affected: AH-64D/E, CH-47D/F, UH-60A/L/M/Q/V, HH-60L/M, EMARSS, UH-72, UAS			Modification Type: Rationalization, Standardization, Interoperability, Compatibility, Simplification		Related RDT&E PEs:	
Financial Plan	Prior Years	FY 2020	FY 2021	FY 2022 Base	FY 2022 OCO	FY 2022 Total
	Qty (Each) / Total Cost (\$ M)	Qty (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 5: Aviation Mission Planning System (AMPS)						
B Kits						
Recurring						
Kit Quantity- (Computer)	7,780 / 33.247	- / -	- / -	- / -	- / -	- / -
ECPs	- / 161.708	- / 14.332	- / 16.869	- / 12.910	- / -	- / 12.910
Systems Engineering	- / 16.420	- / 13.757	- / 12.191	- / 2.080	- / -	- / 12.080
System Test and Eval	- / 11.580	- / 11.021	- / 11.189	- / 1.282	- / -	- / 11.282
Fielding/Training	- / 158.168	- / 15.447	- / 14.775	- / 3.535	- / -	- / 13.535
Systems Engineering / Program Management	- / 17.420	- / 11.590	- / 11.100	- / 10.970	- / -	- / 10.970
Subtotal: Recurring	7,780 / 298.543	- / 16.147	- / 16.124	- / 10.777	- / -	- / 10.777
Subtotal: Aviation Mission Planning System (AMPS)	7,780 / 298.543	- / 16.147	- / 16.124	- / 10.777	- / -	- / 10.777
Modification Item 2 of 5: Improved Data Modem (IDM)						
B Kits						
Recurring						
Kit Quantity- IDM OSA	4,873 / 97.824	541 / 35.165	257 / 16.538	65 / 6.874	- / -	65 / 6.874
Aircraft Integration	- / 156.705	- / 11.435	- / 11.810	- / -	- / -	- / -
ECP (SW)	- / 194.877	- / 10.516	- / -	- / -	- / -	- / -
Systems Engineering	- / 17.568	- / 13.379	- / 12.791	- / 2.011	- / -	- / 12.011
System Test & Eval	- / 162.791	- / 10.655	- / 11.040	- / 11.061	- / -	- / 11.061
Other- PM Admin	- / 124.869	- / 13.658	- / 12.317	- / 1.644	- / -	- / 1.644
Subtotal: Recurring	4,873 / 454.634	541 / 74.808	257 / 24.496	65 / 11.590	- / -	65 / 11.590
Non-Recurring						
Fielding and Training	- / 1.144	- / -	- / -	- / -	- / -	- / -
Kit Quantity - IDM	- / 19.776	- / -	- / -	- / -	- / -	- / -
Subtotal: Non-Recurring	- / 10.920	- / -	- / -	- / -	- / -	- / -
Subtotal: Improved Data Modem (IDM)	4,873 / 465.554	541 / 74.808	257 / 24.496	65 / 11.590	- / -	65 / 11.590
Modification Item 3 of 5: Aviation Data Exploitation Capability (ADEC)						
B Kits						
Recurring						
Kit Quantity- Workstation	452 / 1.035	- / -	- / -	- / -	- / -	- / -

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Exhibit P-3a, Individual Modification: PB 2022 Army					Date: May 2021	
Appropriation / Budget Activity / Budget Sub Activity: 2031A / 02 / 10			P-1 Line Item Number / Title: 8658AA0712 / Network And Mission Plan		Modification Number / Title: AA0712 / Network And Mission Plan	
ID Code (A=Service Ready, B=Not Service Ready) :				MDAP/MAIS Code:		
Models of Systems Affected: AH-64D/E, CH-47D/F, UH-60A/L/M/Q/V, HH-60L/M, EMARSS, UH-72, UAS			Modification Type: Rationalization, Standardization, Interoperability, Compatibility, Simplification		Related RDT&E PEs:	
Financial Plan	Prior Years	FY 2020	FY 2021	FY 2022 Base	FY 2022 OCO	FY 2022 Total
	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)
Kit Quantity- Server	50 / 0.763	- / -	- / -	- / -	- / -	- / -
ECP (SW)	- / 1.186	- / -	- / -	- / -	- / -	- / -
Data	- / 0.843	- / -	- / -	- / -	- / -	- / -
Systems Engineering	- / 4.362	- / -	- / -	- / -	- / -	- / -
System Test & Eval	- / 0.304	- / -	- / -	- / -	- / -	- / -
Fielding/Training	- / 4.972	- / -	- / -	- / -	- / -	- / -
Other- PM Admin	- / 7.170	- / -	- / -	- / -	- / -	- / -
Subtotal: Recurring	502 / 20.635	- / -	- / -	- / -	- / -	- / -
Subtotal: Aviation Data Exploitation Capability (ADEC)	502 / 20.635	- / -	- / -	- / -	- / -	- / -
Modification Item 4 of 5: Aircraft Notebook (ACN)						
B Kits						
Recurring						
ECP (SW)	- / 10.012	- / 2.222	- / -	- / -	- / -	- / -
Data	- / 0.599	- / 0.182	- / -	- / -	- / -	- / -
Systems Engineering	- / 8.213	- / 3.369	- / -	- / -	- / -	- / -
System Test	- / 1.335	- / 0.514	- / -	- / -	- / -	- / -
Fielding/Training	- / 43.230	- / 0.200	- / -	- / -	- / -	- / -
Other- PM Admin	- / 3.980	- / 0.794	- / -	- / -	- / -	- / -
Subtotal: Recurring	- / 67.369	- / 7.281	- / -	- / -	- / -	- / -
Subtotal: Aircraft Notebook (ACN)	- / 67.369	- / 7.281	- / -	- / -	- / -	- / -
Modification Item 5 of 5: Aviation Mission Common Server (AMCS)						
B Kits						
Recurring						
Kit Quantity - AMCS	- / -	- / -	- / -	10 / 1.301	- / -	10 / 1.301
System Engineering	- / -	- / -	- / 1.460	- / 1.390	- / -	- / 1.390
System Test and Evaluation	- / -	- / -	- / 9.142	- / -	- / -	- / -
Other - PM Admin	- / -	- / -	- / 2.499	- / 2.548	- / -	- / 2.548
Subtotal: Recurring	- / -	- / -	- / 13.101	10 / 5.239	- / -	10 / 5.239
Non-Recurring						
AMCS Aircraft Integration	- / -	- / -	- / 13.697	- / -	- / -	- / -
AMCS SW App ECP	- / -	- / -	- / 10.014	- / 1.600	- / -	- / 1.600
Subtotal: Non-Recurring	- / -	- / -	- / 23.711	- / 1.600	- / -	- / 1.600

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Exhibit P-3a, Individual Modification: PB 2022 Army					Date: May 2021	
Appropriation / Budget Activity / Budget Sub Activity: 2031A / 02 / 10			P-1 Line Item Number / Title: 8658AA0712 / Network And Mission Plan		Modification Number / Title: AA0712 / Network And Mission Plan	
ID Code (A=Service Ready, B=Not Service Ready) :				MDAP/MAIS Code:		
Models of Systems Affected: AH-64D/E, CH-47D/F, UH-60A/L/M/Q/V, HH-60L/M, EMARSS, UH-72, UAS			Modification Type: Rationalization, Standardization, Interoperability, Compatibility, Simplification		Related RDT&E PEs:	
Financial Plan	Prior Years	FY 2020	FY 2021	FY 2022 Base	FY 2022 OCO	FY 2022 Total
	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)
<i>Subtotal: Aviation Mission Common Server (AMCS)</i>	- / -	- / -	- / 36.812	10 / 6.839	- / -	10 / 6.839
<i>Subtotal: Procurement, All Modification Items</i>	13,155 / 852.101	541 / 98.236	257 / 77.432	75 / 29.206	- / -	75 / 29.206
Installation						
<i>Modification Item 3 of 5: Aviation Data Exploitation Capability (ADEC)</i>	1 / -	- / -	- / -	- / -	- / -	- / -
<i>Modification Item 4 of 5: Aircraft Notebook (ACN)</i>	1 / -	- / -	- / -	- / -	- / -	- / -
<i>Subtotal: Installation</i>	2 / -	- / -	- / -	- / -	- / -	- / -
Total						
Total Cost (Procurement + Support + Installation)	852.101	98.236	77.432	29.206	-	29.206

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Exhibit P-3a, Individual Modification: PB 2022 Army		Date: May 2021	
Appropriation / Budget Activity / Budget Sub Activity: 2031A / 02 / 10		P-1 Line Item Number / Title: 8658AA0712 / Network And Mission Plan	
		Modification Number / Title: AA0712 / Network And Mission Plan	
ID Code (A=Service Ready, B=Not Service Ready) :		MDAP/MAIS Code:	
Modification Item 1 of 5: Aviation Mission Planning System (AMPS)			
Manufacturer Information			
Manufacturer Name: Getac		Manufacturer Location: Irvine, CA	
Administrative Leadtime (in Months):		Production Leadtime (in Months):	
Dates	FY 2020	FY 2021	FY 2022
Contract Dates			
Delivery Dates			
Installation Information			
Method of Implementation (Organic): Not applicable		Installation Quantity: 0	

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Exhibit P-3a, Individual Modification: PB 2022 Army		Date: May 2021	
Appropriation / Budget Activity / Budget Sub Activity: 2031A / 02 / 10		P-1 Line Item Number / Title: 8658AA0712 / Network And Mission Plan	
Modification Number / Title: AA0712 / Network And Mission Plan			
ID Code (A=Service Ready, B=Not Service Ready) :		MDAP/MAIS Code:	
Modification Item 2 of 5: Improved Data Modem (IDM)			
Manufacturer Information			
Manufacturer Name: AMRDEC Software Engineering Directorate		Manufacturer Location: Redstone Arsenal, AL	
Administrative Leadtime (in Months):		Production Leadtime (in Months):	
Dates	FY 2020	FY 2021	FY 2022
Contract Dates			
Delivery Dates			
Installation Information			
Method of Implementation (Organic): Not Applicable		Installation Quantity: 0	

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Exhibit P-3a, Individual Modification: PB 2022 Army							Date: May 2021						
Appropriation / Budget Activity / Budget Sub Activity: 2031A / 02 / 10				P-1 Line Item Number / Title: 8658AA0712 / Network And Mission Plan				Modification Number / Title: AA0712 / Network And Mission Plan					
ID Code (A=Service Ready, B=Not Service Ready) :							MDAP/MAIS Code:						
Modification Item 3 of 5: Aviation Data Exploitation Capability (ADEC)													
Manufacturer Information													
Manufacturer Name: AMRDEC Software Engineering Directorate							Manufacturer Location: Redstone Arsenal, AL						
Administrative Leadtime (in Months):							Production Leadtime (in Months):						
Dates		FY 2020				FY 2021				FY 2022			
Contract Dates													
Delivery Dates													
Installation Information													
Method of Implementation: Not Applicable													
Installation Cost		Prior Years		FY 2020		FY 2021		FY 2022 Base		FY 2022 OCO		FY 2022 Total	
		Qty (Each) / Total Cost (\$ M)		Qty (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		- / -		- / -		- / -		- / -		- / -	
FY 2020		0 / 0.000		- / -		- / -		- / -		- / -		- / -	
FY 2021		0 / 0.000		- / -		- / -		- / -		- / -		- / -	
FY 2022		0 / 0.000		- / -		- / -		- / -		- / -		- / -	
Total		1 / 0.000		- / -		- / -		- / -		- / -		- / -	
Installation Schedule													
	PYS	FY 2020				FY 2021				FY 2022			
		Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4
In	1	-	-	-	-	-	-	-	-	-	-	-	-
Out	1	-	-	-	-	-	-	-	-	-	-	-	-

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Exhibit P-3a, Individual Modification: PB 2022 Army							Date: May 2021						
Appropriation / Budget Activity / Budget Sub Activity: 2031A / 02 / 10				P-1 Line Item Number / Title: 8658AA0712 / Network And Mission Plan				Modification Number / Title: AA0712 / Network And Mission Plan					
ID Code (A=Service Ready, B=Not Service Ready) :							MDAP/MAIS Code:						
Modification Item 4 of 5: Aircraft Notebook (ACN)													
Manufacturer Information													
Manufacturer Name: AMRDEC Software Engineering Directorate							Manufacturer Location: Redstone Arsenal, AL						
Administrative Leadtime (in Months):							Production Leadtime (in Months):						
Dates		FY 2020				FY 2021				FY 2022			
Contract Dates													
Delivery Dates													
Installation Information													
Method of Implementation: Not Applicable													
Installation Cost		Prior Years		FY 2020		FY 2021		FY 2022 Base		FY 2022 OCO		FY 2022 Total	
		Qty (Each) / Total Cost (\$ M)		Qty (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		- / -		- / -		- / -		- / -		- / -	
FY 2020		0 / 0.000		- / -		- / -		- / -		- / -		- / -	
FY 2021		0 / 0.000		- / -		- / -		- / -		- / -		- / -	
FY 2022		0 / 0.000		- / -		- / -		- / -		- / -		- / -	
Total		1 / 0.000		- / -		- / -		- / -		- / -		- / -	
Installation Schedule													
	PYS	FY 2020				FY 2021				FY 2022			
		Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4
In	1	-	-	-	-	-	-	-	-	-	-	-	-
Out	1	-	-	-	-	-	-	-	-	-	-	-	-

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Exhibit P-3a, Individual Modification: PB 2022 Army		Date: May 2021	
Appropriation / Budget Activity / Budget Sub Activity: 2031A / 02 / 10		P-1 Line Item Number / Title: 8658AA0712 / Network And Mission Plan	
Modification Number / Title: AA0712 / Network And Mission Plan			
ID Code (A=Service Ready, B=Not Service Ready) :		MDAP/MAIS Code:	
Modification Item 5 of 5: Aviation Mission Common Server (AMCS)			
Manufacturer Information			
Manufacturer Name: TBD		Manufacturer Location: TBD	
Administrative Leadtime (in Months):		Production Leadtime (in Months):	
Dates	FY 2020	FY 2021	FY 2022
Contract Dates			
Delivery Dates			
Installation Information			
Method of Implementation (Organic): ECP		Installation Quantity: 0	

UNCLASSIFIED

Exhibit P-40, Budget Line Item Justification: PB 2022 Army **Date:** May 2021

Appropriation / Budget Activity / Budget Sub Activity: 2031A: Aircraft Procurement, Army / BA 02: Modification of Aircraft / BSA 10: Modification of Aircraft	P-1 Line Item Number / Title: 8659AA0723 / Comms, Nav Surveillance
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ID Code (A=Service Ready, B=Not Service Ready):	Program Elements for Code B Items: N/A	Other Related Program Elements: 0604201A
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Line Item MDAP/MAIS Code: N/A

Resource Summary	Prior Years	FY 2020	FY 2021	FY 2022 Base	FY 2022 OCO	FY 2022 Total	FY 2023	FY 2024	FY 2025	FY 2026	To Complete	Total
Procurement Quantity (<i>Units in Each</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost (<i>\$ in Millions</i>)	877.147	164.315	101.355	58.117	-	58.117	-	-	-	-	-	-
Less PY Advance Procurement (<i>\$ in Millions</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) (<i>\$ in Millions</i>)	877.147	164.315	101.355	58.117	-	58.117	-	-	-	-	-	-
Plus CY Advance Procurement (<i>\$ in Millions</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Total Obligation Authority (<i>\$ in Millions</i>)	877.147	164.315	101.355	58.117	-	58.117	-	-	-	-	-	-

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

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

Description:

Funding for the Army Navigation Systems programs was realigned to the new Budget Line Item 8662A01006, Aviation Assured-Position, Navigation, and Timing (A-PNT) in FY2021.

The current Army Aviation Navigation Systems provide aircraft with extremely accurate and secure navigation and timing, assists in situational awareness, and aids in prevention of fratricide. The Global Positioning System (GPS) includes the Doppler GPS Navigation Set (DGNS), which is used for the Non-bussed Utility and Cargo helicopters, and the Embedded GPS Inertial Navigation System (EGI), which is integrated into the modernized Cargo, Utility, Attack, and Special Operations fleets of helicopters. The upgraded DGNS Computer Display Unit and GPS Anti-jam Antenna is being installed on the Blackhawk UH-60A/L and HH-60A/L fleets and will reduce pilot workload and fatigue and provide GPS Anti-Jam capabilities which significantly improve levels of A-PNT. The Pre-Planned Product Improvement (P3I) EGI A Kits and B Kits are being installed on UH/HH-60M, CH-47F, AH-64E, and Special Operations Aircraft (SOA) fleets and bring a number of enhancements required for operations in civil airspace as well as improved levels of Assured - Position, Navigation and Timing.

The Aviation Tactical Communication Systems (ATCS) programs are Army Aviation programs to procure, integrate, and field A-Kits (the installation hardware and software), and B-Kits (the radio) to meet Army Aviation Communications requirements. The current ATCS program is the Multi-mode Aviation Radio Set (MARS), which uses an ARC-231A radio with greater capability that uses modernized waveforms and cryptography.

The Blue Force Tracking - Aviation (BFT-A) Program integrates, qualifies, and manages the installation of BFT-2 system installation kits (A Kit) for Army Rotary Wing Aircraft. The A-Kit utilizes the BFT-2 transceiver and KGV-72 encryption device provided by PM Mission Command (MC). BFT-2 provides the commander a near real-time Beyond-Line-of-Sight Blue/Red Situational Awareness Picture & Command and Control messaging capability.

Secondary Distribution	FY 2020	FY 2021	FY 2022 Base	FY 2022 OCO	FY 2022 Total	FY 2023	FY 2024	FY 2025	FY 2026
Army	Quantity	-	-	-	-	-	-	-	-
	Total Obligation Authority	155.075	50.678	26.564	-	26.564	-	-	-
ANG	Quantity	-	-	-	-	-	-	-	-
	Total Obligation Authority	8.232	45.609	25.122	-	25.122	-	-	-

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Exhibit P-40, Budget Line Item Justification: PB 2022 Army							Date: May 2021			
Appropriation / Budget Activity / Budget Sub Activity: 2031A: Aircraft Procurement, Army / BA 02: Modification of Aircraft / BSA 10: Modification of Aircraft					P-1 Line Item Number / Title: 8659AA0723 / Comms, Nav Surveillance					
ID Code (A=Service Ready, B=Not Service Ready):			Program Elements for Code B Items: N/A			Other Related Program Elements: 0604201A				
Line Item MDAP/MAIS Code: N/A										

Secondary Distribution		FY 2020	FY 2021	FY 2022 Base	FY 2022 OCO	FY 2022 Total	FY 2023	FY 2024	FY 2025	FY 2026
AR	Quantity	-	-	-	-	-	-	-	-	-
	Total Obligation Authority	1.008	5.068	6.431	-	6.431	-	-	-	-
Total: Secondary Distribution	Quantity	-	-	-	-	-	-	-	-	-
	Total Obligation Authority	164.315	101.355	58.117	-	58.117	-	-	-	-

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Exhibit P-40, Budget Line Item Justification: PB 2022 Army **Date:** May 2021

Appropriation / Budget Activity / Budget Sub Activity:
2031A: Aircraft Procurement, Army / BA 02: Modification of Aircraft / BSA 10: Modification of Aircraft

P-1 Line Item Number / Title:
8659AA0723 / Comms, Nav Surveillance

ID Code (A=Service Ready, B=Not Service Ready): **Program Elements for Code B Items:** N/A **Other Related Program Elements:** 0604201A

Line Item MDAP/MAIS Code: N/A

Exhibits Schedule					Prior Years	FY 2020	FY 2021	FY 2022 Base	FY 2022 OCO	FY 2022 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	AA0723 / Comms, Nav Surveillance (New or Improved Operational Capability)				- / 877.147	- / 164.315	- / 101.355	- / 58.117	- / -	- / 58.117
P-40	Total Gross/Weapon System Cost				- / 877.147	- / 164.315	- / 101.355	- / 58.117	- / -	- / 58.117

*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:
 FY 2022 Base Procurement dollars in the amount of \$41.734 million supports procurement of ARC-231A radios to support aircraft production line and aircraft modification requirements, fielding of the ARC-231A radios to one CAB, system test and evaluation of ARC-231A radios and MARS B Kits, and aircraft integration to support crypto-modernization.

 FY 2022 Base Procurement dollars in the amount of \$16.383 million provides for the procurement and installation of BFT-2 A-Kits.

 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.

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Exhibit P-3a, Individual Modification: PB 2022 Army		Date: May 2021
Appropriation / Budget Activity / Budget Sub Activity: 2031A / 02 / 10	P-1 Line Item Number / Title: 8659AA0723 / Comms, Nav Surveillance	Modification Number / Title: AA0723 / Comms, Nav Surveillance

ID Code (A=Service Ready, B=Not Service Ready) :			MDAP/MAIS Code:			
Resource Summary	Prior Years	FY 2020	FY 2021	FY 2022 Base	FY 2022 OCO	FY 2022 Total
Procurement Quantity <i>(Units in Each)</i>	-	-	-	-	-	-
Gross/Weapon System Cost <i>(\$ in Millions)</i>	877.147	164.315	101.355	58.117	-	58.117
Less PY Advance Procurement <i>(\$ in Millions)</i>	-	-	-	-	-	-
Net Procurement (P-1) <i>(\$ in Millions)</i>	877.147	164.315	101.355	58.117	-	58.117
Plus CY Advance Procurement <i>(\$ in Millions)</i>	-	-	-	-	-	-
Total Obligation Authority <i>(\$ in Millions)</i>	877.147	164.315	101.355	58.117	-	58.117
<i>(The following Resource Summary rows are for informational purposes only. The corresponding budget requests are documented elsewhere.)</i>						
Initial Spares <i>(\$ in Millions)</i>	-	-	-	-	-	-
Gross/Weapon System Unit Cost <i>(\$ in Thousands)</i>	-	-	-	-	-	-

Description:

Funding for the Army Navigation Systems programs was realigned to the new Budget Line Item 8662A01006, Aviation Assured-Position, Navigation, and Timing (A-PNT) in FY2021.

The current Army Aviation Navigation Systems provide aircraft with extremely accurate and secure navigation and timing, assists in situational awareness, and aids in prevention of fratricide. The Global Positioning System (GPS) includes the Doppler GPS Navigation Set (DGNS), which is used for the Non-bussed Utility and Cargo helicopters, and the Embedded GPS Inertial Navigation System (EGI), which is integrated into the modernized Cargo, Utility, Attack, and Special Operations fleets of helicopters. The upgraded DGNS Computer Display Unit and GPS Anti-jam Antenna is being installed on the Blackhawk UH-60A/L and HH-60A/L fleets and will reduce pilot workload and fatigue and provide GPS Anti-Jam capabilities which significantly improve levels of A-PNT. The Pre-Planned Product Improvement (P3I) EGI A Kits and B Kits are being installed on UH/HH-60M, CH-47F, AH-64E, and Special Operations Aircraft (SOA) fleets and bring a number of enhancements required for operations in civil airspace as well as improved levels of Assured - Position, Navigation and Timing.

The Aviation Tactical Communication Systems (ATCS) programs are Army Aviation programs to procure, integrate, and field A-Kits (the installation hardware and software), and B-Kits (the radio) to meet Army Aviation Communications requirements. The current ATCS program is the Multi-mode Aviation Radio Set (MARS), which uses an ARC-231A radio with greater capability that uses modernized waveforms and cryptography.

The Blue Force Tracking - Aviation (BFT-A) Program integrates, qualifies, and manages the installation of BFT-2 system installation kits (A Kit) for Army Rotary Wing Aircraft. The A-Kit utilizes the BFT-2 transceiver and KGV-72 encryption device provided by PM Mission Command (MC). BFT-2 provides the commander a near real-time Beyond-Line-of-Sight Blue/Red Situational Awareness Picture & Command and Control messaging capability.

This exhibit is for a budget line that procures multiple items and does not have a single Army Acquisition Objective.

-- Justification --

FY 2022 Base Procurement dollars in the amount of \$41.734 million supports procurement of ARC-231A radios to support aircraft production line and aircraft modification requirements, fielding of the ARC-231A radios to one CAB, system test and evaluation of ARC-231A radios and MARS B Kits, and aircraft integration to support crypto-modernization.

FY 2022 Base Procurement dollars in the amount of \$16.383 million provides for the procurement and installation of BFT-2 A-Kits.

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.

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Exhibit P-3a, Individual Modification: PB 2022 Army	Date: May 2021
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Appropriation / Budget Activity / Budget Sub Activity: 2031A / 02 / 10	P-1 Line Item Number / Title: 8659AA0723 / Comms, Nav Surveillance	Modification Number / Title: AA0723 / Comms, Nav Surveillance
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ID Code (A=Service Ready, B=Not Service Ready) :	MDAP/MAIS Code:
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Secondary Distribution		FY 2020	FY 2021	FY 2022 Base	FY 2022 OCO	FY 2022 Total
Army	Quantity	-	-	-	-	-
	Total Obligation Authority	155.075	50.678	26.564	-	26.564
ANG	Quantity	-	-	-	-	-
	Total Obligation Authority	8.232	45.609	25.122	-	25.122
AR	Quantity	-	-	-	-	-
	Total Obligation Authority	1.008	5.068	6.431	-	6.431
Total: Secondary Distribution	Quantity	-	-	-	-	-
	Total Obligation Authority	164.315	101.355	58.117	-	58.117

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Exhibit P-3a, Individual Modification: PB 2022 Army						Date: May 2021	
Appropriation / Budget Activity / Budget Sub Activity: 2031A / 02 / 10			P-1 Line Item Number / Title: 8659AA0723 / Comms, Nav Surveillance			Modification Number / Title: AA0723 / Comms, Nav Surveillance	
ID Code (A=Service Ready, B=Not Service Ready) :				MDAP/MAIS Code:			
Models of Systems Affected: UH/HH-60A/L, UH/HH/MH-60M, CH-47D, CH/MH-47F, AH-64D/E, LUH, UAS			Modification Type: New or Improved Operational Capability		Related RDT&E PEs:		
Financial Plan	Prior Years	FY 2020	FY 2021	FY 2022 Base	FY 2022 OCO	FY 2022 Total	
	Qty (Each) / Total Cost (\$ M)	Qty (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: DGNS (AN/ASN-128D) P3I							
A Kits							
Recurring							
Engineering Change Orders	- / 2.800	- / -	- / -	- / -	- / -	- / -	
Data	- / 1.712	- / -	- / -	- / -	- / -	- / -	
Training Equipment	46 / 6.800	- / -	- / -	- / -	- / -	- / -	
Systems Engineering	- / 8.930	- / -	- / -	- / -	- / -	- / -	
Other - PM Admin	- / 1.500	- / -	- / -	- / -	- / -	- / -	
Subtotal: Recurring	46 / 21.742	- / -	- / -	- / -	- / -	- / -	
Subtotal: DGNS (AN/ASN-128D) P3I	46 / 21.742	- / -	- / -	- / -	- / -	- / -	
Modification Item 2 of 9: DGNS (AN/ASN-128D) CDU/ SW Upgrade ECP B-Kit							
B Kits							
Recurring							
Upgraded CDU	450 / 29.759	- / -	- / -	- / -	- / -	- / -	
Fielding	- / 6.820	- / 3.016	- / -	- / -	- / -	- / -	
Systems Eng / Program Management	- / 6.829	- / 1.138	- / -	- / -	- / -	- / -	
Subtotal: Recurring	450 / 43.408	- / 4.154	- / -	- / -	- / -	- / -	
Non-Recurring							
Data / Training	- / 3.349	- / -	- / -	- / -	- / -	- / -	
Aircraft Integration	- / 11.485	- / 10.850	- / -	- / -	- / -	- / -	
Systems Test & Evaluation	- / 4.973	- / 10.105	- / -	- / -	- / -	- / -	
Subtotal: Non-Recurring	- / 19.807	- / 10.955	- / -	- / -	- / -	- / -	
Subtotal: DGNS (AN/ASN-128D) CDU/SW Upgrade ECP B-Kit	450 / 63.215	- / 15.109	- / -	- / -	- / -	- / -	
Modification Item 3 of 9: DGNS (AN/ASN-128D) CDU/ SW Upgrade ECP A-Kit							
A Kits							
Recurring							
GPS Anti Jam Antenna	235 / 7.748	- / -	- / -	- / -	- / -	- / -	
Systems Engineering / Program Management	- / 2.430	- / -	- / -	- / -	- / -	- / -	
Systems Test & Evaluation	- / 3.930	- / -	- / -	- / -	- / -	- / -	

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Exhibit P-3a, Individual Modification: PB 2022 Army					Date: May 2021	
Appropriation / Budget Activity / Budget Sub Activity: 2031A / 02 / 10			P-1 Line Item Number / Title: 8659AA0723 / Comms, Nav Surveillance		Modification Number / Title: AA0723 / Comms, Nav Surveillance	
ID Code (A=Service Ready, B=Not Service Ready) :				MDAP/MAIS Code:		
Models of Systems Affected: UH/HH-60A/L, UH/HH/MH-60M, CH-47D, CH/MH-47F, AH-64D/E, LUH, UAS			Modification Type: New or Improved Operational Capability		Related RDT&E PEs:	
Financial Plan	Prior Years	FY 2020	FY 2021	FY 2022 Base	FY 2022 OCO	FY 2022 Total
	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)
<i>Subtotal: Recurring</i>	235 / 14.108	- / -	- / -	- / -	- / -	- / -
Non-Recurring						
Integration & NRE	- / 1.002	- / -	- / -	- / -	- / -	- / -
<i>Subtotal: Non-Recurring</i>	- / 1.002	- / -	- / -	- / -	- / -	- / -
<i>Subtotal: DGNS (AN/ASN-128D) CDU/SW Upgrade ECP A-Kit</i>	235 / 15.110	- / -	- / -	- / -	- / -	- / -
Modification Item 4 of 9: Embedded GPS Inertial Nav System (EGI) P3I B-Kit						
B Kits						
Recurring						
EGI EAGLE-M Shipsets	88 / 14.655	43 / 8.346	- / -	- / -	- / -	- / -
EGI EAGLE SOA Shipsets	51 / 8.493	- / -	- / -	- / -	- / -	- / -
Fielding	- / 1.365	- / -	- / -	- / -	- / -	- / -
Systems Engineering / Program Management	- / 19.475	- / 3.536	- / -	- / -	- / -	- / -
<i>Subtotal: Recurring</i>	139 / 43.988	43 / 11.882	- / -	- / -	- / -	- / -
Non-Recurring						
Aircraft Integration	- / 17.711	- / 2.500	- / -	- / -	- / -	- / -
Systems Test & Evaluation	- / 17.631	- / 10.222	- / -	- / -	- / -	- / -
Training / Data / Support Equipment	- / 3.553	- / -	- / -	- / -	- / -	- / -
<i>Subtotal: Non-Recurring</i>	- / 18.895	- / 2.722	- / -	- / -	- / -	- / -
<i>Subtotal: Embedded GPS Inertial Nav System (EGI) P3I B-Kit</i>	139 / 62.883	43 / 14.604	- / -	- / -	- / -	- / -
Modification Item 5 of 9: Embedded GPS Inertial Nav System (EGI) P3I A-Kit						
A Kits						
Recurring						
GPS Anti Jam Antenna	153 / 6.069	- / 5.653	- / -	- / -	- / -	- / -
Systems Engineering / Program Management	- / 11.752	- / 3.637	- / -	- / -	- / -	- / -
<i>Subtotal: Recurring</i>	153 / 7.821	- / 9.290	- / -	- / -	- / -	- / -
Non-Recurring						
Aircraft Integration	- / 23.466	- / 22.679	- / -	- / -	- / -	- / -
Systems Test & Evaluation	- / 3.008	- / 12.829	- / -	- / -	- / -	- / -
Productionization	- / -	- / 2.074	- / -	- / -	- / -	- / -

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Exhibit P-3a, Individual Modification: PB 2022 Army					Date: May 2021	
Appropriation / Budget Activity / Budget Sub Activity: 2031A / 02 / 10			P-1 Line Item Number / Title: 8659AA0723 / Comms, Nav Surveillance		Modification Number / Title: AA0723 / Comms, Nav Surveillance	
ID Code (A=Service Ready, B=Not Service Ready) :				MDAP/MAIS Code:		
Models of Systems Affected: UH/HH-60A/L, UH/HH/MH-60M, CH-47D, CH/MH-47F, AH-64D/E, LUH, UAS			Modification Type: New or Improved Operational Capability		Related RDT&E PEs:	
Financial Plan	Prior Years	FY 2020	FY 2021	FY 2022 Base	FY 2022 OCO	FY 2022 Total
	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)
<i>Subtotal: Non-Recurring</i>	- / 26.474	- / 27.582	- / -	- / -	- / -	- / -
<i>Subtotal: Embedded GPS Inertial Nav System (EGI) P3/A-Kit</i>	153 / 34.295	- / 36.872	- / -	- / -	- / -	- / -
Modification Item 6 of 9: Aviation Tactical Comm Systems (ATCS) - Alt Comms						
A Kits						
Recurring						
Kit Quantity-A-Kit	415 / 12.956	- / -	- / -	- / -	- / -	- / -
Systems Engineering / Program Management	- / 46.417	- / -	- / -	- / -	- / -	- / -
System Test & Evaluation	- / 10.107	- / -	- / -	- / -	- / -	- / -
Training / Data / Support Equipment	- / 1.366	- / -	- / -	- / -	- / -	- / -
Fielding	- / 16.922	- / -	- / -	- / -	- / -	- / -
<i>Subtotal: Recurring</i>	415 / 87.768	- / -	- / -	- / -	- / -	- / -
Non-Recurring						
Aircraft Integration	- / 95.887	- / -	- / -	- / -	- / -	- / -
<i>Subtotal: Non-Recurring</i>	- / 95.887	- / -	- / -	- / -	- / -	- / -
B Kits						
Recurring						
Kit Quantity-B-Kit (ARC-231) Shipsets	1,230 / 185.502	- / -	- / -	- / -	- / -	- / -
Kit Quantity-B-Kit (ARC201D) Shipsets	777 / 46.465	- / -	- / -	- / -	- / -	- / -
<i>Subtotal: Recurring</i>	2,007 / 231.967	- / -	- / -	- / -	- / -	- / -
<i>Subtotal: Aviation Tactical Comm Systems (ATCS) - Alt Comms</i>	2,422 / 415.622	- / -	- / -	- / -	- / -	- / -
Modification Item 7 of 9: Aviation Tactical Comm Systems (ATCS) - MARS						
A Kits						
Recurring						
Systems Engineering / Program Management	- / 12.980	- / 11.142	- / 12.298	- / 11.000	- / -	- / 11.000
System Test & Evaluation	- / 2.805	- / 2.687	- / 1.362	- / 1.575	- / -	- / 1.575
<i>Subtotal: Recurring</i>	- / 15.785	- / 13.829	- / 13.660	- / 12.575	- / -	- / 12.575
Non-Recurring						
SINCGARS NRE	- / -	- / 2.327	- / -	- / -	- / -	- / -
Aircraft Integration	- / 10.709	- / 8.729	- / -	- / 7.123	- / -	- / 7.123

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Exhibit P-3a, Individual Modification: PB 2022 Army					Date: May 2021	
Appropriation / Budget Activity / Budget Sub Activity: 2031A / 02 / 10			P-1 Line Item Number / Title: 8659AA0723 / Comms, Nav Surveillance		Modification Number / Title: AA0723 / Comms, Nav Surveillance	
ID Code (A=Service Ready, B=Not Service Ready) :				MDAP/MAIS Code:		
Models of Systems Affected: UH/HH-60A/L, UH/HH/MH-60M, CH-47D, CH/MH-47F, AH-64D/E, LUH, UAS			Modification Type: New or Improved Operational Capability		Related RDT&E PEs:	
Financial Plan	Prior Years	FY 2020	FY 2021	FY 2022 Base	FY 2022 OCO	FY 2022 Total
	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)
<i>Subtotal: Non-Recurring</i>	- / 10.709	- / 11.056	- / -	- / 7.123	- / -	- / 7.123
B Kits						
Recurring						
Kit Shipset B-Kit (ARC-231A) - PIM	26 / 5.408	- / -	- / -	- / -	- / -	- / -
Kit Shipset B-Kit (ARC 231) - Rotable	- / -	169 / 37.338	121 / 10.938	138 / 7.489	- / -	138 / 7.489
Kit Shipset B-Kit (ARC-231A) - MWO	- / -	160 / 18.651	248 / 46.730	98 / 7.582	- / -	98 / 7.582
Fielding	- / -	- / 10.509	- / 13.776	- / 13.871	- / -	- / 13.871
Training/Data	- / 0.900	- / -	- / -	- / -	- / -	- / -
<i>Subtotal: Recurring</i>	26 / 6.308	329 / 56.498	369 / 61.444	236 / 18.942	- / -	236 / 18.942
Non-Recurring						
ECP - Non-Recurring	- / 154.275	- / -	- / 13.000	- / -	- / -	- / -
<i>Subtotal: Non-Recurring</i>	- / 154.275	- / -	- / 13.000	- / -	- / -	- / -
<i>Subtotal: Aviation Tactical Comm Systems (ATCS) - MARS</i>	26 / 87.077	329 / 81.383	369 / 78.104	236 / 38.640	- / -	236 / 38.640
Modification Item 8 of 9: Airborne Maritime Fixed (AMF-A) Radio Integration						
A Kits						
Recurring						
Kit Quantity - A-Kit - Production Line	148 / 13.466	- / -	- / -	- / -	- / -	- / -
Support Equipment	- / 12.030	- / -	- / -	- / -	- / -	- / -
System Test and Evaluation	- / 1.910	- / -	- / -	- / -	- / -	- / -
System Eng/Prog Mgmt (SEPM)	- / 12.074	- / -	- / -	- / -	- / -	- / -
<i>Subtotal: Recurring</i>	148 / 29.480	- / -	- / -	- / -	- / -	- / -
Non-Recurring						
NRE Aircraft Integration	- / 18.594	- / -	- / -	- / -	- / -	- / -
<i>Subtotal: Non-Recurring</i>	- / 18.594	- / -	- / -	- / -	- / -	- / -
<i>Subtotal: Airborne Maritime Fixed (AMF-A) Radio Integration</i>	148 / 48.074	- / -	- / -	- / -	- / -	- / -
Modification Item 9 of 9: Blue Force Tracking-Aviation (BFT-A)						
A Kits						
Recurring						
BFT-A A-Kits (MWO)	1,949 / 23.128	260 / 3.671	242 / 2.292	8 / 0.062	- / -	8 / 0.062

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Exhibit P-3a, Individual Modification: PB 2022 Army					Date: May 2021	
Appropriation / Budget Activity / Budget Sub Activity: 2031A / 02 / 10			P-1 Line Item Number / Title: 8659AA0723 / Comms, Nav Surveillance		Modification Number / Title: AA0723 / Comms, Nav Surveillance	
ID Code (A=Service Ready, B=Not Service Ready) :				MDAP/MAIS Code:		
Models of Systems Affected: UH/HH-60A/L, UH/HH/MH-60M, CH-47D, CH/MH-47F, AH-64D/E, LUH, UAS			Modification Type: New or Improved Operational Capability		Related RDT&E PEs:	
Financial Plan	Prior Years	FY 2020	FY 2021	FY 2022 Base	FY 2022 OCO	FY 2022 Total
	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)
BFT-A A Kit Spares	20 / 0.194	5 / 0.076	- / -	- / -	- / -	- / -
Test / Engineering	- / 4.138	- / -	- / -	- / -	- / -	- / -
Fielding / Training	- / 2.927	- / 0.842	- / 0.005	- / 0.005	- / -	- / 0.005
Systems Engineering / Program Management	- / 26.228	- / 6.794	- / 6.941	- / 17.385	- / -	- / 17.385
Misc HW Procurement	- / 3.524	- / 0.131	- / 0.201	- / 0.068	- / -	- / 0.068
Subtotal: Recurring	1,969 / 60.139	265 / 11.514	242 / 9.439	8 / 7.520	- / -	8 / 7.520
Non-Recurring						
NRE-Test / Engineering	- / 4.747	- / -	- / -	- / -	- / -	- / -
Subtotal: Non-Recurring	- / 4.747	- / -	- / -	- / -	- / -	- / -
Subtotal: Blue Force Tracking-Aviation (BFT-A)	1,969 / 64.886	265 / 11.514	242 / 9.439	8 / 7.520	- / -	8 / 7.520
Subtotal: Procurement, All Modification Items	5,588 / 812.904	637 / 149.482	611 / 87.543	244 / 46.160	- / -	244 / 46.160
Installation						
Modification Item 1 of 9: DGNS (AN/ASN-128D) P3I	46 / 0.296	- / -	- / -	- / -	- / -	- / -
Modification Item 2 of 9: DGNS (AN/ASN-128D) CDU/ SW Upgrade ECP B-Kit	250 / 2.250	200 / 1.820	- / -	- / -	- / -	- / -
Modification Item 3 of 9: DGNS (AN/ASN-128D) CDU/ SW Upgrade ECP A-Kit	- / -	235 / 1.260	- / -	- / -	- / -	- / -
Modification Item 4 of 9: Embedded GPS Inertial Nav System (EGI) P3I B-Kit	51 / 0.447	- / -	- / -	- / -	- / -	- / -
Modification Item 5 of 9: Embedded GPS Inertial Nav System (EGI) P3I A-Kit	50 / 0.180	103 / 0.371	- / -	- / -	- / -	- / -
Modification Item 6 of 9: Aviation Tactical Comm Systems (ATCS) - Alt Comms	415 / 19.416	- / -	- / -	- / -	- / -	- / -
Modification Item 7 of 9: Aviation Tactical Comm Systems (ATCS) - MARS	- / -	- / -	160 / 1.050	221 / 3.094	- / -	221 / 3.094
Modification Item 9 of 9: Blue Force Tracking-Aviation (BFT-A)	1,182 / 41.654	376 / 11.382	450 / 12.762	382 / 8.863	- / -	382 / 8.863
Subtotal: Installation	1,994 / 64.243	914 / 14.833	610 / 13.812	603 / 11.957	- / -	603 / 11.957
Total						
Total Cost (Procurement + Support + Installation)	877.147	164.315	101.355	58.117	-	58.117

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Exhibit P-3a, Individual Modification: PB 2022 Army							Date: May 2021						
Appropriation / Budget Activity / Budget Sub Activity: 2031A / 02 / 10				P-1 Line Item Number / Title: 8659AA0723 / Comms, Nav Surveillance				Modification Number / Title: AA0723 / Comms, Nav Surveillance					
ID Code (A=Service Ready, B=Not Service Ready) :							MDAP/MAIS Code:						
Modification Item 1 of 9: DGNS (AN/ASN-128D) P3I													
Manufacturer Information													
Manufacturer Name: BAE International Incorporated							Manufacturer Location: Wayne, NJ						
Administrative Leadtime (in Months):							Production Leadtime (in Months):						
Dates		FY 2020				FY 2021				FY 2022			
Contract Dates													
Delivery Dates													
Installation Information													
Method of Implementation: Prototype Assets													
Installation Cost		Prior Years		FY 2020		FY 2021		FY 2022 Base		FY 2022 OCO		FY 2022 Total	
		Qty (Each) / Total Cost (\$ M)		Qty (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		46 / 0.296		- / -		- / -		- / -		- / -		- / -	
FY 2020		0 / 0.000		- / -		- / -		- / -		- / -		- / -	
FY 2021		0 / 0.000		- / -		- / -		- / -		- / -		- / -	
FY 2022		0 / 0.000		- / -		- / -		- / -		- / -		- / -	
Total		46 / 0.296		- / -		- / -		- / -		- / -		- / -	
Installation Schedule													
	PYS	FY 2020				FY 2021				FY 2022			
		Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4
In	46	-	-	-	-	-	-	-	-	-	-	-	-
Out	46	-	-	-	-	-	-	-	-	-	-	-	-

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Exhibit P-3a, Individual Modification: PB 2022 Army	Date: May 2021
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Appropriation / Budget Activity / Budget Sub Activity: 2031A / 02 / 10	P-1 Line Item Number / Title: 8659AA0723 / Comms, Nav Surveillance	Modification Number / Title: AA0723 / Comms, Nav Surveillance
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ID Code (A=Service Ready, B=Not Service Ready) :	MDAP/MAIS Code:
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Modification Item 2 of 9: DGNS (AN/ASN-128D) CDU/SW Upgrade ECP B-Kit

Manufacturer Information

Manufacturer Name: BAE International Incorporated	Manufacturer Location: Wayne, NJ
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Administrative Leadtime (in Months): 2	Production Leadtime (in Months): 12
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Dates	FY 2020	FY 2021	FY 2022
Contract Dates			
Delivery Dates			

Installation Information

Method of Implementation: Modification Work Order (MWO)

Installation Cost	Prior Years	FY 2020	FY 2021	FY 2022 Base	FY 2022 OCO	FY 2022 Total
	Qty (Each) / Total Cost (\$ M)	Qty (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	250 / 2.250	200 / 1.820	- / -	- / -	- / -	- / -
FY 2020	0 / 0.000	- / -	- / -	- / -	- / -	- / -
FY 2021	0 / 0.000	- / -	- / -	- / -	- / -	- / -
FY 2022	0 / 0.000	- / -	- / -	- / -	- / -	- / -
Total	250 / 2.250	200 / 1.820	- / -	- / -	- / -	- / -

Installation Schedule

PYS	FY 2020	FY 2020				FY 2021				FY 2022			
		Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4
In	250	50	50	50	50	-	-	-	-	-	-	-	-
Out	188	62	50	50	50	50	-	-	-	-	-	-	-

UNCLASSIFIED

Exhibit P-3a, Individual Modification: PB 2022 Army	Date: May 2021
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Appropriation / Budget Activity / Budget Sub Activity: 2031A / 02 / 10	P-1 Line Item Number / Title: 8659AA0723 / Comms, Nav Surveillance	Modification Number / Title: AA0723 / Comms, Nav Surveillance
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ID Code (A=Service Ready, B=Not Service Ready) :	MDAP/MAIS Code:
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Modification Item 3 of 9: DGNS (AN/ASN-128D) CDU/SW Upgrade ECP A-Kit

Manufacturer Information

Manufacturer Name: Mayflower Communications, Inc.	Manufacturer Location: Boston, MA
Administrative Leadtime (in Months): 2	Production Leadtime (in Months): 12

Dates	FY 2020	FY 2021	FY 2022
Contract Dates			
Delivery Dates			

Installation Information

Method of Implementation: MWO

Installation Cost	Prior Years	FY 2020	FY 2021	FY 2022 Base	FY 2022 OCO	FY 2022 Total
	Qty (Each) / Total Cost (\$ M)	Qty (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	- / -	235 / 1.260	- / -	- / -	- / -	- / -
FY 2020	0 / 0.000	- / -	- / -	- / -	- / -	- / -
FY 2021	0 / 0.000	- / -	- / -	- / -	- / -	- / -
FY 2022	0 / 0.000	- / -	- / -	- / -	- / -	- / -
Total	- / -	235 / 1.260	- / -	- / -	- / -	- / -

Installation Schedule

PYS	FY 2020	FY 2020				FY 2021				FY 2022			
		Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4
In	-	58	59	59	59	-	-	-	-	-	-	-	-
Out	-	-	58	59	59	59	-	-	-	-	-	-	-

UNCLASSIFIED

Exhibit P-3a, Individual Modification: PB 2022 Army	Date: May 2021
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Appropriation / Budget Activity / Budget Sub Activity: 2031A / 02 / 10	P-1 Line Item Number / Title: 8659AA0723 / Comms, Nav Surveillance	Modification Number / Title: AA0723 / Comms, Nav Surveillance
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ID Code (A=Service Ready, B=Not Service Ready) :	MDAP/MAIS Code:
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Modification Item 4 of 9: Embedded GPS Inertial Nav System (EGI) P3I B-Kit

Manufacturer Information

Manufacturer Name: Honeywell, Incorporated	Manufacturer Location: Clearwater, FL
Administrative Leadtime (in Months): 2	Production Leadtime (in Months): 12

Dates	FY 2020	FY 2021	FY 2022
Contract Dates			
Delivery Dates			

Installation Information

Method of Implementation: MWO

Installation Cost	Prior Years	FY 2020	FY 2021	FY 2022 Base	FY 2022 OCO	FY 2022 Total
	Qty (Each) / Total Cost (\$ M)	Qty (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	51 / 0.447	- / -	- / -	- / -	- / -	- / -
FY 2020	0 / 0.000	- / -	- / -	- / -	- / -	- / -
FY 2021	0 / 0.000	- / -	- / -	- / -	- / -	- / -
FY 2022	0 / 0.000	- / -	- / -	- / -	- / -	- / -
Total	51 / 0.447	- / -	- / -	- / -	- / -	- / -

Installation Schedule

PYS	PYS	FY 2020				FY 2021				FY 2022			
		Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4
In	51	-	-	-	-	-	-	-	-	-	-	-	-
Out	51	-	-	-	-	-	-	-	-	-	-	-	-

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Exhibit P-3a, Individual Modification: PB 2022 Army	Date: May 2021
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Appropriation / Budget Activity / Budget Sub Activity: 2031A / 02 / 10	P-1 Line Item Number / Title: 8659AA0723 / Comms, Nav Surveillance	Modification Number / Title: AA0723 / Comms, Nav Surveillance
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ID Code (A=Service Ready, B=Not Service Ready) :	MDAP/MAIS Code:
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Modification Item 5 of 9: Embedded GPS Inertial Nav System (EGI) P3I A-Kit

Manufacturer Information

Manufacturer Name: Mayflower Communications, Inc.	Manufacturer Location: Boston, MA
Administrative Leadtime (in Months): 2	Production Leadtime (in Months): 12

Dates	FY 2020	FY 2021	FY 2022
Contract Dates			
Delivery Dates			

Installation Information

Method of Implementation: MWO Installation

Installation Cost	Prior Years	FY 2020	FY 2021	FY 2022 Base	FY 2022 OCO	FY 2022 Total
	Qty (Each) / Total Cost (\$ M)	Qty (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	50 / 0.180	103 / 0.371	- / -	- / -	- / -	- / -
FY 2020	0 / 0.000	- / -	- / -	- / -	- / -	- / -
FY 2021	0 / 0.000	- / -	- / -	- / -	- / -	- / -
FY 2022	0 / 0.000	- / -	- / -	- / -	- / -	- / -
Total	50 / 0.180	103 / 0.371	- / -	- / -	- / -	- / -

Installation Schedule

	PYS	FY 2020				FY 2021				FY 2022			
		Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4
In	50	26	26	26	25	-	-	-	-	-	-	-	-
Out	37	13	26	26	26	25	-	-	-	-	-	-	-

UNCLASSIFIED

Exhibit P-3a, Individual Modification: PB 2022 Army	Date: May 2021
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Appropriation / Budget Activity / Budget Sub Activity: 2031A / 02 / 10	P-1 Line Item Number / Title: 8659AA0723 / Comms, Nav Surveillance	Modification Number / Title: AA0723 / Comms, Nav Surveillance
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ID Code (A=Service Ready, B=Not Service Ready) :	MDAP/MAIS Code:
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Modification Item 6 of 9: Aviation Tactical Comm Systems (ATCS) - Alt Comms

Manufacturer Information

Manufacturer Name: Various	Manufacturer Location: Various		
Administrative Leadtime (in Months): 2	Production Leadtime (in Months): 10		
Dates	FY 2020	FY 2021	FY 2022
Contract Dates			
Delivery Dates			

Installation Information

Method of Implementation: Modification Work Order (MWO)

Installation Cost	Prior Years	FY 2020	FY 2021	FY 2022 Base	FY 2022 OCO	FY 2022 Total
	Qty (Each) / Total Cost (\$ M)	Qty (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	415 / 19.416	- / -	- / -	- / -	- / -	- / -
FY 2020	0 / 0.000	- / -	- / -	- / -	- / -	- / -
FY 2021	0 / 0.000	- / -	- / -	- / -	- / -	- / -
FY 2022	0 / 0.000	- / -	- / -	- / -	- / -	- / -
Total	415 / 19.416	- / -	- / -	- / -	- / -	- / -

Installation Schedule

PYS	FY 2020	FY 2021	FY 2022												
				Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4
In	415	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Out	409	6	-	-	-	-	-	-	-	-	-	-	-	-	-

UNCLASSIFIED

Exhibit P-3a, Individual Modification: PB 2022 Army **Date:** May 2021

Appropriation / Budget Activity / Budget Sub Activity: 2031A / 02 / 10	P-1 Line Item Number / Title: 8659AA0723 / Comms, Nav Surveillance	Modification Number / Title: AA0723 / Comms, Nav Surveillance
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ID Code (A=Service Ready, B=Not Service Ready) :	MDAP/MAIS Code:
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Modification Item 7 of 9: Aviation Tactical Comm Systems (ATCS) - MARS

Manufacturer Information

Manufacturer Name: BAE	Manufacturer Location: Largo, FL / FT Wayne IN
Administrative Leadtime (in Months): 1	Production Leadtime (in Months): 12

Dates	FY 2020	FY 2021	FY 2022
Contract Dates	Nov 2019	Nov 2020	Nov 2021
Delivery Dates	Oct 2020	Oct 2021	Oct 2022

Installation Information

Method of Implementation: MWO

Installation Cost	Prior Years	FY 2020	FY 2021	FY 2022 Base	FY 2022 OCO	FY 2022 Total
	Qty (Each) / Total Cost (\$ M)	Qty (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	- / -	- / -	- / -	- / -	- / -
FY 2020	- / -	- / -	160 / 1.050	- / -	- / -	- / -
FY 2021	- / -	- / -	- / -	221 / 3.094	- / -	221 / 3.094
FY 2022	- / -	- / -	- / -	- / -	- / -	- / -
Total	- / -	- / -	160 / 1.050	221 / 3.094	- / -	221 / 3.094

Installation Schedule

PYS	FY 2020	FY 2020				FY 2021				FY 2022			
		Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4
In	-	-	-	-	-	40	40	40	40	62	62	62	62
Out	-	-	-	-	-	-	40	40	40	40	62	62	62

UNCLASSIFIED

Exhibit P-3a, Individual Modification: PB 2022 Army		Date: May 2021	
Appropriation / Budget Activity / Budget Sub Activity: 2031A / 02 / 10		P-1 Line Item Number / Title: 8659AA0723 / Comms, Nav Surveillance	
Modification Number / Title: AA0723 / Comms, Nav Surveillance			
ID Code (A=Service Ready, B=Not Service Ready) :		MDAP/MAIS Code:	
Modification Item 8 of 9: Airborne Maritime Fixed (AMF-A) Radio Integration			
Manufacturer Information			
Manufacturer Name: TBD		Manufacturer Location: TBD	
Administrative Leadtime (in Months):		Production Leadtime (in Months):	
Dates	FY 2020	FY 2021	FY 2022
Contract Dates			
Delivery Dates			
Installation Information			
Method of Implementation (Organic): Modification Work Order (MWO) - Contractor		Installation Quantity: 0	

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Exhibit P-3a, Individual Modification: PB 2022 Army **Date:** May 2021

Appropriation / Budget Activity / Budget Sub Activity: 2031A / 02 / 10	P-1 Line Item Number / Title: 8659AA0723 / Comms, Nav Surveillance	Modification Number / Title: AA0723 / Comms, Nav Surveillance
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ID Code (A=Service Ready, B=Not Service Ready) :	MDAP/MAIS Code:
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Modification Item 9 of 9: Blue Force Tracking-Aviation (BFT-A)

Manufacturer Information

Manufacturer Name: Various		Manufacturer Location: Various	
Administrative Leadtime (in Months): 1		Production Leadtime (in Months): 12	
Dates	FY 2020	FY 2021	FY 2022
Contract Dates	Nov 2019	Nov 2020	Nov 2021
Delivery Dates	Oct 2020	Oct 2021	Oct 2022

Installation Information

Method of Implementation: Modification Work Order (MWO) - Contractor

Installation Cost	Prior Years	FY 2020	FY 2021	FY 2022 Base	FY 2022 OCO	FY 2022 Total
	Qty (Each) / Total Cost (\$ M)	Qty (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	1,182 / 41.654	376 / 11.382	391 / 11.089	- / -	- / -	- / -
FY 2020	- / -	- / -	59 / 1.673	201 / 4.568	- / -	201 / 4.568
FY 2021	- / -	- / -	- / -	181 / 4.295	- / -	181 / 4.295
FY 2022	- / -	- / -	- / -	- / -	- / -	- / -
Total	1,182 / 41.654	376 / 11.382	450 / 12.762	382 / 8.863	- / -	382 / 8.863

Installation Schedule

	PYS	FY 2020				FY 2021				FY 2022			
		Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4
In	1,182	94	94	94	94	112	112	113	113	95	95	96	96
Out	1,121	61	94	94	94	94	112	112	113	113	95	95	96

UNCLASSIFIED

Exhibit P-40, Budget Line Item Justification: PB 2022 Army **Date:** May 2021

Appropriation / Budget Activity / Budget Sub Activity: 2031A: Aircraft Procurement, Army / BA 02: Modification of Aircraft / BSA 10: Modification of Aircraft	P-1 Line Item Number / Title: 8660A00713 / Degraded Visual Environment
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ID Code (A=Service Ready, B=Not Service Ready):	Program Elements for Code B Items: N/A	Other Related Program Elements: N/A
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Line Item MDAP/MAIS Code: N/A

Resource Summary	Prior Years	FY 2020	FY 2021	FY 2022 Base	FY 2022 OCO	FY 2022 Total	FY 2023	FY 2024	FY 2025	FY 2026	To Complete	Total
Procurement Quantity (<i>Units in Each</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost (<i>\$ in Millions</i>)	31.328	49.450	1.916	-	-	-	-	-	-	-	-	-
Less PY Advance Procurement (<i>\$ in Millions</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) (<i>\$ in Millions</i>)	31.328	49.450	1.916	-	-	-	-	-	-	-	-	-
Plus CY Advance Procurement (<i>\$ in Millions</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Total Obligation Authority (<i>\$ in Millions</i>)	31.328	49.450	1.916	-	-	-	-	-	-	-	-	-

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

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

Description:

The Degraded Visual Environment (DVE) system provides situational awareness to enable hazard avoidance through sensors to support various modes of flight during training and tactical operations. The Army's DVE Directed Requirement is to procure 40 DVE systems and 8 spares for the Army Medical Evacuation and Special Operations helicopters to improve crew situational awareness in brownout environments.

The DVE Army Acquisition Objective has not been established yet.

Secondary Distribution	FY 2020	FY 2021	FY 2022 Base	FY 2022 OCO	FY 2022 Total	FY 2023	FY 2024	FY 2025	FY 2026
Army	Quantity	-	-	-	-	-	-	-	-
	Total Obligation Authority	49.450	1.916	-	-	-	-	-	-
Total: Secondary Distribution	Quantity	-	-	-	-	-	-	-	-
	Total Obligation Authority	49.450	1.916	-	-	-	-	-	-

Justification:

No FY 2022 Procurement Requirement.

UNCLASSIFIED

Exhibit P-40, Budget Line Item Justification: PB 2022 Army **Date:** May 2021

Appropriation / Budget Activity / Budget Sub Activity: 2031A: Aircraft Procurement, Army / BA 02: Modification of Aircraft / BSA 10: Modification of Aircraft	P-1 Line Item Number / Title: 8662A01006 / Aviation ASSURED PNT
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ID Code (A=Service Ready, B=Not Service Ready):	Program Elements for Code B Items: N/A	Other Related Program Elements: N/A
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Line Item MDAP/MAIS Code: N/A

Resource Summary	Prior Years	FY 2020	FY 2021	FY 2022 Base	FY 2022 OCO	FY 2022 Total	FY 2023	FY 2024	FY 2025	FY 2026	To Complete	Total
Procurement Quantity (<i>Units in Each</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost (<i>\$ in Millions</i>)	-	-	53.509	47.028	-	47.028	-	-	-	-	-	-
Less PY Advance Procurement (<i>\$ in Millions</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) (<i>\$ in Millions</i>)	-	-	53.509	47.028	-	47.028	-	-	-	-	-	-
Plus CY Advance Procurement (<i>\$ in Millions</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Total Obligation Authority (<i>\$ in Millions</i>)	-	-	53.509	47.028	-	47.028	-	-	-	-	-	-

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

Initial Spares (<i>\$ in Millions</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Flyaway Unit Cost (<i>\$ in Thousands</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Unit Cost (<i>\$ in Thousands</i>)	-	-	133.439	126.760	-	126.760	-	-	-	-	-	-

Description:

Prior to FY2021, funding for Aviation ASSURED PNT (Army Navigation Systems) was executed out of Budget Line Item 8659AA0723, Comms, Nav Surveillance.

Assured-Position Navigation and Timing (A-PNT) provides Army aviation with unhindered access to trusted Position, Navigation, and Timing information within contested environments. To meet near term A-PNT modernization requirements, Army Aviation is currently pursuing critical near term capabilities for the enduring fleet. A-PNT will enable aircrews to access and trust PNT information required to conduct PNT dependent tasks and ultimately provide alternate, contingency, or emergency PNT solutions to allow the aircrew to complete the mission or recover safely. To provide the most robust solution, platform level A-PNT includes layers of assurance such as modernized GPS receivers, improved resiliency functions in GPS receivers, navigation equipment, and anti-jam antenna systems. Alternate capabilities will be investigated, evaluated, and implemented into the Embedded GPS Inertial Navigation System (EGI)/Enhanced Aviation GATM Localizer Performance with Vertical Guidance (LPV) EGI (EAGLE)/EAGLE-M as standalone or blended navigation functions. The implementation will be configurable to accept position, velocity, and time measurements from other PNT solutions.

The Doppler Global Positioning System Navigation Set (DGNS) Upgrade program supports system engineering to reduce space, weight, and power as well as supports current and future Civil Airspace requirements. The DGNS hardware upgrades include Non-Recurring Engineering for the Computer Display Unit (CDU) which replaces the current CDU faceplate with a touch screen display, provides a moving navigation map capability, and optimizes pilot interface to promote safer flight operations. The CDU upgrade will support A-PNT operations through Resiliency and Software Assurance Modification (RSAM) in conjunction with additional system upgrades and upgrades to existing DGNS hardware. Fielding of DGNS software upgrades will enhance operations in both civil and military airspace, and support the requirement to maintain A-PNT throughout the Multi-Domain Environment.

EAGLE-M integration and procurement introduces the capability to receive and process the new military code GPS signal security, significantly enhancing APNT capability. It supports the requirement to maintain A-PNT throughout operations and requires assessment and follow-on upgrade to the EGI navigation system. EAGLE-M will support future capabilities such as Alternate PNT (ALT-PNT) and additional system upgrades enabling Joint All-Domain Operations (JADO) in contested GPS environments. EAGLE-M enables LPV allowing precision navigation and approach capabilities in the national airspace.

The Multi-platform Anti-jam GPS Navigation Antenna (MAGNA) integration and procurement introduces a GPS anti-jam adaptive antenna system capability that receives legacy and modernized NAVSTAR GPS satellite signals. The MAGNA reduces the effect of GPS jamming by rejecting the interfering signals before they disrupt the GPS receiver enabling the Warfighter continued access to GPS-provided Position, Navigation, and Timing (PNT) in a GPS degraded environment.

This exhibit is for a budget line that procures multiple items and does not have a single Army Acquisition Objective.

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Exhibit P-40, Budget Line Item Justification: PB 2022 Army **Date:** May 2021

Appropriation / Budget Activity / Budget Sub Activity: 2031A: Aircraft Procurement, Army / BA 02: Modification of Aircraft / BSA 10: Modification of Aircraft	P-1 Line Item Number / Title: 8662A01006 / Aviation ASSURED PNT
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ID Code (A=Service Ready, B=Not Service Ready):	Program Elements for Code B Items: N/A	Other Related Program Elements: N/A
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Line Item MDAP/MAIS Code: N/A

Secondary Distribution		FY 2020	FY 2021	FY 2022 Base	FY 2022 OCO	FY 2022 Total	FY 2023	FY 2024	FY 2025	FY 2026
Army	Quantity	-	-	-	-	-	-	-	-	-
	Total Obligation Authority	-	26.755	24.343	-	24.343	-	-	-	-
ANG	Quantity	-	-	-	-	-	-	-	-	-
	Total Obligation Authority	-	24.079	20.324	-	20.324	-	-	-	-
AR	Quantity	-	-	-	-	-	-	-	-	-
	Total Obligation Authority	-	2.675	2.361	-	2.361	-	-	-	-
Total: Secondary Distribution	Quantity	-	-	-	-	-	-	-	-	-
	Total Obligation Authority	-	53.509	47.028	-	47.028	-	-	-	-

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Exhibit P-40, Budget Line Item Justification: PB 2022 Army **Date:** May 2021

Appropriation / Budget Activity / Budget Sub Activity: 2031A: Aircraft Procurement, Army / BA 02: Modification of Aircraft / BSA 10: Modification of Aircraft	P-1 Line Item Number / Title: 8662A01006 / Aviation ASSURED PNT
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ID Code (A=Service Ready, B=Not Service Ready):	Program Elements for Code B Items: N/A	Other Related Program Elements: N/A
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Line Item MDAP/MAIS Code: N/A

Exhibits Schedule					Prior Years	FY 2020	FY 2021	FY 2022 Base	FY 2022 OCO	FY 2022 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	A01006 / Aviation ASSURED PNT (New or Improved Operational Capability)				- / -	- / -	- / 53.509	- / 47.028	- / -	- / 47.028
P-40	Total Gross/Weapon System Cost				- / -	- / -	- / 53.509	- / 47.028	- / -	- / 47.028

*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:
 FY2022 Base Procurement dollars in the amount of \$28.654 million supports the integration, production, and installation of EAGLE-M for multiple aircraft platforms.

FY2022 Base Procurement dollars in the amount of \$2.500 million supports the fielding of software for DGNS Suite E.

FY2022 Base Procurement dollars in the amount of \$15.874 million supports the integration, procurement, and installation of MAGNA A Kits.

In accordance with Section 1815 of the FY2008 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.

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Exhibit P-3a, Individual Modification: PB 2022 Army		Date: May 2021
Appropriation / Budget Activity / Budget Sub Activity: 2031A / 02 / 10	P-1 Line Item Number / Title: 8662A01006 / Aviation ASSURED PNT	Modification Number / Title: A01006 / Aviation ASSURED PNT

ID Code (A=Service Ready, B=Not Service Ready) :			MDAP/MAIS Code:				
Resource Summary	Prior Years	FY 2020	FY 2021	FY 2022 Base	FY 2022 OCO	FY 2022 Total	
Procurement Quantity (<i>Units in Each</i>)	-	-	-	-	-	-	
Gross/Weapon System Cost (<i>\$ in Millions</i>)	-	-	53.509	47.028	-	47.028	
Less PY Advance Procurement (<i>\$ in Millions</i>)	-	-	-	-	-	-	
Net Procurement (P-1) (<i>\$ in Millions</i>)	-	-	53.509	47.028	-	47.028	
Plus CY Advance Procurement (<i>\$ in Millions</i>)	-	-	-	-	-	-	
Total Obligation Authority (<i>\$ in Millions</i>)	-	-	53.509	47.028	-	47.028	
<i>(The following Resource Summary rows are for informational purposes only. The corresponding budget requests are documented elsewhere.)</i>							
Initial Spares (<i>\$ in Millions</i>)	-	-	-	-	-	-	
Gross/Weapon System Unit Cost (<i>\$ in Thousands</i>)	-	-	133.439	126.760	-	126.760	

Description:

Prior to FY2021, funding for Aviation ASSURED PNT (Army Navigation Systems) was executed out of Budget Line Item 8659AA0723, Comms, Nav Surveillance. Assured-Position Navigation and Timing (A-PNT) provides Army aviation with unhindered access to trusted Position, Navigation, and Timing information within contested environments. To meet near term A-PNT modernization requirements, Army Aviation is currently pursuing critical near term capabilities for the enduring fleet. A-PNT will enable aircrews to access and trust PNT information required to conduct PNT dependent tasks and ultimately provide alternate, contingency, or emergency PNT solutions to allow the aircrew to complete the mission or recover safely. To provide the most robust solution, platform level A-PNT includes layers of assurance such as modernized Global Navigation Satellite System (GNSS) GPS receivers, improved resiliency functions in GPS receivers, navigation equipment, and anti-jam antenna systems. Alternate capabilities (non-GPS) and/or complimentary PNT solutions will be investigated, evaluated, and implemented as standalone or blended navigation functions. The implementation will be configurable to accept position, velocity, and time measurements from other PNT solutions.

The Doppler Global Positioning System Navigation Set (DGNS) Upgrade program supports system engineering to reduce space, weight, and power as well as supports current and future Civil Airspace requirements. The DGNS hardware upgrades include Non-Recurring Engineering for the Computer Display Unit (CDU) which replaces the current CDU faceplate with a touch screen display, provides a moving navigation map capability, and optimizes pilot interface to promote safer flight operations. The CDU upgrade will support A-PNT operations through Resiliency and Software Assurance Modification (RSAM) in conjunction with additional system upgrades and upgrades to existing DGNS hardware. Fielding of DGNS software upgrades will enhance operations in both civil and military airspace, and support the requirement to maintain A-PNT throughout the Multi-Domain Environment.

Embedded GPS Inertial Navigation System (EGI)/Enhanced Aviation GATM Localizer Performance with Vertical Guidance (LPV) EGI (EAGLE)/EAGLE-M integration and procurement introduces the capability to receive and process the new military code (M-Code) GPS signal security, significantly enhancing A-PNT capability. It supports the requirement to maintain A-PNT throughout operations and requires assessment and follow-on upgrade to the EGI navigation system. EAGLE-M will support future capabilities such as Alternate PNT (ALT-PNT) and additional system upgrades enabling Joint All-Domain Operations (JADO) in contested GPS environments. EAGLE-M enables LPV allowing precision navigation and approach capabilities in the national airspace.

The Multi-platform Anti-jam GPS Navigation Antenna (MAGNA) integration and procurement introduces a GPS anti-jam adaptive antenna system capability that receives legacy and modernized NAVSTAR GPS satellite signals. The MAGNA reduces the effect of GPS jamming by rejecting the interfering signals before they disrupt the GPS receiver enabling the Warfighter continued access to GPS-provided Position, Navigation, and Timing (PNT) in a GPS degraded environment.

This exhibit is for a budget line that procures multiple items and does not have a single Army Acquisition Objective.

Secondary Distribution		FY 2020	FY 2021	FY 2022 Base	FY 2022 OCO	FY 2022 Total
Army	Quantity	-	-	-	-	-

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Exhibit P-3a, Individual Modification: PB 2022 Army	Date: May 2021
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Appropriation / Budget Activity / Budget Sub Activity: 2031A / 02 / 10	P-1 Line Item Number / Title: 8662A01006 / Aviation ASSURED PNT	Modification Number / Title: A01006 / Aviation ASSURED PNT
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ID Code (A=Service Ready, B=Not Service Ready) :	MDAP/MAIS Code:
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		FY 2020	FY 2021	FY 2022 Base	FY 2022 OCO	FY 2022 Total
Secondary Distribution						
	Total Obligation Authority	-	26.755	24.343	-	24.343
ANG	Quantity	-	-	-	-	-
	Total Obligation Authority	-	24.079	20.324	-	20.324
AR	Quantity	-	-	-	-	-
	Total Obligation Authority	-	2.675	2.361	-	2.361
Total:	Quantity	-	-	-	-	-
Secondary Distribution	Total Obligation Authority	-	53.509	47.028	-	47.028

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Exhibit P-3a, Individual Modification: PB 2022 Army						Date: May 2021	
Appropriation / Budget Activity / Budget Sub Activity: 2031A / 02 / 10			P-1 Line Item Number / Title: 8662A01006 / Aviation ASSURED PNT			Modification Number / Title: A01006 / Aviation ASSURED PNT	
ID Code (A=Service Ready, B=Not Service Ready) :				MDAP/MAIS Code:			
Models of Systems Affected: UH/HH-60A/L, UH/HH/MH-60M, CH-47D, CH/MH-47F, AH-64D/E, LUH, UAS			Modification Type: New or Improved Operational Capability		Related RDT&E PEs:		
Financial Plan	Prior Years	FY 2020	FY 2021	FY 2022 Base	FY 2022 OCO	FY 2022 Total	
	Qty (Each) / Total Cost (\$ M)	Qty (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: DGNS (AN/ASN-128D) CDU/ SW Upgrade ECP B-Kit							
B Kits							
Recurring							
Fielding	- / -	- / -	- / 1.252	- / 1.449	- / -	- / 1.449	
Systems Eng / Program Management	- / -	- / -	- / 0.500	- / 0.510	- / -	- / 0.510	
Subtotal: Recurring	- / -	- / -	- / 1.752	- / 1.959	- / -	- / 1.959	
Non-Recurring							
System Test & Evaluation	- / -	- / -	- / 0.530	- / 0.541	- / -	- / 0.541	
Subtotal: Non-Recurring	- / -	- / -	- / 0.530	- / 0.541	- / -	- / 0.541	
Subtotal: DGNS (AN/ASN-128D) CDU/ SW Upgrade ECP B-Kit	- / -	- / -	- / 2.282	- / 2.500	- / -	- / 2.500	
Modification Item 2 of 3: MAGNA - GPS Anti Jam Antenna							
A Kits							
Recurring							
MAGNA - A-Kits	- / -	- / -	244 / 3.508	190 / 1.926	- / -	190 / 1.926	
Subtotal: Recurring	- / -	- / -	244 / 3.508	190 / 1.926	- / -	190 / 1.926	
B Kits							
Recurring							
MAGNA - GPS Anti Jam Antenna	- / -	- / -	244 / 6.622	190 / 5.336	- / -	190 / 5.336	
Systems Test & Eval	- / -	- / -	- / 0.816	- / -	- / -	- / -	
Systems Engineering/ Program Management	- / -	- / -	- / 3.688	- / 3.261	- / -	- / 3.261	
Subtotal: Recurring	- / -	- / -	244 / 11.126	190 / 8.597	- / -	190 / 8.597	
Non-Recurring							
Aircraft Integration	- / -	- / -	- / 11.572	- / 3.536	- / -	- / 3.536	
Subtotal: Non-Recurring	- / -	- / -	- / 11.572	- / 3.536	- / -	- / 3.536	
Subtotal: MAGNA - GPS Anti Jam Antenna	- / -	- / -	488 / 26.206	380 / 14.059	- / -	380 / 14.059	
Modification Item 3 of 3: Embedded GPS Inertial Nav System (EGI) P3I B Kit							
B Kits							

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Exhibit P-3a, Individual Modification: PB 2022 Army					Date: May 2021	
Appropriation / Budget Activity / Budget Sub Activity: 2031A / 02 / 10			P-1 Line Item Number / Title: 8662A01006 / Aviation ASSURED PNT		Modification Number / Title: A01006 / Aviation ASSURED PNT	
ID Code (A=Service Ready, B=Not Service Ready) :				MDAP/MAIS Code:		
Models of Systems Affected: UH/HH-60A/L, UH/HH/MH-60M, CH-47D, CH/MH-47F, AH-64D/E, LUH, UAS			Modification Type: New or Improved Operational Capability		Related RDT&E PEs:	
Financial Plan	Prior Years	FY 2020	FY 2021	FY 2022 Base	FY 2022 OCO	FY 2022 Total
	Qty (Each) / Total Cost (\$ M)	Qty (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						
EGI EAGLE-M	- / -	- / -	45 / 4.306	160 / 14.949	- / -	160 / 14.949
Systems Engineering /Program Management	- / -	- / -	- / 3.618	- / 4.057	- / -	- / 4.057
EAGLE-M Spares New	- / -	- / -	5 / 0.363	15 / 1.402	- / -	15 / 1.402
Subtotal: Recurring	- / -	- / -	50 / 8.287	175 / 20.408	- / -	175 / 20.408
Non-Recurring						
Aircraft Integration	- / -	- / -	- / 16.250	- / 7.598	- / -	- / 7.598
System Test and Eval	- / -	- / -	- / 0.484	- / 0.505	- / -	- / 0.505
Subtotal: Non-Recurring	- / -	- / -	- / 16.734	- / 8.103	- / -	- / 8.103
Subtotal: Embedded GPS Inertial Nav System (EGI) P3I B Kit	- / -	- / -	50 / 25.021	175 / 28.511	- / -	175 / 28.511
Subtotal: Procurement, All Modification Items	- / -	- / -	538 / 53.509	555 / 45.070	- / -	555 / 45.070
Installation						
Modification Item 2 of 3: MAGNA - GPS Anti Jam Antenna	- / -	- / -	- / -	244 / 1.815	- / -	244 / 1.815
Modification Item 3 of 3: Embedded GPS Inertial Nav System (EGI) P3I B Kit	- / -	- / -	- / -	45 / 0.143	- / -	45 / 0.143
Subtotal: Installation	- / -	- / -	- / -	289 / 1.958	- / -	289 / 1.958
Total						
Total Cost (Procurement + Support + Installation)	-	-	53.509	47.028	-	47.028

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Exhibit P-3a, Individual Modification: PB 2022 Army		Date: May 2021	
Appropriation / Budget Activity / Budget Sub Activity: 2031A / 02 / 10		P-1 Line Item Number / Title: 8662A01006 / Aviation ASSURED PNT	
Modification Number / Title: A01006 / Aviation ASSURED PNT			
ID Code (A=Service Ready, B=Not Service Ready) :		MDAP/MAIS Code:	
Modification Item 1 of 3: DGNS (AN/ASN-128D) CDU/ SW Upgrade ECP B-Kit			
Manufacturer Information			
Manufacturer Name: BAE International Incorporated		Manufacturer Location: Wayne, NJ	
Administrative Leadtime (in Months):		Production Leadtime (in Months):	
Dates	FY 2020	FY 2021	FY 2022
Contract Dates			
Delivery Dates			
Installation Information			
Method of Implementation (Organic): Modification Work Order (MWO)		Installation Quantity: 0	

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Exhibit P-3a, Individual Modification: PB 2022 Army	Date: May 2021
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Appropriation / Budget Activity / Budget Sub Activity: 2031A / 02 / 10	P-1 Line Item Number / Title: 8662A01006 / Aviation ASSURED PNT	Modification Number / Title: A01006 / Aviation ASSURED PNT
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ID Code (A=Service Ready, B=Not Service Ready) :	MDAP/MAIS Code:
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Modification Item 2 of 3: MAGNA - GPS Anti Jam Antenna

Manufacturer Information

Manufacturer Name: Mayflower Communications, Inc	Manufacturer Location: Bedford, MA
Administrative Leadtime (in Months): 2	Production Leadtime (in Months): 12

Dates	FY 2020	FY 2021	FY 2022
Contract Dates		Dec 2020	Dec 2021
Delivery Dates		Nov 2021	Nov 2022

Installation Information

Method of Implementation: MWO

Installation Cost	Prior Years	FY 2020	FY 2021	FY 2022 Base	FY 2022 OCO	FY 2022 Total
	Qty (Each) / Total Cost (\$ M)	Qty (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	- / -	- / -	- / -	- / -	- / -
FY 2020	0 / 0.000	- / -	- / -	- / -	- / -	- / -
FY 2021	- / -	- / -	- / -	244 / 1.815	- / -	244 / 1.815
FY 2022	- / -	- / -	- / -	- / -	- / -	- / -
Total	- / -	- / -	- / -	244 / 1.815	- / -	244 / 1.815

Installation Schedule

PYS	FY 2020				FY 2021				FY 2022				
	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	
In	-	-	-	-	-	-	-	-	-	55	61	61	61
Out	-	-	-	-	-	-	-	-	-	-	55	61	61

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Exhibit P-3a, Individual Modification: PB 2022 Army		Date: May 2021
Appropriation / Budget Activity / Budget Sub Activity: 2031A / 02 / 10	P-1 Line Item Number / Title: 8662A01006 / Aviation ASSURED PNT	Modification Number / Title: A01006 / Aviation ASSURED PNT

ID Code (A=Service Ready, B=Not Service Ready) :	MDAP/MAIS Code:
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Modification Item 3 of 3: Embedded GPS Inertial Nav System (EGI) P3I B Kit

Manufacturer Information

Manufacturer Name: Honeywell, Incorporated		Manufacturer Location: Clearwater, FL	
Administrative Leadtime (in Months): 2		Production Leadtime (in Months): 12	
Dates	FY 2020	FY 2021	FY 2022
Contract Dates		Dec 2020	Dec 2021
Delivery Dates		Nov 2021	Nov 2022

Installation Information

Method of Implementation: MWO

Installation Cost	Prior Years	FY 2020	FY 2021	FY 2022 Base	FY 2022 OCO	FY 2022 Total
	Qty (Each) / Total Cost (\$ M)	Qty (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	- / -	- / -	- / -	- / -	- / -
FY 2020	0 / 0.000	- / -	- / -	- / -	- / -	- / -
FY 2021	- / -	- / -	- / -	45 / 0.143	- / -	45 / 0.143
FY 2022	- / -	- / -	- / -	- / -	- / -	- / -
Total	- / -	- / -	- / -	45 / 0.143	- / -	45 / 0.143

Installation Schedule

	PYS	FY 2020				FY 2021				FY 2022			
		Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4
In	-	-	-	-	-	-	-	-	-	11	11	11	12
Out	-	-	-	-	-	-	-	-	-	-	11	11	11

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Exhibit P-40, Budget Line Item Justification: PB 2022 Army **Date:** May 2021

Appropriation / Budget Activity / Budget Sub Activity: 2031A: Aircraft Procurement, Army / BA 02: Modification of Aircraft / BSA 10: Modification of Aircraft	P-1 Line Item Number / Title: 8859AA0711 / GATM Rollup
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ID Code (A=Service Ready, B=Not Service Ready):	Program Elements for Code B Items: N/A	Other Related Program Elements: N/A
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Line Item MDAP/MAIS Code: N/A

Resource Summary	Prior Years	FY 2020	FY 2021	FY 2022 Base	FY 2022 OCO	FY 2022 Total	FY 2023	FY 2024	FY 2025	FY 2026	To Complete	Total
Procurement Quantity (<i>Units in Each</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost (<i>\$ in Millions</i>)	734.334	30.966	12.180	16.776	-	16.776	-	-	-	-	-	-
Less PY Advance Procurement (<i>\$ in Millions</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) (<i>\$ in Millions</i>)	734.334	30.966	12.180	16.776	-	16.776	-	-	-	-	-	-
Plus CY Advance Procurement (<i>\$ in Millions</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Total Obligation Authority (<i>\$ in Millions</i>)	734.334	30.966	12.180	16.776	-	16.776	-	-	-	-	-	-

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

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

Description:

Global Air Traffic Management (GATM) provides the equipment, training, and procedures mandated by Civilian Air Traffic Control (ATC) authorities in order to operate within 21st century airspace. GATM requirements are driven by civil aviation authorities and are not under DoD control. Meeting the worldwide GATM requirement will entail the upgrade and procurement of the Common Transponder (CXP) for rotary wing and Unmanned Aircraft System fleets.

GATM provides Army aircraft with improved capabilities to allow them to continue to operate in civil controlled airspace. Identification Friend or Foe (IFF) Mode 5 provides enhanced security and greatly improved performance and also improves compatibility with civil Air Traffic Control by providing less interference. GATM is also necessary since Europe currently mandates Mode S, a Secondary Surveillance Radar process, and plans expansion of the ability for Air Traffic Controllers to communicate with more aircraft in controlled airspace in high volume traffic areas. Army aircraft will not be allowed to transit through or operate in European airspace affected by these mandates unless the necessary GATM upgrades are made. Benefits of GATM include allowing for operations in worldwide civil controlled airspace and improving safety and operational efficiency while meeting emerging security requirements.

Meeting worldwide GATM requirements for rotary wing and Unmanned Aircraft System (UAS) fleets will entail the upgrading of some existing avionics and the procurement of new systems. The GATM program includes the Alt Comms and Multi-Mode Aviation Radio Set programs, the Common Transponder (CXP) Programs, the Embedded GPS Inertial (EGI) Navigation Systems, and aircraft Flight Management Systems. These systems will provide Army aircraft with improved capabilities to allow them to continue to operate in civil controlled airspace as well as to operate in European controlled airspace.

Funding for the EGI Navigation Systems transitioned to the Aviation Assured PNT line, Line Item Number 8662A01006, in FY21.

FY24 is the last year to procure the APX-123A due to obsolescence; this requires an end of life buy out to support the UH-60M, AH-64E, CH-47F production lines along with the UH-60V modification line and UH-60L pure fleetings. The APX-123A further supports fielding to MQ-1C

This exhibit is for a budget line that procures multiple items and does not have a single Army Acquisition Objective.

Secondary Distribution	FY 2020	FY 2021	FY 2022 Base	FY 2022 OCO	FY 2022 Total	FY 2023	FY 2024	FY 2025	FY 2026
Army Quantity	-	-	-	-	-	-	-	-	-

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Exhibit P-40, Budget Line Item Justification: PB 2022 Army							Date: May 2021			
Appropriation / Budget Activity / Budget Sub Activity: 2031A: Aircraft Procurement, Army / BA 02: Modification of Aircraft / BSA 10: Modification of Aircraft					P-1 Line Item Number / Title: 8859AA0711 / GATM Rollup					
ID Code (A=Service Ready, B=Not Service Ready):			Program Elements for Code B Items: N/A			Other Related Program Elements: N/A				
Line Item MDAP/MAIS Code: N/A										

Secondary Distribution		FY 2020	FY 2021	FY 2022 Base	FY 2022 OCO	FY 2022 Total	FY 2023	FY 2024	FY 2025	FY 2026
	Total Obligation Authority	22.398	6.699	8.578	-	8.578	-	-	-	-
ANG	Quantity	-	-	-	-	-	-	-	-	-
	Total Obligation Authority	7.666	4.872	7.287	-	7.287	-	-	-	-
AR	Quantity	-	-	-	-	-	-	-	-	-
	Total Obligation Authority	0.902	0.609	0.911	-	0.911	-	-	-	-
Total:	Quantity	-	-	-	-	-	-	-	-	-
Secondary Distribution	Total Obligation Authority	30.966	12.180	16.776	-	16.776	-	-	-	-

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Exhibit P-40, Budget Line Item Justification: PB 2022 Army **Date:** May 2021

Appropriation / Budget Activity / Budget Sub Activity:
 2031A: Aircraft Procurement, Army / BA 02: Modification of Aircraft / BSA 10: Modification of Aircraft **P-1 Line Item Number / Title:**
 8859AA0711 / GATM Rollup

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

Line Item MDAP/MAIS Code: N/A

Exhibits Schedule					Prior Years	FY 2020	FY 2021	FY 2022 Base	FY 2022 OCO	FY 2022 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	AA0704 / GATM - Rotary Wing Aircraft (New or Improved Operational Capability)				- / 734.334	- / 30.966	- / 12.180	- / 16.776	- / -	- / 16.776
P-40	Total Gross/Weapon System Cost				- / 734.334	- / 30.966	- / 12.180	- / 16.776	- / -	- / 16.776

*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:
 FY 2022 Base Procurement dollars in the amount of \$16.776 million supports Common Transponder APX-123A B-Kit integration, procurement, and installation.

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.

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Exhibit P-3a, Individual Modification: PB 2022 Army		Date: May 2021
Appropriation / Budget Activity / Budget Sub Activity: 2031A / 02 / 10	P-1 Line Item Number / Title: 8859AA0711 / GATM Rollup	Modification Number / Title: AA0704 / GATM - Rotary Wing Aircraft

ID Code (A=Service Ready, B=Not Service Ready) :	MDAP/MAIS Code:
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Resource Summary	Prior Years	FY 2020	FY 2021	FY 2022 Base	FY 2022 OCO	FY 2022 Total
Procurement Quantity (<i>Units in Each</i>)	-	-	-	-	-	-
Gross/Weapon System Cost (<i>\$ in Millions</i>)	734.334	30.966	12.180	16.776	-	16.776
Less PY Advance Procurement (<i>\$ in Millions</i>)	-	-	-	-	-	-
Net Procurement (P-1) (<i>\$ in Millions</i>)	734.334	30.966	12.180	16.776	-	16.776
Plus CY Advance Procurement (<i>\$ in Millions</i>)	-	-	-	-	-	-
Total Obligation Authority (<i>\$ in Millions</i>)	734.334	30.966	12.180	16.776	-	16.776

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

Initial Spares (<i>\$ in Millions</i>)	-	-	-	-	-	-
Gross/Weapon System Unit Cost (<i>\$ in Thousands</i>)	975.211	364.306	95.906	70.785	-	70.785

Description:

Global Air Traffic Management (GATM) provides the equipment, training, and procedures mandated by Civilian Air Traffic Control (ATC) authorities in order to operate within 21st century airspace. GATM requirements are driven by civil aviation authorities and are not under DoD control. Most ground based navigation aids will be phased out of service as the Aviation community transitions to a modernized air traffic management system. The modernization is designed to meet the current and future service demands imposed by aviation growth. The advanced architecture will provide improved safety, accessibility, flexibility, predictability, reliability, capacity, efficiency, and security. Military aircraft will need modernized GATM equipment in order to avoid significant flight restrictions. Meeting the worldwide GATM requirement will entail the upgrading of some existing avionics and the procurement of new systems for rotary wing, fixed wing, and Unmanned Aircraft System fleets. The GATM program includes the Alt Comms and Multi-Mode Aviation Radio Set programs, the Common Transponder (CXP) Programs, the Embedded GPS Inertial (EGI) Navigation Systems, and aircraft Flight Management Systems. Funding for the EGI Navigation Systems transitioned to the Aviation Assured PNT line, Line Item Number 8662A01006, in FY21.

GATM provides Army aircraft with improved capabilities to allow them to continue to operate in civil controlled airspace. Identification Friend or Foe (IFF) Mode 5 provides enhanced security and greatly improved performance and also improves compatibility with civil Air Traffic Control by providing less interference. GATM is also necessary since Europe currently mandates Mode S, a Secondary Surveillance Radar process, and plans expansion of the ability for Air Traffic Controllers to communicate with more aircraft in controlled airspace in high volume traffic areas. Army aircraft will not be allowed to transit through or operate in European airspace affected by these mandates unless the necessary GATM upgrades are made. Benefits of GATM include direct routing through civil airspace resulting in significant savings in both time and training costs. It allows for operations in worldwide civil controlled airspace and improves safety through the use of ADS-B Out and operational efficiency while meeting the new worldwide frequency spectrum requirements.

FY24 is the last year to procure the APX-123A due to obsolescence; this requires an end of life buy out to support the UH-60M, AH-64E, CH-47F production lines along with the UH-60V modification line and UH-60L pure fleetings. The APX-123A further supports fielding to MQ-1C.

Secondary Distribution		FY 2020	FY 2021	FY 2022 Base	FY 2022 OCO	FY 2022 Total
Army	Quantity	-	-	-	-	-
	Total Obligation Authority	22.398	6.699	8.578	-	8.578
ANG	Quantity	-	-	-	-	-
	Total Obligation Authority	7.666	4.872	7.287	-	7.287
AR	Quantity	-	-	-	-	-
	Total Obligation Authority	0.902	0.609	0.911	-	0.911
Total:	Quantity	-	-	-	-	-

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Exhibit P-3a, Individual Modification: PB 2022 Army				Date: May 2021		
Appropriation / Budget Activity / Budget Sub Activity: 2031A / 02 / 10		P-1 Line Item Number / Title: 8859AA0711 / GATM Rollup		Modification Number / Title: AA0704 / GATM - Rotary Wing Aircraft		
ID Code (A=Service Ready, B=Not Service Ready) :			MDAP/MAIS Code:			
Secondary Distribution		FY 2020	FY 2021	FY 2022 Base	FY 2022 OCO	FY 2022 Total
Secondary Distribution	Total Obligation Authority	30.966	12.180	16.776	-	16.776

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Exhibit P-3a, Individual Modification: PB 2022 Army						Date: May 2021	
Appropriation / Budget Activity / Budget Sub Activity: 2031A / 02 / 10			P-1 Line Item Number / Title: 8859AA0711 / GATM Rollup			Modification Number / Title: AA0704 / GATM - Rotary Wing Aircraft	
ID Code (A=Service Ready, B=Not Service Ready) :					MDAP/MAIS Code:		
Models of Systems Affected: UH&HH60A/L, CH47D/F, UH60M, MH47G, MH60M, A/MH6, AH64A/D/E, UAS			Modification Type: New or Improved Operational Capability		Related RDT&E PEs:		
Financial Plan	Prior Years	FY 2020	FY 2021	FY 2022 Base	FY 2022 OCO	FY 2022 Total	
	Qty (Each) / Total Cost (\$ M)	Qty (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: Global Air Traffic Mgmt RW APX-123							
A Kits							
Recurring							
Kit Quantity - APX-123 A-Kits	680 / 2.531	- / -	- / -	- / -	- / -	- / -	
Aircraft Integ/RCUs/KIV77	- / 16.933	- / -	- / -	- / -	- / -	- / -	
ECP	- / 6.785	- / -	- / -	- / -	- / -	- / -	
Systems Eng/Prog Mgt (SEPM)	- / 21.245	- / -	- / -	- / -	- / -	- / -	
Other PM Admin	- / 8.437	- / -	- / -	- / -	- / -	- / -	
Subtotal: Recurring	680 / 55.931	- / -	- / -	- / -	- / -	- / -	
B Kits							
Recurring							
APX-123 B Kit Conversion Kit (MWO)	1,507 / 10.455	- / -	- / -	- / -	- / -	- / -	
APX-123A B-Kit Production Line	822 / 30.533	- / -	- / -	- / -	- / -	- / -	
APX-123 B-Kit Conversion Kit Prod Line	113 / 1.144	- / -	- / -	- / -	- / -	- / -	
APX-123 B-Kits Production Line	185 / 6.878	- / -	- / -	- / -	- / -	- / -	
APX-123 B-Kit (MWO)	60 / 2.231	- / -	- / -	- / -	- / -	- / -	
Fielding/Training	- / 21.002	- / -	- / -	- / -	- / -	- / -	
Subtotal: Recurring	2,687 / 72.243	- / -	- / -	- / -	- / -	- / -	
Non-Recurring							
B Kit	- / 23.696	- / -	- / -	- / -	- / -	- / -	
Subtotal: Non-Recurring	- / 23.696	- / -	- / -	- / -	- / -	- / -	
Subtotal: Global Air Traffic Mgmt RW APX-123	3,367 / 151.870	- / -	- / -	- / -	- / -	- / -	
Modification Item 2 of 6: Global Air Traffic Mgmt RW APX-118 Upgrade Kits							
A Kits							
Recurring							
Kit Qty- Upgrade A-Kits	972 / 4.076	- / -	- / -	- / -	- / -	- / -	
Engineering Change Orders	- / 1.123	- / -	- / -	- / -	- / -	- / -	
System Eng/Prog Mgt (SEPM)	- / 9.205	- / -	- / -	- / -	- / -	- / -	
Subtotal: Recurring	972 / 14.404	- / -	- / -	- / -	- / -	- / -	
B Kits							

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Exhibit P-3a, Individual Modification: PB 2022 Army						Date: May 2021	
Appropriation / Budget Activity / Budget Sub Activity: 2031A / 02 / 10			P-1 Line Item Number / Title: 8859AA0711 / GATM Rollup			Modification Number / Title: AA0704 / GATM - Rotary Wing Aircraft	
ID Code (A=Service Ready, B=Not Service Ready) :					MDAP/MAIS Code:		
Models of Systems Affected: UH&HH60A/L, CH47D/ F, UH60M, MH47G, MH60M, A/MH6, AH64A/D/E, UAS			Modification Type: New or Improved Operational Capability		Related RDT&E PEs:		
Financial Plan	Prior Years	FY 2020	FY 2021	FY 2022 Base	FY 2022 OCO	FY 2022 Total	
	Qty (Each) / Total Cost (\$ M)	Qty (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							
APX-123 Upgrade Kit (MWO)	2,375 / 26.666	- / -	- / -	- / -	- / -	- / -	
<i>Subtotal: Recurring</i>	2,375 / 26.666	- / -	- / -	- / -	- / -	- / -	
Non-Recurring							
B-Kits Nonrecurring	- / 3.520	- / -	- / -	- / -	- / -	- / -	
<i>Subtotal: Non-Recurring</i>	- / 3.520	- / -	- / -	- / -	- / -	- / -	
<i>Subtotal: Global Air Traffic Mgmt RW APX-118 Upgrade Kits</i>	3,347 / 44.590	- / -	- / -	- / -	- / -	- / -	
Modification Item 3 of 6: Global Air Traffic Mgmt RW ADS-B							
A Kits							
Recurring							
Kit Qty: ADS-B A-Kits (Installed w/box)	828 / 3.513	- / -	- / -	- / -	- / -	- / -	
Engineering Change Orders	- / 4.079	- / -	- / -	- / -	- / -	- / -	
Data	- / 3.462	- / -	- / -	- / -	- / -	- / -	
Training Equipment	- / 3.885	- / -	- / -	- / -	- / -	- / -	
Fielding	- / 0.845	- / -	- / -	- / -	- / -	- / -	
System Eng/Prog Mgt (SEPM)	- / 17.887	- / -	- / -	- / -	- / -	- / -	
System Test & Eval (ST&E)	- / 11.167	- / -	- / -	- / -	- / -	- / -	
Other- PM Admin	- / 6.245	- / -	- / -	- / -	- / -	- / -	
<i>Subtotal: Recurring</i>	828 / 31.083	- / -	- / -	- / -	- / -	- / -	
Non-Recurring							
Non-Recurring Engineering	- / 35.236	- / -	- / -	- / -	- / -	- / -	
<i>Subtotal: Non-Recurring</i>	- / 35.236	- / -	- / -	- / -	- / -	- / -	
<i>Subtotal: Global Air Traffic Mgmt RW ADS-B</i>	828 / 66.319	- / -	- / -	- / -	- / -	- / -	
Modification Item 4 of 6: Embedded GPS Inertial (EGI) Navigation System ECP							
A Kits							
Recurring							
Training/Data/Support Equipment	- / 2.070	- / -	- / -	- / -	- / -	- / -	
Systems Engineering/Program Management	- / 9.206	- / 12.279	- / -	- / -	- / -	- / -	
Fielding	- / 1.120	- / -	- / -	- / -	- / -	- / -	
<i>Subtotal: Recurring</i>	- / 12.396	- / 12.279	- / -	- / -	- / -	- / -	

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Exhibit P-3a, Individual Modification: PB 2022 Army						Date: May 2021	
Appropriation / Budget Activity / Budget Sub Activity: 2031A / 02 / 10			P-1 Line Item Number / Title: 8859AA0711 / GATM Rollup			Modification Number / Title: AA0704 / GATM - Rotary Wing Aircraft	
ID Code (A=Service Ready, B=Not Service Ready) :					MDAP/MAIS Code:		
Models of Systems Affected: UH&HH60A/L, CH47D/ F, UH60M, MH47G, MH60M, A/MH6, AH64A/D/E, UAS			Modification Type: New or Improved Operational Capability		Related RDT&E PEs:		
Financial Plan	Prior Years	FY 2020	FY 2021	FY 2022 Base	FY 2022 OCO	FY 2022 Total	
	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	
B Kits							
Recurring							
EGH+ Shipsets	86 / 13.129	- / -	- / -	- / -	- / -	- / -	
EGI EAGLE-M Shipsets MWO	35 / 5.099	- / -	- / -	- / -	- / -	- / -	
EGI EAGLE SOA Retrofit Kit Shipsets GFE	95 / 5.751	- / -	- / -	- / -	- / -	- / -	
EGI EAGLE SOA/429 Shipsets GFE	173 / 29.492	- / -	- / -	- / -	- / -	- / -	
<i>Subtotal: Recurring</i>	<i>389 / 53.471</i>	<i>- / -</i>	<i>- / -</i>	<i>- / -</i>	<i>- / -</i>	<i>- / -</i>	
Non-Recurring							
Systems Testing and Evaluation	- / 4.782	- / -	- / -	- / -	- / -	- / -	
Aircraft Integration	- / 27.960	- / 14.507	- / -	- / -	- / -	- / -	
<i>Subtotal: Non-Recurring</i>	<i>- / 32.742</i>	<i>- / 14.507</i>	<i>- / -</i>	<i>- / -</i>	<i>- / -</i>	<i>- / -</i>	
<i>Subtotal: Embedded GPS Inertial (EGI) Navigation System ECP</i>	<i>389 / 98.609</i>	<i>- / 16.786</i>	<i>- / -</i>	<i>- / -</i>	<i>- / -</i>	<i>- / -</i>	
Modification Item 5 of 6: Common Transponder (CXP)							
A Kits							
Recurring							
ADS-B A-Kit (Wire Harness)	- / 1.938	- / -	- / -	- / -	- / -	- / -	
System Test and Evaluation	- / 2.191	- / 0.226	- / 0.032	- / 0.577	- / -	- / 0.577	
Systems Engineering/Program Management	- / 7.169	- / 2.521	- / 2.394	- / 2.413	- / -	- / 2.413	
Fielding/Training	- / 2.407	- / 1.068	- / 1.421	- / 1.875	- / -	- / 1.875	
Ancillary Procurements	- / 0.027	- / 0.014	- / 0.011	- / 0.011	- / -	- / 0.011	
<i>Subtotal: Recurring</i>	<i>- / 13.732</i>	<i>- / 3.829</i>	<i>- / 3.858</i>	<i>- / 4.876</i>	<i>- / -</i>	<i>- / 4.876</i>	
B Kits							
Recurring							
APX-123A B-Kit Spares	51 / 2.084	15 / 0.682	10 / 0.714	19 / 0.881	- / -	19 / 0.881	
APX-123 B-Kit Conversion Kit - MWO	302 / 2.665	31 / 0.599	25 / 0.910	106 / 2.153	- / -	106 / 2.153	
APX-123A B-Kit Production Line/GFE	200 / 7.126	73 / 3.321	51 / 2.946	101 / 3.812	- / -	101 / 3.812	
<i>Subtotal: Recurring</i>	<i>553 / 11.875</i>	<i>119 / 4.602</i>	<i>86 / 4.570</i>	<i>226 / 6.846</i>	<i>- / -</i>	<i>226 / 6.846</i>	
Non-Recurring							
ADS-B Out Non-Recurring Integration	- / 2.972	- / 1.230	- / -	- / 3.302	- / -	- / 3.302	
<i>Subtotal: Non-Recurring</i>	<i>- / 2.972</i>	<i>- / 1.230</i>	<i>- / -</i>	<i>- / 3.302</i>	<i>- / -</i>	<i>- / 3.302</i>	
<i>Subtotal: Common Transponder (CXP)</i>	<i>553 / 28.579</i>	<i>119 / 9.661</i>	<i>86 / 8.428</i>	<i>226 / 15.024</i>	<i>- / -</i>	<i>226 / 15.024</i>	

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Exhibit P-3a, Individual Modification: PB 2022 Army						Date: May 2021	
Appropriation / Budget Activity / Budget Sub Activity: 2031A / 02 / 10			P-1 Line Item Number / Title: 8859AA0711 / GATM Rollup			Modification Number / Title: AA0704 / GATM - Rotary Wing Aircraft	
ID Code (A=Service Ready, B=Not Service Ready) :					MDAP/MAIS Code:		
Models of Systems Affected: UH&HH60A/L, CH47D/F, UH60M, MH47G, MH60M, A/MH6, AH64A/D/E, UAS			Modification Type: New or Improved Operational Capability		Related RDT&E PEs:		
Financial Plan	Prior Years	FY 2020	FY 2021	FY 2022 Base	FY 2022 OCO	FY 2022 Total	
	Qty (Each) / Total Cost (\$ M)	Qty (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 6: Legacy GATM-RW Mods							
A Kits							
Non-Recurring							
Legacy GATM-RW Mods	- / 331.547	- / -	- / -	- / -	- / -	- / -	
<i>Subtotal: Non-Recurring</i>	- / 331.547	- / -	- / -	- / -	- / -	- / -	
<i>Subtotal: Legacy GATM-RW Mods</i>	- / 331.547	- / -	- / -	- / -	- / -	- / -	
<i>Subtotal: Procurement, All Modification Items</i>	8,484 / 721.514	119 / 26.447	86 / 8.428	226 / 15.024	-	226 / 15.024	
Installation							
Modification Item 1 of 6: Global Air Traffic Mgmt RW APX-123	1,073 / 3.239	335 / 1.124	-	-	-	-	
Modification Item 2 of 6: Global Air Traffic Mgmt RW APX-118 Upgrade Kits	2,182 / 9.581	193 / 0.772	-	-	-	-	
Modification Item 4 of 6: Embedded GPS Inertial (EGI) Navigation System ECP	-	35 / 0.063	-	-	-	-	
Modification Item 5 of 6: Common Transponder (CXP)	-	101 / 2.560	232 / 3.752	25 / 1.752	-	25 / 1.752	
<i>Subtotal: Installation</i>	3,255 / 12.820	664 / 4.519	232 / 3.752	25 / 1.752	-	25 / 1.752	
Total							
Total Cost (Procurement + Support + Installation)	734.334	30.966	12.180	16.776	-	16.776	

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Exhibit P-3a, Individual Modification: PB 2022 Army							Date: May 2021						
Appropriation / Budget Activity / Budget Sub Activity: 2031A / 02 / 10				P-1 Line Item Number / Title: 8859AA0711 / GATM Rollup				Modification Number / Title: AA0704 / GATM - Rotary Wing Aircraft					
ID Code (A=Service Ready, B=Not Service Ready) :							MDAP/MAIS Code:						
Modification Item 1 of 6: Global Air Traffic Mgmt RW APX-123													
Manufacturer Information													
Manufacturer Name: BAE Systems, Incorporated							Manufacturer Location: Greenlawn, NY						
Administrative Leadtime (in Months):							Production Leadtime (in Months):						
Dates		FY 2020				FY 2021				FY 2022			
Contract Dates													
Delivery Dates													
Installation Information													
Method of Implementation: Modification Work Order (MWO) - Contractor													
Installation Cost		Prior Years		FY 2020		FY 2021		FY 2022 Base		FY 2022 OCO		FY 2022 Total	
		Qty (Each) / Total Cost (\$ M)		Qty (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		1,073 / 3.239		335 / 1.124		- / -		- / -		- / -		- / -	
FY 2020		0 / 0.000		- / -		- / -		- / -		- / -		- / -	
FY 2021		0 / 0.000		- / -		- / -		- / -		- / -		- / -	
FY 2022		0 / 0.000		- / -		- / -		- / -		- / -		- / -	
Total		1,073 / 3.239		335 / 1.124		- / -		- / -		- / -		- / -	
Installation Schedule													
	PYS	FY 2020				FY 2021				FY 2022			
		Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4
In	1,073	83	84	84	84	24	25	25	25	-	-	-	-
Out	1,029	44	83	84	84	84	24	25	25	25	-	-	-

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Exhibit P-3a, Individual Modification: PB 2022 Army	Date: May 2021
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Appropriation / Budget Activity / Budget Sub Activity: 2031A / 02 / 10	P-1 Line Item Number / Title: 8859AA0711 / GATM Rollup	Modification Number / Title: AA0704 / GATM - Rotary Wing Aircraft
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ID Code (A=Service Ready, B=Not Service Ready) :	MDAP/MAIS Code:
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Modification Item 2 of 6: Global Air Traffic Mgmt RW APX-118 Upgrade Kits

Manufacturer Information

Manufacturer Name: BAE Systems, Incorporated	Manufacturer Location: Greenlawn, NY
Administrative Leadtime (in Months):	Production Leadtime (in Months):

Dates	FY 2020	FY 2021	FY 2022
Contract Dates			
Delivery Dates			

Installation Information

Method of Implementation: Modification Work Order (MWO) - Contractor

Installation Cost	Prior Years	FY 2020	FY 2021	FY 2022 Base	FY 2022 OCO	FY 2022 Total
	Qty (Each) / Total Cost (\$ M)	Qty (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	2,182 / 9.581	193 / 0.772	- / -	- / -	- / -	- / -
FY 2020	0 / 0.000	- / -	- / -	- / -	- / -	- / -
FY 2021	0 / 0.000	- / -	- / -	- / -	- / -	- / -
FY 2022	0 / 0.000	- / -	- / -	- / -	- / -	- / -
Total	2,182 / 9.581	193 / 0.772	- / -	- / -	- / -	- / -

Installation Schedule

PYS	FY 2020	FY 2021				FY 2022							
		Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4				
In	2,182	49	48	48	48	-	-	-	-	-	-	-	-
Out	2,143	39	49	48	48	48	-	-	-	-	-	-	-

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Exhibit P-3a, Individual Modification: PB 2022 Army		Date: May 2021	
Appropriation / Budget Activity / Budget Sub Activity: 2031A / 02 / 10		P-1 Line Item Number / Title: 8859AA0711 / GATM Rollup	
Modification Number / Title: AA0704 / GATM - Rotary Wing Aircraft			
ID Code (A=Service Ready, B=Not Service Ready) :		MDAP/MAIS Code:	
Modification Item 3 of 6: Global Air Traffic Mgmt RW ADS-B			
Manufacturer Information			
Manufacturer Name: SSAI		Manufacturer Location: Huntsville, AL	
Administrative Leadtime (in Months):		Production Leadtime (in Months):	
Dates	FY 2020	FY 2021	FY 2022
Contract Dates			
Delivery Dates			
Installation Information			
Method of Implementation (Organic): Modification Work Order (MWO) - Contractor		Installation Quantity: 0	

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Exhibit P-3a, Individual Modification: PB 2022 Army							Date: May 2021						
Appropriation / Budget Activity / Budget Sub Activity: 2031A / 02 / 10				P-1 Line Item Number / Title: 8859AA0711 / GATM Rollup				Modification Number / Title: AA0704 / GATM - Rotary Wing Aircraft					
ID Code (A=Service Ready, B=Not Service Ready) :							MDAP/MAIS Code:						
Modification Item 4 of 6: Embedded GPS Inertial (EGI) Navigation System ECP													
Manufacturer Information													
Manufacturer Name: Honeywell, Incorporated							Manufacturer Location: Clearwater, FL						
Administrative Leadtime (in Months): 2							Production Leadtime (in Months): 12						
Dates		FY 2020				FY 2021				FY 2022			
Contract Dates													
Delivery Dates													
Installation Information													
Method of Implementation: Modification Work Order (MWO)													
Installation Cost		Prior Years		FY 2020		FY 2021		FY 2022 Base		FY 2022 OCO		FY 2022 Total	
		Qty (Each) / Total Cost (\$ M)		Qty (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 / 0.063		- / -		- / -		- / -		- / -	
FY 2020		0 / 0.000		- / -		- / -		- / -		- / -		- / -	
FY 2021		0 / 0.000		- / -		- / -		- / -		- / -		- / -	
FY 2022		0 / 0.000		- / -		- / -		- / -		- / -		- / -	
Total		- / -		35 / 0.063		- / -		- / -		- / -		- / -	
Installation Schedule													
	PYS	FY 2020				FY 2021				FY 2022			
		Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4
In	-	9	9	9	8	-	-	-	-	-	-	-	-
Out	-	-	9	9	9	8	-	-	-	-	-	-	-

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Exhibit P-3a, Individual Modification: PB 2022 Army		Date: May 2021
Appropriation / Budget Activity / Budget Sub Activity: 2031A / 02 / 10	P-1 Line Item Number / Title: 8859AA0711 / GATM Rollup	Modification Number / Title: AA0704 / GATM - Rotary Wing Aircraft

ID Code (A=Service Ready, B=Not Service Ready) :	MDAP/MAIS Code:
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Modification Item 5 of 6: Common Transponder (CXP)

Manufacturer Information

Manufacturer Name: BAE Systems, Incorporated		Manufacturer Location: Greenlawn, NY	
Administrative Leadtime (in Months): 5		Production Leadtime (in Months): 16	
Dates	FY 2020	FY 2021	FY 2022
Contract Dates	Mar 2020	Mar 2021	Mar 2022
Delivery Dates	Jun 2021	Jun 2022	Jun 2023

Installation Information

Method of Implementation: MWO

Installation Cost	Prior Years	FY 2020	FY 2021	FY 2022 Base	FY 2022 OCO	FY 2022 Total
	Qty (Each) / Total Cost (\$ M)	Qty (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	- / -	101 / 2.560	201 / 2.516	- / -	- / -	- / -
FY 2020	- / -	- / -	31 / 1.236	- / -	- / -	- / -
FY 2021	- / -	- / -	- / -	25 / 1.752	- / -	25 / 1.752
FY 2022	- / -	- / -	- / -	- / -	- / -	- / -
Total	- / -	101 / 2.560	232 / 3.752	25 / 1.752	- / -	25 / 1.752

Installation Schedule

	PYS	FY 2020				FY 2021				FY 2022			
		Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4
In	-	25	25	25	26	58	58	58	58	6	6	6	7
Out	-	-	25	25	25	26	58	58	58	58	6	6	6

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Exhibit P-3a, Individual Modification: PB 2022 Army		Date: May 2021	
Appropriation / Budget Activity / Budget Sub Activity: 2031A / 02 / 10		P-1 Line Item Number / Title: 8859AA0711 / GATM Rollup	
Modification Number / Title: AA0704 / GATM - Rotary Wing Aircraft			
ID Code (A=Service Ready, B=Not Service Ready) :		MDAP/MAIS Code:	
Modification Item 6 of 6: Legacy GATM-RW Mods			
Manufacturer Information			
Manufacturer Name: N/A		Manufacturer Location: N/A	
Administrative Leadtime (in Months):		Production Leadtime (in Months):	
Dates	FY 2020	FY 2021	FY 2022
Contract Dates			
Delivery Dates			
Installation Information			
Method of Implementation (Organic): N/A		Installation Quantity: 0	

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Exhibit P-40, Budget Line Item Justification: PB 2022 Army **Date:** May 2021

Appropriation / Budget Activity / Budget Sub Activity: 2031A: Aircraft Procurement, Army / BA 02: Modification of Aircraft / BSA 10: Modification of Aircraft	P-1 Line Item Number / Title: 9555A00018 / RQ-7 UAV MODS
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ID Code (A=Service Ready, B=Not Service Ready):	Program Elements for Code B Items: N/A	Other Related Program Elements: 0305204A, 0305233A
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Line Item MDAP/MAIS Code: N/A

Resource Summary	Prior Years	FY 2020	FY 2021	FY 2022 Base	FY 2022 OCO	FY 2022 Total	FY 2023	FY 2024	FY 2025	FY 2026	To Complete	Total
Procurement Quantity (<i>Units in Each</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost (<i>\$ in Millions</i>)	2,218.623	68.983	30.000	-	-	-	-	-	-	-	-	-
Less PY Advance Procurement (<i>\$ in Millions</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) (<i>\$ in Millions</i>)	2,218.623	68.983	30.000	-	-	-	-	-	-	-	-	-
Plus CY Advance Procurement (<i>\$ in Millions</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Total Obligation Authority (<i>\$ in Millions</i>)	2,218.623	68.983	30.000	-	-	-	-	-	-	-	-	-

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

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

Description:

The Tactical Unmanned Aircraft System (TUAS) provides Army Brigade Combat Teams, Aviation Brigades, and Special Operation Groups situational awareness, improved wide-area target acquisition, Laser Designation, and high value target (HVT) tracking to conduct both shaping and decisive operations with greatly increased lethality. The TUAS meets the need for a day/night, multi sensor collection system with improved connectivity to joint forces that provides real time battle information that cannot be observed from standoff airborne sensor systems, ground collection systems, and scouts. The key performance parameters are blocked into RQ-7B (production) thresholds and subsequent upgrade objectives. The RQ-7B system is a Reconnaissance Surveillance Target Acquisition (RSTA), Command, Control, Communications, and Intelligence (C3I) system that supports Brigade, Battalion, and lower level elements. The RQ-7B Shadow has logged approximately 1,265,000 flight hours, most of which were flown in support of Overseas Contingency Operations (OCO).

The TUAS RQ-7B completed production of 104 Army systems in 2011 (FY 2009 Funding) and entered a modifications phase. These modifications primarily include RQ-7B v2, System Modifications, the RQ-7B v2 Block III System Modification and the improved Electro Optical / Infrared / Laser Designator (EO/IR/LD) payload.

The RQ-7B v2 or Shadow v2 effort incorporates Type 1 Encryption, STANAG 4586 Compliant Software, a Universal Ground Control Station (UGCS), a Universal Ground Data Terminal (UGDT), a STANAG 4586 compliant Portable Ground Control Station, and standardizes modifications introduced during the wars in Iraq and Afghanistan. The last Shadow v2 delivery occurred on 30 September 2020.

The RQ-7B v2 Block III System Modification includes Weatherization, Small Mission (SMC) Computer A-kit, Electro Optical / Infrared / Laser Designator (EO/IR/LD) Universal Interface Assembly, Block III Engine, Communications Relay Installation Kit, and Voice over Internet Protocol (VoIP). Weatherization modifications allow the AV to fly in low visibility conditions and in up to two inches of rain per hour. The SMC is an onboard computer that provides airborne processing power. The SMC addresses obsolescence concerns, features a dual processor, and provides 50x more processing power than the current computer. The EO/ IR/LD Universal Interface Assembly eliminates reliance on a proprietary payload interface, introducing the capability to support payloads from multiple vendors. The Block III engine improves reliability over the current engine, increases thrust and reduces the noise signature of the Shadow system. The Communication Relay upgrade enables voice communications to additional users who utilize other waveforms in the VHF and UHF bands. The VoIP upgrade extends voice communications range from 85 km to 125 km, and provides a more reliable means of voice communications. The overall performance enhancements increase the Shadow's mission capability and survivability. The Improved EO/IR/LD payload features a modular design that includes enhanced high-resolution HD imagery, improved geo-location precision and an extended long-range target designation capability.

On 16 Nov 17, the Army Acquisition Executive (AAE) approved an increase to the Shadow Army Acquisition Objective (AAO) from 104 to 115 Shadow systems which provides additional capability in the Combat Aviation Brigades (CABs).

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Exhibit P-40, Budget Line Item Justification: PB 2022 Army		Date: May 2021
Appropriation / Budget Activity / Budget Sub Activity: 2031A: Aircraft Procurement, Army / BA 02: Modification of Aircraft / BSA 10: Modification of Aircraft		P-1 Line Item Number / Title: 9555A00018 / RQ-7 UAV MODS
ID Code (A=Service Ready, B=Not Service Ready):	Program Elements for Code B Items: N/A	Other Related Program Elements: 0305204A, 0305233A
Line Item MDAP/MAIS Code: N/A		

Changed the P-Form Modification structure to comply with MIL-STD-881C, align with the R-Forms, and align with ACAT-I reporting requirements. The OSRVT Modification moved to Modification Line A00121 in 2017.

Secondary Distribution		FY 2020	FY 2021	FY 2022 Base	FY 2022 OCO	FY 2022 Total	FY 2023	FY 2024	FY 2025	FY 2026
Army	Quantity	-	-	-	-	-	-	-	-	-
	Total Obligation Authority	68.534	30.000	-	-	-	-	-	-	-
ANG	Quantity	-	-	-	-	-	-	-	-	-
	Total Obligation Authority	0.449	-	-	-	-	-	-	-	-
Total: Secondary Distribution	Quantity	-	-	-	-	-	-	-	-	-
	Total Obligation Authority	68.983	30.000	-	-	-	-	-	-	-

Justification:

FY2022 Funding for RQ-7 UAV MODS is zero (\$0).

In accordance with Section 1815 of the FY2008 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.

FY2021 Funding for RQ-7 UAV Procurement Funding of \$30.0M will be used for the following:
 Block III Air Vehicles (minus payload) 15 ea. \$21.34M
 MX-10 Gen 4 Payloads 18 ea. \$ 8.66M

UNCLASSIFIED

Exhibit P-40, Budget Line Item Justification: PB 2022 Army **Date:** May 2021

Appropriation / Budget Activity / Budget Sub Activity: 2031A: Aircraft Procurement, Army / BA 02: Modification of Aircraft / BSA 10: Modification of Aircraft	P-1 Line Item Number / Title: 9556A01002 / UAS MODS
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ID Code (A=Service Ready, B=Not Service Ready): B	Program Elements for Code B Items: N/A	Other Related Program Elements: N/A
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Line Item MDAP/MAIS Code: N/A

Resource Summary	Prior Years	FY 2020	FY 2021	FY 2022 Base	FY 2022 OCO	FY 2022 Total	FY 2023	FY 2024	FY 2025	FY 2026	To Complete	Total
Procurement Quantity (<i>Units in Each</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost (<i>\$ in Millions</i>)	74.894	10.205	4.204	3.840	-	3.840	-	-	-	-	-	-
Less PY Advance Procurement (<i>\$ in Millions</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) (<i>\$ in Millions</i>)	74.894	10.205	4.204	3.840	-	3.840	-	-	-	-	-	-
Plus CY Advance Procurement (<i>\$ in Millions</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Total Obligation Authority (<i>\$ in Millions</i>)	74.894	10.205	4.204	3.840	-	3.840	-	-	-	-	-	-

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

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

Description:

The One System Remote Video Terminal (OSRVT) systems require an update to an Increment II OSRVT. The OSRVT Increment II Upgrade Program of Record (POR) began in FY 2012. The OSRVT Increment II consists of a base system with Remote Operations Video Enhanced Receiver (ROVER) 6 transceiver, tablet computer, Antennas, Type I encryption, Ku-Directional Antennas (KuDA) with an On-The-Move (OTM) capable variant, and an extended range Mobile Directional Antennas System (MDAS). Beginning in FY21, the ROVER 6 will be upgraded to a 6S variant to meet new spectrum requirements and the system will also include a Soldier Portable OsrvT (SPOT) for dismounted users consisting of a wearable tablet computer and a Tactical Net ROVER 2 Encrypted (TNR 2E) transceiver. Software supports decoding Telemetry Data from multiple Manned/Unmanned Aircraft Systems, provides Electro-Optical (EO)/Infrared (IR) payload control, and supports off-target calculations. OSRVT supports current operations as well as FUAS requirements. The OSRVT MODS APE A000121000, began in FY 2017. Prior to FY2017, OSRVT Procurement funds were provided via the SHADOW MODS APE A00018000.

Secondary Distribution	FY 2020	FY 2021	FY 2022 Base	FY 2022 OCO	FY 2022 Total	FY 2023	FY 2024	FY 2025	FY 2026
Army	Quantity	-	-	-	-	-	-	-	-
	Total Obligation Authority	7.654	4.204	3.840	-	3.840	-	-	-
ANG	Quantity	-	-	-	-	-	-	-	-
	Total Obligation Authority	2.551	-	-	-	-	-	-	-
Total: Secondary Distribution	Quantity	-	-	-	-	-	-	-	-
	Total Obligation Authority	10.205	4.204	3.840	-	3.840	-	-	-

Justification:

FY2022 Base funding of \$3.840M provides for fielding of On-the-Move (OTM) variant and ROVER 6S / SPOT variant. The OTM variant enables full OSRVT functionality while on moving vehicle mounted systems (Future Vertical Lift (FVL) priority to support expeditionary operations). The ROVER 6S upgrade meets new spectrum requirements in order to maintain interoperability with Small UAS and the SPOT is a wearable variant for dismounted users consisting of a wearable tablet computer and a TNR 2E transceiver.

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Exhibit P-40, Budget Line Item Justification: PB 2022 Army		Date: May 2021
Appropriation / Budget Activity / Budget Sub Activity: 2031A: Aircraft Procurement, Army / BA 02: Modification of Aircraft / BSA 10: Modification of Aircraft		P-1 Line Item Number / Title: 9556A01002 / UAS MODS
ID Code (A=Service Ready, B=Not Service Ready): B	Program Elements for Code B Items: N/A	Other Related Program Elements: N/A
Line Item MDAP/MAIS Code: N/A		

In accordance with 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.

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Exhibit P-40, Budget Line Item Justification: PB 2022 Army **Date:** May 2021

Appropriation / Budget Activity / Budget Sub Activity: 2031A: Aircraft Procurement, Army / BA 04: Support Equipment and Facilities / BSA 10: Ground Support Avionics
P-1 Line Item Number / Title: 3632AZ3504 / Aircraft Survivability Equipment

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

Line Item MDAP/MAIS Code: N/A

Resource Summary	Prior Years	FY 2020	FY 2021	FY 2022 Base	FY 2022 OCO	FY 2022 Total	FY 2023	FY 2024	FY 2025	FY 2026	To Complete	Total
Procurement Quantity (<i>Units in Each</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost (<i>\$ in Millions</i>)	796.825	52.297	44.455	64.561	-	64.561	-	-	-	-	-	-
Less PY Advance Procurement (<i>\$ in Millions</i>)	11.565	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) (<i>\$ in Millions</i>)	785.260	52.297	44.455	64.561	-	64.561	-	-	-	-	-	-
Plus CY Advance Procurement (<i>\$ in Millions</i>)	11.565	-	-	-	-	-	-	-	-	-	-	-
Total Obligation Authority (<i>\$ in Millions</i>)	796.825	52.297	44.455	64.561	-	64.561	-	-	-	-	-	-

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

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

Description:

The Aircraft Survivability Equipment (ASE) budget line includes ASE Laser Countermeasures (AZ3508) and ASE Radio Frequency Countermeasures (AZ3511).

AZ3508 ASE Laser CM

Army Procurement Objective (APO) = 1,332 (APO based on B-Kits)

The AN/AVR-2B Laser Detecting Set (LDS) installed on Army rotary-wing aircraft passively detects laser-aided weapons targeting the aircraft and alerts aircrews, allowing them to engage the threat or maneuver to break the targeting. The system detects aircraft illumination by laser rangefinders, laser target designators, and laser beam rider surface-to-air missiles. The system provides the aircrew visual and aural warnings prioritized by threat lethality using 360 degree azimuth and 90 degree elevation field of view coverage. AN/AVR-2B is part of the suite of ASE mission equipment for Future Vertical Lift (FVL) platforms.

AZ3511 Radio Frequency CM

APO D(V)2 = 120 (APO based on B-Kits)

APO E(V)2 = 1,200 (APO based on B-Kits)

The objective of ASE Development project is to improve Radio Frequency (RF) ASE for Army aviation. The APR-39 Radar Warning Receiver (RWR) detects, categorizes, and prioritizes RF emitters and provides a visual / aural alert to aircrew members warning them of targeting by RF-guided weapons. The Milestone Decision Authority (MDA) approved Phases 1 and 2 of a 3-phased path forward.

Phase 1, APR-39C(V)1/4, serves as an obsolescence / sustainment upgrade to the Processor Line Replaceable Unit (LRU) of APR-39A(V) RWR implemented to ensure that the currently fielded system remains viable until affordable improved RF ASE capability can be pursued in Phases 2 and 3.

Phase 2A is RWR Modernization begins by adopting the United States Navy APR-39D(V)2 system. APR-39D(V)2 will significantly improve the RF threat coverage, automatic detection and identification of threat types, bearing, and lethality. Phase 2B, the APR-39E(V)2, Modernized Radar Warning Receiver (MRWR), is an Army Engineering Change Proposal (ECP) to APR-39D(V)2, approved in the Acquisition Decision

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Exhibit P-40, Budget Line Item Justification: PB 2022 Army **Date:** May 2021

Appropriation / Budget Activity / Budget Sub Activity: 2031A: Aircraft Procurement, Army / BA 04: Support Equipment and Facilities / BSA 10: Ground Support Avionics	P-1 Line Item Number / Title: 3632AZ3504 / Aircraft Survivability Equipment
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ID Code (A=Service Ready, B=Not Service Ready):	Program Elements for Code B Items: N/A	Other Related Program Elements: N/A
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Line Item MDAP/MAIS Code: N/A

Memorandum (ADM) signed June 24, 2019. This ECP will implement enhanced hardware and software upgrades to keep APR-39 technically relevant against new and emerging agile threats. APR-39E(V)2 is part of the suite of ASE mission equipment for the FVL platforms

Phase 3 adds active Radio Frequency Electronic Countermeasures (RF-ECM) capability for selected aircraft with Material Development Decision (MDD) planned in the future.

	Secondary Distribution	FY 2020	FY 2021	FY 2022 Base	FY 2022 OCO	FY 2022 Total	FY 2023	FY 2024	FY 2025	FY 2026
Army	Quantity	-	-	-	-	-	-	-	-	-
	Total Obligation Authority	52.297	44.455	64.561	-	64.561	-	-	-	-
Total: Secondary Distribution	Quantity	-	-	-	-	-	-	-	-	-
	Total Obligation Authority	52.297	44.455	64.561	-	64.561	-	-	-	-

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Exhibit P-40, Budget Line Item Justification: PB 2022 Army **Date:** May 2021

Appropriation / Budget Activity / Budget Sub Activity: 2031A: Aircraft Procurement, Army / BA 04: Support Equipment and Facilities / BSA 10: Ground Support Avionics
P-1 Line Item Number / Title: 3632AZ3504 / Aircraft Survivability Equipment

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

Line Item MDAP/MAIS Code: N/A

Exhibits Schedule					Prior Years	FY 2020	FY 2021	FY 2022 Base	FY 2022 OCO	FY 2022 Total
Exhibit Type	Title*	Subexhibits	ID CD	MDAP/MAIS Code	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)
P-5	AZ3508 / ASE Laser CM				- / 442.617	- / 5.944	- / 7.565	- / 8.120	- / -	- / 8.120
P-5	AZ3511 / Radio Frequency CM	P-5a, P-21			- / 354.208	- / 46.353	- / 36.890	- / 56.441	- / -	- / 56.441
P-40	Total Gross/Weapon System Cost				- / 796.825	- / 52.297	- / 44.455	- / 64.561	- / -	- / 64.561

*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:
 AZ3508 ASE Laser CM: FY 2022 Base Procurement dollars in the amount of \$8.120 million funds training, technical support, Government Management, and installation of (40) CH-47F A-Kits on Rotary Wing aircraft in support of required operational capabilities and integration of AN/AVR-2B LDS with other ASE systems.

 AZ3511 Radio Frequency CM: FY 2022 Base Procurement dollars in the amount of \$56.441 million funds procurement of APR-39E(V)2 integration assets, installation of (24) APR-39D(V)2 A-Kits and B-Kits on aircraft, systems test and evaluation, mission data set (MDS), other software sustainment, interim contractor logistics support, support equipment, and government management.

 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.

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Exhibit P-5, Cost Analysis: PB 2022 Army		Date: May 2021
Appropriation / Budget Activity / Budget Sub Activity: 2031A / 04 / 10	P-1 Line Item Number / Title: 3632AZ3504 / Aircraft Survivability Equipment	Item Number / Title [DODIC]: AZ3508 / ASE Laser CM

ID Code (A=Service Ready, B=Not Service Ready) :				MDAP/MAIS Code:					
Resource Summary				Prior Years	FY 2020	FY 2021	FY 2022 Base	FY 2022 OCO	FY 2022 Total
Procurement Quantity (Units in Each)				-	-	-	-	-	-
Gross/Weapon System Cost (\$ in Millions)				442.617	5.944	7.565	8.120	-	8.120
Less PY Advance Procurement (\$ in Millions)				11.565	-	-	-	-	-
Net Procurement (P-1) (\$ in Millions)				431.052	5.944	7.565	8.120	-	8.120
Plus CY Advance Procurement (\$ in Millions)				11.565	-	-	-	-	-
Total Obligation Authority (\$ in Millions)				442.617	5.944	7.565	8.120	-	8.120
<i>(The following Resource Summary rows are for informational purposes only. The corresponding budget requests are documented elsewhere.)</i>									
Initial Spares (\$ in Millions)				-	-	-	-	-	-
Gross/Weapon System Unit Cost (\$ in Thousands)				-	-	-	-	-	-

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

Cost Elements	Prior Years			FY 2020			FY 2021			FY 2022 Base			FY 2022 OCO			FY 2022 Total		
	Unit Cost (\$ K)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ K)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ K)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ K)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ K)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ K)	Qty (Each)	Total Cost (\$ M)
Flyaway Cost																		
Recurring Cost																		
Non Recurring Engineering (A-Kit)	-	-	13.688	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
A-Kit Procurement	42.382	1,113	47.171	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
A-Kit Installation UH-60L	74.071	751	55.627	116.111	9	1.045	-	-	-	-	-	-	-	-	-	-	-	-
A-Kit filters	-	-	18.529	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
B-Kit Procurement	146.928	1,332	195.708	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Systems Engineering	-	-	19.482	-	-	0.503	-	-	0.303	-	-	0.302	-	-	-	-	-	0.302
Program Management	-	-	16.864	-	-	0.397	-	-	0.284	-	-	0.386	-	-	-	-	-	0.386
Prime Contractor Prgm Mgt / Engr Spt	-	-	6.348	-	-	0.031	-	-	0.300	-	-	0.568	-	-	-	-	-	0.568
Software	-	-	9.936	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Engineering Changes	-	-	0.638	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Systems Test and Evaluation	-	-	27.941	-	-	1.446	-	-	-	-	-	-	-	-	-	-	-	-
Training / Logistics	-	-	21.041	-	-	1.612	-	-	1.315	-	-	1.673	-	-	-	-	-	1.673
Depot / Field Support	-	-	6.556	-	-	0.080	-	-	0.300	-	-	-	-	-	-	-	-	-
Fielding	-	-	2.900	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Other Procurement	-	-	0.188	-	-	-	-	-	0.030	-	-	-	-	-	-	-	-	-
A-Kit Installation CH-47F	-	-	-	103.750	8	0.830	92.500	40	3.700	94.400	40	3.776	-	-	-	94.400	40	3.776
Tech Support	-	-	-	-	-	-	-	-	1.333	-	-	0.740	-	-	-	-	-	0.740

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Exhibit P-5, Cost Analysis: PB 2022 Army												Date: May 2021					
Appropriation / Budget Activity / Budget Sub Activity: 2031A / 04 / 10						P-1 Line Item Number / Title: 3632AZ3504 / Aircraft Survivability Equipment						Item Number / Title [DODIC]: AZ3508 / ASE Laser CM					
ID Code (A=Service Ready, B=Not Service Ready) :												MDAP/MAIS Code:					

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

Cost Elements	Prior Years			FY 2020			FY 2021			FY 2022 Base			FY 2022 OCO			FY 2022 Total		
	Unit Cost (\$ K)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ K)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ K)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ K)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ K)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ K)	Qty (Each)	Total Cost (\$ M)
Data- Threat Analysis	-	-	-	-	-	-	-	-	-	-	-	0.675	-	-	-	-	-	0.675
<i>Subtotal: Recurring Cost</i>	-	-	442.617	-	-	5.944	-	-	7.565	-	-	8.120	-	-	-	-	-	8.120
<i>Subtotal: Flyaway Cost</i>	-	-	442.617	-	-	5.944	-	-	7.565	-	-	8.120	-	-	-	-	-	8.120
Gross/Weapon System Cost	-	-	442.617	-	-	5.944	-	-	7.565	-	-	8.120	-	-	-	-	-	8.120

Secondary Distribution		FY 2020	FY 2021	FY 2022 Base	FY 2022 OCO	FY 2022 Total
Army	Quantity	-	-	-	-	-
	Total Obligation Authority	5.944	7.565	8.120	-	8.120
Total: Secondary Distribution	Quantity	-	-	-	-	-
	Total Obligation Authority	5.944	7.565	8.120	-	8.120

UNCLASSIFIED

Exhibit P-5, Cost Analysis: PB 2022 Army		Date: May 2021
Appropriation / Budget Activity / Budget Sub Activity: 2031A / 04 / 10	P-1 Line Item Number / Title: 3632AZ3504 / Aircraft Survivability Equipment	Item Number / Title [DODIC]: AZ3511 / Radio Frequency CM

ID Code (A=Service Ready, B=Not Service Ready) :	MDAP/MAIS Code:
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Resource Summary	Prior Years	FY 2020	FY 2021	FY 2022 Base	FY 2022 OCO	FY 2022 Total
Procurement Quantity (Units in Each)	-	-	-	-	-	-
Gross/Weapon System Cost (\$ in Millions)	354.208	46.353	36.890	56.441	-	56.441
Less PY Advance Procurement (\$ in Millions)	-	-	-	-	-	-
Net Procurement (P-1) (\$ in Millions)	354.208	46.353	36.890	56.441	-	56.441
Plus CY Advance Procurement (\$ in Millions)	-	-	-	-	-	-
Total Obligation Authority (\$ in Millions)	354.208	46.353	36.890	56.441	-	56.441

(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 Thousands)	10,120.229	-	-	-	-	-

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

Cost Elements	Prior Years			FY 2020			FY 2021			FY 2022 Base			FY 2022 OCO			FY 2022 Total		
	Unit Cost (\$ K)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ K)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ K)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ K)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ K)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ K)	Qty (Each)	Total Cost (\$ M)
Flyaway Cost																		
Non Recurring Cost																		
A-Kit NRE	-	-	128.159	-	-	-	-	-	0.636	-	-	-	-	-	-	-	-	-
<i>Subtotal: Non Recurring Cost</i>	-	-	128.159	-	-	-	-	-	0.636	-	-	-	-	-	-	-	-	-
<i>Subtotal: Flyaway Cost</i>	-	-	128.159	-	-	-	-	-	0.636	-	-	-	-	-	-	-	-	-
Hardware Cost																		
Recurring Cost																		
A-Kit Procurement ^(†)	120.098	82	9.848	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
A-Kit Installs	-	-	-	167.292	24	4.015	105.208	24	2.525	175.125	24	4.203	-	-	-	175.125	24	4.203
B-Kit Procurement ^(†)	438.966	89	39.068	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Replacement Flight Line Test Sets	-	-	9.169	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Retrofit	-	-	3.221	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
B-Kit Spares	-	-	4.100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
E(V)2 Integration Assets ^(†)	-	-	-	-	-	-	1,483.000	7	10.381	1,383.538	13	17.986	-	-	-	1,383.538	13	17.986
D(V)2 Integration Assets	889.450	20	17.789	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
<i>Subtotal: Recurring Cost</i>	-	-	83.195	-	-	4.015	-	-	12.906	-	-	22.189	-	-	-	-	-	22.189
Non Recurring Cost																		
System Test and Evaluation	-	-	19.947	-	-	6.331	-	-	0.655	-	-	8.406	-	-	-	-	-	8.406

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Exhibit P-5, Cost Analysis: PB 2022 Army		Date: May 2021
Appropriation / Budget Activity / Budget Sub Activity: 2031A / 04 / 10	P-1 Line Item Number / Title: 3632AZ3504 / Aircraft Survivability Equipment	Item Number / Title [DODIC]: AZ3511 / Radio Frequency CM

ID Code (A=Service Ready, B=Not Service Ready) :	MDAP/MAIS Code:
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Note: Subtotals or Totals in this Exhibit P-5 may not be exact or sum exactly due to rounding.

Cost Elements	Prior Years			FY 2020			FY 2021			FY 2022 Base			FY 2022 OCO			FY 2022 Total		
	Unit Cost (\$ K)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ K)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ K)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ K)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ K)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ K)	Qty (Each)	Total Cost (\$ M)
Other	-	-	24.548	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Technology Insertion/ Hardware parts	-	-	0.601	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Withhold	-	-	1.652	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
<i>Subtotal: Non Recurring Cost</i>	-	-	46.748	-	-	6.331	-	-	0.655	-	-	8.406	-	-	-	-	-	8.406
<i>Subtotal: Hardware Cost</i>	-	-	129.943	-	-	10.346	-	-	13.561	-	-	30.595	-	-	-	-	-	30.595
Software Cost																		
Non Recurring Cost																		
Mission Data Set (MDS)	-	-	13.686	-	-	4.051	-	-	6.944	-	-	7.840	-	-	-	-	-	7.840
Other Software Sustainment	-	-	20.532	-	-	6.426	-	-	-	-	-	3.404	-	-	-	-	-	3.404
System Integration Lab (SIL) and RF Threat Generation	-	-	14.772	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
<i>Subtotal: Non Recurring Cost</i>	-	-	48.990	-	-	10.477	-	-	6.944	-	-	11.244	-	-	-	-	-	11.244
<i>Subtotal: Software Cost</i>	-	-	48.990	-	-	10.477	-	-	6.944	-	-	11.244	-	-	-	-	-	11.244
Logistics Cost																		
Recurring Cost																		
Training	-	-	0.381	-	-	0.426	-	-	0.300	-	-	-	-	-	-	-	-	-
Fielding	-	-	4.442	-	-	3.000	-	-	0.709	-	-	-	-	-	-	-	-	-
ICLS/ICS	-	-	-	-	-	4.647	-	-	3.201	-	-	4.530	-	-	-	-	-	4.530
<i>Subtotal: Recurring Cost</i>	-	-	4.823	-	-	8.073	-	-	4.210	-	-	4.530	-	-	-	-	-	4.530
Non Recurring Cost																		
Other	-	-	1.980	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Support Equipment	-	-	-	-	-	-	-	-	1.600	-	-	4.264	-	-	-	-	-	4.264
<i>Subtotal: Non Recurring Cost</i>	-	-	1.980	-	-	-	-	-	1.600	-	-	4.264	-	-	-	-	-	4.264
<i>Subtotal: Logistics Cost</i>	-	-	6.803	-	-	8.073	-	-	5.810	-	-	8.794	-	-	-	-	-	8.794
Support - Program Management Cost																		
Contractor Management	-	-	17.514	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Government Management	-	-	10.460	-	-	4.835	-	-	3.690	-	-	3.003	-	-	-	-	-	3.003
<i>Subtotal: Support - Program Management Cost</i>	-	-	27.974	-	-	4.835	-	-	3.690	-	-	3.003	-	-	-	-	-	3.003
Support - System Engineering Cost																		

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Exhibit P-5, Cost Analysis: PB 2022 Army												Date: May 2021					
Appropriation / Budget Activity / Budget Sub Activity: 2031A / 04 / 10						P-1 Line Item Number / Title: 3632AZ3504 / Aircraft Survivability Equipment						Item Number / Title [DODIC]: AZ3511 / Radio Frequency CM					
ID Code (A=Service Ready, B=Not Service Ready) :												MDAP/MAIS Code:					

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

Cost Elements	Prior Years			FY 2020			FY 2021			FY 2022 Base			FY 2022 OCO			FY 2022 Total		
	Unit Cost (\$ K)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ K)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ K)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ K)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ K)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ K)	Qty (Each)	Total Cost (\$ M)
System Engineering	-	-	12.339	-	-	12.622	-	-	6.249	-	-	2.805	-	-	-	-	-	2.805
<i>Subtotal: Support - System Engineering Cost</i>	-	-	12.339	-	-	12.622	-	-	6.249	-	-	2.805	-	-	-	-	-	2.805
Gross/Weapon System Cost	10,120.229	-	354.208	-	-	46.353	-	-	36.890	-	-	56.441	-	-	-	-	-	56.441

Secondary Distribution		FY 2020	FY 2021	FY 2022 Base	FY 2022 OCO	FY 2022 Total
Army	Quantity	-	-	-	-	-
	Total Obligation Authority	46.353	36.890	56.441	-	56.441
Total: Secondary Distribution	Quantity	-	-	-	-	-
	Total Obligation Authority	46.353	36.890	56.441	-	56.441

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

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Exhibit P-5a, Procurement History and Planning: PB 2022 Army **Date:** May 2021

Appropriation / Budget Activity / Budget Sub Activity: 2031A / 04 / 10	P-1 Line Item Number / Title: 3632AZ3504 / Aircraft Survivability Equipment	Item Number / Title [DODIC]: AZ3511 / Radio Frequency CM
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Cost Elements	O C O	FY	Contractor and Location	Method/Type or Funding Vehicle	Location of PCO	Award Date	Date of First Delivery	Qty <i>(Each)</i>	Unit Cost <i>(\$ K)</i>	Specs Avail Now?	Date Revision Available	RFP Issue Date
A-Kit Procurement		2017	Prototype Integration Facility / Redstone Arsenal, AL	C / CPFF	Redstone Arsenal, AL	Mar 2017	Mar 2019	82	93.790	N		
B-Kit Procurement		2016	Northrop Grumman / Rolling Meadows, IL	SS / FFP	Patuxent River, MD	Sep 2017	Mar 2019	16	974.750	N		
B-Kit Procurement		2017	Northrop Grumman / Rolling Meadows, IL	SS / FFP	Patuxent River, MD	Sep 2017	Sep 2019	38	974.920	N		
B-Kit Procurement		2018	Northrop Grumman / Rolling Meadows, IL	SS / FFP	Patuxent River, MD	Jan 2018	Dec 2019	29	728.379	N		
B-Kit Procurement		2019	Northrop Grumman / Rolling Meadows, IL	SS / FFP	Patuxent River, MD	Jan 2019	Jun 2020	6	933.833	N		
E(V)2 Integration Assets ^(†)		2021	Northrop Grumman / Rolling Meadow, IL	SS / FFP	Patuxent River MD	Aug 2021	Feb 2023	7	1,483.000	N		
E(V)2 Integration Assets ^(†)		2022	Northrop Grumman / Rolling Meadow, IL	SS / FFP	Patuxent River, MD	Dec 2021	Jun 2023	13	1,383.538	N		

^(†) indicates the presence of a P-21

Remarks:

Fiscal Year (FY) 2016, 2017, 2018, and 2019 leverages Navy contract for APR-39D(V)2 B-Kit procurement

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Exhibit P-21, Production Schedule: PB 2022 Army **Date:** May 2021

Appropriation / Budget Activity / Budget Sub Activity: 2031A / 04 / 10 **P-1 Line Item Number / Title:** 3632AZ3504 / Aircraft Survivability Equipment **Item Number / Title [DODIC]:** AZ3511 / Radio Frequency CM

Cost Elements <i>(Units in Each)</i>						Fiscal Year 2017												Fiscal Year 2018												BALANCE	
O C C #	M F R #	FY	SERVICE	PROC QTY	ACCEP T P R I O R T O 1 O C T 2 0 1 6	BAL D U E A S O F 1 O C T	Calendar Year 2017												Calendar Year 2018												
							O C T	N O V	D E C	J A N	F E B	M A R	A P R	M A Y	J U N	J U L	A U G	S E P	O C T	N O V	D E C	J A N	F E B	M A R	A P R	M A Y	J U N	J U L	A U G		S E P
E(V)2 Integration Assets																															
	1	2021	ARMY	7	0	7																							7		
	1	2022	ARMY	13	0	13																							13		
							O C T	N O V	D E C	J A N	F E B	M A R	A P R	M A Y	J U N	J U L	A U G	S E P	O C T	N O V	D E C	J A N	F E B	M A R	A P R	M A Y	J U N	J U L	A U G	S E P	

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Exhibit P-21, Production Schedule: PB 2022 Army **Date:** May 2021

Appropriation / Budget Activity / Budget Sub Activity: 2031A / 04 / 10	P-1 Line Item Number / Title: 3632AZ3504 / Aircraft Survivability Equipment	Item Number / Title [DODIC]: AZ3511 / Radio Frequency CM
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Cost Elements <i>(Units in Each)</i>							Fiscal Year 2019														Fiscal Year 2020														BALANCE
O C C #	M F R #	FY	SERVICE	PROC QTY	ACCEPT PRIOR TO 1 OCT 2018	BAL DUE AS OF 1 OCT	Calendar Year 2019														Calendar Year 2020														
							O C T	N O V	D E C	J A N	F E B	M A R	A P R	M A Y	J U N	J U L	A U G	S E P	O C T	N O V	D E C	J A N	F E B	M A R	A P R	M A Y	J U N	J U L	A U G	S E P					
E(V)2 Integration Assets																																			
1		2021	ARMY	7	0	7																							7						
1		2022	ARMY	13	0	13																							13						
							O C T	N O V	D E C	J A N	F E B	M A R	A P R	M A Y	J U N	J U L	A U G	S E P	O C T	N O V	D E C	J A N	F E B	M A R	A P R	M A Y	J U N	J U L	A U G	S E P					

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Exhibit P-21, Production Schedule: PB 2022 Army **Date:** May 2021

Appropriation / Budget Activity / Budget Sub Activity: 2031A / 04 / 10	P-1 Line Item Number / Title: 3632AZ3504 / Aircraft Survivability Equipment	Item Number / Title [DODIC]: AZ3511 / Radio Frequency CM
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Cost Elements <i>(Units in Each)</i>						Fiscal Year 2023												Fiscal Year 2024												BALANCE	
O C C #	M F R #	FY	SERVICE	PROC QTY	ACCEPT PRIOR TO 1 OCT 2022	BAL DUE AS OF 1 OCT	Calendar Year 2023												Calendar Year 2024												
							O C T	N O V	D E C	J A N	F E B	M A R	A P R	M A Y	J U N	J U L	A U G	S E P	O C T	N O V	D E C	J A N	F E B	M A R	A P R	M A Y	J U N	J U L	A U G		S E P
E(V)2 Integration Assets																															
	1	2021	ARMY	7	0	7	-	-	-	-	1	2	2	2															0		
	1	2022	ARMY	13	0	13	-	-	-	-	-	-	-	2	2	2	2	2	2	2	1								0		
							O C T	N O V	D E C	J A N	F E B	M A R	A P R	M A Y	J U N	J U L	A U G	S E P	O C T	N O V	D E C	J A N	F E B	M A R	A P R	M A Y	J U N	J U L	A U G	S E P	

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Exhibit P-21, Production Schedule: PB 2022 Army **Date:** May 2021

Appropriation / Budget Activity / Budget Sub Activity: 2031A / 04 / 10	P-1 Line Item Number / Title: 3632AZ3504 / Aircraft Survivability Equipment	Item Number / Title [DODIC]: AZ3511 / Radio Frequency CM
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MFR Ref #	Manufacturer Name - Location	Production Rates (Each / Month)			Procurement Leadtime (Months)							
		MSR For 2022	1-8-5 For 2022	MAX For 2022	Initial				Reorder			
					ALT Prior to Oct 1	ALT After Oct 1	Manufacturing PLT	Total After Oct 1	ALT Prior to Oct 1	ALT After Oct 1	Manufacturing PLT	Total After Oct 1
1	Northrop Grumman - Rolling Meadow, IL	1	2	3	0	0	18	18	0	0	0	0

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

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Exhibit P-40, Budget Line Item Justification: PB 2022 Army **Date:** May 2021

Appropriation / Budget Activity / Budget Sub Activity: 2031A: Aircraft Procurement, Army / BA 04: Support Equipment and Facilities / BSA 10: Ground Support Avionics	P-1 Line Item Number / Title: 5044AZ3507 / Survivability CM
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ID Code (A=Service Ready, B=Not Service Ready):	Program Elements for Code B Items: N/A	Other Related Program Elements: N/A
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Line Item MDAP/MAIS Code: N/A

Resource Summary	Prior Years	FY 2020	FY 2021	FY 2022 Base	FY 2022 OCO	FY 2022 Total	FY 2023	FY 2024	FY 2025	FY 2026	To Complete	Total
Procurement Quantity (<i>Units in Each</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost (<i>\$ in Millions</i>)	3,493.337	8.388	8.035	5.104	-	5.104	-	-	-	-	-	-
Less PY Advance Procurement (<i>\$ in Millions</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) (<i>\$ in Millions</i>)	3,493.337	8.388	8.035	5.104	-	5.104	-	-	-	-	-	-
Plus CY Advance Procurement (<i>\$ in Millions</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Total Obligation Authority (<i>\$ in Millions</i>)	3,493.337	8.388	8.035	5.104	-	5.104	-	-	-	-	-	-

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

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

Description:

The Advanced Threat Infrared Countermeasure (ATIRCM) is an infrared (IR) countermeasure system that interfaces with the Common Missile Warning System (CMWS) to provide near spherical protection of the host aircraft platform in order to defeat IR threat missiles. The operational concept of ATIRCM is as part of the Suite of Integrated Infrared Countermeasures (SIIRCM). The core components of the SIIRCM concept are: a Missile Warning System (MWS), expendable countermeasures (flares) and a laser based IR countermeasure (IRCM). The CMWS detects, declares, and initiates IRCM against IR-guided Surface-to-Air Missiles (SAM) or Air-to-Air Missiles (AAM). ATIRCM takes a hand-off cue from CMWS and then takes immediate action as a laser based countermeasure against the incoming threat missile.

The A-Kit for ATIRCM includes mounting hardware, wiring harnesses, and other components necessary to install and interface the mission kit on host aircraft. The ATIRCM B-Kit is the mission kit (laser, optical coupler, infrared jam head, and jam head control unit) required to achieve near spherical coverage for an aircraft.

The ATIRCM program is a post-Milestone C, Acquisition Category (ACAT) 1C program of record fielded on CH-47F aircraft.

The approved Army Acquisition Objective (AAO) for ATIRCM is 340 A-Kits and 120 B-Kits.

Secondary Distribution		FY 2020	FY 2021	FY 2022 Base	FY 2022 OCO	FY 2022 Total	FY 2023	FY 2024	FY 2025	FY 2026
Army	Quantity	-	-	-	-	-	-	-	-	-
	Total Obligation Authority	8.388	8.035	5.104	-	5.104	-	-	-	-
Total: Secondary Distribution	Quantity	-	-	-	-	-	-	-	-	-
	Total Obligation Authority	8.388	8.035	5.104	-	5.104	-	-	-	-

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Exhibit P-40, Budget Line Item Justification: PB 2022 Army **Date:** May 2021

Appropriation / Budget Activity / Budget Sub Activity: 2031A: Aircraft Procurement, Army / BA 04: Support Equipment and Facilities / BSA 10: Ground Support Avionics
P-1 Line Item Number / Title: 5044AZ3507 / Survivability CM

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

Line Item MDAP/MAIS Code: N/A

Exhibits Schedule					Prior Years	FY 2020	FY 2021	FY 2022 Base	FY 2022 OCO	FY 2022 Total
Exhibit Type	Title*	Subexhibits	ID CD	MDAP/MAIS Code	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)
P-5	AZ3507 / Survivability CM	P-5a			- / 3,493.337	- / 8.388	- / 8.035	- / 5.104	- / -	- / 5.104
P-40	Total Gross/Weapon System Cost				- / 3,493.337	- / 8.388	- / 8.035	- / 5.104	- / -	- / 5.104

*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:
 FY 2022 Base Procurement dollars in the amount of \$5.104 million supports software concurrency/maintenance, system testing, System Engineering Program Management, and support across the CH-47F aircraft fleet.

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 responses, and providing military support to civil authorities.

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Exhibit P-5, Cost Analysis: PB 2022 Army		Date: May 2021
Appropriation / Budget Activity / Budget Sub Activity: 2031A / 04 / 10	P-1 Line Item Number / Title: 5044AZ3507 / Survivability CM	Item Number / Title [DODIC]: AZ3507 / Survivability CM

ID Code (A=Service Ready, B=Not Service Ready) :	MDAP/MAIS Code:
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Resource Summary	Prior Years	FY 2020	FY 2021	FY 2022 Base	FY 2022 OCO	FY 2022 Total
Procurement Quantity (Units in Each)	-	-	-	-	-	-
Gross/Weapon System Cost (\$ in Millions)	3,493.337	8.388	8.035	5.104	-	5.104
Less PY Advance Procurement (\$ in Millions)	-	-	-	-	-	-
Net Procurement (P-1) (\$ in Millions)	3,493.337	8.388	8.035	5.104	-	5.104
Plus CY Advance Procurement (\$ in Millions)	-	-	-	-	-	-
Total Obligation Authority (\$ in Millions)	3,493.337	8.388	8.035	5.104	-	5.104

(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 Thousands)	-	-	-	-	-	-

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

Cost Elements	Prior Years			FY 2020			FY 2021			FY 2022 Base			FY 2022 OCO			FY 2022 Total		
	Unit Cost (\$ K)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ K)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ K)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ K)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ K)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ K)	Qty (Each)	Total Cost (\$ M)
Flyaway Cost																		
Recurring Cost																		
Non-Recurring Production	-	-	140.382	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
A-Kit Procurement	541.000	167	90.347	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
A-Kit/Pod Bay Door Installation ⁽¹⁾	164.176	255	41.865	33.650	35	1.178	-	-	-	-	-	-	-	-	-	-	-	-
B-Kit Procurement	3,416.000	120	409.920	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Pod Bay Door Procurement	15.030	167	2.510	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Engineering Changes	-	-	10.772	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Program Management	-	-	56.116	-	-	0.462	-	-	0.871	-	-	0.480	-	-	-	-	-	0.480
System Test & Evaluation	-	-	96.475	-	-	4.089	-	-	3.052	-	-	2.719	-	-	-	-	-	2.719
Training	-	-	14.518	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Data	-	-	0.776	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Support Equipment	-	-	3.501	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Fielding	-	-	129.918	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Legacy ATIRCM/CMWS Procurement	-	-	2,496.237	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
ATIRCM Divestiture Optimization	-	-	-	-	-	-	-	-	1.000	-	-	-	-	-	-	-	-	-
<i>Subtotal: Recurring Cost</i>	-	-	3,493.337	-	-	5.729	-	-	4.923	-	-	3.199	-	-	-	-	-	3.199
<i>Subtotal: Flyaway Cost</i>	-	-	3,493.337	-	-	5.729	-	-	4.923	-	-	3.199	-	-	-	-	-	3.199

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Exhibit P-5, Cost Analysis: PB 2022 Army **Date:** May 2021

Appropriation / Budget Activity / Budget Sub Activity: 2031A / 04 / 10	P-1 Line Item Number / Title: 5044AZ3507 / Survivability CM	Item Number / Title [DODIC]: AZ3507 / Survivability CM
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ID Code (A=Service Ready, B=Not Service Ready) : **MDAP/MAIS Code:**

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

Cost Elements	Prior Years			FY 2020			FY 2021			FY 2022 Base			FY 2022 OCO			FY 2022 Total		
	Unit Cost (\$ K)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ K)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ K)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ K)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ K)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ K)	Qty (Each)	Total Cost (\$ M)
Software Cost																		
Recurring Cost																		
Software Support	-	-	-	-	-	2.659	-	-	3.112	-	-	1.905	-	-	-	-	-	1.905
<i>Subtotal: Recurring Cost</i>	-	-	-	-	-	2.659	-	-	3.112	-	-	1.905	-	-	-	-	-	1.905
<i>Subtotal: Software Cost</i>	-	-	-	-	-	2.659	-	-	3.112	-	-	1.905	-	-	-	-	-	1.905
Gross/Weapon System Cost	-	-	3,493.337	-	-	8.388	-	-	8.035	-	-	5.104	-	-	-	-	-	5.104

Secondary Distribution		FY 2020	FY 2021	FY 2022 Base	FY 2022 OCO	FY 2022 Total
Army	Quantity	-	-	-	-	-
	Total Obligation Authority	8.388	8.035	5.104	-	5.104
Total:	Quantity	-	-	-	-	-
Secondary Distribution	Total Obligation Authority	8.388	8.035	5.104	-	5.104

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

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Exhibit P-5a, Procurement History and Planning: PB 2022 Army **Date:** May 2021

Appropriation / Budget Activity / Budget Sub Activity: 2031A / 04 / 10	P-1 Line Item Number / Title: 5044AZ3507 / Survivability CM	Item Number / Title [DODIC]: AZ3507 / Survivability CM
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Cost Elements	O C O	FY	Contractor and Location	Method/Type or Funding Vehicle	Location of PCO	Award Date	Date of First Delivery	Qty <i>(Each)</i>	Unit Cost <i>(\$ K)</i>	Specs Avail Now?	Date Revision Available	RFP Issue Date
A-Kit/Pod Bay Door Installation		2017	Aviation Field Maint Division / Redstone Arsenal, AL	MIPR	Redstone Arsenal, AL	Oct 2016	Oct 2016	43	36.000	N		
A-Kit/Pod Bay Door Installation		2018	Aviation Field Maint Division / Redstone Arsenal, AL	MIPR	Redstone Arsenal, AL	Oct 2017	Oct 2017	45	37.089	N		
A-Kit/Pod Bay Door Installation		2019	Aviation Field Maint Division / Redstone Arsenal, AL	MIPR	Redstone Arsenal, AL	Oct 2018	Oct 2018	36	35.122	N		
A-Kit/Pod Bay Door Installation		2020	Aviation Field Maint Division / Redstone Arsenal, AL	MIPR	Redstone Arsenal, AL	Oct 2019	Oct 2019	35	33.650	N		

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Exhibit P-40, Budget Line Item Justification: PB 2022 Army **Date:** May 2021

Appropriation / Budget Activity / Budget Sub Activity:
 2031A: Aircraft Procurement, Army / BA 04: Support Equipment and Facilities / BSA 10: Ground Support Avionics

P-1 Line Item Number / Title:
 5397AZ3517 / CMWS

ID Code (A=Service Ready, B=Not Service Ready): **Program Elements for Code B Items:** N/A **Other Related Program Elements:** 0605051A

Line Item MDAP/MAIS Code: N/A

Resource Summary	Prior Years	FY 2020	FY 2021	FY 2022 Base	FY 2022 OCO	FY 2022 Total	FY 2023	FY 2024	FY 2025	FY 2026	To Complete	Total
Procurement Quantity (<i>Units in Each</i>)	137	100	-	100	-	100	-	-	-	-	-	-
Gross/Weapon System Cost (<i>\$ in Millions</i>)	1,030.759	144.218	159.729	148.570	-	148.570	-	-	-	-	-	-
Less PY Advance Procurement (<i>\$ in Millions</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) (<i>\$ in Millions</i>)	1,030.759	144.218	159.729	148.570	-	148.570	-	-	-	-	-	-
Plus CY Advance Procurement (<i>\$ in Millions</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Total Obligation Authority (<i>\$ in Millions</i>)	1,030.759	144.218	159.729	148.570	-	148.570	-	-	-	-	-	-

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

Initial Spares (<i>\$ in Millions</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Flyaway Unit Cost (<i>\$ in Thousands</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Unit Cost (<i>\$ in Thousands</i>)	7,523.788	1,442.180	-	1,485.700	-	1,485.700	-	-	-	-	-	-

Description:

Common Missile Warning System (CMWS):

Army Procurement Objective (APO) = 1,351 (B-Kits)

The CMWS program is a missile warning system that cues both flare and laser-based countermeasures to defeat incoming Infrared (IR)-seeking missiles and will alert aircrews to the presence of certain incoming unguided munitions. The B-Kit consists of the components which perform the missile detection and aircrew notification, unguided munitions detection and aircrew notification, false alarm rejection, and countermeasure employment/cueing functions of the system. The CMWS Electronic Control Unit (ECU) receives ultraviolet (UV) missile detection data from Electro-Optic Missile Sensors (EOMS), which detects UV signals, and sends a missile alert signal to warn aircrews via on-board avionics. Tier 1 threat missiles detected and tracked by the CMWS are subsequently defeated by a combination of missile seeker countermeasures, including decoy flares and IR Laser Jamming (currently Common Infrared Countermeasure (CIRCM) and Advanced Threat Infrared Countermeasures (ATIRCM)-equipped CH-47 platform only). In addition, the CMWS ECU receives from the EOMS unguided munitions detection data which is also passed to the aircrew through aural and visual cues. The aircrew then applies the appropriate Tactics, Techniques and Procedures (TTPs) to break contact or engage the enemy with on-ship ordnance. The CMWS Generation 3 (Gen 3) ECU in conjunction with ongoing software development efforts will address outstanding materiel release conditions and ensure protection against emerging IR-guided missile threats. Due to limited quantities of B-Kits, CMWS will remain in the Army inventory for a number of years and must remain relevant against emerging threats.

The CMWS A-Kit includes mounting hardware, wiring harnesses, cables, and other components necessary to install and interface the mission kit on host aircraft. The A-Kit ensures the mission kit is functionally and physically operational with a specific host aircraft type.

Joint Urgent Operational Needs Statement (JUONS)/Common Infrared Countermeasure Quick Reaction Capability (CIRCM QRC):

APO = 42 (B-Kits)

As a part of Phase 2a of the JUONS (SO-0010) program, the Army integrated the Department of the Navy Large Aircraft Infrared Countermeasure (DoN LAIRCM) system onto the Army and Special Operations Aircraft platforms. Due to a number of challenges, circumstances, and variables, the Army updated the Advanced Threat Warning (ATW)/CIRCM QRC and Limited Interim Missile Warning System (LIMWS) Directed Requirements (dated November 16, 2018). The updated requirements extend the utilization of ATW DoN LAIRCM on conventional Army aircraft and cancel the need for the ATW/CIRCM QRC system for the conventional Army. (It should be noted that the updated requirement maintains the need for ATW/CIRCM on the Special Operations Aircraft. Sustainment of ATW on Special Operations Aircraft will

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Exhibit P-40, Budget Line Item Justification: PB 2022 Army **Date:** May 2021

Appropriation / Budget Activity / Budget Sub Activity:
 2031A: Aircraft Procurement, Army / BA 04: Support Equipment and Facilities / BSA
 10: Ground Support Avionics

P-1 Line Item Number / Title:
 5397AZ3517 / CMWS

ID Code (A=Service Ready, B=Not Service Ready): **Program Elements for Code B Items:** N/A **Other Related Program Elements:** 0605051A

Line Item MDAP/MAIS Code: N/A

transfer to Special Operations Aircraft budget line in FY22) As a result, the Army did not acquire the ATW sensors for use in Phase 3 of the JUONS effort. Instead, the Army accelerated the procurement of the CIRCM QRC systems for use with the currently fielded CMWS in preparation for transition to the LIMWS system.

LIMWS QRC:

APO = 399 (B-Kits)

Phase 4 LIMWS QRC addresses the HQDA Directed Requirement to provide a greater capability than CMWS, the current POR, to bridge the gap between CMWS and the future POR. LIMWS is required in order to maintain overmatch of quickly emerging threat technology and tactics by providing increased detection range, improved detection in clutter, more agile algorithms to rapidly respond to emerging threats, and eliminates the need for sensor alignment.

References:

- Joint Staff, J-8 Deputy Director for Requirements (DOR) memorandum, April 24, 2015
- Phase 2a SOCOM JUONS SO-0010, Joint Rapid Acquisition Cell (JRAC) memorandum, May 29, 2015
- Directed Requirement for the Phase 3 Advanced Threat Warner and Common Infrared Countermeasure Quick Reaction Capability (ATW/CIRCM QRC) to Support Joint Urgent Operational Need (JUON) SO-0010, CIRCM Critical Intelligence Parameters Breach, December 18, 2015
- Directed Requirement for Limited Interim Missile Warning System to Detect Enemy Man Portable Air Defense Systems, March 26, 2017
- Update to the Directed Requirement for the United States Special Operations Command Joint Urgent Operational Needs SO-0010 Threat Detection and Countermeasures to Enemy Man Portable Air Defense System Capability, November 16, 2018
- Directed Requirement for Limited Interim Missile Warning System to Detect Enemy Man Portable Air Defense Systems, November 16, 2018
- Aircraft Survivability Equipment (ASE) Modernization Fielding Guidance, Change 1, November 19, 2018

Secondary Distribution		FY 2020	FY 2021	FY 2022 Base	FY 2022 OCO	FY 2022 Total	FY 2023	FY 2024	FY 2025	FY 2026
Army	Quantity	100	-	100	-	100	-	-	-	-
	Total Obligation Authority	144.218	159.729	148.570	-	148.570	-	-	-	-
Total: Secondary Distribution	Quantity	100	-	100	-	100	-	-	-	-
	Total Obligation Authority	144.218	159.729	148.570	-	148.570	-	-	-	-

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Exhibit P-40, Budget Line Item Justification: PB 2022 Army **Date:** May 2021

Appropriation / Budget Activity / Budget Sub Activity: 2031A: Aircraft Procurement, Army / BA 04: Support Equipment and Facilities / BSA 10: Ground Support Avionics **P-1 Line Item Number / Title:** 5397AZ3517 / CMWS

ID Code (A=Service Ready, B=Not Service Ready): **Program Elements for Code B Items:** N/A **Other Related Program Elements:** 0605051A

Line Item MDAP/MAIS Code: N/A

Exhibits Schedule					Prior Years	FY 2020	FY 2021	FY 2022 Base	FY 2022 OCO	FY 2022 Total
Exhibit Type	Title*	Subexhibits	ID CD	MDAP/MAIS Code	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)
P-5	AZ3517 / CMWS	P-5a, P-21			137 / 1,030.759	100 / 144.218	- / 159.729	100 / 148.570	- / -	100 / 148.570
P-40	Total Gross/Weapon System Cost				137 / 1,030.759	100 / 144.218	- / 159.729	100 / 148.570	- / -	100 / 148.570

*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:
 CMWS: FY 2022 Base Procurement dollars in the amount of \$14.756 million supports CMWS software modifications, software concurrency, contractor support, system of system analysis, algorithm solutions, and system test and evaluation (ST&E) efforts.

JUONS Phase 2a DoN LAIRCM: FY 2022 Direct War funding in the amount \$29.608 million funds, software maintenance, demil engineering support and Systems Engineering Program Management (SEPM). Increase also includes support for SOAR.

Phase 4 LIMWS QRC: FY 2022 Direct War funding in the amount of \$104.206 million funds for procurement of 100 LIMWS B-kits, procurement of 102 Smart Dispensers and 324 Payload Modules for ALE-47 flare countermeasure systems, installation of A-kits for MH-60M, HH/UH-60M, CH-47F, and AH-64E aircraft, training and publications, test and special equipment, contractor logistics support, and SEPM.

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.

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Exhibit P-5, Cost Analysis: PB 2022 Army		Date: May 2021
Appropriation / Budget Activity / Budget Sub Activity: 2031A / 04 / 10	P-1 Line Item Number / Title: 5397AZ3517 / CMWS	Item Number / Title [DODIC]: AZ3517 / CMWS

ID Code (A=Service Ready, B=Not Service Ready) :	MDAP/MAIS Code:
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Resource Summary	Prior Years	FY 2020	FY 2021	FY 2022 Base	FY 2022 OCO	FY 2022 Total
Procurement Quantity (Units in Each)	137	100	-	100	-	100
Gross/Weapon System Cost (\$ in Millions)	1,030.759	144.218	159.729	148.570	-	148.570
Less PY Advance Procurement (\$ in Millions)	-	-	-	-	-	-
Net Procurement (P-1) (\$ in Millions)	1,030.759	144.218	159.729	148.570	-	148.570
Plus CY Advance Procurement (\$ in Millions)	-	-	-	-	-	-
Total Obligation Authority (\$ in Millions)	1,030.759	144.218	159.729	148.570	-	148.570

(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 Thousands)	7,523.788	1,442.180	-	1,485.700	-	1,485.700

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

Cost Elements	Prior Years			FY 2020			FY 2021			FY 2022 Base			FY 2022 OCO			FY 2022 Total		
	Unit Cost (\$ K)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ K)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ K)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ K)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ K)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ K)	Qty (Each)	Total Cost (\$ M)
Hardware Cost																		
Recurring Cost																		
CMWS A-Kit Fixed Wing Installation	2,974.222	18	53.536	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
CMWS A-Kit Rotary Wing Installation	657.000	10	6.570	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
CMWS Gen 3 ECU Hardware	261.671	432	113.042	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
CMWS Gen 3 User Data Module (UDM)	-	-	9.607	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
CMWS Other Recurring Prod (Software/Engineer)	-	-	194.167	-	-	7.502	-	-	1.266	-	-	5.716	-	-	-	-	-	5.716
CMWS Systems Engineering	-	-	27.773	-	-	0.781	-	-	1.181	-	-	1.210	-	-	-	-	-	1.210
CMWS Program Management	-	-	24.119	-	-	0.639	-	-	3.516	-	-	2.810	-	-	-	-	-	2.810
CMWS Systems Test and Evaluation	-	-	74.349	-	-	4.094	-	-	4.589	-	-	5.000	-	-	-	-	-	5.000
JUONS SO-0010 A-Kit Procurement	432.174	69	29.820	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
JUONS SO-0010 A-Kit Installation	376.406	69	25.972	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
JUONS SO-0010 B-Kit Procurement	2,824.200	45	127.089	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

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Exhibit P-5, Cost Analysis: PB 2022 Army													Date: May 2021					
Appropriation / Budget Activity / Budget Sub Activity: 2031A / 04 / 10						P-1 Line Item Number / Title: 5397AZ3517 / CMWS						Item Number / Title [DODIC]: AZ3517 / CMWS						
ID Code (A=Service Ready, B=Not Service Ready) :										MDAP/MAIS Code:								

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

Cost Elements	Prior Years			FY 2020			FY 2021			FY 2022 Base			FY 2022 OCO			FY 2022 Total		
	Unit Cost (\$ K)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ K)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ K)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ K)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ K)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ K)	Qty (Each)	Total Cost (\$ M)
JUONS SO-0010 Systems Engineering	-	-	8.650	-	-	0.921	-	-	1.200	-	-	2.050	-	-	-	-	-	2.050
JUONS SO-0010 Program Management	-	-	7.248	-	-	0.754	-	-	0.983	-	-	1.840	-	-	-	-	-	1.840
JUONS SO-0010 Systems Test & Evaluation	-	-	12.538	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
JUONS SO-0010 Fielding/FSR Support/ Depot/Demod	-	-	39.087	-	-	10.367	-	-	17.697	-	-	17.118	-	-	-	-	-	17.118
JUONS SO-0010 Software/Engineering Support	-	-	6.163	-	-	1.600	-	-	1.970	-	-	8.600	-	-	-	-	-	8.600
Phase 3 ATW/ CIRCM QRC B-Kit Procurement ^(†)	1,015.344	64	64.982	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
CIRCM QRC Systems Engineering	-	-	6.350	-	-	0.354	-	-	-	-	-	-	-	-	-	-	-	-
CIRCM QRC Program Management	-	-	6.315	-	-	0.299	-	-	-	-	-	-	-	-	-	-	-	-
CIRCM QRC A-Kit Installation	171.096	135	23.098	68.350	20	1.367	-	-	-	-	-	-	-	-	-	-	-	-
CIRCM QRC ST&E	-	-	1.410	-	-	4.510	-	-	-	-	-	-	-	-	-	-	-	-
Phase 4 LIMWS A-Kit Procurement and Install ^(†)	78.047	86	6.712	71.960	201	14.464	290.688	80	23.255	-	-	4.494	-	-	-	-	-	4.494
LIMWS Systems Engineering Program Management	-	-	8.384	-	-	9.997	-	-	12.590	-	-	11.980	-	-	-	-	-	11.980
Phase 4 LIMWS QRC B-Kit Procurement ^(†)	479.581	136	65.223	626.090	100	62.609	626.090	100	62.609	626.090	100	62.609	-	-	-	626.090	100	62.609
LIMWS QRC Additional B-Kit Hardware (ALE-47)	-	-	0.262	-	-	5.197	-	-	6.618	-	-	1.747	-	-	-	-	-	1.747
CIRCM QRC A-Kit Procurement	378.650	60	22.719	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
CIRCM Additional Hardware-I Generators	50.550	20	1.011	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
LIMWS Engineering Services	-	-	5.531	-	-	-	-	-	4.417	-	-	2.872	-	-	-	-	-	2.872
<i>Subtotal: Recurring Cost</i>	-	-	971.727	-	-	125.455	-	-	141.891	-	-	128.046	-	-	-	-	-	128.046

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Exhibit P-5, Cost Analysis: PB 2022 Army		Date: May 2021
Appropriation / Budget Activity / Budget Sub Activity: 2031A / 04 / 10		P-1 Line Item Number / Title: 5397AZ3517 / CMWS
		Item Number / Title [DODIC]: AZ3517 / CMWS

ID Code (A=Service Ready, B=Not Service Ready) :	MDAP/MAIS Code:
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Note: Subtotals or Totals in this Exhibit P-5 may not be exact or sum exactly due to rounding.

Cost Elements	Prior Years			FY 2020			FY 2021			FY 2022 Base			FY 2022 OCO			FY 2022 Total		
	Unit Cost (\$ K)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ K)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ K)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ K)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ K)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ K)	Qty (Each)	Total Cost (\$ M)
Non Recurring Cost																		
CMWS Other Modifications (5th Sensor and P3I)	-	-	4.845	-	-	0.960	-	-	-	-	-	-	-	-	-	-	-	-
CMWS Other Procurement	-	-	3.176	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
FY 2019 Rapid Prototyping Fund	-	-	0.613	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
<i>Subtotal: Non Recurring Cost</i>	-	-	8.634	-	-	0.960	-	-	-	-	-	-	-	-	-	-	-	-
Subtotal: Hardware Cost	-	-	980.361	-	-	126.415	-	-	141.891	-	-	128.046	-	-	-	-	-	128.046
Logistics Cost																		
Recurring Cost																		
CIRCM ICS-CLS	-	-	8.060	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
JUONS Fielding and ICS-CLS	-	-	-	-	-	3.108	-	-	-	-	-	-	-	-	-	-	-	-
LIMWS ICS-CLS	-	-	0.935	-	-	14.672	-	-	15.823	-	-	11.190	-	-	-	-	-	11.190
LIMWS Fielding	-	-	-	-	-	-	-	-	-	-	-	6.316	-	-	-	-	-	6.316
<i>Subtotal: Recurring Cost</i>	-	-	8.995	-	-	17.780	-	-	15.823	-	-	17.506	-	-	-	-	-	17.506
Non Recurring Cost																		
LIMWS Training/ Equipment	-	-	-	-	-	-	-	-	-	-	-	2.998	-	-	-	-	-	2.998
<i>Subtotal: Non Recurring Cost</i>	-	-	-	-	-	-	-	-	-	-	-	2.998	-	-	-	-	-	2.998
Subtotal: Logistics Cost	-	-	8.995	-	-	17.780	-	-	15.823	-	-	20.504	-	-	-	-	-	20.504
Support - Fielding Cost																		
Fielding	-	-	33.000	-	-	0.023	-	-	2.015	-	-	0.020	-	-	-	-	-	0.020
<i>Subtotal: Support - Fielding Cost</i>	-	-	33.000	-	-	0.023	-	-	2.015	-	-	0.020	-	-	-	-	-	0.020
Support - Training Cost																		
Equipment	-	-	8.403	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
<i>Subtotal: Support - Training Cost</i>	-	-	8.403	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost	7,523.788	137	1,030.759	1,442.180	100	144.218	-	-	159.729	1,485.700	100	148.570	-	-	-	1,485.700	100	148.570

Remarks:
LIMWS A-Kits: Production of 201 A-Kits procured in first quarter FY 2020. FY 2021 LIMWS OCO APA funds procurement of 80 A-Kits for multiple platform variants. FY22 LIMWS funding for A-Kit installs only.

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Exhibit P-5, Cost Analysis: PB 2022 Army **Date:** May 2021

Appropriation / Budget Activity / Budget Sub Activity: 2031A / 04 / 10	P-1 Line Item Number / Title: 5397AZ3517 / CMWS	Item Number / Title [DODIC]: AZ3517 / CMWS
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ID Code (A=Service Ready, B=Not Service Ready) : **MDAP/MAIS Code:**

Secondary Distribution		FY 2020	FY 2021	FY 2022 Base	FY 2022 OCO	FY 2022 Total
Army	Quantity	100	-	100	-	100
	Total Obligation Authority	144.218	159.729	148.570	-	148.570
Total:	Quantity	100	-	100	-	100
Secondary Distribution	Total Obligation Authority	144.218	159.729	148.570	-	148.570

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

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Exhibit P-5a, Procurement History and Planning: PB 2022 Army **Date:** May 2021

Appropriation / Budget Activity / Budget Sub Activity: 2031A / 04 / 10	P-1 Line Item Number / Title: 5397AZ3517 / CMWS	Item Number / Title [DODIC]: AZ3517 / CMWS
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Cost Elements	O C O	FY	Contractor and Location	Method/Type or Funding Vehicle	Location of PCO	Award Date	Date of First Delivery	Qty <i>(Each)</i>	Unit Cost <i>(\$ K)</i>	Specs Avail Now?	Date Revision Available	RFP Issue Date
Phase 3 ATW/CIRCM QRC B-Kit Procurement	✓	2018	Northrop Grumman / Rolling Meadows, IL	SS / FFP	AMCOM Contracting Command, RSA	Dec 2017	Dec 2018	64	1,015.344	N		
Phase 4 LIMWS A-Kit Procurement and Install	✓	2019	BAE Systems / Nashua, NH	C / FFP	AMCOM Contracting Command, RSA	Nov 2018	Aug 2019	86	78.047	N		
Phase 4 LIMWS A-Kit Procurement and Install	✓	2020	BAE Systems / Nashua, NH	C / FFP	AMCOM Contracting Command, RSA	Oct 2019	Apr 2020	201	71.960	N		
Phase 4 LIMWS A-Kit Procurement and Install	✓	2021	Tyonek / Huntsville, AL	C / FFP	AMCOM Contracting Command, RSA	Jan 2021	Jul 2021	80	290.688	N		
Phase 4 LIMWS QRC B-Kit Procurement ^(†)	✓	2018	BAE Systems / Nashua, NH	C / FFP	AMCOM Contracting Command, RSA	May 2018	Sep 2019	36	626.090	N		
Phase 4 LIMWS QRC B-Kit Procurement ^(†)	✓	2019	BAE Systems / Nashua, NH	C / FFP	AMCOM Contracting Command, RSA	Mar 2020	Feb 2021	100	626.090	N		
Phase 4 LIMWS QRC B-Kit Procurement ^(†)	✓	2020	BAE Systems / Nashua, NH	C / FFP	AMCOM Contracting Command, RSA	Jan 2020	Dec 2021	100	626.090	N		
Phase 4 LIMWS QRC B-Kit Procurement ^(†)	✓	2021	BAE Systems / Nashua, NH	C / FFP	AMCOM Contracting Command, RSA	Jan 2021	Oct 2022	100	626.090	N		
Phase 4 LIMWS QRC B-Kit Procurement		2022	BAE Systems / Nashua, NH	C / FFP	AMCOM Contracting Command, RSA	Sep 2022	Aug 2023	100	626.090	N		

^(†) indicates the presence of a P-21

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Exhibit P-21, Production Schedule: PB 2022 Army **Date:** May 2021

Appropriation / Budget Activity / Budget Sub Activity: 2031A / 04 / 10	P-1 Line Item Number / Title: 5397AZ3517 / CMWS	Item Number / Title [DODIC]: AZ3517 / CMWS
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Cost Elements <i>(Units in Each)</i>						Fiscal Year 2018												Fiscal Year 2019												BALANCE	
O C C #	M F R #	FY	SERVICE	PROC QTY	ACCEPT PRIOR TO 1 OCT 2017	BAL DUE AS OF 1 OCT	Calendar Year 2018												Calendar Year 2019												
							O C T	N O V	D E C	J A N	F E B	M A R	A P R	M A Y	J U N	J U L	A U G	S E P	O C T	N O V	D E C	J A N	F E B	M A R	A P R	M A Y	J U N	J U L	A U G		S E P
Phase 4 LIMWS QRC B-Kit Procurement																															
✓	1	2018	ARMY	36	0	36																							1	35	
✓	1	2019	ARMY	100	0	100																								100	
✓	1	2020	ARMY	100	0	100																								100	
✓	1	2021	ARMY	100	0	100																								100	
							O C T	N O V	D E C	J A N	F E B	M A R	A P R	M A Y	J U N	J U L	A U G	S E P	O C T	N O V	D E C	J A N	F E B	M A R	A P R	M A Y	J U N	J U L	A U G	S E P	

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Exhibit P-21, Production Schedule: PB 2022 Army **Date:** May 2021

Appropriation / Budget Activity / Budget Sub Activity: 2031A / 04 / 10 **P-1 Line Item Number / Title:** 5397AZ3517 / CMWS **Item Number / Title [DODIC]:** AZ3517 / CMWS

Cost Elements <i>(Units in Each)</i>					Fiscal Year 2020													Fiscal Year 2021												BALANCE		
O C C #	M F R #	FY	SERVICE	PROC QTY	ACCEPT PRIOR TO 1 OCT 2019	BAL DUE AS OF 1 OCT	Calendar Year 2020													Calendar Year 2021												
							O C T	N O V	D E C	J A N	F E B	M A R	A P R	M A Y	J U N	J U L	A U G	S E P	O C T	N O V	D E C	J A N	F E B	M A R	A P R	M A Y	J U N	J U L	A U G		S E P	
Phase 4 LIMWS QRC B-Kit Procurement																																
✓	1	2018	ARMY	36	1	35	1	-	1	1	-	-	-	-	2	5	5	5	5	5	3	2							0			
✓	1	2019	ARMY	100	0	100																10	10	10	10	10	10	10	20			
✓	1	2020	ARMY	100	0	100			A	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	100				
✓	1	2021	ARMY	100	0	100																A	-	-	-	-	-	100				
							O C T	N O V	D E C	J A N	F E B	M A R	A P R	M A Y	J U N	J U L	A U G	S E P	O C T	N O V	D E C	J A N	F E B	M A R	A P R	M A Y	J U N	J U L	A U G	S E P		

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Exhibit P-21, Production Schedule: PB 2022 Army **Date:** May 2021

Appropriation / Budget Activity / Budget Sub Activity: 2031A / 04 / 10 **P-1 Line Item Number / Title:** 5397AZ3517 / CMWS **Item Number / Title [DODIC]:** AZ3517 / CMWS

Cost Elements <i>(Units in Each)</i>						Fiscal Year 2022													Fiscal Year 2023										BALANCE	
O C C #	M F R #	FY	SERVICE	PROC QTY	ACCEPT PRIOR TO 1 OCT 2021	BAL DUE AS OF 1 OCT	Calendar Year 2022													Calendar Year 2023										
							O C T	N O V	D E C	J A N	F E B	M A R	A P R	M A Y	J U N	J U L	A U G	S E P	O C T	N O V	D E C	J A N	F E B	M A R	A P R	M A Y	J U N	J U L		A U G
Phase 4 LIMWS QRC B-Kit Procurement																														
✓	1	2018	ARMY	36	36	0																							0	
✓	1	2019	ARMY	100	80	20	10	10																					0	
✓	1	2020	ARMY	100	0	100	-	-	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	0	
✓	1	2021	ARMY	100	0	100	-	-	-	-	-	-	-	-	-	-	-	-	10	10	10	10	10	10	10	10	10	10	0	
							O C T	N O V	D E C	J A N	F E B	M A R	A P R	M A Y	J U N	J U L	A U G	S E P	O C T	N O V	D E C	J A N	F E B	M A R	A P R	M A Y	J U N	J U L	A U G	S E P

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Exhibit P-21, Production Schedule: PB 2022 Army	Date: May 2021
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Appropriation / Budget Activity / Budget Sub Activity: 2031A / 04 / 10	P-1 Line Item Number / Title: 5397AZ3517 / CMWS	Item Number / Title [DODIC]: AZ3517 / CMWS
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MFR Ref #	Manufacturer Name - Location	Production Rates (Each / Month)			Procurement Leadtime (Months)							
		MSR For 2022	1-8-5 For 2022	MAX For 2022	Initial				Reorder			
					ALT Prior to Oct 1	ALT After Oct 1	Manufacturing PLT	Total After Oct 1	ALT Prior to Oct 1	ALT After Oct 1	Manufacturing PLT	Total After Oct 1
1	BAE Systems - Nashua, NH	1	10	10	0	0	12	12	0	0	12	12

"A" in the Delivery Schedule indicates the Contract Award Date.

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

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Exhibit P-40, Budget Line Item Justification: PB 2022 Army **Date:** May 2021

Appropriation / Budget Activity / Budget Sub Activity:
2031A: Aircraft Procurement, Army / BA 04: Support Equipment and Facilities / BSA 10: Ground Support Avionics

P-1 Line Item Number / Title:
5399AZ3537 / Common Infrared Countermeasures (CIRCM)

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

Line Item MDAP/MAIS Code: 446

Resource Summary	Prior Years	FY 2020	FY 2021	FY 2022 Base	FY 2022 OCO	FY 2022 Total	FY 2023	FY 2024	FY 2025	FY 2026	To Complete	Total
Procurement Quantity (<i>Units in Each</i>)	86	101	120	101	-	101	-	-	-	-	-	-
Gross/Weapon System Cost (<i>\$ in Millions</i>)	249.981	178.094	266.517	240.412	-	240.412	-	-	-	-	-	-
Less PY Advance Procurement (<i>\$ in Millions</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) (<i>\$ in Millions</i>)	249.981	178.094	266.517	240.412	-	240.412	-	-	-	-	-	-
Plus CY Advance Procurement (<i>\$ in Millions</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Total Obligation Authority (<i>\$ in Millions</i>)	249.981	178.094	266.517	240.412	-	240.412	-	-	-	-	-	-

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

Initial Spares (<i>\$ in Millions</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Flyaway Unit Cost (<i>\$ in Thousands</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Unit Cost (<i>\$ in Thousands</i>)	2,906.756	1,763.307	2,220.975	2,380.317	-	2,380.317	-	-	-	-	-	-

Description:

Army Procurement Objective (APO) = 1,781 (B-Kits only)

The (Common Infrared Countermeasures) CIRCM budget line includes 1) CIRCM (AZ3537), 2) funding to counter emerging technology as identified in Joint Urgent Operational Needs Statement (JUONS) SO-0010 Phase 2a and the Headquarters Department of the Army (HQDA) Directed Requirement for the CIRCM Quick Reaction Capability (QRC), 3) funding to support HQDA Directed Requirement for the Phase 3 Advanced Threat Warning(ATW)/CIRCM QRC.

CIRCM (AZ3537)

CIRCM is the next generation lightweight, laser-based Infrared Countermeasure (IRCM) component that will interface with both the Army's Common Missile Warning System (CMWS) and future missile warning systems (MWS) to defeat current and emerging missile threats that use multispectral technology for rotary-wing, tilt-rotor and small fixed-wing aircraft across the DoD. CIRCM receives an angular bearing hand-off from the MWS, employs a pointing and tracking system which acquires the handed-over threat and tracks the incoming missile during and after motor burnout. CIRCM jams the missile by using modulated laser energy in the missile seeker band, thus degrading the tracking capability of the missile and causing it to miss the aircraft. CIRCM is utilizing Open Systems Architecture which allows flexibility with software and hardware refreshes to keep pace with future threats. CIRCM is part of the suite of ASE Mission Equipment for the Future Vertical Life (FVL) platform.

The CIRCM A-Kit includes mounting hardware, wiring harnesses, and other components necessary to install and interface the mission kit on host aircraft. The A-Kit ensures the mission kit is functionally and physically operational with a specific host aircraft type. The CIRCM B-Kit is the mission kit (laser, pointer tracker, and controller) required to achieve near spherical coverage for an aircraft.

JUONS SO-0010 and CIRCM QRC

As a part of Phase 2a of the JUONS (SO-0010) program, the Army integrated the Department of the Navy Large Aircraft Infrared Countermeasure (DoN LAIRCM) system onto the Army and Special Operations Aircraft (SOA) platforms. Due to a number of challenges, circumstances, and variables, the Army updated the ATW/CIRCM QRC and LIMWS Directed Requirements (dated November 16, 2018). The updated requirements extend the utilization of ATW DoN LAIRCM on conventional Army aircraft and cancel the need for the ATW/CIRCM QRC system for the conventional Army. (It should be noted that the updated requirement maintains the need for ATW/CIRCM on SOA platforms. Sustainment of ATW on Special Operations Aircraft will transfer to the SOA budget line in FY22). As a result, the Army did not acquire the ATW sensors for use in Phase 3 of the JUONS effort. Instead, the Army accelerated the procurement of the CIRCM QRC systems for use with the currently fielded CMWS in preparation for transition to the LIMWS system.

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Exhibit P-40, Budget Line Item Justification: PB 2022 Army **Date:** May 2021

Appropriation / Budget Activity / Budget Sub Activity: 2031A: Aircraft Procurement, Army / BA 04: Support Equipment and Facilities / BSA 10: Ground Support Avionics
P-1 Line Item Number / Title: 5399AZ3537 / Common Infrared Countermeasures (CIRCM)

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

Line Item MDAP/MAIS Code: 446

CIRCM MS C was approved September 14, 2018, the LRIP and Engineering Support options were exercised and the program entered the Production and Deployment phase with First Unit Equipped (FUE) achieved in the second quarter of FY 2020, and a Full Rate Production Decision Review (FRPDR) planned for the second quarter of FY 2021. During the MS C approval process, the CSA directed funding be increased beginning in FY 2020 to accelerate CIRCM production, Initial Operational Test (IOT) and to field one Combat Aviation Brigade (CAB) per year.

Secondary Distribution		FY 2020	FY 2021	FY 2022 Base	FY 2022 OCO	FY 2022 Total	FY 2023	FY 2024	FY 2025	FY 2026
Army	Quantity	101	120	101	-	101	-	-	-	-
	Total Obligation Authority	178.094	266.517	240.412	-	240.412	-	-	-	-
Total: Secondary Distribution	Quantity	101	120	101	-	101	-	-	-	-
	Total Obligation Authority	178.094	266.517	240.412	-	240.412	-	-	-	-

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Exhibit P-40, Budget Line Item Justification: PB 2022 Army **Date:** May 2021

Appropriation / Budget Activity / Budget Sub Activity: 2031A: Aircraft Procurement, Army / BA 04: Support Equipment and Facilities / BSA 10: Ground Support Avionics
P-1 Line Item Number / Title: 5399AZ3537 / Common Infrared Countermeasures (CIRCM)

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

Line Item MDAP/MAIS Code: 446

Exhibits Schedule					Prior Years	FY 2020	FY 2021	FY 2022 Base	FY 2022 OCO	FY 2022 Total
Exhibit Type	Title*	Subexhibits	ID CD	MDAP/MAIS Code	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)
P-5	AZ3537 / Common Infrared Countermeasures (CIRCM)	P-5a, P-21			86 / 249.981	101 / 178.094	120 / 266.517	101 / 240.412	- / -	101 / 240.412
P-40	Total Gross/Weapon System Cost				86 / 249.981	101 / 178.094	120 / 266.517	101 / 240.412	- / -	101 / 240.412

*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:
 FY 2022 Base Procurement dollars in the amount of \$203.152 million will fund procurement of CIRCM hardware, integration, testing, Systems Engineering Program Management (SEPM), and fielding.
 FY 2022 Direct War/Enduring Operation Procurement dollars for CIRCM QRC in the amount of \$37.260 million funds A-Kit installs, SEPM, System Test & Evaluation (ST&E), fielding, Contractor Logistics Support (CLS), and software updates.
 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.
 All COMPO 1 Active

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Exhibit P-5, Cost Analysis: PB 2022 Army		Date: May 2021
Appropriation / Budget Activity / Budget Sub Activity: 2031A / 04 / 10	P-1 Line Item Number / Title: 5399AZ3537 / Common Infrared Countermeasures (CIRCM)	Item Number / Title [DODIC]: AZ3537 / Common Infrared Countermeasures (CIRCM)

ID Code (A=Service Ready, B=Not Service Ready) :	MDAP/MAIS Code:
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Resource Summary	Prior Years	FY 2020	FY 2021	FY 2022 Base	FY 2022 OCO	FY 2022 Total
Procurement Quantity (Units in Each)	86	101	120	101	-	101
Gross/Weapon System Cost (\$ in Millions)	249.981	178.094	266.517	240.412	-	240.412
Less PY Advance Procurement (\$ in Millions)	-	-	-	-	-	-
Net Procurement (P-1) (\$ in Millions)	249.981	178.094	266.517	240.412	-	240.412
Plus CY Advance Procurement (\$ in Millions)	-	-	-	-	-	-
Total Obligation Authority (\$ in Millions)	249.981	178.094	266.517	240.412	-	240.412

(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 Thousands)	2,906.756	1,763.307	2,220.975	2,380.317	-	2,380.317

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

Cost Elements	Prior Years			FY 2020			FY 2021			FY 2022 Base			FY 2022 OCO			FY 2022 Total		
	Unit Cost (\$ K)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ K)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ K)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ K)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ K)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ K)	Qty (Each)	Total Cost (\$ M)
Flyaway Cost																		
Recurring Cost																		
CIRCM A-Kit Manufacturing/ Installation ^(f)	70.952	105	7.450	72.810	100	7.281	125.439	196	24.586	115.268	157	18.097	-	-	-	115.268	157	18.097
CIRCM B-Kit Manufacturing ^(f)	884.292	48	42.446	1,168.089	101	117.977	1,154.000	120	138.480	1,063.554	101	107.419	-	-	-	1,063.554	101	107.419
Other Recurring Production	-	-	12.368	-	-	10.559	-	-	10.764	-	-	8.181	-	-	-	-	-	8.181
Phase 3 CIRCM QRC B-Kit Manufacturing ^(f)	1,251.159	107	133.874	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
CIRCM QRC A-Kit Manufacturing/Installs	-	-	9.465	-	-	-	-	-	14.665	-	-	-	-	-	-	-	-	-
B-Kit Manufacturing to Support Phase 4 LIMWS QRC ^(f)	1,271.000	9	11.439	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
CIRCM QRC SEPM	-	-	10.638	-	-	0.931	-	-	3.457	-	-	4.183	-	-	-	-	-	4.183
CIRCM QRC Testing	-	-	2.049	-	-	-	-	-	-	-	-	4.785	-	-	-	-	-	4.785
CIRCM QRC Training	-	-	2.843	-	-	2.850	-	-	-	-	-	-	-	-	-	-	-	-
CIRCM QRC Fielding	-	-	5.597	-	-	4.529	-	-	6.778	-	-	11.879	-	-	-	-	-	11.879
CIRCM QRC Software	-	-	-	-	-	1.000	-	-	2.000	-	-	2.458	-	-	-	-	-	2.458
CIRCM QRC Rapid Prototyping Fund	-	-	0.033	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

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Exhibit P-5, Cost Analysis: PB 2022 Army												Date: May 2021					
Appropriation / Budget Activity / Budget Sub Activity: 2031A / 04 / 10						P-1 Line Item Number / Title: 5399AZ3537 / Common Infrared Countermeasures (CIRCM)						Item Number / Title [DODIC]: AZ3537 / Common Infrared Countermeasures (CIRCM)					

ID Code (A=Service Ready, B=Not Service Ready) :										MDAP/MAIS Code:							
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Note: Subtotals or Totals in this Exhibit P-5 may not be exact or sum exactly due to rounding.

Cost Elements	Prior Years			FY 2020			FY 2021			FY 2022 Base			FY 2022 OCO			FY 2022 Total		
	Unit Cost (\$ K)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ K)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ K)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ K)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ K)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ K)	Qty (Each)	Total Cost (\$ M)
CIRCM QRC Engineering Changes	-	-	-	-	-	-	-	-	5.500	-	-	-	-	-	-	-	-	-
<i>Subtotal: Recurring Cost</i>	-	-	238.202	-	-	145.127	-	-	206.230	-	-	157.002	-	-	-	-	-	157.002
Non Recurring Cost																		
Depot Stand-up	-	-	-	-	-	0.350	-	-	1.200	-	-	6.431	-	-	-	-	-	6.431
CIRCM QRC Retrofit	-	-	-	-	-	-	-	-	-	465.167	30	13.955	-	-	-	465.167	30	13.955
<i>Subtotal: Non Recurring Cost</i>	-	-	-	-	-	0.350	-	-	1.200	-	-	20.386	-	-	-	-	-	20.386
<i>Subtotal: Flyaway Cost</i>	-	-	238.202	-	-	145.477	-	-	207.430	-	-	177.388	-	-	-	-	-	177.388
Software Cost																		
Recurring Cost																		
Jam Code Updates/ Software Support	-	-	3.902	-	-	5.531	-	-	2.954	-	-	2.097	-	-	-	-	-	2.097
Cyber Security	-	-	-	-	-	3.299	-	-	1.266	-	-	1.080	-	-	-	-	-	1.080
<i>Subtotal: Recurring Cost</i>	-	-	3.902	-	-	8.830	-	-	4.220	-	-	3.177	-	-	-	-	-	3.177
<i>Subtotal: Software Cost</i>	-	-	3.902	-	-	8.830	-	-	4.220	-	-	3.177	-	-	-	-	-	3.177
Support - Data Cost																		
Technical Publications	-	-	0.463	-	-	-	-	-	-	-	-	0.255	-	-	-	-	-	0.255
<i>Subtotal: Support - Data Cost</i>	-	-	0.463	-	-	-	-	-	-	-	-	0.255	-	-	-	-	-	0.255
Support - Engineering Change Proposals Cost																		
Engineering Change Proposals	-	-	-	-	-	-	-	-	-	-	-	1.323	-	-	-	-	-	1.323
<i>Subtotal: Support - Engineering Change Proposals Cost</i>	-	-	-	-	-	-	-	-	-	-	-	1.323	-	-	-	-	-	1.323
Support - Fielding Cost																		
Fielding	-	-	3.942	-	-	12.395	-	-	24.767	-	-	24.329	-	-	-	-	-	24.329
<i>Subtotal: Support - Fielding Cost</i>	-	-	3.942	-	-	12.395	-	-	24.767	-	-	24.329	-	-	-	-	-	24.329
Support - System Engineering Cost																		
System Engineering	-	-	3.472	-	-	8.675	-	-	16.992	-	-	17.253	-	-	-	-	-	17.253
<i>Subtotal: Support - System Engineering Cost</i>	-	-	3.472	-	-	8.675	-	-	16.992	-	-	17.253	-	-	-	-	-	17.253
Support - System Test and Evaluation Cost																		
Test and Evaluation Support	-	-	-	-	-	-	-	-	5.146	-	-	6.092	-	-	-	-	-	6.092

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Exhibit P-5, Cost Analysis: PB 2022 Army		Date: May 2021
Appropriation / Budget Activity / Budget Sub Activity: 2031A / 04 / 10	P-1 Line Item Number / Title: 5399AZ3537 / Common Infrared Countermeasures (CIRCM)	Item Number / Title [DODIC]: AZ3537 / Common Infrared Countermeasures (CIRCM)

ID Code (A=Service Ready, B=Not Service Ready) :	MDAP/MAIS Code:
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Note: Subtotals or Totals in this Exhibit P-5 may not be exact or sum exactly due to rounding.

Cost Elements	Prior Years			FY 2020			FY 2021			FY 2022 Base			FY 2022 OCO			FY 2022 Total		
	Unit Cost (\$ K)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ K)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ K)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ K)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ K)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ K)	Qty (Each)	Total Cost (\$ M)
<i>Subtotal: Support - System Test and Evaluation Cost</i>	-	-	-	-	-	-	-	-	5.146	-	-	6.092	-	-	-	-	-	6.092
Support - Training Cost																		
Services	-	-	-	-	-	2.717	-	-	7.962	-	-	10.595	-	-	-	-	-	10.595
<i>Subtotal: Support - Training Cost</i>	-	-	-	-	-	2.717	-	-	7.962	-	-	10.595	-	-	-	-	-	10.595
Gross/Weapon System Cost	2,906.756	86	249.981	1,763.307	101	178.094	2,220.975	120	266.517	2,380.317	101	240.412	-	-	-	2,380.317	101	240.412

Remarks:
Other Recurring Production includes CIRCM Obsolescence

Secondary Distribution		FY 2020	FY 2021	FY 2022 Base	FY 2022 OCO	FY 2022 Total
Army	Quantity	101	120	101	-	101
	Total Obligation Authority	178.094	266.517	240.412	-	240.412
Total:	Quantity	101	120	101	-	101
Secondary Distribution	Total Obligation Authority	178.094	266.517	240.412	-	240.412

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

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Exhibit P-5a, Procurement History and Planning: PB 2022 Army **Date:** May 2021

Appropriation / Budget Activity / Budget Sub Activity: 2031A / 04 / 10	P-1 Line Item Number / Title: 5399AZ3537 / Common Infrared Countermeasures (CIRCM)	Item Number / Title [DODIC]: AZ3537 / Common Infrared Countermeasures (CIRCM)
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Cost Elements	O C O	FY	Contractor and Location	Method/Type or Funding Vehicle	Location of PCO	Award Date	Date of First Delivery	Qty (Each)	Unit Cost (\$ K)	Specs Avail Now?	Date Revision Available	RFP Issue Date
CIRCM A-Kit Manufacturing/ Installation ^(†)		2018	Logistics Support Facility (LSF) / Army Aviation Field Maintenance Facility (AFMD) / Redtone Arsenal	C / FPIF	HQ ACC, Redstone Arsenal, AL	Sep 2018	Jul 2019	24	0.000	Y		
CIRCM A-Kit Manufacturing/ Installation ^(†)		2019	Logistics Support Facility (LSF) / Army Aviation Field Maintenance Facility (AFMD) / Redtone Arsenal	MIPR	HQ ACC, Redstone Arsenal, AL	Apr 2019	Aug 2019	81	61.914	N		
CIRCM A-Kit Manufacturing/ Installation ^(†)		2020	Logistics Support Facility (LSF) / Army Aviation Field Maintenance Facility (AFMD) / Redtone Arsenal	MIPR	HQ ACC, Redstone Arsenal, AL	Jan 2020	May 2020	100	72.810	N		
CIRCM A-Kit Manufacturing/ Installation ^(†)		2021	Logistics Support Facility (LSF) / Army Aviation Field Maintenance Facility (AFMD) / Redtone Arsenal	MIPR	HQ ACC, Redstone Arsenal, AL	Jan 2021	May 2021	196	125.439	N		
CIRCM A-Kit Manufacturing/ Installation ^(†)		2022	Logistics Support Facility (LSF) / Army Aviation Field Maintenance Facility (AFMD) / Redtone Arsenal	MIPR	HQ ACC, Redstone Arsenal, AL	Jan 2022	May 2022	157	115.268	N		
CIRCM B-Kit Manufacturing ^(†)		2018	Northrop Grumman Systems Corp / Rolling Meadows	C / FFP	HQ ACC, Redstone Arsenal, AL	Jul 2019	Dec 2020	24	1,287.500	N		
CIRCM B-Kit Manufacturing ^(†)		2019	Northrop Grumman Systems Corp / Rolling Meadows	Option / FPIF	HQ ACC, Redstone Arsenal, AL	Dec 2018	Oct 2019	24	481.083	N		
CIRCM B-Kit Manufacturing ^(†)		2020	Northrop Grumman Systems Corp / Rolling Meadows	C / FFP	HQ ACC, Redstone Arsenal, AL	Jan 2020	Jun 2021	101	1,168.089	N		
CIRCM B-Kit Manufacturing ^(†)		2021	Northrop Grumman Systems Corp / Rolling Meadows	C / FFP	HQ ACC, Redstone Arsenal, AL	Nov 2020	May 2022	120	1,154.000	N		
CIRCM B-Kit Manufacturing ^(†)		2022	Northrop Grumman Systems Corp / Rolling Meadows	C / FFP	HQ ACC, Redstone Arsenal, AL	Nov 2021	May 2023	101	1,063.554	N		
Phase 3 CIRCM QRC B-Kit Manufacturing	✓	2017	Northrop Grumman Systems Corp / Rolling Meadows	C / FFP	HQ ACC, Redstone Arsenal, AL	Sep 2018	Nov 2019	77	1,200.170	N		
Phase 3 CIRCM QRC B-Kit Manufacturing	✓	2018	Northrop Grumman Systems Corp / Rolling Meadows	C / FFP	HQ ACC, Redstone Arsenal, AL	Jul 2019	Jan 2021	30	1,382.033	N		
B-Kit Manufacturing to Support Phase 4 LIMWS QRC	✓	2019	Northrop Grumman Systems Corp / Rolling Meadows	C / FFP	HQ ACC, Redstone Arsenal, AL	Jul 2019	Dec 2020	9	1,271.000	N		

^(†) indicates the presence of a P-21

Remarks:
 FY18 - LRIP 3 (DO 01) Qty = 24
 FY19 - LRIP 2 Qty = 24
 FY20 - LRIP 3 (DO 02) Qty = 81 (Update to 101)
 FY21 - FRP Qty = 120
 FY22 - FRP Qty = 101

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Exhibit P-5a, Procurement History and Planning: PB 2022 Army		Date: May 2021
Appropriation / Budget Activity / Budget Sub Activity: 2031A / 04 / 10	P-1 Line Item Number / Title: 5399AZ3537 / Common Infrared Countermeasures (CIRCM)	Item Number / Title [DODIC]: AZ3537 / Common Infrared Countermeasures (CIRCM)
FY17 - QRC 2 Qty = 77 FY18 - QRC 3 Qty = 30 FY19 - LIMWS QRC Qty = 9		
Variances in the delivery schedules reflect multiple contract vehicle requirements being met by a single production line, which is operating on a first in first out basis.		

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Exhibit P-21, Production Schedule: PB 2022 Army															Date: May 2021														
Appropriation / Budget Activity / Budget Sub Activity: 2031A / 04 / 10										P-1 Line Item Number / Title: 5399AZ3537 / Common Infrared Countermeasures (CIRCM)										Item Number / Title [DODIC]: AZ3537 / Common Infrared Countermeasures (CIRCM)									

Cost Elements <i>(Units in Each)</i>					Fiscal Year 2020															Fiscal Year 2021															B A L A N C E		
O C C O	M F R #	FY	SERVICE	PROC QTY	ACCEPT PRIOR TO 1 OCT 2019	BAL DUE AS OF 1 OCT	Calendar Year 2020															Calendar Year 2021															
							O C T	N O V	D E C	J A N	F E B	M A R	A P R	M A Y	J U N	J U L	A U G	S E P	O C T	N O V	D E C	J A N	F E B	M A R	A P R	M A Y	J U N	J U L	A U G	S E P							
CIRCM A-Kit Manufacturing/Installation																																					
	1	2018	ARMY	24	24	0																												0			
	1	2019	ARMY	81	30	51	15	15	21																									0			
	1	2020	ARMY	100	0	100				A	-	-	-	-	15	15	15	15	15	15	10												0				
	1	2021	ARMY	196	0	196																												121			
	1	2022	ARMY	157	0	157																												157			
CIRCM B-Kit Manufacturing																																					
	2	2018	ARMY	24	0	24	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0				
	2	2019	ARMY	24	0	24	11	1	-	-	-	5	7																				0				
	2	2020	ARMY	101	0	101				A	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	69				
	2	2021	ARMY	120	0	120																												120			
	2	2022	ARMY	101	0	101																												101			
							O C T	N O V	D E C	J A N	F E B	M A R	A P R	M A Y	J U N	J U L	A U G	S E P	O C T	N O V	D E C	J A N	F E B	M A R	A P R	M A Y	J U N	J U L	A U G	S E P							

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Exhibit P-21, Production Schedule: PB 2022 Army															Date: May 2021														
Appropriation / Budget Activity / Budget Sub Activity: 2031A / 04 / 10										P-1 Line Item Number / Title: 5399AZ3537 / Common Infrared Countermeasures (CIRCM)										Item Number / Title [DODIC]: AZ3537 / Common Infrared Countermeasures (CIRCM)									

Cost Elements <i>(Units in Each)</i>						Fiscal Year 2022														Fiscal Year 2023														BALANCE	
O C O	M F R #	FY	SERVICE	PROC QTY	ACCEPT PRIOR TO 1 OCT 2021	BAL DUE AS OF 1 OCT	Calendar Year 2022														Calendar Year 2023														
							O C T	N O V	D E C	J A N	F E B	M A R	A P R	M A Y	J U N	J U L	A U G	S E P	O C T	N O V	D E C	J A N	F E B	M A R	A P R	M A Y	J U N	J U L	A U G	S E P					
CIRCM A-Kit Manufacturing/Installation																																			
	1	2018	ARMY	24	24	0																							0						
	1	2019	ARMY	81	81	0																							0						
	1	2020	ARMY	100	100	0																							0						
	1	2021	ARMY	196	75	121	15	15	15	15	15	15	15	16														0							
	1	2022	ARMY	157	0	157				A	-	-	-	-	15	15	15	15	15	15	15	15	15	15	15	15	7	0							
CIRCM B-Kit Manufacturing																																			
	2	2018	ARMY	24	24	0																						0							
	2	2019	ARMY	24	24	0																						0							
	2	2020	ARMY	101	32	69	9	9	9	9	9	9	9	6														0							
	2	2021	ARMY	120	0	120	-	-	-	-	-	-	-	3	10	10	10	10	10	10	10	10	10	10	10	10	7	0							
	2	2022	ARMY	101	0	101		A	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	3	10	10	10	10	58				
							O	N	D	J	F	M	A	M	J	J	A	S	O	N	D	J	F	M	A	M	J	J	A	S					
							C	O	E	A	E	A	P	A	U	U	U	E	C	O	V	E	A	E	A	A	U	U	A	S					
							T	V	C	N	B	R	R	Y	N	L	G	P	T	V	C	N	B	R	R	Y	N	L	G	P					

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Exhibit P-21, Production Schedule: PB 2022 Army															Date: May 2021														
Appropriation / Budget Activity / Budget Sub Activity: 2031A / 04 / 10										P-1 Line Item Number / Title: 5399AZ3537 / Common Infrared Countermeasures (CIRCM)										Item Number / Title [DODIC]: AZ3537 / Common Infrared Countermeasures (CIRCM)									

Cost Elements <i>(Units in Each)</i>						Fiscal Year 2024												Fiscal Year 2025												BALANCE	
O C C #	M F R #	FY	SERVICE	PROC QTY	ACCEPT PRIOR TO 1 OCT 2023	BAL DUE AS OF 1 OCT	Calendar Year 2024												Calendar Year 2025												
							O C T	N O V	D E C	J A N	F E B	M A R	A P R	M A Y	J U N	J U L	A U G	S E P	O C T	N O V	D E C	J A N	F E B	M A R	A P R	M A Y	J U N	J U L	A U G		S E P
CIRCM A-Kit Manufacturing/Installation																															
	1	2018	ARMY	24	24	0																							0		
	1	2019	ARMY	81	81	0																							0		
	1	2020	ARMY	100	100	0																							0		
	1	2021	ARMY	196	196	0																							0		
	1	2022	ARMY	157	157	0																							0		
CIRCM B-Kit Manufacturing																															
	2	2018	ARMY	24	24	0																							0		
	2	2019	ARMY	24	24	0																							0		
	2	2020	ARMY	101	101	0																							0		
	2	2021	ARMY	120	120	0																							0		
	2	2022	ARMY	101	43	58	10	10	10	10	10	8																	0		
							O C T	N O V	D E C	J A N	F E B	M A R	A P R	M A Y	J U N	J U L	A U G	S E P	O C T	N O V	D E C	J A N	F E B	M A R	A P R	M A Y	J U N	J U L	A U G	S E P	

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Exhibit P-21, Production Schedule: PB 2022 Army		Date: May 2021
Appropriation / Budget Activity / Budget Sub Activity: 2031A / 04 / 10		P-1 Line Item Number / Title: 5399AZ3537 / Common Infrared Countermeasures (CIRCM)
		Item Number / Title [DODIC]: AZ3537 / Common Infrared Countermeasures (CIRCM)

MFR Ref #	Manufacturer Name - Location	Production Rates (Each / Month)			Procurement Leadtime (Months)								
		MSR For 2022	1-8-5 For 2022	MAX For 2022	Initial				Reorder				
					ALT Prior to Oct 1	ALT After Oct 1	Manufacturing PLT	Total After Oct 1	ALT Prior to Oct 1	ALT After Oct 1	Manufacturing PLT	Total After Oct 1	
1	Logistics Support Facility (LSF) / Army Aviation Field Maintenance Facility (AFMD) - Redtone Arsenal	3	30	45	0	0	0	0	0	0	0	0	0
2	Northrop Grumman Systems Corp - Rolling Meadows	5	10	15	0	0	14	14	0	0	0	0	0

"A" in the Delivery Schedule indicates the Contract Award Date.

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

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Exhibit P-40, Budget Line Item Justification: PB 2022 Army **Date:** May 2021

Appropriation / Budget Activity / Budget Sub Activity:
2031A: Aircraft Procurement, Army / BA 04: Support Equipment and Facilities / BSA 30: Other Support

P-1 Line Item Number / Title:
0832AZ3000 / Avionics Support Equipment

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

Line Item MDAP/MAIS Code: N/A

Resource Summary	Prior Years	FY 2020	FY 2021	FY 2022 Base	FY 2022 OCO	FY 2022 Total	FY 2023	FY 2024	FY 2025	FY 2026	To Complete	Total
Procurement Quantity (<i>Units in Each</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost (<i>\$ in Millions</i>)	540.984	1.422	1.789	-	-	-	-	-	-	-	-	-
Less PY Advance Procurement (<i>\$ in Millions</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) (<i>\$ in Millions</i>)	540.984	1.422	1.789	-	-	-	-	-	-	-	-	-
Plus CY Advance Procurement (<i>\$ in Millions</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Total Obligation Authority (<i>\$ in Millions</i>)	540.984	1.422	1.789	-	-	-	-	-	-	-	-	-

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

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

Description:

The Aviator's Night Vision Imaging System (ANVIS), supports the Army's objectives by permitting superior tactical mobility of rotary wing aircraft during darkness and low light conditions. ANVIS also supports Fixed Wing Lift permitting loading/unloading and flight during darkness and low light conditions. ANVIS is a binocular, helmet-mounted system for Aviation crew members. ANVIS is a night vision goggle that significantly expands the input dynamic range to support operations in conditions that vary from below starlight illumination levels through strong urban lighting situations. The increased capability of ANVIS yields enhanced mission performance and improved safety of flight, compared to what is now possible using previous ANVIS systems. ANVIS enhances the survivability, lethality, and tactical mobility for aviators.

The Army Acquisition Objective (AAO) for this program is 16,902.

Secondary Distribution		FY 2020	FY 2021	FY 2022 Base	FY 2022 OCO	FY 2022 Total	FY 2023	FY 2024	FY 2025	FY 2026
Army	Quantity	-	-	-	-	-	-	-	-	-
	Total Obligation Authority	1.422	1.789	-	-	-	-	-	-	-
Total: Secondary Distribution	Quantity	-	-	-	-	-	-	-	-	-
	Total Obligation Authority	1.422	1.789	-	-	-	-	-	-	-

Justification:

There is no FY2022 funding for this program.

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 of civil authorities.

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Exhibit P-40, Budget Line Item Justification: PB 2022 Army **Date:** May 2021

Appropriation / Budget Activity / Budget Sub Activity:
 2031A: Aircraft Procurement, Army / BA 04: Support Equipment and Facilities / BSA 30: Other Support

P-1 Line Item Number / Title:
 5212AZ3100 / Common Ground Equipment

ID Code (A=Service Ready, B=Not Service Ready): **Program Elements for Code B Items:** N/A **Other Related Program Elements:** 0603801A, 0605830A

Line Item MDAP/MAIS Code: N/A

Resource Summary	Prior Years	FY 2020	FY 2021	FY 2022 Base	FY 2022 OCO	FY 2022 Total	FY 2023	FY 2024	FY 2025	FY 2026	To Complete	Total
Procurement Quantity (<i>Units in Each</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost (<i>\$ in Millions</i>)	1,310.288	18.624	17.584	13.561	-	13.561	-	-	-	-	-	-
Less PY Advance Procurement (<i>\$ in Millions</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) (<i>\$ in Millions</i>)	1,310.288	18.624	17.584	13.561	-	13.561	-	-	-	-	-	-
Plus CY Advance Procurement (<i>\$ in Millions</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Total Obligation Authority (<i>\$ in Millions</i>)	1,310.288	18.624	17.584	13.561	-	13.561	-	-	-	-	-	-

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

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

Description:

Aviation Ground Support Equipment (AGSE) acquires, fields, and modernizes aviation support equipment within cost, schedule, and performance parameters, allowing Army Aviation Soldiers to carry out peacetime and wartime missions. AGSE provides life cycle systems management for Aviation Ground Power Unit (AGPU), Aviation Light Utility Mobile Maintenance Cart (ALUMMC), Modernized Maintenance Stands (MMS), Common Aviation Tool System (CATS), Flexible Engine Diagnostic System (FEDS), Self-propelled Crane Aircraft Maintenance and Positioning Increment II (SCAMP II) Type 2 (Expeditionary Variant), Unit Maintenance Aerial Recovery Kit (UMARK), Non-Destructive Test Equipment (NDTE), Tool Set, Aviation Unit Maintenance (TS, AUM), Pitot Static Test Set (PSTS), Turbine Engine Wash System (TEWS), Aircraft Cleaning and Deicing System (ACDS) and procurement of support equipment required for maintenance of modernized/future force aircraft.

Secondary Distribution	FY 2020	FY 2021	FY 2022 Base	FY 2022 OCO	FY 2022 Total	FY 2023	FY 2024	FY 2025	FY 2026
Army	-	-	-	-	-	-	-	-	-
Quantity	-	-	-	-	-	-	-	-	-
Total Obligation Authority	16.458	17.276	7.809	-	7.809	-	-	-	-
ANG	-	-	-	-	-	-	-	-	-
Quantity	-	-	-	-	-	-	-	-	-
Total Obligation Authority	2.000	0.308	4.765	-	4.765	-	-	-	-
AR	-	-	-	-	-	-	-	-	-
Quantity	-	-	-	-	-	-	-	-	-
Total Obligation Authority	0.166	-	0.987	-	0.987	-	-	-	-
Total: Secondary Distribution	-	-	-	-	-	-	-	-	-
Quantity	-	-	-	-	-	-	-	-	-
Total Obligation Authority	18.624	17.584	13.561	-	13.561	-	-	-	-

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Exhibit P-40, Budget Line Item Justification: PB 2022 Army **Date:** May 2021

Appropriation / Budget Activity / Budget Sub Activity: 2031A: Aircraft Procurement, Army / BA 04: Support Equipment and Facilities / BSA 30: Other Support **P-1 Line Item Number / Title:** 5212AZ3100 / Common Ground Equipment

ID Code (A=Service Ready, B=Not Service Ready): **Program Elements for Code B Items:** N/A **Other Related Program Elements:** 0603801A, 0605830A

Line Item MDAP/MAIS Code: N/A

Exhibits Schedule					Prior Years	FY 2020	FY 2021	FY 2022 Base	FY 2022 OCO	FY 2022 Total
Exhibit Type	Title*	Subexhibits	ID CD	MDAP/MAIS Code	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)
P-5	AZ3520 / AVIATION GROUND SUPPORT EQUIPMENT				- / 1,310.288	- / 18.624	- / 17.584	- / 13.561	- / -	- / 13.561
P-40	Total Gross/Weapon System Cost				- / 1,310.288	- / 18.624	- / 17.584	- / 13.561	- / -	- / 13.561

*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:

FY22 Base procurement dollars in the amount of \$13.561 million procures 150 Pitot Static Test Set (PSTS) systems and Modification Work Orders (MWO). Reduction from 179 to 150 due to decrement.

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.

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Exhibit P-5, Cost Analysis: PB 2022 Army		Date: May 2021
Appropriation / Budget Activity / Budget Sub Activity: 2031A / 04 / 30	P-1 Line Item Number / Title: 5212AZ3100 / Common Ground Equipment	Item Number / Title [DODIC]: AZ3520 / AVIATION GROUND SUPPORT EQUIPMENT

ID Code (A=Service Ready, B=Not Service Ready) :	MDAP/MAIS Code:
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Resource Summary	Prior Years	FY 2020	FY 2021	FY 2022 Base	FY 2022 OCO	FY 2022 Total
Procurement Quantity (Units in Each)	-	-	-	-	-	-
Gross/Weapon System Cost (\$ in Millions)	1,310.288	18.624	17.584	13.561	-	13.561
Less PY Advance Procurement (\$ in Millions)	-	-	-	-	-	-
Net Procurement (P-1) (\$ in Millions)	1,310.288	18.624	17.584	13.561	-	13.561
Plus CY Advance Procurement (\$ in Millions)	-	-	-	-	-	-
Total Obligation Authority (\$ in Millions)	1,310.288	18.624	17.584	13.561	-	13.561

(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 Thousands)	575.192	122.526	76.786	-	-	-

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

Cost Elements	Prior Years			FY 2020			FY 2021			FY 2022 Base			FY 2022 OCO			FY 2022 Total		
	Unit Cost (\$ K)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ K)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ K)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ K)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ K)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ K)	Qty (Each)	Total Cost (\$ M)
Flyaway Cost																		
Recurring Cost																		
Aviation Ground Power Unit	124.499	8,246	1,026.619	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Avn Light Utility Mobile Maint	43.671	1,100	48.038	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Modernized Maintenance Stands	-	-	5.827	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Common Aviation Tool System	2.836	19,889	56.405	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Flexible Engine Diagnostics Sys	17,565.400	5	87.827	-	-	4.015	-	-	-	-	-	-	-	-	-	-	-	-
SCAMP II Expeditionary Type 2	198.958	96	19.100	165.500	14	2.317	-	-	1.176	-	-	-	-	-	-	-	-	-
Unit Maint Aerial Recovery Kit	-	-	14.584	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Non-Destructive Test Equipment	486.484	62	30.162	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Tool Set, Aviation Unit Maintenance	-	-	1.879	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Pitot Static Test Set	162.481	108	17.548	163.890	75	12.292	820.400	20	16.408	-	-	13.561	-	-	-	-	-	13.561
<i>Subtotal: Recurring Cost</i>	-	-	<i>1,307.989</i>	-	-	<i>18.624</i>	-	-	<i>17.584</i>	-	-	<i>13.561</i>	-	-	-	-	-	<i>13.561</i>
<i>Subtotal: Flyaway Cost</i>	-	-	<i>1,307.989</i>	-	-	<i>18.624</i>	-	-	<i>17.584</i>	-	-	<i>13.561</i>	-	-	-	-	-	<i>13.561</i>

Support - Program Management Cost

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Exhibit P-5, Cost Analysis: PB 2022 Army		Date: May 2021
Appropriation / Budget Activity / Budget Sub Activity: 2031A / 04 / 30	P-1 Line Item Number / Title: 5212AZ3100 / Common Ground Equipment	Item Number / Title [DODIC]: AZ3520 / AVIATION GROUND SUPPORT EQUIPMENT

ID Code (A=Service Ready, B=Not Service Ready) :	MDAP/MAIS Code:
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Note: Subtotals or Totals in this Exhibit P-5 may not be exact or sum exactly due to rounding.

Cost Elements	Prior Years			FY 2020			FY 2021			FY 2022 Base			FY 2022 OCO			FY 2022 Total		
	Unit Cost (\$ K)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ K)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ K)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ K)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ K)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ K)	Qty (Each)	Total Cost (\$ M)
Government Management	-	-	2.307	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
<i>Subtotal: Support - Program Management Cost</i>	-	-	2.307	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost	575.192	-	1,310.288	122.526	-	18.624	76.786	-	17.584	-	-	13.561	-	-	-	-	-	13.561

Secondary Distribution		FY 2020	FY 2021	FY 2022 Base	FY 2022 OCO	FY 2022 Total
Army	Quantity	-	-	-	-	-
	Total Obligation Authority	16.458	17.276	7.809	-	7.809
ANG	Quantity	-	-	-	-	-
	Total Obligation Authority	2.000	0.308	4.765	-	4.765
AR	Quantity	-	-	-	-	-
	Total Obligation Authority	0.166	-	0.987	-	0.987
Total: Secondary Distribution	Quantity	-	-	-	-	-
	Total Obligation Authority	18.624	17.584	13.561	-	13.561

UNCLASSIFIED

Exhibit P-40, Budget Line Item Justification: PB 2022 Army **Date:** May 2021

Appropriation / Budget Activity / Budget Sub Activity:
2031A: Aircraft Procurement, Army / BA 04: Support Equipment and Facilities / BSA 30: Other Support

P-1 Line Item Number / Title:
6380AZ3110 / Aircrew Integrated Systems

ID Code (A=Service Ready, B=Not Service Ready): **Program Elements for Code B Items:** N/A **Other Related Program Elements:** 0603827A, 0604601A

Line Item MDAP/MAIS Code: N/A

Resource Summary	Prior Years	FY 2020	FY 2021	FY 2022 Base	FY 2022 OCO	FY 2022 Total	FY 2023	FY 2024	FY 2025	FY 2026	To Complete	Total
Procurement Quantity (<i>Units in Each</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost (<i>\$ in Millions</i>)	891.335	48.610	54.793	41.425	-	41.425	-	-	-	-	-	-
Less PY Advance Procurement (<i>\$ in Millions</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) (<i>\$ in Millions</i>)	891.335	48.610	54.793	41.425	-	41.425	-	-	-	-	-	-
Plus CY Advance Procurement (<i>\$ in Millions</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Total Obligation Authority (<i>\$ in Millions</i>)	891.335	48.610	54.793	41.425	-	41.425	-	-	-	-	-	-

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

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

Description:

Aircrew Integrated Systems funds Air Warrior and Air Soldier System Aviation Life Support Equipment efforts. The Air Warrior (AW) is the legacy Aviation Life Support Equipment system that provides Army rotary wing aircrews with protective mission and survival equipment. The AW consists of Clothing and Individual Equipment and mission electronics integrated with the aircraft that enable the aircrew member to successfully perform the mission as well as protect, sustain, and assist in the safe return to friendly forces in the event of a downed aircraft scenario. The Air Soldier System (AirSS) is the phased replacement of the AW that addresses AW capability gaps while equipping Army aircrews with protective, survival and personal mission equipment, to include: Soldier-worn modernized mission electronics, end-user devices, and tools that improve aircrew Situational Awareness (SA); improved Soldier load through reductions in bulk and weight of body worn mission and survival gear; and, improved connectivity between the Soldier and the platform.

All of these continuing efforts are enablers that provide support for Multi-Domain Operations (MDO) to include targeted modernization of the enduring Aviation fleet. Recent and future efforts migrate from program/platform-unique hardware and software solutions to common integrated air/ground solutions that align with Network, Soldier Lethality, and Future Vertical Lift (FVL) modernization priorities. The program leverages complementary systems within the Army and other Services to deliver integrated, timely and cost effective capabilities.

Secondary Distribution	FY 2020	FY 2021	FY 2022 Base	FY 2022 OCO	FY 2022 Total	FY 2023	FY 2024	FY 2025	FY 2026
Army									
Quantity	-	-	-	-	-	-	-	-	-
Total Obligation Authority	37.578	54.793	26.755	-	26.755	-	-	-	-
ANG									
Quantity	-	-	-	-	-	-	-	-	-
Total Obligation Authority	10.360	-	11.003	-	11.003	-	-	-	-
AR									
Quantity	-	-	-	-	-	-	-	-	-
Total Obligation Authority	0.672	-	3.667	-	3.667	-	-	-	-
Total: Secondary Distribution									
Quantity	-	-	-	-	-	-	-	-	-
Total Obligation Authority	48.610	54.793	41.425	-	41.425	-	-	-	-

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Exhibit P-40, Budget Line Item Justification: PB 2022 Army **Date:** May 2021

Appropriation / Budget Activity / Budget Sub Activity:
 2031A: Aircraft Procurement, Army / BA 04: Support Equipment and Facilities / BSA 30: Other Support

P-1 Line Item Number / Title:
 6380AZ3110 / Aircrew Integrated Systems

ID Code (A=Service Ready, B=Not Service Ready): **Program Elements for Code B Items:** N/A **Other Related Program Elements:** 0603827A, 0604601A

Line Item MDAP/MAIS Code: N/A

Exhibits Schedule					Prior Years	FY 2020	FY 2021	FY 2022 Base	FY 2022 OCO	FY 2022 Total
Exhibit Type	Title*	Subexhibits	ID CD	MDAP/MAIS Code	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)
P-5	AZ3110 / Aircrew Integrated Systems				- / 891.335	- / 48.610	- / 54.793	- / 41.425	- / -	- / 41.425
P-40	Total Gross/Weapon System Cost				- / 891.335	- / 48.610	- / 54.793	- / 41.425	- / -	- / 41.425

*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:

FY 2022 procurement dollars supports AirSS requirements, and continued production and fielding of AirSS capabilities. AirSS provides: improved flight helmets; an Aviation Information System (AIS) for aviators that displays digital moving map/situational awareness, Blue Force Tracking capability, and enhanced air/ground operations through Common Operating Environment (COE); improved lightweight body armor; improved personal survival equipment; a wider field of view Common Helmet Mounted Display (CHMD) including enhanced flight symbology for day/night operations on UH-60/CH-47 aircraft; next generation flight survival vest, Aircrew Combat Equipment (ACE), provides further reductions in body-worn bulk and weight; and, end-user devices to replace paper DoD Flight Information Publications and aircraft publications and provide modernized SA and enables air/ground integration for aircrew members. These capabilities reduce Soldier load and enhance Situational Awareness, Safety, and Survivability. Funds also procure Air Soldier platform-mounted components necessary for airframe interface with the Air Soldier; and installation of airframe integration kits.

FY 2022 Direct War funding in the amount of \$3.149 and Enduring Operation funding in the amount of \$4.521 supports procurement of equipment and materiel to support a balanced investment strategy in support of the Army Acquisition Objective.

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.

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Exhibit P-5, Cost Analysis: PB 2022 Army						Date: May 2021			
Appropriation / Budget Activity / Budget Sub Activity: 2031A / 04 / 30				P-1 Line Item Number / Title: 6380AZ3110 / Aircrew Integrated Systems			Item Number / Title [DODIC]: AZ3110 / Aircrew Integrated Systems		
ID Code (A=Service Ready, B=Not Service Ready) :						MDAP/MAIS Code:			
Resource Summary				Prior Years	FY 2020	FY 2021	FY 2022 Base	FY 2022 OCO	FY 2022 Total
Procurement Quantity (Units in Each)				-	-	-	-	-	-
Gross/Weapon System Cost (\$ in Millions)				891.335	48.610	54.793	41.425	-	41.425
Less PY Advance Procurement (\$ in Millions)				-	-	-	-	-	-
Net Procurement (P-1) (\$ in Millions)				891.335	48.610	54.793	41.425	-	41.425
Plus CY Advance Procurement (\$ in Millions)				-	-	-	-	-	-
Total Obligation Authority (\$ in Millions)				891.335	48.610	54.793	41.425	-	41.425
<i>(The following Resource Summary rows are for informational purposes only. The corresponding budget requests are documented elsewhere.)</i>									
Initial Spares (\$ in Millions)				-	-	-	-	-	-
Gross/Weapon System Unit Cost (\$ in Thousands)				-	-	-	-	-	-

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

Cost Elements	Prior Years			FY 2020			FY 2021			FY 2022 Base			FY 2022 OCO			FY 2022 Total		
	Unit Cost (\$ K)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ K)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ K)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ K)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ K)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ K)	Qty (Each)	Total Cost (\$ M)
Flyaway Cost																		
Recurring Cost																		
Air Warrior ECPs Supporting Air SS Rqmts	-	-	18.158	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Air SS Soldier Kits	4.553	8,520	38.792	4.300	1,750	7.525	4.999	2,142	10.708	5.983	1,378	8.245	-	-	-	5.983	1,378	8.245
Air SS Airframe Kits	106.745	844	90.093	218.000	149	32.482	218.573	110	24.043	220.333	90	19.830	-	-	-	220.333	90	19.830
Airframe Kit Install	-	-	13.795	-	-	1.364	-	-	6.178	-	-	4.896	-	-	-	-	-	4.896
Manual	-	-	14.700	-	-	-	-	-	-	-	-	0.168	-	-	-	-	-	0.168
New Equipment Training	-	-	5.763	-	-	0.401	-	-	0.170	-	-	0.175	-	-	-	-	-	0.175
Initial Spares	-	-	13.049	-	-	1.624	-	-	1.201	-	-	1.529	-	-	-	-	-	1.529
Support Equipment	-	-	9.794	-	-	0.200	-	-	0.256	-	-	0.275	-	-	-	-	-	0.275
Systems Test and Evaluation	-	-	16.690	-	-	0.299	-	-	-	-	-	-	-	-	-	-	-	-
Nonrecurring Engineering (NRE)	-	-	34.553	-	-	0.362	-	-	0.461	-	-	0.450	-	-	-	-	-	0.450
Engineering Changes	-	-	13.237	-	-	0.800	-	-	0.289	-	-	0.300	-	-	-	-	-	0.300
Systems Integration Engineering	-	-	7.915	-	-	0.690	-	-	0.383	-	-	0.378	-	-	-	-	-	0.378
Program Management & Matrix Support	-	-	40.646	-	-	2.268	-	-	3.002	-	-	3.062	-	-	-	-	-	3.062
Total Package Fielding	-	-	3.138	-	-	0.240	-	-	0.756	-	-	0.875	-	-	-	-	-	0.875
Contract Logistics Support	-	-	6.311	-	-	0.355	-	-	1.846	-	-	1.242	-	-	-	-	-	1.242

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Exhibit P-5, Cost Analysis: PB 2022 Army												Date: May 2021					
Appropriation / Budget Activity / Budget Sub Activity: 2031A / 04 / 30						P-1 Line Item Number / Title: 6380AZ3110 / Aircrew Integrated Systems						Item Number / Title [DODIC]: AZ3110 / Aircrew Integrated Systems					
ID Code (A=Service Ready, B=Not Service Ready) :												MDAP/MAIS Code:					

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

Cost Elements	Prior Years			FY 2020			FY 2021			FY 2022 Base			FY 2022 OCO			FY 2022 Total		
	Unit Cost (\$ K)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ K)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ K)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ K)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ K)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ K)	Qty (Each)	Total Cost (\$ M)
<i>Subtotal: Recurring Cost</i>	-	-	326.634	-	-	48.610	-	-	49.293	-	-	41.425	-	-	-	-	-	41.425
Non Recurring Cost																		
Legacy Air Warrior Costs	-	-	564.701	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Congressional Add - Load Stability Systems	-	-	-	-	-	-	-	-	5.500	-	-	-	-	-	-	-	-	-
<i>Subtotal: Non Recurring Cost</i>	-	-	564.701	-	-	-	-	-	5.500	-	-	-	-	-	-	-	-	-
<i>Subtotal: Flyaway Cost</i>	-	-	891.335	-	-	48.610	-	-	54.793	-	-	41.425	-	-	-	-	-	41.425
Gross/Weapon System Cost	-	-	891.335	-	-	48.610	-	-	54.793	-	-	41.425	-	-	-	-	-	41.425

Remarks:

Unit Cost changes across the years reflect the different mix of subsystem components procured each year. The AirSS Airframe Kit subsystem component is a primary cost driver of the program and fluctuations in quantities in a fiscal year can substantially change the overall program Unit Cost. The AirSS Soldier Kit subsystem components, and associated platform installation costs, make up the other bulk of hardware procured under this program that can also change overall program Unit Cost based on quantities bought. The subsystem component quantities for each fiscal year are shown on the P-5 cost elements.

FY2021 to FY2022 Airframe Kit subsystem unit cost increases due to addition of new components to Base system and contract pricing curves that adjust for inflation.

FY2021 to FY2022 Soldier Kit subsystem unit cost increases due to addition of new components to Base system and contract pricing curves that adjust for inflation.

Secondary Distribution		FY 2020	FY 2021	FY 2022 Base	FY 2022 OCO	FY 2022 Total
Army	Quantity	-	-	-	-	-
	Total Obligation Authority	37.578	54.793	26.755	-	26.755
ANG	Quantity	-	-	-	-	-
	Total Obligation Authority	10.360	-	11.003	-	11.003
AR	Quantity	-	-	-	-	-
	Total Obligation Authority	0.672	-	3.667	-	3.667
Total: Secondary Distribution	Quantity	-	-	-	-	-
	Total Obligation Authority	48.610	54.793	41.425	-	41.425

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Exhibit P-40, Budget Line Item Justification: PB 2022 Army **Date:** May 2021

Appropriation / Budget Activity / Budget Sub Activity:
 2031A: Aircraft Procurement, Army / BA 04: Support Equipment and Facilities / BSA 30: Other Support

P-1 Line Item Number / Title:
 6818AA0050 / Air Traffic Control

ID Code (A=Service Ready, B=Not Service Ready): **Program Elements for Code B Items:** N/A **Other Related Program Elements:** 0604633A

Line Item MDAP/MAIS Code: N/A

Resource Summary	Prior Years	FY 2020	FY 2021	FY 2022 Base	FY 2022 OCO	FY 2022 Total	FY 2023	FY 2024	FY 2025	FY 2026	To Complete	Total
Procurement Quantity (<i>Units in Each</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost (<i>\$ in Millions</i>)	1,667.654	32.738	26.408	21.759	-	21.759	-	-	-	-	-	-
Less PY Advance Procurement (<i>\$ in Millions</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) (<i>\$ in Millions</i>)	1,667.654	32.738	26.408	21.759	-	21.759	-	-	-	-	-	-
Plus CY Advance Procurement (<i>\$ in Millions</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Total Obligation Authority (<i>\$ in Millions</i>)	1,667.654	32.738	26.408	21.759	-	21.759	-	-	-	-	-	-

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

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

Description:

Funds in the Air Traffic Control (ATC) line support the acquisition of modernized tactical and fixed base ATC systems that provide real time aircraft management and control that will ensure safety of aircraft operations. ATC systems are required to maintain compliance with civil, military, domestic, and international air traffic control and combat identification requirements in accordance with Federal Aviation Administration (FAA) mandates for systems operating in the National Airspace System.

Efforts include the Tactical Airspace Integration System (TAIS), Air Traffic Navigation Integration and Coordination System (ATNAVICS), the Mobile Tower System (MOTS), and Fixed Base systems, which include the DoD Advanced Automation System (DAAS), the Digital Airport Surveillance Radar (DASR), and other navigational control aids that include the Army Airfield Automation System (AAAS), National Airspace System (NAS) Voice Switch, Doppler VHF Omnidirectional Range (DVOR) system, NAS Voice Recorder (NVR) and Precision Approach Radar, and Instrument Landing System Replacement Program (ILS).

The Tactical Airspace Integration System (TAIS) is the Army's program of record for Airspace Control and enroute Air Traffic Services. It requires the modification new software for Air Traffic Control and Airspace Control in order to maintain compatibility and interoperability with the Army Mission Command Information System and coalition partners. TAIS software modification incorporates emerging Air Force interfaces, ability to simultaneously connect to multiple sensor systems to receive and process situational awareness information, the capability to connect to sensors to enhance available situational awareness thus reducing risk to aviation and ground forces, and to implement new software features for use in multiple computing environments. TAIS will evolve through Common Operating Environment (COE) convergence to facilitate Air Space Total Awareness for Rapid Tactical Execution (ASTARTE) and Joint All Domain Command and Control (JADC2).

ATNAVICS is a Surveillance and Precision Approach Radar system that provides Air Traffic Services at Army airfields and landing sites at Division, Corps, and Echelons Above Corps to include services for Joint and Allied aircraft. ATNAVICS integrates interrogator capabilities required to control aircraft both Outside of the Continental United States and within the Continental United States. ATNAVICS will network its radar picture and interrogator data to aviation and joint network nodes through TAIS.

MOTS provides Air Traffic Control and aircraft separation for both air and ground operations at tactical or remote landing sites. MOTS capabilities include weather information, secure and anti-jam communications across all required frequency bands and ranges and precision location.

Fixed Base Air Traffic Control requirements will be met through a vast array of new technology solutions and pre-planned product improvement (P3I) of these systems resulting in highly reliable and safe Air Traffic Control systems in accordance with the Joint DoD/FAA program to modernize the National Airspace and the FAA Next Gen program.

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Exhibit P-40, Budget Line Item Justification: PB 2022 Army		Date: May 2021
Appropriation / Budget Activity / Budget Sub Activity: 2031A: Aircraft Procurement, Army / BA 04: Support Equipment and Facilities / BSA 30: Other Support		P-1 Line Item Number / Title: 6818AA0050 / Air Traffic Control
ID Code (A=Service Ready, B=Not Service Ready):	Program Elements for Code B Items: N/A	Other Related Program Elements: 0604633A
Line Item MDAP/MAIS Code: N/A		

Precision Approach Radar 2020 provides precision approach capabilities at Army airfields and landing sites at Division, Corps, and Echelons Above Corps to include services for Joint and Allied aircraft.

This exhibit is for a budget line that procures multiple items and does not have a single Army Acquisition Objective.

Secondary Distribution		FY 2020	FY 2021	FY 2022 Base	FY 2022 OCO	FY 2022 Total	FY 2023	FY 2024	FY 2025	FY 2026
Army	Quantity	-	-	-	-	-	-	-	-	-
	Total Obligation Authority	27.493	26.408	21.759	-	21.759	-	-	-	-
ANG	Quantity	-	-	-	-	-	-	-	-	-
	Total Obligation Authority	2.622	-	-	-	-	-	-	-	-
AR	Quantity	-	-	-	-	-	-	-	-	-
	Total Obligation Authority	2.623	-	-	-	-	-	-	-	-
Total: Secondary Distribution	Quantity	-	-	-	-	-	-	-	-	-
	Total Obligation Authority	32.738	26.408	21.759	-	21.759	-	-	-	-

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Exhibit P-40, Budget Line Item Justification: PB 2022 Army **Date:** May 2021

Appropriation / Budget Activity / Budget Sub Activity: 2031A: Aircraft Procurement, Army / BA 04: Support Equipment and Facilities / BSA 30: Other Support **P-1 Line Item Number / Title:** 6818AA0050 / Air Traffic Control

ID Code (A=Service Ready, B=Not Service Ready): **Program Elements for Code B Items:** N/A **Other Related Program Elements:** 0604633A

Line Item MDAP/MAIS Code: N/A

Exhibits Schedule					Prior Years	FY 2020	FY 2021	FY 2022 Base	FY 2022 OCO	FY 2022 Total
Exhibit Type	Title*	Subexhibits	ID CD	MDAP/MAIS Code	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)
P-5	AA0050 / Air Traffic Control				- / 1,667.654	- / 32.738	- / 26.408	- / 21.759	- / -	- / 21.759
P-40	Total Gross/Weapon System Cost				- / 1,667.654	- / 32.738	- / 26.408	- / 21.759	- / -	- / 21.759

*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:

FY 2022 Base procurement dollars in the amount of \$8.551 million procures 6 DoD Advanced Automation System (DAAS) Generation 5 upgraded systems and the associate system site preparation and installation.

FY 2022 Base procurement dollars in the amount of \$5.301 million procures 69 Army Airfield Automation System software upgrades and Information Assurance and Vulnerability Assessment; and procures 17 National Airspace System Voice Recorder systems and the associated site preparation and installation.

FY 2022 Base procurement dollars in the amount of \$2.555 million provides for the embedded operator proficiency and training software modification effort, Cyber Security and RMF requirements, software 12.x.x Interactive Multimedia Instruction and the continuation of ongoing TAIS Common Operating Environment efforts: Joint All Domain Command and Control, Army Interoperability Certification, support of Integrated Tactical network, Project Convergence, incorporation of emerging FAA requirements, convergence with Aviation Mission Planning across computing environments, improving airspace situational awareness, and providing an improved soldier interface that is common with other systems across ATC, AC, and other warfighting functions including sister services and coalition environments.

FY 2022 Base procurement dollars in the amount of \$5.352 million procures 2 Instrument Landing Systems (ILS) for the ILS Replacement Program and the associated site surveys, installation, and training.

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.

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Exhibit P-5, Cost Analysis: PB 2022 Army		Date: May 2021
Appropriation / Budget Activity / Budget Sub Activity: 2031A / 04 / 30	P-1 Line Item Number / Title: 6818AA0050 / Air Traffic Control	Item Number / Title [DODIC]: AA0050 / Air Traffic Control

ID Code (A=Service Ready, B=Not Service Ready) :				MDAP/MAIS Code:			
Resource Summary		Prior Years	FY 2020	FY 2021	FY 2022 Base	FY 2022 OCO	FY 2022 Total
Procurement Quantity (Units in Each)		-	-	-	-	-	-
Gross/Weapon System Cost (\$ in Millions)		1,667.654	32.738	26.408	21.759	-	21.759
Less PY Advance Procurement (\$ in Millions)		-	-	-	-	-	-
Net Procurement (P-1) (\$ in Millions)		1,667.654	32.738	26.408	21.759	-	21.759
Plus CY Advance Procurement (\$ in Millions)		-	-	-	-	-	-
Total Obligation Authority (\$ in Millions)		1,667.654	32.738	26.408	21.759	-	21.759
<i>(The following Resource Summary rows are for informational purposes only. The corresponding budget requests are documented elsewhere.)</i>							
Initial Spares (\$ in Millions)		-	-	-	-	-	-
Gross/Weapon System Unit Cost (\$ in Thousands)		-	-	-	-	-	-

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

Cost Elements	Prior Years			FY 2020			FY 2021			FY 2022 Base			FY 2022 OCO			FY 2022 Total		
	Unit Cost (\$ K)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ K)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ K)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ K)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ K)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ K)	Qty (Each)	Total Cost (\$ M)
Flyaway Cost																		
Recurring Cost																		
Fixed Base Precision Approach Radar (FBPAR)	-	-	89.918	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
DoD Advanced Automation System (DAAS)	-	-	114.993	-	-	7.056	-	-	5.051	-	-	8.551	-	-	-	-	-	8.551
Digital Airport Surveillance Radar(DASR)	-	-	85.843	-	-	-	-	-	1.600	-	-	-	-	-	-	-	-	-
Tactical Airspace Integration Sys (TAIS)	-	-	447.477	-	-	14.740	-	-	9.381	-	-	2.555	-	-	-	-	-	2.555
Air Traffic Navigation and Integration	-	-	447.505	-	-	2.767	-	-	-	-	-	-	-	-	-	-	-	-
Navigational Control (AAAS, DVOR, NVS, NVR)	-	-	109.865	-	-	4.354	-	-	5.638	-	-	5.301	-	-	-	-	-	5.301
Tactical Terminal Control System (TTCS)	-	-	91.038	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Mobile Tower System (MOTS)	-	-	219.246	-	-	3.821	-	-	-	-	-	-	-	-	-	-	-	-
ATC Common Simulator (ACS)	-	-	51.523	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Precision Approach Radar (PAR) 2020	-	-	10.246	-	-	-	-	-	0.415	-	-	-	-	-	-	-	-	-

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Exhibit P-5, Cost Analysis: PB 2022 Army												Date: May 2021					
Appropriation / Budget Activity / Budget Sub Activity: 2031A / 04 / 30						P-1 Line Item Number / Title: 6818AA0050 / Air Traffic Control						Item Number / Title [DODIC]: AA0050 / Air Traffic Control					
ID Code (A=Service Ready, B=Not Service Ready) :												MDAP/MAIS Code:					

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

Cost Elements	Prior Years			FY 2020			FY 2021			FY 2022 Base			FY 2022 OCO			FY 2022 Total		
	Unit Cost (\$ K)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ K)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ K)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ K)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ K)	Qty (Each)	Total Cost (\$ M)	Unit Cost (\$ K)	Qty (Each)	Total Cost (\$ M)
Instrument Landing System (ILS)	-	-	-	-	-	-	-	-	4.323	-	-	5.352	-	-	-	-	-	5.352
<i>Subtotal: Recurring Cost</i>	-	-	1,667.654	-	-	32.738	-	-	26.408	-	-	21.759	-	-	-	-	-	21.759
<i>Subtotal: Flyaway Cost</i>	-	-	1,667.654	-	-	32.738	-	-	26.408	-	-	21.759	-	-	-	-	-	21.759
Gross/Weapon System Cost	-	-	1,667.654	-	-	32.738	-	-	26.408	-	-	21.759	-	-	-	-	-	21.759

Secondary Distribution		FY 2020	FY 2021	FY 2022 Base	FY 2022 OCO	FY 2022 Total
Army	Quantity	-	-	-	-	-
	Total Obligation Authority	27.493	26.408	21.759	-	21.759
ANG	Quantity	-	-	-	-	-
	Total Obligation Authority	2.622	-	-	-	-
AR	Quantity	-	-	-	-	-
	Total Obligation Authority	2.623	-	-	-	-
Total: Secondary Distribution	Quantity	-	-	-	-	-
	Total Obligation Authority	32.738	26.408	21.759	-	21.759

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Exhibit P-40, Budget Line Item Justification: PB 2022 Army **Date:** May 2021

Appropriation / Budget Activity / Budget Sub Activity: 2031A: Aircraft Procurement, Army / BA 04: Support Equipment and Facilities / BSA 30: Other Support **P-1 Line Item Number / Title:** 9154A50100 / Launcher, 2.75 Rocket

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

Line Item MDAP/MAIS Code: N/A

Resource Summary	Prior Years	FY 2020	FY 2021	FY 2022 Base	FY 2022 OCO	FY 2022 Total	FY 2023	FY 2024	FY 2025	FY 2026	To Complete	Total
Procurement Quantity (<i>Units in Each</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost (<i>\$ in Millions</i>)	98.130	2.201	2.256	-	-	-	-	-	-	-	-	-
Less PY Advance Procurement (<i>\$ in Millions</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) (<i>\$ in Millions</i>)	98.130	2.201	2.256	-	-	-	-	-	-	-	-	-
Plus CY Advance Procurement (<i>\$ in Millions</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Total Obligation Authority (<i>\$ in Millions</i>)	98.130	2.201	2.256	-	-	-	-	-	-	-	-	-

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

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

Description:

The Aviation Rockets and Small Guided Munitions Product Office is the executive procurement agent for all services and Foreign Military customers for all variants of 2.75 Inch Hydra-70 Rocket Launchers. The M261 19-tube analog launcher and the M260 7-tube analog launcher are used to fire 2.75 Inch Hydra-70 Guided / Unguided Rockets from the following platforms: AH-64 Apache, H-60 Blackhawk, and Special Operations aircraft. The analog launchers are non-repairable, yet durable enough to withstand at least 16 rocket firings per tube before being discarded. The empty weight of the M260 analog launcher is approximately 35 pounds and the empty weight of the M261 analog launcher is approximately 82 pounds. The analog launcher permits fuze-timing selections from the cockpit and will launch guided / unguided rockets using either the MK40 or the MK66 motors. 2.75 Inch Rocket Launcher procurement funding supports the launcher system to include resolution of obsolescence, safety, reliability, weapon integration activities, test sets, engineering changes, and production issues.

Secondary Distribution	FY 2020	FY 2021	FY 2022 Base	FY 2022 OCO	FY 2022 Total	FY 2023	FY 2024	FY 2025	FY 2026
Army									
Quantity	-	-	-	-	-	-	-	-	-
Total Obligation Authority	2.201	2.256	-	-	-	-	-	-	-
Total:									
Secondary Distribution									
Quantity	-	-	-	-	-	-	-	-	-
Total Obligation Authority	2.201	2.256	-	-	-	-	-	-	-

Justification:

FY21 is the last planned procurement of the M261 launcher by the Army.

There is no budget request for FY2022.

"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."

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Exhibit P-40, Budget Line Item Justification: PB 2022 Army **Date:** May 2021

Appropriation / Budget Activity / Budget Sub Activity:
 2031A: Aircraft Procurement, Army / BA 04: Support Equipment and Facilities / BSA 30: Other Support

P-1 Line Item Number / Title:
 9157J01200 / Launcher Guided Missile: Longbow Hellfire XM299

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

Line Item MDAP/MAIS Code: N/A

Resource Summary	Prior Years	FY 2020	FY 2021	FY 2022 Base	FY 2022 OCO	FY 2022 Total	FY 2023	FY 2024	FY 2025	FY 2026	To Complete	Total
Procurement Quantity (<i>Units in Each</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost (<i>\$ in Millions</i>)	0.991	2.991	8.982	-	-	-	-	-	-	-	-	-
Less PY Advance Procurement (<i>\$ in Millions</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) (<i>\$ in Millions</i>)	0.991	2.991	8.982	-	-	-	-	-	-	-	-	-
Plus CY Advance Procurement (<i>\$ in Millions</i>)	-	-	-	-	-	-	-	-	-	-	-	-
Total Obligation Authority (<i>\$ in Millions</i>)	0.991	2.991	8.982	-	-	-	-	-	-	-	-	-

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

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

Description:

The Launchers and Test Sets Product Office is the executive procurement agent for M299 Launchers for all services and Foreign Military customers. This budget line procures all M299 launchers in support of Army operational, training, and war reserve requirements. The M299 launchers are qualified to carry and fire the AGM-114 Family of Missiles and the Joint Air-to-Ground Missile. Each launcher contains: Launcher electronics assembly (LEA) that communicates with the aircraft via bus commands, provides missile launch sequencing, seeker type ID, missile "Hang fire/Misfire" determination, alternate laser code algorithm processing, and Alternating Current (AC) to Direct Current (DC) power conversion for supplying missile DC power; Wiring harnesses that provide electrical connection from LEA to missile rails (not interchangeable with M272 harnesses); Holdback latch that retains missiles on rails and Safe/Arm switch that mechanically interrupts the arm power going to the LEA. The weight of the M299 launcher (4-Rail Launcher) is approximately 114 pounds and the length of the M299 is approximately 66.3 inches. M299 Longbow HELLFIRE Launcher procurement funding supports the launcher system to include resolution of obsolescence, safety, reliability, weapon integration activities, test sets, engineering changes, software, and production issues.

Secondary Distribution	FY 2020	FY 2021	FY 2022 Base	FY 2022 OCO	FY 2022 Total	FY 2023	FY 2024	FY 2025	FY 2026
Army									
Quantity	-	-	-	-	-	-	-	-	-
Total Obligation Authority	2.991	8.982	-	-	-	-	-	-	-
Total:									
Quantity	-	-	-	-	-	-	-	-	-
Total Obligation Authority	2.991	8.982	-	-	-	-	-	-	-

Justification:

There is no budget request for FY2022.

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.