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**Department of Defense  
Fiscal Year (FY) 2021 Budget Estimates**

February 2020



**Army**

*Justification Book of*

***Other Procurement, Army***

**Communications and Electronics Equipment, Budget Activity 2**

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Army • Budget Estimates FY 2021 • Procurement

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## Cost Statement

The following Justification Books were prepared at a cost of \$460,860: 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 6, Budget Activity 7, and Budget Activity 8.

# PROCUREMENT

## Department of Defense Appropriations Act, 2021

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### OTHER PROCUREMENT, ARMY

For construction, procurement, production, and modification of Other Procurement, Army, equipment, including ordnance, spare parts, and accessories therefore; specialized equipment and training devices; expansion of public and private plants, including the land necessary therefore, 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, \$9,549,283,000 to remain available for obligation until September 30, 2023.

The Fiscal Year (FY) 2021 Overseas Contingency Operations funding can be separated into the following categories:

- OCO for Direct War Costs (\$443,991,000.00): 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.
- OCO for Enduring Requirements (\$480,086,000.00): OCO for 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.
- OCO for Base Requirements (\$0): OCO for Base Requirements is funding to pay for base budget requirements for readiness and other support activities that are financed in the OCO budget in order for the Department to comply with the Bipartisan Budget Act (BBA) of 2019.

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Total Obligational Authority  
(Dollars in Thousands)

15 Jan 2020

<u>Appropriation</u>	<u>FY 2019 (Base + OCO)</u>	<u>FY 2020 Base Enacted</u>	<u>FY 2020 OCO Enacted</u>	<u>FY 2020 Emergency (Included in Base Enacted)</u>
Other Procurement, Army	9,240,568	7,581,524	1,080,504	
Total Department of the Army	9,240,568	7,581,524	1,080,504	

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Department of the Army  
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15 Jan 2020

<u>Appropriation</u>	<u>FY 2020 Total Enacted (Base + OCO)</u>	<u>FY 2021 Base</u>	<u>FY 2021 OCO for Base Requirements</u>	<u>FY 2021 OCO for Direct War and Enduring Costs</u>
Other Procurement, Army	8,662,028	8,625,206		924,077
Total Department of the Army	8,662,028	8,625,206		924,077

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Department of the Army  
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15 Jan 2020

<u>Appropriation</u>	<u>FY 2021 Total OCO</u>	<u>FY 2021 Total (Base + OCO)</u>
Other Procurement, Army	924,077	9,549,283
Total Department of the Army	924,077	9,549,283

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 Total Obligational Authority  
 (Dollars in Thousands)

15 Jan 2020

Appropriation: Other Procurement, Army

Budget Activity	FY 2019 (Base + OCO)	FY 2020 Base Enacted	FY 2020 OCO Enacted	FY 2020 Emergency (Included in Base Enacted)
01. Tactical and Support Vehicles	2,423,219	1,842,185	183,107	
02. Communications and Electronics Equipment	4,761,456	3,742,097	440,861	
03. Other Support Equipment	2,046,076	1,987,485	456,536	
04. Spare and Repair Parts	9,817	9,757		
Total Other Procurement, Army	9,240,568	7,581,524	1,080,504	



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15 Jan 2020

Appropriation: Other Procurement, Army

Budget Activity	FY 2020 Total Enacted (Base + OCO)	FY 2021 Base	FY 2021 OCO for Base Requirements	FY 2021 OCO for Direct War and Enduring Costs
01. Tactical and Support Vehicles	2,025,292	1,457,919		48,729
02. Communications and Electronics Equipment	4,182,958	5,202,031		445,910
03. Other Support Equipment	2,444,021	1,955,306		429,438
04. Spare and Repair Parts	9,757	9,950		
Total Other Procurement, Army	8,662,028	8,625,206		924,077

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Appropriation: Other Procurement, Army

<u>Budget Activity</u>	<u>FY 2021 Total OCO</u>	<u>FY 2021 Total (Base + OCO)</u>
01. Tactical and Support Vehicles	48,729	1,506,648
02. Communications and Electronics Equipment	445,910	5,647,941
03. Other Support Equipment	429,438	2,384,744
04. Spare and Repair Parts		9,950
Total Other Procurement, Army	924,077	9,549,283

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Appropriation: 2035A Other Procurement, Army

Line No	Item Nomenclature	Ident Code	FY 2019 (Base + OCO)		FY 2020 Base Enacted		FY 2020 OCO Enacted		FY 2020 Emergency (Included in Base Enacted)		S e c -
			Quantity	Cost	Quantity	Cost	Quantity	Cost	Quantity	Cost	
Budget Activity 01: Tactical and Support Vehicles											
Tactical Vehicles											
1	Tactical Trailers/Dolly Sets	A		8,850		12,993					U
2	Semitrailers, Flatbed:	A		29,941		102,386					U
3	Semitrailers, tankers	A									U
4	HI MOB MULTI-PURP WHLD VEH (HMMWV)			190,893		127,271					U
5	Ground Mobility Vehicles (GMV)	A		42,695		37,038					U
6	ARNG HMMWV Modernization Program	A		100,000		100,000					U
7	JOINT LIGHT TACTICAL VEHICLE	A	3557	1,279,437		972,407					U
8	JOINT LIGHT TACTICAL VEHICLE FAMILY OF VEHICL	A									U
9	TRUCK, DUMP, 20T (CCE)			5,061		10,838					U
10	Family Of Medium Tactical Veh (FMTV)			123,464		138,057					U
11	Family of Cold Weather All-Terrain Vehicle (C	A									U
12	Firetrucks & Associated Firefighting Equip			14,842		28,048					U
13	Family Of Heavy Tactical Vehicles (FHTV)			160,897		9,969		26,917			U
14	PLS ESP	A				6,280		16,941			U
15	Hvy Expanded Mobile Tactical Truck Ext Serv			109,764		131,841		62,734			U
16	HMMWV Recapitalization Program					30,734					U
17	Tactical Wheeled Vehicle Protection Kits	A		83,138		45,113		50,000			U

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Line No	Item Nomenclature	Ident Code	FY 2020 Total Enacted (Base + OCO)		FY 2021 Base		FY 2021 OCC for Base Requirements		FY 2021 OCO for Direct War and Enduring Costs		S e c
			Quantity	Cost	Quantity	Cost	Quantity	Cost	Quantity	Cost	
<u>Budget Activity 01: Tactical and Support Vehicles</u>											
Tactical Vehicles											
1	Tactical Trailers/Dolly Sets	A		12,993		12,986					U
2	Semitrailers, Flatbed:	A		102,386		31,443					U
3	Semitrailers, tankers	A				17,082					U
4	HI MOB MULTI-PURP WHLD VEH (HMMWV)			127,271		44,795					U
5	Ground Mobility Vehicles (GMV)	A		37,038		37,932					U
6	ARNG HMMWV Modernization Program	A		100,000							U
7	JOINT LIGHT TACTICAL VEHICLE	A		972,407							U
8	JOINT LIGHT TACTICAL VEHICLE FAMILY OF VEHICL	A				894,414					U
9	TRUCK, DUMP, 20T (CCE)			10,838		29,368					U
10	Family Of Medium Tactical Veh (FMTV)			138,057		95,092					U
11	Family of Cold Weather All-Terrain Vehicle (C	A				999					U
12	Firetrucks & Associated Firefighting Equip			28,048		27,687					U
13	Family Of Heavy Tactical Vehicles (FHTV)			36,886					6,500		U
14	PLS ESP	A		23,221		21,969			15,163		U
15	Hvy Expanded Mobile Tactical Truck Ext Serv			194,575		65,635					U
16	HMMWV Recapitalization Program			30,734		5,927					U
17	Tactical Wheeled Vehicle Protection Kits	A		95,113		36,497			27,066		U

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Line No	Item Nomenclature	Ident Code	FY 2021 Total		FY 2021 Total		S e c
			Quantity	Cost	(Base + OCO) Quantity	Cost	
<u>Budget Activity 01: Tactical and Support Vehicles</u>							
Tactical Vehicles							
1	Tactical Trailers/Dolly Sets	A			12,986		U
2	Semitrailers, Flatbed:	A			31,443		U
3	Semitrailers, tankers	A			17,082		U
4	HI MOB MULTI-PURP WHLD VEH (HMMWV)				44,795		U
5	Ground Mobility Vehicles (GMV)	A			37,932		U
6	ARNG HMMWV Modernization Program	A					U
7	JOINT LIGHT TACTICAL VEHICLE	A					U
8	JOINT LIGHT TACTICAL VEHICLE FAMILY OF VEHICL	A			894,414		U
9	TRUCK, DUMP, 20T (CCE)				29,368		U
10	Family Of Medium Tactical Veh (FMTV)				95,092		U
11	Family of Cold Weather All-Terrain Vehicle (C	A			999		U
12	Firetrucks & Associated Firefighting Equip				27,687		U
13	Family Of Heavy Tactical Vehicles (FHTV)			6,500	6,500		U
14	PLS ESP	A		15,163	37,132		U
15	Hvy Expanded Mobile Tactical Truck Ext Serv				65,635		U
16	HMMWV Recapitalization Program				5,927		U
17	Tactical Wheeled Vehicle Protection Kits	A		27,066	63,563		U

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Line No	Item Nomenclature	Ident Code	FY 2019 (Base + OCO)		FY 2020 Base Enacted		FY 2020 OCO Enacted		FY 2020 Emergency (Included in Base Enacted)		S e c
			Quantity	Cost	Quantity	Cost	Quantity	Cost	Quantity	Cost	
18	Modification Of In Svc Equip			256,642		57,112		26,515			U
	Non-Tactical Vehicles										
19	Heavy Armored Vehicle			790		791					U
20	Passenger Carrying Vehicles			1,390		1,416					U
21	NonTactical Vehicles, Other	A		15,415		29,891					U
Total Tactical and Support Vehicles				2,423,219		1,842,185		183,107			
Budget Activity 02: Communications and Electronics Equipment											
Comm - Joint Communications											
22	Signal Modernization Program	A		82,180		128,913					U
23	Tactical Network Technology Mod In Svc	A		568,367		443,439		40,000			U
24	SITUATION INFORMATION TRANSPORT	A		64,517		46,693					U
25	Joint Incident Site Communications Capability	A		13,895							U
26	JCSE Equipment (USRDECOM)			4,866		5,075					U
Comm - Satellite Communications											
27	Spectrum METSAT	A		9,176							U
28	Spectrum Portal	A		44							U
29	Defense Enterprise Wideband Satcom Systems			96,633		98,399					U
30	Transportable Tactical Command Communications	A		77,060		92,141		6,930			U
31	SHF Term			10,378		15,054					U

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Line No	Item Nomenclature	Ident Code	FY 2020 Total Enacted (Base + OCO)		FY 2021 Base		FY 2021 OCO for Base Requirements		FY 2021 OCO for Direct War and Enduring Costs		S e c
			Quantity	Cost	Quantity	Cost	Quantity	Cost	Quantity	Cost	
18	Modification Of In Svc Equip			83,627		114,977					U
	Non-Tactical Vehicles										
19	Heavy Armored Vehicle			791							U
20	Passenger Carrying Vehicles			1,416		1,246					U
21	NonTactical Vehicles, Other	A		29,891		19,870					U
Total Tactical and Support Vehicles				2,025,292		1,457,919				48,729	
Budget Activity 02: Communications and Electronics Equipment											
Comm - Joint Communications											
22	Signal Modernization Program	A		128,913		160,469					U
23	Tactical Network Technology Mod In Svc	A		483,439		360,379					U
24	SITUATION INFORMATION TRANSPORT	A		46,693		63,396					U
25	Joint Incident Site Communications Capability	A									U
26	JCSE Equipment (USRDECOM)			5,075		5,170					U
Comm - Satellite Communications											
27	Spectrum METSAT	A									U
28	Spectrum Portal	A									U
29	Defense Enterprise Wideband Satcom Systems			98,399		101,498					U
30	Transportable Tactical Command Communications	A		99,071		72,450			2,700		U
31	SHF Term			15,054		13,173					U

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Line No	Item Nomenclature	Ident Code	FY 2021 Total		FY 2021 Total		S e c
			Quantity	Cost	(Base + OCO) Quantity	Cost	
18	Modification Of In Svc Equip				114,977		U
	Non-Tactical Vehicles						
19	Heavy Armored Vehicle						U
20	Passenger Carrying Vehicles				1,246		U
21	NonTactical Vehicles, Other	A			19,870		U
	Total Tactical and Support Vehicles			48,729	1,506,648		
<u>Budget Activity 02: Communications and Electronics Equipment</u>							
Comm - Joint Communications							
22	Signal Modernization Program	A			160,469		U
23	Tactical Network Technology Mod In Svc	A			360,379		U
24	SITUATION INFORMATION TRANSPORT	A			63,396		U
25	Joint Incident Site Communications Capability	A					U
26	JCSE Equipment (USRDECOM)				5,170		U
Comm - Satellite Communications							
27	Spectrum METSAT	A					U
28	Spectrum Portal	A					U
29	Defense Enterprise Wideband Satcom Systems				101,498		U
30	Transportable Tactical Command Communications	A		2,700	75,150		U
31	SHF Term				13,173		U

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			Quantity	Cost	Quantity	Cost	Quantity	Cost	Quantity	Cost	
32	Assured Positioning, Navigation and Timing	A			31,674		11,778				U
33	SMART-T (SPACE)			19,160	10,515		825				U
34	Global Brdcst Svc - GBS			17,682	11,800						U
35	ENROUTE MISSION COMMAND (EMC)	A		37,401	8,609						U
Comm - C3 System											
36	COE Tactical Server Infrastructure (TSI)	A		20,500	67,533						U
Comm - Combat Communications											
37	Handheld Manpack Small Form Fit (HMS)	A		298,475	468,026						U
38	Radio Terminal Set, MIDS LVT(2)	A		6,741	23,778		350				U
39	TRACTOR DESK			1,187							U
40	Tractor Ride			21,601							U
41	Spider Family of Networked Munitions Incr	A		13,345	10,930						U
42	Tactical Communications And Protective System	A		10,368							U
43	Unified Command Suite	A		16,270	18,291						U
44	COTS Communications Equipment	A		85,835	55,630		20,400				U
45	Family of Med Comm for Combat Casualty Care	A		22,226	16,590		1,231				U
46	Army Communications & Electronics	A			37,856						U
Comm - Intelligence Comm											
48	CI Automation Architecture (MIP)	A		27,356	10,470		6,200				U
49	Defense Military Deception Initiative	A		2,667	3,704						U

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Line No	Item Nomenclature	Ident Code	FY 2020 Total Enacted (Base + OCO)		FY 2021 Base		FY 2021 OCO for Base Requirements		FY 2021 OCO for Direct War and Enduring Costs		S e c
			Quantity	Cost	Quantity	Cost	Quantity	Cost	Quantity	Cost	
32	Assured Positioning, Navigation and Timing	A		43,452		134,928				12,566	U
33	SMART-T (SPACE)			11,340		8,611				289	U
34	Global Brdcst Svc - GBS			11,800		8,191				319	U
35	ENROUTE MISSION COMMAND (EMC)	A		8,609							U
Comm - C3 System											
36	COE Tactical Server Infrastructure (TSI)	A		67,533		94,871					U
Comm - Combat Communications											
37	Handheld Manpack Small Form Fit (HMS)	A		468,026		550,848					U
38	Radio Terminal Set, MIDS LVT(2)	A		24,128		8,237					U
39	TRACTOR DESK										U
40	Tractor Ride										U
41	Spider Family of Networked Munitions Incr	A		10,930		13,967					U
42	Tactical Communications And Protective System	A									U
43	Unified Command Suite	A		18,291		19,579					U
44	COTS Communications Equipment	A		76,030		94,156					U
45	Family of Med Comm for Combat Casualty Care	A		17,821		18,313				1,257	U
46	Army Communications & Electronics	A		37,856		51,480					U
Comm - Intelligence Comm											
48	CI Automation Architecture (MIP)	A		16,670		13,146				1,230	U
49	Defense Military Deception Initiative	A		3,704		5,624					U

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Line No	Item Nomenclature	Ident Code	FY 2021 Total		FY 2021 Total		S e c
			Quantity	Cost	(Base + OCO) Quantity	Cost	
32	Assured Positioning, Navigation and Timing	A		12,566		147,494	U
33	SMART-T (SPACE)			289		8,900	U
34	Global Brdcst Svc - GBS			319		8,510	U
35	ENROUTE MISSION COMMAND (EMC)	A					U
Comm - C3 System							
36	COE Tactical Server Infrastructure (TSI)	A				94,871	U
Comm - Combat Communications							
37	Handheld Manpack Small Form Fit (HMS)	A				550,848	U
38	Radio Terminal Set, MIDS LVT(2)	A				8,237	U
39	TRACTOR DESK						U
40	Tractor Ride						U
41	Spider Family of Networked Munitions Incr	A				13,967	U
42	Tactical Communications And Protective System	A					U
43	Unified Command Suite	A				19,579	U
44	COTS Communications Equipment	A				94,156	U
45	Family of Med Comm for Combat Casualty Care	A		1,257		19,570	U
46	Army Communications & Electronics	A				51,480	U
Comm - Intelligence Comm							
48	CI Automation Architecture (MIP)	A		1,230		14,376	U
49	Defense Military Deception Initiative	A				5,624	U

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Line No	Item Nomenclature	Ident Code	FY 2019 (Base + OCO)		FY 2020 Base Enacted		FY 2020 OCO Enacted		FY 2020 Emergency (Included in Base Enacted)		S e c
			Quantity	Cost	Quantity	Cost	Quantity	Cost	Quantity	Cost	
Information Security											
50	FAMILY OF BIOMETRICS	A		8,319	1,000						U
51	Information System Security Program-ISSP	A		2,000	3,600						U
52	Communications Security (COMSEC)	A		65,580	147,097						U
53	Defensive CYBER Operations	A		51,343	56,962						U
54	Insider Threat Program - Unit Activity Monito	A		330	756						U
55	Persistent Cyber Training Environment	A		3,000	3,000						U
56	Items Less Than \$5M (Info Security)	A									U
Comm - Long Haul Communications											
57	Base Support Communications			50,247	31,770		20,482				U
Comm - Base Communications											
58	Information Systems			80,064	159,009		55,800				U
59	Emergency Management Modernization Program	A		3,789	4,854						U
60	Home Station Mission Command Centers (HSMCC)	A		24,479	47,174						U
61	Joint Information Environment (JIE)	A									U
62	Installation Info Infrastructure Mod Program	A		246,770	265,494		75,820				U
Elect Equip - Tact Int Rel Act (TIARA)											
65	JTT/CIBS-M (MIP)	B		9,027	7,686						U
66	TERRESTRIAL LAYER SYSTEMS (TLS) (MIP)										U
67	DRUG INTERDICTION PROGRAM (DIP) (TIARA)			3,711							U

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Line No	Item Nomenclature	Ident Code	FY 2020 Total Enacted (Base + OCO)		FY 2021 Base		FY 2021 OCO for Base Requirements		FY 2021 OCO for Direct War and Enduring Costs		S e c
			Quantity	Cost	Quantity	Cost	Quantity	Cost	Quantity	Cost	
Information Security											
50	FAMILY OF BIOMETRICS	A		1,000							U
51	Information System Security Program-ISSP	A		3,600		4,596					U
52	Communications Security (COMSEC)	A		147,097		159,272			128		U
53	Defensive CYBER Operations	A		56,962		54,753					U
54	Insider Threat Program - Unit Activity Monito	A		756		1,760					U
55	Persistent Cyber Training Environment	A		3,000							U
56	Items Less Than \$5M (Info Security)	A				260					U
Comm - Long Haul Communications											
57	Base Support Communications			52,252		29,761					U
Comm - Base Communications											
58	Information Systems			214,809		147,696			15,277		U
59	Emergency Management Modernization Program	A		4,854		4,900					U
60	Home Station Mission Command Centers (HSMCC)	A		47,174		15,227					U
61	Joint Information Environment (JIE)	A				3,177					U
62	Installation Info Infrastructure Mod Program	A		341,314		300,035			74,004		U
Elect Equip - Tact Int Rel Act (TIARA)											
65	JTT/CIBS-M (MIP)	B		7,686		5,304					U
66	TERRESTRIAL LAYER SYSTEMS (TLS) (MIP)					8,081					U
67	DRUG INTERDICTION PROGRAM (DIP) (TIARA)										U

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Line No	Item Nomenclature	Ident Code	FY 2021 Total		FY 2021 Total		S e c
			Quantity	Cost	(Base + OCO) Quantity	Cost	
Information Security							
50	FAMILY OF BIOMETRICS	A					U
51	Information System Security Program-ISSP	A			4,596		U
52	Communications Security (COMSEC)	A		128	159,400		U
53	Defensive CYBER Operations	A			54,753		U
54	Insider Threat Program - Unit Activity Monito	A			1,760		U
55	Persistent Cyber Training Environment	A					U
56	Items Less Than \$5M (Info Security)	A			260		U
Comm - Long Haul Communications							
57	Base Support Communications				29,761		U
Comm - Base Communications							
58	Information Systems			15,277	162,973		U
59	Emergency Management Modernization Program	A			4,900		U
60	Home Station Mission Command Centers (HSMCC)	A			15,227		U
61	Joint Information Environment (JIE)	A			3,177		U
62	Installation Info Infrastructure Mod Program	A		74,004	374,039		U
Elect Equip - Tact Int Rel Act (TIARA)							
65	JTT/CIBS-M (MIP)	B			5,304		U
66	TERRESTRIAL LAYER SYSTEMS (TLS) (MIP)				8,081		U
67	DRUG INTERDICTION PROGRAM (DIP) (TIARA)						U

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Line No	Item Nomenclature	Ident Code	FY 2019 (Base + OCO)		FY 2020 Base Enacted		FY 2020 OCO Enacted		FY 2020 Emergency (Included in Base Enacted)		S e c
			Quantity	Cost	Quantity	Cost	Quantity	Cost	Quantity	Cost	
68	DCGS-A (MIP)			298,270		166,606		38,613			U
69	Joint Tactical Ground Station (JTAGS) (MIP)	A		5,434							U
70	TROJAN (MIP)	B		27,549		17,368		1,337			U
71	Mod of In-Svc Equip (INTEL SPT) (MIP)			49,184		59,052		2,051			U
72	CI HUMINT Auto Reprting & Coll(CHARCS) (MIP)			296							U
73	Biometric Tactical Collection Devices (MIP)	A		5,370				1,800			U
74	Items Less Than \$5.0M (MIP)			410							U
Elect Equip - Electronic Warfare (EW)											
75	Lightweight Counter Mortar Radar	A		6,107		5,400					U
76	EW Planning & Management Tools (EWPMT)	A		4,700		7,568					U
77	Air Vigilance (AV) (MIP)	A		8,497		8,953					U
78	CREW			42,651							U
79	Multi-Function Electronic Warfare (MFEW) Syst	A									U
80	Family of Persistent Surveillance Cap. (MIP)	A		20,050				31,493			U
81	Counterintelligence/Security Countermeasures			29,554		501		6,917			U
82	CI Modernization (MIP)	A		486		121					U
Elect Equip - Tactical Surv. (Tac Surv)											
83	Sentinel Mods			77,752		113,910		20,000			U
84	Night Vision Devices	A		153,451		81,526		3,676			U
85	Long Range Advanced Scout Surveillance System			2,861							U

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			Quantity	Cost	Quantity	Cost	Quantity	Cost	Quantity	Cost	
68	DCGS-A (MIP)			205,219		151,886				47,709	U
69	Joint Tactical Ground Station (JTAGS) (MIP)	A									U
70	TROJAN (MIP)	B		18,705		17,593				1,766	U
71	Mod of In-Svc Equip (INTEL SPT) (MIP)			61,103		28,558				61,450	U
72	CI HUMINT Auto Reprting & Coll(CHARCS) (MIP)										U
73	Biometric Tactical Collection Devices (MIP)	A		1,800		999				12,337	U
74	Items Less Than \$5.0M (MIP)										U
Elect Equip - Electronic Warfare (EW)											
75	Lightweight Counter Mortar Radar	A		5,400		5,332					U
76	EW Planning & Management Tools (EWPMT)	A		7,568		7,849					U
77	Air Vigilance (AV) (MIP)	A		8,953		8,160					U
78	CREW										U
79	Multi-Function Electronic Warfare (MFEW) Syst	A				8,669					U
80	Family of Persistent Surveillance Cap. (MIP)	A		31,493						44,293	U
81	Counterintelligence/Security Countermeasures			7,418						49,100	U
82	CI Modernization (MIP)	A		121		300					U
Elect Equip - Tactical Surv. (Tac Surv)											
83	Sentinel Mods			133,910		58,884				33,496	U
84	Night Vision Devices	A		85,202		1,127,375				643	U
85	Long Range Advanced Scout Surveillance System										U

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			Quantity	Cost	Quantity	Cost	
68	DCGS-A (MIP)			47,709		199,595	U
69	Joint Tactical Ground Station (JTAGS) (MIP)	A					U
70	TROJAN (MIP)	B		1,766		19,359	U
71	Mod of In-Svc Equip (INTEL SPT) (MIP)			61,450		90,008	U
72	CI HUMINT Auto Reprting & Coll (CHARCS) (MIP)						U
73	Biometric Tactical Collection Devices (MIP)	A		12,337		13,336	U
74	Items Less Than \$5.0M (MIP)						U
Elect Equip - Electronic Warfare (EW)							
75	Lightweight Counter Mortar Radar	A				5,332	U
76	EW Planning & Management Tools (EWPMT)	A				7,849	U
77	Air Vigilance (AV) (MIP)	A				8,160	U
78	CREW						U
79	Multi-Function Electronic Warfare (MFEW) Syst	A				8,669	U
80	Family of Persistent Surveillance Cap. (MIP)	A		44,293		44,293	U
81	Counterintelligence/Security Countermeasures			49,100		49,100	U
82	CI Modernization (MIP)	A				300	U
Elect Equip - Tactical Surv. (Tac Surv)							
83	Sentinel Mods			33,496		92,380	U
84	Night Vision Devices	A		643		1,128,018	U
85	Long Range Advanced Scout Surveillance System						U

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			Quantity	Cost	Quantity	Cost	Quantity	Cost	Quantity	Cost	
86	Small Tactical Optical Rifle Mounted MLRF			16,990		22,623					U
87	RADIATION MONITORING SYSTEMS			17,393							U
88	Indirect Fire Protection Family Of Systems	A		291,497		29,127					U
89	FAMILY OF WEAPON SIGHTS (FWS)	A		113,630		81,541					U
90	Profiler			171							U
91	JOINT BATTLE COMMAND - PLATFORM (JBC-P)	A		401,991		256,546		25,568			U
92	JOINT EFFECTS TARGETING SYSTEM (JETS)			66,574		25,330					U
93	Mod Of In-Svc Equip (LLDR)	A		24,833		6,044					U
94	Computer Ballistics: LHMCB XM32	A		9,513		3,268		570			U
95	Mortar Fire Control System			29,149		13,199		15,975			U
96	Mortar Fire Control Systems Modifications					10,000					U
97	Counterfire Radars			324,150		16,416					U
Elect Equip - Tactical C2 Systems											
98	Army Command Post Integrated Infrastructure (	A		2,284							U
99	Fire Support C2 Family	A		19,724		13,197					U
100	AIR & MSL Defense Planning & Control Sys			29,913		24,730		14,331			U
101	IAMD Battle Command System	A				29,629					U
102	Life Cycle Software Support (LCSS)			6,163		6,774					U
103	Network Management Initialization and Service	A		15,087		24,448					U
104	Maneuver Control System (MCS)	A		29,144		260					U

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			Quantity	Cost	Quantity	Cost	Quantity	Cost	Quantity	Cost	
86	Small Tactical Optical Rifle Mounted MLRF			22,623		13,954					U
87	RADIATION MONITORING SYSTEMS									11	U
88	Indirect Fire Protection Family Of Systems	A		29,127		10,069				37,000	U
89	FAMILY OF WEAPON SIGHTS (FWS)	A		81,541		133,590					U
90	Profiler										U
91	JOINT BATTLE COMMAND - PLATFORM (JBC-P)	A		282,114		243,850					U
92	JOINT EFFECTS TARGETING SYSTEM (JETS)			25,330		69,641					U
93	Mod Of In-Svc Equip (LLDR)	A		6,044							U
94	Computer Ballistics: LHMBC XM32	A		3,838		7,509				280	U
95	Mortar Fire Control System			29,174		3,800				13,672	U
96	Mortar Fire Control Systems Modifications			10,000		7,292					U
97	Counterfire Radars			16,416		72,421					U
Elect Equip - Tactical C2 Systems											
98	Army Command Post Integrated Infrastructure (	A				49,947					U
99	Fire Support C2 Family	A		13,197		9,390					U
100	AIR & MSL Defense Planning & Control Sys			39,061		47,374				15,143	U
101	IAMD Battle Command System	A		29,629		201,587					U
102	Life Cycle Software Support (LCSS)			6,774		4,495					U
103	Network Management Initialization and Service	A		24,448		18,651					U
104	Maneuver Control System (MCS)	A		260							U

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			Quantity	Cost	(Base + OCO) Quantity	Cost	
86	Small Tactical Optical Rifle Mounted MLRF				13,954		U
87	RADIATION MONITORING SYSTEMS			11	11		U
88	Indirect Fire Protection Family Of Systems	A		37,000	47,069		U
89	FAMILY OF WEAPON SIGHTS (FWS)	A			133,590		U
90	Profiler						U
91	JOINT BATTLE COMMAND - PLATFORM (JBC-P)	A			243,850		U
92	JOINT EFFECTS TARGETING SYSTEM (JETS)				69,641		U
93	Mod Of In-Svc Equip (LLDR)	A					U
94	Computer Ballistics: LHMBC XM32	A		280	7,789		U
95	Mortar Fire Control System			13,672	17,472		U
96	Mortar Fire Control Systems Modifications				7,292		U
97	Counterfire Radars				72,421		U
Elect Equip - Tactical C2 Systems							
98	Army Command Post Integrated Infrastructure (	A			49,947		U
99	Fire Support C2 Family	A			9,390		U
100	AIR & MSL Defense Planning & Control Sys			15,143	62,517		U
101	IAMD Battle Command System	A			201,587		U
102	Life Cycle Software Support (LCSS)				4,495		U
103	Network Management Initialization and Service	A			18,651		U
104	Maneuver Control System (MCS)	A					U

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			Quantity	Cost	Quantity	Cost	Quantity	Cost	Quantity	Cost	
105	Global Combat Support System-Army (GCSS-A)	A		15,164		8,815					U
106	Integrated Personnel and Pay System-Army (IPP)	A		16,800		14,100					U
107	Reconnaissance and Surveying Instrument Set	A		6,823		11,000					U
108	MOD of In-Svc Equipment (ENFIRE)	A		1,177		15,317					U
	Elect Equip - Automation										
109	Army Training Modernization			12,265		14,578		6,014			U
110	Automated Data Processing Equip			219,812		138,215		32,700			U
111	General Fund Enterprise Business Systems Fam	A		10,976		15,002					U
112	High Perf Computing Mod Pgm (HPCMP)	A		66,330		72,610					U
113	Contract Writing System	A		5,927		6,000					U
114	CSS Communications	A				24,700					U
115	Reserve Component Automation Sys (RCAS)			27,896		27,879					U
	Elect Equip - Audio Visual Sys (A/V)										
116	TACTICAL DIGITAL MEDIA	A		4,392							U
117	Items Less Than \$5M (Surveying Equipment)			1,970		5,000					U
	Elect Equip - Support										
118	Production Base Support (C-E)			15,506							U
119	BCT Emerging Technologies	A		144,500		19,312					U
999	Classified Programs			4,501		11,910					U
	Total Communications and Electronics Equipment			4,761,456		3,742,097		440,861			

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			Quantity	Cost	Quantity	Cost	Quantity	Cost	Quantity	Cost	
105	Global Combat Support System-Army (GCSS-A)	A		8,815		2,792					U
106	Integrated Personnel and Pay System-Army (IPP)	A		14,100		9,071					U
107	Reconnaissance and Surveying Instrument Set	A		11,000		12,117					U
108	MOD of In-Svc Equipment (ENFIRE)	A		15,317		3,004					U
	Elect Equip - Automation										
109	Army Training Modernization			20,592		14,574			4,688		U
110	Automated Data Processing Equip			170,915		140,619			16,552		U
111	General Fund Enterprise Business Systems Fam	A		15,002		4,448					U
112	High Perf Computing Mod Pgm (HPCMP)	A		72,610		68,405					U
113	Contract Writing System	A		6,000		8,459					U
114	CSS Communications	A		24,700		57,651					U
115	Reserve Component Automation Sys (RCAS)			27,879		14,848					U
	Elect Equip - Audio Visual Sys (A/V)										
116	TACTICAL DIGITAL MEDIA	A									U
117	Items Less Than \$5M (Surveying Equipment)			5,000		4,995					U
	Elect Equip - Support										
118	Production Base Support (C-E)										U
119	BCT Emerging Technologies	A		19,312		16,983					U
999	Classified Programs			11,910		1,582					U
Total Communications and Electronics Equipment				4,182,958		5,202,031			445,910		

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			Quantity	Cost	Quantity	Cost	
105	Global Combat Support System-Army (GCSS-A)	A			2,792		U
106	Integrated Personnel and Pay System-Army (IPP)	A			9,071		U
107	Reconnaissance and Surveying Instrument Set	A			12,117		U
108	MOD of In-Svc Equipment (ENFIRE)	A			3,004		U
	Elect Equip - Automation						
109	Army Training Modernization			4,688	19,262		U
110	Automated Data Processing Equip			16,552	157,171		U
111	General Fund Enterprise Business Systems Fam	A			4,448		U
112	High Perf Computing Mod Pgm (HPCMP)	A			68,405		U
113	Contract Writing System	A			8,459		U
114	CSS Communications	A			57,651		U
115	Reserve Component Automation Sys (RCAS)				14,848		U
	Elect Equip - Audio Visual Sys (A/V)						
116	TACTICAL DIGITAL MEDIA	A					U
117	Items Less Than \$5M (Surveying Equipment)				4,995		U
	Elect Equip - Support						
118	Production Base Support (C-E)						U
119	BCT Emerging Technologies	A			16,983		U
999	Classified Programs				1,582		U
	Total Communications and Electronics Equipment			445,910	5,647,941		

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			Quantity	Cost	Quantity	Cost	Quantity	Cost	Quantity	Cost	
<u>Budget Activity 03: Other Support Equipment</u>											
Chemical Defensive Equipment											
120	Protective Systems	A		2,341							U
121	Family Of Non-Lethal Equipment (FNLE)	A		33,972	3,000		25,480				U
122	Base Defense Systems (BDS)	A		39,200			39,984				U
123	CBRN Defense	A		189,271	25,828		17,461				U
124	Smoke & Obscurant Family: SOF (Non AAO Item)				5,050						U
Bridging Equipment											
125	Tactical Bridging			81,219	59,821		4,884				U
126	Tactical Bridge, Float-Ribbon			55,145	57,661						U
127	BRIDGE SUPPLEMENTAL SET	A			17,966						U
128	Common Bridge Transporter (CBT) Recap	A		55,392	43,155						U
Engineer (Non-Construction) Equipment											
129	Handheld Standoff Minefield Detection Sys-HST	B		8,471	7,570						U
130	Grnd Standoff Mine Detectn System (GSTAMIDS)			42,001	37,025		3,655				U
131	AREA MINE DETECTION SYSTEM (AMDS)	A		5,797							U
132	HUSKY MOUNTED DETECTION SYSTEM (HMDS)	A		35,834	47,515		28,071				U
133	Robotic Combat Support System (RCSS)			8,879	2,000		3,300				U
134	EOD Robotics Systems Recapitalization	A		17,736	23,115						U

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			Quantity	Cost	Quantity	Cost	Quantity	Cost	Quantity	Cost	
Budget Activity 03: Other Support Equipment											
Chemical Defensive Equipment											
120	Protective Systems	A									U
121	Family Of Non-Lethal Equipment (FNLE)	A		28,480					25,480		U
122	Base Defense Systems (BDS)	A		39,984					98,960		U
123	CBRN Defense	A		43,289		28,456			18,887		U
124	Smoke & Obscurant Family: SOF (Non AAO Item)			5,050		13,995					U
Bridging Equipment											
125	Tactical Bridging			64,705		10,545			50,400		U
126	Tactical Bridge, Float-Ribbon			57,661		72,074					U
127	BRIDGE SUPPLEMENTAL SET	A		17,966		32,493					U
128	Common Bridge Transporter (CBT) Recap	A		43,155		62,978					U
Engineer (Non-Construction) Equipment											
129	Handheld Standoff Minefield Detection Sys-HST	B		7,570		5,570					U
130	Grnd Standoff Mine Detectn Sysm (GSTAMIDS)			40,680		2,497					U
131	AREA MINE DETECTION SYSTEM (AMDS)	A									U
132	HUSKY MOUNTED DETECTION SYSTEM (HMDS)	A		75,586		109,069					U
133	Robotic Combat Support System (RCSS)			5,300							U
134	EOD Robotics Systems Recapitalization	A		23,115		36,584					U

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			Quantity	Cost	(Base + OCO) Quantity	Cost	
<u>Budget Activity 03: Other Support Equipment</u>							
Chemical Defensive Equipment							
120	Protective Systems	A					U
121	Family Of Non-Lethal Equipment (FNLE)	A		25,480		25,480	U
122	Base Defense Systems (BDS)	A		98,960		98,960	U
123	CBRN Defense	A		18,887		47,343	U
124	Smoke & Obscurant Family: SOF (Non AAO Item)					13,995	U
Bridging Equipment							
125	Tactical Bridging			50,400		60,945	U
126	Tactical Bridge, Float-Ribbon					72,074	U
127	BRIDGE SUPPLEMENTAL SET	A				32,493	U
128	Common Bridge Transporter (CBT) Recap	A				62,978	U
Engineer (Non-Construction) Equipment							
129	Handheld Standoff Minefield Detection Sys-HST	B				5,570	U
130	Grnd Standoff Mine Detectn Sysm (GSTAMIDS)					2,497	U
131	AREA MINE DETECTION SYSTEM (AMDS)	A					U
132	HUSKY MOUNTED DETECTION SYSTEM (HMDS)	A				109,069	U
133	Robotic Combat Support System (RCSS)						U
134	EOD Robotics Systems Recapitalization	A				36,584	U

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			Quantity	Cost	Quantity	Cost	Quantity	Cost	Quantity	Cost	
135	Robotics and Applique Systems			35,456		101,056					U
136	Remote Demolition Systems	A		1,748							U
137	Render Safe Sets kits Outfits	A				18,684		84,000			U
138	< \$5M, Countermining Equipment	A		5,914							U
139	Family of Boats and Motors	A		8,006		5,745					U
	Combat Service Support Equipment										
140	Heaters and ECU's	A		10,122		7,336		8			U
141	Soldier Enhancement			1,103							U
142	Personnel Recovery Support System (PRSS)	A		10,175		4,281		5,101			U
143	Ground Soldier System	A		36,506		114,505		1,760			U
144	Mobile Soldier Power	A		30,774		29,364					U
145	Force Provider	A		55,800		8,000		56,400			U
146	Field Feeding Equipment			18,556		15,973					U
147	Cargo Aerial Del & Personnel Parachute System			46,835		42,622		2,040			U
148	Family Of Engr Combat and Construction Sets	A		13,010		11,451					U
149	Items Less Than \$5M (Eng Spt)	A		2,000		4,128					U
	Petroleum Equipment										
150	Distribution Systems, Petroleum & Water			26,471		72,118		12,409			U
	Medical Equipment										
151	Combat Support Medical			102,765		98,616		2,735			U

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			Quantity	Cost	Quantity	Cost	Quantity	Cost	Quantity	Cost	
135	Robotics and Applique Systems			101,056		179,544					U
136	Remote Demolition Systems	A									U
137	Render Safe Sets kits Outfits	A		102,684		64,583			84,000		U
138	< \$5M, Countermining Equipment	A									U
139	Family of Boats and Motors	A		5,745		5,289					U
	Combat Service Support Equipment										
140	Heaters and ECU's	A		7,344		8,200			370		U
141	Soldier Enhancement										U
142	Personnel Recovery Support System (PRSS)	A		9,382		4,625			3,721		U
143	Ground Soldier System	A		116,265		154,937					U
144	Mobile Soldier Power	A		29,364		34,297					U
145	Force Provider	A		64,400					56,400		U
146	Field Feeding Equipment			15,973					2,279		U
147	Cargo Aerial Del & Personnel Parachute System			44,662		53,021			2,040		U
148	Family Of Engr Combat and Construction Sets	A		11,451		23,324					U
149	Items Less Than \$5M (Eng Spt)	A		4,128		8,014					U
	Petroleum Equipment										
150	Distribution Systems, Petroleum & Water			84,527		78,448			4,374		U
	Medical Equipment										
151	Combat Support Medical			101,351		59,485			6,390		U

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			Quantity	Cost	Quantity	Cost	
135	Robotics and Applique Systems				179,544		U
136	Remote Demolition Systems	A					U
137	Render Safe Sets kits Outfits	A		84,000	148,583		U
138	< \$5M, Countermining Equipment	A					U
139	Family of Boats and Motors	A			5,289		U
	Combat Service Support Equipment						
140	Heaters and ECU's	A		370	8,570		U
141	Soldier Enhancement						U
142	Personnel Recovery Support System (PRSS)	A		3,721	8,346		U
143	Ground Soldier System	A			154,937		U
144	Mobile Soldier Power	A			34,297		U
145	Force Provider	A		56,400	56,400		U
146	Field Feeding Equipment			2,279	2,279		U
147	Cargo Aerial Del & Personnel Parachute System			2,040	55,061		U
148	Family Of Engr Combat and Construction Sets	A			23,324		U
149	Items Less Than \$5M (Eng Spt)	A			8,014		U
	Petroleum Equipment						
150	Distribution Systems, Petroleum & Water			4,374	82,822		U
	Medical Equipment						
151	Combat Support Medical			6,390	65,875		U

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			Quantity	Cost	Quantity	Cost	Quantity	Cost	Quantity	Cost	
Maintenance Equipment											
152	Mobile Maintenance Equipment Systems	A		34,479		140,053					U
153	Items Less Than \$5.0M (Maint Eq)	A		5,253		5,608					U
Construction Equipment											
154	Grader, Road Mtzd, Hvy, 6X4 (CCE)	A									U
155	Scrapers, Earthmoving	A		8,061				3,910			U
156	Loaders							380			U
157	Hydraulic Excavator	B		5,226		500					U
158	Tractor, Full Tracked	A				4,835		8,225			U
159	All Terrain Cranes	A		13,031		23,003					U
160	High Mobility Engineer Excavator (HMEE)	A		71,748		27,188		3,000			U
161	Enhanced Rapid Airfield Construction Capap	B		8,480							U
162	Const Equip ESP			33,289		34,790		3,870			U
163	Items Less Than \$5.0M (Const Equip)	A		6,103		4,381		350			U
Rail Float Containerization Equipment											
164	Army Watercraft Esp	A		8,508		35,194					U
165	Maneuver Support Vessel (MSV)	B				14,185					U
166	Items Less Than \$5.0M (Float/Rail)	A		9,385		6,920					U
Generators											
167	Generators And Associated Equip	A		136,906		113,476		2,436			U

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			Quantity	Cost	Quantity	Cost	Quantity	Cost	Quantity	Cost	
Maintenance Equipment											
152	Mobile Maintenance Equipment Systems	A		140,053		40,337				7,769	U
153	Items Less Than \$5.0M (Maint Eq)	A		5,608		5,386				184	U
Construction Equipment											
154	Grader, Road Mtzd, Hvy, 6X4 (CCE)	A				5,406					U
155	Scrapers, Earthmoving	A		3,910		4,188					U
156	Loaders			380		4,521				3,190	U
157	Hydraulic Excavator	B		500		5,186				7,600	U
158	Tractor, Full Tracked	A		13,060		4,715				7,450	U
159	All Terrain Cranes	A		23,003		70,560					U
160	High Mobility Engineer Excavator (HMEE)	A		30,188						3,703	U
161	Enhanced Rapid Airfield Construction Capap	B									U
162	Const Equip ESP			38,660		8,925				657	U
163	Items Less Than \$5.0M (Const Equip)	A		4,731							U
Rail Float Containerization Equipment											
164	Army Watercraft Esp	A		35,194		40,910					U
165	Maneuver Support Vessel (MSV)	B		14,185		76,576					U
166	Items Less Than \$5.0M (Float/Rail)	A		6,920		1,844					U
Generators											
167	Generators And Associated Equip	A		115,912		53,433				106	U

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			Quantity	Cost	Quantity	Cost	
Maintenance Equipment							
152	Mobile Maintenance Equipment Systems	A		7,769	48,106		U
153	Items Less Than \$5.0M (Maint Eq)	A		184	5,570		U
Construction Equipment							
154	Grader, Road Mtzd, Hvy, 6X4 (CCE)	A			5,406		U
155	Scrapers, Earthmoving	A			4,188		U
156	Loaders			3,190	7,711		U
157	Hydraulic Excavator	B		7,600	12,786		U
158	Tractor, Full Tracked	A		7,450	12,165		U
159	All Terrain Cranes	A			70,560		U
160	High Mobility Engineer Excavator (HMEE)	A		3,703	3,703		U
161	Enhanced Rapid Airfield Construction Capap	B					U
162	Const Equip ESP			657	9,582		U
163	Items Less Than \$5.0M (Const Equip)	A					U
Rail Float Containerization Equipment							
164	Army Watercraft Esp	A			40,910		U
165	Maneuver Support Vessel (MSV)	B			76,576		U
166	Items Less Than \$5.0M (Float/Rail)	A			1,844		U
Generators							
167	Generators And Associated Equip	A		106	53,539		U

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			Quantity	Cost	Quantity	Cost	Quantity	Cost	Quantity	Cost	
168	Tactical Electric Power Recapitalization Material Handling Equipment	A		8,333		14,814					U
169	Family Of Forklifts Training Equipment	A		12,901		13,864		5,152			U
170	Combat Training Centers Support			117,584		123,411					U
171	Training Devices, Nonsystem			217,597		213,347		2,106			U
172	Synthetic Training Environment (STE)					14,449					U
173	Close Combat Tactical Trainer	A		33,080							U
174	Aviation Combined Arms Tactical Trainer			32,700		4,840					U
175	Gaming Technology In Support of Army Training Test Measure and Dig Equipment (TMD)			25,161		15,463					U
176	Calibration Sets Equipment			4,270		3,030					U
177	Integrated Family Of Test Equipment (IFTE)			82,037		76,980		1,395			U
178	Test Equipment Modernization (TEMOD) Other Support Equipment			9,316		13,415					U
179	M25 STABILIZED BINOCULAR	A		4,368							U
180	Rapid Equipping Soldier Support Equipment	A		22,429		9,877		18,000			U
181	Physical Security Systems (OPA3)	A		53,836		78,958		10,016			U
182	Base Level Common Equipment			11,139		15,340					U
183	Modification Of In-Svc Equipment (OPA-3)			65,495		73,458		33,354			U

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			Quantity	Cost	Quantity	Cost	Quantity	Cost	Quantity	Cost	
168	Tactical Electric Power Recapitalization Material Handling Equipment	A		14,814		22,216					U
169	Family Of Forklifts Training Equipment	A		19,016		16,145			1,885		U
170	Combat Training Centers Support			123,411		90,580					U
171	Training Devices, Nonsystem			215,453		161,814					U
172	Synthetic Training Environment (STE)			14,449		13,063					U
173	Close Combat Tactical Trainer	A									U
174	Aviation Combined Arms Tactical Trainer			4,840							U
175	Gaming Technology In Support of Army Training Test Measure and Dig Equipment (TMD)			15,463		1,950					U
176	Calibration Sets Equipment			3,030		2,511					U
177	Integrated Family Of Test Equipment (IFTE)			78,375		78,578					U
178	Test Equipment Modernization (TEMOD) Other Support Equipment			13,415		14,941					U
179	M25 STABILIZED BINOCULAR	A									U
180	Rapid Equipping Soldier Support Equipment	A		27,877		8,629			8,500		U
181	Physical Security Systems (OPA3)	A		88,974		75,499			3,248		U
182	Base Level Common Equipment			15,340		27,444					U
183	Modification Of In-Svc Equipment (OPA-3)			106,812		32,485					U

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Line No	Item Nomenclature	Ident Code	FY 2021 Total		FY 2021 Total		S e c
			Quantity	Cost	(Base + OCO) Quantity	Cost	
168	Tactical Electric Power Recapitalization Material Handling Equipment	A			22,216		U
169	Family Of Forklifts Training Equipment	A		1,885	18,030		U
170	Combat Training Centers Support				90,580		U
171	Training Devices, Nonsystem				161,814		U
172	Synthetic Training Environment (STE)				13,063		U
173	Close Combat Tactical Trainer	A					U
174	Aviation Combined Arms Tactical Trainer						U
175	Gaming Technology In Support of Army Training Test Measure and Dig Equipment (TMD)				1,950		U
176	Calibration Sets Equipment				2,511		U
177	Integrated Family Of Test Equipment (IFTE)				78,578		U
178	Test Equipment Modernization (TEMOD) Other Support Equipment				14,941		U
179	M25 STABILIZED BINOCULAR	A					U
180	Rapid Equipping Soldier Support Equipment	A		8,500	17,129		U
181	Physical Security Systems (OPA3)	A		3,248	78,747		U
182	Base Level Common Equipment				27,444		U
183	Modification Of In-Svc Equipment (OPA-3)				32,485		U

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			Quantity	Cost	Quantity	Cost	Quantity	Cost	Quantity	Cost	
184	Production Base Support (OTH)			2,301							U
185	BUILDING, PRE-FAB, RELOCATABLE	A		6,000		32,700		77,054			U
186	Special Equipment For User Testing			11,605		9,821					U
187	Special Equipment for Test and Evaluation	B									U
188	TRACTOR YARD			4,956							U
Total Other Support Equipment				2,046,076		1,987,485		456,536			
Budget Activity 04: Spare and Repair Parts											
OPA2											
189	INITIAL SPARES - C&E			9,817		9,757					U
Total Spare and Repair Parts				9,817		9,757					
Total Other Procurement, Army				9,240,568		7,581,524		1,080,504			

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			Quantity	Cost	Quantity	Cost	Quantity	Cost	Quantity	Cost	
184	Production Base Support (OTH)										U
185	BUILDING, PRE-FAB, RELOCATABLE	A		109,754						31,845	U
186	Special Equipment For User Testing			9,821							U
187	Special Equipment for Test and Evaluation	B				39,436					U
188	TRACTOR YARD										U
Total Other Support Equipment				2,444,021		1,955,306				429,438	
Budget Activity 04: Spare and Repair Parts											
-----											
OPA2											
189	INITIAL SPARES - C&E			9,757		9,950					U
Total Spare and Repair Parts				9,757		9,950					
Total Other Procurement, Army				8,662,028		8,625,206				924,077	

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			Quantity	Cost	Quantity	Cost	
184	Production Base Support (OTH)						U
185	BUILDING, PRE-FAB, RELOCATABLE	A		31,845		31,845	U
186	Special Equipment For User Testing						U
187	Special Equipment for Test and Evaluation	B				39,436	U
188	TRACTOR YARD						U
Total Other Support Equipment				429,438		2,384,744	
<u>Budget Activity 04: Spare and Repair Parts</u>							
OPA2							
189	INITIAL SPARES - C&E					9,950	U
Total Spare and Repair Parts						9,950	
Total Other Procurement, Army				924,077		9,549,283	

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74	02	80	9990BK5278	Items Less Than \$5.0M (MIP).....	296
75	02	83	8387B05201	Lightweight Counter Mortar Radar.....	298
76	02	83	8488K00002	EW Planning & Management Tools (EWPMT).....	304

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79	02	83	8491B05000	Multi-Function Electronic Warfare (MFEW) Systems.....	314
80	02	83	9926BL5287	Family of Persistent Surveillance Cap. (MIP).....	319
81	02	83	9996BL5283	Counterintelligence/Security Countermeasures (MIP).....	330
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90	02	86	0200K27900	Profiler.....	408
91	02	86	0245W61990	JOINT BATTLE COMMAND - PLATFORM (JBC-P).....	409
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Air Vigilance (AV) (MIP)	8489W60001	77	02	83.....	308
Army Command Post Integrated Infrastructure (CPI2)	9042B29810	98	02	89.....	456
Army Communications & Electronics	9887B88810	46	02	32.....	172
Army Training Modernization	3001BE4169	109	02	92.....	514
Assured Positioning, Navigation and Timing	9897K49000	32	02	18.....	61
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CI Automation Architecture (MIP)	0250BK5284	48	02	36.....	175
CI HUMINT Auto Reprting & Coll(CHARCS)(MIP)	9925BK5275	72	02	80.....	291
CI Modernization (MIP)	9997BL5285	82	02	83.....	332
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Computer Ballistics: LHMBC XM32	5726K99200	94	02	86.....	430
Contract Writing System	3009B66001	113	02	92.....	560
Counterfire Radars	8386BA5500	97	02	86.....	450
Counterintelligence/Security Countermeasures (MIP)	9996BL5283	81	02	83.....	330
DCGS-A (MIP)	9690BZ7316	68	02	80.....	268
DRUG INTERDICTION PROGRAM (DIP) (TIARA)	9654BU4050	67	02	80.....	267
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FAMILY OF WEAPON SIGHTS (FWS)	0177K22001	89	02	86.....	390
Family of Med Comm for Combat Casualty Care	9885MA8000	45	02	32.....	163
Family of Persistent Surveillance Cap. (MIP)	9926BL5287	80	02	83.....	319
Fire Support C2 Family	9060B28501	99	02	89.....	465
General Fund Enterprise Business Systems Fam	3004B55500	111	02	92.....	553
Global Brdcst Svc - GBS	9915BC4120	34	02	18.....	84

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IAMD Battle Command System	9280BZ5075	101	02	89.....	480
Indirect Fire Protection Family Of Systems	0173BZ0501	88	02	86.....	381
Information System Security Program-ISSP	0122TA0600	51	02	64.....	184
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Installation Info Infrastructure Mod Program	9700BU0500	62	02	73.....	240
Integrated Personnel and Pay System-Army (IPPS-A)	9921B66701	106	02	89.....	501
Items Less Than \$5.0M (MIP)	9990BK5278	74	02	80.....	296
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JOINT EFFECTS TARGETING SYSTEM (JETS)	0254K32101	92	02	86.....	420
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Life Cycle Software Support (LCSS)	9442BD3955	102	02	89.....	489
Lightweight Counter Mortar Radar	8387B05201	75	02	83.....	298
Long Range Advanced Scout Surveillance System	0142K38300	85	02	86.....	371
MOD of In-Svc Equipment (ENFIRE)	9971B99901	108	02	89.....	512
Maneuver Control System (MCS)	9742BA9320	104	02	89.....	498
Mod Of In-Svc Equip (LLDR)	0255KA3100	93	02	86.....	428
Mod of In-Svc Equip (INTEL SPT) (MIP)	9912BZ9750	71	02	80.....	284
Mortar Fire Control System	7500K99300	95	02	86.....	435
Mortar Fire Control Systems Modifications	7563AD9300	96	02	86.....	445
Multi-Function Electronic Warfare (MFEW) Systems	8491B05000	79	02	83.....	314
Network Management Initialization and Services	9705BA9301	103	02	89.....	491
Night Vision Devices	0140KA3500	84	02	86.....	349
Persistent Cyber Training Environment	0132B65010	55	02	64.....	209
Production Base Support (C-E)	2716BF5400	118	02	98.....	580
Profiler	0200K27900	90	02	86.....	408
RADIATION MONITORING SYSTEMS	0162WC5200	87	02	86.....	380
Radio Terminal Set, MIDS LVT(2)	6948B22603	38	02	32.....	117
Reconnaissance and Surveying Instrument Set	9966BZ9966	107	02	89.....	506
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SMART-T (SPACE)	9910BC4002	33	02	18.....	78
Sentinel Mods	0125WK5057	83	02	86.....	333
Signal Modernization Program	1981B00010	22	02	12.....	1
Small Tactical Optical Rifle Mounted MLRF	0155K35110	86	02	86.....	372
Spectrum METSAT	2936B09800	27	02	18.....	27
Spectrum Portal	2937B09700	28	02	18.....	28
Spider Family of Networked Munitions Incr	8558B54020	41	02	32.....	125
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Exhibit P-1M, Procurement Programs - Modification Summary  
(Listing by Model)

**Lookup Matrix by Model**

<b>Model:</b> Sentinel [AN/MPQ-64]		
<b>P-3a Individual Modifications</b>		
Modification Number	Modification Title	Applies to Multiple Models
WK5057	Sentinel Mods	No

<b>Model:</b> M95 M1064		
<b>P-3a Individual Modifications</b>		
Modification Number	Modification Title	Applies to Multiple Models
AD9305	Mortar Fire Control Systems Modifications	Yes

<b>Model:</b> M95 Stryker		
<b>P-3a Individual Modifications</b>		
Modification Number	Modification Title	Applies to Multiple Models
AD9305	Mortar Fire Control Systems Modifications	Yes

<b>Model:</b> M151 Stryker		
<b>P-3a Individual Modifications</b>		
Modification Number	Modification Title	Applies to Multiple Models
AD9305	Mortar Fire Control Systems Modifications	Yes

<b>Model:</b> M150		
<b>P-3a Individual Modifications</b>		
Modification Number	Modification Title	Applies to Multiple Models
AD9305	Mortar Fire Control Systems Modifications	Yes

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

<b>Model:</b>	and M151 systems	
<b>P-3a Individual Modifications</b>		
<b>Modification Number</b>	<b>Modification Title</b>	<b>Applies to Multiple Models</b>
AD9305	Mortar Fire Control Systems Modifications	Yes

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

**Funding (\$ M)**

P-3a Modification Title	PYS	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025
<b>Exhibit P-3a</b>										
Sentinel Mods	563.333	77.752	133.910	58.884	33.496	92.380	68.767	78.707	164.633	166.731
Mortar Fire Control Systems Modifications	-	-	10.000	7.292	-	7.292	4.196	8.091	6.494	-
<b>Totals (Total Obligation Authority)</b>										
<b>Total Obligation Authority</b>	<b>563.333</b>	<b>77.752</b>	<b>143.910</b>	<b>66.176</b>	<b>33.496</b>	<b>99.672</b>	<b>72.963</b>	<b>86.798</b>	<b>171.127</b>	<b>166.731</b>

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

<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 2035A: Other Procurement, Army / BA 02: Communications and Electronics Equipment / BSA 12: Comm - Joint Communications	<b>P-1 Line Item Number / Title:</b> 1981B00010 / Signal Modernization Program
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<b>ID Code</b> (A=Service Ready, B=Not Service Ready):	<b>Program Elements for Code B Items:</b> N/A	<b>Other Related Program Elements:</b> 0604818A
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**Line Item MDAP/MAIS Code:** N/A

Resource Summary	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	To Complete	Total
Procurement Quantity ( <i>Units in Each</i> )	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost ( <i>\$ in Millions</i> )	461.395	82.180	128.913	160.469	-	160.469	190.053	224.085	221.048	260.035	Continuing	Continuing
Less PY Advance Procurement ( <i>\$ in Millions</i> )	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) ( <i>\$ in Millions</i> )	461.395	82.180	128.913	160.469	-	160.469	190.053	224.085	221.048	260.035	Continuing	Continuing
Plus CY Advance Procurement ( <i>\$ in Millions</i> )	-	-	-	-	-	-	-	-	-	-	-	-
<b>Total Obligation Authority (<i>\$ in Millions</i>)</b>	<b>461.395</b>	<b>82.180</b>	<b>128.913</b>	<b>160.469</b>	-	<b>160.469</b>	<b>190.053</b>	<b>224.085</b>	<b>221.048</b>	<b>260.035</b>	<b>Continuing</b>	<b>Continuing</b>

*(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> )	7,441.855	2,417.059	1,631.810	756.929	-	756.929	742.395	861.865	917.212	1,007.888	Continuing	Continuing

**Description:**

This funding line is directly aligned to the Army Network Modernization Strategy LOE 1, Unified Network. Efforts are aligned to support the Network-Cross Functional Team capability set approach to achieve the network modernization strategy.

This funding line also supports the Army Network Modernization Strategy LOE 3, Interoperability and LOE 4, Command Post Communications. Efforts are aligned to support the Network-Cross Functional Team capability set approach to achieve the network modernization strategy.

SIGMOD funding line will procure additional and enhanced capabilities to modernize tactical network components by reducing Size, Weight and Power (SWaP) and providing more expeditionary communications, leveraging the current Tactical Network found in Expeditionary Signal Battalions (ESB), future Expeditionary Signal Battalions- Enhanced (ESB-E), Maneuver and Multi-Functional Brigades, Division and Corps Headquarters. SIGMOD capabilities augment and increase capabilities to units equipped with Tactical Network, allowing them to support the full spectrum of operations with Cellular Solution (4G LTE & WIFI), Commercial Coalition, and Top Secret local area network (LAN) enclaves. SIGMOD will provide redundant communications in a satellite denied environment by providing improved Line of Sight Terrestrial Transmission System (TRILOS) and beyond line of sight Troposcatter Transmission System (TROPO) radio systems.

SIGMOD provides the Local Area Network for Mission Partner Environment (MPE), which enables Army units to establish an enduring, tactical and strategic network that allows US Army units to train, integrate, and fight in any theater regardless of the theaters current security classification, and participating coalition Unified Action Partner(s) (UAP).

SIGMOD supports Network Modernization Capability sets/ Integrated Tactical Network (ITN) with Line-of-Sight (LOS) Backhaul, Voice/Radio Bridging, and Command Post Communications capabilities. This includes Cyber Security Updates and Secure But Unclassified (SBU) Domain for improved interoperability, usability, flexibility, and readiness as well as, smaller more expeditionary technology. It includes but is not limited to LOS radios with Point to Point, Point to Multipoint and Mesh networking topologies, as well as integrated waveforms. Also provides wireless coverage for a squad (5-10 soldiers) and provides Mobile Broadband networking capabilities.

The following SIGMOD Capabilities/Systems are part of the base effort for this funding line:

Commercial Coalition Equipment (CCE): Provides both Commercial and Coalition communications LANs and radio cross-banding capabilities supporting command control and coalition partners in order to enable Mission Command between forces. By integrating disparate and unique forces communications, the network is extended and Mission Command is further enabled.

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<b>Exhibit P-40, Budget Line Item Justification:</b> PB 2021 Army		<b>Date:</b> February 2020
<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 2035A: Other Procurement, Army / BA 02: Communications and Electronics Equipment / BSA 12: Comm - Joint Communications		<b>P-1 Line Item Number / Title:</b> 1981B00010 / Signal Modernization Program
<b>ID Code</b> (A=Service Ready, B=Not Service Ready):	<b>Program Elements for Code B Items:</b> N/A	<b>Other Related Program Elements:</b> 0604818A
<b>Line Item MDAP/MAIS Code:</b> N/A		
<p>Modular Communications Node - Advanced Enclave (MCN-AE): Provides Top Secret/Sensitive Compartmented Information (TS/SCI) communications to Brigades, Divisions, Corps, and Signal Battalions over the Tactical Network. MCN-AE enables operation/intelligence conversion and reduction of satellite communications systems in the Command Post (CP). MCN-AE also supports expeditionary / initial entry operations.</p> <p>Cellular Solution (4G LTE and WiFi): Expands the Tactical network below battalion, using an expeditionary 4G LTE cellular and wireless (WiFi) network. The 4G LTE network enables Situational Awareness (SA) and Mission Command (MC) communications capability (experimentation only in FY22-26 and procurement following). The WiFi capability enables wireless Mission Command within the command post for wireless laptops, tablets and phone, dramatically reducing TOC set-up and teardown times. Secure Wireless is currently designed for Brigade and above command posts (Up to 200 soldiers) and using the Tactical Network as the backhaul.</p> <p>Terrestrial Transmission System (TRILOS): Enables broadband communications in a satellite denied environment at higher throughput than the current High Capacity Line of Sight System (HCLOS). TRILOS will enable Army units to reduce reliance on costly satellite bandwidth. TRILOS will extend the network by utilizing a significantly reduced SWaP radio versus the aging HCLOS system. TRILOS will also provide RF path diversity, making the system more resilient to jamming in a contested environment. Provides point to point and point to multi point.</p> <p>Troposcatter Transmission System (TROPO): Enables broadband communications in a satellite denied environment by providing Beyond Line of Sight (BLOS) capability over longer ranges and at higher throughput than the current BLOS System. TROPO extends the network by utilizing a significantly reduced SWaP radio versus the legacy system. TROPO will enable Army units to reduce reliance on costly satellite bandwidth. TROPO will also provide RF path diversity, making the system more resilient to jamming in a contested environment.</p>		

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

**Appropriation / Budget Activity / Budget Sub Activity:** 2035A: Other Procurement, Army / BA 02: Communications and Electronics Equipment / BSA 12: Comm - Joint Communications **P-1 Line Item Number / Title:** 1981B00010 / Signal Modernization Program

**ID Code** (A=Service Ready, B=Not Service Ready): **Program Elements for Code B Items:** N/A **Other Related Program Elements:** 0604818A

**Line Item MDAP/MAIS Code:** N/A

Exhibits Schedule					Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total
Exhibit Type	Title*	Subexhibits	ID CD	MDAP/MAIS Code	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)
P-5	B00010 / Signal Modernization Program	P-5a, P-21			- / 461.395	- / 82.180	- / 128.913	- / 160.469	- / -	- / 160.469
<b>P-40</b>	<b>Total Gross/Weapon System Cost</b>				<b>- / 461.395</b>	<b>- / 82.180</b>	<b>- / 128.913</b>	<b>- / 160.469</b>	<b>- / -</b>	<b>- / 160.469</b>

\*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 2021 Base procurement dollars in the amount of \$160.469 million supports procurement of twelve (12) Commercial Coalition Equipment (CCE), eighteen(18) Modular Communications Node - Advanced Enclave (MCN-AE), and fifty six (56) Secure Wireless systems. In addition, funding procures two hundred and thirty (230) TRILOS to support line of sight communications supporting the Tactical Network. In addition, procures systems as part of the Integrated Tactical Network (ITN) baseline capabilities for five (5) Brigade Combat Teams (BCTs). Systems provide bridging technology and Line-Of-Sight (LOS) Backhaul, Voice/Radio Bridging, and Command Post communications capabilities.

The Transmission Systems Capability Production Document (CPD) was approved on 30 Jan 2015.

"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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<b>Exhibit P-5, Cost Analysis: PB 2021 Army</b>		<b>Date:</b> February 2020
<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 2035A / 02 / 12	<b>P-1 Line Item Number / Title:</b> 1981B00010 / Signal Modernization Program	<b>Item Number / Title [DODIC]:</b> B00010 / Signal Modernization Program

<b>ID Code</b> (A=Service Ready, B=Not Service Ready) :	<b>MDAP/MAIS Code:</b>
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Resource Summary	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total
Procurement Quantity (Units in Each)	-	-	-	-	-	-
Gross/Weapon System Cost (\$ in Millions)	461.395	82.180	128.913	160.469	-	160.469
Less PY Advance Procurement (\$ in Millions)	-	-	-	-	-	-
Net Procurement (P-1) (\$ in Millions)	461.395	82.180	128.913	160.469	-	160.469
Plus CY Advance Procurement (\$ in Millions)	-	-	-	-	-	-
<b>Total Obligation Authority (\$ in Millions)</b>	<b>461.395</b>	<b>82.180</b>	<b>128.913</b>	<b>160.469</b>	<b>-</b>	<b>160.469</b>

*(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)	7,441.855	2,417.059	1,631.810	756.929	-	756.929

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

Cost Elements	Prior Years			FY 2019			FY 2020			FY 2021 Base			FY 2021 OCO			FY 2021 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																		
MCN-AE HW-Equipment <sup>(f)</sup>	76.059	118	8.975	70.854	48	3.401	74.731	26	1.943	76.222	18	1.372	-	-	-	76.222	18	1.372
CCE HW-Equipment <sup>(f)</sup>	236.333	72	17.016	159.056	18	2.863	179.333	18	3.228	182.917	12	2.195	-	-	-	182.917	12	2.195
Cellular Solution HW - Equipment	880.000	30	26.400	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Secure Wireless (WiFi) HW - Equipment <sup>(f)</sup>	213.000	30	6.390	248.188	32	7.942	256.925	40	10.277	262.054	56	14.675	-	-	-	262.054	56	14.675
TROPO HW-Equipment <sup>(f)</sup>	-	-	-	385.611	18	6.941	-	-	-	-	-	-	-	-	-	-	-	-
TRILOS HW - Equipment <sup>(f)</sup>	181.870	230	41.830	181.314	70	12.692	180.867	150	27.130	174.183	230	40.062	-	-	-	174.183	230	40.062
SBU VSAT and gateway (SFAB)	-	-	189.000	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Integrated Tactical Network (ITN)	-	-	-	-	-	-	-	-	26.044	-	-	34.359	-	-	-	-	-	34.359
Engineering / Integration / Tech Services Support	-	-	48.403	-	-	12.989	-	-	12.217	-	-	12.417	-	-	-	-	-	12.417
Non- Recurring Engineering	-	-	36.042	-	-	0.952	-	-	0.999	-	-	0.801	-	-	-	-	-	0.801
System Test / Validation	-	-	7.450	-	-	1.537	-	-	3.666	-	-	0.345	-	-	-	-	-	0.345



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<b>Exhibit P-5, Cost Analysis: PB 2021 Army</b>		<b>Date:</b> February 2020
<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 2035A / 02 / 12		<b>P-1 Line Item Number / Title:</b> 1981B00010 / Signal Modernization Program
<b>ID Code</b> (A=Service Ready, B=Not Service Ready) :		<b>MDAP/MAIS Code:</b>

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

Cost Elements	Prior Years			FY 2019			FY 2020			FY 2021 Base			FY 2021 OCO			FY 2021 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)
Training	-	-	15.854	-	-	7.997	-	-	7.573	-	-	14.290	-	-	-	-	-	14.290
Fielding	-	-	15.645	-	-	4.062	-	-	4.069	-	-	4.603	-	-	-	-	-	4.603
Initial Spares	-	-	15.756	-	-	2.720	-	-	5.648	-	-	7.010	-	-	-	-	-	7.010
Software	-	-	15.574	-	-	4.859	-	-	12.023	-	-	14.947	-	-	-	-	-	14.947
Technical Refresh	-	-	-	-	-	-	-	-	0.318	-	-	1.499	-	-	-	-	-	1.499
Data	-	-	-	-	-	1.895	-	-	2.927	-	-	0.384	-	-	-	-	-	0.384
<i>Subtotal: Recurring Cost</i>	-	-	444.335	-	-	70.850	-	-	118.062	-	-	148.959	-	-	-	-	-	148.959
<i>Subtotal: Flyaway Cost</i>	-	-	444.335	-	-	70.850	-	-	118.062	-	-	148.959	-	-	-	-	-	148.959
Support - Program Management Cost																		
Government Management	-	-	9.615	-	-	7.012	-	-	6.476	-	-	7.048	-	-	-	-	-	7.048
Contractor Management	-	-	7.445	-	-	4.318	-	-	4.375	-	-	4.462	-	-	-	-	-	4.462
<i>Subtotal: Support - Program Management Cost</i>	-	-	17.060	-	-	11.330	-	-	10.851	-	-	11.510	-	-	-	-	-	11.510
<b>Gross/Weapon System Cost</b>	<b>7,441.855</b>	<b>-</b>	<b>461.395</b>	<b>2,417.059</b>	<b>-</b>	<b>82.180</b>	<b>1,631.810</b>	<b>-</b>	<b>128.913</b>	<b>756.929</b>	<b>-</b>	<b>160.469</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>756.929</b>	<b>-</b>	<b>160.469</b>

**Remarks:**

FY19 CCE V2 Unit costs are lower than FY20 and FY21 due to spending FY18 carryover funds in FY19.

Changes From FY20 to FY21:

Software increase is due increased quantities for SW licenses and cumulative SW renewals.

Technical refresh costs associated with previously procured system components that will require cyclical replacements in order to remain operational, suitable and supportable.

Training costs increased with increased quantities of equipment fielded.

ITN: FY20 funding procures 68 VSAT systems. In FY21, ITN efforts will include procurement of mobile broadband and Mid-Tier High Capacity Line of Sight (LOS) tactical networking capabilities (to include TRILOS and other commercial solutions) as well as emerging ITN requirements to support 5 BCTs. FY21 funding reflects cost to equip a BCT with current ITN solution of Mobile Broadband and mid-tier mesh networking radios to support each BCT.

Gov't management is for Matrix support from other organizations. Core support is funded by OMA. FY21 reflects current projected costs based on actuals in FY20.

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

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<b>Exhibit P-5a, Procurement History and Planning: PB 2021 Army</b>								<b>Date:</b> February 2020			
<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 2035A / 02 / 12			<b>P-1 Line Item Number / Title:</b> 1981B00010 / Signal Modernization Program					<b>Item Number / Title [DODIC]:</b> B00010 / Signal Modernization Program			

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
MCN-AE HW-Equipment		2017	GDMS CHS IV / Taunton, MA	C / IDIQ	Aberdeen Proving Ground, MD	Aug 2017	Jan 2018	24	76.300	Y		
MCN-AE HW-Equipment		2019	GDMS CHS IV / Taunton, MA	C / IDIQ	Aberdeen Proving Ground, MD	Feb 2019	Jun 2019	48	70.854	Y		
MCN-AE HW-Equipment		2020	GDMS CHS IV / Taunton, MA	C / IDIQ	Aberdeen Proving Ground, MD	Jan 2020	May 2020	26	74.731	Y		
MCN-AE HW-Equipment		2021	GDMS CHS IV / Taunton, MA	C / IDIQ	Aberdeen Proving Ground, MD	Jan 2021	May 2021	18	76.222	Y		
CCE HW-Equipment		2017	GDMS CHS IV / Taunton, MA	C / IDIQ	Aberdeen Proving Ground, MD	Jul 2017	Dec 2017	24	238.000	Y		
CCE HW-Equipment		2018	GDMS CHS IV / Taunton, MA	C / IDIQ	Aberdeen Proving Ground, MD	Apr 2018	Sep 2018	24	241.000	Y		
CCE HW-Equipment		2019	GDMS CHS IV / Taunton, MA	C / IDIQ	Aberdeen Proving Ground, MD	Feb 2019	Jun 2019	18	159.056	Y		
CCE HW-Equipment		2020	GDMS CHS IV / Taunton, MA	C / IDIQ	Aberdeen Proving Ground, MD	Jan 2020	May 2020	18	179.333	Y		
CCE HW-Equipment		2021	GDMS CHS IV / Taunton, MA	C / IDDQ	Aberdeen Proving Ground, MD	Jan 2021	May 2021	12	182.917	Y		
Secure Wireless (WiFi) HW - Equipment <sup>(†)</sup>		2019	GDMS CHS IV / Taunton, MA	C / IDDQ	Aberdeen Proving Ground, MD	Jan 2019	May 2019	32	248.188	Y		
Secure Wireless (WiFi) HW - Equipment <sup>(†)</sup>		2020	GDMS CHS IV / Taunton, MA	C / IDDQ	Aberdeen Proving Ground, MD	Jan 2020	May 2020	40	256.925	Y		
Secure Wireless (WiFi) HW - Equipment <sup>(†)</sup>		2021	GDMS CHS IV / Taunton, MA	C / IDDQ	Aberdeen Proving Ground, MD	Jan 2021	May 2021	56	262.054	Y		
TROPO HW-Equipment		2019	Raytheon Company / Dulles , VA	C / IDIQ	Aberdeen Proving Ground, MD	Apr 2019	Nov 2019	18	385.611	Y		
TROPO HW-Equipment		2020	Raytheon Company / Dulles , VA	C / IDIQ	Aberdeen Proving Ground, MD	Jun 2020	Feb 2021	0	0.000	Y		
TROPO HW-Equipment		2021	Raytheon Company / Dulles , VA	C / IDIQ	Aberdeen Proving Ground, MD	Feb 2021	Sep 2021	0	0.000	Y		
TRILOS HW - Equipment <sup>(†)</sup>		2017	ADS / Virginia Beach, VA	C / IDIQ	Aberdeen Proving Ground, MD	Aug 2017	Jan 2018	120	179.000	N		
TRILOS HW - Equipment <sup>(†)</sup>		2018	ADS / Virginia Beach, VA	C / IDIQ	Aberdeen Proving Ground, MD	Jun 2018	Jan 2019	110	185.000	N		
TRILOS HW - Equipment <sup>(†)</sup>		2019	Ultra - Canadian Commercial Corp / Ottawa, Canada	C / IDIQ	Aberdeen Proving Ground, MD	Jun 2019	Jan 2020	70	181.314	Y		
TRILOS HW - Equipment <sup>(†)</sup>		2020	Ultra - Canadian Commercial Corp / Ottawa, Canada	C / IDDQ	Aberdeen Proving Ground, MD	Feb 2020	Sep 2020	150	180.867	Y		

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**Exhibit P-5a, Procurement History and Planning:** PB 2021 Army **Date:** February 2020

<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 2035A / 02 / 12	<b>P-1 Line Item Number / Title:</b> 1981B00010 / Signal Modernization Program	<b>Item Number / Title [DODIC]:</b> B00010 / Signal Modernization Program
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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
TRILOS HW - Equipment <sup>(†)</sup>		2021	Ultra - Canadian Commercial Corp / Ottawa, Canada	C / IDDQ	Aberdeen Proving Ground, MD	Feb 2021	Sep 2021	230	174.183	Y		

<sup>(†)</sup> indicates the presence of a P-21

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**Exhibit P-21, Production Schedule:** PB 2021 Army **Date:** February 2020

**Appropriation / Budget Activity / Budget Sub Activity:** 2035A / 02 / 12 **P-1 Line Item Number / Title:** 1981B00010 / Signal Modernization Program **Item Number / Title [DODIC]:** B00010 / Signal Modernization Program

Cost Elements <i>(Units in Each)</i>						Fiscal Year 2017												Fiscal Year 2018												BALANCE	
O C C #	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
Secure Wireless (WiFi) HW - Equipment																															
Prior Years Deliveries: 30																															
1		2019	ARMY	32	0	32																						32			
1		2020	ARMY	40	0	40																						40			
1		2021	ARMY	56	0	56																						56			
TRILOS HW - Equipment																															
2		2017	ARMY	120	0	120																						15			
2		2018	ARMY	110	0	110																						110			
3		2019	ARMY	70	0	70																						70			
3		2020	ARMY	150	0	150																						150			
3		2021	ARMY	230	0	230																						230			
							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 2021 Army **Date:** February 2020

**Appropriation / Budget Activity / Budget Sub Activity:** 2035A / 02 / 12 **P-1 Line Item Number / Title:** 1981B00010 / Signal Modernization Program **Item Number / Title [DODIC]:** B00010 / Signal Modernization Program

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					
Secure Wireless (WiFi) HW - Equipment																																				
Prior Years Deliveries: 30																																				
	1	2019	ARMY	32	0	32				A	-	-	-	-	5	5	5	5	5	5	5	2							0							
	1	2020	ARMY	40	0	40																				A	-	-	-	-	5	5	5	5	5	15
	1	2021	ARMY	56	0	56																													56	
TRILOS HW - Equipment																																				
	2	2017	ARMY	120	105	15	10	5																											0	
	2	2018	ARMY	110	0	110	-	-	-	10	10	10	10	10	10	10	15	15	15	5																0
	3	2019	ARMY	70	0	70																													0	
	3	2020	ARMY	150	0	150																													140	
	3	2021	ARMY	230	0	230																													230	
							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 2021 Army **Date:** February 2020

**Appropriation / Budget Activity / Budget Sub Activity:** 2035A / 02 / 12 **P-1 Line Item Number / Title:** 1981B00010 / Signal Modernization Program **Item Number / Title [DODIC]:** B00010 / Signal Modernization Program

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			
Secure Wireless (WiFi) HW - Equipment																																		
Prior Years Deliveries: 30																																		
	1	2019	ARMY	32	32	0																							0					
	1	2020	ARMY	40	25	15	5	4	4	2																			0					
	1	2021	ARMY	56	0	56					A -	-	-	-	3	4	4	5	5	5	5	5	5	5	5	5	5	5	0					
TRILOS HW - Equipment																																		
	2	2017	ARMY	120	120	0																							0					
	2	2018	ARMY	110	110	0																							0					
	3	2019	ARMY	70	70	0																							0					
	3	2020	ARMY	150	10	140	10	10	10	10	10	15	15	15	15	15	15												0					
	3	2021	ARMY	230	0	230					A -	-	-	-	-	-	-	-	20	20	20	20	20	20	20	20	20	20	20	20	20	20	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 2021 Army **Date:** February 2020

<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 2035A / 02 / 12	<b>P-1 Line Item Number / Title:</b> 1981B00010 / Signal Modernization Program	<b>Item Number / Title [DODIC]:</b> B00010 / Signal Modernization Program
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MFR Ref #	Manufacturer Name - Location	Production Rates (Each / Month)			Procurement Leadtime (Months)								
		MSR For 2021	1-8-5 For 2021	MAX For 2021	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	GDMS CHS IV - Taunton, MA	1	10	30	0	4	0	4	0	4	4	4	8
2	ADS - Virginia Beach, VA	1	10	30	0	6	0	6	0	9	7	7	16
3	Ultra - Canadian Commercial Corp - Ottawa, Canada	1	10	30	0	7	0	7	0	4	7	7	11

**Remarks:**  
Production rates represent monthly values.

"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 2021 Army **Date:** February 2020

<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 2035A: Other Procurement, Army / BA 02: Communications and Electronics Equipment / BSA 12: Comm - Joint Communications	<b>P-1 Line Item Number / Title:</b> 1982B07100 / Tactical Network Technology Mod In Svc
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<b>ID Code</b> (A=Service Ready, B=Not Service Ready): A	<b>Program Elements for Code B Items:</b> N/A	<b>Other Related Program Elements:</b> N/A
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**Line Item MDAP/MAIS Code:** N/A

Resource Summary	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	To Complete	Total
Procurement Quantity ( <i>Units in Each</i> )	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost ( <i>\$ in Millions</i> )	414.597	568.367	483.439	360.379	-	360.379	441.745	393.776	417.176	421.347	Continuing	Continuing
Less PY Advance Procurement ( <i>\$ in Millions</i> )	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) ( <i>\$ in Millions</i> )	414.597	568.367	483.439	360.379	-	360.379	441.745	393.776	417.176	421.347	Continuing	Continuing
Plus CY Advance Procurement ( <i>\$ in Millions</i> )	-	-	-	-	-	-	-	-	-	-	-	-
<b>Total Obligation Authority (<i>\$ in Millions</i>)</b>	<b>414.597</b>	<b>568.367</b>	<b>483.439</b>	<b>360.379</b>	-	<b>360.379</b>	<b>441.745</b>	<b>393.776</b>	<b>417.176</b>	<b>421.347</b>	<b>Continuing</b>	<b>Continuing</b>

*(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:**

This funding line is directly aligned to the Army Network Modernization Strategy LOE 1, Unified Network. Efforts are aligned to support the Network-Cross Functional Team capability set approach to achieve the network modernization strategy.

Tactical Network Technology Modernization in Service (TNT MIS) funding modernizes the Army's Tactical Network Transport (comprised of Tactical Network Transport At the Halt and Tactical Network Transport On the Move). Tactical Network Transport provides both networking at-the-halt and networking on-the-move, keeping highly mobile and dispersed forces connected to one another and to the Army's global information network. It connects all users to each other to allow information sharing from theater down to the maneuver battalion and to select Company-level roles, to joint and multinational elements, and the Department of Defense Information Network (DoDIN). With essential voice, video and data services, at all levels of security, commanders can make decisions faster than ever before and from anywhere on the battlefield. Tactical Network Transport employs a combination of terrestrial and satellite-based transport options to provide robust, redundant connectivity with greater network reliability and better end-to-end connectivity than traditional point-to-point networks.

TNT MIS supports the near-term objectives of the Army Network Modernization Strategy by standardizing the Tactical Network Transport baseline to help create the first 'future state' of the network. TNT MIS supports the Army's Mission Command Network Modernization Implementation Plan mid-term goals by providing technology insertion that incorporates cyber and electronic warfare resiliency required for the expeditionary Army. TNT MIS will introduce new capabilities and new technologies through engineering changes to the tactical network baseline. TNT MIS provides the Army with acquisition agility to respond to the network environment in which it operates and remain the world's most lethal land force. Modernizing the Army's Tactical Network is one of the Army's top six priorities.

TNT MIS provides technology insertion for tactical network transport and modernization of non-sustainable/end of life commercial technology and other information technology (IT) component end item equipment (switches, routers, servers etc.) procured under tactical networking efforts. Technology insertion and modernization are critical to ensure the Army's tactical network maintains its security posture and compliance with new Information Assurance policies. TNT MIS is executing a modernization cycle to counter obsolescence and to sustain Commercial off the Shelf (COTS) IT components. Modernization reduces life cycle costs by reducing size, weight and power through collapsing and converging capabilities that previously resided on individual hardware components, and leverages common COTS solutions across various programs.

Secondary Distribution		FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025
Army	Quantity	-	-	-	-	-	-	-	-	-



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

<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 2035A: Other Procurement, Army / BA 02: Communications and Electronics Equipment / BSA 12: Comm - Joint Communications	<b>P-1 Line Item Number / Title:</b> 1982B07100 / Tactical Network Technology Mod In Svc
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<b>ID Code</b> (A=Service Ready, B=Not Service Ready): A	<b>Program Elements for Code B Items:</b> N/A	<b>Other Related Program Elements:</b> N/A
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**Line Item MDAP/MAIS Code:** N/A

	<b>Secondary Distribution</b>	<b>FY 2019</b>	<b>FY 2020</b>	<b>FY 2021 Base</b>	<b>FY 2021 OCO</b>	<b>FY 2021 Total</b>	<b>FY 2022</b>	<b>FY 2023</b>	<b>FY 2024</b>	<b>FY 2025</b>
	Total Obligation Authority	568.367	483.439	360.379	-	360.379	441.745	393.776	417.176	421.347
<b>Total:</b>	<b>Quantity</b>	-	-	-	-	-	-	-	-	-
<b>Secondary Distribution</b>	<b>Total Obligation Authority</b>	<b>568.367</b>	<b>483.439</b>	<b>360.379</b>	<b>-</b>	<b>360.379</b>	<b>441.745</b>	<b>393.776</b>	<b>417.176</b>	<b>421.347</b>

**UNCLASSIFIED**

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

**Appropriation / Budget Activity / Budget Sub Activity:**  
 2035A: Other Procurement, Army / BA 02: Communications and Electronics  
 Equipment / BSA 12: Comm - Joint Communications

**P-1 Line Item Number / Title:**  
 1982B07100 / Tactical Network Technology Mod In Svc

**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

Exhibits Schedule					Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total
Exhibit Type	Title*	Subexhibits	ID CD	MDAP/MAIS Code	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)
P-5	B07110 / Tactical Network Technology Mod In Svc		A		- / 414.597	- / 568.367	- / 483.439	- / 360.379	- / -	- / 360.379
<b>P-40</b>	<b>Total Gross/Weapon System Cost</b>				<b>- / 414.597</b>	<b>- / 568.367</b>	<b>- / 483.439</b>	<b>- / 360.379</b>	<b>- / -</b>	<b>- / 360.379</b>

\*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 2021 Base procurement dollars in the amount of \$360.379 million procures and fields Mission Network refresh, initial spares, and modernization of non-sustainable/end of life commercial technology to support 16 variously sized units (Division, Brigade Combat Team (BCT) and Corps), Regional Hub Nodes (RHN), Tactical Network Management System (TNMS) and lab assets.

(a) Technology insertion and modernization are critical to ensure the Army's tactical network maintains its security posture and compliance with Information Assurance policies required to maintain Authority to Operate (ATO). Tech refresh reduces life cycle costs by reducing size, weight and power through collapsing and converging capabilities that previously resided on individual hardware components, and leveraging common COTS solutions across various programs.

(b) Technology Insertion: Supports modernization of one networking on-the-move IBCTs, two networking on-the-move SBCT, and two networking on-the-move Divisions.

(c) Supports training and fielding for previously procured IBCTs with Tactical Communications Node - Lite (TCN-L) and Network Operations and Security Center - Lite (NOSC-L) capabilities; thereby improving deployability, a reduction of electronic signature, and improved network resiliency in contested environments.

(d) SATCOM obsolescence procures and fields 56 Satellite Transportable Terminals (STT) Modification Work Orders (MWO) as well as two Division Hub Nodes (DHN) to address obsolescence at Division headquarters. The SATCOM obsolescence cost elements modernize a total of 768 STT by FY23 and 18 DHN by FY25. This ensures previously fielded baseband and SATCOM configuration items remain interoperable with new capabilities to ensure the network extends to the tactical edge of the battlefield.

(e) Supports Post Deployment Software Support (PDSS) for 23 previously fielded networking on-the-move BCTs and nine networking on-the-move Divisions which is critical for maintaining an Authority to Operate and enabling a low vulnerability of cyber-attack. PDSS costs include critical trouble ticket fixes, Rapid Provisioning Software (RPS) deployment, Information Assurance Vulnerability Assessment (IAVA) updates, and continued support to transition the final software baseline to sustainment.

(f) Supports Tactical Public Key Infrastructure (PKI), allowing equipment and services on the Army's tactical network to be cryptographically authenticated as genuine.

(g) Fielding: Supports a Soldier Network Extension (SNE) reduction/redistribution and the fielding of additional Points of Presence (PoP) per the Vice Chief of Staff, Army approved BOI for networking on the move capabilities.

(h) Supports procurement and fielding to three Expeditionary Signal Battalion (ESB) - Enhanced. The ESB - Enhanced program is to provide full spectrum early-entry signal support with a tailorable capability. It has the capacity to provide JWICS (Joint Worldwide Intelligence Communications Systems)/SIPR (Secret Internet Protocol Router Network)/ NIPR (Non-Secure Internet Protocol Router)/Coalition voice, data and VTC to scale across all phases of military operation. The Joint Communications Support Element-like equipment purchase delivers modular and scalable capabilities and is intended to modernize elements of Tactical Network Transport.

(i) Supports integration of commercial satellite communications into Tactical Network Transport, including but not limited to LEO (Low Earth Orbit)/ MEO (Medium Earth Orbit)/ GEO (Geosynchronous Orbit) HTS (High Throughput Satellites).

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<b>Exhibit P-5, Cost Analysis: PB 2021 Army</b>		<b>Date:</b> February 2020
<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 2035A / 02 / 12	<b>P-1 Line Item Number / Title:</b> 1982B07100 / Tactical Network Technology Mod In Svc	<b>Item Number / Title [DODIC]:</b> B07110 / Tactical Network Technology Mod In Svc

<b>ID Code</b> (A=Service Ready, B=Not Service Ready) : A	<b>MDAP/MAIS Code:</b>
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Resource Summary	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total
Procurement Quantity (Units in Each)	-	-	-	-	-	-
Gross/Weapon System Cost (\$ in Millions)	414.597	568.367	483.439	360.379	-	360.379
Less PY Advance Procurement (\$ in Millions)	-	-	-	-	-	-
Net Procurement (P-1) (\$ in Millions)	414.597	568.367	483.439	360.379	-	360.379
Plus CY Advance Procurement (\$ in Millions)	-	-	-	-	-	-
<b>Total Obligation Authority (\$ in Millions)</b>	<b>414.597</b>	<b>568.367</b>	<b>483.439</b>	<b>360.379</b>	<b>-</b>	<b>360.379</b>

*(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 2019			FY 2020			FY 2021 Base			FY 2021 OCO			FY 2021 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																		
Lab Assets	-	-	8.417	-	-	-	-	-	15.620	-	-	6.839	-	-	-	-	-	6.839
RHN Obsolescence	-	-	17.323	-	-	21.542	-	-	19.644	-	-	16.347	-	-	-	-	-	16.347
TNMS	-	-	-	-	-	7.664	-	-	1.426	-	-	1.746	-	-	-	-	-	1.746
Tactical PKI	-	-	0.017	-	-	-	-	-	1.660	-	-	1.693	-	-	-	-	-	1.693
SATCOM Obsolescence - STT MWO	-	-	48.116	-	-	110.831	-	-	21.264	-	-	40.244	-	-	-	-	-	40.244
SATCOM Obsolescence - DHN	-	-	-	-	-	5.775	-	-	-	-	-	20.794	-	-	-	-	-	20.794
TCN-L	-	-	-	-	-	58.939	-	-	-	-	-	-	-	-	-	-	-	-
NOSC-L	-	-	-	-	-	4.994	-	-	-	-	-	-	-	-	-	-	-	-
NextGen POP B-Kit	-	-	58.577	-	-	24.359	-	-	-	-	-	-	-	-	-	-	-	-
NextGen SNE B-kit	-	-	-	-	-	13.655	-	-	-	-	-	-	-	-	-	-	-	-
NextGen SNE A-Kit	-	-	10.278	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
NextGen PoP A-Kit	-	-	-	-	-	2.188	-	-	-	-	-	-	-	-	-	-	-	-
HMMWWs	-	-	5.600	-	-	15.613	-	-	-	-	-	-	-	-	-	-	-	-
MRAP A-kits	-	-	-	-	-	5.587	-	-	-	-	-	-	-	-	-	-	-	-
Tech Insertions	-	-	23.991	-	-	22.768	-	-	68.786	-	-	59.910	-	-	-	-	-	59.910
Expeditionary Signal Battalion (ESB) - Enhanced	-	-	35.000	-	-	12.651	-	-	126.703	-	-	106.975	-	-	-	-	-	106.975

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<b>Exhibit P-5, Cost Analysis: PB 2021 Army</b>		<b>Date:</b> February 2020
<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 2035A / 02 / 12	<b>P-1 Line Item Number / Title:</b> 1982B07100 / Tactical Network Technology Mod In Svc	<b>Item Number / Title [DODIC]:</b> B07110 / Tactical Network Technology Mod In Svc
<b>ID Code</b> (A=Service Ready, B=Not Service Ready) : A		<b>MDAP/MAIS Code:</b>

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

Cost Elements	Prior Years			FY 2019			FY 2020			FY 2021 Base			FY 2021 OCO			FY 2021 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)
Post Deployment Software Support	-	-	110.184	-	-	73.730	-	-	52.719	-	-	11.264	-	-	-	-	-	11.264
Commercial Broadband	-	-	-	-	-	-	-	-	-	-	-	6.579	-	-	-	-	-	6.579
ABCT On the Move	-	-	-	-	-	-	-	-	71.000	-	-	-	-	-	-	-	-	-
<i>Subtotal: Recurring Cost</i>	-	-	317.503	-	-	380.296	-	-	378.822	-	-	272.391	-	-	-	-	-	272.391
<b>Non Recurring Cost</b>																		
Engineering	-	-	23.469	-	-	8.543	-	-	-	-	-	14.434	-	-	-	-	-	14.434
<i>Subtotal: Non Recurring Cost</i>	-	-	23.469	-	-	8.543	-	-	-	-	-	14.434	-	-	-	-	-	14.434
<i>Subtotal: Flyaway Cost</i>	-	-	340.972	-	-	388.839	-	-	378.822	-	-	286.825	-	-	-	-	-	286.825
<b>Support - Fielding Cost</b>																		
Fielding	-	-	13.324	-	-	45.569	-	-	31.353	-	-	31.583	-	-	-	-	-	31.583
<i>Subtotal: Support - Fielding Cost</i>	-	-	13.324	-	-	45.569	-	-	31.353	-	-	31.583	-	-	-	-	-	31.583
<b>Support - Initial Spares and Repair Parts Cost</b>																		
Initial Spares and Repair Parts	-	-	-	-	-	82.425	-	-	2.316	-	-	0.033	-	-	-	-	-	0.033
<i>Subtotal: Support - Initial Spares and Repair Parts Cost</i>	-	-	-	-	-	82.425	-	-	2.316	-	-	0.033	-	-	-	-	-	0.033
<b>Support - Program Management Cost</b>																		
Contractor Management	-	-	24.491	-	-	16.919	-	-	14.465	-	-	14.740	-	-	-	-	-	14.740
Government Management	-	-	10.627	-	-	17.642	-	-	15.328	-	-	11.971	-	-	-	-	-	11.971
<i>Subtotal: Support - Program Management Cost</i>	-	-	35.118	-	-	34.561	-	-	29.793	-	-	26.711	-	-	-	-	-	26.711
<b>Support - System Engineering Cost</b>																		
System Engineering	-	-	17.683	-	-	9.410	-	-	12.893	-	-	7.249	-	-	-	-	-	7.249
<i>Subtotal: Support - System Engineering Cost</i>	-	-	17.683	-	-	9.410	-	-	12.893	-	-	7.249	-	-	-	-	-	7.249
<b>Support - System Test and Evaluation Cost</b>																		
Development Test and Evaluation	-	-	1.535	-	-	2.182	-	-	2.521	-	-	2.598	-	-	-	-	-	2.598
<i>Subtotal: Support - System Test and Evaluation Cost</i>	-	-	1.535	-	-	2.182	-	-	2.521	-	-	2.598	-	-	-	-	-	2.598
<b>Support - Training Cost</b>																		

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<b>Exhibit P-5, Cost Analysis: PB 2021 Army</b>		<b>Date:</b> February 2020
<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 2035A / 02 / 12	<b>P-1 Line Item Number / Title:</b> 1982B07100 / Tactical Network Technology Mod In Svc	<b>Item Number / Title [DODIC]:</b> B07110 / Tactical Network Technology Mod In Svc
<b>ID Code</b> (A=Service Ready, B=Not Service Ready) : A		<b>MDAP/MAIS Code:</b>

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

Cost Elements	Prior Years			FY 2019			FY 2020			FY 2021 Base			FY 2021 OCO			FY 2021 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)
Services	-	-	5.965	-	-	5.381	-	-	25.741	-	-	5.380	-	-	-	-	-	5.380
<i>Subtotal: Support - Training Cost</i>	-	-	5.965	-	-	5.381	-	-	25.741	-	-	5.380	-	-	-	-	-	5.380
<b>Gross/Weapon System Cost</b>	-	-	414.597	-	-	568.367	-	-	483.439	-	-	360.379	-	-	-	-	-	360.379

**Remarks:**

FY19 Initial Spares funding supports spares associated with the \$135M program increase in the FY19 Appropriation and previously procured quantities to complete the Army Network Modernization Strategy and associated transition to sustainment by FY21.

Tech Insertion costs address baseband obsolescence.

Secondary Distribution		FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total
Army	Quantity	-	-	-	-	-
	Total Obligation Authority	568.367	483.439	360.379	-	360.379
<b>Total:</b>	Quantity	-	-	-	-	-
<b>Secondary Distribution</b>	Total Obligation Authority	568.367	483.439	360.379	-	360.379

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

<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 2035A: Other Procurement, Army / BA 02: Communications and Electronics Equipment / BSA 12: Comm - Joint Communications	<b>P-1 Line Item Number / Title:</b> 1983BW7200 / SITUATION INFORMATION TRANSPORT
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<b>ID Code</b> (A=Service Ready, B=Not Service Ready):	<b>Program Elements for Code B Items:</b> N/A	<b>Other Related Program Elements:</b> N/A
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**Line Item MDAP/MAIS Code:** N/A

Resource Summary	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	To Complete	Total
Procurement Quantity ( <i>Units in Each</i> )	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost ( <i>\$ in Millions</i> )	-	64.517	46.693	63.396	-	63.396	-	-	-	-	-	174.606
Less PY Advance Procurement ( <i>\$ in Millions</i> )	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) ( <i>\$ in Millions</i> )	-	64.517	46.693	63.396	-	63.396	-	-	-	-	-	174.606
Plus CY Advance Procurement ( <i>\$ in Millions</i> )	-	-	-	-	-	-	-	-	-	-	-	-
<b>Total Obligation Authority</b> ( <i>\$ in Millions</i> )	-	<b>64.517</b>	<b>46.693</b>	<b>63.396</b>	-	<b>63.396</b>	-	-	-	-	-	<b>174.606</b>

*(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:**

This funding line supports the Army Network Modernization Strategy LOE 1, Unified Network. Efforts are aligned to support the Network-Cross Functional Team capability set approach to achieve the network modernization strategy.

In FY21, Situational Information Transport (SIT) completes fielding of networking-on-the-move to the last two Stryker Brigade Combat teams of a combined program total of 33 active component Infantry Brigade Combat Teams and Stryker Brigade Combat Teams receiving SIT equipment. SIT also funds the procurement of initial spares and repair parts for these BCTS. SIT and the Tactical Network Technology Modernization in Service (TNT MIS) budget line provide unity of effort as part of the Army Network Modernization Strategy to provide on-the-move capability. Tactical Network Transport systems will be modernized and upgraded over time via TNT MIS.

Secondary Distribution	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025
Army	Quantity	-	-	-	-	-	-	-	-
	Total Obligation Authority	64.517	46.693	63.396	-	63.396	-	-	-
<b>Total:</b> Secondary Distribution	Quantity	-	-	-	-	-	-	-	-
	Total Obligation Authority	<b>64.517</b>	<b>46.693</b>	<b>63.396</b>	-	<b>63.396</b>	-	-	-

**UNCLASSIFIED**

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

<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 2035A: Other Procurement, Army / BA 02: Communications and Electronics Equipment / BSA 12: Comm - Joint Communications	<b>P-1 Line Item Number / Title:</b> 1983BW7200 / SITUATION INFORMATION TRANSPORT
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<b>ID Code</b> (A=Service Ready, B=Not Service Ready):	<b>Program Elements for Code B Items:</b> N/A	<b>Other Related Program Elements:</b> N/A
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**Line Item MDAP/MAIS Code:** N/A

Exhibits Schedule					Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total
Exhibit Type	Title*	Subexhibits	ID CD	MDAP/MAIS Code	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)
P-5	B27201 / Situation Information Transport				- / -	- / 64.517	- / 46.693	- / 63.396	- / -	- / 63.396
<b>P-40</b>	<b>Total Gross/Weapon System Cost</b>				- / -	- / 64.517	- / 46.693	- / 63.396	- / -	- / 63.396

\*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:**  
 FY2021 Base procurement dollars in the amount of \$63.396 million supports new equipment fielding and initial spares for networking on-the-move for the final two Stryker Brigade Combat Teams (SBCTs).

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<b>Exhibit P-5, Cost Analysis: PB 2021 Army</b>		<b>Date:</b> February 2020
<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 2035A / 02 / 12	<b>P-1 Line Item Number / Title:</b> 1983BW7200 / SITUATION INFORMATION TRANSPORT	<b>Item Number / Title [DODIC]:</b> B27201 / Situation Information Transport

<b>ID Code</b> (A=Service Ready, B=Not Service Ready) :	<b>MDAP/MAIS Code:</b>
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Resource Summary	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total
Procurement Quantity (Units in Each)	-	-	-	-	-	-
Gross/Weapon System Cost (\$ in Millions)	-	64.517	46.693	63.396	-	63.396
Less PY Advance Procurement (\$ in Millions)	-	-	-	-	-	-
Net Procurement (P-1) (\$ in Millions)	-	64.517	46.693	63.396	-	63.396
Plus CY Advance Procurement (\$ in Millions)	-	-	-	-	-	-
<b>Total Obligation Authority (\$ in Millions)</b>	-	<b>64.517</b>	<b>46.693</b>	<b>63.396</b>	-	<b>63.396</b>

*(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 2019			FY 2020			FY 2021 Base			FY 2021 OCO			FY 2021 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)
<b>Support - Fielding Cost</b>																		
Fielding	-	-	-	-	-	49.820	-	-	26.256	-	-	42.251	-	-	-	-	-	42.251
<i>Subtotal: Support - Fielding Cost</i>	-	-	-	-	-	<b>49.820</b>	-	-	<b>26.256</b>	-	-	<b>42.251</b>	-	-	-	-	-	<b>42.251</b>
<b>Support - Initial Spares and Repair Parts Cost</b>																		
Initial Spares and Repair Parts	-	-	-	-	-	9.190	-	-	6.813	-	-	7.228	-	-	-	-	-	7.228
<i>Subtotal: Support - Initial Spares and Repair Parts Cost</i>	-	-	-	-	-	<b>9.190</b>	-	-	<b>6.813</b>	-	-	<b>7.228</b>	-	-	-	-	-	<b>7.228</b>
<b>Support - Program Management Cost</b>																		
Government Management	-	-	-	-	-	3.469	-	-	5.079	-	-	5.149	-	-	-	-	-	5.149
Contractor Management	-	-	-	-	-	2.038	-	-	8.545	-	-	8.768	-	-	-	-	-	8.768
<i>Subtotal: Support - Program Management Cost</i>	-	-	-	-	-	<b>5.507</b>	-	-	<b>13.624</b>	-	-	<b>13.917</b>	-	-	-	-	-	<b>13.917</b>
<b>Gross/Weapon System Cost</b>	-	-	-	-	-	<b>64.517</b>	-	-	<b>46.693</b>	-	-	<b>63.396</b>	-	-	-	-	-	<b>63.396</b>

Secondary Distribution		FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total
Army	Quantity	-	-	-	-	-
	Total Obligation Authority	64.517	46.693	63.396	-	63.396
<b>Total:</b>	Quantity	-	-	-	-	-



**UNCLASSIFIED**

<b>Exhibit P-5, Cost Analysis:</b> PB 2021 Army			<b>Date:</b> February 2020			
<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 2035A / 02 / 12		<b>P-1 Line Item Number / Title:</b> 1983BW7200 / SITUATION INFORMATION TRANSPORT		<b>Item Number / Title [DODIC]:</b> B27201 / Situation Information Transport		
<b>ID Code</b> (A=Service Ready, B=Not Service Ready) :			<b>MDAP/MAIS Code:</b>			
<b>Secondary Distribution</b>		<b>FY 2019</b>	<b>FY 2020</b>	<b>FY 2021 Base</b>	<b>FY 2021 OCO</b>	<b>FY 2021 Total</b>
<b>Secondary Distribution</b>	<b>Total Obligation Authority</b>	64.517	46.693	63.396	-	63.396

**UNCLASSIFIED**

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

<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 2035A: Other Procurement, Army / BA 02: Communications and Electronics Equipment / BSA 12: Comm - Joint Communications	<b>P-1 Line Item Number / Title:</b> 2101B00009 / Joint Incident Site Communications Capability
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<b>ID Code</b> (A=Service Ready, B=Not Service Ready):	<b>Program Elements for Code B Items:</b> N/A	<b>Other Related Program Elements:</b> N/A
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**Line Item MDAP/MAIS Code:** N/A

Resource Summary	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	To Complete	Total
Procurement Quantity <i>(Units in Each)</i>	6	11	-	-	-	-	-	-	-	-	-	17
Gross/Weapon System Cost <i>(\$ in Millions)</i>	31.782	13.895	-	-	-	-	-	-	-	-	-	45.677
Less PY Advance Procurement <i>(\$ in Millions)</i>	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) <i>(\$ in Millions)</i>	31.782	13.895	-	-	-	-	-	-	-	-	-	45.677
Plus CY Advance Procurement <i>(\$ in Millions)</i>	-	-	-	-	-	-	-	-	-	-	-	-
<b>Total Obligation Authority <i>(\$ in Millions)</i></b>	<b>31.782</b>	<b>13.895</b>	-	-	-	-	-	-	-	-	-	<b>45.677</b>

*(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>	5,297.000	1,263.182	-	-	-	-	-	-	-	-	-	2,686.882

**Description:**

The Joint Incident Site Communications Capability (JISCC) funding line procures the Disaster Incident Response Emergency Communications Terminal (DIRECT) capability. DIRECT provides communication to each of the 50 States and 4 Territories to meet the information exchange requirements of the States National Guard (NG) operational commanders while performing Defense Support of Civil Authorities (DSCA) missions. The program leverages Warfighter Information Network-Tactical (WIN-T) Cellular and Commercial Capabilities to provide seamless network connectivity to support first responders and emergency managers.

DIRECT Capabilities consist of:

Commercial Coalition Equipment (CCE): Provides commercial internet access to civilian and multinational partners to reduce Size Weight and Power (SWaP) technology, thus fully addressing the increasingly high demand for accelerated capabilities. Interconnects disparate voice communications networks/devices used by multiple response agencies at an incident site.

Cellular Solution (Commercial Wireless and 4th Generation Long Term Evolution (4G LTE)): Provides immediate cellular and wireless network connectivity to first responders, state authorities, and federal authorities allowing for enhanced Command and Control (C2) and shared situational awareness at an incident site.

Secondary Distribution	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025
ANG									
Quantity	11	-	-	-	-	-	-	-	-
Total Obligation Authority	13.895	-	-	-	-	-	-	-	-
<b>Total:</b>									
<b>Secondary Distribution</b>									
Quantity	11	-	-	-	-	-	-	-	-
Total Obligation Authority	13.895	-	-	-	-	-	-	-	-

**Justification:**

Program has no FY2021 funding requirement

**UNCLASSIFIED**

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

<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 2035A: Other Procurement, Army / BA 02: Communications and Electronics Equipment / BSA 12: Comm - Joint Communications	<b>P-1 Line Item Number / Title:</b> 2930BB5777 / JCSE Equipment (USRDECOM)
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<b>ID Code</b> (A=Service Ready, B=Not Service Ready):	<b>Program Elements for Code B Items:</b> N/A	<b>Other Related Program Elements:</b> N/A
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**Line Item MDAP/MAIS Code:** N/A

Resource Summary	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	To Complete	Total
Procurement Quantity ( <i>Units in Each</i> )	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost ( <i>\$ in Millions</i> )	164.385	4.866	5.075	5.170	-	5.170	5.301	5.396	5.561	5.661	Continuing	Continuing
Less PY Advance Procurement ( <i>\$ in Millions</i> )	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) ( <i>\$ in Millions</i> )	164.385	4.866	5.075	5.170	-	5.170	5.301	5.396	5.561	5.661	Continuing	Continuing
Plus CY Advance Procurement ( <i>\$ in Millions</i> )	-	-	-	-	-	-	-	-	-	-	-	-
<b>Total Obligation Authority (<i>\$ in Millions</i>)</b>	<b>164.385</b>	<b>4.866</b>	<b>5.075</b>	<b>5.170</b>	<b>-</b>	<b>5.170</b>	<b>5.301</b>	<b>5.396</b>	<b>5.561</b>	<b>5.661</b>	<b>Continuing</b>	<b>Continuing</b>

*(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:**

JOINT COMMUNICATIONS SUPPORT ELEMENT (JCSE): JCSE, assigned under Joint Enabling Capabilities Command (JECC), US Transportation Command, is the only joint Department of Defense (DoD) unit specifically formed to provide Command, Control, Communications and Computers (C4) systems support for Joint Chiefs of Staff (JCS) contingency operations worldwide. The JCSE mission is to provide, on short notice, those critical communications required to support Joint Task Force support (JTF) and Joint Special Operations Task Force (JSOTF) headquarters. These assets support the warfighter's ability to deploy rapidly and immediately provide the positive command and control required. This support includes contingency and crisis communications for the Joint Chiefs of Staff, Combatant Commands, Services, Defense agencies, non-Defense agencies, and foreign governments. The program's modernization goals include meeting emerging real-world operational requirements with improved capabilities, smaller footprint, reduced operations and maintenance costs, and seamless integration with the global information grid. Per Defense Planning Guidance (DPG) and Director, Joint Staff Memorandum (DJSM) 0291-14, the Army is mandated to fund 1/3rd of JCSE's validated equipment modernization plan.

Secondary Distribution	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025
Army	Quantity	-	-	-	-	-	-	-	-
	Total Obligation Authority	4.866	5.075	5.170	-	5.170	5.301	5.396	5.561
<b>Total:</b> Secondary Distribution	Quantity	-	-	-	-	-	-	-	-
	Total Obligation Authority	<b>4.866</b>	<b>5.075</b>	<b>5.170</b>	<b>-</b>	<b>5.170</b>	<b>5.301</b>	<b>5.396</b>	<b>5.561</b>

**UNCLASSIFIED**

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

**Appropriation / Budget Activity / Budget Sub Activity:**  
 2035A: Other Procurement, Army / BA 02: Communications and Electronics  
 Equipment / BSA 12: Comm - Joint Communications

**P-1 Line Item Number / Title:**  
 2930BB5777 / JCSE Equipment (USRDECOM)

**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 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total
Exhibit Type	Title*	Subexhibits	ID CD	MDAP/MAIS Code	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)
P-5	BB5777 / JCSE Equipment (USRDECOM)	P-5a			- / 164.385	- / 4.866	- / 5.075	- / 5.170	- / -	- / 5.170
<b>P-40</b>	<b>Total Gross/Weapon System Cost</b>				<b>- / 164.385</b>	<b>- / 4.866</b>	<b>- / 5.075</b>	<b>- / 5.170</b>	<b>- / -</b>	<b>- / 5.170</b>

\*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 2021 Base funding in the amount of \$5.170 million procures communications equipment based on Strategic Planning Guidance; which includes major upgrades to large and small aperture mobile satellite systems, Everything over Internet Protocol (EoIP), Airborne/En-Route, Forced Entry, single-channel radios, and power generation equipment. Currently employed commercial-off-the-shelf (COTS) equipment is approaching the end of its life cycle and requires replacement, along with technology refresh, to meet the modernization program goals which include meeting emerging real-world operational requirements with improved capabilities, smaller footprint, reduced operations and maintenance costs, and seamless integration with the global information grid. This equipment is a critical part of Command and Control communications packages that provide direct operational support to joint forces and HQ elements deployed to austere locations around the globe. Army is mandated to fund one-third share of JCSE's validated equipment modernization plan. JCSE's Modernization Program is based on Combatant Command (CCMD) and Service Components' requirements and emerging technologies. Services influence JCSE's plan through recommendations in concert with Major Defense Acquisition Program (MDAP) schedules, ensuring that Service dollars meet Joint Service requirements.

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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<b>Exhibit P-5, Cost Analysis: PB 2021 Army</b>		<b>Date:</b> February 2020
<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 2035A / 02 / 12	<b>P-1 Line Item Number / Title:</b> 2930BB5777 / JCSE Equipment (USRDECOM)	<b>Item Number / Title [DODIC]:</b> BB5777 / JCSE Equipment (USRDECOM)

<b>ID Code</b> (A=Service Ready, B=Not Service Ready) :	<b>MDAP/MAIS Code:</b>
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<b>Resource Summary</b>	<b>Prior Years</b>	<b>FY 2019</b>	<b>FY 2020</b>	<b>FY 2021 Base</b>	<b>FY 2021 OCO</b>	<b>FY 2021 Total</b>
Procurement Quantity ( <i>Units in Each</i> )	-	-	-	-	-	-
Gross/Weapon System Cost ( <i>\$ in Millions</i> )	164.385	4.866	5.075	5.170	-	5.170
Less PY Advance Procurement ( <i>\$ in Millions</i> )	-	-	-	-	-	-
Net Procurement (P-1) ( <i>\$ in Millions</i> )	164.385	4.866	5.075	5.170	-	5.170
Plus CY Advance Procurement ( <i>\$ in Millions</i> )	-	-	-	-	-	-
<b>Total Obligation Authority</b> ( <i>\$ in Millions</i> )	<b>164.385</b>	<b>4.866</b>	<b>5.075</b>	<b>5.170</b>	<b>-</b>	<b>5.170</b>

*(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> )	-	-	-	-	-	-

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

<b>Cost Elements</b>	<b>Prior Years</b>			<b>FY 2019</b>			<b>FY 2020</b>			<b>FY 2021 Base</b>			<b>FY 2021 OCO</b>			<b>FY 2021 Total</b>		
	<b>Unit Cost</b> (\$ K)	<b>Qty</b> (Each)	<b>Total Cost</b> (\$ M)	<b>Unit Cost</b> (\$ K)	<b>Qty</b> (Each)	<b>Total Cost</b> (\$ M)	<b>Unit Cost</b> (\$ K)	<b>Qty</b> (Each)	<b>Total Cost</b> (\$ M)	<b>Unit Cost</b> (\$ K)	<b>Qty</b> (Each)	<b>Total Cost</b> (\$ M)	<b>Unit Cost</b> (\$ K)	<b>Qty</b> (Each)	<b>Total Cost</b> (\$ M)	<b>Unit Cost</b> (\$ K)	<b>Qty</b> (Each)	<b>Total Cost</b> (\$ M)
Flyaway Cost																		
Recurring Cost																		
(JCSE) <sup>(t)</sup>	82,192.500	2	164.385	4,866.000	1	4.866	5,075.000	1	5.075	5,170.000	1	5.170	-	-	-	5,170.000	1	5.170
<i>Subtotal: Recurring Cost</i>	-	-	164.385	-	-	4.866	-	-	5.075	-	-	5.170	-	-	-	-	-	5.170
<i>Subtotal: Flyaway Cost</i>	-	-	<b>164.385</b>	-	-	<b>4.866</b>	-	-	<b>5.075</b>	-	-	<b>5.170</b>	-	-	-	-	-	<b>5.170</b>
<b>Gross/Weapon System Cost</b>	-	-	<b>164.385</b>	-	-	<b>4.866</b>	-	-	<b>5.075</b>	-	-	<b>5.170</b>	-	-	-	-	-	<b>5.170</b>

<b>Secondary Distribution</b>	<b>FY 2019</b>	<b>FY 2020</b>	<b>FY 2021 Base</b>	<b>FY 2021 OCO</b>	<b>FY 2021 Total</b>
Army					
Quantity	-	-	-	-	-
Total Obligation Authority	4.866	5.075	5.170	-	5.170
<b>Total: Secondary Distribution</b>					
Quantity	-	-	-	-	-
Total Obligation Authority	4.866	5.075	5.170	-	5.170

<sup>(t)</sup> indicates the presence of a P-5a

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<b>Exhibit P-5a, Procurement History and Planning:</b> PB 2021 Army							<b>Date:</b> February 2020					
<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 2035A / 02 / 12			<b>P-1 Line Item Number / Title:</b> 2930BB5777 / JCSE Equipment (USRDECOM)				<b>Item Number / Title [DODIC]:</b> BB5777 / JCSE Equipment (USRDECOM)					

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
(JCSE)		2018	Multiple (4) / MULTIPLE	Various	Variis	Apr 2018	Sep 2018	1	5,051.000	N		
(JCSE)		2019	Multiple (2) / MULTIPLE	Various	Variis	Apr 2019	Sep 2019	1	4,866.000	N		
(JCSE)		2020	Multiple (3) / MULTIPLE	Various	Variis	Apr 2020	Sep 2020	1	5,075.000	N		
(JCSE)		2021	Multiple (3) / MULTIPLE	Various	Variis	Apr 2021	Sep 2021	1	5,170.000	N		

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

<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 2035A: Other Procurement, Army / BA 02: Communications and Electronics Equipment / BSA 18: Comm - Satellite Communications	<b>P-1 Line Item Number / Title:</b> 2936B09800 / Spectrum METSAT
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<b>ID Code</b> (A=Service Ready, B=Not Service Ready):	<b>Program Elements for Code B Items:</b> N/A	<b>Other Related Program Elements:</b> N/A
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**Line Item MDAP/MAIS Code:** N/A

Resource Summary	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	To Complete	Total
Procurement Quantity ( <i>Units in Each</i> )	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost ( <i>\$ in Millions</i> )	12.644	9.176	-	-	-	-	-	-	-	-	-	21.820
Less PY Advance Procurement ( <i>\$ in Millions</i> )	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) ( <i>\$ in Millions</i> )	12.644	9.176	-	-	-	-	-	-	-	-	-	21.820
Plus CY Advance Procurement ( <i>\$ in Millions</i> )	-	-	-	-	-	-	-	-	-	-	-	-
<b>Total Obligation Authority</b> ( <i>\$ in Millions</i> )	<b>12.644</b>	<b>9.176</b>	-	-	-	-	-	-	-	-	-	<b>21.820</b>

*(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 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025
Army	Quantity	-	-	-	-	-	-	-	-
	Total Obligation Authority	9.176	-	-	-	-	-	-	-
<b>Total:</b> Secondary Distribution	Quantity	-	-	-	-	-	-	-	-
	Total Obligation Authority	<b>9.176</b>	-	-	-	-	-	-	-

**Justification:**

Spectrum METSAT funds support the utilization of the National Oceanic and Atmospheric Administration (NOAA) Radio Frequency Interference Monitoring System (RFIMS) to design, build, install and maintain a system to monitor and detect undesirable radio frequency interference at seven (7) Army ground stations, with a centralized monitoring hub.

**UNCLASSIFIED**

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

<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 2035A: Other Procurement, Army / BA 02: Communications and Electronics Equipment / BSA 18: Comm - Satellite Communications	<b>P-1 Line Item Number / Title:</b> 2937B09700 / Spectrum Portal
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<b>ID Code</b> (A=Service Ready, B=Not Service Ready):	<b>Program Elements for Code B Items:</b> N/A	<b>Other Related Program Elements:</b> N/A
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**Line Item MDAP/MAIS Code:** N/A

Resource Summary	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	To Complete	Total
Procurement Quantity ( <i>Units in Each</i> )	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost ( <i>\$ in Millions</i> )	0.459	0.044	-	-	-	-	-	-	-	-	-	0.503
Less PY Advance Procurement ( <i>\$ in Millions</i> )	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) ( <i>\$ in Millions</i> )	0.459	0.044	-	-	-	-	-	-	-	-	-	0.503
Plus CY Advance Procurement ( <i>\$ in Millions</i> )	-	-	-	-	-	-	-	-	-	-	-	-
<b>Total Obligation Authority</b> ( <i>\$ in Millions</i> )	<b>0.459</b>	<b>0.044</b>	-	-	-	-	-	-	-	-	-	<b>0.503</b>

*(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 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025
Army	Quantity	-	-	-	-	-	-	-	-
	Total Obligation Authority	0.044	-	-	-	-	-	-	-
<b>Total:</b> Secondary Distribution	Quantity	-	-	-	-	-	-	-	-
	Total Obligation Authority	<b>0.044</b>	-	-	-	-	-	-	-

**Justification:**  
Spectrum Portal is a web-based, secure tool to provide coordination between Advance Wireless Services (AWS-3) licenses and affected federal spectrum users. The overall cost is shared between the Department of Commerce (DoC), Department of Defense (DoD), and the Department of Labor (DoL).



**UNCLASSIFIED**

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

<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 2035A: Other Procurement, Army / BA 02: Communications and Electronics Equipment / BSA 18: Comm - Satellite Communications	<b>P-1 Line Item Number / Title:</b> 2948BB8500 / Defense Enterprise Wideband Satcom Systems
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<b>ID Code</b> (A=Service Ready, B=Not Service Ready):	<b>Program Elements for Code B Items:</b> N/A	<b>Other Related Program Elements:</b> 0303142A
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**Line Item MDAP/MAIS Code:** N/A

Resource Summary	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	To Complete	Total
Procurement Quantity ( <i>Units in Each</i> )	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost ( <i>\$ in Millions</i> )	3,091.137	96.633	98.399	101.498	-	101.498	110.890	105.871	101.438	97.156	Continuing	Continuing
Less PY Advance Procurement ( <i>\$ in Millions</i> )	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) ( <i>\$ in Millions</i> )	3,091.137	96.633	98.399	101.498	-	101.498	110.890	105.871	101.438	97.156	Continuing	Continuing
Plus CY Advance Procurement ( <i>\$ in Millions</i> )	-	-	-	-	-	-	-	-	-	-	-	-
<b>Total Obligation Authority (<i>\$ in Millions</i>)</b>	<b>3,091.137</b>	<b>96.633</b>	<b>98.399</b>	<b>101.498</b>	<b>-</b>	<b>101.498</b>	<b>110.890</b>	<b>105.871</b>	<b>101.438</b>	<b>97.156</b>	<b>Continuing</b>	<b>Continuing</b>

*(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> )	70,253.114	4,601.571	-	-	-	-	-	-	-	-	Continuing	Continuing

**Description:**

The Defense Enterprise Wideband Satellite Communications (SATCOM) Systems (DEWSS) funding line provides Super High Frequency (SHF) wideband with Anti-Jam (AJ) military satellite communications readiness and resiliency supporting critical national strategic and tactical Command, Control, Communications and Intelligence (C3I) requirements. The DEWSS supports not only the Army, but it may be considered a Joint program supporting all of the Department of Defense (DoD) and has oversight at the Chairman of the Joint Chief of Staff (CJCS) level. The DEWSS/Wideband Global SATCOM (WGS) will be used in conjunction with the terrestrial transmissions of the Department of Defense Information Network (DoDIN) and other communications systems to provide end-to-end communications and long-haul connectivity. DEWSS is a system of systems composed of various hardware and software components; large earth terminal antenna, baseband terrestrial transmission terminals and payload control systems. Requirements vary based on geographic area, terrain, end users, and joint partners (both national and international). DEWSS consists of the following efforts: B08701/GMF Enhancement, B08900/Special Communications Links Program, BB8416/Enterprise Wideband Satellite Terminal (Mod) - The Modernization of Enterprise Terminals (MET), BB8501/Enterprise Wideband Satellite Terminal Digital EQ, and BB8509/Enterprise Wideband Sat Payload Control System.

B08701/GMF Enhancement - The AN/TSC-93E Tactical Satellite Service Life Extension Program (SLEP) provides satellite communications (SATCOM) capability in the SHF (Super High Frequency) range. AN/TSC-93E operates over both commercial and military SHF satellites for Army Expeditionary Signal Battalions (ESBs). 93E, along with the Warfighter Information Network - Tactical (WIN-T) program's AN/TSC-156 Phoenix Terminal, is the Army's primary means of extending Defense Information Systems Network (DISN) services (Unclassified but Sensitive Internet Protocol Router Network (NIPR), Secret Internet Protocol Router Network (SIPR), Joint Worldwide Intelligence Communications System (JWICS), Defense Switched Network (DSN), Defense Red Switched Network (DRSN), and Secure Video Teleconference (SVTC) to deployed Army forces. AN/TSC-93E SLEP has replaced existing "D" models with "E" models. E model upgrades the AN/TSC-93E from 20 Mbps to 50 Mbps, and extends the service life of the AN/TSC-93E until 2025. AN/TSC-93E configuration is as follows: up-armored, consisting of antenna pallet housing the AS-3036D antenna mounted on an M1152 D1 vehicle towing a M1102 trailer. The M1102 transports two MEP-803A generators, a SN-571 SYNC box, and a 20 gallon fuel cell. The cell will increase fuel capacity over 200%. A second M1152A1 will tow a fifth wheel commercial trailer transporting the AN/TSC-93E 250 shelter. The 93E configuration will also work in a non-up armored mode using the M1097 and the M1113.

B08900/Special Communications Links Program - The Senior National Leadership Communications (SNLC) program and the required modernization effort exists through a bilateral agreement for a 10-year user equipment modernization. Per Lead MILDEP designation memorandum - dated 28 July 2000, this is a must fund effort. Supports unique internal requirements that provide critical communications to support continuing relations between the United States President, Department of State (DoS), Secretary of Defense (SECDEF), other high level United States members and the Russia/Ukraine/Belarus/Kazakhstan leaders. The program includes the Direct Communications Link (DCL), Continuous Communications Link (CCL) and the Government-to-Government Communications Link (GGCL). Communications are required for diplomatic peacekeeping, arms control and treaty verification purposes.

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<b>Exhibit P-40, Budget Line Item Justification:</b> PB 2021 Army		<b>Date:</b> February 2020
<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 2035A: Other Procurement, Army / BA 02: Communications and Electronics Equipment / BSA 18: Comm - Satellite Communications		<b>P-1 Line Item Number / Title:</b> 2948BB8500 / Defense Enterprise Wideband Satcom Systems
<b>ID Code</b> (A=Service Ready, B=Not Service Ready):	<b>Program Elements for Code B Items:</b> N/A	<b>Other Related Program Elements:</b> 0303142A

**Line Item MDAP/MAIS Code:** N/A

BB8416/Enterprise Wideband Satellite Terminal (Mod) - The Modernization of Enterprise Terminals (MET) program is a complete modernization of fixed X-Band enterprise satellite communications terminals. The MET family of terminal equipment will increase the capacity of existing satellite communications facilities by adding military Ka-Band capability, enabling the Army to maximize its use of the Wideband Global SATCOM (WGS) constellation. The MET's modular design and incorporation of Commercial-Off-The-Shelf (COTS) systems will improve the sustainability of Army enterprise satellite communications systems, reduce life cycle costs, and extend the life of the enterprise terminal family beyond 2025.

BB8501/Enterprise Wideband Satellite Terminal Digital EQ - The Digital Communications Satellite Subsystem (DCSS) is an array of baseband equipment that is integral to the Defense Enterprise Wideband SATCOM System (DEWSS). DCSS is the interconnection between the Department of Defense Information Network (DoDIN) and the DEWSS satellite earth terminal equipment, providing users with access to the Wideband Global SATCOM (WGS) system, the DoDIN, and other military and commercially available satellite constellations. Provides deployed Warfighters with global connectivity to military command and control systems, reach back to the sustaining base, and access to enterprise information resources and the Defense Information Systems Network. Interfaces with the national strategic communications infrastructure to support Presidential and senior DoD leadership communications.

BB8509/Enterprise Wideband Sat Payload Control System - The Enterprise Wideband Satellite Payload Control System is responsible for the Department of Defense (DoD) readiness and resiliency for the management of Defense Satellite Communications System (DSCS) and Wideband Global SATCOM (WGS) satellite resources, which are required for rapid and efficient reaction to operational needs for all DOD users to include the President and International Partners. The Enterprise Wideband Satellite Payload Control System ensure efficient use and security of satellite power and spectrum, overcoming existing and projected bandwidth constraints, and allow U.S. forces to achieve information superiority on the battlefield. This system provides reliable satellite communications networks to support unique user mission requirements vital to national security under stressed and unstressed conditions.

Secondary Distribution		FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025
Army	Quantity	-	-	-	-	-	-	-	-	-
	Total Obligation Authority	96.633	98.399	101.498	-	101.498	110.890	105.871	101.438	97.156
<b>Total:</b> Secondary Distribution	Quantity	-	-	-	-	-	-	-	-	-
	Total Obligation Authority	<b>96.633</b>	<b>98.399</b>	<b>101.498</b>	-	<b>101.498</b>	<b>110.890</b>	<b>105.871</b>	<b>101.438</b>	<b>97.156</b>

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<b>Exhibit P-40, Budget Line Item Justification:</b> PB 2021 Army		<b>Date:</b> February 2020
<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 2035A: Other Procurement, Army / BA 02: Communications and Electronics Equipment / BSA 18: Comm - Satellite Communications		<b>P-1 Line Item Number / Title:</b> 2948BB8500 / Defense Enterprise Wideband Satcom Systems
<b>ID Code</b> (A=Service Ready, B=Not Service Ready):	<b>Program Elements for Code B Items:</b> N/A	<b>Other Related Program Elements:</b> 0303142A

Exhibits Schedule					Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total
Exhibit Type	Title*	Subexhibits	ID CD	MDAP/MAIS Code	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)
P-5	B08701 / GMF Enhancement				4 / 80.806	- / -	- / 0.800	- / -	- / -	- / -
P-5	B08900 / Special Communications Links Program				- / 34.960	- / 1.954	- / 2.348	- / 2.393	- / -	- / 2.393
P-5	BB8416 / Enterprise Wideband Satellite Terminal - (Mod)				- / 909.797	- / 20.532	- / 26.659	- / 28.401	- / -	- / 28.401
P-5	BB8501 / Enterprise Wideband Satellite Terminal Digital EQ				- / 929.606	- / 33.361	- / 29.902	- / 28.866	- / -	- / 28.866
P-5	BB8509 / Enterprise Wideband Sat Payload Control System				- / 1,135.968	- / 40.786	- / 38.690	- / 41.838	- / -	- / 41.838
<b>P-40</b>	<b>Total Gross/Weapon System Cost</b>				<b>- / 3,091.137</b>	<b>- / 96.633</b>	<b>- / 98.399</b>	<b>- / 101.498</b>	<b>- / -</b>	<b>- / 101.498</b>

\*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 2021 BB8500 Base procurement dollars in the amount of \$101.498 million support the following programs:

B08701 has no FY 2021 funding request.

FY 2021 B08900 Base procurement dollars in the amount of \$2.393 million supports modernization of the Direct Communications Link (DCL) software suite to support modern computers, network hardware and operating systems. Funding provides integration, installation and training support for software and associated hardware.

FY 2021 BB8416 Base Procurement dollars in the amount of \$28.401 million supports the engineering, systems integration, post-production integration, testing and installation support of Modernization of Enterprise Terminals (MET) systems fielding; MET Interactive Electronic Technical Manual (IETM) upgrades, technology refresh of the terminal systems; and the procurement, site preparation and installation of radomes.

FY 2021 BB8501 Base procurement dollars in the amount \$28.866 million procures satellite terminal and baseband equipment and associated management systems in support of Network Enterprise Technology Command (NETCOM) relocation of the satellite earth station Ft. Buckner, Okinawa. Provides the minimum essential baseband and telecommunications equipment to support the modernization of Digital Communications Satellite System (DCSS) components and their integration into the Defense Enterprise Wideband SATCOM Systems (DEWSS), including procurement, installation, and testing of the SATCOM Unified Net-centric System (SUNS). Additionally, provides replacement of legacy Enhanced Bandwidth Efficient Modem (EBEM) with a modernized Frequency Division Multiple Access (FDMA) Modem. Supports Chairman, Joint Chiefs of Staff (CJCS) validated Combatant Commanders/Service long haul communication requirements and provides baseband equipment support for the Modernization of Enterprise Terminals (MET) program.

FY 2021 BB8509 Base procurement dollars in the amount of \$41.838 million supports the readiness and resiliency in the procurement of hardware/software and security for the enterprise wideband satellite payload control system, which acquires and installs state-of-the-art strategic and tactical satellite payload control, spectrum monitoring, transmission control and network planning systems for wideband satellite constellations. Without wideband control systems to plan mission communications through Wideband Global SATCOM (WGS) and Defense Satellite Communications System (DSCS) programs, all DoD users to include the President and International Partners will not be supported.

In FY 2021, \$3.741 million in Reimbursable Manpower for this line has been realigned from Reimbursable Civilian Funding to Direct Operations and Maintenance. Program support costs have been accurately updated to reflect the realignments.

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<b>Exhibit P-40, Budget Line Item Justification:</b> PB 2021 Army		<b>Date:</b> February 2020
<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 2035A: Other Procurement, Army / BA 02: Communications and Electronics Equipment / BSA 18: Comm - Satellite Communications		<b>P-1 Line Item Number / Title:</b> 2948BB8500 / Defense Enterprise Wideband Satcom Systems
<b>ID Code</b> (A=Service Ready, B=Not Service Ready):	<b>Program Elements for Code B Items:</b> N/A	<b>Other Related Program Elements:</b> 0303142A
<b>Line Item MDAP/MAIS Code:</b> N/A		
<p>"In accordance with Section 1815 of the FY 2008 National Defense Authorization Act (P.L.110-181), these items are necessary for use by the active components and reserve components of the Armed Forces for homeland defense missions, domestic emergency responses, and providing military support to civil authorities."</p>		

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<b>Exhibit P-5, Cost Analysis: PB 2021 Army</b>		<b>Date:</b> February 2020
<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 2035A / 02 / 18	<b>P-1 Line Item Number / Title:</b> 2948BB8500 / Defense Enterprise Wideband Satcom Systems	<b>Item Number / Title [DODIC]:</b> B08701 / GMF Enhancement

<b>ID Code</b> (A=Service Ready, B=Not Service Ready) :	<b>MDAP/MAIS Code:</b>
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<b>Resource Summary</b>	<b>Prior Years</b>	<b>FY 2019</b>	<b>FY 2020</b>	<b>FY 2021 Base</b>	<b>FY 2021 OCO</b>	<b>FY 2021 Total</b>
Procurement Quantity (Units in Each)	4	-	-	-	-	-
Gross/Weapon System Cost (\$ in Millions)	80.806	-	0.800	-	-	-
Less PY Advance Procurement (\$ in Millions)	-	-	-	-	-	-
Net Procurement (P-1) (\$ in Millions)	80.806	-	0.800	-	-	-
Plus CY Advance Procurement (\$ in Millions)	-	-	-	-	-	-
<b>Total Obligation Authority (\$ in Millions)</b>	<b>80.806</b>	<b>-</b>	<b>0.800</b>	<b>-</b>	<b>-</b>	<b>-</b>

*(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)	20,201.500	-	-	-	-	-

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

<b>Cost Elements</b>	<b>Prior Years</b>			<b>FY 2019</b>			<b>FY 2020</b>			<b>FY 2021 Base</b>			<b>FY 2021 OCO</b>			<b>FY 2021 Total</b>		
	<b>Unit Cost (\$ K)</b>	<b>Qty (Each)</b>	<b>Total Cost (\$ M)</b>	<b>Unit Cost (\$ K)</b>	<b>Qty (Each)</b>	<b>Total Cost (\$ M)</b>	<b>Unit Cost (\$ K)</b>	<b>Qty (Each)</b>	<b>Total Cost (\$ M)</b>	<b>Unit Cost (\$ K)</b>	<b>Qty (Each)</b>	<b>Total Cost (\$ M)</b>	<b>Unit Cost (\$ K)</b>	<b>Qty (Each)</b>	<b>Total Cost (\$ M)</b>	<b>Unit Cost (\$ K)</b>	<b>Qty (Each)</b>	<b>Total Cost (\$ M)</b>
<b>Package Fielding Cost</b>																		
Recurring Cost																		
Fielding	-	-	74.673	-	-	-	-	-	0.350	-	-	-	-	-	-	-	-	-
<i>Subtotal: Recurring Cost</i>	-	-	74.673	-	-	-	-	-	0.350	-	-	-	-	-	-	-	-	-
<i>Subtotal: Package Fielding Cost</i>	-	-	<b>74.673</b>	-	-	-	-	-	<b>0.350</b>	-	-	-	-	-	-	-	-	-
<b>Support - Initial Spares and Repair Parts Cost</b>																		
Initial Spares and Repair Parts	1,750.000	1	1.750	-	-	-	-	-	0.155	-	-	-	-	-	-	-	-	-
<i>Subtotal: Support - Initial Spares and Repair Parts Cost</i>	-	-	<b>1.750</b>	-	-	-	-	-	<b>0.155</b>	-	-	-	-	-	-	-	-	-
<b>Support - Program Management Cost</b>																		
Government Management	-	-	3.151	-	-	-	-	-	0.050	-	-	-	-	-	-	-	-	-
<i>Subtotal: Support - Program Management Cost</i>	-	-	<b>3.151</b>	-	-	-	-	-	<b>0.050</b>	-	-	-	-	-	-	-	-	-
<b>Support - System Engineering Cost</b>																		
System Engineering	-	-	1.232	-	-	-	-	-	0.245	-	-	-	-	-	-	-	-	-
<i>Subtotal: Support - System Engineering Cost</i>	-	-	<b>1.232</b>	-	-	-	-	-	<b>0.245</b>	-	-	-	-	-	-	-	-	-
<b>Gross/Weapon System Cost</b>	<b>20,201.500</b>	<b>4</b>	<b>80.806</b>	-	-	-	-	-	<b>0.800</b>	-	-	-	-	-	-	-	-	-

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**Exhibit P-5, Cost Analysis: PB 2021 Army** **Date:** February 2020

<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 2035A / 02 / 18	<b>P-1 Line Item Number / Title:</b> 2948BB8500 / Defense Enterprise Wideband Satcom Systems	<b>Item Number / Title [DODIC]:</b> B08701 / GMF Enhancement
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**ID Code** (A=Service Ready, B=Not Service Ready) : **MDAP/MAIS Code:**

Secondary Distribution		FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total
Army	Quantity	-	-	-	-	-
	Total Obligation Authority	-	0.800	-	-	-
<b>Total:</b>	<b>Quantity</b>	-	-	-	-	-
<b>Secondary Distribution</b>	<b>Total Obligation Authority</b>	-	0.800	-	-	-

**UNCLASSIFIED**

<b>Exhibit P-5, Cost Analysis: PB 2021 Army</b>		<b>Date:</b> February 2020
<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 2035A / 02 / 18	<b>P-1 Line Item Number / Title:</b> 2948BB8500 / Defense Enterprise Wideband Satcom Systems	<b>Item Number / Title [DODIC]:</b> B08900 / Special Communications Links Program

<b>ID Code</b> (A=Service Ready, B=Not Service Ready) :	<b>MDAP/MAIS Code:</b>
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Resource Summary	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total
Procurement Quantity (Units in Each)	-	-	-	-	-	-
Gross/Weapon System Cost (\$ in Millions)	34.960	1.954	2.348	2.393	-	2.393
Less PY Advance Procurement (\$ in Millions)	-	-	-	-	-	-
Net Procurement (P-1) (\$ in Millions)	34.960	1.954	2.348	2.393	-	2.393
Plus CY Advance Procurement (\$ in Millions)	-	-	-	-	-	-
<b>Total Obligation Authority (\$ in Millions)</b>	<b>34.960</b>	<b>1.954</b>	<b>2.348</b>	<b>2.393</b>	<b>-</b>	<b>2.393</b>

*(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 2019			FY 2020			FY 2021 Base			FY 2021 OCO			FY 2021 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)
<b>Software Cost</b>																		
Recurring Cost																		
Software Development Integration	-	-	2.802	-	-	-	-	-	0.688	-	-	0.205	-	-	-	-	-	0.205
Subtotal: Recurring Cost	-	-	2.802	-	-	-	-	-	0.688	-	-	0.205	-	-	-	-	-	0.205
Subtotal: Software Cost	-	-	2.802	-	-	-	-	-	0.688	-	-	0.205	-	-	-	-	-	0.205
<b>Package Fielding Cost</b>																		
Recurring Cost																		
Fielding	-	-	2.802	-	-	0.500	-	-	0.550	-	-	0.898	-	-	-	-	-	0.898
Subtotal: Recurring Cost	-	-	2.802	-	-	0.500	-	-	0.550	-	-	0.898	-	-	-	-	-	0.898
Subtotal: Package Fielding Cost	-	-	2.802	-	-	0.500	-	-	0.550	-	-	0.898	-	-	-	-	-	0.898
<b>Support - Program Management Cost</b>																		
Government Management	-	-	29.356	-	-	1.454	-	-	1.110	-	-	0.128	-	-	-	-	-	0.128
Subtotal: Support - Program Management Cost	-	-	29.356	-	-	1.454	-	-	1.110	-	-	0.128	-	-	-	-	-	0.128
<b>Support - System Engineering Cost</b>																		
System Engineering	-	-	-	-	-	-	-	-	-	-	-	1.162	-	-	-	-	-	1.162
Subtotal: Support - System Engineering Cost	-	-	-	-	-	-	-	-	-	-	-	1.162	-	-	-	-	-	1.162
<b>Gross/Weapon System Cost</b>	<b>-</b>	<b>-</b>	<b>34.960</b>	<b>-</b>	<b>-</b>	<b>1.954</b>	<b>-</b>	<b>-</b>	<b>2.348</b>	<b>-</b>	<b>-</b>	<b>2.393</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>2.393</b>

**UNCLASSIFIED**

<b>Exhibit P-5, Cost Analysis:</b> PB 2021 Army		<b>Date:</b> February 2020
<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 2035A / 02 / 18	<b>P-1 Line Item Number / Title:</b> 2948BB8500 / Defense Enterprise Wideband Satcom Systems	<b>Item Number / Title [DODIC]:</b> B08900 / Special Communications Links Program

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

**Remarks:**  
Program Management consists of travel, training and supplies.

Secondary Distribution		FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total
Army	Quantity	-	-	-	-	-
	Total Obligation Authority	1.954	2.348	2.393	-	2.393
<b>Total:</b> Secondary Distribution	Quantity	-	-	-	-	-
	<b>Total Obligation Authority</b>	<b>1.954</b>	<b>2.348</b>	<b>2.393</b>	-	<b>2.393</b>



**UNCLASSIFIED**

<b>Exhibit P-5, Cost Analysis: PB 2021 Army</b>		<b>Date:</b> February 2020
<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 2035A / 02 / 18	<b>P-1 Line Item Number / Title:</b> 2948BB8500 / Defense Enterprise Wideband Satcom Systems	<b>Item Number / Title [DODIC]:</b> BB8416 / Enterprise Wideband Satellite Terminal - (Mod)

<b>ID Code</b> (A=Service Ready, B=Not Service Ready) :	<b>MDAP/MAIS Code:</b>
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Resource Summary	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total
Procurement Quantity (Units in Each)	-	-	-	-	-	-
Gross/Weapon System Cost (\$ in Millions)	909.797	20.532	26.659	28.401	-	28.401
Less PY Advance Procurement (\$ in Millions)	-	-	-	-	-	-
Net Procurement (P-1) (\$ in Millions)	909.797	20.532	26.659	28.401	-	28.401
Plus CY Advance Procurement (\$ in Millions)	-	-	-	-	-	-
<b>Total Obligation Authority (\$ in Millions)</b>	<b>909.797</b>	<b>20.532</b>	<b>26.659</b>	<b>28.401</b>	<b>-</b>	<b>28.401</b>

*(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)	75,816.417	4,106.400	-	-	-	-

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

Cost Elements	Prior Years			FY 2019			FY 2020			FY 2021 Base			FY 2021 OCO			FY 2021 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																		
Modernization of Enterprise Terminals (MET) Hardware	-	-	673.291	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
MET Depot Support	-	-	11.812	-	-	3.005	-	-	4.500	-	-	-	-	-	-	-	-	-
MET PDSS	-	-	4.551	-	-	2.035	-	-	-	-	-	-	-	-	-	-	-	-
MET Tech Refresh	-	-	-	-	-	5.361	-	-	8.160	-	-	0.300	-	-	-	-	-	0.300
Radome Hardware & Install	-	-	-	-	-	-	-	-	2.400	-	-	3.451	-	-	-	-	-	3.451
<i>Subtotal: Recurring Cost</i>	-	-	<i>689.654</i>	-	-	<i>10.401</i>	-	-	<i>15.060</i>	-	-	<i>3.751</i>	-	-	-	-	-	<i>3.751</i>
<i>Subtotal: Flyaway Cost</i>	-	-	<i>689.654</i>	-	-	<i>10.401</i>	-	-	<i>15.060</i>	-	-	<i>3.751</i>	-	-	-	-	-	<i>3.751</i>
Support - Fielding Cost																		
Fielding	-	-	52.153	-	-	2.001	-	-	3.722	-	-	17.434	-	-	-	-	-	17.434
<i>Subtotal: Support - Fielding Cost</i>	-	-	<i>52.153</i>	-	-	<i>2.001</i>	-	-	<i>3.722</i>	-	-	<i>17.434</i>	-	-	-	-	-	<i>17.434</i>
Support - Program Management Cost																		
Government Management	-	-	125.691	-	-	4.980	-	-	4.780	-	-	0.250	-	-	-	-	-	0.250
<i>Subtotal: Support - Program Management Cost</i>	-	-	<i>125.691</i>	-	-	<i>4.980</i>	-	-	<i>4.780</i>	-	-	<i>0.250</i>	-	-	-	-	-	<i>0.250</i>
Support - System Engineering Cost																		
System Engineering	-	-	42.299	-	-	3.150	-	-	3.097	-	-	6.966	-	-	-	-	-	6.966

**UNCLASSIFIED**

<b>Exhibit P-5, Cost Analysis: PB 2021 Army</b>		<b>Date:</b> February 2020
<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 2035A / 02 / 18	<b>P-1 Line Item Number / Title:</b> 2948BB8500 / Defense Enterprise Wideband Satcom Systems	<b>Item Number / Title [DODIC]:</b> BB8416 / Enterprise Wideband Satellite Terminal - (Mod)
<b>ID Code</b> (A=Service Ready, B=Not Service Ready) :		<b>MDAP/MAIS Code:</b>

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

Cost Elements	Prior Years			FY 2019			FY 2020			FY 2021 Base			FY 2021 OCO			FY 2021 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 Engineering Cost</i>	-	-	42.299	-	-	3.150	-	-	3.097	-	-	6.966	-	-	-	-	-	6.966
<b>Gross/Weapon System Cost</b>	75,816.417	-	909.797	4,106.400	-	20.532	-	-	26.659	-	-	28.401	-	-	-	-	-	28.401

**Remarks:**

Modernization of Enterprise Terminal (MET) hardware fully procured in FY18. MET systems are fielded to multiple locations such as: Arifjan, Kwajalein, Landstuhl, Greely, Buckner and Menwith Hill. The increase in fielding costs is due to locations and conditions of these sites and are more costly.

Program Management consists of travel, training and supplies.

Secondary Distribution		FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total
Army	Quantity	-	-	-	-	-
	Total Obligation Authority	20.532	26.659	28.401	-	28.401
<b>Total: Secondary Distribution</b>	Quantity	-	-	-	-	-
	Total Obligation Authority	20.532	26.659	28.401	-	28.401

**UNCLASSIFIED**

<b>Exhibit P-5, Cost Analysis: PB 2021 Army</b>		<b>Date:</b> February 2020
<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 2035A / 02 / 18		<b>P-1 Line Item Number / Title:</b> 2948BB8500 / Defense Enterprise Wideband Satcom Systems
		<b>Item Number / Title [DODIC]:</b> BB8501 / Enterprise Wideband Satellite Terminal Digital EQ

<b>ID Code</b> (A=Service Ready, B=Not Service Ready) :	<b>MDAP/MAIS Code:</b>
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Resource Summary	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total
Procurement Quantity (Units in Each)	-	-	-	-	-	-
Gross/Weapon System Cost (\$ in Millions)	929.606	33.361	29.902	28.866	-	28.866
Less PY Advance Procurement (\$ in Millions)	-	-	-	-	-	-
Net Procurement (P-1) (\$ in Millions)	929.606	33.361	29.902	28.866	-	28.866
Plus CY Advance Procurement (\$ in Millions)	-	-	-	-	-	-
<b>Total Obligation Authority (\$ in Millions)</b>	<b>929.606</b>	<b>33.361</b>	<b>29.902</b>	<b>28.866</b>	<b>-</b>	<b>28.866</b>

*(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)	92,960.600	3,336.100	-	-	-	-

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

Cost Elements	Prior Years			FY 2019			FY 2020			FY 2021 Base			FY 2021 OCO			FY 2021 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																		
Baseband Production Support	-	-	12.942	-	-	3.105	-	-	0.354	-	-	0.304	-	-	-	-	-	0.304
Landstuhl Baseband Installs	-	-	281.377	-	-	1.703	-	-	-	-	-	-	-	-	-	-	-	-
Precision Timing Rack Modification	-	-	1.418	-	-	1.005	-	-	0.500	-	-	-	-	-	-	-	-	-
Enhanced Bandwidth Efficient Modem (EBEM)	-	-	0.553	-	-	0.551	-	-	-	-	-	-	-	-	-	-	-	-
Transport Convergence	-	-	2.576	-	-	0.205	-	-	0.750	-	-	-	-	-	-	-	-	-
Prototyping, Integration, Test, Training (PITT) Lab	-	-	0.916	-	-	2.590	-	-	1.173	-	-	-	-	-	-	-	-	-
SATCOM Unified Net-Centric System (SUNS)	-	-	12.105	-	-	13.717	-	-	20.836	-	-	8.903	-	-	-	-	-	8.903
Communication Configuration and Asset Management System (CCAMS)	-	-	4.000	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Power Distribution Rack	-	-	-	-	-	-	-	-	0.354	-	-	-	-	-	-	-	-	-

**UNCLASSIFIED**

<b>Exhibit P-5, Cost Analysis: PB 2021 Army</b>		<b>Date:</b> February 2020
<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 2035A / 02 / 18	<b>P-1 Line Item Number / Title:</b> 2948BB8500 / Defense Enterprise Wideband Satcom Systems	<b>Item Number / Title [DODIC]:</b> BB8501 / Enterprise Wideband Satellite Terminal Digital EQ

<b>ID Code</b> (A=Service Ready, B=Not Service Ready) :	<b>MDAP/MAIS Code:</b>
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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 2019			FY 2020			FY 2021 Base			FY 2021 OCO			FY 2021 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)
Ft. Buckner Equipment	-	-	-	-	-	-	-	-	1.316	-	-	9.134	-	-	-	-	-	9.134
Camp Roberts Equipment	-	-	-	-	-	-	-	-	0.452	-	-	-	-	-	-	-	-	-
Frequency Division Multiple Access (FMDA) Modem	-	-	-	-	-	-	-	-	-	-	-	6.880	-	-	-	-	-	6.880
<i>Subtotal: Recurring Cost</i>	-	-	315.887	-	-	22.876	-	-	25.735	-	-	25.221	-	-	-	-	-	25.221
<i>Subtotal: Flyaway Cost</i>	-	-	315.887	-	-	22.876	-	-	25.735	-	-	25.221	-	-	-	-	-	25.221
<b>Support - Fielding Cost</b>																		
Fielding	-	-	8.468	-	-	1.477	-	-	0.340	-	-	1.065	-	-	-	-	-	1.065
<i>Subtotal: Support - Fielding Cost</i>	-	-	8.468	-	-	1.477	-	-	0.340	-	-	1.065	-	-	-	-	-	1.065
<b>Support - Production Engineering Cost</b>																		
Production Engineering	-	-	10.852	-	-	2.824	-	-	1.000	-	-	0.665	-	-	-	-	-	0.665
<i>Subtotal: Support - Production Engineering Cost</i>	-	-	10.852	-	-	2.824	-	-	1.000	-	-	0.665	-	-	-	-	-	0.665
<b>Support - Program Management Cost</b>																		
Government Management	-	-	393.772	-	-	3.610	-	-	1.527	-	-	0.175	-	-	-	-	-	0.175
<i>Subtotal: Support - Program Management Cost</i>	-	-	393.772	-	-	3.610	-	-	1.527	-	-	0.175	-	-	-	-	-	0.175
<b>Support - System Engineering Cost</b>																		
System Engineering	-	-	200.627	-	-	2.574	-	-	1.300	-	-	1.740	-	-	-	-	-	1.740
<i>Subtotal: Support - System Engineering Cost</i>	-	-	200.627	-	-	2.574	-	-	1.300	-	-	1.740	-	-	-	-	-	1.740
<b>Gross/Weapon System Cost</b>	<b>92,960.600</b>	-	<b>929.606</b>	<b>3,336.100</b>	-	<b>33.361</b>	-	-	<b>29.902</b>	-	-	<b>28.866</b>	-	-	-	-	-	<b>28.866</b>

**Remarks:**  
 These efforts are multiple systems of sub-systems; consisting of multiple components. There should not be any quantities associated with these efforts.

Program Management consists of travel, training and supplies.

FY 2021 increase in Ft. Buckner equipment is due to requirement to procure in order to be ready to install at newly constructed Satellite Earth Terminal Station in FY 2022. Beneficial Occupancy Date (BOD) is scheduled to be complete in FY 2022.

FY 2021 increase in fielding is due to the procurement of SATCOM Unified Net-Centric System (SUNS) in FY 2020.

**UNCLASSIFIED**

<b>Exhibit P-5, Cost Analysis:</b> PB 2021 Army		<b>Date:</b> February 2020
<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 2035A / 02 / 18	<b>P-1 Line Item Number / Title:</b> 2948BB8500 / Defense Enterprise Wideband Satcom Systems	<b>Item Number / Title [DODIC]:</b> BB8501 / Enterprise Wideband Satellite Terminal Digital EQ

<b>ID Code</b> (A=Service Ready, B=Not Service Ready) :	<b>MDAP/MAIS Code:</b>
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Secondary Distribution		FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total
Army	Quantity	-	-	-	-	-
	Total Obligation Authority	33.361	29.902	28.866	-	28.866
<b>Total:</b>	Quantity	-	-	-	-	-
<b>Secondary Distribution</b>	Total Obligation Authority	<b>33.361</b>	<b>29.902</b>	<b>28.866</b>	-	<b>28.866</b>

**UNCLASSIFIED**

<b>Exhibit P-5, Cost Analysis: PB 2021 Army</b>		<b>Date:</b> February 2020
<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 2035A / 02 / 18	<b>P-1 Line Item Number / Title:</b> 2948BB8500 / Defense Enterprise Wideband Satcom Systems	<b>Item Number / Title [DODIC]:</b> BB8509 / Enterprise Wideband Sat Payload Control System

<b>ID Code</b> (A=Service Ready, B=Not Service Ready) :	<b>MDAP/MAIS Code:</b>
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<b>Resource Summary</b>	<b>Prior Years</b>	<b>FY 2019</b>	<b>FY 2020</b>	<b>FY 2021 Base</b>	<b>FY 2021 OCO</b>	<b>FY 2021 Total</b>
Procurement Quantity (Units in Each)	-	-	-	-	-	-
Gross/Weapon System Cost (\$ in Millions)	1,135.968	40.786	38.690	41.838	-	41.838
Less PY Advance Procurement (\$ in Millions)	-	-	-	-	-	-
Net Procurement (P-1) (\$ in Millions)	1,135.968	40.786	38.690	41.838	-	41.838
Plus CY Advance Procurement (\$ in Millions)	-	-	-	-	-	-
<b>Total Obligation Authority (\$ in Millions)</b>	<b>1,135.968</b>	<b>40.786</b>	<b>38.690</b>	<b>41.838</b>	<b>-</b>	<b>41.838</b>

*(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)	63,109.333	6,797.667	-	-	-	-

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

<b>Cost Elements</b>	<b>Prior Years</b>			<b>FY 2019</b>			<b>FY 2020</b>			<b>FY 2021 Base</b>			<b>FY 2021 OCO</b>			<b>FY 2021 Total</b>		
	<b>Unit Cost (\$ K)</b>	<b>Qty (Each)</b>	<b>Total Cost (\$ M)</b>	<b>Unit Cost (\$ K)</b>	<b>Qty (Each)</b>	<b>Total Cost (\$ M)</b>	<b>Unit Cost (\$ K)</b>	<b>Qty (Each)</b>	<b>Total Cost (\$ M)</b>	<b>Unit Cost (\$ K)</b>	<b>Qty (Each)</b>	<b>Total Cost (\$ M)</b>	<b>Unit Cost (\$ K)</b>	<b>Qty (Each)</b>	<b>Total Cost (\$ M)</b>	<b>Unit Cost (\$ K)</b>	<b>Qty (Each)</b>	<b>Total Cost (\$ M)</b>
Flyaway Cost																		
Recurring Cost																		
Wideband Satellite Communications Trend Analysis and Anomaly Resolution Solution (WSTARS)	-	-	125.085	-	-	4.250	-	-	4.715	-	-	3.904	-	-	-	-	-	3.904
Wideband Remote Monitoring System (WRMS)	-	-	130.909	-	-	3.050	-	-	1.792	-	-	4.178	-	-	-	-	-	4.178
Common Network Planning System (CNPS)	-	-	129.785	-	-	6.000	-	-	3.400	-	-	3.634	-	-	-	-	-	3.634
Global Satellite Configuration Control Element (GSCCE)	-	-	198.963	-	-	2.815	-	-	-	-	-	4.423	-	-	-	-	-	4.423
Wideband SATCOM Operational Management System (WSOMS)	-	-	14.271	-	-	-	-	-	4.574	-	-	12.850	-	-	-	-	-	12.850
Joint Mngmt. & Ops. System (JMOS)	-	-	132.902	-	-	-	-	-	0.040	-	-	0.226	-	-	-	-	-	0.226
Remote Monitor Control Equipment (RMCE)	-	-	182.137	-	-	-	-	-	1.100	-	-	-	-	-	-	-	-	-

**UNCLASSIFIED**

<b>Exhibit P-5, Cost Analysis: PB 2021 Army</b>		<b>Date:</b> February 2020
<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 2035A / 02 / 18		<b>P-1 Line Item Number / Title:</b> 2948BB8500 / Defense Enterprise Wideband Satcom Systems
		<b>Item Number / Title [DODIC]:</b> BB8509 / Enterprise Wideband Sat Payload Control System
<b>ID Code</b> (A=Service Ready, B=Not Service Ready) :		<b>MDAP/MAIS Code:</b>

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

Cost Elements	Prior Years			FY 2019			FY 2020			FY 2021 Base			FY 2021 OCO			FY 2021 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)
Wideband Trainer & Certification System (WTCS)	-	-	2.099	-	-	1.350	-	-	1.457	-	-	1.371	-	-	-	-	-	1.371
Radio Frequency Modulated Orderwire (RFMOW)	-	-	141.333	-	-	0.155	-	-	-	-	-	0.114	-	-	-	-	-	0.114
Power Control Management System (PCMS)	-	-	10.420	-	-	7.925	-	-	7.775	-	-	0.678	-	-	-	-	-	0.678
Post Gres Enterprise Class Data Management Platform	-	-	3.000	-	-	3.005	-	-	-	-	-	-	-	-	-	-	-	-
Replacement and Patch Test Facility (RPTF)	-	-	0.368	-	-	-	-	-	-	-	-	0.464	-	-	-	-	-	0.464
Replacement Radio Frequency Interconnecting Subsystem (RRFIS)	-	-	-	-	-	-	-	-	-	-	-	0.271	-	-	-	-	-	0.271
<i>Subtotal: Recurring Cost</i>	-	-	1,071.272	-	-	28.550	-	-	24.853	-	-	32.113	-	-	-	-	-	32.113
<i>Subtotal: Flyaway Cost</i>	-	-	1,071.272	-	-	28.550	-	-	24.853	-	-	32.113	-	-	-	-	-	32.113
<b>Support - Fielding Cost</b>																		
Fielding	-	-	0.128	-	-	-	-	-	1.000	-	-	0.933	-	-	-	-	-	0.933
<i>Subtotal: Support - Fielding Cost</i>	-	-	0.128	-	-	-	-	-	1.000	-	-	0.933	-	-	-	-	-	0.933
<b>Support - Production Engineering Cost</b>																		
Production Engineering	-	-	3.902	-	-	-	-	-	2.681	-	-	2.262	-	-	-	-	-	2.262
<i>Subtotal: Support - Production Engineering Cost</i>	-	-	3.902	-	-	-	-	-	2.681	-	-	2.262	-	-	-	-	-	2.262
<b>Support - Program Management Cost</b>																		
Government Management	-	-	42.887	-	-	6.586	-	-	4.996	-	-	1.343	-	-	-	-	-	1.343
<i>Subtotal: Support - Program Management Cost</i>	-	-	42.887	-	-	6.586	-	-	4.996	-	-	1.343	-	-	-	-	-	1.343
<b>Support - System Engineering Cost</b>																		
System Engineering	-	-	17.779	-	-	5.650	-	-	5.160	-	-	5.187	-	-	-	-	-	5.187
<i>Subtotal: Support - System Engineering Cost</i>	-	-	17.779	-	-	5.650	-	-	5.160	-	-	5.187	-	-	-	-	-	5.187
<b>Gross/Weapon System Cost</b>	<b>63,109.333</b>	-	<b>1,135.968</b>	<b>6,797.667</b>	-	<b>40.786</b>	-	-	<b>38.690</b>	-	-	<b>41.838</b>	-	-	-	-	-	<b>41.838</b>

**UNCLASSIFIED**

<b>Exhibit P-5, Cost Analysis: PB 2021 Army</b>		<b>Date:</b> February 2020
<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 2035A / 02 / 18	<b>P-1 Line Item Number / Title:</b> 2948BB8500 / Defense Enterprise Wideband Satcom Systems	<b>Item Number / Title [DODIC]:</b> BB8509 / Enterprise Wideband Sat Payload Control System

<b>ID Code</b> (A=Service Ready, B=Not Service Ready) :	<b>MDAP/MAIS Code:</b>
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**Remarks:**  
 These efforts are multiple systems of sub-systems; consisting of multiple components. There should not be any quantities associated with these efforts.

Program Management consists of frequent travel (CONUS/OCONUS), training and supplies.

Wideband Remote Monitoring System (WRMS) - The cost increase (FY 2020 to FY 2021) completes the modernization and integration of the WRMS software as interoperable with all other Wideband SATCOM Operational Management System (WSOMS) subsystems hosted in the Wideband Satellite Communications Trend Analysis and Anomaly Resolution Solution (WSTARS), including the Power Control Management System (PCMS). This increase also includes an upgrade to the Correlation Function of WRMS Alarms to actual Satellite Link Utilization.

Wideband Satellite Operations Management System (WSOMS) - The cost increase (FY 2020 to FY 2021) includes consolidation of the Remote Monitor Control Equipment (RMCE) functionality and costs (see separate FY 2020 line item) into the Wideband SATCOM Operational Management System (WSOMS). This cost increase also enables the Wideband (Payload Control) Integration Center (WIC) to become a component of the WSOMS network, and enables Continuous Validation, Verification, and Integration of the WGS Modernization and Cybersecurity Posture.

Secondary Distribution		FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total
Army	Quantity	-	-	-	-	-
	Total Obligation Authority	40.786	38.690	41.838	-	41.838
<b>Total: Secondary Distribution</b>	Quantity	-	-	-	-	-
	<b>Total Obligation Authority</b>	<b>40.786</b>	<b>38.690</b>	<b>41.838</b>	-	<b>41.838</b>



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

<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 2035A: Other Procurement, Army / BA 02: Communications and Electronics Equipment / BSA 18: Comm - Satellite Communications	<b>P-1 Line Item Number / Title:</b> 2956B85800 / Transportable Tactical Command Communications (T2C
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ID Code (A=Service Ready, B=Not Service Ready): A	Program Elements for Code B Items: N/A	Other Related Program Elements: 0303142A
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**Line Item MDAP/MAIS Code:** N/A

Resource Summary	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	To Complete	Total
Procurement Quantity ( <i>Units in Each</i> )	252	150	152	92	7	99	84	83	32	232	Continuing	Continuing
Gross/Weapon System Cost ( <i>\$ in Millions</i> )	283.598	77.060	99.071	72.450	2.700	75.150	76.227	75.202	48.763	45.954	Continuing	Continuing
Less PY Advance Procurement ( <i>\$ in Millions</i> )	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) ( <i>\$ in Millions</i> )	283.598	77.060	99.071	72.450	2.700	75.150	76.227	75.202	48.763	45.954	Continuing	Continuing
Plus CY Advance Procurement ( <i>\$ in Millions</i> )	-	-	-	-	-	-	-	-	-	-	-	-
<b>Total Obligation Authority (<i>\$ in Millions</i>)</b>	<b>283.598</b>	<b>77.060</b>	<b>99.071</b>	<b>72.450</b>	<b>2.700</b>	<b>75.150</b>	<b>76.227</b>	<b>75.202</b>	<b>48.763</b>	<b>45.954</b>	<b>Continuing</b>	<b>Continuing</b>

*(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> )	1,125.389	513.733	651.783	787.500	385.714	759.091	907.464	906.048	1,523.844	198.078	Continuing	Continuing

**Description:**

The Transportable Tactical Command Communications (T2C2) funding line supports the Army's Network Modernization Strategy Line of Effort #1, Unified Network.

T2C2 is an ACAT Level III program based on combat proven capabilities and provides robust voice and data communication capabilities. T2C2 enables warfighters in select Command Posts (CP) (typically Company level) and select Army teams to send and receive time sensitive Situational Awareness (SA), Intelligence, and Mission Command (MC) information while At-the-Halt (ATH) in support of all Joint determined and defined operational phases.

The approved Army Procurement Objective (APO) for T2C2 is 843 (443 Lite systems, 400 Heavy systems), and 294 SCOUT Variants. The T2C2 Capability Production Document (CPD) was validated in November 2013. In 2018, the Army approved procurement of tri-band (X, Ka, Ku) systems for both variants to provide increased operational flexibility. T2C2 transitioned into Full Rate Production (FRP) in January 2018 after a successful FRP Decision and immediately began fielding in March 2018. T2C2 is a satellite communication system leveraging modular Commercial Off the Shelf (COTS) communications and network package requirements providing robust, long-range, Beyond-Line-Of-Site NIPR, SIPR, and CENTRIX SBU Data/Voice capability down to the tactical Company/Platoon/Team level. Common hardware is shared across the T2C2 variants to reduce Soldier training and to reduce unique hardware components in the Army Supply System.

In 2019, the T2C2 Program of Record (POR) began the integration of Scalable Class of Unified Terminals (SCOUT), specifically for the Army's Security Force Assistance Brigades (SFAB), into the POR. SCOUT is scheduled to complete procurement, fielding, and transition to sustainment in FY23. The SCOUT Medium variant has been identified as the leading candidate for the Integrated Tactical Network (ITN) VSAT solution.

Deployable Ku-Band Earth Terminals (DKET) actions have historically been funded out of this line; new start was announced in the FY19 OMNIBUS package. DKETs are 3.9m satellite terminals used to augment the Army's communications network infrastructure in the theater of operation. The DKET also operates as a network hub, providing inter- and intra-theater satellite links and services for disadvantaged Forward Operating Bases (FOBs). The DKET requirement is separate and distinct from the T2C2 requirement. This line was used for an Above Threshold Reprogramming action to fund the DKET requirement with prior year OPA funds and may be used to support unanticipated critical needs for the DKET terminals in the future.

Secondary Distribution	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	
Army	Quantity	150	152	39	7	46	8	22	5	97

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<b>Exhibit P-40, Budget Line Item Justification:</b> PB 2021 Army							<b>Date:</b> February 2020			
<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 2035A: Other Procurement, Army / BA 02: Communications and Electronics Equipment / BSA 18: Comm - Satellite Communications					<b>P-1 Line Item Number / Title:</b> 2956B85800 / Transportable Tactical Command Communications (T2C)					
<b>ID Code</b> (A=Service Ready, B=Not Service Ready): A			<b>Program Elements for Code B Items:</b> N/A			<b>Other Related Program Elements:</b> 0303142A				
<b>Line Item MDAP/MAIS Code:</b> N/A										

Secondary Distribution		FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025
	Total Obligation Authority	77.060	99.071	30.712	2.700	33.412	9.296	19.933	9.518	19.213
ANG	Quantity	-	-	40	-	40	76	48	23	56
	Total Obligation Authority	-	-	31.500	-	31.500	66.931	43.490	33.431	11.093
AR	Quantity	-	-	13	-	13	-	13	4	79
	Total Obligation Authority	-	-	10.238	-	10.238	-	11.779	5.814	15.648
<b>Total:</b>	<b>Quantity</b>	<b>150</b>	<b>152</b>	<b>92</b>	<b>7</b>	<b>99</b>	<b>84</b>	<b>83</b>	<b>32</b>	<b>232</b>
<b>Secondary Distribution</b>	<b>Total Obligation Authority</b>	<b>77.060</b>	<b>99.071</b>	<b>72.450</b>	<b>2.700</b>	<b>75.150</b>	<b>76.227</b>	<b>75.202</b>	<b>48.763</b>	<b>45.954</b>

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

**Appropriation / Budget Activity / Budget Sub Activity:**  
 2035A: Other Procurement, Army / BA 02: Communications and Electronics  
 Equipment / BSA 18: Comm - Satellite Communications

**P-1 Line Item Number / Title:**  
 2956B85800 / Transportable Tactical Command Communications (T2C)

**ID Code** (A=Service Ready, B=Not Service Ready): A **Program Elements for Code B Items:** N/A **Other Related Program Elements:** 0303142A

**Line Item MDAP/MAIS Code:** N/A

Exhibits Schedule					Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total
Exhibit Type	Title*	Subexhibits	ID CD	MDAP/MAIS Code	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)
P-5	B85800 / Transportable Tactical Command Communications (T2C)	P-5a, P-21	A		252 / 283.598	150 / 77.060	152 / 99.071	92 / 72.450	7 / 2.700	99 / 75.150
<b>P-40</b>	<b>Total Gross/Weapon System Cost</b>				<b>252 / 283.598</b>	<b>150 / 77.060</b>	<b>152 / 99.071</b>	<b>92 / 72.450</b>	<b>7 / 2.700</b>	<b>99 / 75.150</b>

\*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 2021 base procurement dollars, in the amount of \$72.450 million, supports the procurement of Full Rate Production (FRP) quantities for T2C2 Lite (46) and T2C2 Heavy (46) tri-band systems. FY 2021 base procurement dollars also support procurement of applicable spares, fielding and training of Lite and Heavy systems, maintain system engineering for current fielded systems, and any approved emerging modular communications or network package requirements as a result of ITN experimentation.

FY 2021 OCO procurement dollars, in the amount of \$2.700 million, supports the procurement and fielding of 7 modular communications and network packages to remote locations with limited or challenged communications services and fielding of units rapidly deploying. The communications and network package will be able to scale from a platoon to battalion size element, include a portable satellite antenna, small-form networking servers, and backup battery equipment. The communications and network package will be transportable by two-man teams to remote locations in order to respond to contingency deployment operations requiring tri-band capability (X, Ka, Ku), multiple enclave availability, easily transportable (commercial transport), and scalable communications. Deployable Ku-Band Earth Terminals (DKET) are satellite terminals, used to augment the Army's communications network infrastructure in theater. They also operate as hubs, providing inter- and intra- theater satellite links and network hub services for disadvantaged forward operating bases.

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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<b>Exhibit P-5, Cost Analysis: PB 2021 Army</b>													<b>Date:</b> February 2020					
<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 2035A / 02 / 18						<b>P-1 Line Item Number / Title:</b> 2956B85800 / Transportable Tactical Command Communications (T2C)						<b>Item Number / Title [DODIC]:</b> B85800 / Transportable Tactical Command Communications (T2C)						
<b>ID Code</b> (A=Service Ready, B=Not Service Ready) : A									<b>MDAP/MAIS Code:</b>									
<b>Resource Summary</b>				<b>Prior Years</b>		<b>FY 2019</b>		<b>FY 2020</b>		<b>FY 2021 Base</b>		<b>FY 2021 OCO</b>		<b>FY 2021 Total</b>				
Procurement Quantity ( <i>Units in Each</i> )				252		150		152		92		7		99				
Gross/Weapon System Cost ( <i>\$ in Millions</i> )				283.598		77.060		99.071		72.450		2.700		75.150				
Less PY Advance Procurement ( <i>\$ in Millions</i> )				-		-		-		-		-		-				
Net Procurement (P-1) ( <i>\$ in Millions</i> )				283.598		77.060		99.071		72.450		2.700		75.150				
Plus CY Advance Procurement ( <i>\$ in Millions</i> )				-		-		-		-		-		-				
<b>Total Obligation Authority</b> ( <i>\$ in Millions</i> )				<b>283.598</b>		<b>77.060</b>		<b>99.071</b>		<b>72.450</b>		<b>2.700</b>		<b>75.150</b>				
<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> )				1,125.389		513.733		651.783		787.500		385.714		759.091				
Note: Subtotals or Totals in this Exhibit P-5 may not be exact or sum exactly due to rounding.																		
<b>Cost Elements</b>	<b>Prior Years</b>			<b>FY 2019</b>			<b>FY 2020</b>			<b>FY 2021 Base</b>			<b>FY 2021 OCO</b>			<b>FY 2021 Total</b>		
	<b>Unit Cost</b> (\$ K)	<b>Qty</b> (Each)	<b>Total Cost</b> (\$ M)	<b>Unit Cost</b> (\$ K)	<b>Qty</b> (Each)	<b>Total Cost</b> (\$ M)	<b>Unit Cost</b> (\$ K)	<b>Qty</b> (Each)	<b>Total Cost</b> (\$ M)	<b>Unit Cost</b> (\$ K)	<b>Qty</b> (Each)	<b>Total Cost</b> (\$ M)	<b>Unit Cost</b> (\$ K)	<b>Qty</b> (Each)	<b>Total Cost</b> (\$ M)	<b>Unit Cost</b> (\$ K)	<b>Qty</b> (Each)	<b>Total Cost</b> (\$ M)
<b>Hardware Cost</b>																		
<b>Recurring Cost</b>																		
T2C2 Lite <sup>(†)</sup>	468.657	99	46.397	264.693	88	23.293	367.269	78	28.647	395.043	46	18.172	-	-	-	395.043	46	18.172
T2C2 Heavy <sup>(†)</sup>	563.494	89	50.151	319.690	58	18.542	493.270	63	31.076	507.891	46	23.363	-	-	-	507.891	46	23.363
T2C2 Tri-band Delta Kit	155.049	82	12.714	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
<b>Subtotal: Recurring Cost</b>	<b>-</b>	<b>-</b>	<b>109.262</b>	<b>-</b>	<b>-</b>	<b>41.835</b>	<b>-</b>	<b>-</b>	<b>59.723</b>	<b>-</b>	<b>-</b>	<b>41.535</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>41.535</b>
<b>Non Recurring Cost</b>																		
RHN Upgrades	-	-	16.849	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Commercially Available Systems	993.667	12	11.924	546.154	13	7.100	630.000	11	6.930	-	-	-	385.714	7	2.700	385.714	7	2.700
AN/PSC-15 (GRRIP) Upgrade	10.000	54	0.540	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
CSS-VSAT	-	-	90.372	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
<b>Subtotal: Non Recurring Cost</b>	<b>-</b>	<b>-</b>	<b>119.685</b>	<b>-</b>	<b>-</b>	<b>7.100</b>	<b>-</b>	<b>-</b>	<b>6.930</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>2.700</b>	<b>-</b>	<b>-</b>	<b>2.700</b>
<b>Subtotal: Hardware Cost</b>	<b>-</b>	<b>-</b>	<b>228.947</b>	<b>-</b>	<b>-</b>	<b>48.935</b>	<b>-</b>	<b>-</b>	<b>66.653</b>	<b>-</b>	<b>-</b>	<b>41.535</b>	<b>-</b>	<b>-</b>	<b>2.700</b>	<b>-</b>	<b>-</b>	<b>44.235</b>
<b>Software Cost</b>																		
<b>Recurring Cost</b>																		
Software	-	-	5.983	-	-	7.395	-	-	7.665	-	-	8.246	-	-	-	-	-	8.246
<b>Subtotal: Recurring Cost</b>	<b>-</b>	<b>-</b>	<b>5.983</b>	<b>-</b>	<b>-</b>	<b>7.395</b>	<b>-</b>	<b>-</b>	<b>7.665</b>	<b>-</b>	<b>-</b>	<b>8.246</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>8.246</b>
<b>Subtotal: Software Cost</b>	<b>-</b>	<b>-</b>	<b>5.983</b>	<b>-</b>	<b>-</b>	<b>7.395</b>	<b>-</b>	<b>-</b>	<b>7.665</b>	<b>-</b>	<b>-</b>	<b>8.246</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>8.246</b>

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<b>Exhibit P-5, Cost Analysis: PB 2021 Army</b>													<b>Date:</b> February 2020					
<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 2035A / 02 / 18						<b>P-1 Line Item Number / Title:</b> 2956B85800 / Transportable Tactical Command Communications (T2C)						<b>Item Number / Title [DODIC]:</b> B85800 / Transportable Tactical Command Communications (T2C)						
<b>ID Code</b> (A=Service Ready, B=Not Service Ready) : A									<b>MDAP/MAIS Code:</b>									

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

Cost Elements	Prior Years			FY 2019			FY 2020			FY 2021 Base			FY 2021 OCO			FY 2021 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)
<b>Support - Data Cost</b>																		
Technical Publications	-	-	5.100	-	-	1.752	-	-	1.541	-	-	0.552	-	-	-	-	-	0.552
<i>Subtotal: Support - Data Cost</i>	-	-	<b>5.100</b>	-	-	<b>1.752</b>	-	-	<b>1.541</b>	-	-	<b>0.552</b>	-	-	-	-	-	<b>0.552</b>
<b>Support - Fielding Cost</b>																		
Fielding	-	-	19.628	-	-	13.696	-	-	16.572	-	-	15.370	-	-	-	-	-	15.370
<i>Subtotal: Support - Fielding Cost</i>	-	-	<b>19.628</b>	-	-	<b>13.696</b>	-	-	<b>16.572</b>	-	-	<b>15.370</b>	-	-	-	-	-	<b>15.370</b>
<b>Support - Program Management Cost</b>																		
Government Management	-	-	12.979	-	-	1.062	-	-	1.127	-	-	1.150	-	-	-	-	-	1.150
Contractor Management	-	-	8.568	-	-	3.003	-	-	3.441	-	-	3.474	-	-	-	-	-	3.474
<i>Subtotal: Support - Program Management Cost</i>	-	-	<b>21.547</b>	-	-	<b>4.065</b>	-	-	<b>4.568</b>	-	-	<b>4.624</b>	-	-	-	-	-	<b>4.624</b>
<b>Support - System Engineering Cost</b>																		
System Engineering	-	-	2.393	-	-	1.217	-	-	2.072	-	-	2.123	-	-	-	-	-	2.123
<i>Subtotal: Support - System Engineering Cost</i>	-	-	<b>2.393</b>	-	-	<b>1.217</b>	-	-	<b>2.072</b>	-	-	<b>2.123</b>	-	-	-	-	-	<b>2.123</b>
<b>Gross/Weapon System Cost</b>	<b>1,125.389</b>	<b>252</b>	<b>283.598</b>	<b>513.733</b>	<b>150</b>	<b>77.060</b>	<b>651.783</b>	<b>152</b>	<b>99.071</b>	<b>787.500</b>	<b>92</b>	<b>72.450</b>	<b>385.714</b>	<b>7</b>	<b>2.700</b>	<b>759.091</b>	<b>99</b>	<b>75.150</b>

**Remarks:**

Recurring unit cost estimates increased in FY21 to reflect contract actuals and requirements change.  
 Gross Weapons System Unit Cost variability (FY19 through FY21) is due to a mix of system variants (Lite and Heavy) procured annually and offsetting fielding with funding from prior years.  
 Commercially available systems unit cost decreased in FY21 to reflect current projected configuration.

Secondary Distribution		FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total
Army	Quantity	150	152	39	7	46
	Total Obligation Authority	77.060	99.071	30.712	2.700	33.412
ANG	Quantity	-	-	40	-	40
	Total Obligation Authority	-	-	31.500	-	31.500
AR	Quantity	-	-	13	-	13
	Total Obligation Authority	-	-	10.238	-	10.238
<b>Total:</b>	<b>Quantity</b>	<b>150</b>	<b>152</b>	<b>92</b>	<b>7</b>	<b>99</b>

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<b>Exhibit P-5, Cost Analysis:</b> PB 2021 Army		<b>Date:</b> February 2020
<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 2035A / 02 / 18	<b>P-1 Line Item Number / Title:</b> 2956B85800 / Transportable Tactical Command Communications (T2C)	<b>Item Number / Title [DODIC]:</b> B85800 / Transportable Tactical Command Communications (T2C)

<b>ID Code</b> (A=Service Ready, B=Not Service Ready) : A	<b>MDAP/MAIS Code:</b>
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Secondary Distribution		FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total
Secondary Distribution	Total Obligation Authority	77.060	99.071	72.450	2.700	75.150

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

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<b>Exhibit P-5a, Procurement History and Planning:</b> PB 2021 Army							<b>Date:</b> February 2020				
<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 2035A / 02 / 18			<b>P-1 Line Item Number / Title:</b> 2956B85800 / Transportable Tactical Command Communications (T2C				<b>Item Number / Title [DODIC]:</b> B85800 / Transportable Tactical Command Communications (T2C				

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
T2C2 Lite <sup>(†)</sup>		2019	GATR Technologies / Huntsville	C / IDIQ	Aberdeen Proving Ground, MD	Mar 2019	Jun 2019	88	264.693	Y		Jun 2013
T2C2 Lite <sup>(†)</sup>		2020	GATR Technologies / Huntsville	C / IDIQ	Aberdeen Proving Ground, MD	Feb 2020	Jun 2020	78	367.269	Y		Jun 2013
T2C2 Lite <sup>(†)</sup>		2021	GATR Technologies / Huntsville	C / IDDQ	Aberdeen Proving Ground, MD	Jan 2021	Apr 2021	46	395.043	N		Jun 2013
T2C2 Heavy <sup>(†)</sup>		2019	GATR Technologies / Huntsville	C / IDIQ	Aberdeen Proving Ground, MD	Mar 2019	Jun 2019	58	319.690	Y		Jun 2013
T2C2 Heavy <sup>(†)</sup>		2020	GATR Technologies / Huntsville	C / IDIQ	Aberdeen Proving Ground, MD	Feb 2020	Jun 2020	63	493.270	Y		Jun 2013
T2C2 Heavy <sup>(†)</sup>		2021	GATR Technologies / Huntsville	C / IDIQ	Aberdeen Proving Ground MD	Jan 2021	Apr 2021	46	507.891	Y		Jun 2013

<sup>(†)</sup> indicates the presence of a P-21

**Remarks:**

T2C2 executes Delivery Orders under an existing Small Business Innovated Research (SBIR) III, Firm Fixed Price (FFP), Indefinite Delivery, Indefinite Quantity (IDIQ) contract to procure system hardware. The current period of performance ends in September 2023. Unit cost increased in the T2C2 Lite because FY20 projections were prior to integrated Tri-band system award. FY21 cost reflect most current contract values. ITN experimentation may alter contract for FY20 and beyond.

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<b>Exhibit P-21, Production Schedule:</b> PB 2021 Army													<b>Date:</b> February 2020																
<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 2035A / 02 / 18						<b>P-1 Line Item Number / Title:</b> 2956B85800 / Transportable Tactical Command Communications (T2C)												<b>Item Number / Title [DODIC]:</b> B85800 / Transportable Tactical Command Communications (T2C)											

Cost Elements (Units in Each)					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					

T2C2 Lite																																					
Prior Years Deliveries: 99																																					
1	2019	ARMY	88	0	88																																0
1	2020	ARMY	78	0	78																																38
1	2021	ARMY	46	0	46																															46	

T2C2 Heavy																																				
Prior Years Deliveries: 89																																				
2	2019	ARMY	58	0	58																															0
2	2020	ARMY	63	0	63																															15
2	2021	ARMY	46	0	46																															46



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<b>Exhibit P-21, Production Schedule:</b> PB 2021 Army		<b>Date:</b> February 2020
<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 2035A / 02 / 18		<b>P-1 Line Item Number / Title:</b> 2956B85800 / Transportable Tactical Command Communications (T2C)
		<b>Item Number / Title [DODIC]:</b> B85800 / Transportable Tactical Command Communications (T2C)

Cost Elements <i>(Units in Each)</i>						Fiscal Year 2021												Fiscal Year 2022												BALANCE	
O C C #	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
T2C2 Lite																															
Prior Years Deliveries: 99																															
	1	2019	ARMY	88	88	0																							0		
	1	2020	ARMY	78	40	38	10	10	10		8																		0		
	1	2021	ARMY	46	0	46					A -	-	-	10	10	10	10	6											0		
T2C2 Heavy																															
Prior Years Deliveries: 89																															
	2	2019	ARMY	58	58	0																							0		
	2	2020	ARMY	63	48	15	11	4																					0		
	2	2021	ARMY	46	0	46					A -	-	-	10	10	10	10	6											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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<b>Exhibit P-21, Production Schedule:</b> PB 2021 Army		<b>Date:</b> February 2020
<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 2035A / 02 / 18		<b>P-1 Line Item Number / Title:</b> 2956B85800 / Transportable Tactical Command Communications (T2C)
		<b>Item Number / Title [DODIC]:</b> B85800 / Transportable Tactical Command Communications (T2C)

MFR Ref #	Manufacturer Name - Location	Production Rates (Each / Month)			Procurement Leadtime (Months)							
		MSR For 2021	1-8-5 For 2021	MAX For 2021	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	GATR Technologies - Huntsville	1	30	80	0	3	3	6	0	6	3	9
2	GATR Technologies - Huntsville	1	30	80	0	3	3	6	0	6	3	9

"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).

**UNCLASSIFIED**

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

<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 2035A: Other Procurement, Army / BA 02: Communications and Electronics Equipment / BSA 18: Comm - Satellite Communications	<b>P-1 Line Item Number / Title:</b> 9810BA9350 / SHF Term
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<b>ID Code</b> (A=Service Ready, B=Not Service Ready): A	<b>Program Elements for Code B Items:</b> N/A	<b>Other Related Program Elements:</b> N/A
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**Line Item MDAP/MAIS Code:** N/A

Resource Summary	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	To Complete	Total
Procurement Quantity ( <i>Units in Each</i> )	12	-	-	-	-	-	-	-	-	-	-	12
Gross/Weapon System Cost ( <i>\$ in Millions</i> )	689.988	10.378	15.054	13.173	-	13.173	22.692	22.692	21.693	-	-	795.670
Less PY Advance Procurement ( <i>\$ in Millions</i> )	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) ( <i>\$ in Millions</i> )	689.988	10.378	15.054	13.173	-	13.173	22.692	22.692	21.693	-	-	795.670
Plus CY Advance Procurement ( <i>\$ in Millions</i> )	-	-	-	-	-	-	-	-	-	-	-	-
<b>Total Obligation Authority (<i>\$ in Millions</i>)</b>	<b>689.988</b>	<b>10.378</b>	<b>15.054</b>	<b>13.173</b>	<b>-</b>	<b>13.173</b>	<b>22.692</b>	<b>22.692</b>	<b>21.693</b>	<b>-</b>	<b>-</b>	<b>795.670</b>

*(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:**

This funding line supports the Army Network Modernization Strategy LOE 1, Unified Network. Efforts are aligned to support the Network-Cross Functional Team capability set approach to achieve the network modernization strategy.

The Super High Frequency (SHF) Terminal (Phoenix, AN/TSC-156D) program procured and fielded the Army's only quad-band, multi-carrier, high throughput (max 52 Mbps), self-contained, satellite communications system that can be rapidly reconfigured with on-board equipment. The AN/TSC-156D is an Expeditionary Signal Battalion (ESB) asset that provides tactical, highly mobile, command and control, intelligence, fire support, air defense and logistics wideband communications requirements. New and emerging architectures levied in the Transmission Systems Increment 1 Capabilities Production Document (CPD), increasing demand for satellite bandwidth, and approaching end of life on the AN/TSC-156D, necessitate a modernization of the AN/TSC-156D to the AN/TSC-156E variant. The design of the AN/TSC-156E will leverage commercial off-the-shelf (COTS) solutions to increase commonality with lateral systems and any approved emerging modular communications and network package requirements. The AN/TSC-156E will utilize a transit-case based concept allowing for scalability with or without the vehicle support. This modernization effort focuses on building network capacity, improving system interoperability, and extending/adding flexibility to the network for the tactical formation. Specifically, the AN/TSC-156E will add Internet Protocol (IP) capable Frequency Division Multiple Access (FDMA) and Multi-frequency Time Division Multiple Access (MF-TDMA) Net-Centric Waveform (NCW) modems as well as provide a dual head capability to access two satellites and/or bands simultaneously in order to increase network diversity, robustness, and capacity. The network attributes that will be enabled network-wide by the Transmission CPD are: network extension, network flexibility, and network integration. This will align the AN/TSC-156E with the Tactical Network (TN) and allow seamless integration with current and future proposed tactical communications networks at the high data rates and multiple bands required by current and future operations. Of note, the AN/TSC-156E will serve as the solution for the ESB-E's large SATCOM terminal. This program is designated as a DoD Space Program.

The Approved Acquisition Objective (AAO) for the SHF Terminal is 160.

	Secondary Distribution	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025
Army	Quantity	-	-	-	-	-	-	-	-	-
	Total Obligation Authority	10.378	15.054	7.245	-	7.245	12.480	12.480	11.481	-
ANG	Quantity	-	-	-	-	-	-	-	-	-
	Total Obligation Authority	-	-	3.952	-	3.952	6.808	6.808	6.808	-

**UNCLASSIFIED**

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

<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 2035A: Other Procurement, Army / BA 02: Communications and Electronics Equipment / BSA 18: Comm - Satellite Communications	<b>P-1 Line Item Number / Title:</b> 9810BA9350 / SHF Term
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ID Code (A=Service Ready, B=Not Service Ready): A	Program Elements for Code B Items: N/A	Other Related Program Elements: N/A
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Line Item MDAP/MAIS Code: N/A

		FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025
<b>Secondary Distribution</b>	Quantity	-	-	-	-	-	-	-	-	-
	Total Obligation Authority	-	-	1.976	-	1.976	3.404	3.404	3.404	-
<b>Total: Secondary Distribution</b>	Quantity	-	-	-	-	-	-	-	-	-
	Total Obligation Authority	<b>10.378</b>	<b>15.054</b>	<b>13.173</b>	-	<b>13.173</b>	<b>22.692</b>	<b>22.692</b>	<b>21.693</b>	-

**UNCLASSIFIED**

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

<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 2035A: Other Procurement, Army / BA 02: Communications and Electronics Equipment / BSA 18: Comm - Satellite Communications	<b>P-1 Line Item Number / Title:</b> 9810BA9350 / SHF Term
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ID Code (A=Service Ready, B=Not Service Ready): A	Program Elements for Code B Items: N/A	Other Related Program Elements: N/A
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**Line Item MDAP/MAIS Code:** N/A

Exhibits Schedule					Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total
Exhibit Type	Title*	Subexhibits	ID CD	MDAP/MAIS Code	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)
P-5	BA9350 / SHF Term		A		12 / 689.988	- / 10.378	- / 15.054	- / 13.173	- / -	- / 13.173
<b>P-40</b>	<b>Total Gross/Weapon System Cost</b>				<b>12 / 689.988</b>	<b>- / 10.378</b>	<b>- / 15.054</b>	<b>- / 13.173</b>	<b>- / -</b>	<b>- / 13.173</b>

\*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 2021 Base procurement dollars in the amount of \$13.173 million supports the continued production of Phoenix E-Model upgrades, to add a standard Internet Protocol (IP) interface and Time Division Multiple Access (TDMA) modem capability to the currently fielded D-Model Phoenix capability. These modifications will significantly enhance Phoenix interoperability with the Tactical Network. The result of these upgrades will be the E-Model Phoenix terminal. These were specified in the Transmission Systems Increment 1 Capabilities Production Document (CPD) requirements.

**Notes:**  
 The P-5 COST ELEMENT E-Model Upgrades/ECP (Engineering Change Proposal) was added to reflect the Phoenix E-Model cost and the cost for any upgrades to the initial E-Model prototypes to the current configuration. The removal of the prior verbiage "MWO/ECP line" occurred as a result of the shift from a formal MWO to a directed Material Release process per PEO C3T directive September 2019. The competitive Full Rate Production (FRP) contract will be initiated in FY22, and will provide time for the full and open competitive source selection process. The total of 7 low-rate E-Model terminals is well below the 10% (qty 16) threshold and will be the basis of the First Unit equipped (FUE) terminals.  
 The Depot Pipeline/ Organic Maintenance P-5 COST ELEMENT in FY21 reflects continued stocking of the depot with pipeline spares and supporting the depot to take on the organic maintenance responsibility. The FY20 Depot Pipeline funding was reduced by \$1.000 million, as a result of the FY20 Congressional reduction. In addition, the FY21 GFE funding is to provide trucks (IAW truck contract availability) and other equipment GFE required for the E-model upgrades.

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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<b>Exhibit P-5, Cost Analysis: PB 2021 Army</b>		<b>Date:</b> February 2020
<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 2035A / 02 / 18	<b>P-1 Line Item Number / Title:</b> 9810BA9350 / SHF Term	<b>Item Number / Title [DODIC]:</b> BA9350 / SHF Term

<b>ID Code</b> (A=Service Ready, B=Not Service Ready) : A	<b>MDAP/MAIS Code:</b>
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Resource Summary	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total
Procurement Quantity (Units in Each)	12	-	-	-	-	-
Gross/Weapon System Cost (\$ in Millions)	689.988	10.378	15.054	13.173	-	13.173
Less PY Advance Procurement (\$ in Millions)	-	-	-	-	-	-
Net Procurement (P-1) (\$ in Millions)	689.988	10.378	15.054	13.173	-	13.173
Plus CY Advance Procurement (\$ in Millions)	-	-	-	-	-	-
<b>Total Obligation Authority (\$ in Millions)</b>	<b>689.988</b>	<b>10.378</b>	<b>15.054</b>	<b>13.173</b>	<b>-</b>	<b>13.173</b>

*(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 2019			FY 2020			FY 2021 Base			FY 2021 OCO			FY 2021 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)
<b>Flyaway Cost</b>																		
Recurring Cost																		
SHF Terminals	-	-	184.906	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
GFE	-	-	2.250	-	-	0.333	-	-	1.351	-	-	0.562	-	-	-	-	-	0.562
E-Model Upgrades/ECP	-	-	45.285	-	-	5.514	-	-	6.312	-	-	6.268	-	-	-	-	-	6.268
<i>Subtotal: Recurring Cost</i>	-	-	232.441	-	-	5.847	-	-	7.663	-	-	6.830	-	-	-	-	-	6.830
Non Recurring Cost																		
Data/ Test	-	-	0.446	-	-	0.468	-	-	2.150	-	-	0.550	-	-	-	-	-	0.550
<i>Subtotal: Non Recurring Cost</i>	-	-	0.446	-	-	0.468	-	-	2.150	-	-	0.550	-	-	-	-	-	0.550
<i>Subtotal: Flyaway Cost</i>	-	-	<b>232.887</b>	-	-	<b>6.315</b>	-	-	<b>9.813</b>	-	-	<b>7.380</b>	-	-	-	-	-	<b>7.380</b>
<b>Package Fielding Cost</b>																		
Recurring Cost																		
Fielding	-	-	-	-	-	-	-	-	0.219	-	-	0.745	-	-	-	-	-	0.745
Training	-	-	-	-	-	-	-	-	0.179	-	-	0.650	-	-	-	-	-	0.650
<i>Subtotal: Recurring Cost</i>	-	-	-	-	-	-	-	-	0.398	-	-	1.395	-	-	-	-	-	1.395
<i>Subtotal: Package Fielding Cost</i>	-	-	-	-	-	-	-	-	<b>0.398</b>	-	-	<b>1.395</b>	-	-	-	-	-	<b>1.395</b>
<b>Logistics Cost</b>																		
Recurring Cost																		
Logistics Services	-	-	80.948	-	-	0.750	-	-	0.937	-	-	0.970	-	-	-	-	-	0.970

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<b>Exhibit P-5, Cost Analysis: PB 2021 Army</b>												<b>Date:</b> February 2020					
<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 2035A / 02 / 18						<b>P-1 Line Item Number / Title:</b> 9810BA9350 / SHF Term						<b>Item Number / Title [DODIC]:</b> BA9350 / SHF Term					
<b>ID Code</b> (A=Service Ready, B=Not Service Ready) : A												<b>MDAP/MAIS Code:</b>					

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

Cost Elements	Prior Years			FY 2019			FY 2020			FY 2021 Base			FY 2021 OCO			FY 2021 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)
Obsolescence Mitigation/ D-Model Terminal Support	-	-	2.882	-	-	0.538	-	-	1.350	-	-	-	-	-	-	-	-	-
<i>Subtotal: Recurring Cost</i>	-	-	<b>83.830</b>	-	-	<b>1.288</b>	-	-	<b>2.287</b>	-	-	<b>0.970</b>	-	-	<b>-</b>	-	-	<b>0.970</b>
Non Recurring Cost																		
Depot Pipeline / Organic Maintenance Build Up	-	-	-	-	-	-	-	-	0.211	-	-	1.036	-	-	-	-	-	1.036
<i>Subtotal: Non Recurring Cost</i>	-	-	-	-	-	-	-	-	<b>0.211</b>	-	-	<b>1.036</b>	-	-	<b>-</b>	-	-	<b>1.036</b>
<i>Subtotal: Logistics Cost</i>	-	-	<b>83.830</b>	-	-	<b>1.288</b>	-	-	<b>2.498</b>	-	-	<b>2.006</b>	-	-	<b>-</b>	-	-	<b>2.006</b>
Support - Program Management Cost																		
Government Management	-	-	20.414	-	-	0.694	-	-	0.707	-	-	0.722	-	-	-	-	-	0.722
Contractor Management	-	-	18.354	-	-	1.054	-	-	0.795	-	-	0.799	-	-	-	-	-	0.799
<i>Subtotal: Support - Program Management Cost</i>	-	-	<b>38.768</b>	-	-	<b>1.748</b>	-	-	<b>1.502</b>	-	-	<b>1.521</b>	-	-	<b>-</b>	-	-	<b>1.521</b>
Support - System Engineering Cost																		
System Engineering	-	-	321.795	-	-	0.725	-	-	0.843	-	-	0.871	-	-	-	-	-	0.871
<i>Subtotal: Support - System Engineering Cost</i>	-	-	<b>321.795</b>	-	-	<b>0.725</b>	-	-	<b>0.843</b>	-	-	<b>0.871</b>	-	-	<b>-</b>	-	-	<b>0.871</b>
Support - Training Cost																		
Services	-	-	12.708	-	-	0.302	-	-	-	-	-	-	-	-	-	-	-	-
<i>Subtotal: Support - Training Cost</i>	-	-	<b>12.708</b>	-	-	<b>0.302</b>	-	-	<b>-</b>	-	-	<b>-</b>	-	-	<b>-</b>	-	-	<b>-</b>
<b>Gross/Weapon System Cost</b>	-	<b>12</b>	<b>689.988</b>	-	-	<b>10.378</b>	-	-	<b>15.054</b>	-	-	<b>13.173</b>	-	-	<b>-</b>	-	-	<b>13.173</b>

Secondary Distribution		FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total
Army	Quantity	-	-	-	-	-
	Total Obligation Authority	10.378	15.054	7.245	-	7.245
ANG	Quantity	-	-	-	-	-
	Total Obligation Authority	-	-	3.952	-	3.952
AR	Quantity	-	-	-	-	-
	Total Obligation Authority	-	-	1.976	-	1.976
<b>Total:</b>	<b>Quantity</b>	-	-	-	-	-

**UNCLASSIFIED**

<b>Exhibit P-5, Cost Analysis: PB 2021 Army</b>				<b>Date:</b> February 2020		
<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 2035A / 02 / 18		<b>P-1 Line Item Number / Title:</b> 9810BA9350 / SHF Term		<b>Item Number / Title [DODIC]:</b> BA9350 / SHF Term		
<b>ID Code</b> (A=Service Ready, B=Not Service Ready) : A			<b>MDAP/MAIS Code:</b>			
<b>Secondary Distribution</b>		<b>FY 2019</b>	<b>FY 2020</b>	<b>FY 2021 Base</b>	<b>FY 2021 OCO</b>	<b>FY 2021 Total</b>
<b>Secondary Distribution</b>	<b>Total Obligation Authority</b>	10.378	15.054	13.173	-	13.173



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

<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 2035A: Other Procurement, Army / BA 02: Communications and Electronics Equipment / BSA 18: Comm - Satellite Communications	<b>P-1 Line Item Number / Title:</b> 9897K49000 / Assured Positioning, Navigation and Timing
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<b>ID Code</b> (A=Service Ready, B=Not Service Ready):	<b>Program Elements for Code B Items:</b> N/A	<b>Other Related Program Elements:</b> 1206120A
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**Line Item MDAP/MAIS Code:** N/A

Resource Summary	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	To Complete	Total
Procurement Quantity ( <i>Units in Each</i> )	-	-	-	3,485	141	3,626	-	-	-	-	Continuing	Continuing
Gross/Weapon System Cost ( <i>\$ in Millions</i> )	-	-	43.452	134.928	12.566	147.494	138.386	187.374	103.208	104.220	Continuing	Continuing
Less PY Advance Procurement ( <i>\$ in Millions</i> )	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) ( <i>\$ in Millions</i> )	-	-	43.452	134.928	12.566	147.494	138.386	187.374	103.208	104.220	Continuing	Continuing
Plus CY Advance Procurement ( <i>\$ in Millions</i> )	-	-	-	-	-	-	-	-	-	-	-	-
<b>Total Obligation Authority</b> ( <i>\$ in Millions</i> )	-	-	<b>43.452</b>	<b>134.928</b>	<b>12.566</b>	<b>147.494</b>	<b>138.386</b>	<b>187.374</b>	<b>103.208</b>	<b>104.220</b>	<b>Continuing</b>	<b>Continuing</b>

*(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> )	-	-	-	38.717	89.121	40.677	-	-	-	-	Continuing	Continuing

**Description:**

Assured Positioning, Navigation and Timing (A-PNT) provides Army ground maneuver forces access to assured PNT information under conditions where space based PNT Global Positioning System (GPS) may be limited or denied (jammed and spoofed). A-PNT products are ruggedized tactical systems that enable Army forces at echelon the ability to shoot, move, communicate, and protect their forces to penetrate and dis-integrate enemy anti-access systems, thereby allowing them to maneuver from operational and strategic distances to close with, destroy, and exploit the enemy in close and deep maneuver areas with sufficient combat power, tempo, and momentum. A-PNT addresses two critical capability gaps: Access and Integrity. Access is the ability to retrieve accurate PNT information in a contested Electronic Warfare/Cyber environment. Integrity is the ability to trust the PNT information. PNT is a critical enabler of many Army Maneuver, Fires, and Command and Control systems that are dependent on accurate Position and Timing, and a foundational Multi-Domain Battle capability to support: calibrated force posture (position and maneuver across strategic distances); multi-domain formations (operate in contested spaces against near-peer adversaries); convergence (continuous integration of capabilities in all domains). The current Global Positioning System (GPS) capability is a fixed frequency system susceptible to electronic warfare and field environments (e.g. urban, dense vegetation). A-PNT will incorporate the congressionally and OSD mandated transition to Military Code (M-Code) when available.

Joint Requirements Oversight Council Memo (JROCM) 049-10, dated 05 April 2010, approved the PNT Assurance Initial Capabilities Document and designated the Army as the Lead Component for Assured PNT. Army Futures Command approved the Mounted A-PNT System (MAPS) Directed Requirement (DR) on 13 January 2019. The Dismounted A-PNT System (DAPS) Directed Requirement was approved 05 April 2019. The Alternative Navigation (ALTNAV) Directed Requirement was approved in November 2019. MAPS transitions to a Capability Development Document (CDD) in June 2020 and DAPS transitions in FY 2021.

Assured PNT consists of:

SSN K49010 - Mounted/Dismounted Receiver: PNT System of Systems Architecture (SOSA) Testing and Resiliency and Software Assurance Measures (RSAM) to legacy GPS systems, and enhancements to Army PNT Enterprise Enablers and capabilities (Alternative Navigation).

SSN K49020 - Dismounted Hub: The Dismounted Assured PNT (A-PNT) System (DAPS) will provide the Soldiers equipped with Nett Warrior and other Soldier architecture compliant systems (e.g. Integrated Visual Augmentation System (IVAS)) the critical timing and position data to effectively engage targets, share data across the network and conduct mission command functions.

SSN K49030 - Mounted Hub A-PNT: The Mounted Assured Positioning, Navigation, and Timing (PNT) System (MAPS) is a platform-mounted, ruggedized tactical PNT system which provides electronic protection capabilities that enable combatant commanders the ability to move, shoot, communicate, and provide situational awareness in Global Positioning System (GPS) challenged or denied environments.

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<b>Exhibit P-40, Budget Line Item Justification:</b> PB 2021 Army							<b>Date:</b> February 2020			
<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 2035A: Other Procurement, Army / BA 02: Communications and Electronics Equipment / BSA 18: Comm - Satellite Communications					<b>P-1 Line Item Number / Title:</b> 9897K49000 / Assured Positioning, Navigation and Timing					
<b>ID Code</b> (A=Service Ready, B=Not Service Ready):			<b>Program Elements for Code B Items:</b> N/A			<b>Other Related Program Elements:</b> 1206120A				
<b>Line Item MDAP/MAIS Code:</b> N/A										

Secondary Distribution		FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025
Army	Quantity	-	-	3,485	141	3,626	-	-	-	-
	Total Obligation Authority	-	43.452	134.928	12.566	147.494	138.386	187.374	103.208	104.220
<b>Total:</b> Secondary Distribution	<b>Quantity</b>	-	-	<b>3,485</b>	<b>141</b>	<b>3,626</b>	-	-	-	-
	<b>Total Obligation Authority</b>	-	<b>43.452</b>	<b>134.928</b>	<b>12.566</b>	<b>147.494</b>	<b>138.386</b>	<b>187.374</b>	<b>103.208</b>	<b>104.220</b>

**UNCLASSIFIED**

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

**Appropriation / Budget Activity / Budget Sub Activity:**  
 2035A: Other Procurement, Army / BA 02: Communications and Electronics  
 Equipment / BSA 18: Comm - Satellite Communications

**P-1 Line Item Number / Title:**  
 9897K49000 / Assured Positioning, Navigation and Timing

**ID Code** (A=Service Ready, B=Not Service Ready): **Program Elements for Code B Items:** N/A **Other Related Program Elements:** 1206120A

**Line Item MDAP/MAIS Code:** N/A

Exhibits Schedule					Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total
Exhibit Type	Title*	Subexhibits	ID CD	MDAP/MAIS Code	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)
P-5	K49010 / Mounted/Dismounted Receivers				- / -	- / -	- / 1.724	- / 5.894	- / -	- / 5.894
P-5	K49020 / Dismounted Hub	P-5a, P-21	B		- / -	- / -	- / -	2,578 / 48.449	- / -	2,578 / 48.449
P-5	K49030 / Mounted Hub A-PNT	P-5a, P-21	B		- / -	- / -	- / 41.728	907 / 80.585	141 / 12.566	1,048 / 93.151
<b>P-40</b>	<b>Total Gross/Weapon System Cost</b>				- / -	- / -	- / 43.452	3,485 / 134.928	141 / 12.566	3,626 / 147.494

\*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 2021 Base dollars in the amount of \$134.928 million and FY21 OCO dollars in the amount of \$12.566 million will support the following:

SSN K49010 - Mounted/Dismounted Receiver: FY 2021 base procurement dollars in the amount of \$5.894 million supports Fielding Support Teams and Post Software Release support for the delivery of Resiliency Software Assurance Measures (RSAM) to legacy GPS systems.

SSN K49020 - Dismounted Hub: This is a new start project in FY 2021. FY 2021 base procurement dollars in the amount of \$48.449 million supports procurement of 2,578 Dismounted Assured Positioning, Navigation and Timing (APNT) Systems (DAPS), production, project management, spares, and logistics support and Pre Milestone C activities. The Directed Requirement (DR) quantities for DAPS and ALTNAV Handheld variants costs are captured under the heading Hardware Costs. All sparing and equipping support costs are captured under Package Fielding Costs. All program management and system engineering are captured under Support.

SSN K49030 - Mounted Hub A-PNT: FY 2021 base procurement dollars in the amount of \$80.585 million supports procurement of 907 Mounted Assured Positioning, Navigation and Timing (APNT) Systems (MAPS) and associated spares, equipping, engineering efforts and logistics support and Pre Milestone C activities. Additionally, FY 2021 OCO dollars in the amount of \$12.566 million support the procurement of 141 MAPS and associated spares, equipping, engineering efforts and logistics support. All sparing and equipping support costs are captured under Package Fielding Costs. All program management and system engineering are captured under Support.

All Quantities are for the Active component.

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<b>Exhibit P-5, Cost Analysis: PB 2021 Army</b>													<b>Date:</b> February 2020						
<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 2035A / 02 / 18						<b>P-1 Line Item Number / Title:</b> 9897K49000 / Assured Positioning, Navigation and Timing						<b>Item Number / Title [DODIC]:</b> K49010 / Mounted/Dismounted Receivers							
<b>ID Code</b> (A=Service Ready, B=Not Service Ready) :									<b>MDAP/MAIS Code:</b>										
<b>Resource Summary</b>				<b>Prior Years</b>		<b>FY 2019</b>			<b>FY 2020</b>			<b>FY 2021 Base</b>			<b>FY 2021 OCO</b>		<b>FY 2021 Total</b>		
Procurement Quantity (Units in Each)				-		-			-			-			-		-		
Gross/Weapon System Cost (\$ in Millions)				-		-			1.724			5.894			-		5.894		
Less PY Advance Procurement (\$ in Millions)				-		-			-			-			-		-		
Net Procurement (P-1) (\$ in Millions)				-		-			1.724			5.894			-		5.894		
Plus CY Advance Procurement (\$ in Millions)				-		-			-			-			-		-		
<b>Total Obligation Authority (\$ in Millions)</b>				-		-			<b>1.724</b>			<b>5.894</b>			-		<b>5.894</b>		
<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.																			
<b>Cost Elements</b>		<b>Prior Years</b>			<b>FY 2019</b>			<b>FY 2020</b>			<b>FY 2021 Base</b>			<b>FY 2021 OCO</b>			<b>FY 2021 Total</b>		
		<b>Unit Cost (\$ K)</b>	<b>Qty (Each)</b>	<b>Total Cost (\$ M)</b>	<b>Unit Cost (\$ K)</b>	<b>Qty (Each)</b>	<b>Total Cost (\$ M)</b>	<b>Unit Cost (\$ K)</b>	<b>Qty (Each)</b>	<b>Total Cost (\$ M)</b>	<b>Unit Cost (\$ K)</b>	<b>Qty (Each)</b>	<b>Total Cost (\$ M)</b>	<b>Unit Cost (\$ K)</b>	<b>Qty (Each)</b>	<b>Total Cost (\$ M)</b>	<b>Unit Cost (\$ K)</b>	<b>Qty (Each)</b>	<b>Total Cost (\$ M)</b>
Logistics Cost																			
Recurring Cost																			
FSR Support, SETA Support		-	-	-	-	-	-	-	-	-	-	1.073	-	-	-	-	-	1.073	
<i>Subtotal: Recurring Cost</i>		-	-	-	-	-	-	-	-	-	-	1.073	-	-	-	-	-	1.073	
Non Recurring Cost																			
Post Software Release Product Support		-	-	-	-	-	-	-	-	-	-	3.858	-	-	-	-	-	3.858	
<i>Subtotal: Non Recurring Cost</i>		-	-	-	-	-	-	-	-	-	-	3.858	-	-	-	-	-	3.858	
<i>Subtotal: Logistics Cost</i>		-	-	-	-	-	-	-	-	-	-	4.931	-	-	-	-	-	4.931	
Support - Program Management Cost																			
Contractor Management		-	-	-	-	-	-	-	1.724	-	-	0.963	-	-	-	-	-	0.963	
<i>Subtotal: Support - Program Management Cost</i>		-	-	-	-	-	-	-	1.724	-	-	0.963	-	-	-	-	-	0.963	
<b>Gross/Weapon System Cost</b>		-	-	-	-	-	-	-	1.724	-	-	5.894	-	-	-	-	-	5.894	
<b>Secondary Distribution</b>						<b>FY 2019</b>			<b>FY 2020</b>			<b>FY 2021 Base</b>			<b>FY 2021 OCO</b>		<b>FY 2021 Total</b>		
Army						Quantity			-			-			-		-		
						Total Obligation Authority			-			1.724			5.894		-		

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<b>Exhibit P-5, Cost Analysis:</b> PB 2021 Army			<b>Date:</b> February 2020			
<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 2035A / 02 / 18		<b>P-1 Line Item Number / Title:</b> 9897K49000 / Assured Positioning, Navigation and Timing		<b>Item Number / Title [DODIC]:</b> K49010 / Mounted/Dismounted Receivers		
<b>ID Code</b> (A=Service Ready, B=Not Service Ready) :			<b>MDAP/MAIS Code:</b>			
<b>Secondary Distribution</b>		<b>FY 2019</b>	<b>FY 2020</b>	<b>FY 2021 Base</b>	<b>FY 2021 OCO</b>	<b>FY 2021 Total</b>
<b>Total:</b>	<b>Quantity</b>	-	-	-	-	-
<b>Secondary Distribution</b>	<b>Total Obligation Authority</b>	-	1.724	5.894	-	5.894

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<b>Exhibit P-5, Cost Analysis: PB 2021 Army</b>						<b>Date:</b> February 2020		
<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 2035A / 02 / 18			<b>P-1 Line Item Number / Title:</b> 9897K49000 / Assured Positioning, Navigation and Timing			<b>Item Number / Title [DODIC]:</b> K49020 / Dismounted Hub		
<b>ID Code</b> (A=Service Ready, B=Not Service Ready) : B				<b>MDAP/MAIS Code:</b>				
<b>Resource Summary</b>			<b>Prior Years</b>	<b>FY 2019</b>	<b>FY 2020</b>	<b>FY 2021 Base</b>	<b>FY 2021 OCO</b>	<b>FY 2021 Total</b>
Procurement Quantity ( <i>Units in Each</i> )			-	-	-	2,578	-	2,578
Gross/Weapon System Cost ( <i>\$ in Millions</i> )			-	-	-	48.449	-	48.449
Less PY Advance Procurement ( <i>\$ in Millions</i> )			-	-	-	-	-	-
Net Procurement (P-1) ( <i>\$ in Millions</i> )			-	-	-	48.449	-	48.449
Plus CY Advance Procurement ( <i>\$ in Millions</i> )			-	-	-	-	-	-
<b>Total Obligation Authority</b> ( <i>\$ in Millions</i> )			-	-	-	<b>48.449</b>	-	<b>48.449</b>
<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> )			-	-	-	18.793	-	18.793

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

Cost Elements	Prior Years			FY 2019			FY 2020			FY 2021 Base			FY 2021 OCO			FY 2021 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)
<b>Hardware Cost</b>																		
<b>Recurring Cost</b>																		
DAPS Hardware <sup>(†)</sup>	-	-	-	-	-	-	-	-	-	13.465	2,022	27.227	-	-	-	13.465	2,022	27.227
DAPS Engineering Change Orders	-	-	-	-	-	-	-	-	-	-	-	2.496	-	-	-	-	-	2.496
DAPS Training	-	-	-	-	-	-	-	-	-	-	-	2.332	-	-	-	-	-	2.332
DAPS Data	-	-	-	-	-	-	-	-	-	-	-	0.070	-	-	-	-	-	0.070
DAPS Hardware Handheld <sup>(†)</sup>	-	-	-	-	-	-	-	-	-	4.772	556	2.653	-	-	-	4.772	556	2.653
DAPS Engineering Change Orders Handheld	-	-	-	-	-	-	-	-	-	-	-	0.243	-	-	-	-	-	0.243
DAPS Training Handheld	-	-	-	-	-	-	-	-	-	-	-	0.227	-	-	-	-	-	0.227
DAPS Data Handheld	-	-	-	-	-	-	-	-	-	-	-	0.007	-	-	-	-	-	0.007
<i>Subtotal: Recurring Cost</i>	-	-	-	-	-	-	-	-	-	-	-	35.255	-	-	-	-	-	35.255
<b>Non Recurring Cost</b>																		
DAPS Non-recurring Engineering	-	-	-	-	-	-	-	-	-	-	-	0.875	-	-	-	-	-	0.875
<i>Subtotal: Non Recurring Cost</i>	-	-	-	-	-	-	-	-	-	-	-	0.875	-	-	-	-	-	0.875
<i>Subtotal: Hardware Cost</i>	-	-	-	-	-	-	-	-	-	-	-	<b>36.130</b>	-	-	-	-	-	<b>36.130</b>
<b>Package Fielding Cost</b>																		
<b>Recurring Cost</b>																		

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<b>Exhibit P-5, Cost Analysis: PB 2021 Army</b>		<b>Date:</b> February 2020
<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 2035A / 02 / 18	<b>P-1 Line Item Number / Title:</b> 9897K49000 / Assured Positioning, Navigation and Timing	<b>Item Number / Title [DODIC]:</b> K49020 / Dismounted Hub
<b>ID Code</b> (A=Service Ready, B=Not Service Ready) : B		<b>MDAP/MAIS Code:</b>

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

Cost Elements	Prior Years			FY 2019			FY 2020			FY 2021 Base			FY 2021 OCO			FY 2021 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)
Contractor Logistics Support	-	-	-	-	-	-	-	-	-	-	-	2.810	-	-	-	-	-	2.810
<i>Subtotal: Recurring Cost</i>	-	-	-	-	-	-	-	-	-	-	-	2.810	-	-	-	-	-	2.810
Non Recurring Cost																		
Initial Spares/Repairs Parts	-	-	-	-	-	-	-	-	-	-	-	6.099	-	-	-	-	-	6.099
Contract Logistics Support	-	-	-	-	-	-	-	-	-	-	-	0.987	-	-	-	-	-	0.987
<i>Subtotal: Non Recurring Cost</i>	-	-	-	-	-	-	-	-	-	-	-	7.086	-	-	-	-	-	7.086
<i>Subtotal: Package Fielding Cost</i>	-	-	-	-	-	-	-	-	-	-	-	9.896	-	-	-	-	-	9.896
Support - Program Management Cost																		
Contractor Management	-	-	-	-	-	-	-	-	-	-	-	1.556	-	-	-	-	-	1.556
<i>Subtotal: Support - Program Management Cost</i>	-	-	-	-	-	-	-	-	-	-	-	1.556	-	-	-	-	-	1.556
Support - System Engineering Cost																		
System Engineering	-	-	-	-	-	-	-	-	-	-	-	0.867	-	-	-	-	-	0.867
<i>Subtotal: Support - System Engineering Cost</i>	-	-	-	-	-	-	-	-	-	-	-	0.867	-	-	-	-	-	0.867
<b>Gross/Weapon System Cost</b>	-	-	-	-	-	-	-	-	-	18.793	2,578	48.449	-	-	-	18.793	2,578	48.449

Secondary Distribution		FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total
Army	Quantity	-	-	2,578	-	2,578
	Total Obligation Authority	-	-	48.449	-	48.449
<b>Total:</b>	<b>Quantity</b>	-	-	2,578	-	2,578
<b>Secondary Distribution</b>	<b>Total Obligation Authority</b>	-	-	48.449	-	48.449

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

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**Exhibit P-5a, Procurement History and Planning:** PB 2021 Army **Date:** February 2020

<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 2035A / 02 / 18	<b>P-1 Line Item Number / Title:</b> 9897K49000 / Assured Positioning, Navigation and Timing	<b>Item Number / Title [DODIC]:</b> K49020 / Dismounted Hub
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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
DAPS Hardware <sup>(†)</sup>		2021	TBD DAPS / TBD DAPS	C / TBD	TBD	Jun 2021	Dec 2021	2,022	13.465	N		
DAPS Hardware Handheld		2021	TBD DAPS / TBD DAPS	C / TBD	TBD	Jun 2021	Dec 2021	556	4.772	N		

<sup>(†)</sup> indicates the presence of a P-21

**Remarks:**  
Unit cost estimate for FY2021 is derived from prototype manufacturing actuals.



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**Exhibit P-21, Production Schedule:** PB 2021 Army **Date:** February 2020

**Appropriation / Budget Activity / Budget Sub Activity:** 2035A / 02 / 18 **P-1 Line Item Number / Title:** 9897K49000 / Assured Positioning, Navigation and Timing **Item Number / Title [DODIC]:** K49020 / Dismounted Hub

Cost Elements <i>(Units in Each)</i>						Fiscal Year 2021												Fiscal Year 2022												BALANCE																
O C C #	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															
DAPS Hardware																																														
	1	2021	ARMY	2,022	0	2,022																							A	-	-	-	-	-	-	162	162	162	162	162	173	173	173	173	173	347
							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 2021 Army **Date:** February 2020

<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 2035A / 02 / 18	<b>P-1 Line Item Number / Title:</b> 9897K49000 / Assured Positioning, Navigation and Timing	<b>Item Number / Title [DODIC]:</b> K49020 / Dismounted Hub
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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
DAPS Hardware																															
1		2021	ARMY	2,022	1,675	347	173	174																					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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<b>Exhibit P-21, Production Schedule:</b> PB 2021 Army	<b>Date:</b> February 2020
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<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 2035A / 02 / 18	<b>P-1 Line Item Number / Title:</b> 9897K49000 / Assured Positioning, Navigation and Timing	<b>Item Number / Title [DODIC]:</b> K49020 / Dismounted Hub
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MFR Ref #	Manufacturer Name - Location	Production Rates (Each / Month)			Procurement Leadtime (Months)								
		MSR For 2021	1-8-5 For 2021	MAX For 2021	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 DAPS - TBD DAPS	100	200	300	0	0	0	0	0	0	0	0	0

**Remarks:**  
The Dismounted Assured Positioning, Navigation, and Timing System (DAPS) Production manufacturing contract has not been awarded. Production rates are based upon the initial production of the analogous Defense Advanced Global Position System (GPS) Receiver (DAGR).

"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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<b>Exhibit P-5, Cost Analysis: PB 2021 Army</b>						<b>Date:</b> February 2020		
<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 2035A / 02 / 18			<b>P-1 Line Item Number / Title:</b> 9897K49000 / Assured Positioning, Navigation and Timing			<b>Item Number / Title [DODIC]:</b> K49030 / Mounted Hub A-PNT		
<b>ID Code</b> (A=Service Ready, B=Not Service Ready) : B				<b>MDAP/MAIS Code:</b>				
<b>Resource Summary</b>			<b>Prior Years</b>	<b>FY 2019</b>	<b>FY 2020</b>	<b>FY 2021 Base</b>	<b>FY 2021 OCO</b>	<b>FY 2021 Total</b>
Procurement Quantity ( <i>Units in Each</i> )			-	-	-	907	141	1,048
Gross/Weapon System Cost ( <i>\$ in Millions</i> )			-	-	41.728	80.585	12.566	93.151
Less PY Advance Procurement ( <i>\$ in Millions</i> )			-	-	-	-	-	-
Net Procurement (P-1) ( <i>\$ in Millions</i> )			-	-	41.728	80.585	12.566	93.151
Plus CY Advance Procurement ( <i>\$ in Millions</i> )			-	-	-	-	-	-
<b>Total Obligation Authority</b> ( <i>\$ in Millions</i> )			-	-	<b>41.728</b>	<b>80.585</b>	<b>12.566</b>	<b>93.151</b>
<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> )			-	-	-	88.848	89.121	88.885

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

Cost Elements	Prior Years			FY 2019			FY 2020			FY 2021 Base			FY 2021 OCO			FY 2021 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)
<b>Hardware Cost</b>																		
Recurring Cost																		
Mounted A-PNT Systems B-Kits <sup>(†)</sup>	-	-	-	-	-	-	48.663	484	23.553	48.663	907	44.137	48.660	141	6.861	48.662	1,048	50.998
Mounted A-PNT Systems A-Kits	-	-	-	-	-	-	11.289	484	5.464	11.289	907	10.239	11.291	141	1.592	11.289	1,048	11.831
<i>Subtotal: Recurring Cost</i>	-	-	-	-	-	-	-	-	29.017	-	-	54.376	-	-	8.453	-	-	62.829
<i>Subtotal: Hardware Cost</i>	-	-	-	-	-	-	-	-	29.017	-	-	54.376	-	-	8.453	-	-	62.829
<b>Package Fielding Cost</b>																		
Recurring Cost																		
Installation	-	-	-	-	-	-	-	-	4.023	-	-	5.749	-	-	0.896	-	-	6.645
Interim Contractor Logistic Support	-	-	-	-	-	-	-	-	0.171	-	-	0.636	-	-	0.099	-	-	0.735
Spares	-	-	-	-	-	-	-	-	5.686	-	-	10.871	-	-	1.695	-	-	12.566
Transportation	-	-	-	-	-	-	-	-	0.255	-	-	0.487	-	-	0.076	-	-	0.563
<i>Subtotal: Recurring Cost</i>	-	-	-	-	-	-	-	-	10.135	-	-	17.743	-	-	2.766	-	-	20.509
Non Recurring Cost																		
Training	-	-	-	-	-	-	-	-	0.300	-	-	0.260	-	-	0.040	-	-	0.300
Interim Contractor Logistic Support	-	-	-	-	-	-	-	-	0.057	-	-	0.212	-	-	0.033	-	-	0.245
<i>Subtotal: Non Recurring Cost</i>	-	-	-	-	-	-	-	-	0.357	-	-	0.472	-	-	0.073	-	-	0.545
<i>Subtotal: Package Fielding Cost</i>	-	-	-	-	-	-	-	-	10.492	-	-	18.215	-	-	2.839	-	-	21.054

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<b>Exhibit P-5, Cost Analysis: PB 2021 Army</b>												<b>Date:</b> February 2020					
<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 2035A / 02 / 18						<b>P-1 Line Item Number / Title:</b> 9897K49000 / Assured Positioning, Navigation and Timing						<b>Item Number / Title [DODIC]:</b> K49030 / Mounted Hub A-PNT					
<b>ID Code</b> (A=Service Ready, B=Not Service Ready) : B												<b>MDAP/MAIS Code:</b>					

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

Cost Elements	Prior Years			FY 2019			FY 2020			FY 2021 Base			FY 2021 OCO			FY 2021 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)
Support - Program Management Cost																		
Contractor Management	-	-	-	-	-	-	-	-	-	-	-	2.220	-	-	0.373	-	-	2.593
<i>Subtotal: Support - Program Management Cost</i>	-	-	-	-	-	-	-	-	-	-	-	2.220	-	-	0.373	-	-	2.593
Support - System Engineering Cost																		
System Engineering	-	-	-	-	-	-	-	-	2.219	-	-	5.774	-	-	0.901	-	-	6.675
<i>Subtotal: Support - System Engineering Cost</i>	-	-	-	-	-	-	-	-	2.219	-	-	5.774	-	-	0.901	-	-	6.675
<b>Gross/Weapon System Cost</b>	-	-	-	-	-	-	-	-	41.728	88.848	907	80.585	89.121	141	12.566	88.885	1,048	93.151

**Remarks:**  
Unit cost for MAPS includes the Anti-Jam Antenna.

Secondary Distribution		FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total
Army	Quantity	-	-	907	141	1,048
	Total Obligation Authority	-	41.728	80.585	12.566	93.151
<b>Total:</b>	<b>Quantity</b>	-	-	907	141	1,048
<b>Secondary Distribution</b>	<b>Total Obligation Authority</b>	-	41.728	80.585	12.566	93.151

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

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**Exhibit P-5a, Procurement History and Planning:** PB 2021 Army **Date:** February 2020

<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 2035A / 02 / 18	<b>P-1 Line Item Number / Title:</b> 9897K49000 / Assured Positioning, Navigation and Timing	<b>Item Number / Title [DODIC]:</b> K49030 / Mounted Hub A-PNT
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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
Mounted A-PNT Systems B-Kits <sup>(†)</sup>		2020	General Dynamics 1 / APG, MD	C / TBD	APG, MD	Feb 2020	Sep 2020	484	48.663	N		
Mounted A-PNT Systems B-Kits <sup>(†)</sup>		2021	General Dynamics 1 / APG, MD	C / TBD	APG, MD	Nov 2020	Jul 2021	907	48.663	N		
Mounted A-PNT Systems B-Kits <sup>(†)</sup>	✓	2021	General Dynamics 2 / APG, MD	C / TBD	APG, MD	Nov 2020	Jun 2021	141	48.660	N		

<sup>(†)</sup> indicates the presence of a P-21

**Remarks:**  
Unit cost for MAPS includes the Anti-Jam Antenna.

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<b>Exhibit P-21, Production Schedule:</b> PB 2021 Army	<b>Date:</b> February 2020
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<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 2035A / 02 / 18	<b>P-1 Line Item Number / Title:</b> 9897K49000 / Assured Positioning, Navigation and Timing	<b>Item Number / Title [DODIC]:</b> K49030 / Mounted Hub A-PNT
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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			
Mounted A-PNT Systems B-Kits																																	
	1	2020	ARMY	484	0	484																									0		
	1	2021	ARMY	907	0	907																									592		
✓	2	2021	ARMY	141	0	141																									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 2021 Army **Date:** February 2020

**Appropriation / Budget Activity / Budget Sub Activity:** 2035A / 02 / 18 **P-1 Line Item Number / Title:** 9897K49000 / Assured Positioning, Navigation and Timing **Item Number / Title [DODIC]:** K49030 / Mounted Hub A-PNT

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
Mounted A-PNT Systems B-Kits																															
	1	2020	ARMY	484	484	0																							0		
	1	2021	ARMY	907	315	592	150	150	150	142																			0		
✓	2	2021	ARMY	141	141	0																							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 2021 Army **Date:** February 2020

<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 2035A / 02 / 18	<b>P-1 Line Item Number / Title:</b> 9897K49000 / Assured Positioning, Navigation and Timing	<b>Item Number / Title [DODIC]:</b> K49030 / Mounted Hub A-PNT
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MFR Ref #	Manufacturer Name - Location	Production Rates (Each / Month)			Procurement Leadtime (Months)								
		MSR For 2021	1-8-5 For 2021	MAX For 2021	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	General Dynamics 1 - APG, MD	20	180	300	0	0	0	0	0	0	0	0	0
2	General Dynamics 2 - APG, MD	20	180	300	0	0	0	0	0	0	0	0	0

**Remarks:**  
Estimated Production 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, Budget Line Item Justification:** PB 2021 Army **Date:** February 2020

<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 2035A: Other Procurement, Army / BA 02: Communications and Electronics Equipment / BSA 18: Comm - Satellite Communications	<b>P-1 Line Item Number / Title:</b> 9910BC4002 / SMART-T (SPACE)
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<b>ID Code</b> (A=Service Ready, B=Not Service Ready): A	<b>Program Elements for Code B Items:</b> N/A	<b>Other Related Program Elements:</b> 0303142A
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**Line Item MDAP/MAIS Code:** N/A

Resource Summary	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	To Complete	Total
Procurement Quantity ( <i>Units in Each</i> )	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost ( <i>\$ in Millions</i> )	752.977	19.160	11.340	8.611	0.289	8.900	8.716	4.814	-	-	-	805.907
Less PY Advance Procurement ( <i>\$ in Millions</i> )	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) ( <i>\$ in Millions</i> )	752.977	19.160	11.340	8.611	0.289	8.900	8.716	4.814	-	-	-	805.907
Plus CY Advance Procurement ( <i>\$ in Millions</i> )	-	-	-	-	-	-	-	-	-	-	-	-
<b>Total Obligation Authority (<i>\$ in Millions</i>)</b>	<b>752.977</b>	<b>19.160</b>	<b>11.340</b>	<b>8.611</b>	<b>0.289</b>	<b>8.900</b>	<b>8.716</b>	<b>4.814</b>	-	-	-	<b>805.907</b>

*(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:**

This funding line supports the Army Network Modernization Strategy LOE 1, Unified Network. Efforts are aligned to support the Network-Cross Functional Team capability set approach to achieve the network modernization strategy.

SMART-T is the Army's only protected satellite terminal that provides worldwide beyond line of sight resilient communication for the current and future tactical communications network. The SMART-T provides a robust anti-jam, protected communications capability enabling uninterrupted voice and data communications against Electronic Warfare (EW) attacks or other contested environments, including nuclear scintillation. SMART-T is the Army's only large throughput satellite capability with low probability of interception and low probability of detection (LPI/LPD) to avoid being targeted for destruction, jamming or eavesdropping. The SMART-T system is integrated onto a High Mobility Multi-Purpose Wheeled Vehicle (HMMWV), operating in a standalone configuration.

New and emerging architectures levied in the Transmission Systems Capabilities Production Document (CPD) necessitate a modernization of the SMART-T configuration. The Army is taking a 2-tiered approach in addressing the continuance of the SMART-T terminal capability: 1) CECOM Integrated Logistics Support Center (ILSC) is mitigating the obsolescence through sustainment efforts to support SMART-T through FY28; and 2) Program Office is modernizing in accordance with the Transmission CPD.

SMART-T terminals use the AEHF satellite constellation, providing the US Army with our highest level of protected communications. Additionally, SMART-T provides fully interoperable communications with the AEHF and MILSTAR terminals of other services (Air Force, Navy, Marine Corps and other DoD agencies and activities). SMART-T is designated as an ACAT II DoD Space Program.

The Approved Acquisition Objective (AAO) is 324 terminals plus 14 terminals procured for the DoD Special Users; Army Procurement Objective (APO) is 278; ACAT Level II.

Secondary Distribution	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025
Army	Quantity	-	-	-	-	-	-	-	-
	Total Obligation Authority	12.160	10.590	8.611	0.289	8.900	8.716	4.814	-
ANG	Quantity	-	-	-	-	-	-	-	-
	Total Obligation Authority	6.000	0.750	-	-	-	-	-	-

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<b>Exhibit P-40, Budget Line Item Justification:</b> PB 2021 Army							<b>Date:</b> February 2020			
<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 2035A: Other Procurement, Army / BA 02: Communications and Electronics Equipment / BSA 18: Comm - Satellite Communications					<b>P-1 Line Item Number / Title:</b> 9910BC4002 / SMART-T (SPACE)					
<b>ID Code</b> (A=Service Ready, B=Not Service Ready): A			<b>Program Elements for Code B Items:</b> N/A			<b>Other Related Program Elements:</b> 0303142A				
<b>Line Item MDAP/MAIS Code:</b> N/A										

Secondary Distribution		FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025
AR	Quantity	-	-	-	-	-	-	-	-	-
	Total Obligation Authority	1.000	-	-	-	-	-	-	-	-
<b>Total: Secondary Distribution</b>	<b>Quantity</b>	-	-	-	-	-	-	-	-	-
	<b>Total Obligation Authority</b>	<b>19.160</b>	<b>11.340</b>	<b>8.611</b>	<b>0.289</b>	<b>8.900</b>	<b>8.716</b>	<b>4.814</b>	-	-

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

<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 2035A: Other Procurement, Army / BA 02: Communications and Electronics Equipment / BSA 18: Comm - Satellite Communications	<b>P-1 Line Item Number / Title:</b> 9910BC4002 / SMART-T (SPACE)
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<b>ID Code</b> (A=Service Ready, B=Not Service Ready): A	<b>Program Elements for Code B Items:</b> N/A	<b>Other Related Program Elements:</b> 0303142A
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**Line Item MDAP/MAIS Code:** N/A

Exhibits Schedule					Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total
Exhibit Type	Title*	Subexhibits	ID CD	MDAP/MAIS Code	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)
P-5	BC4002 / SMART-T (SPACE)		A		- / 752.977	- / 19.160	- / 11.340	- / 8.611	- / 0.289	- / 8.900
<b>P-40</b>	<b>Total Gross/Weapon System Cost</b>				<b>- / 752.977</b>	<b>- / 19.160</b>	<b>- / 11.340</b>	<b>- / 8.611</b>	<b>- / 0.289</b>	<b>- / 8.900</b>

\*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 2021 Base procurement dollars in the amount of \$8.611 million will be used for: Fielding of SMART-T system upgrades; System Engineering (includes Maintenance & Support contract, Information Assurance Vulnerability Alerts (IAVA), and Acquisition Logistics Performance Scorecard (ALPS) Training Base support); completion of NRE for Ethernet IP upgrades; and initial procurement (45 sets) of Ethernet IP cards. Program Management costs include Help Desk, Program Analysis, Cost and Budget support, and Government travel. System Test & Evaluation funds a SatSim Terminal leased annually from MIT/Lincoln Labs. Logistics funds efforts in support of fielding upgrades. NOTE: Procurement funding supports Modification Work Order (MWO) upgrades to existing systems, therefore, no new quantities/end items will be procured.

FY21 OCO dollars in the amount of \$.289 million is to support and field upgrades to OCONUS systems deployed in support of the European Deterrence Initiative (EDI).

Fielding includes performing a System Health Check prior to implementation of upgrades which ensure access to greater than five satellite communications capability (in conjunction with Air Force launch of more Advanced Extremely High Frequency (AEHF) satellites), and Ethernet IP Cards. Fielding also includes robust AEHF system training, necessary due to increase in usage caused by increasing electronic warfare threats.

SMART-T effectively transitioned to Sustainment under CECOM ILSC in 2QFY18. The Program Office continues Life Cycle Management and modernization of terminals with Ethernet IP upgrades.

"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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<b>Exhibit P-5, Cost Analysis: PB 2021 Army</b>		<b>Date:</b> February 2020
<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 2035A / 02 / 18	<b>P-1 Line Item Number / Title:</b> 9910BC4002 / SMART-T (SPACE)	<b>Item Number / Title [DODIC]:</b> BC4002 / SMART-T (SPACE)

<b>ID Code</b> (A=Service Ready, B=Not Service Ready) : A	<b>MDAP/MAIS Code:</b>
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Resource Summary	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total
Procurement Quantity (Units in Each)	-	-	-	-	-	-
Gross/Weapon System Cost (\$ in Millions)	752.977	19.160	11.340	8.611	0.289	8.900
Less PY Advance Procurement (\$ in Millions)	-	-	-	-	-	-
Net Procurement (P-1) (\$ in Millions)	752.977	19.160	11.340	8.611	0.289	8.900
Plus CY Advance Procurement (\$ in Millions)	-	-	-	-	-	-
<b>Total Obligation Authority (\$ in Millions)</b>	<b>752.977</b>	<b>19.160</b>	<b>11.340</b>	<b>8.611</b>	<b>0.289</b>	<b>8.900</b>

*(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 2019			FY 2020			FY 2021 Base			FY 2021 OCO			FY 2021 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)
<b>Flyaway Cost</b>																		
Recurring Cost																		
EHF SMART-T Terminal Cost	888.198	247	219.385	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
AEHF Upgrade Mod Kits	637.085	247	157.360	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
AEHF SMART-T Terminal Cost	1,769.667	39	69.017	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Obsolescence	-	-	3.915	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Transition to Sustainment	-	-	3.417	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Modularity/Army National Guard	-	-	4.400	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
<i>Subtotal: Recurring Cost</i>	-	-	<b>457.494</b>	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Non Recurring Cost																		
Ethernet Repeater Solution Engineering	-	-	1.802	-	-	10.357	-	-	4.281	-	-	1.103	-	-	-	-	-	1.103
<i>Subtotal: Non Recurring Cost</i>	-	-	<b>1.802</b>	-	-	<b>10.357</b>	-	-	<b>4.281</b>	-	-	<b>1.103</b>	-	-	-	-	-	<b>1.103</b>
<i>Subtotal: Flyaway Cost</i>	-	-	<b>459.296</b>	-	-	<b>10.357</b>	-	-	<b>4.281</b>	-	-	<b>1.103</b>	-	-	-	-	-	<b>1.103</b>
<b>Software Cost</b>																		
Non Recurring Cost																		
Software Upgrades for SV6 and Beyond	-	-	-	-	-	2.000	-	-	-	-	-	-	-	-	-	-	-	-

**UNCLASSIFIED**

<b>Exhibit P-5, Cost Analysis: PB 2021 Army</b>													<b>Date:</b> February 2020					
<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 2035A / 02 / 18						<b>P-1 Line Item Number / Title:</b> 9910BC4002 / SMART-T (SPACE)						<b>Item Number / Title [DODIC]:</b> BC4002 / SMART-T (SPACE)						
<b>ID Code</b> (A=Service Ready, B=Not Service Ready) : A									<b>MDAP/MAIS Code:</b>									
Note: Subtotals or Totals in this Exhibit P-5 may not be exact or sum exactly due to rounding.																		
Cost Elements	Prior Years			FY 2019			FY 2020			FY 2021 Base			FY 2021 OCO			FY 2021 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: Non Recurring Cost</i>	-	-	-	-	-	2.000	-	-	-	-	-	-	-	-	-	-	-	-
<i>Subtotal: Software Cost</i>	-	-	-	-	-	2.000	-	-	-	-	-	-	-	-	-	-	-	-
<b>Package Fielding Cost</b>																		
<b>Recurring Cost</b>																		
Ethernet IP Cards	-	-	-	-	-	-	-	-	-	-	-	1.328	-	-	-	-	-	1.328
<i>Subtotal: Recurring Cost</i>	-	-	-	-	-	-	-	-	-	-	-	1.328	-	-	-	-	-	1.328
<i>Subtotal: Package Fielding Cost</i>	-	-	-	-	-	-	-	-	-	-	-	1.328	-	-	-	-	-	1.328
<b>Logistics Cost</b>																		
<b>Recurring Cost</b>																		
Logistics Support to fielding efforts	-	-	-	-	-	-	-	-	-	-	-	0.212	-	-	-	-	-	0.212
<i>Subtotal: Recurring Cost</i>	-	-	-	-	-	-	-	-	-	-	-	0.212	-	-	-	-	-	0.212
<i>Subtotal: Logistics Cost</i>	-	-	-	-	-	-	-	-	-	-	-	0.212	-	-	-	-	-	0.212
<b>Support - Data Cost</b>																		
Management Data	-	-	1.833	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
<i>Subtotal: Support - Data Cost</i>	-	-	1.833	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
<b>Support - Fielding Cost</b>																		
Fielding	-	-	57.550	-	-	3.227	-	-	3.876	-	-	3.108	-	-	0.289	-	-	3.397
<i>Subtotal: Support - Fielding Cost</i>	-	-	57.550	-	-	3.227	-	-	3.876	-	-	3.108	-	-	0.289	-	-	3.397
<b>Support - Government Furnished Materials Cost</b>																		
Government Furnished Materials	-	-	49.173	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
<i>Subtotal: Support - Government Furnished Materials Cost</i>	-	-	49.173	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
<b>Support - Program Management Cost</b>																		
Government Management	-	-	84.258	-	-	1.327	-	-	1.195	-	-	1.123	-	-	-	-	-	1.123
<i>Subtotal: Support - Program Management Cost</i>	-	-	84.258	-	-	1.327	-	-	1.195	-	-	1.123	-	-	-	-	-	1.123
<b>Support - System Engineering Cost</b>																		
System Engineering	-	-	69.622	-	-	1.769	-	-	1.503	-	-	1.472	-	-	-	-	-	1.472
<i>Subtotal: Support - System Engineering Cost</i>	-	-	69.622	-	-	1.769	-	-	1.503	-	-	1.472	-	-	-	-	-	1.472

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<b>Exhibit P-5, Cost Analysis: PB 2021 Army</b>		<b>Date:</b> February 2020
<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 2035A / 02 / 18		<b>P-1 Line Item Number / Title:</b> 9910BC4002 / SMART-T (SPACE)
		<b>Item Number / Title [DODIC]:</b> BC4002 / SMART-T (SPACE)
<b>ID Code</b> (A=Service Ready, B=Not Service Ready) : A		<b>MDAP/MAIS Code:</b>

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

Cost Elements	Prior Years			FY 2019			FY 2020			FY 2021 Base			FY 2021 OCO			FY 2021 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)
Support - System Test and Evaluation Cost																		
Operational Test and Evaluation	-	-	31.245	-	-	0.480	-	-	0.485	-	-	0.265	-	-	-	-	-	0.265
<i>Subtotal: Support - System Test and Evaluation Cost</i>	-	-	<b>31.245</b>	-	-	<b>0.480</b>	-	-	<b>0.485</b>	-	-	<b>0.265</b>	-	-	-	-	-	<b>0.265</b>
<b>Gross/Weapon System Cost</b>	-	-	<b>752.977</b>	-	-	<b>19.160</b>	-	-	<b>11.340</b>	-	-	<b>8.611</b>	-	-	<b>0.289</b>	-	-	<b>8.900</b>

**Remarks:**

FY21 Fielding is to continue system upgrade efforts, to include upgraded United States Air Force Planning Tool, Greater Than 5 Satellite capability, system refresh and Unit training.  
 FY21 Systems Engineering is for Maintenance & Support Contract, IAVA, and ALPS Training Base support.  
 FY21 Ethernet Repeater Solutions is for completion of NRE for redesigned Ethernet IP cards.  
 FY21 Recurring Cost is for initial procurement of Ethernet IP cards (45 sets), which will be available starting in FY21.  
 FY21 Program Management Cost is for Help Desk, Program, Cost and Budget Analysts, and Government travel.  
 FY21 System Test & Evaluation funds a SatSim Terminal leased annually from MIT/Lincoln Labs.  
 FY21 Logistics is for logistics efforts in support of fielding upgrades.  
 FY21 OCO funding will be used to field upgrades to OCONUS-fielded systems for European Deterrence Initiative (EDI).

Secondary Distribution		FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total
Army	Quantity	-	-	-	-	-
	Total Obligation Authority	12.160	10.590	8.611	0.289	8.900
ANG	Quantity	-	-	-	-	-
	Total Obligation Authority	6.000	0.750	-	-	-
AR	Quantity	-	-	-	-	-
	Total Obligation Authority	1.000	-	-	-	-
<b>Total:</b>	<b>Quantity</b>	-	-	-	-	-
<b>Secondary Distribution</b>	<b>Total Obligation Authority</b>	<b>19.160</b>	<b>11.340</b>	<b>8.611</b>	<b>0.289</b>	<b>8.900</b>

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

<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 2035A: Other Procurement, Army / BA 02: Communications and Electronics Equipment / BSA 18: Comm - Satellite Communications	<b>P-1 Line Item Number / Title:</b> 9915BC4120 / Global Brdcst Svc - GBS
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<b>ID Code</b> (A=Service Ready, B=Not Service Ready): A	<b>Program Elements for Code B Items:</b> N/A	<b>Other Related Program Elements:</b> N/A
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**Line Item MDAP/MAIS Code:** N/A

Resource Summary	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	To Complete	Total
Procurement Quantity ( <i>Units in Each</i> )	-	35	-	-	-	-	-	-	-	-	-	35
Gross/Weapon System Cost ( <i>\$ in Millions</i> )	309.642	17.682	11.800	8.191	0.319	8.510	-	-	-	-	-	347.634
Less PY Advance Procurement ( <i>\$ in Millions</i> )	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) ( <i>\$ in Millions</i> )	309.642	17.682	11.800	8.191	0.319	8.510	-	-	-	-	-	347.634
Plus CY Advance Procurement ( <i>\$ in Millions</i> )	-	-	-	-	-	-	-	-	-	-	-	-
<b>Total Obligation Authority (<i>\$ in Millions</i>)</b>	<b>309.642</b>	<b>17.682</b>	<b>11.800</b>	<b>8.191</b>	<b>0.319</b>	<b>8.510</b>	-	-	-	-	-	<b>347.634</b>

*(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> )	-	505.200	-	-	-	-	-	-	-	-	-	9,932.400

**Description:**

This funding line supports the Army Network Modernization Strategy LOE 1, Unified Network. Efforts are aligned to support the Network Cross-Functional Team capability set approach to achieve the network modernization strategy.

Global Broadcast Service (GBS) provides high-speed broadcast to receive only terminals of large-volume data and multimedia products including Unmanned Aerial Vehicles (UAV) and commercial video, imagery, intelligence, map data, weather, and biometric data. GBS gives deployed forces access to national level repositories of intelligence products and other critical mission planning information. This is a Joint Program and is designated as a Department of Defense Space System. GBS is used to deliver security and system software updates to other terminals in the Army Tactical Network by offloading of the Command and Control (C2) MILSATCOM bandwidth. GBS also reduces oversubscription on the Wideband Global SATCOM (WGS) constellation, providing deployed tactical operations centers (TOCs) and garrison forces worldwide greater bandwidth for two-way C2 traffic. The GBS system is being upgraded for increased cyber security.

GBS is a Joint Program and is designated as a Department of Defense Space System. The Air Force (USAF) is designated as the executive service (Joint ACAT IC program). The Army supports the Joint Program Office (JPO) on the development and procurement of the Transportable Ground Receive Suite (TGRS) (AN/TSR-11). The TGRS consists of a Receive Broadcast Manager (RBM) and very-small-aperture satellite antenna. The TGRS is fielded to Battalion, Brigade Combat Teams, Divisions, Corps and Theater level units in Active, National Guard, and Reserve components.

Current funding supports testing efforts for the integration of the Enterprise Service Gateway Modem (ESGM) to meet Transmission Security (TRANSEC) capability requirements planned to begin in FY2023.

Secondary Distribution	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025
Army	Quantity	-	-	-	-	-	-	-	-
	Total Obligation Authority	10.816	11.800	8.191	0.319	8.510	-	-	-
ANG	Quantity	35	-	-	-	-	-	-	-
	Total Obligation Authority	4.472	-	-	-	-	-	-	-
AR	Quantity	-	-	-	-	-	-	-	-
	Total Obligation Authority	2.394	-	-	-	-	-	-	-



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<b>Exhibit P-40, Budget Line Item Justification:</b> PB 2021 Army							<b>Date:</b> February 2020		
<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 2035A: Other Procurement, Army / BA 02: Communications and Electronics Equipment / BSA 18: Comm - Satellite Communications					<b>P-1 Line Item Number / Title:</b> 9915BC4120 / Global Brdcst Svc - GBS				
<b>ID Code</b> (A=Service Ready, B=Not Service Ready): A			<b>Program Elements for Code B Items:</b> N/A			<b>Other Related Program Elements:</b> N/A			
<b>Line Item MDAP/MAIS Code:</b> N/A									

Secondary Distribution		FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025
<b>Total:</b>	<b>Quantity</b>	35	-	-	-	-	-	-	-	-
<b>Secondary Distribution</b>	<b>Total Obligation Authority</b>	17.682	11.800	8.191	0.319	8.510	-	-	-	-

Empty content area for justification										
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**UNCLASSIFIED**

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

<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 2035A: Other Procurement, Army / BA 02: Communications and Electronics Equipment / BSA 18: Comm - Satellite Communications	<b>P-1 Line Item Number / Title:</b> 9915BC4120 / Global Brdcst Svc - GBS
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ID Code (A=Service Ready, B=Not Service Ready): A	Program Elements for Code B Items: N/A	Other Related Program Elements: N/A
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**Line Item MDAP/MAIS Code:** N/A

Exhibits Schedule					Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total
Exhibit Type	Title*	Subexhibits	ID CD	MDAP/MAIS Code	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)
P-5	BC4120 / Global Brdcst Svc - GBS	P-5a	A		- / 309.642	35 / 17.682	- / 11.800	- / 8.191	- / 0.319	- / 8.510
<b>P-40</b>	<b>Total Gross/Weapon System Cost</b>				<b>- / 309.642</b>	<b>35 / 17.682</b>	<b>- / 11.800</b>	<b>- / 8.191</b>	<b>- / 0.319</b>	<b>- / 8.510</b>

\*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 2021 Base procurement funds in the amount of \$8.191 million will be used to complete fielding AN/TSR-11 upgrades and for the participation in USAF testing of the GBS Transmission Security (TRANSEC) capability using the Enterprise Service Gateway Modem (ESGM). Additionally, the program will procure 10 ESGM modems to support the joint program operational test of the ESGM modem. The ESGM modems will provide increased security of satellite transmissions over the WGS constellation to meet the TRANSEC capability requirements.

FY 2021 OCO funds in the amount of \$0.319 million will be used to complete fielding efforts for the AN/TSR-11.

The Approved Acquisition Objective (AAO) for Global Broadcast Service (GBS) is 2,080.

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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<b>Exhibit P-5, Cost Analysis: PB 2021 Army</b>											<b>Date:</b> February 2020									
<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 2035A / 02 / 18					<b>P-1 Line Item Number / Title:</b> 9915BC4120 / Global Brdcst Svc - GBS						<b>Item Number / Title [DODIC]:</b> BC4120 / Global Brdcst Svc - GBS									
<b>ID Code</b> (A=Service Ready, B=Not Service Ready) : A											<b>MDAP/MAIS Code:</b>									
Resource Summary				Prior Years		FY 2019			FY 2020			FY 2021 Base			FY 2021 OCO			FY 2021 Total		
Procurement Quantity (Units in Each)				-		35			-			-			-			-		
Gross/Weapon System Cost (\$ in Millions)				309.642		17.682			11.800			8.191			0.319			8.510		
Less PY Advance Procurement (\$ in Millions)				-		-			-			-			-			-		
Net Procurement (P-1) (\$ in Millions)				309.642		17.682			11.800			8.191			0.319			8.510		
Plus CY Advance Procurement (\$ in Millions)				-		-			-			-			-			-		
<b>Total Obligation Authority (\$ in Millions)</b>				<b>309.642</b>		<b>17.682</b>			<b>11.800</b>			<b>8.191</b>			<b>0.319</b>			<b>8.510</b>		
<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)				-		505.200			-			-			-			-		

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

Cost Elements	Prior Years			FY 2019			FY 2020			FY 2021 Base			FY 2021 OCO			FY 2021 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																		
Tech Refresh (Laptops)	4.000	150	0.600	4.000	1,051	4.204	4.000	757	3.028	-	-	-	-	-	-	-	-	-
Other	-	-	9.441	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Transportable Grnd Rec Suite (AN/TSR-8)	139.508	710	99.051	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Joint IP Modem (JIPM) Upgrd Kit AN/TSR-8	27.156	979	26.586	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Trans Grnd Rec Suite TGRS-11 For Testing	85.000	4	0.340	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Transportable Ground Receive Suite (TGRS) <sup>(†)</sup>	55.216	365	20.154	96.140	85	8.172	154.000	26	4.004	-	-	-	-	-	-	-	-	-
GFE	-	-	9.664	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
TSBM JIPM Mini Hub	5,600.000	1	5.600	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Theater Satellite Broadcast Mngr (TSBM)	3,380.000	3	10.140	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
SHF Terminal (replaces TTI RF head)	2,218.000	2	4.436	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
SHF Terminal GFE/Fielding/Training	-	-	1.027	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
TRANSEC (ESGM) Modems for Test <sup>(†)</sup>	-	-	-	-	-	-	-	-	-	30.000	10	0.300	-	-	-	30.000	10	0.300

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<b>Exhibit P-5, Cost Analysis: PB 2021 Army</b>												<b>Date:</b> February 2020					
<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 2035A / 02 / 18						<b>P-1 Line Item Number / Title:</b> 9915BC4120 / Global Brdcst Svc - GBS						<b>Item Number / Title [DODIC]:</b> BC4120 / Global Brdcst Svc - GBS					
<b>ID Code</b> (A=Service Ready, B=Not Service Ready) : A												<b>MDAP/MAIS Code:</b>					

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

Cost Elements	Prior Years			FY 2019			FY 2020			FY 2021 Base			FY 2021 OCO			FY 2021 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>	-	-	187.039	-	-	12.376	-	-	7.032	-	-	0.300	-	-	-	-	-	0.300
<b>Non Recurring Cost</b>																		
Test	-	-	6.776	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
<i>Subtotal: Non Recurring Cost</i>	-	-	6.776	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
<i>Subtotal: Flyaway Cost</i>	-	-	<b>193.815</b>	-	-	<b>12.376</b>	-	-	<b>7.032</b>	-	-	<b>0.300</b>	-	-	-	-	-	<b>0.300</b>
<b>Software Cost</b>																		
<b>Recurring Cost</b>																		
Software Procurement	-	-	-	5.802	85	0.493	7.000	26	0.182	2.500	10	0.025	-	-	-	2.500	10	0.025
<i>Subtotal: Recurring Cost</i>	-	-	-	-	-	0.493	-	-	0.182	-	-	0.025	-	-	-	-	-	0.025
<i>Subtotal: Software Cost</i>	-	-	-	-	-	<b>0.493</b>	-	-	<b>0.182</b>	-	-	<b>0.025</b>	-	-	-	-	-	<b>0.025</b>
<b>Support - Acceptance Testing Cost</b>																		
Acceptance Test	-	-	21.554	-	-	1.429	-	-	1.167	-	-	1.486	-	-	-	-	-	1.486
<i>Subtotal: Support - Acceptance Testing Cost</i>	-	-	<b>21.554</b>	-	-	<b>1.429</b>	-	-	<b>1.167</b>	-	-	<b>1.486</b>	-	-	-	-	-	<b>1.486</b>
<b>Support - Fielding Cost</b>																		
Fielding	-	-	51.706	-	-	2.592	-	-	2.650	-	-	4.900	-	-	0.319	-	-	5.219
<i>Subtotal: Support - Fielding Cost</i>	-	-	<b>51.706</b>	-	-	<b>2.592</b>	-	-	<b>2.650</b>	-	-	<b>4.900</b>	-	-	<b>0.319</b>	-	-	<b>5.219</b>
<b>Support - Operational/Site Activation Cost</b>																		
Sustainment/Interim Contractor Support	-	-	26.371	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
<i>Subtotal: Support - Operational/Site Activation Cost</i>	-	-	<b>26.371</b>	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
<b>Support - Program Management Cost</b>																		
Government Management	-	-	15.538	-	-	0.792	-	-	0.769	-	-	0.796	-	-	-	-	-	0.796
<i>Subtotal: Support - Program Management Cost</i>	-	-	<b>15.538</b>	-	-	<b>0.792</b>	-	-	<b>0.769</b>	-	-	<b>0.796</b>	-	-	-	-	-	<b>0.796</b>
<b>Support - System Engineering Cost</b>																		
System Engineering	-	-	0.658	-	-	-	-	-	-	-	-	0.684	-	-	-	-	-	0.684
<i>Subtotal: Support - System Engineering Cost</i>	-	-	<b>0.658</b>	-	-	-	-	-	-	-	-	<b>0.684</b>	-	-	-	-	-	<b>0.684</b>
<b>Gross/Weapon System Cost</b>	-	-	<b>309.642</b>	<b>505.200</b>	<b>35</b>	<b>17.682</b>	-	-	<b>11.800</b>	-	-	<b>8.191</b>	-	-	<b>0.319</b>	-	-	<b>8.510</b>

Remarks:

**UNCLASSIFIED**

<b>Exhibit P-5, Cost Analysis: PB 2021 Army</b>		<b>Date:</b> February 2020
<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 2035A / 02 / 18	<b>P-1 Line Item Number / Title:</b> 9915BC4120 / Global Brdcst Svc - GBS	<b>Item Number / Title [DODIC]:</b> BC4120 / Global Brdcst Svc - GBS
<b>ID Code</b> (A=Service Ready, B=Not Service Ready) : A		<b>MDAP/MAIS Code:</b>
Fielding costs increased from FY20 to FY21 to complete fielding of AN/TSR-11 upgrades.		

Secondary Distribution		FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total
Army	Quantity	-	-	-	-	-
	Total Obligation Authority	10.816	11.800	8.191	0.319	8.510
ANG	Quantity	35	-	-	-	-
	Total Obligation Authority	4.472	-	-	-	-
AR	Quantity	-	-	-	-	-
	Total Obligation Authority	2.394	-	-	-	-
<b>Total:</b>	<b>Quantity</b>	<b>35</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>
<b>Secondary Distribution</b>	<b>Total Obligation Authority</b>	<b>17.682</b>	<b>11.800</b>	<b>8.191</b>	<b>0.319</b>	<b>8.510</b>

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

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**Exhibit P-5a, Procurement History and Planning:** PB 2021 Army **Date:** February 2020

<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 2035A / 02 / 18	<b>P-1 Line Item Number / Title:</b> 9915BC4120 / Global Brdcst Svc - GBS	<b>Item Number / Title [DODIC]:</b> BC4120 / Global Brdcst Svc - GBS
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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
Transportable Ground Receive Suite (TGRS)		2019	General Dynamics / C4 Systems / Taunton, MA	MIPR	Colorado Springs, Colorado	Mar 2019	Oct 2019	85	96.140	N		
Transportable Ground Receive Suite (TGRS)		2020	General Dynamics / C4 Systems / Taunton, MA	MIPR	Colorado Springs, Colorado	Mar 2020	Oct 2020	26	154.000	N		
TRANSEC (ESGM) Modems for Test		2021	TBD / TBD	MIPR	TBD	Oct 2020	Sep 2021	10	30.000	N		

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

<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 2035A: Other Procurement, Army / BA 02: Communications and Electronics Equipment / BSA 18: Comm - Satellite Communications	<b>P-1 Line Item Number / Title:</b> 9922B08400 / ENROUTE MISSION COMMAND (EMC)
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<b>ID Code</b> (A=Service Ready, B=Not Service Ready):	<b>Program Elements for Code B Items:</b> N/A	<b>Other Related Program Elements:</b> N/A
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**Line Item MDAP/MAIS Code:** N/A

Resource Summary	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	To Complete	Total
Procurement Quantity <i>(Units in Each)</i>	10	25	-	-	-	-	-	-	-	-	-	35
Gross/Weapon System Cost <i>(\$ in Millions)</i>	128.183	37.401	8.609	-	-	-	-	-	-	-	-	174.193
Less PY Advance Procurement <i>(\$ in Millions)</i>	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) <i>(\$ in Millions)</i>	128.183	37.401	8.609	-	-	-	-	-	-	-	-	174.193
Plus CY Advance Procurement <i>(\$ in Millions)</i>	-	-	-	-	-	-	-	-	-	-	-	-
<b>Total Obligation Authority <i>(\$ in Millions)</i></b>	<b>128.183</b>	<b>37.401</b>	<b>8.609</b>	-	-	-	-	-	-	-	-	<b>174.193</b>

*(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>	12,818.300	1,496.040	-	-	-	-	-	-	-	-	-	4,976.943

**Description:**

EMC supports the Global Response Force (GRF) requirement to conduct Airborne forcible entry operations with the ability to conduct mission command, to include mission planning and rehearsal, while enroute on board US Air Force Air Mobility Command (AMC) aircraft. EMC modernizes enroute communications to enable broadband reach-back data capability utilizing military or commercial networks with adequate bandwidth to support required Mission Command and Intelligence applications.

The Ka MWO will enable access to a faster, more reliable and robust network. The Ka satellite service increases the coverage map providing true worldwide coverage instead of regional coverage. Ka will provide a guaranteed data rate and up to 4 times higher throughput which will better enable mission command and simultaneous use of more data-intensive services that commanders can use such as UAV video streaming for greater situational awareness of the drop zone. Market research indicates multiple DoD stakeholders can collectively achieve price breaks and lower future bandwidth costs by up to 20-30% over Ku. This MWO, in conjunction with other DoD stakeholders' efforts, will provide a larger available pool of aircraft available for the Army and others to utilize decreasing maintenance downtime or unavailability of aircraft.

Operational Needs Statement (ONS) 09-9319 was revalidated by the HQDA G-3 on 5 Nov 2014 to support fielding of the objective capability, which will support a full brigade lift of the Alpha echelon for a forced entry operation. (ONS) 09-9319 was validated by HQDA G3 in 5 Mar 2013. \$21.275 million was provided in September 2013 via an Above Threshold Reprogramming (ATR) on SSN BB8417 Modification of In-Service Equipment (TACSAT) in support of that ONS to provide an initial capability.

Full Operational Capability (FOC) for Ku satellite band was met in Sep 2017. Commensurate with rephasing of FY2017 OPA funding into FY2018/2019, program was restructured in Dec 2015. MDA addressed schedule issues (Oct 2016) by authorizing to field a Ku SATCOM band FISA Full Operational Capability (FOC) (4QFY17) and complete a Modification Word Order (MWO), adding Ka SATCOM band FISA capability, post Ku FISA FOC.

Initial Operational Capability was met in May 2015 with modification of five C-17s with satellite antennae and installation kits, and roll-on/roll-off, battalion level, Key Leader Enroute Node (KEN). FOC is 35 Ku FISA equipped C-17s, eight KENs, 24 company level Dependent Airborne Nodes (DAN), and a Command and Staff Palletized Airborne Node (CASPAN) airborne command post suite.

The enduring requirement for EMC is documented in the Transmission Systems Capabilities Production Document (CPD), DAMO, CIC 30 January 2015.

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

<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 2035A: Other Procurement, Army / BA 02: Communications and Electronics Equipment / BSA 18: Comm - Satellite Communications	<b>P-1 Line Item Number / Title:</b> 9922B08400 / ENROUTE MISSION COMMAND (EMC)
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<b>ID Code</b> (A=Service Ready, B=Not Service Ready):	<b>Program Elements for Code B Items:</b> N/A	<b>Other Related Program Elements:</b> N/A
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**Line Item MDAP/MAIS Code:** N/A

"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."

	<b>Secondary Distribution</b>	<b>FY 2019</b>	<b>FY 2020</b>	<b>FY 2021 Base</b>	<b>FY 2021 OCO</b>	<b>FY 2021 Total</b>	<b>FY 2022</b>	<b>FY 2023</b>	<b>FY 2024</b>	<b>FY 2025</b>
Army	Quantity	25	-	-	-	-	-	-	-	-
	Total Obligation Authority	37.401	8.609	-	-	-	-	-	-	-
<b>Total: Secondary Distribution</b>	<b>Quantity</b>	<b>25</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>
	<b>Total Obligation Authority</b>	<b>37.401</b>	<b>8.609</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>

**Justification:**  
 Program has no FY 2021 request.



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

<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 2035A: Other Procurement, Army / BA 02: Communications and Electronics Equipment / BSA 24: Comm - C3 System	<b>P-1 Line Item Number / Title:</b> 8151B70000 / COE Tactical Server Infrastructure (TSI)
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<b>ID Code</b> (A=Service Ready, B=Not Service Ready):	<b>Program Elements for Code B Items:</b> 0604818A	<b>Other Related Program Elements:</b> N/A
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**Line Item MDAP/MAIS Code:** N/A

Resource Summary	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	To Complete	Total
Procurement Quantity ( <i>Units in Each</i> )	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost ( <i>\$ in Millions</i> )	-	20.500	67.533	94.871	-	94.871	94.052	106.057	110.504	110.702	Continuing	Continuing
Less PY Advance Procurement ( <i>\$ in Millions</i> )	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) ( <i>\$ in Millions</i> )	-	20.500	67.533	94.871	-	94.871	94.052	106.057	110.504	110.702	Continuing	Continuing
Plus CY Advance Procurement ( <i>\$ in Millions</i> )	-	-	-	-	-	-	-	-	-	-	-	-
<b>Total Obligation Authority (<i>\$ in Millions</i>)</b>	-	<b>20.500</b>	<b>67.533</b>	<b>94.871</b>	-	<b>94.871</b>	<b>94.052</b>	<b>106.057</b>	<b>110.504</b>	<b>110.702</b>	<b>Continuing</b>	<b>Continuing</b>

*(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> )	-	47.018	-	210.357	-	210.357	276.624	238.330	293.894	379.116	Continuing	Continuing

**Description:**

This funding line is directly aligned to the Army Network Modernization Strategy LOE 2, Common Operating Environment. This funding line also supports the Army Network Modernization Strategy LOE 1, Network Enabling Functions (CYBER). Efforts are aligned to support the Network-Cross Functional Team capability set approach to achieve the network modernization strategy.

COE TSI will provide the hardware infrastructure to host capabilities such as the command post software infrastructure, movement and maneuver applications, Tactical Defensive Cyber Operation (DCO) Infrastructure (TDI) tools and warfighting function applications. TSI infrastructure will standardize server configurations using Commercial-off-the-shelf (COTS) hardware and software. The TSI hardware will come in two hardware configurations: a TSI Large server that provides a reduced Size, Weight and Power (SWAP) than the currently fielded servers that will support Brigade and higher formations, and a TSI Small server that will support Battalion level and higher formations for disaster/early entry operations. TSI is intended to provide a common hosting platform for mission command systems and will extend to support the migration of future warfighting capabilities as well as future technological advances in computing. The Milestone Decision Authority (MDA) approved the TSI Acquisition Strategy on 11 July 2019 and issued an Acquisition Decision Memorandum (ADM) approving a Full Deployment Decision (FDD) to field Command Post Computing Environment Increment 0 capability on the TSI. CPCE is the primary component of one of four Army Network Cross-Functional Team (N-CFT) Lines of Effort, providing the Army's warfighting Common Operational Picture and converging multiple warfighting systems into a single soldier interface. Conditional fielding authority was approved on 15 July 19; First Unit Equipped (FUE) was achieved on 26 August 2019.

The Tactical DCO Infrastructure (TDI) is the semi-automated infrastructure to deploy pre-configured DCO Tools on the Tactical Server Infrastructure (TSI) which resides within the Command Post, at Brigade through Corps, for both organic Cyber Network Defenders as well as remote access by Cyber Protection Teams (CPTs) to support defense of the tactical network.

Cyberspace Situational Understanding (Cyber SU) is a software-only program that will be hosted on the Tactical Server Infrastructure (TSI) at Brigade to ASCC echelons continually integrating COTS/NDI capabilities into the Common Operating Environment (COE) to produce a CEMA overlay on the commander's Common Operational Picture (COP) within the Command Post Computing Environment (CPCE). Cyber SU enables the commander and staff to concurrently defend the network/information systems, identify and target cyberspace threats, manage risks and aid in increasing operational success.

Secondary Distribution	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025
Army									
Quantity	-	-	-	-	-	-	-	-	-
Total Obligation Authority	15.000	67.533	76.268	-	76.268	47.026	55.517	58.284	58.378

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<b>Exhibit P-40, Budget Line Item Justification:</b> PB 2021 Army							<b>Date:</b> February 2020			
<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 2035A: Other Procurement, Army / BA 02: Communications and Electronics Equipment / BSA 24: Comm - C3 System					<b>P-1 Line Item Number / Title:</b> 8151B70000 / COE Tactical Server Infrastructure (TSI)					
<b>ID Code</b> (A=Service Ready, B=Not Service Ready):			<b>Program Elements for Code B Items:</b> 0604818A			<b>Other Related Program Elements:</b> N/A				
<b>Line Item MDAP/MAIS Code:</b> N/A										

Secondary Distribution		FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025
ANG	Quantity	-	-	-	-	-	-	-	-	-
	Total Obligation Authority	3.400	-	13.859	-	13.859	28.216	30.572	31.418	31.481
AR	Quantity	-	-	-	-	-	-	-	-	-
	Total Obligation Authority	2.100	-	4.744	-	4.744	18.810	19.968	20.802	20.843
<b>Total:</b>	<b>Quantity</b>	-	-	-	-	-	-	-	-	-
<b>Secondary Distribution</b>	<b>Total Obligation Authority</b>	<b>20.500</b>	<b>67.533</b>	<b>94.871</b>	-	<b>94.871</b>	<b>94.052</b>	<b>106.057</b>	<b>110.504</b>	<b>110.702</b>

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

**Appropriation / Budget Activity / Budget Sub Activity:**  
 2035A: Other Procurement, Army / BA 02: Communications and Electronics  
 Equipment / BSA 24: Comm - C3 System

**P-1 Line Item Number / Title:**  
 8151B70000 / COE Tactical Server Infrastructure (TSI)

**ID Code** (A=Service Ready, B=Not Service Ready): **Program Elements for Code B Items:** 0604818A **Other Related Program Elements:** N/A

**Line Item MDAP/MAIS Code:** N/A

Exhibits Schedule					Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total
Exhibit Type	Title*	Subexhibits	ID CD	MDAP/MAIS Code	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)
P-5	B70005 / Tactical Server Infrastructure (TSI)	P-5a			- / -	- / 20.500	- / 67.533	- / 94.871	- / -	- / 94.871
<b>P-40</b>	<b>Total Gross/Weapon System Cost</b>				<b>- / -</b>	<b>- / 20.500</b>	<b>- / 67.533</b>	<b>- / 94.871</b>	<b>- / -</b>	<b>- / 94.871</b>

\*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 2021 Base procurement funding of \$94.871 million supports the purchase of 142 TSI Large servers and 309 TSI Small servers to host Command Post Computing Environment (CPCE) core infrastructure software and warfighting function applications. Funding also procures TSI server software necessary for server operation, including Operating System software, virtual machine configuration software, firewall software, password management software and integration of TDI and Cyber SU into TSI. Funding supports fielding and New Equipment Training (NET) of the hardware and software that brings the command and control, situational awareness, and executive decision making capabilities to the Warfighter. Requirements for the TSI are established in the AROC approved COE Information Systems Initial Capability Document (IS ICD), TSI Requirements Definition Package (RDP), Cyber SU RDP, DCO IS-ICD and TDI RDP.

Procurement and Fielding will continue in accordance with the approved TSI Acquisition Strategy.

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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<b>Exhibit P-5, Cost Analysis: PB 2021 Army</b>													<b>Date:</b> February 2020					
<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 2035A / 02 / 24						<b>P-1 Line Item Number / Title:</b> 8151B70000 / COE Tactical Server Infrastructure (TSI)						<b>Item Number / Title [DODIC]:</b> B70005 / Tactical Server Infrastructure (TSI)						
<b>ID Code</b> (A=Service Ready, B=Not Service Ready) :										<b>MDAP/MAIS Code:</b>								
<b>Resource Summary</b>				<b>Prior Years</b>		<b>FY 2019</b>			<b>FY 2020</b>			<b>FY 2021 Base</b>			<b>FY 2021 OCO</b>		<b>FY 2021 Total</b>	
Procurement Quantity ( <i>Units in Each</i> )				-		-			-			-			-		-	
Gross/Weapon System Cost ( <i>\$ in Millions</i> )				-		20.500			67.533			94.871			-		94.871	
Less PY Advance Procurement ( <i>\$ in Millions</i> )				-		-			-			-			-		-	
Net Procurement (P-1) ( <i>\$ in Millions</i> )				-		20.500			67.533			94.871			-		94.871	
Plus CY Advance Procurement ( <i>\$ in Millions</i> )				-		-			-			-			-		-	
<b>Total Obligation Authority</b> ( <i>\$ in Millions</i> )				-		<b>20.500</b>			<b>67.533</b>			<b>94.871</b>			-		<b>94.871</b>	
<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> )				-		47.018			-			210.357			-		210.357	
Note: Subtotals or Totals in this Exhibit P-5 may not be exact or sum exactly due to rounding.																		
<b>Cost Elements</b>	<b>Prior Years</b>			<b>FY 2019</b>			<b>FY 2020</b>			<b>FY 2021 Base</b>			<b>FY 2021 OCO</b>			<b>FY 2021 Total</b>		
	<b>Unit Cost</b> (\$ K)	<b>Qty</b> (Each)	<b>Total Cost</b> (\$ M)	<b>Unit Cost</b> (\$ K)	<b>Qty</b> (Each)	<b>Total Cost</b> (\$ M)	<b>Unit Cost</b> (\$ K)	<b>Qty</b> (Each)	<b>Total Cost</b> (\$ M)	<b>Unit Cost</b> (\$ K)	<b>Qty</b> (Each)	<b>Total Cost</b> (\$ M)	<b>Unit Cost</b> (\$ K)	<b>Qty</b> (Each)	<b>Total Cost</b> (\$ M)	<b>Unit Cost</b> (\$ K)	<b>Qty</b> (Each)	<b>Total Cost</b> (\$ M)
Hardware Cost																		
Recurring Cost																		
Hardware TSI Large Server <sup>(f)</sup>	-	-	-	120.179	28	3.365	125.547	117	14.689	130.352	142	18.510	-	-	-	130.352	142	18.510
Hardware TSI Small Server (Laptop) <sup>(f)</sup>	-	-	-	19.767	86	1.700	20.148	256	5.158	20.217	309	6.247	-	-	-	20.217	309	6.247
<i>Subtotal: Recurring Cost</i>	-	-	-	-	-	5.065	-	-	19.847	-	-	24.757	-	-	-	-	-	24.757
<i>Subtotal: Hardware Cost</i>	-	-	-	-	-	5.065	-	-	19.847	-	-	24.757	-	-	-	-	-	24.757
Software Cost																		
Recurring Cost																		
TSI Large SW Licenses	-	-	-	106.000	28	2.968	124.000	117	14.508	126.000	142	17.892	-	-	-	126.000	142	17.892
TSI Small SW Licenses	-	-	-	13.965	86	1.201	18.566	256	4.753	19.670	309	6.078	-	-	-	19.670	309	6.078
Software License Maintenance	-	-	-	-	-	4.153	-	-	14.910	-	-	16.764	-	-	-	-	-	16.764
Post Deployment Software Support	-	-	-	-	-	-	-	-	-	-	-	5.921	-	-	-	-	-	5.921
<i>Subtotal: Recurring Cost</i>	-	-	-	-	-	8.322	-	-	34.171	-	-	46.655	-	-	-	-	-	46.655
<i>Subtotal: Software Cost</i>	-	-	-	-	-	8.322	-	-	34.171	-	-	46.655	-	-	-	-	-	46.655
Support - Fielding Cost																		
Fielding	-	-	-	-	-	3.287	-	-	5.017	-	-	7.040	-	-	-	-	-	7.040

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<b>Exhibit P-5, Cost Analysis: PB 2021 Army</b>		<b>Date:</b> February 2020
<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 2035A / 02 / 24	<b>P-1 Line Item Number / Title:</b> 8151B70000 / COE Tactical Server Infrastructure (TSI)	<b>Item Number / Title [DODIC]:</b> B70005 / Tactical Server Infrastructure (TSI)

<b>ID Code</b> (A=Service Ready, B=Not Service Ready) :	<b>MDAP/MAIS Code:</b>
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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 2019			FY 2020			FY 2021 Base			FY 2021 OCO			FY 2021 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 - Fielding Cost</i>	-	-	-	-	-	3.287	-	-	5.017	-	-	7.040	-	-	-	-	-	7.040
Support - New Equipment Training (NET) Cost																		
Equipment	-	-	-	-	-	3.286	-	-	4.094	-	-	6.788	-	-	-	-	-	6.788
<i>Subtotal: Support - New Equipment Training (NET) Cost</i>	-	-	-	-	-	3.286	-	-	4.094	-	-	6.788	-	-	-	-	-	6.788
Support - Program Management Cost																		
Contractor Management	-	-	-	-	-	0.540	-	-	2.143	-	-	4.938	-	-	-	-	-	4.938
<i>Subtotal: Support - Program Management Cost</i>	-	-	-	-	-	0.540	-	-	2.143	-	-	4.938	-	-	-	-	-	4.938
Support - System Engineering Cost																		
System Engineering	-	-	-	-	-	-	-	-	1.561	-	-	3.345	-	-	-	-	-	3.345
<i>Subtotal: Support - System Engineering Cost</i>	-	-	-	-	-	-	-	-	1.561	-	-	3.345	-	-	-	-	-	3.345
Support - Training Cost																		
Equipment	-	-	-	-	-	-	-	-	0.700	-	-	1.348	-	-	-	-	-	1.348
<i>Subtotal: Support - Training Cost</i>	-	-	-	-	-	-	-	-	0.700	-	-	1.348	-	-	-	-	-	1.348
<b>Gross/Weapon System Cost</b>	-	-	-	47.018	-	20.500	-	-	67.533	210.357	-	94.871	-	-	-	210.357	-	94.871

**Remarks:**

Note 1: The TSI Large hardware consists of three server assemblies for Brigade and higher formations, while the TSI Small is a laptop supporting Battalion level and higher formations.

Note 2: Unit costs for hardware based on CHS contract costs and software unit costs based on current Extended License Agreement costs.

Secondary Distribution		FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total
Army	Quantity	-	-	-	-	-
	Total Obligation Authority	15.000	67.533	76.268	-	76.268
ANG	Quantity	-	-	-	-	-
	Total Obligation Authority	3.400	-	13.859	-	13.859
AR	Quantity	-	-	-	-	-
	Total Obligation Authority	2.100	-	4.744	-	4.744
<b>Total:</b>	<b>Quantity</b>	-	-	-	-	-

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<b>Exhibit P-5, Cost Analysis:</b> PB 2021 Army		<b>Date:</b> February 2020
<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 2035A / 02 / 24	<b>P-1 Line Item Number / Title:</b> 8151B70000 / COE Tactical Server Infrastructure (TSI)	<b>Item Number / Title [DODIC]:</b> B70005 / Tactical Server Infrastructure (TSI)

<b>ID Code</b> (A=Service Ready, B=Not Service Ready) :	<b>MDAP/MAIS Code:</b>
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Secondary Distribution		FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total
Secondary Distribution	Total Obligation Authority	20.500	67.533	94.871	-	94.871

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

**UNCLASSIFIED**

<b>Exhibit P-5a, Procurement History and Planning:</b> PB 2021 Army								<b>Date:</b> February 2020				
<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 2035A / 02 / 24			<b>P-1 Line Item Number / Title:</b> 8151B70000 / COE Tactical Server Infrastructure (TSI)					<b>Item Number / Title [DODIC]:</b> B70005 / Tactical Server Infrastructure (TSI)				

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
Hardware TSI Large Server		2019	General Dynamics / Taunton, MA	C / IDIQ	Aberdeen Proving Ground, MD	May 2019	Aug 2019	28	120.179	Y		
Hardware TSI Large Server		2020	General Dynamics / Taunton, MA	C / IDIQ	Aberdeen Proving Ground, MD	Jan 2020	May 2020	117	125.547	Y		
Hardware TSI Large Server		2021	General Dynamics / Taunton, MA	C / IDIQ	Aberdeen Proving Ground, MD	Nov 2020	Mar 2021	142	130.352	Y		
Hardware TSI Small Server (Laptop)		2019	General Dynamics / Taunton, MA	C / IDIQ	Aberdeen Proving Ground, MD	May 2019	Aug 2019	86	19.767	Y		
Hardware TSI Small Server (Laptop)		2020	General Dynamics / Taunton, MA	C / IDIQ	Aberdeen Proving Ground, MD	Jan 2020	May 2020	256	20.148	Y		
Hardware TSI Small Server (Laptop)		2021	General Dynamics / Taunton, MA	C / IDIQ	Aberdeen Proving Ground, MD	Nov 2020	Mar 2021	309	20.217	Y		

**Remarks:**  
Procured items are COTS.

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

<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 2035A: Other Procurement, Army / BA 02: Communications and Electronics Equipment / BSA 32: Comm - Combat Communications	<b>P-1 Line Item Number / Title:</b> 6458B95004 / Handheld Manpack Small Form Fit (HMS)
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<b>ID Code</b> (A=Service Ready, B=Not Service Ready):	<b>Program Elements for Code B Items:</b> N/A	<b>Other Related Program Elements:</b> 0604280A, 0605042A
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**Line Item MDAP/MAIS Code:** N/A

Resource Summary	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	To Complete	Total
Procurement Quantity ( <i>Units in Each</i> )	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost ( <i>\$ in Millions</i> )	684.945	298.475	468.026	550.848	-	550.848	687.792	838.216	989.541	852.259	Continuing	Continuing
Less PY Advance Procurement ( <i>\$ in Millions</i> )	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) ( <i>\$ in Millions</i> )	684.945	298.475	468.026	550.848	-	550.848	687.792	838.216	989.541	852.259	Continuing	Continuing
Plus CY Advance Procurement ( <i>\$ in Millions</i> )	-	-	-	-	-	-	-	-	-	-	-	-
<b>Total Obligation Authority (<i>\$ in Millions</i>)</b>	<b>684.945</b>	<b>298.475</b>	<b>468.026</b>	<b>550.848</b>	-	<b>550.848</b>	<b>687.792</b>	<b>838.216</b>	<b>989.541</b>	<b>852.259</b>	<b>Continuing</b>	<b>Continuing</b>

*(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:**

This funding line is directly aligned to the Army Network Modernization Strategy LOE 1, Unified Network. Efforts are aligned to support the Network-Cross Functional Team capability set approach to achieve the network modernization strategy.

The Handheld, Manpack, and Small Form Fit (HMS) radio program is a single Acquisition Category IC program encompassing: handheld radios (one-channel Rifleman Radio (RR), two-channel Leader Radio (LR), and single-channel data radio) and Manpack (MP) radio (Generation 1 and Generation 2 radios). HMS provides voice and data communication to the expeditionary Warfighter with an on-the-move, at-the-halt, and stationary Line of Sight (LOS)/Beyond Line of Sight (BLOS) capability for both dismounted personnel and platforms. HMS radio systems are software reprogrammable, networkable, multi-mode systems capable of simultaneous voice and data communication. HMS radios will support a variety of other platforms, including tactical End User Devices (EUD) voice and data needs. HMS provides tailorable and scalable, software-defined radio systems meeting U.S. Army, Air Force, Navy, Marine Corps and Special Operations Command communications needs.

HMS radios provide both Classified and Unclassified communications. HMS radios provide the Single Channel Ground and Airborne Radio System (SINCGARS) legacy waveform for Classified and Unclassified communications. HMS radios also provide advanced waveforms (e.g. TrellisWare TSM) that provide Secure but Unclassified (SBU) communications. The MP radio provides the Mobile User Objective System (MUOS) waveform for Tactical Satellite communications. These procurement efforts support Army Capability Set brigades as well as priority legacy TACSAT users. The HMS program is currently in the process of conducting significant testing, including Laboratory and Field Based Risk Reduction events in support of Operational Test event.

The HMS radio systems serve as the backbone of the Integrated Tactical Network (ITN) architecture, supporting a converged Mission Command network. Emerging requirements from ITN experimentation may include reconfiguration of existing communications equipment for additional use cases and/or new radio variants to meet Soldier networking needs. The Army intends to test and integrate two-channel communication technologies, utilizing existing Army two-channel radio variants (MP Radios), in support of Air to Ground demonstration. A single-channel variant that runs an advanced networking waveform and Small Form Factors will be evaluated as part of the ITN as an affordable option to reduce size, weight, and power.

HMS is currently executing a May 2014 approved Acquisition Strategy (AS) to procure Non-Developmental Items (NDI) through full and open competition open to all potential industry partners. An addendum to the AS was approved by the acting AAE on 8 March 2017, which incorporates the LR requirements. Two Firm-Fixed-Price (FFP) Indefinite Delivery Indefinite Quantity (IDIQ) contracts were awarded in support of this effort. The first contract was awarded on 29 April 2015 to procure Handheld radios; the initial Delivery Order on this contract was to procure RR. On 13 September 2016, the Army Acquisition Executive approved a decrease to the Basis of Issue (BOI) for the single-channel RR, an increase to the BOI for the two channel LR, and provided authority to move forward with acquisition activities for the two-channel



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<b>Exhibit P-40, Budget Line Item Justification:</b> PB 2021 Army		<b>Date:</b> February 2020
<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 2035A: Other Procurement, Army / BA 02: Communications and Electronics Equipment / BSA 32: Comm - Combat Communications		<b>P-1 Line Item Number / Title:</b> 6458B95004 / Handheld Manpack Small Form Fit (HMS)
<b>ID Code</b> (A=Service Ready, B=Not Service Ready):	<b>Program Elements for Code B Items:</b> N/A	<b>Other Related Program Elements:</b> 0604280A, 0605042A

**Line Item MDAP/MAIS Code:** N/A

LR. On 18 September 2018, HMS on-ramped LR capabilities to the existing Handheld IDIQ contract. The second contract was awarded on 26 February 2016 and will procure NDI MP radios for use in a classified environment.

For MP, the Army will procure radios through a multiple step selection process:

- Awarded FFP Contracts to all qualified vendors based on technical acceptability and demonstrations (26 February 2016)
- Awarded initial delivery orders based on Qualification Test results (19 December 2016)
- Awarded second delivery orders based on Customer Test results (31 July 2017)
- Award(ed) LRIP delivery orders (30 April 2018, 06 June 2019, and 3QFY20)
- Achieve Full Rate Production (2QFY21)

For LR, the Army will procure radios through a multiple step selection process:

- Awarded FFP Contracts to all qualified vendors based on technical acceptability and demonstrations (18 September 2018)
- Awarded LRIP delivery orders to support SFAB and ITN fieldings/evaluations (18 September 2018)
- Award delivery orders based on best value trade off construct (20 December 2019 & 4QFY20)
- Achieve Full Rate Production (2QFY21)

The current Handheld AAO (Army Acquisition Objective) is 226,075:  
 -100,000 Leader Radios  
 -21,579 Rifleman Radios  
 -104,496 Single Channel Data Radio

The current Manpack AAO is 65,622.

HMS received Congressional approval to execute \$94.680 million FY 2017 funding (B95007) to procure tactical radios and associated equipment to support Security Force Assistance Brigades (SFAB) fielding. The \$94.680M was authorized in two Above Threshold Reprogramming (ATR) actions (\$90.000M on ATR 17-27 PA and \$4.680M on ATR 18-05 PA) and was executed from the HMS B95007 funding line.

Secondary Distribution		FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025
Army	Quantity	-	-	-	-	-	-	-	-	-
	Total Obligation Authority	298.475	468.026	550.848	-	550.848	687.792	838.216	989.541	852.259
<b>Total:</b> Secondary Distribution	Quantity	-	-	-	-	-	-	-	-	-
	Total Obligation Authority	<b>298.475</b>	<b>468.026</b>	<b>550.848</b>	-	<b>550.848</b>	<b>687.792</b>	<b>838.216</b>	<b>989.541</b>	<b>852.259</b>

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

<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 2035A: Other Procurement, Army / BA 02: Communications and Electronics Equipment / BSA 32: Comm - Combat Communications	<b>P-1 Line Item Number / Title:</b> 6458B95004 / Handheld Manpack Small Form Fit (HMS)
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<b>ID Code</b> (A=Service Ready, B=Not Service Ready):	<b>Program Elements for Code B Items:</b> N/A	<b>Other Related Program Elements:</b> 0604280A, 0605042A
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**Line Item MDAP/MAIS Code:** N/A

Exhibits Schedule					Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total
Exhibit Type	Title*	Subexhibits	ID CD	MDAP/MAIS Code	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)
P-5	B95006 / Handheld Radio	P-5a, P-21			- / 229.202	- / 79.802	- / 118.275	- / 139.811	- / -	- / 139.811
P-5	B95007 / Manpack Radio	P-5a, P-21			- / 455.743	- / 218.673	- / 349.751	- / 411.037	- / -	- / 411.037
<b>P-40</b>	<b>Total Gross/Weapon System Cost</b>				<b>- / 684.945</b>	<b>- / 298.475</b>	<b>- / 468.026</b>	<b>- / 550.848</b>	<b>- / -</b>	<b>- / 550.848</b>

\*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 2021 Base procurement dollars in the amount of \$550.848 million support the procurement of:  
 - 4,510 Leader Radios, Non-Recurring Engineering (NRE), System Engineering and Program Management (SEPM), support equipment, fielding, and vehicle integration. (\$139.811million)  
 - 4,678 Manpack Radios, NRE, SEPM, support equipment, fielding, and vehicle integration. (\$411.037 million)

In accordance with Section 1815 of the FY08 National Defense Authorization Act (P.L. 110-181), these items are necessary for use by the active and reserve components of the Armed Forces for homeland defense missions, domestic emergency responses, and providing military support to civil authorities.

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<b>Exhibit P-5, Cost Analysis: PB 2021 Army</b>		<b>Date:</b> February 2020
<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 2035A / 02 / 32	<b>P-1 Line Item Number / Title:</b> 6458B95004 / Handheld Manpack Small Form Fit (HMS)	<b>Item Number / Title [DODIC]:</b> B95006 / Handheld Radio

<b>ID Code</b> (A=Service Ready, B=Not Service Ready) :	<b>MDAP/MAIS Code:</b>
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<b>Resource Summary</b>	<b>Prior Years</b>	<b>FY 2019</b>	<b>FY 2020</b>	<b>FY 2021 Base</b>	<b>FY 2021 OCO</b>	<b>FY 2021 Total</b>
Procurement Quantity (Units in Each)	-	-	-	-	-	-
Gross/Weapon System Cost (\$ in Millions)	229.202	79.802	118.275	139.811	-	139.811
Less PY Advance Procurement (\$ in Millions)	-	-	-	-	-	-
Net Procurement (P-1) (\$ in Millions)	229.202	79.802	118.275	139.811	-	139.811
Plus CY Advance Procurement (\$ in Millions)	-	-	-	-	-	-
<b>Total Obligation Authority (\$ in Millions)</b>	<b>229.202</b>	<b>79.802</b>	<b>118.275</b>	<b>139.811</b>	<b>-</b>	<b>139.811</b>

*(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)	45.324	15.992	40.616	31.000	-	31.000

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

Cost Elements	Prior Years			FY 2019			FY 2020			FY 2021 Base			FY 2021 OCO			FY 2021 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)
<b>Hardware Cost</b>																		
Recurring Cost																		
Manufacturing - Leader Radio <sup>(f)</sup>	27.010	4,096	110.633	24.730	2,004	49.559	27.200	2,912	79.206	21.470	4,510	96.830	-	-	-	21.470	4,510	96.830
<i>Subtotal: Recurring Cost</i>	-	-	110.633	-	-	49.559	-	-	79.206	-	-	96.830	-	-	-	-	-	96.830
Non Recurring Cost																		
Hardware NRE	-	-	18.979	-	-	4.231	-	-	7.070	-	-	0.995	-	-	-	-	-	0.995
<i>Subtotal: Non Recurring Cost</i>	-	-	18.979	-	-	4.231	-	-	7.070	-	-	0.995	-	-	-	-	-	0.995
<i>Subtotal: Hardware Cost</i>	-	-	<b>129.612</b>	-	-	<b>53.790</b>	-	-	<b>86.276</b>	-	-	<b>97.825</b>	-	-	-	-	-	<b>97.825</b>
<b>Support - Common Support Equipment Cost</b>																		
Support and Handling Equipment	-	-	53.518	-	-	1.184	-	-	2.692	-	-	4.140	-	-	-	-	-	4.140
<i>Subtotal: Support - Common Support Equipment Cost</i>	-	-	<b>53.518</b>	-	-	<b>1.184</b>	-	-	<b>2.692</b>	-	-	<b>4.140</b>	-	-	-	-	-	<b>4.140</b>
<b>Support - Data Cost</b>																		
Engineering Data	-	-	21.961	-	-	4.969	-	-	6.087	-	-	6.165	-	-	-	-	-	6.165
<i>Subtotal: Support - Data Cost</i>	-	-	<b>21.961</b>	-	-	<b>4.969</b>	-	-	<b>6.087</b>	-	-	<b>6.165</b>	-	-	-	-	-	<b>6.165</b>
<b>Support - Fielding Cost</b>																		
Fielding	-	-	8.546	-	-	8.498	-	-	7.536	-	-	9.152	-	-	-	-	-	9.152
<i>Subtotal: Support - Fielding Cost</i>	-	-	<b>8.546</b>	-	-	<b>8.498</b>	-	-	<b>7.536</b>	-	-	<b>9.152</b>	-	-	-	-	-	<b>9.152</b>
<b>Support - Operational/Site Activation Cost</b>																		

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<b>Exhibit P-5, Cost Analysis: PB 2021 Army</b>												<b>Date:</b> February 2020					
<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 2035A / 02 / 32						<b>P-1 Line Item Number / Title:</b> 6458B95004 / Handheld Manpack Small Form Fit (HMS)						<b>Item Number / Title [DODIC]:</b> B95006 / Handheld Radio					
<b>ID Code</b> (A=Service Ready, B=Not Service Ready) :										<b>MDAP/MAIS Code:</b>							

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

Cost Elements	Prior Years			FY 2019			FY 2020			FY 2021 Base			FY 2021 OCO			FY 2021 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 Assembly, Installation and Checkout on Site	-	-	4.269	-	-	8.443	-	-	6.782	-	-	9.309	-	-	-	-	-	9.309
<i>Subtotal: Support - Operational/Site Activation Cost</i>	-	-	<b>4.269</b>	-	-	<b>8.443</b>	-	-	<b>6.782</b>	-	-	<b>9.309</b>	-	-	-	-	-	<b>9.309</b>
Support - System Engineering Cost																		
System Engineering	-	-	8.987	-	-	2.918	-	-	7.155	-	-	7.400	-	-	-	-	-	7.400
<i>Subtotal: Support - System Engineering Cost</i>	-	-	<b>8.987</b>	-	-	<b>2.918</b>	-	-	<b>7.155</b>	-	-	<b>7.400</b>	-	-	-	-	-	<b>7.400</b>
Support - System Technical Support (STS) Cost																		
System Technical Support (STS)	-	-	2.309	-	-	-	-	-	1.747	-	-	5.820	-	-	-	-	-	5.820
<i>Subtotal: Support - System Technical Support (STS) Cost</i>	-	-	<b>2.309</b>	-	-	-	-	-	<b>1.747</b>	-	-	<b>5.820</b>	-	-	-	-	-	<b>5.820</b>
<b>Gross/Weapon System Cost</b>	<b>45.324</b>	-	<b>229.202</b>	<b>15.992</b>	-	<b>79.802</b>	<b>40.616</b>	-	<b>118.275</b>	<b>31.000</b>	-	<b>139.811</b>	-	-	-	<b>31.000</b>	-	<b>139.811</b>

**Remarks:**  
 Recurring Manufacturing Leader Radio: The funding in FY21 is the projected cost to support Leader Radio (LR) procurements for 5 BCTs in support of ITN fieldings.  
 Engineering Data: The funding in FY21 encompasses projected costs for vendor services and Contract Data Requirements Lists (CDRL) on the IDIQ contract.  
 Operational/Site Activation Cost: This reflects costs associated with installation of radios into vehicle platforms.

Secondary Distribution		FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total
Army	Quantity	-	-	-	-	-
	Total Obligation Authority	79.802	118.275	139.811	-	139.811
<b>Total:</b>	Quantity	-	-	-	-	-
<b>Secondary Distribution</b>	<b>Total Obligation Authority</b>	<b>79.802</b>	<b>118.275</b>	<b>139.811</b>	-	<b>139.811</b>

(†) indicates the presence of a P-5a

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**Exhibit P-5a, Procurement History and Planning:** PB 2021 Army **Date:** February 2020

<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 2035A / 02 / 32	<b>P-1 Line Item Number / Title:</b> 6458B95004 / Handheld Manpack Small Form Fit (HMS)	<b>Item Number / Title [DODIC]:</b> B95006 / Handheld Radio
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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
Manufacturing - Leader Radio <sup>(†)</sup>		2018	Harris Corp / New York	SS / FFP	APG, MD	Sep 2018	May 2019	1,688	26.865	Y		Jul 2018
Manufacturing - Leader Radio <sup>(†)</sup>		2018	Thales Comm / Maryland	SS / FFP	APG, MD	Sep 2018	Mar 2019	2,408	26.865	Y		Jul 2018
Manufacturing - Leader Radio <sup>(†)</sup>		2019	Harris Corp / New York	SS / FFP	APG, MD	Dec 2019	Apr 2020	1,244	0.000	Y		
Manufacturing - Leader Radio <sup>(†)</sup>		2019	Thales Comm / Maryland	SS / FFP	APG, MD	Dec 2019	Apr 2020	760	0.000	Y		
Manufacturing - Leader Radio <sup>(†)</sup>		2020	TBD / TBD	C / FFP	APG, MD	Sep 2020	Mar 2021	2,912	27.200	N	Jan 2020	Apr 2020
Manufacturing - Leader Radio <sup>(†)</sup>		2021	TBD / TBD	C / FFP	APG, MD	Apr 2021	Oct 2021	4,510	21.470	N	Aug 2020	Nov 2020

<sup>(†)</sup> indicates the presence of a P-21

**Remarks:**

HMS contracts will be Firm Fixed Price (FFP) Indefinite Delivery Indefinite Quantity (IDIQ) for Full Rate Production (FRP).

Vendors for the Handheld IDIQ contract are Harris Radio Corp (Rochester, NY) and Thales Communications (Clarksburg, MD). The Leader Radio meets the needs of SFAB, ITN, Nett Warrior, and the Warfighter community. Quantities shown may be split if multiple vendors qualify for award.

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**Exhibit P-21, Production Schedule:** PB 2021 Army **Date:** February 2020

<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 2035A / 02 / 32	<b>P-1 Line Item Number / Title:</b> 6458B95004 / Handheld Manpack Small Form Fit (HMS)	<b>Item Number / Title [DODIC]:</b> B95006 / Handheld Radio
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O C O	M F R #	FY	SERVICE	PROC QTY	ACCEP T P R I O R  T O 1 O C T 2 0 1 7	BAL D U E A S O F  1 O C T	Fiscal Year 2018												Fiscal Year 2019												B A L A N C E				
							Calendar Year																												
							Calendar Year 2018												Calendar Year 2019																
							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	A	A	U	U	U	E	C	O	O	D	A	E	A	A	A	U	U	U	E				
							T	V	C	N	B	R	P	Y	N	L	G	P	T	V	C	N	B	R	P	Y	N	L	G	P					
Manufacturing - Leader Radio																																			
1	2018	ARMY		1,688	0	1,688													A	-	-	-	-	-	-	-	-	-	248	-	-	109	539	792	
2	2018	ARMY		2,408	0	2,408													A	-	-	-	-	-	-	-	-	720	-	148	229	430	420	247	214
1	2019	ARMY		1,244	0	1,244																													1,244
2	2019	ARMY		760	0	760																													760
3	2020	ARMY		2,912	0	2,912																													2,912
3	2021	ARMY		4,510	0	4,510																													4,510

**UNCLASSIFIED**

**Exhibit P-21, Production Schedule:** PB 2021 Army **Date:** February 2020

**Appropriation / Budget Activity / Budget Sub Activity:** 2035A / 02 / 32 **P-1 Line Item Number / Title:** 6458B95004 / Handheld Manpack Small Form Fit (HMS) **Item Number / Title [DODIC]:** B95006 / Handheld Radio

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					
Manufacturing - Leader Radio																																			
	1	2018	ARMY	1,688	896	792	406	386																					0						
	2	2018	ARMY	2,408	2,194	214	-	-	-	214																			0						
	1	2019	ARMY	1,244	0	1,244			A -	-	-	-	-	780	464														0						
	2	2019	ARMY	760	0	760			A -	-	-	-	-	760															0						
	3	2020	ARMY	2,912	0	2,912												A -	-	-	-	-	-	-	-	243	243	243	243	243	243	243	1,211		
	3	2021	ARMY	4,510	0	4,510																					A -	-	-	-	-	-	-	4,510	
							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 2021 Army **Date:** February 2020

**Appropriation / Budget Activity / Budget Sub Activity:** 2035A / 02 / 32 **P-1 Line Item Number / Title:** 6458B95004 / Handheld Manpack Small Form Fit (HMS) **Item Number / Title [DODIC]:** B95006 / Handheld Radio

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
Manufacturing - Leader Radio																															
	1	2018	ARMY	1,688	1,688	0																							0		
	2	2018	ARMY	2,408	2,408	0																							0		
	1	2019	ARMY	1,244	1,244	0																							0		
	2	2019	ARMY	760	760	0																							0		
	3	2020	ARMY	2,912	1,701	1,211	243	243	243	243	239																		0		
	3	2021	ARMY	4,510	0	4,510	376	376	376	376	376	376	376	376	376	376	376												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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<b>Exhibit P-21, Production Schedule:</b> PB 2021 Army	<b>Date:</b> February 2020
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<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 2035A / 02 / 32	<b>P-1 Line Item Number / Title:</b> 6458B95004 / Handheld Manpack Small Form Fit (HMS)	<b>Item Number / Title [DODIC]:</b> B95006 / Handheld Radio
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MFR Ref #	Manufacturer Name - Location	Production Rates (Each / Month)			Procurement Leadtime (Months)								
		MSR For 2021	1-8-5 For 2021	MAX For 2021	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	Harris Corp - New York	100	300	900	0	0	0	0	0	0	0	0	0
2	Thales Comm - Maryland	100	150	450	0	0	0	0	0	0	0	0	0
3	TBD - TBD	200	300	900	0	0	0	0	0	0	0	0	0

**Remarks:**  
Based on the Army's requirements and the number of vendors, min/max production rates will be updated annually.

"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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<b>Exhibit P-5, Cost Analysis: PB 2021 Army</b>		<b>Date:</b> February 2020
<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 2035A / 02 / 32	<b>P-1 Line Item Number / Title:</b> 6458B95004 / Handheld Manpack Small Form Fit (HMS)	<b>Item Number / Title [DODIC]:</b> B95007 / Manpack Radio

<b>ID Code</b> (A=Service Ready, B=Not Service Ready) :	<b>MDAP/MAIS Code:</b>
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Resource Summary	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total
Procurement Quantity (Units in Each)	-	-	-	-	-	-
Gross/Weapon System Cost (\$ in Millions)	455.743	218.673	349.751	411.037	-	411.037
Less PY Advance Procurement (\$ in Millions)	-	-	-	-	-	-
Net Procurement (P-1) (\$ in Millions)	455.743	218.673	349.751	411.037	-	411.037
Plus CY Advance Procurement (\$ in Millions)	-	-	-	-	-	-
<b>Total Obligation Authority (\$ in Millions)</b>	<b>455.743</b>	<b>218.673</b>	<b>349.751</b>	<b>411.037</b>	<b>-</b>	<b>411.037</b>

*(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)	172.630	111.625	101.672	87.866	-	87.866

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

Cost Elements	Prior Years			FY 2019			FY 2020			FY 2021 Base			FY 2021 OCO			FY 2021 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)
<b>Flyaway Cost</b>																		
Recurring Cost																		
Recurring Manufacturing - Manpack <sup>(†)</sup>	80.830	2,460	198.842	64.050	1,720	110.166	53.810	3,440	185.106	47.150	4,678	220.567	-	-	-	47.150	4,678	220.567
<i>Subtotal: Recurring Cost</i>	-	-	198.842	-	-	110.166	-	-	185.106	-	-	220.567	-	-	-	-	-	220.567
Non Recurring Cost																		
Hardware NRE	-	-	5.601	-	-	52.184	-	-	63.514	-	-	54.301	-	-	-	-	-	54.301
<i>Subtotal: Non Recurring Cost</i>	-	-	5.601	-	-	52.184	-	-	63.514	-	-	54.301	-	-	-	-	-	54.301
<i>Subtotal: Flyaway Cost</i>	-	-	<b>204.443</b>	-	-	<b>162.350</b>	-	-	<b>248.620</b>	-	-	<b>274.868</b>	-	-	-	-	-	<b>274.868</b>
<b>Support - Common Support Equipment Cost</b>																		
Support and Handling Equipment	-	-	115.131	-	-	8.347	-	-	13.457	-	-	21.284	-	-	-	-	-	21.284
<i>Subtotal: Support - Common Support Equipment Cost</i>	-	-	<b>115.131</b>	-	-	<b>8.347</b>	-	-	<b>13.457</b>	-	-	<b>21.284</b>	-	-	-	-	-	<b>21.284</b>
<b>Support - Data Cost</b>																		
Engineering Data	-	-	23.068	-	-	6.505	-	-	8.558	-	-	8.775	-	-	-	-	-	8.775
<i>Subtotal: Support - Data Cost</i>	-	-	<b>23.068</b>	-	-	<b>6.505</b>	-	-	<b>8.558</b>	-	-	<b>8.775</b>	-	-	-	-	-	<b>8.775</b>
<b>Support - Fielding Cost</b>																		
Fielding	-	-	4.099	-	-	20.583	-	-	41.674	-	-	57.346	-	-	-	-	-	57.346
<i>Subtotal: Support - Fielding Cost</i>	-	-	<b>4.099</b>	-	-	<b>20.583</b>	-	-	<b>41.674</b>	-	-	<b>57.346</b>	-	-	-	-	-	<b>57.346</b>

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<b>Exhibit P-5, Cost Analysis: PB 2021 Army</b>		<b>Date:</b> February 2020
<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 2035A / 02 / 32	<b>P-1 Line Item Number / Title:</b> 6458B95004 / Handheld Manpack Small Form Fit (HMS)	<b>Item Number / Title [DODIC]:</b> B95007 / Manpack Radio

<b>ID Code</b> (A=Service Ready, B=Not Service Ready) :	<b>MDAP/MAIS Code:</b>
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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 2019			FY 2020			FY 2021 Base			FY 2021 OCO			FY 2021 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)
Support - Operational/Site Activation Cost																		
System Assembly, Installation and Checkout on Site	-	-	8.439	-	-	14.062	-	-	11.757	-	-	15.958	-	-	-	-	-	15.958
<i>Subtotal: Support - Operational/Site Activation Cost</i>	-	-	<b>8.439</b>	-	-	<b>14.062</b>	-	-	<b>11.757</b>	-	-	<b>15.958</b>	-	-	-	-	-	<b>15.958</b>
Support - System Engineering Cost																		
System Engineering	-	-	73.601	-	-	6.192	-	-	18.595	-	-	19.208	-	-	-	-	-	19.208
<i>Subtotal: Support - System Engineering Cost</i>	-	-	<b>73.601</b>	-	-	<b>6.192</b>	-	-	<b>18.595</b>	-	-	<b>19.208</b>	-	-	-	-	-	<b>19.208</b>
Support - System Technical Support (STS) Cost																		
System Technical Support (STS)	-	-	26.962	-	-	0.634	-	-	7.090	-	-	13.598	-	-	-	-	-	13.598
<i>Subtotal: Support - System Technical Support (STS) Cost</i>	-	-	<b>26.962</b>	-	-	<b>0.634</b>	-	-	<b>7.090</b>	-	-	<b>13.598</b>	-	-	-	-	-	<b>13.598</b>
<b>Gross/Weapon System Cost</b>	<b>172.630</b>	-	<b>455.743</b>	<b>111.625</b>	-	<b>218.673</b>	<b>101.672</b>	-	<b>349.751</b>	<b>87.866</b>	-	<b>411.037</b>	-	-	-	<b>87.866</b>	-	<b>411.037</b>

**Remarks:**

Recurring Manufacturing Manpack: The funding in FY21 is projected costs to support Manpack (MP) procurements for 5 BCTs in support of ITN fieldings. Decrease in FY20 & FY21 unit cost is associated with a decrease in procurement funded warranty coverage and range pricing in alignment with contract tiers and anticipated competition cost savings.

Hardware NRE: Of the total \$54.3M FY21 cost, \$32.3M is for Air to Ground integration engineering.

Engineering Data: The funding in FY21 encompasses projected costs for vendor services and CDRLs on the IDIQ contract.

Operational/Site Activation Cost: This reflects costs associated with installation of radios into vehicle platforms. The funding in FY21 is to support integration of mounted MP in 5 BCTs to support ITN fieldings.

Secondary Distribution		FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total
Army	Quantity	-	-	-	-	-
	Total Obligation Authority	218.673	349.751	411.037	-	411.037
<b>Total:</b>	<b>Quantity</b>	-	-	-	-	-
<b>Secondary Distribution</b>	<b>Total Obligation Authority</b>	<b>218.673</b>	<b>349.751</b>	<b>411.037</b>	<b>-</b>	<b>411.037</b>

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

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**Exhibit P-5a, Procurement History and Planning:** PB 2021 Army **Date:** February 2020

<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 2035A / 02 / 32	<b>P-1 Line Item Number / Title:</b> 6458B95004 / Handheld Manpack Small Form Fit (HMS)	<b>Item Number / Title [DODIC]:</b> B95007 / Manpack Radio
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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
Recurring Manufacturing - Manpack <sup>(†)</sup>		2018	Collins Aerospace / Iowa	SS / FFP	APG, MD	Apr 2018	Jan 2019	1,129	60.420	Y		Apr 2018
Recurring Manufacturing - Manpack <sup>(†)</sup>		2018	Harris Corp / New York	SS / FFP	APG, MD	Apr 2018	Feb 2019	1,129	60.420	Y		Apr 2018
Recurring Manufacturing - Manpack <sup>(†)</sup>		2019	Collins Aerospace / Iowa	C / FFP	APG, MD	Jun 2019	Feb 2020	860	62.467	Y		Feb 2019
Recurring Manufacturing - Manpack <sup>(†)</sup>		2019	Harris Corp / New York	C / FFP	APG, MD	Jun 2019	Oct 2019	860	62.467	Y		Feb 2019
Recurring Manufacturing - Manpack <sup>(†)</sup>		2020	TBD / TBD	C / FFP	APG, MD	Apr 2020	Oct 2020	3,440	53.810	N	Aug 2019	Nov 2019
Recurring Manufacturing - Manpack <sup>(†)</sup>		2021	TBD / TBD	C / FFP	APG, MD	Apr 2021	Oct 2021	4,678	47.150	N	Aug 2020	Nov 2020

<sup>(†)</sup> indicates the presence of a P-21

**Remarks:**

HMS contracts will be Firm Fixed Price (FFP) Indefinite Delivery Indefinite Quantity (IDIQ) for Full Rate Production (FRP).

As of July 2018, vendors for the Manpack IDIQ contracts are Harris Radio Corp (Rochester, NY) and Rockwell Collins Inc. (Cedar Rapids, IA). Both vendors were awarded an FY 2018 delivery order on 30 April 2018 (1,129 R/Ts per vendor), and a FY 2019 delivery order on 06 June 2019 (860 R/Ts per vendor). Future delivery order quantity split is notional and will be assessed as a best value tradeoff evaluation.

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**Exhibit P-21, Production Schedule:** PB 2021 Army **Date:** February 2020

<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 2035A / 02 / 32	<b>P-1 Line Item Number / Title:</b> 6458B95004 / Handheld Manpack Small Form Fit (HMS)	<b>Item Number / Title [DODIC]:</b> B95007 / Manpack Radio
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Cost Elements <i>(Units in Each)</i>					Fiscal Year 2018													Fiscal Year 2019													B A L A N C E		
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			
Recurring Manufacturing - Manpack																																	
Prior Years Deliveries: 202																																	
	1	2018	ARMY	1,129	0	1,129																											
	2	2018	ARMY	1,129	0	1,129																											
	1	2019	ARMY	860	0	860																											
	2	2019	ARMY	860	0	860																											
	3	2020	ARMY	3,440	0	3,440																											
	3	2021	ARMY	4,678	0	4,678																											
							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 2021 Army **Date:** February 2020

**Appropriation / Budget Activity / Budget Sub Activity:** 2035A / 02 / 32 **P-1 Line Item Number / Title:** 6458B95004 / Handheld Manpack Small Form Fit (HMS) **Item Number / Title [DODIC]:** B95007 / Manpack Radio

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	S E P			
Recurring Manufacturing - Manpack																																	
Prior Years Deliveries: 202																																	
	1	2018	ARMY	1,129	751	378	378																						0				
	2	2018	ARMY	1,129	855	274	274																						0				
	1	2019	ARMY	860	0	860	-	-	-	-	385	-	-	-	196	-	93	93	93										0				
	2	2019	ARMY	860	0	860	291	-	-	-	-	291	-	-	-	-	-	66	212										0				
	3	2020	ARMY	3,440	0	3,440						A -	-	-	-	-	-	330	330	329	329	329	329	329	329	329	329	148	0				
	3	2021	ARMY	4,678	0	4,678																						4,678					

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**Exhibit P-21, Production Schedule:** PB 2021 Army **Date:** February 2020

**Appropriation / Budget Activity / Budget Sub Activity:** 2035A / 02 / 32 **P-1 Line Item Number / Title:** 6458B95004 / Handheld Manpack Small Form Fit (HMS) **Item Number / Title [DODIC]:** B95007 / Manpack Radio

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
Recurring Manufacturing - Manpack																															
Prior Years Deliveries: 202																															
	1	2018	ARMY	1,129	1,129	0																							0		
	2	2018	ARMY	1,129	1,129	0																							0		
	1	2019	ARMY	860	860	0																							0		
	2	2019	ARMY	860	860	0																							0		
	3	2020	ARMY	3,440	3,440	0																							0		
	3	2021	ARMY	4,678	0	4,678	508	508	508	508	508	508	508	508	508	508	508	106											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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<b>Exhibit P-21, Production Schedule:</b> PB 2021 Army	<b>Date:</b> February 2020
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<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 2035A / 02 / 32	<b>P-1 Line Item Number / Title:</b> 6458B95004 / Handheld Manpack Small Form Fit (HMS)	<b>Item Number / Title [DODIC]:</b> B95007 / Manpack Radio
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MFR Ref #	Manufacturer Name - Location	Production Rates (Each / Month)			Procurement Leadtime (Months)							
		MSR For 2021	1-8-5 For 2021	MAX For 2021	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	Collins Aerospace - Iowa	30	60	180	0	1,576	0	1,576	0	0	0	0
2	Harris Corp - New York	30	75	300	0	1,576	0	1,576	0	0	0	0
3	TBD - TBD	60	150	508	0	0	0	0	0	0	0	0

**Remarks:**  
 An FY 2018 delivery order was awarded for Manpack (MP) Radios on 30 April 2018 and procured 1,129 MP radios from each vendor (2,258 MP radios total) as well as ancillary equipment, vehicle mounts, and support services.  
 An FY 2019 delivery order was awarded for MP Radios on 06 June 2019 and procured 860 MP radios from each vendor (1,720 MP radios total) as well as ancillary equipment, vehicle mounts, and support services.

"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 2021 Army **Date:** February 2020

<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 2035A: Other Procurement, Army / BA 02: Communications and Electronics Equipment / BSA 32: Comm - Combat Communications	<b>P-1 Line Item Number / Title:</b> 6948B22603 / Radio Terminal Set, MIDS LVT(2)
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<b>ID Code</b> (A=Service Ready, B=Not Service Ready):	<b>Program Elements for Code B Items:</b> N/A	<b>Other Related Program Elements:</b> N/A
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**Line Item MDAP/MAIS Code:** 554

Resource Summary	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	To Complete	Total
Procurement Quantity ( <i>Units in Each</i> )	230	17	214	55	-	55	-	-	-	-	-	516
Gross/Weapon System Cost ( <i>\$ in Millions</i> )	127.916	6.741	24.128	8.237	-	8.237	2.961	2.228	-	-	-	172.211
Less PY Advance Procurement ( <i>\$ in Millions</i> )	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) ( <i>\$ in Millions</i> )	127.916	6.741	24.128	8.237	-	8.237	2.961	2.228	-	-	-	172.211
Plus CY Advance Procurement ( <i>\$ in Millions</i> )	-	-	-	-	-	-	-	-	-	-	-	-
<b>Total Obligation Authority</b> ( <i>\$ in Millions</i> )	<b>127.916</b>	<b>6.741</b>	<b>24.128</b>	<b>8.237</b>	<b>-</b>	<b>8.237</b>	<b>2.961</b>	<b>2.228</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>172.211</b>

*(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> )	556.157	396.529	112.748	149.764	-	149.764	-	-	-	-	-	333.742

**Description:**

The Multifunctional Information Distribution System program supports the Army Network Modernization Strategy Line of Effort 1, Unified Network.

The MIDS LVT is DoD's primary Link 16 tactical data link network providing joint/allied interoperability, situational awareness and support to air and missile defense engagement operations at Battalion through Corps. The MIDS provides secure, jam resistant transmission and reception of Link 16 messages with near real-time distribution of air and missile tracking and Precise Participant Location and Identification Location (PPLIs). The MIDS LVT Block Upgrade Two (BU2) effort supports National Security Agency (NSA) and Federal Aviation Administration (FAA) mandated cryptographic modernization and frequency remapping. This includes hardware and services procurements required to retrieve/re-issue the BU2 terminals to Army units and establish proper supportability in preparation for Transition to Sustainment.

The Army has procured 572 terminals through FY 2015. Planned fielding supports the purchase of 572 Block Upgrade 2 (BU2) kits in support of NSA and FAA mandates. Voice hardware purchases (cables and cards) support the LVT(2) to LVT(11) conversions required for the Integrated Air and Missile Defense Battle Command System's (IBCS) Link 16 voice requirement.

Army MIDS is part of the Joint Navy-led MIDS program. The Army provides funding to support MIDS modernization initiatives and Link-16 advanced capabilities in support of the Army ground platforms. Further the Army will align with the Joint Requirements Oversight Council Memorandum (JROCM) 089-19 dated 20 August 2018, which endorses the advanced capabilities of Concurrent Multi-Netting (CMN), Concurrent Contention Receive (CCR) and Enhanced Throughput (ET). The Army leverages Navy contracts to support Army MIDS LVT efforts and to procure BU2 kits. The BU2 retrofit improves the capabilities and security of the MIDS LVT by incorporating the cryptographic-modernization and mandated frequency remapping to ensure compliance with NSA and FAA mandates. The LVT Cryptographic Module (LCM) is a subcomponent required to support the BU2 retrofit kit, it is procured from ViaSat and provided as Government Furnished Equipment (GFE) to the vendors (ViaSat and Data Link Systems).

Secondary Distribution	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025
Army	Quantity	15	157	55	-	55	-	-	-
	Total Obligation Authority	4.912	17.713	8.237	-	8.237	2.961	2.228	-
ANG	Quantity	2	57	-	-	-	-	-	-
	Total Obligation Authority	1.829	6.415	-	-	-	-	-	-
<b>Total:</b>	<b>Quantity</b>	<b>17</b>	<b>214</b>	<b>55</b>	<b>-</b>	<b>55</b>	<b>-</b>	<b>-</b>	<b>-</b>

**UNCLASSIFIED**

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

<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 2035A: Other Procurement, Army / BA 02: Communications and Electronics Equipment / BSA 32: Comm - Combat Communications	<b>P-1 Line Item Number / Title:</b> 6948B22603 / Radio Terminal Set, MIDS LVT(2)
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<b>ID Code</b> (A=Service Ready, B=Not Service Ready):	<b>Program Elements for Code B Items:</b> N/A	<b>Other Related Program Elements:</b> N/A
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**Line Item MDAP/MAIS Code:** 554

Secondary Distribution		FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025
Secondary Distribution	Total Obligation Authority	6.741	24.128	8.237	-	8.237	2.961	2.228	-	-

**UNCLASSIFIED**

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

<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 2035A: Other Procurement, Army / BA 02: Communications and Electronics Equipment / BSA 32: Comm - Combat Communications	<b>P-1 Line Item Number / Title:</b> 6948B22603 / Radio Terminal Set, MIDS LVT(2)
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<b>ID Code</b> (A=Service Ready, B=Not Service Ready):	<b>Program Elements for Code B Items:</b> N/A	<b>Other Related Program Elements:</b> N/A
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**Line Item MDAP/MAIS Code:** 554

Exhibits Schedule					Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total
Exhibit Type	Title*	Subexhibits	ID CD	MDAP/MAIS Code	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)
P-5	B22603 / Radio Terminal Set, MIDS LVT(2)	P-5a			230 / 127.916	17 / 6.741	214 / 24.128	55 / 8.237	- / -	55 / 8.237
<b>P-40</b>	<b>Total Gross/Weapon System Cost</b>				<b>230 / 127.916</b>	<b>17 / 6.741</b>	<b>214 / 24.128</b>	<b>55 / 8.237</b>	<b>- / -</b>	<b>55 / 8.237</b>

\*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 2021 Base procurement dollars in the amount of \$8.237 million is currently budgeted to procure 55 each BU2 retrofit kits, Link-16 software support, logistics support and program management. FY 2021 Procurement dollars are budgeted to support the MIDS LVT(2) to MIDS LVT(11) in the following systems: Air Defense Airspace Management (ADAM) Cell, Patriot, Terminal High Altitude Area Defense (THAAD), Forward Area Air Defense Command and Control (FAADC2), Joint Tactical Ground Station (JTAGS), and IBCS.

**UNCLASSIFIED**

<b>Exhibit P-5, Cost Analysis: PB 2021 Army</b>		<b>Date:</b> February 2020
<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 2035A / 02 / 32	<b>P-1 Line Item Number / Title:</b> 6948B22603 / Radio Terminal Set, MIDS LVT(2)	<b>Item Number / Title [DODIC]:</b> B22603 / Radio Terminal Set, MIDS LVT(2)

<b>ID Code</b> (A=Service Ready, B=Not Service Ready) :	<b>MDAP/MAIS Code:</b>
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Resource Summary	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total
Procurement Quantity (Units in Each)	230	17	214	55	-	55
Gross/Weapon System Cost (\$ in Millions)	127.916	6.741	24.128	8.237	-	8.237
Less PY Advance Procurement (\$ in Millions)	-	-	-	-	-	-
Net Procurement (P-1) (\$ in Millions)	127.916	6.741	24.128	8.237	-	8.237
Plus CY Advance Procurement (\$ in Millions)	-	-	-	-	-	-
<b>Total Obligation Authority (\$ in Millions)</b>	<b>127.916</b>	<b>6.741</b>	<b>24.128</b>	<b>8.237</b>	<b>-</b>	<b>8.237</b>

*(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)	556.157	396.529	112.748	149.764	-	149.764

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

Cost Elements	Prior Years			FY 2019			FY 2020			FY 2021 Base			FY 2021 OCO			FY 2021 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)
<b>Flyaway Cost</b>																		
<b>Recurring Cost</b>																		
Other Hardware - BU2 <sup>(f)</sup>	57.076	331	18.892	74.333	15	1.115	100.000	214	21.400	71.309	55	3.922	-	-	-	71.309	55	3.922
Other Hardware - LCMs	3.720	350	1.302	2.851	67	0.191	-	-	-	-	-	-	-	-	-	-	-	-
Program Management Support	-	-	95.569	-	-	0.920	-	-	1.391	-	-	0.726	-	-	-	-	-	0.726
Software Support	-	-	8.203	-	-	-	-	-	0.400	-	-	0.400	-	-	-	-	-	0.400
Test	-	-	2.377	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Logistics (Transition to Sustainment)	-	-	0.893	-	-	0.950	-	-	0.587	-	-	1.536	-	-	-	-	-	1.536
<b>Subtotal: Recurring Cost</b>	<b>-</b>	<b>-</b>	<b>127.236</b>	<b>-</b>	<b>-</b>	<b>3.176</b>	<b>-</b>	<b>-</b>	<b>23.778</b>	<b>-</b>	<b>-</b>	<b>6.584</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>6.584</b>
<b>Subtotal: Flyaway Cost</b>	<b>-</b>	<b>-</b>	<b>127.236</b>	<b>-</b>	<b>-</b>	<b>3.176</b>	<b>-</b>	<b>-</b>	<b>23.778</b>	<b>-</b>	<b>-</b>	<b>6.584</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>6.584</b>
<b>Hardware Cost</b>																		
<b>Recurring Cost</b>																		
Other Hardware - MIDS LVT(11)	-	-	0.680	239.500	8	1.916	350.000	1	0.350	-	-	-	-	-	-	-	-	-
<b>Subtotal: Recurring Cost</b>	<b>-</b>	<b>-</b>	<b>0.680</b>	<b>-</b>	<b>-</b>	<b>1.916</b>	<b>-</b>	<b>-</b>	<b>0.350</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>
<b>Subtotal: Hardware Cost</b>	<b>-</b>	<b>-</b>	<b>0.680</b>	<b>-</b>	<b>-</b>	<b>1.916</b>	<b>-</b>	<b>-</b>	<b>0.350</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>
<b>Support - System Engineering Cost</b>																		
System Engineering	-	-	-	-	-	1.649	-	-	-	-	-	1.653	-	-	-	-	-	1.653

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<b>Exhibit P-5, Cost Analysis: PB 2021 Army</b>		<b>Date:</b> February 2020
<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 2035A / 02 / 32	<b>P-1 Line Item Number / Title:</b> 6948B22603 / Radio Terminal Set, MIDS LVT(2)	<b>Item Number / Title [DODIC]:</b> B22603 / Radio Terminal Set, MIDS LVT(2)
<b>ID Code</b> (A=Service Ready, B=Not Service Ready) :		<b>MDAP/MAIS Code:</b>

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

Cost Elements	Prior Years			FY 2019			FY 2020			FY 2021 Base			FY 2021 OCO			FY 2021 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 Engineering Cost</i>	-	-	-	-	-	1.649	-	-	-	-	-	1.653	-	-	-	-	-	1.653
<b>Gross/Weapon System Cost</b>	556.157	230	127.916	396.529	17	6.741	112.748	214	24.128	149.764	55	8.237	-	-	-	149.764	55	8.237

**Remarks:**

Note: The Unit Cost of the MIDS BU2 Retrofit Kit pricing is based upon the number of quantities procured through an annual consolidated lot buy which incorporates the Joint US and Coalition forces.

Secondary Distribution		FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total
Army	Quantity	15	157	55	-	55
	Total Obligation Authority	4.912	17.713	8.237	-	8.237
ANG	Quantity	2	57	-	-	-
	Total Obligation Authority	1.829	6.415	-	-	-
<b>Total: Secondary Distribution</b>	<b>Quantity</b>	<b>17</b>	<b>214</b>	<b>55</b>	<b>-</b>	<b>55</b>
	<b>Total Obligation Authority</b>	<b>6.741</b>	<b>24.128</b>	<b>8.237</b>	<b>-</b>	<b>8.237</b>

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

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<b>Exhibit P-5a, Procurement History and Planning:</b> PB 2021 Army							<b>Date:</b> February 2020					
<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 2035A / 02 / 32			<b>P-1 Line Item Number / Title:</b> 6948B22603 / Radio Terminal Set, MIDS LVT(2)				<b>Item Number / Title [DODIC]:</b> B22603 / Radio Terminal Set, MIDS LVT(2)					

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
Other Hardware - BU2		2017	ViaSat (121) / Carlsbad, CA	C / FFP	SPAWAR, San Diego, CA	Nov 2017	Mar 2018	121	73.000	N		
Other Hardware - BU2		2018	ViaSat (109) / Carlsbad, CA	C / FFP	SPAWAR, San Diego, CA	May 2018	May 2019	109	80.000	N		
Other Hardware - BU2		2019	Viasat (15) / Carlsbad, CA	C / FFP	SPAWAR, San Diego, CA	Jun 2019	Jun 2020	15	74.333	N		
Other Hardware - BU2		2020	Viasat (214) / Carlsbad, CA	C / FFP	SPAWAR, San Diego, CA	Mar 2020	Mar 2021	214	100.000	N		
Other Hardware - BU2		2021	Viasat (55) / Carlsbad, CA	C / FFP	SPAWAR, San Diego, CA	Jul 2021	Jul 2022	55	71.309	N		

**Remarks:**  
 FY 2021 Total dollars in the amount of \$8.237 million will procure 55 each BU2 retrofit kits, software support, logistics support and program management.  
 The Unit Cost of the MIDS BU2 Retrofit Kit pricing is based upon the number of quantities procured through an annual consolidated lot buy, which incorporates the Joint US and Coalition forces.

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

<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 2035A: Other Procurement, Army / BA 02: Communications and Electronics Equipment / BSA 32: Comm - Combat Communications	<b>P-1 Line Item Number / Title:</b> 8104BC3000 / TRACTOR DESK
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<b>ID Code</b> (A=Service Ready, B=Not Service Ready):	<b>Program Elements for Code B Items:</b> N/A	<b>Other Related Program Elements:</b> N/A
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**Line Item MDAP/MAIS Code:** N/A

Resource Summary	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	To Complete	Total
Procurement Quantity ( <i>Units in Each</i> )	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost ( <i>\$ in Millions</i> )	97.968	1.187	-	-	-	-	-	-	-	-	-	99.155
Less PY Advance Procurement ( <i>\$ in Millions</i> )	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) ( <i>\$ in Millions</i> )	97.968	1.187	-	-	-	-	-	-	-	-	-	99.155
Plus CY Advance Procurement ( <i>\$ in Millions</i> )	-	-	-	-	-	-	-	-	-	-	-	-
<b>Total Obligation Authority</b> ( <i>\$ in Millions</i> )	<b>97.968</b>	<b>1.187</b>	-	-	-	-	-	-	-	-	-	<b>99.155</b>

*(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 details for this program are reported in accordance with Title 10, United States Code, Section 119(a)(1)."

Secondary Distribution	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025
Army	Quantity	-	-	-	-	-	-	-	-
	Total Obligation Authority	1.187	-	-	-	-	-	-	-
<b>Total:</b> Secondary Distribution	Quantity	-	-	-	-	-	-	-	-
	Total Obligation Authority	<b>1.187</b>	-	-	-	-	-	-	-

**Justification:**

Justification:  
The details for this program are reported in accordance with Title 10, United States Code, Section 119(a)(1).

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

<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 2035A: Other Procurement, Army / BA 02: Communications and Electronics Equipment / BSA 32: Comm - Combat Communications	<b>P-1 Line Item Number / Title:</b> 8128B03001 / Tractor Ride
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<b>ID Code</b> (A=Service Ready, B=Not Service Ready):	<b>Program Elements for Code B Items:</b> N/A	<b>Other Related Program Elements:</b> N/A
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**Line Item MDAP/MAIS Code:** N/A

Resource Summary	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	To Complete	Total
Procurement Quantity ( <i>Units in Each</i> )	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost ( <i>\$ in Millions</i> )	44.528	21.601	-	-	-	-	-	-	-	-	-	66.129
Less PY Advance Procurement ( <i>\$ in Millions</i> )	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) ( <i>\$ in Millions</i> )	44.528	21.601	-	-	-	-	-	-	-	-	-	66.129
Plus CY Advance Procurement ( <i>\$ in Millions</i> )	-	-	-	-	-	-	-	-	-	-	-	-
<b>Total Obligation Authority</b> ( <i>\$ in Millions</i> )	<b>44.528</b>	<b>21.601</b>	-	-	-	-	-	-	-	-	-	<b>66.129</b>

*(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 details for this program are reported in accordance with Title 10, United States Code, Section 119(a)(1).

Secondary Distribution	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025
Army	Quantity	-	-	-	-	-	-	-	-
	Total Obligation Authority	21.601	-	-	-	-	-	-	-
<b>Total:</b> Secondary Distribution	Quantity	-	-	-	-	-	-	-	-
	Total Obligation Authority	<b>21.601</b>	-	-	-	-	-	-	-

**Justification:**

The details for this program are reported in accordance with Title 10, United States Code, Section 119(a)(1).



**UNCLASSIFIED**

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

<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 2035A: Other Procurement, Army / BA 02: Communications and Electronics Equipment / BSA 32: Comm - Combat Communications	<b>P-1 Line Item Number / Title:</b> 8558B54020 / Spider Family of Networked Munitions Incr
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ID Code (A=Service Ready, B=Not Service Ready): A	Program Elements for Code B Items: N/A	Other Related Program Elements: N/A
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**Line Item MDAP/MAIS Code:** N/A

Resource Summary	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	To Complete	Total
Procurement Quantity ( <i>Units in Each</i> )	64	160	97	101	-	101	75	50	-	-	-	547
Gross/Weapon System Cost ( <i>\$ in Millions</i> )	22.681	13.345	10.930	13.967	-	13.967	8.639	7.508	4.020	-	-	81.090
Less PY Advance Procurement ( <i>\$ in Millions</i> )	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) ( <i>\$ in Millions</i> )	22.681	13.345	10.930	13.967	-	13.967	8.639	7.508	4.020	-	-	81.090
Plus CY Advance Procurement ( <i>\$ in Millions</i> )	-	-	-	-	-	-	-	-	-	-	-	-
<b>Total Obligation Authority (<i>\$ in Millions</i>)</b>	<b>22.681</b>	<b>13.345</b>	<b>10.930</b>	<b>13.967</b>	<b>-</b>	<b>13.967</b>	<b>8.639</b>	<b>7.508</b>	<b>4.020</b>	<b>-</b>	<b>-</b>	<b>81.090</b>

*(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> )	354.391	83.406	112.680	138.287	-	138.287	115.187	150.160	-	-	-	148.245

**Description:**

M7 Spider is a hand emplaced, remotely controlled, Man-In-The-Loop (MITL) anti-personnel munition system that is currently being fielded. Spider Increment 1A (M7E1) utilizes an evolutionary acquisition approach which builds upon the baseline Spider Increment 1 system. Spider Increment 1A will 1) replace the Spider Increment 1 Remote Control Unit (RCU) with a new Networked Munitions Control Station that includes mapping capability, the ability to provide obstacle situational awareness to Joint Battle Command Platform (JBC-P) and new technologies, 2) control current Spider Anti-Personnel (AP) munitions and 3) demonstrate the initiation of legacy GOTS Anti-Vehicle (AV) (lethal) and AP (lethal and non-lethal) effects. All other M7 Spider Increment 1 components (i.e. Control Station Transceiver (CST), Munition Control Units (MCUs)) will remain as is to ensure backwards compatibility. The Spider system with its many desirable features makes it a versatile weapon system that has significant utility across the full spectrum of military operations and will support current and future operations. The Spider system has been identified as a part of the Army Modernization Strategy efforts. The Spider Increment 1A Army Procurement Objective is 705 systems and the overall Spider program has an Approved Acquisition Objective (AAO) of 705 systems. This item is Code A approved for service use.

Secondary Distribution		FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025
Army	Quantity	142	62	39	-	39	-	-	-	-
	Total Obligation Authority	11.877	7.430	5.382	-	5.382	2.139	3.708	1.958	-
ANG	Quantity	18	35	52	-	52	75	50	-	-
	Total Obligation Authority	1.468	3.500	7.205	-	7.205	6.500	3.800	2.062	-
AR	Quantity	-	-	10	-	10	-	-	-	-
	Total Obligation Authority	-	-	1.380	-	1.380	-	-	-	-
<b>Total:</b>	<b>Quantity</b>	<b>160</b>	<b>97</b>	<b>101</b>	<b>-</b>	<b>101</b>	<b>75</b>	<b>50</b>	<b>-</b>	<b>-</b>
<b>Secondary Distribution</b>	<b>Total Obligation Authority</b>	<b>13.345</b>	<b>10.930</b>	<b>13.967</b>	<b>-</b>	<b>13.967</b>	<b>8.639</b>	<b>7.508</b>	<b>4.020</b>	<b>-</b>

**UNCLASSIFIED**

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

<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 2035A: Other Procurement, Army / BA 02: Communications and Electronics Equipment / BSA 32: Comm - Combat Communications	<b>P-1 Line Item Number / Title:</b> 8558B54020 / Spider Family of Networked Munitions Incr
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<b>ID Code</b> (A=Service Ready, B=Not Service Ready): A	<b>Program Elements for Code B Items:</b> N/A	<b>Other Related Program Elements:</b> N/A
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**Line Item MDAP/MAIS Code:** N/A

Exhibits Schedule					Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total
Exhibit Type	Title*	Subexhibits	ID CD	MDAP/MAIS Code	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)
P-5	B54020 / Spider Family of Networked Munitions Incr	P-5a, P-21	A		64 / 22.681	160 / 13.345	97 / 10.930	101 / 13.967	- / -	101 / 13.967
<b>P-40</b>	<b>Total Gross/Weapon System Cost</b>				<b>64 / 22.681</b>	<b>160 / 13.345</b>	<b>97 / 10.930</b>	<b>101 / 13.967</b>	<b>- / -</b>	<b>101 / 13.967</b>

\*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 2021 Base procurement dollars in the amount of \$13.967 million supports the procurement of 101 Spider Increment 1A systems.

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**

<b>Exhibit P-5, Cost Analysis: PB 2021 Army</b>		<b>Date:</b> February 2020
<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 2035A / 02 / 32		<b>P-1 Line Item Number / Title:</b> 8558B54020 / Spider Family of Networked Munitions Incr
		<b>Item Number / Title [DODIC]:</b> B54020 / Spider Family of Networked Munitions Incr

<b>ID Code</b> (A=Service Ready, B=Not Service Ready) : A	<b>MDAP/MAIS Code:</b>
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Resource Summary	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total
Procurement Quantity (Units in Each)	64	160	97	101	-	101
Gross/Weapon System Cost (\$ in Millions)	22.681	13.345	10.930	13.967	-	13.967
Less PY Advance Procurement (\$ in Millions)	-	-	-	-	-	-
Net Procurement (P-1) (\$ in Millions)	22.681	13.345	10.930	13.967	-	13.967
Plus CY Advance Procurement (\$ in Millions)	-	-	-	-	-	-
<b>Total Obligation Authority (\$ in Millions)</b>	<b>22.681</b>	<b>13.345</b>	<b>10.930</b>	<b>13.967</b>	<b>-</b>	<b>13.967</b>

*(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)	354.391	83.406	112.680	138.287	-	138.287

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

Cost Elements	Prior Years			FY 2019			FY 2020			FY 2021 Base			FY 2021 OCO			FY 2021 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																		
Northrup Gruman Production Support and Engineering Change Orders (ECO)	-	-	0.654	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Production Engineering Change Orders (ECO)	-	-	-	-	-	0.050	-	-	1.560	-	-	-	-	-	-	-	-	-
<i>Subtotal: Non Recurring Cost</i>	-	-	<i>0.654</i>	-	-	<i>0.050</i>	-	-	<i>1.560</i>	-	-	-	-	-	-	-	-	-
<i>Subtotal: Flyaway Cost</i>	-	-	<i>0.654</i>	-	-	<i>0.050</i>	-	-	<i>1.560</i>	-	-	-	-	-	-	-	-	-

Hardware Cost																		
Recurring Cost																		
Spider System <sup>(†)</sup>	117.453	64	7.517	47.800	160	7.648	37.000	97	3.589	69.277	101	6.997	-	-	-	69.277	101	6.997
Initial Issue Spares	40.545	11	0.446	18.000	10	0.180	-	-	0.896	16.571	35	0.580	-	-	-	16.571	35	0.580
Production Verification Test (PVT), Lot Acceptance Test (LAT), First Article Acceptance Test (FAAT)	-	-	4.784	-	-	0.810	-	-	0.330	-	-	0.330	-	-	-	-	-	0.330
Government Manufacturing (NATICK)	-	-	0.103	0.913	150	0.137	-	-	0.110	-	-	0.110	-	-	-	-	-	0.110

**UNCLASSIFIED**

<b>Exhibit P-5, Cost Analysis: PB 2021 Army</b>		<b>Date:</b> February 2020
<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 2035A / 02 / 32		<b>P-1 Line Item Number / Title:</b> 8558B54020 / Spider Family of Networked Munitions Incr
<b>ID Code</b> (A=Service Ready, B=Not Service Ready) : A		<b>MDAP/MAIS Code:</b>
<b>Item Number / Title [DODIC]:</b> B54020 / Spider Family of Networked Munitions Incr		

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

Cost Elements	Prior Years			FY 2019			FY 2020			FY 2021 Base			FY 2021 OCO			FY 2021 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)
Spare Batteries	-	-	-	-	-	-	-	-	-	0.028	6,250	0.175	-	-	-	0.028	6,250	0.175
<i>Subtotal: Recurring Cost</i>	-	-	12.850	-	-	8.775	-	-	4.925	-	-	8.192	-	-	-	-	-	8.192
Non Recurring Cost																		
DLA Spider Demo	-	-	0.133	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Spider Parts	-	-	1.246	-	-	0.628	-	-	-	-	-	-	-	-	-	-	-	-
<i>Subtotal: Non Recurring Cost</i>	-	-	1.379	-	-	0.628	-	-	-	-	-	-	-	-	-	-	-	-
<i>Subtotal: Hardware Cost</i>	-	-	14.229	-	-	9.403	-	-	4.925	-	-	8.192	-	-	-	-	-	8.192
Software Cost																		
Recurring Cost																		
Green Hill Software	-	-	0.110	-	-	0.055	-	-	0.059	-	-	0.059	-	-	-	-	-	0.059
<i>Subtotal: Recurring Cost</i>	-	-	0.110	-	-	0.055	-	-	0.059	-	-	0.059	-	-	-	-	-	0.059
Non Recurring Cost																		
DRS BIOS Update	-	-	-	-	-	0.206	-	-	-	-	-	-	-	-	-	-	-	-
<i>Subtotal: Non Recurring Cost</i>	-	-	-	-	-	0.206	-	-	-	-	-	-	-	-	-	-	-	-
<i>Subtotal: Software Cost</i>	-	-	0.110	-	-	0.261	-	-	0.059	-	-	0.059	-	-	-	-	-	0.059
Logistics Cost																		
Recurring Cost																		
Contractor Logistics Support	-	-	0.485	-	-	0.373	-	-	0.820	-	-	0.600	-	-	-	-	-	0.600
TACOM ILSC	-	-	0.305	-	-	0.200	-	-	0.224	-	-	0.219	-	-	-	-	-	0.219
TACOM Materiel Fielding & Training	-	-	-	-	-	0.037	-	-	0.237	-	-	0.219	-	-	-	-	-	0.219
Depot Support	-	-	-	-	-	-	-	-	0.075	-	-	-	-	-	-	-	-	-
New Equipment Training (NET)	-	-	0.186	-	-	0.220	-	-	0.372	-	-	0.681	-	-	-	-	-	0.681
Fibertek Contract	-	-	0.031	-	-	-	-	-	0.033	-	-	-	-	-	-	-	-	-
TAC Code	-	-	-	-	-	-	-	-	0.015	-	-	-	-	-	-	-	-	-
CCDC ARMY RESEARCH LAB / HRED	-	-	-	-	-	-	-	-	-	-	-	0.050	-	-	-	-	-	0.050
Millenium Contract	-	-	-	-	-	-	-	-	0.040	-	-	-	-	-	-	-	-	-
<i>Subtotal: Recurring Cost</i>	-	-	1.007	-	-	0.830	-	-	1.816	-	-	1.769	-	-	-	-	-	1.769
<i>Subtotal: Logistics Cost</i>	-	-	1.007	-	-	0.830	-	-	1.816	-	-	1.769	-	-	-	-	-	1.769
Support - Production Engineering Cost																		

**UNCLASSIFIED**

<b>Exhibit P-5, Cost Analysis: PB 2021 Army</b>		<b>Date:</b> February 2020
<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 2035A / 02 / 32	<b>P-1 Line Item Number / Title:</b> 8558B54020 / Spider Family of Networked Munitions Incr	<b>Item Number / Title [DODIC]:</b> B54020 / Spider Family of Networked Munitions Incr
<b>ID Code</b> (A=Service Ready, B=Not Service Ready) : A		<b>MDAP/MAIS Code:</b>

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

Cost Elements	Prior Years			FY 2019			FY 2020			FY 2021 Base			FY 2021 OCO			FY 2021 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)
Production Engineering	-	-	5.412	-	-	2.203	-	-	1.697	-	-	2.722	-	-	-	-	-	2.722
<i>Subtotal: Support - Production Engineering Cost</i>	-	-	<b>5.412</b>	-	-	<b>2.203</b>	-	-	<b>1.697</b>	-	-	<b>2.722</b>	-	-	-	-	-	<b>2.722</b>
<b>Support - Program Management Cost</b>																		
Government Management	-	-	1.048	-	-	0.598	-	-	0.542	-	-	0.560	-	-	-	-	-	0.560
Contractor Management	-	-	-	-	-	-	-	-	-	-	-	0.200	-	-	-	-	-	0.200
<i>Subtotal: Support - Program Management Cost</i>	-	-	<b>1.048</b>	-	-	<b>0.598</b>	-	-	<b>0.542</b>	-	-	<b>0.760</b>	-	-	-	-	-	<b>0.760</b>
<b>Support - Study &amp; Analysis Cost</b>																		
Study & Analysis	-	-	0.106	-	-	-	-	-	0.331	-	-	-	-	-	-	-	-	-
<i>Subtotal: Support - Study &amp; Analysis Cost</i>	-	-	<b>0.106</b>	-	-	-	-	-	<b>0.331</b>	-	-	-	-	-	-	-	-	-
<b>Support - System Engineering Cost</b>																		
System Engineering	-	-	-	-	-	-	-	-	-	-	-	0.100	-	-	-	-	-	0.100
<i>Subtotal: Support - System Engineering Cost</i>	-	-	-	-	-	-	-	-	-	-	-	<b>0.100</b>	-	-	-	-	-	<b>0.100</b>
<b>Support - System Test and Evaluation Cost</b>																		
Test and Evaluation Support	-	-	0.115	-	-	-	-	-	-	-	-	0.365	-	-	-	-	-	0.365
<i>Subtotal: Support - System Test and Evaluation Cost</i>	-	-	<b>0.115</b>	-	-	-	-	-	-	-	-	<b>0.365</b>	-	-	-	-	-	<b>0.365</b>
<b>Gross/Weapon System Cost</b>	<b>354.391</b>	<b>64</b>	<b>22.681</b>	<b>83.406</b>	<b>160</b>	<b>13.345</b>	<b>112.680</b>	<b>97</b>	<b>10.930</b>	<b>138.287</b>	<b>101</b>	<b>13.967</b>	-	-	-	<b>138.287</b>	<b>101</b>	<b>13.967</b>

Secondary Distribution		FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total
Army	Quantity	142	62	39	-	39
	Total Obligation Authority	11.877	7.430	5.382	-	5.382
ANG	Quantity	18	35	52	-	52
	Total Obligation Authority	1.468	3.500	7.205	-	7.205
AR	Quantity	-	-	10	-	10
	Total Obligation Authority	-	-	1.380	-	1.380
<b>Total: Secondary Distribution</b>	<b>Quantity</b>	<b>160</b>	<b>97</b>	<b>101</b>	-	<b>101</b>
	<b>Total Obligation Authority</b>	<b>13.345</b>	<b>10.930</b>	<b>13.967</b>	-	<b>13.967</b>

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<b>Exhibit P-5, Cost Analysis:</b> PB 2021 Army		<b>Date:</b> February 2020
<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 2035A / 02 / 32	<b>P-1 Line Item Number / Title:</b> 8558B54020 / Spider Family of Networked Munitions Incr	<b>Item Number / Title [DODIC]:</b> B54020 / Spider Family of Networked Munitions Incr
<b>ID Code</b> (A=Service Ready, B=Not Service Ready) : A	<b>MDAP/MAIS Code:</b>	
(†) indicates the presence of a P-5a		

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<b>Exhibit P-5a, Procurement History and Planning:</b> PB 2021 Army							<b>Date:</b> February 2020				
<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 2035A / 02 / 32			<b>P-1 Line Item Number / Title:</b> 8558B54020 / Spider Family of Networked Munitions Incr				<b>Item Number / Title [DODIC]:</b> B54020 / Spider Family of Networked Munitions Incr				

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
Spider System <sup>(†)</sup>		2019	General Dynamics Missions Systems / Taunton, MA	C / FFP	Aberdeen Proving Ground, MD	Dec 2019	Jun 2021	160	47.800	Y		
Spider System <sup>(†)</sup>		2020	General Dynamics Missions Systems / Taunton, MA	C / FFP	Aberdeen Proving Ground, MD	Feb 2020	Sep 2021	97	37.000	Y		
Spider System <sup>(†)</sup>		2021	General Dynamics Missions Systems / Taunton, MA	C / FFP	Aberdeen Proving Ground, MD	Jan 2021	Mar 2022	101	69.277	Y		

<sup>(†)</sup> indicates the presence of a P-21

**Remarks:**  
FY 2021 contract award scheduled for 2nd QTR FY 2021.

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<b>Exhibit P-21, Production Schedule:</b> PB 2021 Army															<b>Date:</b> February 2020									
<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 2035A / 02 / 32										<b>P-1 Line Item Number / Title:</b> 8558B54020 / Spider Family of Networked Munitions Incr										<b>Item Number / Title [DODIC]:</b> B54020 / Spider Family of Networked Munitions Incr				

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	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		
Spider System																																	
Prior Years Deliveries: 64																																	
1	2019	ARMY		160	0	160		A	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	20	20	20	20	80
1	2020	ARMY		97	0	97			A	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	20	77	
1	2021	ARMY		101	0	101																										101	
								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	A	A	U	U	U	E	C	O	V	E	E	A	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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<b>Exhibit P-21, Production Schedule:</b> PB 2021 Army															<b>Date:</b> February 2020														
<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 2035A / 02 / 32										<b>P-1 Line Item Number / Title:</b> 8558B54020 / Spider Family of Networked Munitions Incr										<b>Item Number / Title [DODIC]:</b> B54020 / Spider Family of Networked Munitions Incr									

Cost Elements <i>(Units in Each)</i>					Fiscal Year 2022												Fiscal Year 2023												BALANCE					
O C 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			
Spider System																																		
Prior Years Deliveries: 64																																		
	1	2019	ARMY	160	80	80	20	20	20	20																								0
	1	2020	ARMY	97	20	77	20	20	7	10	20																							0
	1	2021	ARMY	101	0	101	-	-	-	-	-	20	20	20	20	21																		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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<b>Exhibit P-21, Production Schedule:</b> PB 2021 Army								<b>Date:</b> February 2020				
<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 2035A / 02 / 32				<b>P-1 Line Item Number / Title:</b> 8558B54020 / Spider Family of Networked Munitions Incr				<b>Item Number / Title [DODIC]:</b> B54020 / Spider Family of Networked Munitions Incr				
MFR Ref #	Manufacturer Name - Location	Production Rates (Each / Month)			Procurement Leadtime (Months)							
		MSR For 2021	1-8-5 For 2021	MAX For 2021	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	General Dynamics Missions Systems - Taunton, MA	20	36	90	9	9	18	27	4	4	15	19

"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 2021 Army **Date:** February 2020

<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 2035A: Other Procurement, Army / BA 02: Communications and Electronics Equipment / BSA 32: Comm - Combat Communications	<b>P-1 Line Item Number / Title:</b> 8562B55510 / Tactical Communications And Protective System
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<b>ID Code</b> (A=Service Ready, B=Not Service Ready):	<b>Program Elements for Code B Items:</b> N/A	<b>Other Related Program Elements:</b> N/A
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**Line Item MDAP/MAIS Code:** N/A

Resource Summary	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	To Complete	Total
Procurement Quantity ( <i>Units in Each</i> )	3,630	198	-	-	-	-	-	-	-	-	-	3,828
Gross/Weapon System Cost ( <i>\$ in Millions</i> )	101.180	10.368	-	-	-	-	-	-	-	-	-	111.548
Less PY Advance Procurement ( <i>\$ in Millions</i> )	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) ( <i>\$ in Millions</i> )	101.180	10.368	-	-	-	-	-	-	-	-	-	111.548
Plus CY Advance Procurement ( <i>\$ in Millions</i> )	-	-	-	-	-	-	-	-	-	-	-	-
<b>Total Obligation Authority (<i>\$ in Millions</i>)</b>	<b>101.180</b>	<b>10.368</b>	-	-	-	-	-	-	-	-	-	<b>111.548</b>

*(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> )	27.873	52.364	-	-	-	-	-	-	-	-	-	29.140

**Description:**

The Tactical Communications and Protective System (TCAPS) provides Soldiers with advanced active hearing protection that simultaneously protects Soldiers' hearing (from harmful Impulse and Steady-State Noises), while enabling situational awareness (e.g., enhanced ability to detect sounds) and mission command (e.g., voice communications over a tactical radio). TCAPS enhances survivability and situational awareness by protecting Soldiers from noise induced hearing loss. Soldiers wearing TCAPS are provided the capability to amplify faint sounds that under normal circumstance would not be audible or intelligible with the naked ear, as well as the ability to detect the direction of the sound, while wearing a hearing protection device.

TCAPS employs Commercial-Off-The-Shelf (COTS) solutions that are evaluated on a periodic basis, in order to validate performance requirements and Soldier acceptance. The best commercial solution(s) evaluated are transitioned into sustainment and fielding. TCAPS hearing protection contributes to the reduction of post-service disability compensation and limits lost in-service time related to hearing injuries. To accommodate existing situations for Soldiers not assigned a tactical radio, the TCAPS Program includes a TCAPS-Lite variant that provides hearing protection and situational awareness similar to that of a TCAPS.

TCAPS Approved Acquisition Objective is 111,347.

Secondary Distribution	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025
Army	Quantity	198	-	-	-	-	-	-	-
	Total Obligation Authority	10.368	-	-	-	-	-	-	-
<b>Total: Secondary Distribution</b>	<b>Quantity</b>	<b>198</b>	-	-	-	-	-	-	-
	<b>Total Obligation Authority</b>	<b>10.368</b>	-	-	-	-	-	-	-

**Justification:**

Program has no FY2021 funding request.

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<b>Exhibit P-40, Budget Line Item Justification:</b> PB 2021 Army		<b>Date:</b> February 2020
<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 2035A: Other Procurement, Army / BA 02: Communications and Electronics Equipment / BSA 32: Comm - Combat Communications		<b>P-1 Line Item Number / Title:</b> 8562B55510 / Tactical Communications And Protective System
<b>ID Code</b> (A=Service Ready, B=Not Service Ready):	<b>Program Elements for Code B Items:</b> N/A	<b>Other Related Program Elements:</b> N/A
<b>Line Item MDAP/MAIS Code:</b> N/A		
<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>		

**UNCLASSIFIED**

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

<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 2035A: Other Procurement, Army / BA 02: Communications and Electronics Equipment / BSA 32: Comm - Combat Communications	<b>P-1 Line Item Number / Title:</b> 8563B58601 / Unified Command Suite
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<b>ID Code</b> (A=Service Ready, B=Not Service Ready):	<b>Program Elements for Code B Items:</b> N/A	<b>Other Related Program Elements:</b> N/A
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**Line Item MDAP/MAIS Code:** N/A

Resource Summary	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	To Complete	Total
Procurement Quantity ( <i>Units in Each</i> )	4	-	-	-	-	-	-	-	-	-	-	4
Gross/Weapon System Cost ( <i>\$ in Millions</i> )	77.171	16.270	18.291	19.579	-	19.579	19.679	19.779	19.780	19.979	-	210.528
Less PY Advance Procurement ( <i>\$ in Millions</i> )	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) ( <i>\$ in Millions</i> )	77.171	16.270	18.291	19.579	-	19.579	19.679	19.779	19.780	19.979	-	210.528
Plus CY Advance Procurement ( <i>\$ in Millions</i> )	-	-	-	-	-	-	-	-	-	-	-	-
<b>Total Obligation Authority</b> ( <i>\$ in Millions</i> )	<b>77.171</b>	<b>16.270</b>	<b>18.291</b>	<b>19.579</b>	-	<b>19.579</b>	<b>19.679</b>	<b>19.779</b>	<b>19.780</b>	<b>19.979</b>	-	<b>210.528</b>

*(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> )	19,292.750	-	-	-	-	-	-	-	-	-	-	52,632.000

**Description:**

The Unified Command Suite (UCS) supports the Army's 2018 Mission Command Network Modernization Strategy Line of Effort (LOE) 4 - Command Post (LOE 4 addresses the operational requirement of Deployable, Integrated, and Mobile Command Post and integration of Knowledge Management)

Establishment of Weapons of Mass Destruction Civil Support Teams (WMD-CST)

- \* 1999 - Title 10 USC 12310, established WMD-CSTs
- \* 2003 - The National Defense Authorization Act (NDAA) of 2003 authorized the establishment of 55 WMD CSTs
- \* 2006 - Public law 109-364 amended Title 10 USC 12310, directs WMD-CSTs to prepare for or respond to any event involving the following:
  - The use or threatened use of a WMD in the United States;
  - A terrorist attack, or threatened terrorist attack in the United States that results, or could result, in catastrophic loss of life or property;
  - The intentional or unintentional release of nuclear, biological, radiological, or toxic or poisonous chemical materials in the United States that results, or could result, in catastrophic loss of life or property;
  - A natural or man-made disaster in the United States that results, or could result, in catastrophic loss of life or property.
- \* 2006 (August) - The Joint Requirements Oversight Council (JROC) approved the UCS Capability Production Document (CPD) as a Program of Record (PoR).
- \* 2013 - The NDAA of 2013 expanded the number of WMD-CST's from 55 teams to 57 teams, based on the recommendation of the "Advisory Panel on Department of Defense Capabilities for Support of Civil Authorities After Certain Incidents" (Additional teams in Florida and New York were established).

The UCS is a fully integrated mobile communications platform that is self-sufficient and highly interoperable by integrating commercial off the shelf (COTS) and government off the shelf (GOTS) military communications hardware. UCS provides communications interoperability with Federal, State, Local and Military Emergency Response elements at incident scenes. UCS provides reach back capability which allows Incident Commanders the ability to assess an incident scene, advise responders, and facilitate access to Department of Defense information. UCS provides critical Key Performance Parameter directed reach back communications for Analytical Laboratory Systems (ALS) and other WMD CST systems.

Secondary Distribution	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025
Army Quantity	-	-	-	-	-	-	-	-	-

**UNCLASSIFIED**

<b>Exhibit P-40, Budget Line Item Justification:</b> PB 2021 Army							<b>Date:</b> February 2020			
<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 2035A: Other Procurement, Army / BA 02: Communications and Electronics Equipment / BSA 32: Comm - Combat Communications					<b>P-1 Line Item Number / Title:</b> 8563B58601 / Unified Command Suite					
<b>ID Code</b> (A=Service Ready, B=Not Service Ready):			<b>Program Elements for Code B Items:</b> N/A			<b>Other Related Program Elements:</b> N/A				
<b>Line Item MDAP/MAIS Code:</b> N/A										

Secondary Distribution		FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025
	Total Obligation Authority	16.270	18.291	-	-	-	-	-	-	-
ANG	Quantity	-	-	-	-	-	-	-	-	-
	Total Obligation Authority	-	-	19.579	-	19.579	19.679	19.779	19.780	19.979
<b>Total:</b>	<b>Quantity</b>	-	-	-	-	-	-	-	-	-
<b>Secondary Distribution</b>	<b>Total Obligation Authority</b>	<b>16.270</b>	<b>18.291</b>	<b>19.579</b>	-	<b>19.579</b>	<b>19.679</b>	<b>19.779</b>	<b>19.780</b>	<b>19.979</b>

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

<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 2035A: Other Procurement, Army / BA 02: Communications and Electronics Equipment / BSA 32: Comm - Combat Communications	<b>P-1 Line Item Number / Title:</b> 8563B58601 / Unified Command Suite
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<b>ID Code</b> (A=Service Ready, B=Not Service Ready):	<b>Program Elements for Code B Items:</b> N/A	<b>Other Related Program Elements:</b> N/A
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**Line Item MDAP/MAIS Code:** N/A

Exhibits Schedule					Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total
Exhibit Type	Title*	Subexhibits	ID CD	MDAP/MAIS Code	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)
P-5	B58601 / Unified Command Suite				4 / 77.171	- / 16.270	- / 18.291	- / 19.579	- / -	- / 19.579
<b>P-40</b>	<b>Total Gross/Weapon System Cost</b>				<b>4 / 77.171</b>	<b>- / 16.270</b>	<b>- / 18.291</b>	<b>- / 19.579</b>	<b>- / -</b>	<b>- / 19.579</b>

\*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 2021 Base funding in the amount of \$19.579 million will continue to modernize, upgrade, and procure components for the Unified Command Suite (UCS) for the National Guard Bureau Weapons of Mass Destruction Civil Support Teams (WMD-CST). FY2021 funding will allow for upgrades to Network Components, Enterprise Server, Radio Interconnection, ADVON Shelter, Automated Data Processing (ADP), and Secure Voice.

The Network Component upgrades consist of SIPR and NIPR routers, switches, modems, printers, middleware, and network management hardware and software. The Enterprise Server upgrades affect NIPR and SIPR for mitigation of cyber security vulnerabilities. The Radio Interconnection upgrades the wireless tactical voice box for the crew stations within UCS/ADVON. The ADP upgrades the UCS/ADVON laptops, SIPR workstations, and enterprise workstations. The Secure Voice upgrade converts current STE phone technology to CISCO Voice Over Secure Internet Protocol (VOSIP). The ADVON shelter upgrades are necessary to avoid an end of maintenance support issue, since prime movers are leased through GSA. The remaining upgrades are required for the following reasons.

- \* To prevent denied Authority to Operate or being quarantined on the DoD Information Network (DoDIN).
- \* Manufacturer' support for the routers and switches ends in FY21 and the program will no longer be able to patch these components once support ends.
- \* Defense Information Systems Agency (DISA) has stipulated that current STE technology must be phased out for a digital solution.
- \* The program will fail to comply with DoD orders for data encryption.

Additionally, significant mission impacts will occur if upgrades are not funded, these include the following.

- \* Loss of network connectivity and use of server, including apps and data, breaking communication with C2 and critical reach back capabilities.
- \* Inability to transmit or receive classified information critical to national security/homeland security.
- \* Inability to promulgate COP data to JFHQ-ST, USNORTHCOM, and communicate with Incident Command.

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<b>Exhibit P-5, Cost Analysis: PB 2021 Army</b>						<b>Date:</b> February 2020			
<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 2035A / 02 / 32				<b>P-1 Line Item Number / Title:</b> 8563B58601 / Unified Command Suite			<b>Item Number / Title [DODIC]:</b> B58601 / Unified Command Suite		
<b>ID Code</b> (A=Service Ready, B=Not Service Ready) :						<b>MDAP/MAIS Code:</b>			
<b>Resource Summary</b>				<b>Prior Years</b>	<b>FY 2019</b>	<b>FY 2020</b>	<b>FY 2021 Base</b>	<b>FY 2021 OCO</b>	<b>FY 2021 Total</b>
Procurement Quantity ( <i>Units in Each</i> )				4	-	-	-	-	-
Gross/Weapon System Cost ( <i>\$ in Millions</i> )				77.171	16.270	18.291	19.579	-	19.579
Less PY Advance Procurement ( <i>\$ in Millions</i> )				-	-	-	-	-	-
Net Procurement (P-1) ( <i>\$ in Millions</i> )				77.171	16.270	18.291	19.579	-	19.579
Plus CY Advance Procurement ( <i>\$ in Millions</i> )				-	-	-	-	-	-
<b>Total Obligation Authority</b> ( <i>\$ in Millions</i> )				<b>77.171</b>	<b>16.270</b>	<b>18.291</b>	<b>19.579</b>	<b>-</b>	<b>19.579</b>
<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> )				19,292.750	-	-	-	-	-

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

Cost Elements	Prior Years			FY 2019			FY 2020			FY 2021 Base			FY 2021 OCO			FY 2021 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																		
Program Office Support	-	-	3.174	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Fielding	-	-	30.650	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
New Equipment Training	-	-	0.512	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Hardware	285.567	150	42.835	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
<i>Subtotal: Recurring Cost</i>	-	-	77.171	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
<i>Subtotal: Flyaway Cost</i>	-	-	77.171	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Hardware Cost																		
Recurring Cost																		
Recurring Manufacturing - VTC / BGAN	-	-	-	21.609	64	1.383	-	-	-	-	-	-	-	-	-	-	-	-
Recurring Manufacturing - SATCOM / LMR's	-	-	-	231.658	38	8.803	112.000	55	6.160	-	-	-	-	-	-	-	-	-
Recurring Manufacturing - Server Modernization	-	-	-	-	-	-	61.000	40	2.440	-	-	-	-	-	-	-	-	-
Recurring Manufacturing - Network Components	-	-	-	-	-	-	-	-	-	63.000	57	3.591	-	-	-	63.000	57	3.591



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<b>Exhibit P-5, Cost Analysis: PB 2021 Army</b>												<b>Date:</b> February 2020					
<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 2035A / 02 / 32						<b>P-1 Line Item Number / Title:</b> 8563B58601 / Unified Command Suite						<b>Item Number / Title [DODIC]:</b> B58601 / Unified Command Suite					

<b>ID Code</b> (A=Service Ready, B=Not Service Ready) :										<b>MDAP/MAIS Code:</b>							
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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 2019			FY 2020			FY 2021 Base			FY 2021 OCO			FY 2021 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)
Recurring Manufacturing - Radio Interconnection	-	-	-	-	-	-	29.000	22	0.638	30.000	107	3.210	-	-	-	30.000	107	3.210
<i>Subtotal: Recurring Cost</i>	-	-	-	-	-	10.186	-	-	9.238	-	-	6.801	-	-	-	-	-	6.801
<b>Non Recurring Cost</b>																		
Non-Recurring Manufacturing - VTC / BGAN	-	-	-	12.781	64	0.818	13.000	194	2.522	-	-	-	-	-	-	-	-	-
Non-Recurring Manufacturing - Secure Voice	-	-	-	-	-	-	-	-	-	6.000	64	0.384	-	-	-	6.000	64	0.384
Non-Recurring Manufacturing - ADVON Shelter	-	-	-	-	-	-	-	-	-	28.000	64	1.792	-	-	-	28.000	64	1.792
Non-Recurring Manufacturing - ADP Obsolescence Kit	-	-	-	-	-	-	-	-	-	8.000	129	1.032	-	-	-	8.000	129	1.032
Non-Recurring Manufacturing - Enterprise Server Obsolescence Kit	-	-	-	-	-	-	-	-	-	23.000	42	0.966	-	-	-	23.000	42	0.966
<i>Subtotal: Non Recurring Cost</i>	-	-	-	-	-	0.818	-	-	2.522	-	-	4.174	-	-	-	-	-	4.174
<i>Subtotal: Hardware Cost</i>	-	-	-	-	-	11.004	-	-	11.760	-	-	10.975	-	-	-	-	-	10.975
<b>Support - Engineering Change Proposals Cost</b>																		
Engineering Change Proposals	-	-	-	-	-	1.576	-	-	2.092	-	-	3.268	-	-	-	-	-	3.268
<i>Subtotal: Support - Engineering Change Proposals Cost</i>	-	-	-	-	-	1.576	-	-	2.092	-	-	3.268	-	-	-	-	-	3.268
<b>Support - Government Furnished Materials Cost</b>																		
Government Furnished Materials	-	-	-	3.797	64	0.243	-	-	0.125	-	-	0.164	-	-	-	-	-	0.164
<i>Subtotal: Support - Government Furnished Materials Cost</i>	-	-	-	-	-	0.243	-	-	0.125	-	-	0.164	-	-	-	-	-	0.164
<b>Support - Initial Spares and Repair Parts Cost</b>																		
Initial Spares and Repair Parts	-	-	-	-	-	0.312	-	-	0.364	-	-	0.515	-	-	-	-	-	0.515
<i>Subtotal: Support - Initial Spares and Repair Parts Cost</i>	-	-	-	-	-	0.312	-	-	0.364	-	-	0.515	-	-	-	-	-	0.515

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<b>Exhibit P-5, Cost Analysis: PB 2021 Army</b>												<b>Date:</b> February 2020					
<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 2035A / 02 / 32						<b>P-1 Line Item Number / Title:</b> 8563B58601 / Unified Command Suite						<b>Item Number / Title [DODIC]:</b> B58601 / Unified Command Suite					

<b>ID Code</b> (A=Service Ready, B=Not Service Ready) :										<b>MDAP/MAIS Code:</b>							
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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 2019			FY 2020			FY 2021 Base			FY 2021 OCO			FY 2021 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)
Support - Program Management Cost																		
Government Management	-	-	-	-	-	2.536	-	-	2.096	-	-	1.620	-	-	-	-	-	1.620
<i>Subtotal: Support - Program Management Cost</i>	-	-	-	-	-	<b>2.536</b>	-	-	<b>2.096</b>	-	-	<b>1.620</b>	-	-	-	-	-	<b>1.620</b>
Support - Quality Assurance Cost																		
Quality Assurance	-	-	-	-	-	0.052	-	-	0.053	-	-	0.062	-	-	-	-	-	0.062
<i>Subtotal: Support - Quality Assurance Cost</i>	-	-	-	-	-	<b>0.052</b>	-	-	<b>0.053</b>	-	-	<b>0.062</b>	-	-	-	-	-	<b>0.062</b>
Support - System Engineering Cost																		
System Engineering	-	-	-	-	-	-	-	-	0.684	-	-	1.674	-	-	-	-	-	1.674
<i>Subtotal: Support - System Engineering Cost</i>	-	-	-	-	-	-	-	-	<b>0.684</b>	-	-	<b>1.674</b>	-	-	-	-	-	<b>1.674</b>
Support - System Test and Evaluation Cost																		
Test and Evaluation Support	-	-	-	-	-	0.418	-	-	0.978	-	-	1.090	-	-	-	-	-	1.090
<i>Subtotal: Support - System Test and Evaluation Cost</i>	-	-	-	-	-	<b>0.418</b>	-	-	<b>0.978</b>	-	-	<b>1.090</b>	-	-	-	-	-	<b>1.090</b>
Support - Training Cost																		
Equipment	-	-	-	-	-	0.129	-	-	0.139	-	-	0.211	-	-	-	-	-	0.211
<i>Subtotal: Support - Training Cost</i>	-	-	-	-	-	<b>0.129</b>	-	-	<b>0.139</b>	-	-	<b>0.211</b>	-	-	-	-	-	<b>0.211</b>
<b>Gross/Weapon System Cost</b>	<b>19,292.750</b>	<b>4</b>	<b>77.171</b>	-	-	<b>16.270</b>	-	-	<b>18.291</b>	-	-	<b>19.579</b>	-	-	-	-	-	<b>19.579</b>

Secondary Distribution		FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total
Army	Quantity	-	-	-	-	-
	Total Obligation Authority	16.270	18.291	-	-	-
ANG	Quantity	-	-	-	-	-
	Total Obligation Authority	-	-	19.579	-	19.579
<b>Total: Secondary Distribution</b>	<b>Quantity</b>	-	-	-	-	-
	<b>Total Obligation Authority</b>	<b>16.270</b>	<b>18.291</b>	<b>19.579</b>	-	<b>19.579</b>

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

<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 2035A: Other Procurement, Army / BA 02: Communications and Electronics Equipment / BSA 32: Comm - Combat Communications	<b>P-1 Line Item Number / Title:</b> 9164BU8100 / COTS Communications Equipment
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<b>ID Code</b> (A=Service Ready, B=Not Service Ready):	<b>Program Elements for Code B Items:</b> N/A	<b>Other Related Program Elements:</b> N/A
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**Line Item MDAP/MAIS Code:** N/A

Resource Summary	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	To Complete	Total
Procurement Quantity ( <i>Units in Each</i> )	-	-	-	1,077	-	1,077	-	-	-	-	Continuing	Continuing
Gross/Weapon System Cost ( <i>\$ in Millions</i> )	-	85.835	76.030	94.156	-	94.156	106.694	112.911	113.068	113.652	Continuing	Continuing
Less PY Advance Procurement ( <i>\$ in Millions</i> )	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) ( <i>\$ in Millions</i> )	-	85.835	76.030	94.156	-	94.156	106.694	112.911	113.068	113.652	Continuing	Continuing
Plus CY Advance Procurement ( <i>\$ in Millions</i> )	-	-	-	-	-	-	-	-	-	-	-	-
<b>Total Obligation Authority (<i>\$ in Millions</i>)</b>	-	<b>85.835</b>	<b>76.030</b>	<b>94.156</b>	-	<b>94.156</b>	<b>106.694</b>	<b>112.911</b>	<b>113.068</b>	<b>113.652</b>	<b>Continuing</b>	<b>Continuing</b>

*(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> )	-	-	-	87.424	-	87.424	-	-	-	-	Continuing	Continuing

**Description:**

The COTS program funding line is directly aligned to the Army Network Modernization Strategy LOE 1, Unified Network. Efforts are aligned to support the Network-Cross Functional Team capability set approach to achieve the network modernization strategy.

Beginning in FY 2021, the COTS Communications Equipment line is aligned into several efforts to provide additional clarity.

COTS Communications Equipment (BU8100) procures non-developmental items and services in support of the Army's Network Modernization Strategy by providing interoperability and continuity through the procurement of tactical communication enhancement equipment, ancillaries, and related services. The Integrated Tactical Network (ITN) family of radios capability of the ITN fills critical communications gaps at the Battalion and below echelons and allows the Army to pivot strategically and adjust agilely to changes in combatant environments. The results from the Army approved Middle-Tier Acquisition (MTA) rapid prototyping ITN experiment will inform procurement decisions. Approved critical components will transition into a traditional Joint Capabilities Integration and Development System (JCIDS) approved program of record or utilize the MTA rapid fielding acquisition pathway. Components include but are not limited to: High Frequency (HF) radios, Link-16 radios, line-of-sight (LOS) radios, beyond line-of-sight (BLOS) radios, foliage-dense environment radios, subterranean radios, and single channel radios. These items will provide resilient software-defined communication systems and operational utility and adaptability through simplified and protected communications. Procurements will include technical characteristics of Low Probability Intercept (LPI) and Low Probability Detection (LPD). A breakout of the additional efforts are depicted below.

- Gateways (B98111) provide critical voice and data communication bridging across multiple echelons. The small gateway is a rapidly deployable simultaneous 2-channel, Air/Ground, LOS and SATCOM system; the large gateway is a simultaneous 3-channel Air/Ground, LOS and SATCOM system. These efforts were previously funded under COTS Communication Products with Accessories (B98105).

- HF Radios (B98120) provide the long distance, wide area voice and data communications for ground, air-to-ground, and fixed position mission command while at the halt or on the move. In operational environments where SATCOM is degraded or denied, HF can augment or replace SATCOM. Next generation HF radios will provide extended range, resilient LOS and BLOS voice and data communication as part of the Integrated Tactical Network (ITN). These efforts were previously funded under COTS Communication Products with Accessories (B98105).

- Small Unit and Emergency Locator Communications (B98121) provide for several small unit communications devices, including the ITN family of radios. The Integrated Tactical Network (ITN) family of radios capability of the ITN fills critical communications gaps at the Battalion and below echelons and allows the Army to pivot strategically and adjust agilely to changes in combatant environments. It includes but is not limited to: Link-16 radios, line-of-sight (LOS), beyond-line-of sight (BLOS) radios, foliage-dense environment radios, subterranean radios, single channel radios, and tactical radio integration kits for

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

<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 2035A: Other Procurement, Army / BA 02: Communications and Electronics Equipment / BSA 32: Comm - Combat Communications	<b>P-1 Line Item Number / Title:</b> 9164BU8100 / COTS Communications Equipment
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<b>ID Code</b> (A=Service Ready, B=Not Service Ready):	<b>Program Elements for Code B Items:</b> N/A	<b>Other Related Program Elements:</b> N/A
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**Line Item MDAP/MAIS Code:** N/A

routing and switching between various waveforms. In addition, this line provides critical Security Force Assistance Brigade (SFAB) support and sustainment. These efforts were previously funded under COTS Communication Products with Accessories (B98105).

Secondary Distribution		FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025
Army	Quantity	-	-	1,077	-	1,077	-	-	-	-
	Total Obligation Authority	85.835	76.030	94.156	-	94.156	106.694	112.911	113.068	113.652
<b>Total: Secondary Distribution</b>	Quantity	-	-	<b>1,077</b>	-	<b>1,077</b>	-	-	-	-
	Total Obligation Authority	<b>85.835</b>	<b>76.030</b>	<b>94.156</b>	-	<b>94.156</b>	<b>106.694</b>	<b>112.911</b>	<b>113.068</b>	<b>113.652</b>

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

<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 2035A: Other Procurement, Army / BA 02: Communications and Electronics Equipment / BSA 32: Comm - Combat Communications	<b>P-1 Line Item Number / Title:</b> 9164BU8100 / COTS Communications Equipment
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<b>ID Code</b> (A=Service Ready, B=Not Service Ready):	<b>Program Elements for Code B Items:</b> N/A	<b>Other Related Program Elements:</b> N/A
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**Line Item MDAP/MAIS Code:** N/A

Exhibits Schedule					Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total
Exhibit Type	Title*	Subexhibits	ID CD	MDAP/MAIS Code	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)
P-5	B98105 / COTS Communication Products with Accessories	P-5a			- / -	- / 85.835	- / 76.030	- / -	- / -	- / -
P-5	B98111 / COMMUNICATIONS GATEWAYS	P-5a			- / -	- / -	- / -	55 / 32.782	- / -	55 / 32.782
P-5	B98120 / HIGH FREQUENCY RADIOS	P-5a, P-21			- / -	- / -	- / -	337 / 15.040	- / -	337 / 15.040
P-5	B98121 / SMALL UNIT AND EMERGENCY LOCATOR COMMUNICATIONS	P-5a, P-21			- / -	- / -	- / -	685 / 46.334	- / -	685 / 46.334
<b>P-40</b>	<b>Total Gross/Weapon System Cost</b>				<b>- / -</b>	<b>- / 85.835</b>	<b>- / 76.030</b>	<b>1,077 / 94.156</b>	<b>- / -</b>	<b>1,077 / 94.156</b>

\*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:**  
 FY2021 procurement dollars in the amount of \$94.156 million procure equipment in support of Capability Set (CS) Brigade Combat Team (BCT) fielding's. These non-developmental items support the Integrated Tactical Network, they include but are not limited to: Tactical Radios and associated ancillary equipment (e.g. Radio Types: HF, Link-16, Large and Small Communication Gateways, line-of-sight (LOS), beyond-line-of sight (BLOS), foliage-dense environment, subterranean, and single channel); Tactical Radio Integration Kits (TRIK); Logistics, Fielding, Training, SW support/Licensing, Help Desk, SEPM and SFAB sustainment services.

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<b>Exhibit P-5, Cost Analysis: PB 2021 Army</b>		<b>Date:</b> February 2020
<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 2035A / 02 / 32	<b>P-1 Line Item Number / Title:</b> 9164BU8100 / COTS Communications Equipment	<b>Item Number / Title [DODIC]:</b> B98105 / COTS Communication Products with Accessories

<b>ID Code</b> (A=Service Ready, B=Not Service Ready) :	<b>MDAP/MAIS Code:</b>
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Resource Summary	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total
Procurement Quantity (Units in Each)	-	-	-	-	-	-
Gross/Weapon System Cost (\$ in Millions)	-	85.835	76.030	-	-	-
Less PY Advance Procurement (\$ in Millions)	-	-	-	-	-	-
Net Procurement (P-1) (\$ in Millions)	-	85.835	76.030	-	-	-
Plus CY Advance Procurement (\$ in Millions)	-	-	-	-	-	-
<b>Total Obligation Authority (\$ in Millions)</b>	-	<b>85.835</b>	<b>76.030</b>	-	-	-

*(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)	-	31.499	309.065	-	-	-

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

Cost Elements	Prior Years			FY 2019			FY 2020			FY 2021 Base			FY 2021 OCO			FY 2021 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)
<b>Hardware Cost</b>																		
<b>Recurring Cost</b>																		
High Frequency Radios <sup>(†)</sup>	-	-	-	31.138	1,110	34.563	34.979	633	22.142	-	-	-	-	-	-	-	-	-
ITN System of Radios <sup>(†)</sup>	-	-	-	-	-	-	45.573	279	12.715	-	-	-	-	-	-	-	-	-
Voice/Data Gateways	-	-	-	-	-	-	-	-	16.899	-	-	-	-	-	-	-	-	-
Ancillaries, Enhancements, and Related Services	-	-	-	-	-	-	-	-	4.000	-	-	-	-	-	-	-	-	-
High Frequency Radios - OCONUS European Response Initiative <sup>(†)</sup>	-	-	-	38.780	409	15.861	-	-	-	-	-	-	-	-	-	-	-	-
<i>Subtotal: Recurring Cost</i>	-	-	-	-	-	50.424	-	-	55.756	-	-	-	-	-	-	-	-	-
<b>Subtotal: Hardware Cost</b>	-	-	-	-	-	<b>50.424</b>	-	-	<b>55.756</b>	-	-	-	-	-	-	-	-	-
<b>Logistics Cost</b>																		
<b>Recurring Cost</b>																		
Sustainment Logistics	-	-	-	-	-	5.837	-	-	1.723	-	-	-	-	-	-	-	-	-
FSR	-	-	-	-	-	6.373	-	-	1.210	-	-	-	-	-	-	-	-	-
Safety and Platform Integration	-	-	-	-	-	12.566	-	-	5.540	-	-	-	-	-	-	-	-	-
<i>Subtotal: Recurring Cost</i>	-	-	-	-	-	24.776	-	-	8.473	-	-	-	-	-	-	-	-	-

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<b>Exhibit P-5, Cost Analysis: PB 2021 Army</b>		<b>Date:</b> February 2020
<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 2035A / 02 / 32	<b>P-1 Line Item Number / Title:</b> 9164BU8100 / COTS Communications Equipment	<b>Item Number / Title [DODIC]:</b> B98105 / COTS Communication Products with Accessories

<b>ID Code</b> (A=Service Ready, B=Not Service Ready) :	<b>MDAP/MAIS Code:</b>
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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 2019			FY 2020			FY 2021 Base			FY 2021 OCO			FY 2021 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: Logistics Cost</i>	-	-	-	-	-	24.776	-	-	8.473	-	-	-	-	-	-	-	-	-
<b>Support - Fielding Cost</b>																		
Fielding	-	-	-	-	-	5.193	-	-	7.929	-	-	-	-	-	-	-	-	-
<i>Subtotal: Support - Fielding Cost</i>	-	-	-	-	-	5.193	-	-	7.929	-	-	-	-	-	-	-	-	-
<b>Support - Program Management Cost</b>																		
Government Management	-	-	-	-	-	4.892	-	-	1.200	-	-	-	-	-	-	-	-	-
<i>Subtotal: Support - Program Management Cost</i>	-	-	-	-	-	4.892	-	-	1.200	-	-	-	-	-	-	-	-	-
<b>Support - System Engineering Cost</b>																		
System Engineering	-	-	-	-	-	-	-	-	2.022	-	-	-	-	-	-	-	-	-
<i>Subtotal: Support - System Engineering Cost</i>	-	-	-	-	-	-	-	-	2.022	-	-	-	-	-	-	-	-	-
<b>Support - Training Cost</b>																		
Equipment	-	-	-	-	-	0.550	-	-	0.650	-	-	-	-	-	-	-	-	-
<i>Subtotal: Support - Training Cost</i>	-	-	-	-	-	0.550	-	-	0.650	-	-	-	-	-	-	-	-	-
<b>Gross/Weapon System Cost</b>	-	-	-	31.499	-	85.835	309.065	-	76.030	-	-	-	-	-	-	-	-	-

**Remarks:**

ITN System of Radios - The Integrated Tactical Network (ITN) family of radios capability of the ITN fills critical communications gaps at the Battalion and below echelons and allows the Army to pivot strategically and adjust agilely to changes in combatant environments. It includes but is not limited to: High Frequency (HF) radios, Link-16 radios, line-of-sight (LOS), beyond line-of-sight (BLOS) radios, foliage-dense environment radios, subterranean radios, and single channel radios.

FY19 OCO OPA European Response Initiative (ERI) higher procurement unit cost is due to 284 of 409 Next Gen HF radios not realizing a legacy HF radio turn-in credit. The 284 legacy HF radios will be used to support Army Prepositioned Stock (APS).

Secondary Distribution		FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total
Army	Quantity	-	-	-	-	-
	Total Obligation Authority	85.835	76.030	-	-	-
<b>Total: Secondary Distribution</b>	<b>Quantity</b>	-	-	-	-	-
	<b>Total Obligation Authority</b>	85.835	76.030	-	-	-

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<b>Exhibit P-5, Cost Analysis:</b> PB 2021 Army		<b>Date:</b> February 2020
<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 2035A / 02 / 32	<b>P-1 Line Item Number / Title:</b> 9164BU8100 / COTS Communications Equipment	<b>Item Number / Title [DODIC]:</b> B98105 / COTS Communication Products with Accessories
<b>ID Code</b> (A=Service Ready, B=Not Service Ready) :		<b>MDAP/MAIS Code:</b>
<sup>(†)</sup> indicates the presence of a P-5a		



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<b>Exhibit P-5a, Procurement History and Planning:</b> PB 2021 Army								<b>Date:</b> February 2020				
<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 2035A / 02 / 32			<b>P-1 Line Item Number / Title:</b> 9164BU8100 / COTS Communications Equipment					<b>Item Number / Title [DODIC]:</b> B98105 / COTS Communication Products with Accessories				
<b>Cost Elements</b>	<b>O C O</b>	<b>FY</b>	<b>Contractor and Location</b>	<b>Method/Type or Funding Vehicle</b>	<b>Location of PCO</b>	<b>Award Date</b>	<b>Date of First Delivery</b>	<b>Qty (Each)</b>	<b>Unit Cost (\$ K)</b>	<b>Specs Avail Now?</b>	<b>Date Revision Available</b>	<b>RFP Issue Date</b>
High Frequency Radios		2019	High Frequency Radios - L3Harris / Rochester, NY	C / FFP	ACC-APG, Aberdeen, MD	Aug 2019	Feb 2020	1,110	31.138	N		
High Frequency Radios		2020	High Frequency Radios - L3Harris / Rochester, NY	C / FFP	SPAWARSSYSCEN, San Diego CA	Mar 2020	Jun 2020	633	34.979	N		
ITN System of Radios		2020	TBD - ITN System of Radios / TBD	C / FFP	TBD	Mar 2020	Jun 2020	279	45.573	Y		
High Frequency Radios - OCONUS European Response Initiative		2019	High Frequency Radios - L3Harris / Rochester, NY	C / FFP	TBD	Aug 2019	Feb 2020	409	38.780	Y		

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<b>Exhibit P-5, Cost Analysis: PB 2021 Army</b>		<b>Date:</b> February 2020
<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 2035A / 02 / 32		<b>P-1 Line Item Number / Title:</b> 9164BU8100 / COTS Communications Equipment
		<b>Item Number / Title [DODIC]:</b> B98111 / COMMUNICATIONS GATEWAYS

<b>ID Code</b> (A=Service Ready, B=Not Service Ready) :	<b>MDAP/MAIS Code:</b>
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Resource Summary	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total
Procurement Quantity <i>(Units in Each)</i>	-	-	-	55	-	55
Gross/Weapon System Cost <i>(\$ in Millions)</i>	-	-	-	32.782	-	32.782
Less PY Advance Procurement <i>(\$ in Millions)</i>	-	-	-	-	-	-
Net Procurement (P-1) <i>(\$ in Millions)</i>	-	-	-	32.782	-	32.782
Plus CY Advance Procurement <i>(\$ in Millions)</i>	-	-	-	-	-	-
<b>Total Obligation Authority</b> <i>(\$ in Millions)</i>	-	-	-	<b>32.782</b>	-	<b>32.782</b>

*(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>	-	-	-	596.036	-	596.036

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

Cost Elements	Prior Years			FY 2019			FY 2020			FY 2021 Base			FY 2021 OCO			FY 2021 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)
<b>Hardware Cost</b>																		
Recurring Cost																		
Small <sup>(†)</sup>	-	-	-	-	-	-	-	-	-	318.000	30	9.540	-	-	-	318.000	30	9.540
Large <sup>(†)</sup>	-	-	-	-	-	-	-	-	-	446.000	25	11.150	-	-	-	446.000	25	11.150
Subtotal: Recurring Cost	-	-	-	-	-	-	-	-	-	-	-	20.690	-	-	-	-	-	20.690
Subtotal: Hardware Cost	-	-	-	-	-	-	-	-	-	-	-	<b>20.690</b>	-	-	-	-	-	<b>20.690</b>
<b>Software Cost</b>																		
Recurring Cost																		
Software	-	-	-	-	-	-	-	-	-	-	-	1.253	-	-	-	-	-	1.253
Subtotal: Recurring Cost	-	-	-	-	-	-	-	-	-	-	-	1.253	-	-	-	-	-	1.253
Subtotal: Software Cost	-	-	-	-	-	-	-	-	-	-	-	<b>1.253</b>	-	-	-	-	-	<b>1.253</b>
<b>Logistics Cost</b>																		
Recurring Cost																		
Out of Warranty Repairs	-	-	-	-	-	-	-	-	-	-	-	5.544	-	-	-	-	-	5.544
Subtotal: Recurring Cost	-	-	-	-	-	-	-	-	-	-	-	5.544	-	-	-	-	-	5.544
Subtotal: Logistics Cost	-	-	-	-	-	-	-	-	-	-	-	<b>5.544</b>	-	-	-	-	-	<b>5.544</b>
<b>Support - Data Cost</b>																		
Technical Publications	-	-	-	-	-	-	-	-	-	-	-	0.088	-	-	-	-	-	0.088
Subtotal: Support - Data Cost	-	-	-	-	-	-	-	-	-	-	-	<b>0.088</b>	-	-	-	-	-	<b>0.088</b>

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<b>Exhibit P-5, Cost Analysis: PB 2021 Army</b>		<b>Date:</b> February 2020
<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 2035A / 02 / 32	<b>P-1 Line Item Number / Title:</b> 9164BU8100 / COTS Communications Equipment	<b>Item Number / Title [DODIC]:</b> B98111 / COMMUNICATIONS GATEWAYS

<b>ID Code</b> (A=Service Ready, B=Not Service Ready) :	<b>MDAP/MAIS Code:</b>
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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 2019			FY 2020			FY 2021 Base			FY 2021 OCO			FY 2021 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)
<b>Support - Engineering Change Proposals Cost</b>																		
Engineering Change Proposals	-	-	-	-	-	-	-	-	-	-	-	0.450	-	-	-	-	-	0.450
<i>Subtotal: Support - Engineering Change Proposals Cost</i>	-	-	-	-	-	-	-	-	-	-	-	<b>0.450</b>	-	-	-	-	-	<b>0.450</b>
<b>Support - Fielding Cost</b>																		
Fielding	-	-	-	-	-	-	-	-	-	-	-	3.063	-	-	-	-	-	3.063
<i>Subtotal: Support - Fielding Cost</i>	-	-	-	-	-	-	-	-	-	-	-	<b>3.063</b>	-	-	-	-	-	<b>3.063</b>
<b>Support - System Engineering Cost</b>																		
System Engineering	-	-	-	-	-	-	-	-	-	-	-	1.694	-	-	-	-	-	1.694
<i>Subtotal: Support - System Engineering Cost</i>	-	-	-	-	-	-	-	-	-	-	-	<b>1.694</b>	-	-	-	-	-	<b>1.694</b>
<b>Gross/Weapon System Cost</b>	-	-	-	-	-	-	-	-	-	596.036	55	32.782	-	-	-	596.036	55	32.782

**Remarks:**  
Gateways (B98111) provide critical voice and data communication bridging across multiple echelons.

Secondary Distribution		FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total
Army	Quantity	-	-	55	-	55
	Total Obligation Authority	-	-	32.782	-	32.782
<b>Total:</b>	<b>Quantity</b>	-	-	<b>55</b>	-	<b>55</b>
<b>Secondary Distribution</b>	<b>Total Obligation Authority</b>	-	-	<b>32.782</b>	-	<b>32.782</b>

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

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<b>Exhibit P-5a, Procurement History and Planning:</b> PB 2021 Army								<b>Date:</b> February 2020				
<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 2035A / 02 / 32			<b>P-1 Line Item Number / Title:</b> 9164BU8100 / COTS Communications Equipment					<b>Item Number / Title [DODIC]:</b> B98111 / COMMUNICATIONS GATEWAYS				
<b>Cost Elements</b>	<b>O C O</b>	<b>FY</b>	<b>Contractor and Location</b>	<b>Method/Type or Funding Vehicle</b>	<b>Location of PCO</b>	<b>Award Date</b>	<b>Date of First Delivery</b>	<b>Qty (Each)</b>	<b>Unit Cost (\$ K)</b>	<b>Specs Avail Now?</b>	<b>Date Revision Available</b>	<b>RFP Issue Date</b>
Small		2021	TBD / TBD	C / FFP	Aberdeen Proving Ground, MD	Mar 2021	Sep 2021	30	318.000	N	Sep 2021	Jan 2021
Large		2021	TBD / TBD	C / FFP	Aberdeen Proving Ground, MD	Mar 2021	Sep 2021	25	446.000	N	Sep 2021	Jan 2021

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<b>Exhibit P-5, Cost Analysis: PB 2021 Army</b>													<b>Date:</b> February 2020					
<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 2035A / 02 / 32						<b>P-1 Line Item Number / Title:</b> 9164BU8100 / COTS Communications Equipment						<b>Item Number / Title [DODIC]:</b> B98120 / HIGH FREQUENCY RADIOS						
<b>ID Code</b> (A=Service Ready, B=Not Service Ready) :									<b>MDAP/MAIS Code:</b>									
<b>Resource Summary</b>				<b>Prior Years</b>		<b>FY 2019</b>			<b>FY 2020</b>			<b>FY 2021 Base</b>			<b>FY 2021 OCO</b>		<b>FY 2021 Total</b>	
Procurement Quantity ( <i>Units in Each</i> )				-		-			-			337			-		337	
Gross/Weapon System Cost ( <i>\$ in Millions</i> )				-		-			-			15.040			-		15.040	
Less PY Advance Procurement ( <i>\$ in Millions</i> )				-		-			-			-			-		-	
Net Procurement (P-1) ( <i>\$ in Millions</i> )				-		-			-			15.040			-		15.040	
Plus CY Advance Procurement ( <i>\$ in Millions</i> )				-		-			-			-			-		-	
<b>Total Obligation Authority</b> ( <i>\$ in Millions</i> )				-		-			-			<b>15.040</b>			-		<b>15.040</b>	
<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> )				-		-			-			44.629			-		44.629	
Note: Subtotals or Totals in this Exhibit P-5 may not be exact or sum exactly due to rounding.																		
<b>Cost Elements</b>	<b>Prior Years</b>			<b>FY 2019</b>			<b>FY 2020</b>			<b>FY 2021 Base</b>			<b>FY 2021 OCO</b>			<b>FY 2021 Total</b>		
	<b>Unit Cost</b> (\$ K)	<b>Qty</b> (Each)	<b>Total Cost</b> (\$ M)	<b>Unit Cost</b> (\$ K)	<b>Qty</b> (Each)	<b>Total Cost</b> (\$ M)	<b>Unit Cost</b> (\$ K)	<b>Qty</b> (Each)	<b>Total Cost</b> (\$ M)	<b>Unit Cost</b> (\$ K)	<b>Qty</b> (Each)	<b>Total Cost</b> (\$ M)	<b>Unit Cost</b> (\$ K)	<b>Qty</b> (Each)	<b>Total Cost</b> (\$ M)	<b>Unit Cost</b> (\$ K)	<b>Qty</b> (Each)	<b>Total Cost</b> (\$ M)
Hardware Cost																		
Recurring Cost																		
High Frequency Radios <sup>(†)</sup>	-	-	-	-	-	-	-	-	-	31.457	337	10.601	-	-	-	31.457	337	10.601
<i>Subtotal: Recurring Cost</i>	-	-	-	-	-	-	-	-	-	-	-	10.601	-	-	-	-	-	10.601
<i>Subtotal: Hardware Cost</i>	-	-	-	-	-	-	-	-	-	-	-	<b>10.601</b>	-	-	-	-	-	<b>10.601</b>
Support - Fielding Cost																		
Fielding	-	-	-	-	-	-	-	-	-	-	-	1.471	-	-	-	-	-	1.471
<i>Subtotal: Support - Fielding Cost</i>	-	-	-	-	-	-	-	-	-	-	-	<b>1.471</b>	-	-	-	-	-	<b>1.471</b>
Support - Initial Spares and Repair Parts Cost																		
Initial Spares and Repair Parts	-	-	-	-	-	-	-	-	-	-	-	1.209	-	-	-	-	-	1.209
<i>Subtotal: Support - Initial Spares and Repair Parts Cost</i>	-	-	-	-	-	-	-	-	-	-	-	<b>1.209</b>	-	-	-	-	-	<b>1.209</b>
Support - System Engineering Cost																		
System Engineering	-	-	-	-	-	-	-	-	-	-	-	1.759	-	-	-	-	-	1.759
<i>Subtotal: Support - System Engineering Cost</i>	-	-	-	-	-	-	-	-	-	-	-	<b>1.759</b>	-	-	-	-	-	<b>1.759</b>
<b>Gross/Weapon System Cost</b>	-	-	-	-	-	-	-	-	-	44.629	337	15.040	-	-	-	44.629	337	15.040
<b>Remarks:</b>																		

**UNCLASSIFIED**

**Exhibit P-5, Cost Analysis: PB 2021 Army** **Date:** February 2020

<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 2035A / 02 / 32	<b>P-1 Line Item Number / Title:</b> 9164BU8100 / COTS Communications Equipment	<b>Item Number / Title [DODIC]:</b> B98120 / HIGH FREQUENCY RADIOS
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<b>ID Code</b> (A=Service Ready, B=Not Service Ready) :	<b>MDAP/MAIS Code:</b>
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High Frequency (HF) Radios (B98120) provide the long distance, wide area voice and data communications for ground, air-to-ground, and fixed position mission command while at the halt or on the move. Next generation HF radios will provide extended range, resilient LOS and BLOS voice and data communication as part of the Integrated Tactical Network (ITN).

Secondary Distribution		FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total
Army	Quantity	-	-	337	-	337
	Total Obligation Authority	-	-	15.040	-	15.040
<b>Total: Secondary Distribution</b>	<b>Quantity</b>	-	-	<b>337</b>	-	<b>337</b>
	<b>Total Obligation Authority</b>	-	-	<b>15.040</b>	-	<b>15.040</b>

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

**UNCLASSIFIED**

**Exhibit P-5a, Procurement History and Planning:** PB 2021 Army **Date:** February 2020

<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 2035A / 02 / 32	<b>P-1 Line Item Number / Title:</b> 9164BU8100 / COTS Communications Equipment	<b>Item Number / Title [DODIC]:</b> B98120 / HIGH FREQUENCY RADIOS
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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
High Frequency Radios <sup>(†)</sup>		2021	L3 HARRIS / Rochester, NY	C / FFP	Rochester, Ny	Apr 2021	Sep 2021	337	31.457	Y		

<sup>(†)</sup> indicates the presence of a P-21

**UNCLASSIFIED**

**Exhibit P-21, Production Schedule:** PB 2021 Army **Date:** February 2020

**Appropriation / Budget Activity / Budget Sub Activity:** 2035A / 02 / 32 **P-1 Line Item Number / Title:** 9164BU8100 / COTS Communications Equipment **Item Number / Title [DODIC]:** B98120 / HIGH FREQUENCY RADIOS

Cost Elements <i>(Units in Each)</i>						Fiscal Year 2021												Fiscal Year 2022												BALANCE	
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
High Frequency Radios																															
	1	2021	ARMY	337	0	337																							0		



**UNCLASSIFIED**

<b>Exhibit P-21, Production Schedule:</b> PB 2021 Army								<b>Date:</b> February 2020				
<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 2035A / 02 / 32				<b>P-1 Line Item Number / Title:</b> 9164BU8100 / COTS Communications Equipment				<b>Item Number / Title [DODIC]:</b> B98120 / HIGH FREQUENCY RADIOS				
MFR Ref #	Manufacturer Name - Location	Production Rates (Each / Month)			Procurement Leadtime (Months)							
		MSR For 2021	1-8-5 For 2021	MAX For 2021	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	L3 HARRIS - Rochester, NY	12	250	3,000	0	0	6	6	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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<b>Exhibit P-5, Cost Analysis: PB 2021 Army</b>		<b>Date:</b> February 2020
<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 2035A / 02 / 32	<b>P-1 Line Item Number / Title:</b> 9164BU8100 / COTS Communications Equipment	<b>Item Number / Title [DODIC]:</b> B98121 / SMALL UNIT AND EMERGENCY LOCATOR COMMUNICATIONS

<b>ID Code</b> (A=Service Ready, B=Not Service Ready) :	<b>MDAP/MAIS Code:</b>
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Resource Summary	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total
Procurement Quantity (Units in Each)	-	-	-	685	-	685
Gross/Weapon System Cost (\$ in Millions)	-	-	-	46.334	-	46.334
Less PY Advance Procurement (\$ in Millions)	-	-	-	-	-	-
Net Procurement (P-1) (\$ in Millions)	-	-	-	46.334	-	46.334
Plus CY Advance Procurement (\$ in Millions)	-	-	-	-	-	-
<b>Total Obligation Authority (\$ in Millions)</b>	-	-	-	<b>46.334</b>	-	<b>46.334</b>

*(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)	-	-	-	67.641	-	67.641

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

Cost Elements	Prior Years			FY 2019			FY 2020			FY 2021 Base			FY 2021 OCO			FY 2021 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)
<b>Hardware Cost</b>																		
Recurring Cost																		
ITN Systems of Radios <sup>(†)</sup>	-	-	-	-	-	-	-	-	-	26.117	685	17.890	-	-	-	26.117	685	17.890
<i>Subtotal: Recurring Cost</i>	-	-	-	-	-	-	-	-	-	-	-	17.890	-	-	-	-	-	17.890
<i>Subtotal: Hardware Cost</i>	-	-	-	-	-	-	-	-	-	-	-	17.890	-	-	-	-	-	17.890
<b>Logistics Cost</b>																		
Recurring Cost																		
Logistics Sustainment	-	-	-	-	-	-	-	-	-	-	-	3.280	-	-	-	-	-	3.280
Out of Warranty Repairs	-	-	-	-	-	-	-	-	-	-	-	0.232	-	-	-	-	-	0.232
<i>Subtotal: Recurring Cost</i>	-	-	-	-	-	-	-	-	-	-	-	3.512	-	-	-	-	-	3.512
<i>Subtotal: Logistics Cost</i>	-	-	-	-	-	-	-	-	-	-	-	3.512	-	-	-	-	-	3.512
<b>Support - Data Cost</b>																		
Technical Publications	-	-	-	-	-	-	-	-	-	-	-	1.989	-	-	-	-	-	1.989
<i>Subtotal: Support - Data Cost</i>	-	-	-	-	-	-	-	-	-	-	-	1.989	-	-	-	-	-	1.989
<b>Support - Fielding Cost</b>																		
Fielding	-	-	-	-	-	-	-	-	-	-	-	18.244	-	-	-	-	-	18.244
<i>Subtotal: Support - Fielding Cost</i>	-	-	-	-	-	-	-	-	-	-	-	18.244	-	-	-	-	-	18.244

**UNCLASSIFIED**

<b>Exhibit P-5, Cost Analysis: PB 2021 Army</b>		<b>Date:</b> February 2020
<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 2035A / 02 / 32	<b>P-1 Line Item Number / Title:</b> 9164BU8100 / COTS Communications Equipment	<b>Item Number / Title [DODIC]:</b> B98121 / SMALL UNIT AND EMERGENCY LOCATOR COMMUNICATIONS

<b>ID Code</b> (A=Service Ready, B=Not Service Ready) :	<b>MDAP/MAIS Code:</b>
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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 2019			FY 2020			FY 2021 Base			FY 2021 OCO			FY 2021 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)
Support - System Engineering Cost																		
System Engineering	-	-	-	-	-	-	-	-	-	-	-	4.699	-	-	-	-	-	4.699
<i>Subtotal: Support - System Engineering Cost</i>	-	-	-	-	-	-	-	-	-	-	-	<b>4.699</b>	-	-	-	-	-	<b>4.699</b>
<b>Gross/Weapon System Cost</b>	-	-	-	-	-	-	-	-	-	<b>67.641</b>	<b>685</b>	<b>46.334</b>	-	-	-	<b>67.641</b>	<b>685</b>	<b>46.334</b>

**Remarks:**

The Small Unit and Emergency Locator Communications (B98121) line provide for several small unit communications devices, including the ITN family of radios. The Integrated Tactical Network (ITN) family of radios capability of the ITN fills critical communications gaps at the Battalion and below echelons and allows the Army to pivot strategically and adjust agilely to changes in combatant environments. It includes but is not limited to: Link-16 radios, line-of-sight (LOS), beyond-line-of sight (BLOS) radios, foliage-dense environment radios, subterranean radios, single channel radios, and tactical radio integration kits for routing and switching between various waveforms. In addition, this line provides critical Security Force Assistance Brigade (SFAB) support and sustainment.

Note: The calculated unit cost is based on an average unit cost using the current draft ITN Non-POR components.

Secondary Distribution		FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total
Army	Quantity	-	-	685	-	685
	Total Obligation Authority	-	-	46.334	-	46.334
<b>Total: Secondary Distribution</b>	Quantity	-	-	<b>685</b>	-	<b>685</b>
	Total Obligation Authority	-	-	<b>46.334</b>	-	<b>46.334</b>

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

**UNCLASSIFIED**

<b>Exhibit P-5a, Procurement History and Planning:</b> PB 2021 Army							<b>Date:</b> February 2020				
<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 2035A / 02 / 32			<b>P-1 Line Item Number / Title:</b> 9164BU8100 / COTS Communications Equipment				<b>Item Number / Title [DODIC]:</b> B98121 / SMALL UNIT AND EMERGENCY LOCATOR COMMUNICATIONS				

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
ITN Systems of Radios <sup>(†)</sup>		2021	TBD / TBD	C / Various	Various	Apr 2021	Oct 2021	685	26.117	N		Dec 2020

<sup>(†)</sup> indicates the presence of a P-21

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<b>Exhibit P-21, Production Schedule:</b> PB 2021 Army															<b>Date:</b> February 2020														
<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 2035A / 02 / 32										<b>P-1 Line Item Number / Title:</b> 9164BU8100 / COTS Communications Equipment										<b>Item Number / Title [DODIC]:</b> B98121 / SMALL UNIT AND EMERGENCY LOCATOR COMMUNICATIONS									

Cost Elements <i>(Units in Each)</i>						Fiscal Year 2021												Fiscal Year 2022												BALANCE	
O C C #	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

ITN Systems of Radios																													
1	2021	ARMY		685	0	685																							0

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**UNCLASSIFIED**

<b>Exhibit P-21, Production Schedule:</b> PB 2021 Army		<b>Date:</b> February 2020
<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 2035A / 02 / 32	<b>P-1 Line Item Number / Title:</b> 9164BU8100 / COTS Communications Equipment	<b>Item Number / Title [DODIC]:</b> B98121 / SMALL UNIT AND EMERGENCY LOCATOR COMMUNICATIONS

MFR Ref #	Manufacturer Name - Location	Production Rates (Each / Month)			Procurement Leadtime (Months)								
		MSR For 2021	1-8-5 For 2021	MAX For 2021	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 - TBD	10	10	200	0	0	0	0	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 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 2021 Army **Date:** February 2020

<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 2035A: Other Procurement, Army / BA 02: Communications and Electronics Equipment / BSA 32: Comm - Combat Communications	<b>P-1 Line Item Number / Title:</b> 9885MA8000 / Family of Med Comm for Combat Casualty Care
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<b>ID Code</b> (A=Service Ready, B=Not Service Ready):	<b>Program Elements for Code B Items:</b> N/A	<b>Other Related Program Elements:</b> N/A
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**Line Item MDAP/MAIS Code:** N/A

Resource Summary	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	To Complete	Total
Procurement Quantity ( <i>Units in Each</i> )	2,356	1,597	4,844	3,500	-	3,500	461	152	-	-	-	12,910
Gross/Weapon System Cost ( <i>\$ in Millions</i> )	556.843	22.226	17.821	18.313	1.257	19.570	14.764	7.472	-	-	-	638.696
Less PY Advance Procurement ( <i>\$ in Millions</i> )	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) ( <i>\$ in Millions</i> )	556.843	22.226	17.821	18.313	1.257	19.570	14.764	7.472	-	-	-	638.696
Plus CY Advance Procurement ( <i>\$ in Millions</i> )	-	-	-	-	-	-	-	-	-	-	-	-
<b>Total Obligation Authority (<i>\$ in Millions</i>)</b>	<b>556.843</b>	<b>22.226</b>	<b>17.821</b>	<b>18.313</b>	<b>1.257</b>	<b>19.570</b>	<b>14.764</b>	<b>7.472</b>	-	-	-	<b>638.696</b>

*(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> )	236.351	13.917	3.679	5.232	-	5.591	32.026	49.158	-	-	-	49.473

**Description:**

The Medical Communications for Combat Casualty Care (MC4) system interfaces Force Health Protection and medical surveillance information with Army Mission Command information technology systems. The system captures and provides data for future medical care and medical record retention for all Service members. The MC4 system fulfills the requirements highlighted in United States Code: Title 10, Subtitle A, Part II, Chapter 55, Section 1074f, mandating the proper documentation of deployed Service members' medical treatment to include associated medical surveillance, enabling each soldier to have a comprehensive, life-long medical record of all illnesses and injuries. The collection and analysis of medical data provided by the MC4 system provides and enhances medical situational awareness for mission commanders. The MC4 program is currently in full fielding of integrated Information Management/Information Technology (IM/IT) equipment together with current electronic health record software. The MC4 system is comprised of seven subsystem Line Item Numbers (LINS) and is fielded to all Army units with medical assets. The mix of LINS fielded to any unit is directly related to the unit's medical function and will differ dependent on the type of unit. The system is fielded and trained to units as they prepare for deployment or other priority missions. The medical events captured by the MC4 system will provide the Soldiers' electronic health record as well as data to databases and systems that enable commanders to: identify population health trends and outbreaks; reallocate human and materiel resources based on needs; determine if locations are the source of illnesses or injuries; and make better tactical and medical decisions that impact the mission and Soldiers' health.

In prior years, MC4 has procured and fielded equipment aligned with the incremental development of the jointly developed Theater Medical Information Program-Joint (TMIP-J) electronic health record software. As software increments of the TMIP-J version of electronic health record capability have evolved to a final objective state (available in FY18), MC4 hardware has been replaced and upgraded to support the capability provided by the upgraded software increments and releases. New hardware will be fielded to deploying forces, as required, to maintain the electronic health record capability. The Army Acquisition Objective (AAO as of "AAO POM 2024 Report") includes all seven MC4 LINS to be fielded which will operate the final version of the TMIP-J software and totals 43,581 LIN quantities of the MC4 system.

Approval of Joint Theater Medical Information Requirements (TMIR) Information Systems Initial Capabilities Document (IS-ICD) (FY16), Joint Theater Medical Information Requirements (TMIR) Information Systems Capability Development Document (IS-CDD) (FY17), and Army development and staffing of Adoption package for the TMIR IS-ICD (ongoing) for a modernized electronic health record system created a requirement for the modernization of the electronic health system. Equipment procured and fielded in FY 2021 will be assessed for applicability to future electronic health records requirements as they become known.

Secondary Distribution	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025
Army									
Quantity	689	2,795	2,030	-	2,030	267	88	-	-
Total Obligation Authority	18.044	12.520	13.765	1.257	15.022	14.188	7.222	-	-

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<b>Exhibit P-40, Budget Line Item Justification:</b> PB 2021 Army		<b>Date:</b> February 2020
<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 2035A: Other Procurement, Army / BA 02: Communications and Electronics Equipment / BSA 32: Comm - Combat Communications		<b>P-1 Line Item Number / Title:</b> 9885MA8000 / Family of Med Comm for Combat Casualty Care
<b>ID Code</b> (A=Service Ready, B=Not Service Ready):	<b>Program Elements for Code B Items:</b> N/A	<b>Other Related Program Elements:</b> N/A
<b>Line Item MDAP/MAIS Code:</b> N/A		

Secondary Distribution		FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025
ANG	Quantity	680	1,446	560	-	560	74	24	-	-
	Total Obligation Authority	2.748	3.740	1.733	-	1.733	0.220	0.094	-	-
AR	Quantity	228	603	910	-	910	120	40	-	-
	Total Obligation Authority	1.434	1.561	2.815	-	2.815	0.356	0.156	-	-
<b>Total:</b>	<b>Quantity</b>	<b>1,597</b>	<b>4,844</b>	<b>3,500</b>	<b>-</b>	<b>3,500</b>	<b>461</b>	<b>152</b>	<b>-</b>	<b>-</b>
<b>Secondary Distribution</b>	<b>Total Obligation Authority</b>	<b>22.226</b>	<b>17.821</b>	<b>18.313</b>	<b>1.257</b>	<b>19.570</b>	<b>14.764</b>	<b>7.472</b>	<b>-</b>	<b>-</b>



**UNCLASSIFIED**

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

<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 2035A: Other Procurement, Army / BA 02: Communications and Electronics Equipment / BSA 32: Comm - Combat Communications	<b>P-1 Line Item Number / Title:</b> 9885MA8000 / Family of Med Comm for Combat Casualty Care
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<b>ID Code</b> (A=Service Ready, B=Not Service Ready):	<b>Program Elements for Code B Items:</b> N/A	<b>Other Related Program Elements:</b> N/A
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**Line Item MDAP/MAIS Code:** N/A

Exhibits Schedule					Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total
Exhibit Type	Title*	Subexhibits	ID CD	MDAP/MAIS Code	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)
P-5	MA8046 / Medical Comm For CBT Casualty Care (MC4)	P-5a			2,356 / 556.843	1,597 / 22.226	4,844 / 17.821	3,500 / 18.313	- / 1.257	3,500 / 19.570
<b>P-40</b>	<b>Total Gross/Weapon System Cost</b>				<b>2,356 / 556.843</b>	<b>1,597 / 22.226</b>	<b>4,844 / 17.821</b>	<b>3,500 / 18.313</b>	<b>- / 1.257</b>	<b>3,500 / 19.570</b>

\*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 2021 Base procurement dollars in the amount of \$18.313 million procures 3,500 end components of the MC4 system for upgraded systems and new equipment fielding and provides new equipment training (NET) as needed for 94 Active units, 170 National Guard units, and 36 Army Reserve units. Funding also provides contracted support to the program office management and supports production engineering, cyber security compliance, hardware procurement, fielding and new equipment training for new systems and capability. New hardware will be fielded to all deploying forces with mission requirements, to maintain the electronic health record capability.

94 Active units (1 Air Defense Company, 3 Area Support Medical Companies, 5 Aviation Companies, 13 Brigade Combat Teams, 2 Blood Support Detachment, 2 Civil Affairs Companies, 3 Combat Aviation Brigades, 2 Cavalry Battalions, 4 Field Hospitals, 1 Dental Company, 6 Engineer Companies, 6 Field Artillery, 2 Fires Brigades, 3 Forward Surgical Teams, 2 Ground Ambulance Companies, 2 Headquarters Command and Control, 3 Infantry Regiments, 3 Medical Brigade HQ, 2 Medical Logistics Company, 1 Multi-Functional Medical Battalion, 7 Military Police Battalion, 2 Optometry Detachments, 3 Preventive Medicine Detachment, 3 Special Forces Group Battalions, 7 Support Battalions, 5 Sustainment Battalions, 1 Veterinarian Detachment); 170 National Guard units (3 Air Defense Artillery, 8 Area Support Medical Companies, 18 Aviation, 16 Brigade Combat Teams, 3 Combat Aviation Brigades, 1 Cavalry Regiment, 2 Chemical Companies, 45 Engineer Companies, 13 Field Artillery, 1 Fires Brigade, 1 Ground Ambulance, 1 Brigade HQ, 7 Infantry Regiments, 5 Maneuver Enhancement Brigade HQ, 2 Multi-Functional Medical Battalion, 20 Military Police Companies, 3 Special Forces Battalions, 17 Support Battalions, 4 Sustainment Companies); and 36 Army Reserve units (5 Area Support Medical Companies, 1 Combat Stress Control, 2 Field Hospitals, 1 Dental Company, 7 Engineer Companies, 4 Forward Surgical Teams, 1 Ground Ambulance, 1 Maneuver Enhancement Brigade, 3 Medical Logistics Companies, 1 Minimal Care Detachment, 1 Military Police Company, 1 Preventative Medicine, 5 Combat Support Battalions, 1 Sustainment Battalion, 1 Veterinarian Detachment).

In addition, FY2021 OCO procurement dollars in the amount of \$1.257 million procures 828 end components of the MC4 system for upgraded equipment/systems reset from battle loss in current theater of operations. Units supported include 83 Army medical units across 18 Forward Operating Bases in Afghanistan and Iraq, to include one Army medical hospital.

PMO Fielding Management civilian salaries from FY19 forward are now funded directly in OMA.

Unit cost depends on the particular equipment LIN that is procured. The program procures seven (7) LINs with significant range in unit cost, resulting in differing unit cost year over year, depending on the quantity of each LIN procured.

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

**UNCLASSIFIED**

<b>Exhibit P-5, Cost Analysis: PB 2021 Army</b>		<b>Date:</b> February 2020
<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 2035A / 02 / 32		<b>P-1 Line Item Number / Title:</b> 9885MA8000 / Family of Med Comm for Combat Casualty Care
		<b>Item Number / Title [DODIC]:</b> MA8046 / Medical Comm For CBT Casualty Care (MC4)

<b>ID Code</b> (A=Service Ready, B=Not Service Ready) :	<b>MDAP/MAIS Code:</b>
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<b>Resource Summary</b>	<b>Prior Years</b>	<b>FY 2019</b>	<b>FY 2020</b>	<b>FY 2021 Base</b>	<b>FY 2021 OCO</b>	<b>FY 2021 Total</b>
Procurement Quantity (Units in Each)	2,356	1,597	4,844	3,500	-	3,500
Gross/Weapon System Cost (\$ in Millions)	556.843	22.226	17.821	18.313	1.257	19.570
Less PY Advance Procurement (\$ in Millions)	-	-	-	-	-	-
Net Procurement (P-1) (\$ in Millions)	556.843	22.226	17.821	18.313	1.257	19.570
Plus CY Advance Procurement (\$ in Millions)	-	-	-	-	-	-
<b>Total Obligation Authority (\$ in Millions)</b>	<b>556.843</b>	<b>22.226</b>	<b>17.821</b>	<b>18.313</b>	<b>1.257</b>	<b>19.570</b>

*(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)	236.351	13.917	3.679	5.232	-	5.591

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

<b>Cost Elements</b>	<b>Prior Years</b>			<b>FY 2019</b>			<b>FY 2020</b>			<b>FY 2021 Base</b>			<b>FY 2021 OCO</b>			<b>FY 2021 Total</b>		
	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)
<b>Flyaway Cost</b>																		
<b>Recurring Cost</b>																		
PMO Fielding Management	5,068.667	12	60.824	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PMO Management Support <sup>(†)</sup>	1,246.167	12	14.954	3,318.000	1	3.318	2,730.000	1	2.730	1,100.000	1	1.100	-	-	-	1,100.000	1	1.100
Production Engineering <sup>(†)</sup>	4,636.500	12	55.638	5,274.000	1	5.274	3,509.000	1	3.509	3,721.000	1	3.721	-	-	-	3,721.000	1	3.721
<i>Subtotal: Recurring Cost</i>	-	-	131.416	-	-	8.592	-	-	6.239	-	-	4.821	-	-	-	-	-	4.821
<i>Subtotal: Flyaway Cost</i>	-	-	131.416	-	-	8.592	-	-	6.239	-	-	4.821	-	-	-	-	-	4.821
<b>Hardware Cost</b>																		
<b>Recurring Cost</b>																		
Medical Information Systems Equipment <sup>(†)</sup>	4.439	75,898	336.876	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Medical Information Systems Equipment LIN C27503 AN/TYQ 105 <sup>(†)</sup>	-	-	-	-	-	-	1.000	2,125	2.125	1.000	1,400	1.400	-	-	-	1.000	1,400	1.400
Medical Information Systems Equipment LIN C18345 AN/TYQ 106v1 <sup>(†)</sup>	-	-	-	1.800	825	1.485	1.577	1,016	1.602	1.769	1,200	2.123	1.516	434	0.658	1.702	1,634	2.781
Medical Information Systems Equipment	-	-	-	2.945	487	1.434	2.424	741	1.796	2.351	550	1.293	1.514	278	0.421	2.070	828	1.714

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<b>Exhibit P-5, Cost Analysis: PB 2021 Army</b>												<b>Date:</b> February 2020					
<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 2035A / 02 / 32						<b>P-1 Line Item Number / Title:</b> 9885MA8000 / Family of Med Comm for Combat Casualty Care						<b>Item Number / Title [DODIC]:</b> MA8046 / Medical Comm For CBT Casualty Care (MC4)					
<b>ID Code</b> (A=Service Ready, B=Not Service Ready) :												<b>MDAP/MAIS Code:</b>					

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

Cost Elements	Prior Years			FY 2019			FY 2020			FY 2021 Base			FY 2021 OCO			FY 2021 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)
LIN C18277 AN/TYQ 107v1 <sup>(†)</sup>																		
Medical Information Systems Equipment LIN C18209 AN/TYQ 107v2 <sup>(†)</sup>	-	-	-	2.648	125	0.331	2.222	90	0.200	1.975	200	0.395	1.526	57	0.087	1.875	257	0.482
Medical Information Systems Equipment LIN C41358 AN/TYQ 108v1 <sup>(†)</sup>	-	-	-	40.080	25	1.002	10.000	4	0.040	-	-	-	-	-	-	-	-	-
Medical Information Systems Equipment LIN C27571 AN/TYQ 108v2 <sup>(†)</sup>	-	-	-	43.440	25	1.086	10.000	4	0.040	-	-	-	-	-	-	-	-	-
Medical Information Systems Equipment LIN C27639 AN/TYQ 108v3 (Small) <sup>(†)</sup>	-	-	-	4.636	110	0.510	3.523	88	0.310	2.727	150	0.409	1.542	59	0.091	2.392	209	0.500
<i>Subtotal: Recurring Cost</i>	-	-	336.876	-	-	5.848	-	-	6.113	-	-	5.620	-	-	1.257	-	-	6.877
<i>Subtotal: Hardware Cost</i>	-	-	336.876	-	-	5.848	-	-	6.113	-	-	5.620	-	-	1.257	-	-	6.877
<b>Package Fielding Cost</b>																		
<b>Recurring Cost</b>																		
Field equipment / conduct New Equip Train <sup>(†)</sup>	7,376.250	12	88.515	7,786.000	1	7.786	5,469.000	1	5.469	7,871.000	1	7.871	-	-	-	7,871.000	1	7.871
<i>Subtotal: Recurring Cost</i>	-	-	88.515	-	-	7.786	-	-	5.469	-	-	7.871	-	-	-	-	-	7.871
<i>Subtotal: Package Fielding Cost</i>	-	-	88.515	-	-	7.786	-	-	5.469	-	-	7.871	-	-	-	-	-	7.871
<b>Gross/Weapon System Cost</b>	<b>236.351</b>	<b>2,356</b>	<b>556.843</b>	<b>13.917</b>	<b>1,597</b>	<b>22.226</b>	<b>3.679</b>	<b>4,844</b>	<b>17.821</b>	<b>5.232</b>	<b>3,500</b>	<b>18.313</b>	<b>-</b>	<b>-</b>	<b>1.257</b>	<b>5.591</b>	<b>3,500</b>	<b>19.570</b>

**Remarks:**

- 1) Cost element breakout -
  - a) Flyaway recurring PMO Fielding Management FY18 and Prior included program Government Civilians. In FY19, this funding requirement moved to OMA APE 435107000
  - b) Flyaway recurring PMO Management Support includes contractor program management support and program office costs
  - c) Flyaway recurring Production Engineering is contractor effort to produce a fieldable product, to include cybersecurity compliance, engineering changes, hardware evaluations, and other system engineering
  - d) Hardware recurring Medical Information Systems Equipment FY18 and Prior included a quantity and cost summation of the 7 equipment Line Item Numbers (LINs) associated with the MC4 Program. From FY19 forward, hardware quantity and cost is shown at the individual LIN level vice the aggregated level. Quantities are estimated to support projected Army unit mission Modified Table Of Equipment (MTOE) requirements.

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<b>Exhibit P-5, Cost Analysis:</b> PB 2021 Army		<b>Date:</b> February 2020
<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 2035A / 02 / 32	<b>P-1 Line Item Number / Title:</b> 9885MA8000 / Family of Med Comm for Combat Casualty Care	<b>Item Number / Title [DODIC]:</b> MA8046 / Medical Comm For CBT Casualty Care (MC4)

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

e) Package Fielding Recurring includes contractor effort to field the 7 LINs and provide new equipment training to units with missions requiring the MC4 system to electronically capture health records for deployed Soldiers.

Secondary Distribution		FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total
Army	Quantity	689	2,795	2,030	-	2,030
	Total Obligation Authority	18.044	12.520	13.765	1.257	15.022
ANG	Quantity	680	1,446	560	-	560
	Total Obligation Authority	2.748	3.740	1.733	-	1.733
AR	Quantity	228	603	910	-	910
	Total Obligation Authority	1.434	1.561	2.815	-	2.815
<b>Total: Secondary Distribution</b>	<b>Quantity</b>	<b>1,597</b>	<b>4,844</b>	<b>3,500</b>	<b>-</b>	<b>3,500</b>
	<b>Total Obligation Authority</b>	<b>22.226</b>	<b>17.821</b>	<b>18.313</b>	<b>1.257</b>	<b>19.570</b>

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

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Exhibit P-5a, Procurement History and Planning: PB 2021 Army								Date: February 2020				
Appropriation / Budget Activity / Budget Sub Activity: 2035A / 02 / 32			P-1 Line Item Number / Title: 9885MA8000 / Family of Med Comm for Combat Casualty Care					Item Number / Title [DODIC]: MA8046 / Medical Comm For CBT Casualty Care (MC4)				
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
PMO Management Support		2018	Octo Consulting / Tysons Corner, VA	C / CPFF	ACC-RI	Jul 2018	Aug 2018	1	1,419.000	N		
PMO Management Support		2019	Octo Consulting / Tysons Corner, VA	C / CPFF	ACC-RI	Jul 2019	Aug 2019	1	3,318.000	N		Apr 2019
PMO Management Support		2020	CACI / Reston, VA	C / CPFF	ACC-RI	Dec 2019	Jan 2020	1	2,730.000	N		
PMO Management Support		2021	TBS / TBS	C / FP	ACC-RI	Dec 2020	Jan 2021	1	1,100.000	N		May 2020
Production Engineering		2018	CACI / Reston, VA	C / FP	GSA	Dec 2017	Jan 2018	1	3,123.000	N		
Production Engineering		2019	CACI / Reston, VA	C / FP	GSA	Dec 2018	Jan 2019	1	5,274.000	N		
Production Engineering		2020	CACI / Reston, VA	C / FP	GSA	Dec 2019	Jan 2020	1	3,509.000	N		
Production Engineering		2021	TBS / TBS	C / FP	GSA	Dec 2020	Jan 2021	1	3,721.000	N		May 2020
Medical Information Systems Equipment		2016	VAR / VAR	C / FP	ACC-RI	Aug 2016	Nov 2016	1,627	2.680	N		
Medical Information Systems Equipment		2017	VAR / VAR	C / FP	ACC-RI	Jun 2017	Aug 2017	3,011	0.770	N	Apr 2017	
Medical Information Systems Equipment		2018	VAR / VAR	C / FP	ACC-RI	Feb 2018	Apr 2018	121	2.107	N	Dec 2017	Jan 2018
Medical Information Systems Equipment LIN C27503 AN/TYQ 105		2020	Samsung / San Jose, CA	C / FP	ACC	Jan 2020	Apr 2020	2,125	1.000	Y		
Medical Information Systems Equipment LIN C27503 AN/TYQ 105		2021	Samsung / San Jose, CA	C / FP	ACC	Jan 2021	Apr 2021	1,400	1.000	Y		
Medical Information Systems Equipment LIN C18345 AN/TYQ 106v1		2019	GETAC / Gainesville, VA	C / FP	ACC-RI	Dec 2018	Apr 2019	825	1.800	N		Nov 2018
Medical Information Systems Equipment LIN C18345 AN/TYQ 106v1		2020	TBS / TBS	C / FP	ACC-RI	Jan 2020	Apr 2020	1,016	1.577	N		Nov 2019
Medical Information Systems Equipment LIN C18345 AN/TYQ 106v1		2021	TBS / TBS	C / FP	ACC-RI	Jan 2021	Apr 2021	1,200	1.769	N		Nov 2020
Medical Information Systems Equipment LIN C18277 AN/TYQ 107v1		2019	GETAC / Gainesville, VA	C / FP	ACC-RI	Nov 2018	Feb 2019	487	2.945	N	Feb 2019	Oct 2018
Medical Information Systems Equipment LIN C18277 AN/TYQ 107v1		2020	TBS / TBS	C / FP	ACC-RI	Jan 2020	Apr 2020	741	2.424	N		Nov 2019
Medical Information Systems Equipment LIN C18277 AN/TYQ 107v1		2021	TBS / TBS	C / FP	ACC-RI	Jan 2021	Apr 2021	550	2.351	N		

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Exhibit P-5a, Procurement History and Planning: PB 2021 Army								Date: February 2020				
Appropriation / Budget Activity / Budget Sub Activity: 2035A / 02 / 32			P-1 Line Item Number / Title: 9885MA8000 / Family of Med Comm for Combat Casualty Care					Item Number / Title [DODIC]: MA8046 / Medical Comm For CBT Casualty Care (MC4)				
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
Medical Information Systems Equipment LIN C18209 AN/TYQ 107v2		2019	GETAC / Gainesville, VA	C / FP	ACC-RI	Dec 2018	Apr 2019	125	2.648	N		Nov 2018
Medical Information Systems Equipment LIN C18209 AN/TYQ 107v2		2020	TBS / TBS	C / FP	ACC-RI	Jan 2020	Apr 2020	90	2.222	N		Nov 2019
Medical Information Systems Equipment LIN C18209 AN/TYQ 107v2		2021	TBS / TBS	C / FP	ACC-RI	Jan 2021	Apr 2021	200	1.975	N		Nov 2020
Medical Information Systems Equipment LIN C41358 AN/TYQ 108v1		2019	GETAC / Gainesville, VA	C / FP	ACC-RI	Jan 2019	Apr 2019	25	40.080	N		Nov 2018
Medical Information Systems Equipment LIN C41358 AN/TYQ 108v1		2020	TBS / TBS	C / FP	ACC-RI	Mar 2020	Jun 2020	4	10.000	N		Jan 2020
Medical Information Systems Equipment LIN C27571 AN/TYQ 108v2		2019	Hewlett Packard / Palo Alto, CA	C / FP	ACC-RI	Jan 2019	Apr 2019	25	43.440	N		Nov 2018
Medical Information Systems Equipment LIN C27571 AN/TYQ 108v2		2020	TBS / TBS	C / FP	ACC-RI	Mar 2020	Jun 2020	4	10.000	N		Jan 2020
Medical Information Systems Equipment LIN C27639 AN/TYQ 108v3 (Small)		2019	GETAC / Gainesville, VA	C / FP	ACC-RI	Dec 2018	Apr 2019	110	4.636	N		Nov 2018
Medical Information Systems Equipment LIN C27639 AN/TYQ 108v3 (Small)		2020	TBS / TBS	C / FP	ACC-RI	Jan 2020	Apr 2020	88	3.523	N		Nov 2019
Medical Information Systems Equipment LIN C27639 AN/TYQ 108v3 (Small)		2021	TBS / TBS	C / FP	ACC-RI	Jan 2021	Apr 2021	150	2.727	N		Nov 2020
Field equipment /conduct New Equip Train		2018	CACI / Reston, VA	C / FP	GSA	Dec 2017	Jan 2018	1	4,710.000	N		
Field equipment /conduct New Equip Train		2019	CACI / Reston, VA	C / FP	GSA	Dec 2018	Jan 2019	1	7,786.000	N		
Field equipment /conduct New Equip Train		2020	CACI / Reston, VA	C / FP	GSA	Dec 2019	Jan 2020	1	5,469.000	N		
Field equipment /conduct New Equip Train		2021	TBS / TBS	C / FP	GSA	Dec 2020	Jan 2021	1	7,871.000	N		May 2020
<b>Remarks:</b>												

**UNCLASSIFIED**

<b>Exhibit P-5a, Procurement History and Planning: PB 2021 Army</b>		<b>Date:</b> February 2020
<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 2035A / 02 / 32	<b>P-1 Line Item Number / Title:</b> 9885MA8000 / Family of Med Comm for Combat Casualty Care	<b>Item Number / Title [DODIC]:</b> MA8046 / Medical Comm For CBT Casualty Care (MC4)
<p>Equipment (TBS-To Be Selected) is COTS and is procured for various of the 7 MC4 Line Item Numbers (LINs) depending on specific configurations of operational units to be fielded. Equipment vendors are selected by Army Contracting Command, Rock Island (ACC-RI). New contracts are projected to be competitively awarded in FY20 and FY21, vendors are unknown at this time.</p> <p>Unit cost for Equipment shown in FY16, FY17 and FY18 is an average unit cost. The MC4 system consists of 7 Line Item Numbers (LINs) and the mix of LINs fielded is dependent on the specific unit type. The quantity procured in any year is the summation of the LINs expected to be procured and fielded each year. Cost for each of the 7 LINs differs and the unit cost is developed as the average unit cost for that year based on the mix of LINs to be procured.</p> <p>Starting in FY19, equipment and unit cost has been detailed to the specific LIN level.</p>		

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

<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 2035A: Other Procurement, Army / BA 02: Communications and Electronics Equipment / BSA 32: Comm - Combat Communications	<b>P-1 Line Item Number / Title:</b> 9887B88810 / Army Communications & Electronics
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<b>ID Code</b> (A=Service Ready, B=Not Service Ready):	<b>Program Elements for Code B Items:</b> N/A	<b>Other Related Program Elements:</b> N/A
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**Line Item MDAP/MAIS Code:** N/A

Resource Summary	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	To Complete	Total
Procurement Quantity ( <i>Units in Each</i> )	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost ( <i>\$ in Millions</i> )	-	-	37.856	51.480	-	51.480	27.059	21.662	22.198	22.418	-	182.673
Less PY Advance Procurement ( <i>\$ in Millions</i> )	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) ( <i>\$ in Millions</i> )	-	-	37.856	51.480	-	51.480	27.059	21.662	22.198	22.418	-	182.673
Plus CY Advance Procurement ( <i>\$ in Millions</i> )	-	-	-	-	-	-	-	-	-	-	-	-
<b>Total Obligation Authority (<i>\$ in Millions</i>)</b>	-	-	<b>37.856</b>	<b>51.480</b>	-	<b>51.480</b>	<b>27.059</b>	<b>21.662</b>	<b>22.198</b>	<b>22.418</b>	-	<b>182.673</b>

*(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 Communications & Electronic Equipment budget line funds procurement of communications and electronic equipment and other support equipment used in select programs. It also includes all cost integral and necessary to deliver useful end items intended for operational use within the communications and electronics, information dominance and multi-domain battlespace environment.

Secondary Distribution	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025
Army	Quantity	-	-	-	-	-	-	-	-
	Total Obligation Authority	-	37.856	51.480	-	51.480	27.059	21.662	22.198
<b>Total:</b> Secondary Distribution	Quantity	-	-	-	-	-	-	-	-
	Total Obligation Authority	-	<b>37.856</b>	<b>51.480</b>	-	<b>51.480</b>	<b>27.059</b>	<b>21.662</b>	<b>22.198</b>



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

<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 2035A: Other Procurement, Army / BA 02: Communications and Electronics Equipment / BSA 32: Comm - Combat Communications	<b>P-1 Line Item Number / Title:</b> 9887B88810 / Army Communications & Electronics
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<b>ID Code</b> (A=Service Ready, B=Not Service Ready):	<b>Program Elements for Code B Items:</b> N/A	<b>Other Related Program Elements:</b> N/A
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**Line Item MDAP/MAIS Code:** N/A

Exhibits Schedule					Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total
Exhibit Type	Title*	Subexhibits	ID CD	MDAP/MAIS Code	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)
P-40a	B88820 / Army Communications A				- / -	- / -	- / 37.856	- / 51.480	- / -	- / 51.480
<b>P-40</b>	<b>Total Gross/Weapon System Cost</b>				- / -	- / -	- / 37.856	- / 51.480	- / -	- / 51.480

\*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 Communications & Electronic Equipment budget line funds procurement of communications and electronic equipment and other support equipment used in select programs. It also included all cost integral and necessary to deliver useful end items intended for operational use within the communications and electronics, information dominance and multi-domain battlespace environment.

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**Exhibit P-40a, Budget Item Justification For Aggregated Items:** PB 2021 Army **Date:** February 2020

**Appropriation / Budget Activity / Budget Sub Activity:** 2035A / 02 / 32 **P-1 Line Item Number / Title:** 9887B88810 / Army Communications & Electronics **Aggregated Items Title:** B88820 / Army Communications A

Item Number / Title [DODIC]	ID CD	MDAP/MAIS Code	Prior Years			FY 2019			FY 2020			FY 2021 Base			FY 2021 OCO			FY 2021 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)
<b>Army Communications A</b>																				
B88820 / Army Communications A			-	-	-	-	-	-	-	37.856	-	-	51.480	-	-	-	-	-	51.480	
<i>Secondary Distribution</i>																				
Army				-	-	-	-	-	-	37.856		-	51.480		-	-		-	51.480	
<b>Subtotal: Army Communications A</b>			-	-	-	-	-	-	-	<b>37.856</b>	-	-	<b>51.480</b>	-	-	-	-	-	<b>51.480</b>	
<b>Total</b>			-	-	-	-	-	-	-	<b>37.856</b>	-	-	<b>51.480</b>	-	-	-	-	-	<b>51.480</b>	

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

**UNCLASSIFIED**

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

<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 2035A: Other Procurement, Army / BA 02: Communications and Electronics Equipment / BSA 36: Comm - Intelligence Comm	<b>P-1 Line Item Number / Title:</b> 0250BK5284 / CI Automation Architecture (MIP)
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<b>ID Code</b> (A=Service Ready, B=Not Service Ready):	<b>Program Elements for Code B Items:</b> N/A	<b>Other Related Program Elements:</b> N/A
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**Line Item MDAP/MAIS Code:** N/A

Resource Summary	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	To Complete	Total
Procurement Quantity ( <i>Units in Each</i> )	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost ( <i>\$ in Millions</i> )	100.587	27.356	16.670	13.146	1.230	14.376	13.478	13.730	16.646	14.144	-	216.987
Less PY Advance Procurement ( <i>\$ in Millions</i> )	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) ( <i>\$ in Millions</i> )	100.587	27.356	16.670	13.146	1.230	14.376	13.478	13.730	16.646	14.144	-	216.987
Plus CY Advance Procurement ( <i>\$ in Millions</i> )	-	-	-	-	-	-	-	-	-	-	-	-
<b>Total Obligation Authority (<i>\$ in Millions</i>)</b>	<b>100.587</b>	<b>27.356</b>	<b>16.670</b>	<b>13.146</b>	<b>1.230</b>	<b>14.376</b>	<b>13.478</b>	<b>13.730</b>	<b>16.646</b>	<b>14.144</b>	<b>-</b>	<b>216.987</b>

*(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:**

This program provides the Army, as a member of the Department of Defense (DoD) Counterintelligence (CI) community, with advanced CI operational equipment to enhance its ability to contour the global threat through significant improvements in information sharing, common situational awareness, and knowledge management in a joint operational environment.

Joint Task Force Guantanamo (JTF-GTMO) Intel IT Systems provide critical intelligence capabilities in support of ongoing detainee operations, military commissions and detainee assessments as directed by OSD. In accordance with directives by OSD and DoD General Counsel on GTMO detainee records, JTF-GTMO is mandated to preserve all detainee relevant data. These systems were originally installed in a contingency nature with the intent of operating.

Sensitive Compartmented Information Facility - Information Technology (SCIF-IT) provides maintenance, manning, and sustainment in support of the Joint Worldwide Information Communications System (JWICS) Top Secret network services for the entire Army. In addition, the project supports Collateral (Secret and below) network services in the Army's military intelligence IT domains.

Secondary Distribution	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025
Army									
Quantity	-	-	-	-	-	-	-	-	-
Total Obligation Authority	27.356	16.670	13.146	1.230	14.376	13.478	13.730	16.646	14.144
<b>Total:</b>									
<b>Secondary Distribution</b>									
Quantity	-	-	-	-	-	-	-	-	-
Total Obligation Authority	<b>27.356</b>	<b>16.670</b>	<b>13.146</b>	<b>1.230</b>	<b>14.376</b>	<b>13.478</b>	<b>13.730</b>	<b>16.646</b>	<b>14.144</b>

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

<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 2035A: Other Procurement, Army / BA 02: Communications and Electronics Equipment / BSA 36: Comm - Intelligence Comm	<b>P-1 Line Item Number / Title:</b> 0250BK5284 / CI Automation Architecture (MIP)
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<b>ID Code</b> (A=Service Ready, B=Not Service Ready):	<b>Program Elements for Code B Items:</b> N/A	<b>Other Related Program Elements:</b> N/A
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**Line Item MDAP/MAIS Code:** N/A

Exhibits Schedule					Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total
Exhibit Type	Title*	Subexhibits	ID CD	MDAP/MAIS Code	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)
P-5	BK5284 / CI Automation Architecture (MIP)	P-5a			- / 100.587	- / 27.356	- / 16.670	- / 13.146	- / 1.230	- / 14.376
<b>P-40</b>	<b>Total Gross/Weapon System Cost</b>				<b>- / 100.587</b>	<b>- / 27.356</b>	<b>- / 16.670</b>	<b>- / 13.146</b>	<b>- / 1.230</b>	<b>- / 14.376</b>

\*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:**

FY2021 Base funding in the amount of \$0.402 million procures the Department of Defense Intelligence Information System (DODIIS) - compliant CI and Human Intelligence (HUMINT) material solutions to support implementation of case management, threat management information systems, and information processing systems at Service, Major Command (MACOM) and user level Army Intelligence sites. Funding also provides specialized equipment necessary to support worldwide CI operations and investigation missions.

FY2021 Base funding in the amount of \$12.744 million procures Army Intelligence-Related Information Technology Systems and Networks. This effort will provide life-cycle replacement for critical information technology systems to include Joint Worldwide Intelligence Communications Systems (JWICS) required to support global Army intelligence operations.

FY2021 OCO funding in the amount of \$1.230 million procures hardware and software to perform system life cycle replacement and upgrades in support of JTF-GTMO to ensure the continued preservation of detainee data and implement a disaster recovery plan to prevent data degradation or loss to ensure compliance with OSD and DoD GEN COUNSEL directives (the legacy Intelligence IT system currently in use at JTF-GTMO is approaching the end of its life cycle). Additionally, the required upgrades would replace legacy systems with technology which are in compliance with current DoD Information Systems Accreditation requirements. Delays to this action poses significant risks to the ongoing detainee operation at JTF-GTMO and the potential loss of critical detainee data.

**UNCLASSIFIED**

<b>Exhibit P-5, Cost Analysis: PB 2021 Army</b>		<b>Date:</b> February 2020
<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 2035A / 02 / 36		<b>P-1 Line Item Number / Title:</b> 0250BK5284 / CI Automation Architecture (MIP)
		<b>Item Number / Title [DODIC]:</b> BK5284 / CI Automation Architecture (MIP)

<b>ID Code</b> (A=Service Ready, B=Not Service Ready) :	<b>MDAP/MAIS Code:</b>
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Resource Summary	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total
Procurement Quantity (Units in Each)	-	-	-	-	-	-
Gross/Weapon System Cost (\$ in Millions)	100.587	27.356	16.670	13.146	1.230	14.376
Less PY Advance Procurement (\$ in Millions)	-	-	-	-	-	-
Net Procurement (P-1) (\$ in Millions)	100.587	27.356	16.670	13.146	1.230	14.376
Plus CY Advance Procurement (\$ in Millions)	-	-	-	-	-	-
<b>Total Obligation Authority (\$ in Millions)</b>	<b>100.587</b>	<b>27.356</b>	<b>16.670</b>	<b>13.146</b>	<b>1.230</b>	<b>14.376</b>

*(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 2019			FY 2020			FY 2021 Base			FY 2021 OCO			FY 2021 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																		
CERP Servers <sup>(†)</sup>	75.485	68	5.133	67.429	70	4.720	-	-	-	52.886	149	7.880	-	-	-	52.886	149	7.880
CERP Storage <sup>(†)</sup>	64.000	24	1.536	60.652	23	1.395	-	-	-	56.906	32	1.821	-	-	-	56.906	32	1.821
CERP Routers <sup>(†)</sup>	64.265	49	3.149	58.568	44	2.577	-	-	-	37.696	23	0.867	-	-	-	37.696	23	0.867
CERP Switches <sup>(†)</sup>	1,574.043	46	72.406	22.298	47	1.048	-	-	-	49.455	44	2.176	-	-	-	49.455	44	2.176
Non-MTOE Automation Equipment	18,363.000	1	18.363	17,616.000	1	17.616	16,670.000	1	16.670	402.000	1	0.402	1,230.000	1	1.230	816.000	2	1.632
<i>Subtotal: Recurring Cost</i>	-	-	100.587	-	-	27.356	-	-	16.670	-	-	13.146	-	-	1.230	-	-	14.376
<i>Subtotal: Hardware Cost</i>	-	-	100.587	-	-	27.356	-	-	16.670	-	-	13.146	-	-	1.230	-	-	14.376
<b>Gross/Weapon System Cost</b>	-	-	<b>100.587</b>	-	-	<b>27.356</b>	-	-	<b>16.670</b>	-	-	<b>13.146</b>	-	-	<b>1.230</b>	-	-	<b>14.376</b>

Secondary Distribution		FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total
Army	Quantity	-	-	-	-	-
	Total Obligation Authority	27.356	16.670	13.146	1.230	14.376
<b>Total:</b>	Quantity	-	-	-	-	-
<b>Secondary Distribution</b>	Total Obligation Authority	27.356	16.670	13.146	1.230	14.376

**UNCLASSIFIED**

<b>Exhibit P-5, Cost Analysis:</b> PB 2021 Army		<b>Date:</b> February 2020
<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 2035A / 02 / 36	<b>P-1 Line Item Number / Title:</b> 0250BK5284 / CI Automation Architecture (MIP)	<b>Item Number / Title [DODIC]:</b> BK5284 / CI Automation Architecture (MIP)
<b>ID Code</b> (A=Service Ready, B=Not Service Ready) :		<b>MDAP/MAIS Code:</b>
<sup>(†)</sup> indicates the presence of a P-5a		

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<b>Exhibit P-5a, Procurement History and Planning:</b> PB 2021 Army							<b>Date:</b> February 2020					
<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 2035A / 02 / 36			<b>P-1 Line Item Number / Title:</b> 0250BK5284 / CI Automation Architecture (MIP)				<b>Item Number / Title [DODIC]:</b> BK5284 / CI Automation Architecture (MIP)					

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
CERP Servers		2019	Various / various	C / FFP	Various	May 2019	Jun 2019	70	67.429	N		
CERP Servers		2021	Various / various	C / FFP	Various	May 2021	Jun 2021	149	52.886	N		
CERP Storage		2018	Various / various	C / FFP	Various	May 2018	Jun 2018	23	58.300	N		
CERP Storage		2019	Various / various	C / FFP	Various	May 2019	Jun 2019	23	60.652	N		
CERP Storage		2021	Various / various	C / FFP	Various	May 2021	Jun 2021	32	56.906	N		
CERP Routers		2018	Various / various	C / FFP	Various	May 2018	Jun 2018	48	57.290	N		
CERP Routers		2019	Various / various	C / FFP	Various	May 2019	Jun 2019	44	58.568	N		
CERP Routers		2021	Various / various	C / FFP	Various	May 2021	Jun 2021	23	37.696	N		
CERP Switches		2018	Various / various	C / FFP	Various	May 2018	Jun 2018	45	21.930	N		
CERP Switches		2019	Various / various	C / FFP	Various	May 2019	Jun 2019	47	22.298	N		
CERP Switches		2021	Various / various	C / FFP	Various	May 2021	Jun 2021	44	49.455	N		

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

<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 2035A: Other Procurement, Army / BA 02: Communications and Electronics Equipment / BSA 36: Comm - Intelligence Comm	<b>P-1 Line Item Number / Title:</b> 0256K61010 / Defense Military Deception Initiative
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<b>ID Code</b> (A=Service Ready, B=Not Service Ready):	<b>Program Elements for Code B Items:</b> N/A	<b>Other Related Program Elements:</b> N/A
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**Line Item MDAP/MAIS Code:** N/A

Resource Summary	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	To Complete	Total
Procurement Quantity ( <i>Units in Each</i> )	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost ( <i>\$ in Millions</i> )	4.830	2.667	3.704	5.624	-	5.624	5.698	-	-	-	-	22.523
Less PY Advance Procurement ( <i>\$ in Millions</i> )	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) ( <i>\$ in Millions</i> )	4.830	2.667	3.704	5.624	-	5.624	5.698	-	-	-	-	22.523
Plus CY Advance Procurement ( <i>\$ in Millions</i> )	-	-	-	-	-	-	-	-	-	-	-	-
<b>Total Obligation Authority (<i>\$ in Millions</i>)</b>	<b>4.830</b>	<b>2.667</b>	<b>3.704</b>	<b>5.624</b>	<b>-</b>	<b>5.624</b>	<b>5.698</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>22.523</b>

*(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 Defense Military Deception Initiative (DMDI) program integrates procurement prototypes with Component programs for acquisition, sustainment and maintenance.

Secondary Distribution	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025
Army									
Quantity	-	-	-	-	-	-	-	-	-
Total Obligation Authority	2.667	3.704	5.624	-	5.624	5.698	-	-	-
<b>Total:</b>									
<b>Secondary Distribution</b>									
Quantity	-	-	-	-	-	-	-	-	-
Total Obligation Authority	<b>2.667</b>	<b>3.704</b>	<b>5.624</b>	<b>-</b>	<b>5.624</b>	<b>5.698</b>	<b>-</b>	<b>-</b>	<b>-</b>



**UNCLASSIFIED**

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

**Appropriation / Budget Activity / Budget Sub Activity:** 2035A: Other Procurement, Army / BA 02: Communications and Electronics Equipment / BSA 36: Comm - Intelligence Comm **P-1 Line Item Number / Title:** 0256K61010 / Defense Military Deception Initiative

**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 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total
Exhibit Type	Title*	Subexhibits	ID CD	MDAP/MAIS Code	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)
P-40a	K61020 / Defense Military Deception Initiative				- / 4.830	- / 2.667	- / 3.704	- / 5.624	- / -	- / 5.624
<b>P-40</b>	<b>Total Gross/Weapon System Cost</b>				<b>- / 4.830</b>	<b>- / 2.667</b>	<b>- / 3.704</b>	<b>- / 5.624</b>	<b>- / -</b>	<b>- / 5.624</b>

\*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 2021 Base procurement funding in the amount of \$5.624 million will support integrating prototype efforts to support force protection, signature management, and system survivability related to critical mission threads, operational constructs (Multi-Domain Operations) and key weapon systems. This includes responding to impending Army AROC, ASA (L&T) and G8 requirements. Funding includes supporting capability and capacity to meet Army strategic guidance in support of the National Defense Strategy, and other related Army efforts.

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**

<b>Exhibit P-40a, Budget Item Justification For Aggregated Items:</b> PB 2021 Army															<b>Date:</b> February 2020					
<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 2035A / 02 / 36					<b>P-1 Line Item Number / Title:</b> 0256K61010 / Defense Military Deception Initiative										<b>Aggregated Items Title:</b> K61020 / Defense Military Deception Initiative					
Item Number / Title [DODIC]	ID CD	MDAP/MAIS Code	Prior Years			FY 2019			FY 2020			FY 2021 Base			FY 2021 OCO			FY 2021 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)
<b>Defense Military Deception Initiative</b>																				
K61020 / Defense Military Deception Initiative			-	-	4.830	-	-	2.667	-	-	3.704	-	-	5.624	-	-	-	-	-	5.624
<i>Secondary Distribution</i>																				
Army				-	-		-	2.667		-	3.704		-	5.624		-	-		-	5.624
<b>Subtotal: Defense Military Deception Initiative</b>			-	-	<b>4.830</b>	-	-	<b>2.667</b>	-	-	<b>3.704</b>	-	-	<b>5.624</b>	-	-	-	-	-	<b>5.624</b>
<b>Total</b>			-	-	<b>4.830</b>	-	-	<b>2.667</b>	-	-	<b>3.704</b>	-	-	<b>5.624</b>	-	-	-	-	-	<b>5.624</b>

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

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

<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 2035A: Other Procurement, Army / BA 02: Communications and Electronics Equipment / BSA 64: Information Security	<b>P-1 Line Item Number / Title:</b> 0121BA1300 / FAMILY OF BIOMETRICS
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<b>ID Code</b> (A=Service Ready, B=Not Service Ready):	<b>Program Elements for Code B Items:</b> N/A	<b>Other Related Program Elements:</b> 0607665A
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**Line Item MDAP/MAIS Code:** N/A

Resource Summary	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	To Complete	Total
Procurement Quantity ( <i>Units in Each</i> )	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost ( <i>\$ in Millions</i> )	110.504	8.319	1.000	-	-	-	-	-	-	-	-	119.823
Less PY Advance Procurement ( <i>\$ in Millions</i> )	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) ( <i>\$ in Millions</i> )	110.504	8.319	1.000	-	-	-	-	-	-	-	-	119.823
Plus CY Advance Procurement ( <i>\$ in Millions</i> )	-	-	-	-	-	-	-	-	-	-	-	-
<b>Total Obligation Authority</b> ( <i>\$ in Millions</i> )	<b>110.504</b>	<b>8.319</b>	<b>1.000</b>	-	-	-	-	-	-	-	-	<b>119.823</b>

*(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:**

Biometrics Enabling Capability 0 (BEC 0), aka DoD Automated Biometrics Identification System (DoD ABIS), is an Army information technology system supporting identity superiority by providing the critical core capability for Warfighters to identify known or suspected threat actors in Multi Domain Operations (MDO) to include peer adversaries, terrorists and third country nationals. BEC 0 is an Army Program of Record and DoD's only authoritative biometric repository, providing 24/7 operational support for the Warfighter and interagency partners to decide and act in near-real time with timely identification and identity verification of known or suspected threat actors across the full range of military operations. DoD ABIS enables actionable intelligence supporting offensive operations and preventing espionage, sabotage, terrorist operations and other coercive actions against US forces and partner nations. DoD ABIS enables the Army, all other DOD components, Interagency and International Partners to effectively impede adversary's ability to conceal their identity and intentions. DoD ABIS supports all three objectives of the National Defense Strategy to increase lethality, enhance International Cooperation, and improve business practices.

Secondary Distribution	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025
Army	Quantity	-	-	-	-	-	-	-	-
	Total Obligation Authority	8.319	1.000	-	-	-	-	-	-
<b>Total: Secondary Distribution</b>	<b>Quantity</b>	-	-	-	-	-	-	-	-
	<b>Total Obligation Authority</b>	<b>8.319</b>	<b>1.000</b>	-	-	-	-	-	-

**Justification:**

Program has no FY 2021 OPA funding requirement. BEC 0 is in sustainment.

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 2021 Army **Date:** February 2020

<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 2035A: Other Procurement, Army / BA 02: Communications and Electronics Equipment / BSA 64: Information Security	<b>P-1 Line Item Number / Title:</b> 0122TA0600 / Information System Security Program-ISSP
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<b>ID Code</b> (A=Service Ready, B=Not Service Ready): A	<b>Program Elements for Code B Items:</b> N/A	<b>Other Related Program Elements:</b> 0303140A
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**Line Item MDAP/MAIS Code:** N/A

Resource Summary	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	To Complete	Total
Procurement Quantity ( <i>Units in Each</i> )	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost ( <i>\$ in Millions</i> )	1,549.578	2.000	3.600	4.596	-	4.596	4.596	2.797	2.797	3.007	Continuing	Continuing
Less PY Advance Procurement ( <i>\$ in Millions</i> )	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) ( <i>\$ in Millions</i> )	1,549.578	2.000	3.600	4.596	-	4.596	4.596	2.797	2.797	3.007	Continuing	Continuing
Plus CY Advance Procurement ( <i>\$ in Millions</i> )	-	-	-	-	-	-	-	-	-	-	-	-
<b>Total Obligation Authority (<i>\$ in Millions</i>)</b>	<b>1,549.578</b>	<b>2.000</b>	<b>3.600</b>	<b>4.596</b>	<b>-</b>	<b>4.596</b>	<b>4.596</b>	<b>2.797</b>	<b>2.797</b>	<b>3.007</b>	<b>Continuing</b>	<b>Continuing</b>

*(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 Information Systems Security Program funding line supports the Army's Network Modernization Strategy

The Information Systems Security Program (ISSP) supports the Army's Communication Security (COMSEC) modernization initiative to include the Army Key Management Infrastructure (AKMI) supporting the Total Force. The ISSP collects COMSEC requirements, procures and fields solutions, key management capabilities and Information Assurance (IA) / Cyber tools to secure the Department of Defense Information Network (DoDIN) against evolving cyber threats.

The ISSP supports the identification and allocation of new and emerging COMSEC capabilities required to protect Army's architectures and to replace current and legacy cryptographic systems with technologically advanced (network centric/DoDIN compliant) devices. AKMI is a unified, scalable, interoperable, and trusted infrastructure providing net-centric key management services to systems that rely on cryptography, serving Department of Defense (DoD) and the broader cryptographic community.

Both the ISSP and AKMI programs ensure Army keeps pace with the Chairman of the Joint Chiefs of Staff and Joint Requirements Oversight Council directed cryptographic modernization, advanced key management and network centric performance capability mandates.

Secondary Distribution	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025
Army									
Quantity	-	-	-	-	-	-	-	-	-
Total Obligation Authority	2.000	3.600	4.596	-	4.596	4.596	2.797	2.797	3.007
<b>Total:</b>									
<b>Secondary Distribution</b>									
Quantity	-	-	-	-	-	-	-	-	-
Total Obligation Authority	<b>2.000</b>	<b>3.600</b>	<b>4.596</b>	<b>-</b>	<b>4.596</b>	<b>4.596</b>	<b>2.797</b>	<b>2.797</b>	<b>3.007</b>

**Justification:**

Base procurement dollars in the amount of \$4.596 million supports automated capability to conduct COMSEC modernization oversight, perform requirement and Army Command Plan validation. Responds to operational mission needs, and permits prioritization of COMSEC requirements. Additionally, provides for COMSEC acquisition functions, delivers cryptographic key management modernization enabling Army to equip, train and support the force with critical cryptographic solutions and services during peacetime, wartime, and contingency operations.

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<b>Exhibit P-40, Budget Line Item Justification:</b> PB 2021 Army		<b>Date:</b> February 2020
<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 2035A: Other Procurement, Army / BA 02: Communications and Electronics Equipment / BSA 64: Information Security		<b>P-1 Line Item Number / Title:</b> 0122TA0600 / Information System Security Program-ISSP
<b>ID Code</b> (A=Service Ready, B=Not Service Ready): A	<b>Program Elements for Code B Items:</b> N/A	<b>Other Related Program Elements:</b> 0303140A
<b>Line Item MDAP/MAIS Code:</b> N/A		

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

<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 2035A: Other Procurement, Army / BA 02: Communications and Electronics Equipment / BSA 64: Information Security	<b>P-1 Line Item Number / Title:</b> 0125B96000 / Communications Security (COMSEC)
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<b>ID Code</b> (A=Service Ready, B=Not Service Ready): A	<b>Program Elements for Code B Items:</b> N/A	<b>Other Related Program Elements:</b> 0303140A
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**Line Item MDAP/MAIS Code:** N/A

Resource Summary	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	To Complete	Total
Procurement Quantity ( <i>Units in Each</i> )	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost ( <i>\$ in Millions</i> )	369.031	65.580	147.097	159.272	0.128	159.400	132.034	146.281	148.652	162.470	-	1,330.545
Less PY Advance Procurement ( <i>\$ in Millions</i> )	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) ( <i>\$ in Millions</i> )	369.031	65.580	147.097	159.272	0.128	159.400	132.034	146.281	148.652	162.470	-	1,330.545
Plus CY Advance Procurement ( <i>\$ in Millions</i> )	-	-	-	-	-	-	-	-	-	-	-	-
<b>Total Obligation Authority (<i>\$ in Millions</i>)</b>	<b>369.031</b>	<b>65.580</b>	<b>147.097</b>	<b>159.272</b>	<b>0.128</b>	<b>159.400</b>	<b>132.034</b>	<b>146.281</b>	<b>148.652</b>	<b>162.470</b>	-	<b>1,330.545</b>

*(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> )	20.438	5.338	8.939	11.263	-	11.272	5.429	5.739	6.729	7.413	-	8.598

**Description:**

This funding line supports the Army Network Modernization Strategy LOE 1, Unified Network. Efforts are aligned to support the Network-Cross Functional Team capability set approach to achieve the network modernization strategy.

The Communication Security (COMSEC) program consists of two sub-programs: Cryptographic Systems (CS), Army Key Management Infrastructure (AKMI).

Project B96002: Since its inception, the Cryptographic Systems (CS) Program procures and fields multiple products at multiple price points to provide cryptographic equipment that receive key through fill devices and allow for secure communication through Army devices such as radios and satellite terminals. CS provides solutions to secure the entire Army's Tactical and Enterprise classified networks, to provide intuitive / less complex and more cost efficient sustained COMSEC equipment across all platforms. New and emerging architectures, cease key dates, emerging threats, and Department of Defense (DoD)/Army policy are driving the need to replace currently fielded legacy systems with technologically advanced (network centric/Global Information Grid (GIG) compliant) devices that incorporate Chairman of the Joint Chiefs of Staff (CJCS) and Joint Requirements Oversight Council (JROC) directed cryptographic standardization, advanced key management performance capabilities. This program enables the Army to equip the force with more common and interoperable joint and coalition critical cryptographic solutions and services during peacetime, wartime, and contingency operations. Without this capability, secure communications of classified data are not possible. The program consists of three product families: In-Line Network Encryptors (INE), Link/Trunk Encryption Family (LEF), and Secure Voice (SV). The expanding of new networks and the growth in data needs (as described in LOE 1. Unified Network) has mandated the requirement for more capable and faster encryptors which are more expensive. Some INE and SV procurement quantities for FY22-FY25 cannot be included within P-Forms due to the absence of a SLIN to populate the AE2S Database. Quantities to be updated with next submission.

Project B96004: The Army Key Management Infrastructure (AKMI) is the Army's implementation of the National Security Agency (NSA) KMI ACAT IAM program, automating the functions of COMSEC electronic key management, control, planning, and distribution. AKMI supports the Army's ability to communicate and distribute Cryptographic data on the Army's tactical and strategic networks by limiting adversarial access to and reducing the vulnerability of, Army Command, Control, Communications, Computers, Cyber, Intelligence (C5I) systems. AKMI devices receive, store, manage, and transfer electronic key through the network to be loaded into communication devices such as radios and satellites to secure the network. Without this technology Warfighters are required to manually receive their cryptographic products by traveling to COMSEC account locations (which may not be co-located) and manually fill their devices. The AKMI System of Systems (SoS) includes the Management Client (MGC) Nodes, Automated Communications Engineering Software (ACES), Simple Key Loader (SKL), and Next Generation Load Device (NGLD) Family. NGLD-M procurement quantities for FY23 - FY25 cannot be included within P-Forms due to the absence of a SLIN to populate the AE2S Database. Quantities to be updated with next submission.

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<b>Exhibit P-40, Budget Line Item Justification:</b> PB 2021 Army		<b>Date:</b> February 2020
<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 2035A: Other Procurement, Army / BA 02: Communications and Electronics Equipment / BSA 64: Information Security		<b>P-1 Line Item Number / Title:</b> 0125B96000 / Communications Security (COMSEC)
<b>ID Code</b> (A=Service Ready, B=Not Service Ready): A	<b>Program Elements for Code B Items:</b> N/A	<b>Other Related Program Elements:</b> 0303140A
<b>Line Item MDAP/MAIS Code:</b> N/A		
<p>Project B96006: The Embedded Cryptographic Modernization Initiative (ECMI) procures/retrofits and fields COMSEC embedded within Army radios to ensure communications remain secure by operating with modern cryptographic algorithms and keys, in compliance with Cease Key dates documented in the Chairman of the Joint Chiefs of Staff instruction (CJCSI) 6510. ECMI will provide Warfighters with continued secure communications (i.e., encrypted data and voice), by modernizing Army tactical radios allowing them to utilize cryptographic capabilities by implementing modern algorithms and keys. Failure to comply will result in vulnerabilities to classified data transmissions, or an inability to communicate at classified levels. In FY2020 and out, no funding is required for this effort. ECMI Program was cancelled in FY2018. FY2019 funding has been returned.</p> <p>The Approved Acquisition Objective (AAO) for AKMI is 528 MGCs and 144,000 for AKMS (Fill Devices); Crypto Systems is 271,945 (Encryption Devices).</p>		

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

**Appropriation / Budget Activity / Budget Sub Activity:**  
2035A: Other Procurement, Army / BA 02: Communications and Electronics  
Equipment / BSA 64: Information Security

**P-1 Line Item Number / Title:**  
0125B96000 / Communications Security (COMSEC)

**ID Code** (A=Service Ready, B=Not Service Ready): A **Program Elements for Code B Items:** N/A **Other Related Program Elements:** 0303140A

**Line Item MDAP/MAIS Code:** N/A

Exhibits Schedule					Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total
Exhibit Type	Title*	Subexhibits	ID CD	MDAP/MAIS Code	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)
P-5	B96002 / CRYPTOGRAPHIC SYSTEMS (CRYPTO SYS)	P-5a	A		- / 153.913	- / 26.350	- / 66.242	- / 81.028	- / 0.128	- / 81.156
P-5	B96004 / KEY MANAGEMENT INFRASTRUCTURE	P-5a, P-21			- / 212.041	- / 35.710	- / 80.855	- / 78.244	- / -	- / 78.244
P-5	B96006 / Embedded Cryptographic Modernization				- / 3.077	- / 3.520	- / -	- / -	- / -	- / -
<b>P-40</b>	<b>Total Gross/Weapon System Cost</b>				<b>- / 369.031</b>	<b>- / 65.580</b>	<b>- / 147.097</b>	<b>- / 159.272</b>	<b>- / 0.128</b>	<b>- / 159.400</b>

\*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:**  
In FY 2021, the Communication Security (COMSEC) funding of \$159.400 million supports the below sub-programs.

Cryptographic Systems (CS): FY 2021 base procurement dollars in the amount of \$81.028 million and OCO dollars in the amount of \$.128 million will be utilized to procure and field modern In-Line Network Encryption (INE) and Secure Voice (SV) devices at multiple price points to provide cryptographic equipment that receive key through fill devices and allow for secure communication through Army devices such as radios and satellite terminals. In-Line Network Encryptors Family are systems that provide secure data and voice communications over Internet Protocol (IP) networks. The Secure Voice Family are systems that provide secure voice communication capability through the use of security tokens and/or public key encryption.

Army Key Management Infrastructure (AKMI): In FY 2021, \$1.602 million in Reimbursable Manpower for this line has been realigned from Reimbursable Civilian Funding to Direct Operations and Maintenance. Program support costs have been accurately updated to reflect the realignments. FY 2021 base procurement dollars in the amount of \$78.244 million supports the procurement, fielding, depot support and New Equipment Training (NET) for Key Management Infrastructure (KMI) Management Client Node (MGC), Simple Key Loader (SKL), and Automated Communication Engineering Software (ACES) enabling the Army to manage, control, plan, and distribute electronic key for the ~1.5 million End Cryptographic Units (ECU)s necessary to communicate and distribute data on the Army's tactical through strategic networks. The end state for the Army is to leverage AKMI capabilities (Over the Network Keying (OTNK), Mission Plan/Mission Support System (MP/MSS), Delivery Only Client (DOC), Client Host Only (CHO) to increase automation, reduce soldier oversight, manage, and deliver key products to the tactical edge up through strategic ECU's. The objective AKMI capabilities will be found in all of the products across the AKMI product line. All unit costs are based on verified contractually negotiated pricing based on quantity along with inflationary and bill of material increases. Increases in System Engineering will support integration for Key Management Infrastructure (KMI) Increment 3 services.

Funding enables modifications in the AKMI SoS to enable KMI standards compliance and to support legacy and emerging ECUs ability to communicate within the KMI architecture. The current SKL fleet will require support through at least 2030. Modernization of fill devices and emerging radio planning and configuration requirements are supported through this funding line. It also provides associated government and contractor engineering support, Post Production Deployment Software Support (PPDSS), system technical and software support of the AKMI SoS components. The PPDSS contract supports AKMI SoS components, operational support for deployed and sustaining forces, technical engineering & support, associated government and contractor engineering support, and the development and updating of Web based training for AKMI components to augment in-class delta and sustainment training. The PPDSS effort is an OPA requirement because of the new capabilities that are required to be implemented into the Key Management infrastructure (KMI) products based on the evolution of the KMI and to address parts obsolescence. The changes in capability do not allow the operational support to be transitioned to sustainment. The PPDSS contract for all key management products has been optimized and requirements continuously assessed to ensure that it is fiscally sound.

Embedded Cryptographic Modernization Initiative (ECMI): In FY2020 and out, no funding is required for this effort. The Army canceled the ECMI program in FY2018.



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<b>Exhibit P-5, Cost Analysis: PB 2021 Army</b>		<b>Date:</b> February 2020
<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 2035A / 02 / 64	<b>P-1 Line Item Number / Title:</b> 0125B96000 / Communications Security (COMSEC)	<b>Item Number / Title [DODIC]:</b> B96002 / CRYPTOGRAPHIC SYSTEMS (CRYPTO SYS)

<b>ID Code</b> (A=Service Ready, B=Not Service Ready) : A	<b>MDAP/MAIS Code:</b>
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<b>Resource Summary</b>	<b>Prior Years</b>	<b>FY 2019</b>	<b>FY 2020</b>	<b>FY 2021 Base</b>	<b>FY 2021 OCO</b>	<b>FY 2021 Total</b>
Procurement Quantity (Units in Each)	-	-	-	-	-	-
Gross/Weapon System Cost (\$ in Millions)	153.913	26.350	66.242	81.028	0.128	81.156
Less PY Advance Procurement (\$ in Millions)	-	-	-	-	-	-
Net Procurement (P-1) (\$ in Millions)	153.913	26.350	66.242	81.028	0.128	81.156
Plus CY Advance Procurement (\$ in Millions)	-	-	-	-	-	-
<b>Total Obligation Authority (\$ in Millions)</b>	<b>153.913</b>	<b>26.350</b>	<b>66.242</b>	<b>81.028</b>	<b>0.128</b>	<b>81.156</b>

*(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)	29.956	19.446	10.938	14.482	-	14.505

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

<b>Cost Elements</b>	<b>Prior Years</b>			<b>FY 2019</b>			<b>FY 2020</b>			<b>FY 2021 Base</b>			<b>FY 2021 OCO</b>			<b>FY 2021 Total</b>		
	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)
<b>Hardware Cost</b>																		
<b>Recurring Cost</b>																		
INE-FUTURE DEVICES <sup>(†)</sup>	-	-	-	-	-	-	1.296	1,893	2.454	3.051	3,850	11.746	-	-	-	3.051	3,850	11.746
SV-FUTURE DEVICES	-	-	-	0.600	200	0.120	-	-	-	-	-	-	-	-	-	-	-	-
KG-175D (INE) <sup>(†)</sup>	8.980	4,625	41.533	9.900	910	9.009	9.900	1,000	9.900	9.900	250	2.475	-	-	-	9.900	250	2.475
KG-175GM (INE)	13.250	320	4.240	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
KG-175GS (INE) <sup>(†)</sup>	15.843	898	14.227	13.951	288	4.018	18.950	1,100	20.845	18.950	500	9.475	-	-	-	18.950	500	9.475
KG-175F (INE) <sup>(†)</sup>	-	-	-	-	-	-	17.950	300	5.385	17.950	600	10.770	-	-	-	17.950	600	10.770
KG-175X (INE) <sup>(†)</sup>	61.451	142	8.726	60.944	54	3.291	66.865	74	4.948	66.871	210	14.043	-	-	-	66.871	210	14.043
KG-250X (INE) <sup>(†)</sup>	8.900	1,079	9.603	-	-	-	-	-	-	9.900	590	5.841	-	-	-	9.900	590	5.841
KG-250X FC (INE)	8.669	2,060	17.858	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
KG-250XS (INE) <sup>(†)</sup>	7.277	1,350	9.824	-	-	-	7.950	298	2.369	7.951	650	5.168	-	-	-	7.951	650	5.168
KG-255X (INE) <sup>(†)</sup>	-	-	-	13.971	34	0.475	18.947	170	3.221	18.949	547	10.365	-	-	-	18.949	547	10.365
KG-350 (INE) <sup>(†)</sup>	-	-	-	-	-	-	-	-	-	50.000	40	2.000	-	-	-	50.000	40	2.000
vIPer (SV) <sup>(†)</sup>	2.995	800	2.396	2.794	321	0.897	2.994	900	2.695	2.995	1,000	2.995	-	-	-	2.995	1,000	2.995
KY-58M (VACM)	7.800	670	5.226	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
KY-99M (VACM)	6.838	321	2.195	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

**UNCLASSIFIED**

<b>Exhibit P-5, Cost Analysis: PB 2021 Army</b>		<b>Date:</b> February 2020
<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 2035A / 02 / 64	<b>P-1 Line Item Number / Title:</b> 0125B96000 / Communications Security (COMSEC)	<b>Item Number / Title [DODIC]:</b> B96002 / CRYPTOGRAPHIC SYSTEMS (CRYPTO SYS)

<b>ID Code</b> (A=Service Ready, B=Not Service Ready) : A	<b>MDAP/MAIS Code:</b>
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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 2019			FY 2020			FY 2021 Base			FY 2021 OCO			FY 2021 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)
KY-100M (VACM)	7.427	344	2.555	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
KYV-5M (VACM)	11.129	31	0.345	13.720	25	0.343	-	-	-	-	-	-	-	-	-	-	-	-
<i>Subtotal: Recurring Cost</i>	-	-	118.728	-	-	18.153	-	-	51.817	-	-	74.878	-	-	-	-	-	74.878
<i>Subtotal: Hardware Cost</i>	-	-	118.728	-	-	18.153	-	-	51.817	-	-	74.878	-	-	-	-	-	74.878
Package Fielding Cost																		
Recurring Cost																		
ARMY-WIDE CRYPTO NETWORK STANDARDIZATION	-	-	5.825	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PRODUCT SUPPORT/FIELDING	-	-	10.440	-	-	1.640	-	-	5.463	-	-	1.086	-	-	0.128	-	-	1.214
<i>Subtotal: Recurring Cost</i>	-	-	16.265	-	-	1.640	-	-	5.463	-	-	1.086	-	-	0.128	-	-	1.214
<i>Subtotal: Package Fielding Cost</i>	-	-	16.265	-	-	1.640	-	-	5.463	-	-	1.086	-	-	0.128	-	-	1.214
Support - Program Management Cost																		
Contractor Management	-	-	5.149	-	-	4.917	-	-	2.694	-	-	2.830	-	-	-	-	-	2.830
<i>Subtotal: Support - Program Management Cost</i>	-	-	5.149	-	-	4.917	-	-	2.694	-	-	2.830	-	-	-	-	-	2.830
Support - System Engineering Cost																		
System Engineering	-	-	7.619	-	-	0.615	-	-	1.564	-	-	1.209	-	-	-	-	-	1.209
<i>Subtotal: Support - System Engineering Cost</i>	-	-	7.619	-	-	0.615	-	-	1.564	-	-	1.209	-	-	-	-	-	1.209
Support - Training Cost																		
Equipment	-	-	6.152	-	-	1.025	-	-	4.705	-	-	1.025	-	-	-	-	-	1.025
<i>Subtotal: Support - Training Cost</i>	-	-	6.152	-	-	1.025	-	-	4.705	-	-	1.025	-	-	-	-	-	1.025
<b>Gross/Weapon System Cost</b>	<b>29.956</b>	<b>-</b>	<b>153.913</b>	<b>19.446</b>	<b>-</b>	<b>26.350</b>	<b>10.938</b>	<b>-</b>	<b>66.242</b>	<b>14.482</b>	<b>-</b>	<b>81.028</b>	<b>-</b>	<b>-</b>	<b>0.128</b>	<b>14.505</b>	<b>-</b>	<b>81.156</b>

**Remarks:**  
 1. There are no unit price increases due to Firm Fixed Price contracts, just quantity mix increases to reflect requirements changes over the time periods.  
 (Table below)

	2018 AUPC	2019 AUPC	2020 AUPC	2021 AUPC	2022 AUPC	2023 AUPC	2024 AUPC	2025 AUPC	2026 AUPC	AUPC Growth
INE										
KG175D	\$9,900	\$9,900	\$9,900	N/A	N/A	N/A	N/A	N/A	N/A	\$0
KG175GS	\$18,950	\$18,950	\$18,950	\$18,950	\$18,950	\$18,950	\$18,950	\$18,950	\$18,950	\$0
KG175F	N/A	N/A	\$20,950	\$20,950	\$20,950	\$20,950	\$20,950	\$20,950	\$20,950	\$0

**UNCLASSIFIED**

<b>Exhibit P-5, Cost Analysis: PB 2021 Army</b>											<b>Date:</b> February 2020	
<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 2035A / 02 / 64					<b>P-1 Line Item Number / Title:</b> 0125B96000 / Communications Security (COMSEC)					<b>Item Number / Title [DODIC]:</b> B96002 / CRYPTOGRAPHIC SYSTEMS (CRYPTO SYS)		
<b>ID Code</b> (A=Service Ready, B=Not Service Ready) : A							<b>MDAP/MAIS Code:</b>					
KG175X	\$65,950	\$65,950	\$65,950	\$65,950	\$65,950	\$65,950	\$65,950	\$65,950	\$65,950	\$65,950	\$0	
KG250X	\$8,900	\$8,900	\$8,900	\$8,900	\$8,900	\$8,900	\$8,900	\$8,900	\$8,900	\$8,900	\$0	
KG255X	N/A	\$18,950	\$18,950	\$18,950	\$18,950	\$18,950	\$18,950	\$18,950	\$18,950	\$18,950	\$0	
KG250XS	\$7,800	\$7,800	\$7,800	\$7,800	\$7,800	\$7,800	\$7,800	\$7,800	\$7,800	\$7,800	\$0	
KG 350	N/A	N/A	\$20,000	\$20,000	\$20,000	\$20,000	\$20,000	\$20,000	\$20,000	\$20,000	\$0	
SV												
vIPer	\$2,995	\$2,995	\$2,995	\$2,995	\$2,995	\$2,995	\$2,995	\$2,995	\$2,995	\$2,995	\$0	
(t) indicates the presence of a P-5a												

**UNCLASSIFIED**

<b>Exhibit P-5a, Procurement History and Planning: PB 2021 Army</b>							<b>Date:</b> February 2020					
<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 2035A / 02 / 64			<b>P-1 Line Item Number / Title:</b> 0125B96000 / Communications Security (COMSEC)				<b>Item Number / Title [DODIC]:</b> B96002 / CRYPTOGRAPHIC SYSTEMS (CRYPTO SYS)					

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
INE-FUTURE DEVICES		2021	NSA / FORT MEADE	C / IDIQ	NSA, Fort Meade, MD	Jan 2021	Jan 2022	3,850	3.051	N		
KG-175D (INE)		2019	NSA / FORT MEADE	C / IDIQ	NSA, Fort Meade, MD	Jan 2019	Jan 2020	910	9.900	N		
KG-175D (INE)		2020	NSA / FORT MEADE	C / IDIQ	NSA, Fort Meade, MD	Jan 2020	Jan 2021	1,000	9.900	N		
KG-175D (INE)		2021	NSA / FORT MEADE	C / IDIQ	NSA, Fort Meade, MD	Jan 2021	Jan 2022	250	9.900	N		
KG-175GS (INE)		2019	NSA / FORT MEADE	C / IDIQ	NSA, Fort Meade, MD	Jan 2019	Jan 2020	288	13.951	N		
KG-175GS (INE)		2020	NSA / FORT MEADE	C / IDIQ	NSA, Fort Meade, MD	Jan 2020	Jan 2021	1,100	18.950	N		
KG-175GS (INE)		2021	NSA / FORT MEADE	C / IDDQ	NSA, Fort Meade, MD	Jan 2021	Jan 2022	500	18.950	N		
KG-175F (INE)		2021	NSA / FORT MEADE	C / IDIQ	NSA, Fort Meade, MD	Jan 2021	Jan 2022	600	17.950	N		
KG-175X (INE)		2019	NSA / FORT MEADE	C / IDIQ	NSA, Fort Meade, MD	Jan 2019	Jan 2020	54	60.944	N		
KG-175X (INE)		2020	NSA / FORT MEADE	C / IDIQ	NSA, Fort Meade, MD	Jan 2020	Jan 2021	74	66.865	N		
KG-175X (INE)		2021	NSA / FORT MEADE	C / IDIQ	NSA, Fort Meade, MD	Jan 2021	Jan 2022	210	66.871	N		
KG-250X (INE)		2021	NSA / FORT MEADE	C / IDIQ	NSA, Fort Meade, MD	Jan 2021	Jan 2022	590	9.900	N		
KG-250XS (INE)		2020	NSA / FORT MEADE	C / IDIQ	NSA, Fort Meade, MD	Jan 2020	Jan 2021	298	7.950	N		
KG-250XS (INE)		2021	NSA / FORT MEADE	C / IDIQ	NSA, Fort Meade, MD	Jan 2021	Jan 2022	650	7.951	N		
KG-255X (INE)		2019	NSA / FORT MEADE	C / IDIQ	NSA, Fort Meade, MD	Jan 2019	Jan 2020	34	13.971	N		
KG-255X (INE)		2020	NSA / FORT MEADE	C / IDIQ	NSA, Fort Meade, MD	Jan 2020	Jan 2021	170	18.947	N		
KG-255X (INE)		2021	NSA / FORT MEADE	C / IDIQ	NSA, Fort Meade, MD	Jan 2021	Jan 2022	547	18.949	N		
KG-350 (INE)		2021	NSA / FORT MEADE	C / IDIQ	NSA, Fort Meade, MD	Jan 2021	Jan 2022	40	50.000	N		
viPer (SV)		2019	NSA / FORT MEADE	C / IDIQ	NSA, Fort Meade, MD	Jan 2019	Jan 2020	321	2.794	N		
viPer (SV)		2020	NSA / FORT MEADE	C / IDIQ	NSA, Fort Meade, MD	Jan 2020	Jan 2021	900	2.994	N		
viPer (SV)		2021	NSA / FORT MEADE	C / IDIQ	NSA, Fort Meade, MD	Jan 2021	Jan 2022	1,000	2.995	N		

**Remarks:**  
The items procured are COTS or GOTS.

The unit cost in FY19 is different than unit cost in FY 21 due to the trade in program with vendors:  
 1. KG 175GS: PL NET E trade in 288 old INE devices at \$5k/devices, reduce price per KG 175GS from \$18.950k to \$13.950k. Saving \$1440k.  
 2. KG 175X: PL NET E trade in 54 old INE devices at \$5k/devices, reduce price per KG 175X from \$65.950k to \$60.950k. Saving \$270k.  
 3. KG 255X: PL NET E trade in 34 old INE devices at \$5k/devices, reduce price per KG 255X from \$18.950 to \$13.950. Saving \$170k.  
 4. viPer: PL NET E trade in 321 old SV devices at \$.2k/devices, reduce price per viPer from \$2.995 to \$2.750. Saving \$64.2k.  
 Total saving by trade-in program in FY19 is \$1.944M.

**UNCLASSIFIED**

<b>Exhibit P-5, Cost Analysis: PB 2021 Army</b>		<b>Date:</b> February 2020
<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 2035A / 02 / 64	<b>P-1 Line Item Number / Title:</b> 0125B96000 / Communications Security (COMSEC)	<b>Item Number / Title [DODIC]:</b> B96004 / KEY MANAGEMENT INFRASTRUCTURE

<b>ID Code</b> (A=Service Ready, B=Not Service Ready) :	<b>MDAP/MAIS Code:</b>
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Resource Summary	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total
Procurement Quantity (Units in Each)	-	-	-	-	-	-
Gross/Weapon System Cost (\$ in Millions)	212.041	35.710	80.855	78.244	-	78.244
Less PY Advance Procurement (\$ in Millions)	-	-	-	-	-	-
Net Procurement (P-1) (\$ in Millions)	212.041	35.710	80.855	78.244	-	78.244
Plus CY Advance Procurement (\$ in Millions)	-	-	-	-	-	-
<b>Total Obligation Authority (\$ in Millions)</b>	<b>212.041</b>	<b>35.710</b>	<b>80.855</b>	<b>78.244</b>	<b>-</b>	<b>78.244</b>

*(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)	16.805	3.375	7.775	9.156	-	9.156

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

Cost Elements	Prior Years			FY 2019			FY 2020			FY 2021 Base			FY 2021 OCO			FY 2021 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)
<b>Hardware Cost</b>																		
<b>Recurring Cost</b>																		
MGC Procurement <sup>(†)</sup>	18.314	379	6.941	23.833	66	1.573	18.131	175	3.173	15.460	150	2.319	-	-	-	15.460	150	2.319
ACES Procurement	2.641	1,348	3.560	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
SKLs Procurement <sup>(†)</sup>	2.882	25,400	73.203	3.740	4,264	15.947	3.825	12,125	46.378	4.144	11,934	49.456	-	-	-	4.144	11,934	49.456
NGLD S	2.060	5,000	10.300	2.060	151	0.311	2.442	1,537	3.753	-	-	-	-	-	-	-	-	-
Engineering Recurring	-	-	41.091	-	-	3.100	-	-	4.170	-	-	4.370	-	-	-	-	-	4.370
<i>Subtotal: Recurring Cost</i>	-	-	135.095	-	-	20.931	-	-	57.474	-	-	56.145	-	-	-	-	-	56.145
<i>Subtotal: Hardware Cost</i>	-	-	135.095	-	-	20.931	-	-	57.474	-	-	56.145	-	-	-	-	-	56.145
<b>Software Cost</b>																		
<b>Recurring Cost</b>																		
Post Deployment Software Support/NET	-	-	29.513	-	-	6.800	-	-	10.282	-	-	9.118	-	-	-	-	-	9.118
Post Production Software Support	-	-	-	-	-	-	-	-	-	-	-	0.921	-	-	-	-	-	0.921
<i>Subtotal: Recurring Cost</i>	-	-	29.513	-	-	6.800	-	-	10.282	-	-	10.039	-	-	-	-	-	10.039
<i>Subtotal: Software Cost</i>	-	-	29.513	-	-	6.800	-	-	10.282	-	-	10.039	-	-	-	-	-	10.039
<b>Package Fielding Cost</b>																		
<b>Recurring Cost</b>																		
Fielding	-	-	5.515	-	-	0.980	-	-	1.009	-	-	1.340	-	-	-	-	-	1.340
<i>Subtotal: Recurring Cost</i>	-	-	5.515	-	-	0.980	-	-	1.009	-	-	1.340	-	-	-	-	-	1.340

**UNCLASSIFIED**

<b>Exhibit P-5, Cost Analysis: PB 2021 Army</b>		<b>Date:</b> February 2020
<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 2035A / 02 / 64	<b>P-1 Line Item Number / Title:</b> 0125B96000 / Communications Security (COMSEC)	<b>Item Number / Title [DODIC]:</b> B96004 / KEY MANAGEMENT INFRASTRUCTURE

<b>ID Code</b> (A=Service Ready, B=Not Service Ready) :	<b>MDAP/MAIS Code:</b>
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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 2019			FY 2020			FY 2021 Base			FY 2021 OCO			FY 2021 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: Package Fielding Cost</i>	-	-	5.515	-	-	0.980	-	-	1.009	-	-	1.340	-	-	-	-	-	1.340
<b>Logistics Cost</b>																		
<b>Recurring Cost</b>																		
Depot Support	-	-	4.578	-	-	1.300	-	-	1.930	-	-	2.100	-	-	-	-	-	2.100
<i>Subtotal: Recurring Cost</i>	-	-	4.578	-	-	1.300	-	-	1.930	-	-	2.100	-	-	-	-	-	2.100
<i>Subtotal: Logistics Cost</i>	-	-	4.578	-	-	1.300	-	-	1.930	-	-	2.100	-	-	-	-	-	2.100
<b>Support - Program Management Cost</b>																		
Contractor Management	-	-	14.804	-	-	2.122	-	-	3.352	-	-	2.202	-	-	-	-	-	2.202
<i>Subtotal: Support - Program Management Cost</i>	-	-	14.804	-	-	2.122	-	-	3.352	-	-	2.202	-	-	-	-	-	2.202
<b>Support - System Engineering Cost</b>																		
System Engineering	-	-	18.150	-	-	3.125	-	-	6.302	-	-	5.450	-	-	-	-	-	5.450
<i>Subtotal: Support - System Engineering Cost</i>	-	-	18.150	-	-	3.125	-	-	6.302	-	-	5.450	-	-	-	-	-	5.450
<b>Support - System Test and Evaluation Cost</b>																		
Test and Evaluation Support	-	-	0.736	-	-	0.170	-	-	0.185	-	-	0.490	-	-	-	-	-	0.490
<i>Subtotal: Support - System Test and Evaluation Cost</i>	-	-	0.736	-	-	0.170	-	-	0.185	-	-	0.490	-	-	-	-	-	0.490
<b>Support - Training Cost</b>																		
Services	-	-	3.650	-	-	0.281	-	-	0.321	-	-	0.478	-	-	-	-	-	0.478
<i>Subtotal: Support - Training Cost</i>	-	-	3.650	-	-	0.281	-	-	0.321	-	-	0.478	-	-	-	-	-	0.478
<b>Gross/Weapon System Cost</b>	<b>16.805</b>	-	<b>212.041</b>	<b>3.375</b>	-	<b>35.710</b>	<b>7.775</b>	-	<b>80.855</b>	<b>9.156</b>	-	<b>78.244</b>	-	-	-	<b>9.156</b>	-	<b>78.244</b>

**Remarks:**  
 Note:  
 1. ACES & MGCs procurements are COTS or GOTS.  
 2. In FY 2021, \$1.602 million in Reimbursable Manpower for this line has been realigned from Reimbursable Civilian Funding to Direct Operations and Maintenance. Program support costs have been accurately updated to reflect the realignments.  
 3. PPSS support will begin to include Next Generation Load Device - Small (NGLD-S) software support in FY20.  
 4. Increases in System Engineering will support integration for Key Management Infrastructure (KMI) Increment 3 services.

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

**UNCLASSIFIED**

<b>Exhibit P-5a, Procurement History and Planning:</b> PB 2021 Army							<b>Date:</b> February 2020				
<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 2035A / 02 / 64			<b>P-1 Line Item Number / Title:</b> 0125B96000 / Communications Security (COMSEC)				<b>Item Number / Title [DODIC]:</b> B96004 / KEY MANAGEMENT INFRASTRUCTURE				

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
MGC Procurement		2021	NSA / FORT MEADE	C / IDIQ	NSA, Fort Meade, MD	Feb 2021	Nov 2021	150	15.460	N		
SKLs Procurement <sup>(†)</sup>		2019	SNC / SPARK	C / IDDQ	Spark, NV	Feb 2019	Nov 2019	4,264	3.740	Y		
SKLs Procurement <sup>(†)</sup>		2020	SNC / SPARK	C / IDDQ	Spark, NV	Feb 2020	Nov 2020	12,125	3.825	Y		
SKLs Procurement <sup>(†)</sup>		2021	SNC / SPARK	C / IDDQ	Spark, NV	Feb 2021	Nov 2021	11,934	4.144	Y		

<sup>(†)</sup> indicates the presence of a P-21

**Remarks:**

- ACES & MGCs procurements are COTS or GOTS.
- In FY 2021, \$1.602 million in Reimbursable Manpower for this line has been realigned from Reimbursable Civilian Funding to Direct Operations and Maintenance. Program support costs have been accurately updated to reflect the realignments.





**UNCLASSIFIED**

<b>Exhibit P-21, Production Schedule:</b> PB 2021 Army															<b>Date:</b> February 2020														
<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 2035A / 02 / 64										<b>P-1 Line Item Number / Title:</b> 0125B96000 / Communications Security (COMSEC)										<b>Item Number / Title [DODIC]:</b> B96004 / KEY MANAGEMENT INFRASTRUCTURE									

Cost Elements <i>(Units in Thousands)</i>						Fiscal Year 2021														Fiscal Year 2022														BALANCE		
O C C #	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						
SKLs Procurement																																				
Prior Years Deliveries: 25400																																				
1		2019	ARMY	4.264	4.264	.000																														.000
1		2020	ARMY	12.125	.000	12.125	-	2.000	2.000	2.000	2.000	2.000	2.000	.125																						.000
1		2021	ARMY	11.934	.000	11.934																														.000

**UNCLASSIFIED**

<b>Exhibit P-21, Production Schedule:</b> PB 2021 Army		<b>Date:</b> February 2020
<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 2035A / 02 / 64		<b>P-1 Line Item Number / Title:</b> 0125B96000 / Communications Security (COMSEC)
		<b>Item Number / Title [DODIC]:</b> B96004 / KEY MANAGEMENT INFRASTRUCTURE

MFR Ref #	Manufacturer Name - Location	Production Rates (Each / Month)			Procurement Leadtime (Months)								
		MSR For 2021	1-8-5 For 2021	MAX For 2021	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	SNC - SPARK	2,000	2,000	10,000	0	0	0	0	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).

**UNCLASSIFIED**

<b>Exhibit P-5, Cost Analysis: PB 2021 Army</b>		<b>Date:</b> February 2020
<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 2035A / 02 / 64	<b>P-1 Line Item Number / Title:</b> 0125B96000 / Communications Security (COMSEC)	<b>Item Number / Title [DODIC]:</b> B96006 / Embedded Cryptographic Modernization

<b>ID Code</b> (A=Service Ready, B=Not Service Ready) :	<b>MDAP/MAIS Code:</b>
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<b>Resource Summary</b>	<b>Prior Years</b>	<b>FY 2019</b>	<b>FY 2020</b>	<b>FY 2021 Base</b>	<b>FY 2021 OCO</b>	<b>FY 2021 Total</b>
Procurement Quantity ( <i>Units in Each</i> )	-	-	-	-	-	-
Gross/Weapon System Cost ( <i>\$ in Millions</i> )	3.077	3.520	-	-	-	-
Less PY Advance Procurement ( <i>\$ in Millions</i> )	-	-	-	-	-	-
Net Procurement (P-1) ( <i>\$ in Millions</i> )	3.077	3.520	-	-	-	-
Plus CY Advance Procurement ( <i>\$ in Millions</i> )	-	-	-	-	-	-
<b>Total Obligation Authority</b> ( <i>\$ in Millions</i> )	<b>3.077</b>	<b>3.520</b>	-	-	-	-

*(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> )	10.257	10.057	-	-	-	-

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

<b>Cost Elements</b>	<b>Prior Years</b>			<b>FY 2019</b>			<b>FY 2020</b>			<b>FY 2021 Base</b>			<b>FY 2021 OCO</b>			<b>FY 2021 Total</b>		
	<b>Unit Cost</b> (\$ K)	<b>Qty</b> (Each)	<b>Total Cost</b> (\$ M)	<b>Unit Cost</b> (\$ K)	<b>Qty</b> (Each)	<b>Total Cost</b> (\$ M)	<b>Unit Cost</b> (\$ K)	<b>Qty</b> (Each)	<b>Total Cost</b> (\$ M)	<b>Unit Cost</b> (\$ K)	<b>Qty</b> (Each)	<b>Total Cost</b> (\$ M)	<b>Unit Cost</b> (\$ K)	<b>Qty</b> (Each)	<b>Total Cost</b> (\$ M)	<b>Unit Cost</b> (\$ K)	<b>Qty</b> (Each)	<b>Total Cost</b> (\$ M)
<b>Support - System Engineering Cost</b>																		
System Engineering	-	-	3.077	-	-	3.520	-	-	-	-	-	-	-	-	-	-	-	-
<i>Subtotal: Support - System Engineering Cost</i>	-	-	<b>3.077</b>	-	-	<b>3.520</b>	-	-	-	-	-	-	-	-	-	-	-	-
<b>Gross/Weapon System Cost</b>	<b>10.257</b>	-	<b>3.077</b>	<b>10.057</b>	-	<b>3.520</b>	-	-	-	-	-	-	-	-	-	-	-	-

**UNCLASSIFIED**

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

**Appropriation / Budget Activity / Budget Sub Activity:**  
 2035A: Other Procurement, Army / BA 02: Communications and Electronics  
 Equipment / BSA 64: Information Security

**P-1 Line Item Number / Title:**  
 0128B63000 / Defensive CYBER Operations

**ID Code** (A=Service Ready, B=Not Service Ready): **Program Elements for Code B Items:** N/A **Other Related Program Elements:** 0605041A

**Line Item MDAP/MAIS Code:** N/A

Resource Summary	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	To Complete	Total
Procurement Quantity ( <i>Units in Each</i> )	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost ( <i>\$ in Millions</i> )	73.175	51.343	56.962	54.753	-	54.753	70.097	36.783	39.402	45.850	-	428.365
Less PY Advance Procurement ( <i>\$ in Millions</i> )	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) ( <i>\$ in Millions</i> )	73.175	51.343	56.962	54.753	-	54.753	70.097	36.783	39.402	45.850	-	428.365
Plus CY Advance Procurement ( <i>\$ in Millions</i> )	-	-	-	-	-	-	-	-	-	-	-	-
<b>Total Obligation Authority</b> ( <i>\$ in Millions</i> )	<b>73.175</b>	<b>51.343</b>	<b>56.962</b>	<b>54.753</b>	-	<b>54.753</b>	<b>70.097</b>	<b>36.783</b>	<b>39.402</b>	<b>45.850</b>	-	<b>428.365</b>

*(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:**

Defensive Cyber Operations (DCO) programs were selected as a candidate for the BA8 Software Pilot Program in FY21. Based on the parameters of the pilot, the program realigned \$16.593 million FY21 OPA from PE 0128B63000 to PE 0608041A from DCO Tools Suite, Forensics and Malware Analysis, and software Army Cyber Command (ARCYBER) Rapid Cyber Prototyping programs.

Remaining OPA program funding supports the Army Network Modernization Strategy Line of Effort (LOE) Key Enabler for the Unified Network. Efforts are aligned to support the Network-Cross Functional Team capability set approach to achieve the network modernization strategy.

DCO consists of platform (hardware and software) programs which are key elements of the DCO Maneuver Baseline infrastructure, platform, and tools. The employment of defensive capabilities creates specific effects in cyberspace through actions that allow commanders to achieve the following objectives: deter, destroy, and defeat enemy offensive cyberspace operations; gain time; economy of force; control key terrain; protect tasked critical assets and infrastructure; and develop intelligence. DCO supports the Army Cyber Command (ARCYBER), Army Cyberspace Operations and Integration Center (ACOIC), (5) Regional Cyber Centers (RCCs), Cyber Warfare Battalion (CWB), Multi-Domain Task Force (MDTF), Cyber Protection Brigade (CPB), and (41) Cyber Protection Teams (CPTs) in COMPO 1/2/3.

**Platforms/Levels:**

- \* DCO - Garrison Defensive Platform - (PEO EIS) - Base Level
- \* DCO - Deployable DCO Systems - (PEO EIS) - Tactical/Command Post Level

**Defensive Cyber Tools and Analytics:**

- \* DCO User Activity Monitoring - (PEO EIS) - Strategic Level
- \* DCO - Rapid Cyber - (ARCYBER)

Secondary Distribution	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025
Army									
Quantity	-	-	-	-	-	-	-	-	-
Total Obligation Authority	51.343	56.962	54.753	-	54.753	70.097	36.783	39.402	45.850

**UNCLASSIFIED**

<b>Exhibit P-40, Budget Line Item Justification:</b> PB 2021 Army							<b>Date:</b> February 2020		
<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 2035A: Other Procurement, Army / BA 02: Communications and Electronics Equipment / BSA 64: Information Security					<b>P-1 Line Item Number / Title:</b> 0128B63000 / Defensive CYBER Operations				
<b>ID Code</b> (A=Service Ready, B=Not Service Ready):			<b>Program Elements for Code B Items:</b> N/A			<b>Other Related Program Elements:</b> 0605041A			
<b>Line Item MDAP/MAIS Code:</b> N/A									

Secondary Distribution		FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025
<b>Total:</b>	<b>Quantity</b>	-	-	-	-	-	-	-	-	-
<b>Secondary Distribution</b>	<b>Total Obligation Authority</b>	51.343	56.962	54.753	-	54.753	70.097	36.783	39.402	45.850

**UNCLASSIFIED**

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

**Appropriation / Budget Activity / Budget Sub Activity:**  
 2035A: Other Procurement, Army / BA 02: Communications and Electronics  
 Equipment / BSA 64: Information Security

**P-1 Line Item Number / Title:**  
 0128B63000 / Defensive CYBER Operations

**ID Code** (A=Service Ready, B=Not Service Ready): **Program Elements for Code B Items:** N/A **Other Related Program Elements:** 0605041A

**Line Item MDAP/MAIS Code:** N/A

Exhibits Schedule					Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total
Exhibit Type	Title*	Subexhibits	ID CD	MDAP/MAIS Code	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)
P-5	B63103 / Advanced Cyber Tool Development	P-5a			- / 73.175	- / 51.343	- / 56.962	- / 54.753	- / -	- / 54.753
<b>P-40</b>	<b>Total Gross/Weapon System Cost</b>				<b>- / 73.175</b>	<b>- / 51.343</b>	<b>- / 56.962</b>	<b>- / 54.753</b>	<b>- / -</b>	<b>- / 54.753</b>

\*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:**

B63103/Defensive Cyber Operations:

FY21 Base procurement dollars in the amount of \$54.753 million supports the procurement, fielding, and training of solutions that fill capability gaps as outlined in the Army DCO Information Systems Initial Capabilities Document (IS ICD):

\* \$17.948 million procures twenty-one (21) Garrison Defensive Platforms providing prepositioned compute and storage capabilities to designated Camps, Posts and Stations; fielding and training. Unit cost is anticipated to be lowered through quantity buys by the vendor.

\* \$7.517 million procures twenty (20) Deployable DCO Systems providing fly-away kit capabilities to CPT across the COMPO; fielding and training. Integrator engineering costs included to level off as solution becomes a standard reproducible capability.

\* \$5.473 million procures hardware and software licenses for DCO Development Environment (formerly called Armories) facilities located at Fort Belvoir, Fort Gordon, Tobyhanna, San Diego, San Antonio, Rock Island, Germany, and South Korea. These facilities designed to provide centralized engineering, fielding and training to the warfighters.

\* \$5.782 million procures software licenses, technical support and associated training to support UAM and insider threat on Cloud Application and Services Environment (CASE), Joint Worldwide Intelligence Communication System (JWICS) and Secret Internet Protocol Router (SIPR)Net.

\* \$1.533 million for ARCYBER Rapid Cyber capabilities that can quickly respond to emerging cyber threats and keep up with threat technology, execute limited authority to expend resources as appropriate to modify and acquire, non-program of record cyber operations-peculiar equipment and capabilities in support of Cyber Mission Forces (CMF).

\* \$16.500 million for program management support to include: contractor management services for product implementation and fielding, government management to provide matrix support for system engineering and acquisition 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.

**UNCLASSIFIED**

<b>Exhibit P-5, Cost Analysis: PB 2021 Army</b>		<b>Date:</b> February 2020
<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 2035A / 02 / 64	<b>P-1 Line Item Number / Title:</b> 0128B63000 / Defensive CYBER Operations	<b>Item Number / Title [DODIC]:</b> B63103 / Advanced Cyber Tool Development

<b>ID Code</b> (A=Service Ready, B=Not Service Ready) :				<b>MDAP/MAIS Code:</b>			
<b>Resource Summary</b>		<b>Prior Years</b>	<b>FY 2019</b>	<b>FY 2020</b>	<b>FY 2021 Base</b>	<b>FY 2021 OCO</b>	<b>FY 2021 Total</b>
Procurement Quantity (Units in Each)		-	-	-	-	-	-
Gross/Weapon System Cost (\$ in Millions)		73.175	51.343	56.962	54.753	-	54.753
Less PY Advance Procurement (\$ in Millions)		-	-	-	-	-	-
Net Procurement (P-1) (\$ in Millions)		73.175	51.343	56.962	54.753	-	54.753
Plus CY Advance Procurement (\$ in Millions)		-	-	-	-	-	-
<b>Total Obligation Authority (\$ in Millions)</b>		<b>73.175</b>	<b>51.343</b>	<b>56.962</b>	<b>54.753</b>	-	<b>54.753</b>
<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 2019			FY 2020			FY 2021 Base			FY 2021 OCO			FY 2021 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																		
CYBERSPACE ANALYTICS <sup>(†)</sup>	-	-	3,802.000	3,802	1	3,802	993.000	1	0.993	-	-	-	-	-	-	-	-	-
CYBER PROTECTION TEAM TOOLS SUITE <sup>(†)</sup>	24,900.000	1	24,900	12,332.000	1	12,332	9,957.000	1	9.957	-	-	-	-	-	-	-	-	-
GARRISON Defensive PLATFORMS <sup>(†)</sup>	948.833	6	5,693	1,085.000	3	3,255	761.813	16	12.189	854.667	21	17.948	-	-	-	854.667	21	17.948
DEPLOYABLE DCO SYSTEMS <sup>(†)</sup>	240.444	18	4,328	219.556	45	9,880	272.610	41	11.177	375.850	20	7.517	-	-	-	375.850	20	7.517
FORENSICS & MALWARE ANALYSIS	-	-	-	1,484.000	1	1,484	-	-	-	-	-	-	-	-	-	-	-	-
DCO DEVELOPMENT ENVIRONMENT (formerly CYBER ARMORY) <sup>(†)</sup>	-	-	-	5,499.000	1	5,499	3,129.000	1	3,129	5,473.000	1	5,473	-	-	-	5,473.000	1	5,473
<i>Subtotal: Recurring Cost</i>	-	-	34,921	-	-	36,252	-	-	37,445	-	-	30,938	-	-	-	-	-	30,938
<i>Subtotal: Flyaway Cost</i>	-	-	34,921	-	-	36,252	-	-	37,445	-	-	30,938	-	-	-	-	-	30,938
Hardware Cost																		
Non Recurring Cost																		
DCO INFRASTRUCTURE	3,477.000	2	6,954	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

**UNCLASSIFIED**

<b>Exhibit P-5, Cost Analysis: PB 2021 Army</b>		<b>Date:</b> February 2020
<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 2035A / 02 / 64	<b>P-1 Line Item Number / Title:</b> 0128B63000 / Defensive CYBER Operations	<b>Item Number / Title [DODIC]:</b> B63103 / Advanced Cyber Tool Development

<b>ID Code</b> (A=Service Ready, B=Not Service Ready) :	<b>MDAP/MAIS Code:</b>
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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 2019			FY 2020			FY 2021 Base			FY 2021 OCO			FY 2021 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)
ENTERPRISE HARDWARE (TDI)																		
ARCYBER Rapid Cyber Prototyping (RCP)	-	-	-	-	-	-	-	-	-	1,098.000	1	1.098	-	-	-	1,098.000	1	1.098
<i>Subtotal: Non Recurring Cost</i>	-	-	6.954	-	-	-	-	-	-	-	-	1.098	-	-	-	-	-	1.098
<b>Subtotal: Hardware Cost</b>	-	-	<b>6.954</b>	-	-	-	-	-	-	-	-	<b>1.098</b>	-	-	-	-	-	<b>1.098</b>
<b>Software Cost</b>																		
<b>Recurring Cost</b>																		
USER ACTIVITY MONITORING <sup>(†)</sup>	-	-	-	-	-	-	3,575.000	1	3.575	5,782.000	1	5.782	-	-	-	5,782.000	1	5.782
<i>Subtotal: Recurring Cost</i>	-	-	-	-	-	-	-	-	3.575	-	-	5.782	-	-	-	-	-	5.782
<b>Non Recurring Cost</b>																		
ARCYBER Rapid Cyber Prototyping (RCP)	-	-	-	-	-	-	-	-	-	435.000	1	0.435	-	-	-	435.000	1	0.435
<i>Subtotal: Non Recurring Cost</i>	-	-	-	-	-	-	-	-	-	-	-	0.435	-	-	-	-	-	0.435
<b>Subtotal: Software Cost</b>	-	-	-	-	-	-	-	-	<b>3.575</b>	-	-	<b>6.217</b>	-	-	-	-	-	<b>6.217</b>
<b>Support - Program Management Cost</b>																		
Contractor Management	-	-	16.361	-	-	9.617	-	-	10.272	-	-	10.400	-	-	-	-	-	10.400
Government Management	-	-	8.961	-	-	3.195	-	-	4.247	-	-	4.300	-	-	-	-	-	4.300
<b>Subtotal: Support - Program Management Cost</b>	-	-	<b>25.322</b>	-	-	<b>12.812</b>	-	-	<b>14.519</b>	-	-	<b>14.700</b>	-	-	-	-	-	<b>14.700</b>
<b>Support - System Engineering Cost</b>																		
System Engineering	-	-	4.388	-	-	1.200	-	-	1.200	-	-	1.200	-	-	-	-	-	1.200
<b>Subtotal: Support - System Engineering Cost</b>	-	-	<b>4.388</b>	-	-	<b>1.200</b>	-	-	<b>1.200</b>	-	-	<b>1.200</b>	-	-	-	-	-	<b>1.200</b>
<b>Support - Training Cost</b>																		
Services	-	-	1.590	-	-	1.079	-	-	0.223	-	-	0.600	-	-	-	-	-	0.600
<b>Subtotal: Support - Training Cost</b>	-	-	<b>1.590</b>	-	-	<b>1.079</b>	-	-	<b>0.223</b>	-	-	<b>0.600</b>	-	-	-	-	-	<b>0.600</b>
<b>Gross/Weapon System Cost</b>	-	-	<b>73.175</b>	-	-	<b>51.343</b>	-	-	<b>56.962</b>	-	-	<b>54.753</b>	-	-	-	-	-	<b>54.753</b>

**Remarks:**



**UNCLASSIFIED**

<b>Exhibit P-5, Cost Analysis: PB 2021 Army</b>		<b>Date:</b> February 2020
<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 2035A / 02 / 64	<b>P-1 Line Item Number / Title:</b> 0128B63000 / Defensive CYBER Operations	<b>Item Number / Title [DODIC]:</b> B63103 / Advanced Cyber Tool Development

<b>ID Code</b> (A=Service Ready, B=Not Service Ready) :	<b>MDAP/MAIS Code:</b>
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**Deployable DCO Systems (DDS):**  
 FY19 quantity of (1) was the prototype for the Cyberspace Operations Broad Responsive Agreement (COBRA) Other Transaction Authority (OTA). Result led to the limited production delivery of (45) systems in FY19, and (41) systems in FY20 (pending milestone fielding decision). Using the Armory concept which operates like a library, whereby DDS equipment will be checked in/out of the Armory, aligning to deployment schedule. DDS will procure (20) DDS in FY21 to replace broken systems. Funds are provided for the procurement, fielding and training of DDS.

**Garrison Defensive Platform (GDP):**  
 FY19 quantity of (3) were delivered to Tobyhanna. The decrease from (5) to (3) due to ARCYBER's convergence pilot request that put a hold on additional procurement of GDP (ARCYBER/DCO Workshop in November 2019). The convergence is an opportunity to determine if Department of Defense Information Network (DoDIN) mission and DCO mission can reside on the same hardware resulted in future cost savings/cost avoidance. GDP will procure (16) in FY20 and (21) in FY21. Funds are provided for the procurement, fielding and training of GDP.

**User Activity Monitoring (UAM):**  
 FY20 UAM purchased 41,000 perpetual licenses of the analytic tool for UAM. This completes the current estimated deployment numbers for CASE, JWICS and SIPR enclaves. FY21 the Program Manager (PM) will assume the cost of purchasing the collection software licenses for 51,000 end points, this cost was paid by ARCYBER in FY20.

Secondary Distribution		FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total
Army	Quantity	-	-	-	-	-
	Total Obligation Authority	51.343	56.962	54.753	-	54.753
<b>Total:</b> Secondary Distribution	Quantity	-	-	-	-	-
	Total Obligation Authority	<b>51.343</b>	<b>56.962</b>	<b>54.753</b>	-	<b>54.753</b>

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

**UNCLASSIFIED**

**Exhibit P-5a, Procurement History and Planning: PB 2021 Army** **Date:** February 2020

<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 2035A / 02 / 64	<b>P-1 Line Item Number / Title:</b> 0128B63000 / Defensive CYBER Operations	<b>Item Number / Title [DODIC]:</b> B63103 / Advanced Cyber Tool Development
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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
CYBERSPACE ANALYTICS		2019	NGA / Arnold, MO	MIPR	NGA	Aug 2019	Aug 2019	1	3,802.000	Y		
CYBERSPACE ANALYTICS		2020	NGA / Arnold, MO	MIPR	ACC-Rock Island, IL	Jan 2020	Jan 2020	1	993.000	N		
CYBER PROTECTION TEAM TOOLS SUITE		2019	SOSSEC / Atkinson, NH	C / FFP	ACC-Rock Island, IL	Feb 2019	Mar 2019	1	12,332.000	Y		
CYBER PROTECTION TEAM TOOLS SUITE		2020	SOSSEC / Atkinson, NH	C / TBD	ACC-Rock Island, IL	Feb 2020	Mar 2020	1	9,957.000	N		
GARRISON Defensive PLATFORMS		2019	Iron Bow Tech / Herndon, VA	C / FFP	ACC-Rock Island, IL	Feb 2019	Mar 2019	3	1,085.000	Y		
GARRISON Defensive PLATFORMS		2020	TBD / TBD	C / FFP	ACC-Rock Island, IL	Feb 2020	Mar 2020	16	761.813	N		
GARRISON Defensive PLATFORMS		2021	TBD / TBD	C / FFP	ACC-Rock Island, IL	Feb 2021	Jan 2022	21	854.667	N		
DEPLOYABLE DCO SYSTEMS		2019	SOSSEC / Atkinson, NH	C / FFP	ACC-Rock Island, IL	Apr 2019	May 2019	45	219.556	Y		
DEPLOYABLE DCO SYSTEMS		2020	SOSSEC / Atkinson, NH	C / FFP	ACC-Rock Island, IL	Jun 2020	Jul 2020	41	272.610	Y		
DEPLOYABLE DCO SYSTEMS		2021	TBD / TBD	C / FFP	ACC-Rock Island, IL	Jun 2021	Jul 2021	20	375.850	Y		
DCO DEVELOPMENT ENVIRONMENT (formerly CYBER ARMORY)		2019	CECOM LCMC G8 (TYAD) / APG, MD	MIPR	TOBYHANNA, PA	Oct 2018	Sep 2019	1	5,499.000	N		
DCO DEVELOPMENT ENVIRONMENT (formerly CYBER ARMORY)		2020	CECOM LCMC G8 (TYAD) / APG, MD	MIPR	TOBYHANNA, PA	Oct 2019	Sep 2020	1	3,129.000	N		
DCO DEVELOPMENT ENVIRONMENT (formerly CYBER ARMORY)		2021	CECOM LCMC G8 (TYAD) / APG, MD	MIPR	TOBYHANNA, PA	Oct 2020	Sep 2021	1	5,473.000	N		
USER ACTIVITY MONITORING		2020	SOSSEC / Atkinson, NH	C / FFP	ACC-Rock Island, IL	Feb 2020	Mar 2020	1	3,575.000	N		
USER ACTIVITY MONITORING		2021	TBD / TBD	C / FFP	ACC-Rock island, IL	Feb 2021	Mar 2021	1	5,782.000	N		

**Remarks:**

Acquisition Strategy:

The DCO Information System Capabilities Development Document (IS ICD) was approved on 19 Dec 17 by the Army Requirements Oversight Council (AROC). DCO programs are under an IT Box construct with five year term (FY18-22) which aligns with current Requirements Definition Package (RDP).

Garrison Defensive Platforms and Deployable DCO Systems RDPs were approved on 16 Jan 18, and User Activity Monitoring on 16 Oct 18. The MDA designated these as ACAT IV programs. Under subsequent reviews, the MDA approved agile acquisition approach to develop and deliver preconfigured hardware and software in a series of releases and capability drops in order to deliver full functional values of the RDP that align with DCO priorities. DCO programs utilize standard and 874 agile pilot evolutionary acquisition processes (30-90 rapid acquisition approach). DCO continually delivers new technologies and capabilities as a prototype and fields updated capabilities. DCO contract strategy utilizes multiple existing contracts vehicles to include Other Transactional Authority (OTA), Federal Acquisition Regulation (FAR)-based, Blanket Purchase Agreement (BPA), and Basic Ordering Agreement (BOA).

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

<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 2035A: Other Procurement, Army / BA 02: Communications and Electronics Equipment / BSA 64: Information Security	<b>P-1 Line Item Number / Title:</b> 0131B89000 / Insider Threat Program - Unit Activity Monitoring
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<b>ID Code</b> (A=Service Ready, B=Not Service Ready):	<b>Program Elements for Code B Items:</b> N/A	<b>Other Related Program Elements:</b> N/A
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**Line Item MDAP/MAIS Code:** N/A

Resource Summary	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	To Complete	Total
Procurement Quantity ( <i>Units in Each</i> )	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost ( <i>\$ in Millions</i> )	0.690	0.330	0.756	1.760	-	1.760	0.359	-	-	-	-	3.895
Less PY Advance Procurement ( <i>\$ in Millions</i> )	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) ( <i>\$ in Millions</i> )	0.690	0.330	0.756	1.760	-	1.760	0.359	-	-	-	-	3.895
Plus CY Advance Procurement ( <i>\$ in Millions</i> )	-	-	-	-	-	-	-	-	-	-	-	-
<b>Total Obligation Authority</b> ( <i>\$ in Millions</i> )	<b>0.690</b>	<b>0.330</b>	<b>0.756</b>	<b>1.760</b>	<b>-</b>	<b>1.760</b>	<b>0.359</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>3.895</b>

*(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:**

User Activity Monitoring (UAM) supports the Army Network Modernization Strategy Line of Effort (LOE) Key Enabler for the Unified Network. Efforts are aligned to support the Network-Cross Functional Team capability set approach to achieve the network modernization strategy.

All information technology (IT) procurement consists of commercial-off-the-shelf (COTS) solutions. Quantities and units costs vary by system configuration and site.

UAM operations are conducted in support of the Army's insider threat program. User activity monitoring is the technical capability to observe and record the actions and activities of an individual, at any time, on any device access US Government information in order to detect insider threats and to support authorized investigations. The OPA program supports three objectives. First, it provides advanced analytics (including user behavior modeling software) to increase UAM analysis effectiveness and efficiency. Second, it provides additional system hardware, and third, it support the procurement of the next generation Army UAM tool in FY 2021. Advanced analytics procurement includes COTS hardware and software, and open source software. This capability will increase UAM analysts' effectiveness and efficiency. The primary objective is to employ COTS technology to identify potential insider threats by monitoring behavior between users, user interactions with data and network capabilities (especially in regards to privileged users), and monitoring user compliance with network and data standards and policies.

Secondary Distribution	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025
Army	Quantity	-	-	-	-	-	-	-	-
	Total Obligation Authority	0.330	0.756	1.760	-	1.760	0.359	-	-
<b>Total: Secondary Distribution</b>	<b>Quantity</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>
	<b>Total Obligation Authority</b>	<b>0.330</b>	<b>0.756</b>	<b>1.760</b>	<b>-</b>	<b>1.760</b>	<b>0.359</b>	<b>-</b>	<b>-</b>

**Justification:**

FY 2021 Base procurement dollars in the amount of \$1.760 million support the procurement, installation, assessment and authorization of commercial-off-the-shelf (COTS) technology to enhance Army UAM analysis effectiveness and efficiency in support of the Army's Insider Threat Program. Army executes its insider threat program in accordance with Executive Order 13587, Structural Reforms to Improve the

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<b>Exhibit P-40, Budget Line Item Justification:</b> PB 2021 Army		<b>Date:</b> February 2020
<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 2035A: Other Procurement, Army / BA 02: Communications and Electronics Equipment / BSA 64: Information Security		<b>P-1 Line Item Number / Title:</b> 0131B89000 / Insider Threat Program - Unit Activity Monitoring
<b>ID Code</b> (A=Service Ready, B=Not Service Ready):	<b>Program Elements for Code B Items:</b> N/A	<b>Other Related Program Elements:</b> N/A
<b>Line Item MDAP/MAIS Code:</b> N/A		
Security of Classified Networks and the Responsible Sharing and Safeguarding of Classified Information, (Reference b) dated 7 October 2011; Presidential Memorandum, National Insider Threat Policy and Minimum Standards for Executive Branch Insider Threat Programs, dated 21 November 2012; National Defense Authorization Act for Fiscal Year 2012, Section 922, Insider Threat Detection; and Army Directive 2013-18 (Army Insider Threat Program) dated 31 July 2013.		

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

<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 2035A: Other Procurement, Army / BA 02: Communications and Electronics Equipment / BSA 64: Information Security	<b>P-1 Line Item Number / Title:</b> 0132B65010 / Persistent Cyber Training Environment
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<b>ID Code</b> (A=Service Ready, B=Not Service Ready):	<b>Program Elements for Code B Items:</b> N/A	<b>Other Related Program Elements:</b> N/A
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**Line Item MDAP/MAIS Code:** N/A

Resource Summary	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	To Complete	Total
Procurement Quantity ( <i>Units in Each</i> )	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost ( <i>\$ in Millions</i> )	4.000	3.000	3.000	-	-	-	-	-	-	-	-	10.000
Less PY Advance Procurement ( <i>\$ in Millions</i> )	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) ( <i>\$ in Millions</i> )	4.000	3.000	3.000	-	-	-	-	-	-	-	-	10.000
Plus CY Advance Procurement ( <i>\$ in Millions</i> )	-	-	-	-	-	-	-	-	-	-	-	-
<b>Total Obligation Authority</b> ( <i>\$ in Millions</i> )	<b>4.000</b>	<b>3.000</b>	<b>3.000</b>	-	-	-	-	-	-	-	-	<b>10.000</b>

*(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:**

Persistent Cyber Training Environment (PCTE) supports the United States Cyber Command (USCC) by enabling a critical need for the DoD Cyber Mission Force (CMF) to train at the individual, team, and force level. The service cyber components have established their own training environments, but do not have standardized capabilities or content. PCTE will provide the Department of Defense (DoD) cyber forces with a standardized training capability that utilizes shared content across the Services to include emulated network environments and has the ability to connect to other range environments.. The PCTE platform is aligned to the outputs of the Office of the Under Secretary of Defense for Acquisition & Sustainment OUSD (A&S) and Chairman of the Joint Chiefs of Staff (CJCS) J6 led, "Cyber Range Evaluation of Alternatives (EOA) Findings and Issue Paper Deliberations," dated 17 November 2015. The Program Executive Office for Simulation, Training, and Instrumentation (PEO STRI) was designated as the DoD Acquisition Lead for the PCTE and the program is directed by the 2016 National Defense Authorization Act, Section 1645. With the JROC validation of the Information System - Capability Development Document (IS-CDD) on 4 November 2019, the PCTE program quickly achieved Milestone B on 6 December 2019.

Beginning FY 2021, OPA funds reprogrammed program is funded in Operations and Maintenance Army (OMA) (APE 151251000, MDEP VLWA) for software licensing for cyber training applications. PCTE has procured and installed the appropriate hardware infrastructure footprint to enable the platform to serve the Cyber Mission Force user base.

Secondary Distribution	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025
Army	Quantity	-	-	-	-	-	-	-	-
	Total Obligation Authority	3.000	3.000	-	-	-	-	-	-
<b>Total: Secondary Distribution</b>	<b>Quantity</b>	-	-	-	-	-	-	-	-
	<b>Total Obligation Authority</b>	<b>3.000</b>	<b>3.000</b>	-	-	-	-	-	-

**Justification:**

Program has no FY 2021 procurement request.

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

<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 2035A: Other Procurement, Army / BA 02: Communications and Electronics Equipment / BSA 64: Information Security	<b>P-1 Line Item Number / Title:</b> 9091B85010 / Items Less Than \$5M (Info Security)
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<b>ID Code</b> (A=Service Ready, B=Not Service Ready):	<b>Program Elements for Code B Items:</b> N/A	<b>Other Related Program Elements:</b> N/A
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**Line Item MDAP/MAIS Code:** N/A

Resource Summary	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	To Complete	Total
Procurement Quantity ( <i>Units in Each</i> )	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost ( <i>\$ in Millions</i> )	-	-	-	0.260	-	0.260	0.399	0.260	0.269	0.270	-	1.458
Less PY Advance Procurement ( <i>\$ in Millions</i> )	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) ( <i>\$ in Millions</i> )	-	-	-	0.260	-	0.260	0.399	0.260	0.269	0.270	-	1.458
Plus CY Advance Procurement ( <i>\$ in Millions</i> )	-	-	-	-	-	-	-	-	-	-	-	-
<b>Total Obligation Authority (<i>\$ in Millions</i>)</b>	-	-	-	<b>0.260</b>	-	<b>0.260</b>	<b>0.399</b>	<b>0.260</b>	<b>0.269</b>	<b>0.270</b>	-	<b>1.458</b>

*(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:**

This program supports hardware and software purchases and renewals for the Army Security Response Tool (ASRT) in support of the Army Insider Threat Hub.

Secondary Distribution	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025
Army	Quantity	-	-	-	-	-	-	-	-
	Total Obligation Authority	-	-	0.260	-	0.260	0.399	0.260	0.269
<b>Total:</b> Secondary Distribution	Quantity	-	-	-	-	-	-	-	-
	Total Obligation Authority	-	-	<b>0.260</b>	-	<b>0.260</b>	<b>0.399</b>	<b>0.260</b>	<b>0.269</b>

**Justification:**

FY 2021 funding in the amount of \$.260 million supports hardware and software purchases and renewals for the Army Security Response Tool (ASRT) in support of the Army Insider Threat Hub.

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

<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 2035A: Other Procurement, Army / BA 02: Communications and Electronics Equipment / BSA 72: Comm - Long Haul Communications	<b>P-1 Line Item Number / Title:</b> 9716BU4160 / Base Support Communications
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<b>ID Code</b> (A=Service Ready, B=Not Service Ready):	<b>Program Elements for Code B Items:</b> N/A	<b>Other Related Program Elements:</b> N/A
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**Line Item MDAP/MAIS Code:** N/A

Resource Summary	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	To Complete	Total
Procurement Quantity ( <i>Units in Each</i> )	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost ( <i>\$ in Millions</i> )	800.229	50.247	52.252	29.761	-	29.761	29.077	19.060	14.039	14.039	Continuing	Continuing
Less PY Advance Procurement ( <i>\$ in Millions</i> )	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) ( <i>\$ in Millions</i> )	800.229	50.247	52.252	29.761	-	29.761	29.077	19.060	14.039	14.039	Continuing	Continuing
Plus CY Advance Procurement ( <i>\$ in Millions</i> )	-	-	-	-	-	-	-	-	-	-	-	-
<b>Total Obligation Authority (<i>\$ in Millions</i>)</b>	<b>800.229</b>	<b>50.247</b>	<b>52.252</b>	<b>29.761</b>	<b>-</b>	<b>29.761</b>	<b>29.077</b>	<b>19.060</b>	<b>14.039</b>	<b>14.039</b>	<b>Continuing</b>	<b>Continuing</b>

*(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 Base Support Communications program provides real-time voice communications and data via the Army Land Mobile Radio (LMR) network. Land Mobile Radio (LMR) systems are commercial solutions that provide mission critical mobile and portable communications for garrison first responders, public safety, force protection, homeland security, pre-deployment logistics support, and installation management missions. First Responders are the primary users of LMR to include installation Military Police, Fire Departments, and Emergency Medical personnel. The Army's LMR program provides network infrastructure, network enabling functions and subscriber unit devices to ensure a synchronized, timely, and effective emergency first response. Originally designed and resourced to modernize Army Continental United States (CONUS) Enterprise (ACE) LMR systems to meet the National Telecommunications Information Administrations Narrowband (NTIA) mandates and to upgrade to the Association of Public-safety Communications Officers (APCO) Project 25 (P25) standards, the Army LMR program has grown to meet Army LMR requirements world-wide including providing communications support for non-combatant evacuation orders (NEO) in the OCONUS Theaters.

The LMR program provides all LMR system hardware/software infrastructure to include initial critical system spares, subscriber units which include portable (handheld units for each operator), vehicle mounted mobile units and desktop equipment for dispatchers in accordance with the Installation Management Command (IMCOM) Basis of issue plan (BOIP), and two years of interim contractor support including system and cyber security patching.

Land Mobile Radio systems are a system of systems composed of various hardware and software components. Requirements at each post/camp/station vary based on the geographic coverage area, terrain of the installation, number of end users, number of mutual aid partners, and installation dispatch concept of operations. To meet the first responder and installation non-tactical communications mission requirements, the solution at each post/camp/station is unique and determined by government surveys and coordination with stakeholders.

To optimize efficiencies, Army LMR systems are currently migrating from a stand-alone LMR system at each post/camp/station to an enterprise network model that will centralize the information system to maximize cost-effectiveness and cyber security. The LMR systems are key components of the Army enterprise used to provide a seamless communications network in support of garrison level communications and infrastructure. Without adequate communications capabilities that enable coordinated emergency response, maximize the use of scarce radio spectrum, and provide secure voice transmissions, emergency responders and base support personnel would be significantly constrained in their ability to perform key emergency response functions. This is a health, life, and safety Army requirement.

Secondary Distribution	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025
Army									
Quantity	-	-	-	-	-	-	-	-	-

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

<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 2035A: Other Procurement, Army / BA 02: Communications and Electronics Equipment / BSA 72: Comm - Long Haul Communications	<b>P-1 Line Item Number / Title:</b> 9716BU4160 / Base Support Communications
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<b>ID Code</b> (A=Service Ready, B=Not Service Ready):	<b>Program Elements for Code B Items:</b> N/A	<b>Other Related Program Elements:</b> N/A
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**Line Item MDAP/MAIS Code:** N/A

	<b>Secondary Distribution</b>	<b>FY 2019</b>	<b>FY 2020</b>	<b>FY 2021 Base</b>	<b>FY 2021 OCO</b>	<b>FY 2021 Total</b>	<b>FY 2022</b>	<b>FY 2023</b>	<b>FY 2024</b>	<b>FY 2025</b>
	Total Obligation Authority	50.247	52.252	29.761	-	29.761	29.077	19.060	14.039	14.039
<b>Total:</b>	<b>Quantity</b>	-	-	-	-	-	-	-	-	-
<b>Secondary Distribution</b>	<b>Total Obligation Authority</b>	<b>50.247</b>	<b>52.252</b>	<b>29.761</b>	<b>-</b>	<b>29.761</b>	<b>29.077</b>	<b>19.060</b>	<b>14.039</b>	<b>14.039</b>



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

**Appropriation / Budget Activity / Budget Sub Activity:**  
 2035A: Other Procurement, Army / BA 02: Communications and Electronics  
 Equipment / BSA 72: Comm - Long Haul Communications

**P-1 Line Item Number / Title:**  
 9716BU4160 / Base Support Communications

**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 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total
Exhibit Type	Title*	Subexhibits	ID CD	MDAP/MAIS Code	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)
P-5	BU4160 / Base Support Communications	P-5a			- / 800.229	- / 50.247	- / 52.252	- / 29.761	- / -	- / 29.761
<b>P-40</b>	<b>Total Gross/Weapon System Cost</b>				<b>- / 800.229</b>	<b>- / 50.247</b>	<b>- / 52.252</b>	<b>- / 29.761</b>	<b>- / -</b>	<b>- / 29.761</b>

\*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 2021 base funding in the amount of \$29.761 million will modernize the following locations: LMR upgrades in CONUS for Fort Drum, New York, Fort Bragg, North Carolina, Fort Stewart, Georgia, Fort Sill, Oklahoma, and Fort Leavenworth, Kansas, will modernize and converge the legacy stand alone LMR systems at each location into the Army CONUS Enterprise LMR network.

The quantity for cost element "Commercial" LMR Systems represents the number of local installations being modernized in the fiscal year, not an end item or the number of LMR systems. LMR is a commercial off-the-shelf solution that is a system of systems composed of various hardware and software components. Requirements at each post/camp/station vary based on the geographic coverage area, terrain of the installation, number of end users, number of mutual aid partners, and dispatch concept of operations. For example, Fort Rucker, Alabama consisted of 1 Core, 30 Repeaters, 4 Dispatch Consoles, 2 Logging Recorders, 1 Mutual Aid Interoperability Gateway, 2 Universal Power Supplies (UPS), 2 System Management Terminals (SMT), 2 Motorola Supervisory Control and Data Acquisition (MOSCAD) Clients, and 10 Key Variable Loaders (KVLs). In comparison, McAlester Army Ammo Plant, Oklahoma consisted of 1 Core, 6 Repeaters, 4 Dispatch Consoles, 1 Logging Recorder, 1 Mutual Aid Interoperability Gateway, and 1 SMT. These elements are the main cost drivers for the LMR system solutions. All quantities and unit costs vary based on the unique requirements at each installation and the level of effort required as a result of the Government site survey that is completed for each location. Locations are determined by a stakeholder analysis, and prioritization that is reviewed annually in accordance with current requirements, threat analysis and DoD and Army Planning Guidance.

FY20 totaled \$52.252M which includes \$31.770M Base and \$20.482M OCO. FY21 funding does not include OCO funding, only Base dollars in the amount of \$29.761M.

The Interim Contractor Support (ICS) cost element provides interim contractor support for initial system maintenance and cyber security patching. The ICS cost element is also driven by the aforementioned cost drivers, the more equipment required at a post/camp/station to meet coverage and user requirements, the higher the level of effort for the ICS.

The majority of existing LMR systems at Army installations do not meet DoD and Army standards, are obsolete, are no longer supported by the manufacturer, and/or are non-compliant with the National Telecommunications and Information Administrations (NTIA) spectrum efficiency mandate. Power projection and power support Army installations across the continental United States (CONUS) and the Europe and Pacific Area of Operations rely on base support LMR systems as a primary means to support force protection, public safety, installation management, homeland security missions and non-combatant evacuation operations (NEO).

In accordance with Sections 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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<b>Exhibit P-5, Cost Analysis: PB 2021 Army</b>		<b>Date:</b> February 2020
<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 2035A / 02 / 72		<b>P-1 Line Item Number / Title:</b> 9716BU4160 / Base Support Communications
		<b>Item Number / Title [DODIC]:</b> BU4160 / Base Support Communications

<b>ID Code</b> (A=Service Ready, B=Not Service Ready) :	<b>MDAP/MAIS Code:</b>
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Resource Summary	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total
Procurement Quantity (Units in Each)	-	-	-	-	-	-
Gross/Weapon System Cost (\$ in Millions)	800.229	50.247	52.252	29.761	-	29.761
Less PY Advance Procurement (\$ in Millions)	-	-	-	-	-	-
Net Procurement (P-1) (\$ in Millions)	800.229	50.247	52.252	29.761	-	29.761
Plus CY Advance Procurement (\$ in Millions)	-	-	-	-	-	-
<b>Total Obligation Authority (\$ in Millions)</b>	<b>800.229</b>	<b>50.247</b>	<b>52.252</b>	<b>29.761</b>	<b>-</b>	<b>29.761</b>

*(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 2019			FY 2020			FY 2021 Base			FY 2021 OCO			FY 2021 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																		
Non Recurring Cost																		
Commercial LMR Systems <sup>(†)</sup>	71,220.900	10	712.209	5,336.714	7	37.357	4,157.600	5	20.788	3,896.200	5	19.481	-	-	-	3,896.200	5	19.481
Interim Contractor Support <sup>(†)</sup>	1,619.444	9	14.575	2,000.000	4	8.000	1,730.400	5	8.652	1,516.000	5	7.580	-	-	-	1,516.000	5	7.580
Engineering and Program Support <sup>(†)</sup>	14,689.000	5	73.445	4,200.000	1	4.200	2,330.000	1	2.330	2,700.000	1	2.700	-	-	-	2,700.000	1	2.700
SWA LMR Systems Site Surveys <sup>(†)</sup>	-	-	-	690.000	1	0.690	-	-	-	-	-	-	-	-	-	-	-	-
Operation Inherent Resolve <sup>(†)</sup>	-	-	-	-	-	-	20,482.000	1	20.482	-	-	-	-	-	-	-	-	-
<i>Subtotal: Non Recurring Cost</i>	-	-	800.229	-	-	50.247	-	-	52.252	-	-	29.761	-	-	-	-	-	29.761
<i>Subtotal: Hardware Cost</i>	-	-	800.229	-	-	50.247	-	-	52.252	-	-	29.761	-	-	-	-	-	29.761
<b>Gross/Weapon System Cost</b>	-	-	800.229	-	-	50.247	-	-	52.252	-	-	29.761	-	-	-	-	-	29.761

Secondary Distribution		FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total
Army	Quantity	-	-	-	-	-
	Total Obligation Authority	50.247	52.252	29.761	-	29.761
<b>Total:</b>	<b>Quantity</b>	-	-	-	-	-

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<b>Exhibit P-5, Cost Analysis:</b> PB 2021 Army			<b>Date:</b> February 2020			
<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 2035A / 02 / 72		<b>P-1 Line Item Number / Title:</b> 9716BU4160 / Base Support Communications		<b>Item Number / Title [DODIC]:</b> BU4160 / Base Support Communications		
<b>ID Code</b> (A=Service Ready, B=Not Service Ready) :			<b>MDAP/MAIS Code:</b>			
<b>Secondary Distribution</b>		<b>FY 2019</b>	<b>FY 2020</b>	<b>FY 2021 Base</b>	<b>FY 2021 OCO</b>	<b>FY 2021 Total</b>
<b>Secondary Distribution</b>	<b>Total Obligation Authority</b>	50.247	52.252	29.761	-	29.761

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

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<b>Exhibit P-5a, Procurement History and Planning: PB 2021 Army</b>							<b>Date:</b> February 2020				
<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 2035A / 02 / 72			<b>P-1 Line Item Number / Title:</b> 9716BU4160 / Base Support Communications				<b>Item Number / Title [DODIC]:</b> BU4160 / Base Support Communications				

Cost Elements	OCO	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
Commercial LMR Systems		2018	VAR / .VAR	C / FFP	ACC RI, Rock Island, IL	Apr 2018	May 2018	5	5,900.000	N		
Commercial LMR Systems		2019	VAR / .VAR	C / FFP	ACC RI, Rock Island, IL	Mar 2019	Apr 2019	7	5,336.714	N		
Commercial LMR Systems		2020	VAR / .VAR	C / FFP	ACC RI, Rock Island, IL	Mar 2020	Sep 2020	5	4,157.600	N		
Commercial LMR Systems		2021	VAR / .VAR	C / FFP	ACC RI, Rock Island, IL	Mar 2021	Sep 2021	5	3,246.833	N		
Interim Contractor Support		2018	VAR / .VAR	C / FFP	ACC RI, Rock Island, IL	Jul 2018	Aug 2018	5	2,500.000	N		
Interim Contractor Support		2019	VAR / .VAR	C / FFP	ACC RI, Rock Island, IL	Apr 2019	May 2019	4	2,000.000	N		
Interim Contractor Support		2020	VAR / .VAR	C / FFP	ACC-RI, Rock Island, IL	Mar 2020	Sep 2020	5	1,730.400	N		
Interim Contractor Support		2021	VAR / .VAR	C / FFP	ACC-RI, Rock Island, IL	Mar 2021	Sep 2021	5	1,263.333	N		
Engineering and Program Support		2018	ISEC / Ft. Detrick, MD	MIPR	ISEC, Fort Detrick, MD/ PEO FT Belvoir, Va	Apr 2018	May 2018	2	1,875.500	N		
Engineering and Program Support		2019	ISEC / Ft. Detrick, MD	MIPR	ISEC, Fort Detrick, MD/ PEO FT Belvoir, Va	Apr 2019	May 2019	1	4,200.000	N		
Engineering and Program Support		2020	ISEC / Ft. Detrick, MD	MIPR	ISEC, Fort Detrick, MD/ PEO FT Belvoir, Va	Apr 2020	May 2020	1	2,330.000	N		
Engineering and Program Support		2021	ISEC / Ft. Detrick, MD	MIPR	ISEC, Fort Detrick, MD/ PEO FT Belvoir, Va	Apr 2021	May 2021	1	2,700.000	N		
SWA LMR Systems Site Surveys		2019	ISEC / Ft. Detrick, MD	MIPR	TBD	Aug 2019	Sep 2019	1	690.000	N		
Operation Inherent Resolve		2020	TBD / TBD	C / FFP	TBD	Jun 2020	Sep 2020	1	20,482.000	N		

**Remarks:**  
 All IT procurements consist of Commercial Off-The-shelf (COTS) solutions. PEO EIS - Program Executive Office Enterprise Information Systems, PM DCATS-Project Manager, Defense Communications and Army Transmission Systems; PL LMR-Product Lead, Land Mobile Radios; ACC-RI - Army Contracting Command Rock Island; ISEC - Information Systems Engineering Command.

Note the quantity for cost element of Commercial LMR systems does not articulate an end item or the number of LMR systems, rather, it represents the number of local installations/area of responsibility being modernized in the fiscal year. Requirements at each post/camp/station vary based on the geographic coverage, terrain of the installation, number of end users, number of mutual air partners, and dispatch of operations. These elements are the main cost drivers for the LMR system solutions.

The Interim Contractor Support (ICS) cost element provides interim contractor support for initial system maintenance and cyber security patching. The ICS cost element is also driven by the aforementioned cost drivers, the more equipment required at a post/camp/station to coverage and user requirements, the higher the level of effort for the ICS.

Various contract awards for FY18 and FY19 include both Motorola Solutions, Columbia, Maryland and Harris Corporation, Melbourne, Florida.

Decreased unit cost for Interim Contract Support (ICS) is due to the fact that all CONUS efforts are integrated into the converged Army CONUS Enterprise (ACE) network with reduce requirements for systems patching.

FY20 totaled \$52.252M which includes \$31.770M Base and \$20.482M OCO. FY21 funding does not include OCO funding for SWA, only Base dollars in the amount of \$29.792M.

Engineering and Program Support includes Matrix support from Information Systems Engineering Command (ISEC) and Army Contracting Command (ACC), Systems Engineering and Technical Assistance (SETA) and Project Management Office (PMO) support.

All quantities of LMR hardware/software vary based on the unique requirements at each installation and the level of effort required as a result of the Government site survey that is completed for each location. Fluctuations in unit costs year to year for Commercial LMR Systems and ICS are based on the cost drivers and specific requirements at each post/camp/station.

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

<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 2035A: Other Procurement, Army / BA 02: Communications and Electronics Equipment / BSA 73: Comm - Base Communications	<b>P-1 Line Item Number / Title:</b> 9200BB8650 / Information Systems
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<b>ID Code</b> (A=Service Ready, B=Not Service Ready):	<b>Program Elements for Code B Items:</b> N/A	<b>Other Related Program Elements:</b> N/A
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**Line Item MDAP/MAIS Code:** N/A

Resource Summary	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	To Complete	Total
Procurement Quantity ( <i>Units in Each</i> )	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost ( <i>\$ in Millions</i> )	2,856.181	80.064	214.809	147.696	15.277	162.973	242.768	114.522	136.226	116.940	Continuing	Continuing
Less PY Advance Procurement ( <i>\$ in Millions</i> )	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) ( <i>\$ in Millions</i> )	2,856.181	80.064	214.809	147.696	15.277	162.973	242.768	114.522	136.226	116.940	Continuing	Continuing
Plus CY Advance Procurement ( <i>\$ in Millions</i> )	-	-	-	-	-	-	-	-	-	-	-	-
<b>Total Obligation Authority (<i>\$ in Millions</i>)</b>	<b>2,856.181</b>	<b>80.064</b>	<b>214.809</b>	<b>147.696</b>	<b>15.277</b>	<b>162.973</b>	<b>242.768</b>	<b>114.522</b>	<b>136.226</b>	<b>116.940</b>	<b>Continuing</b>	<b>Continuing</b>

*(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:**

This budget line does not procure weapons systems or produce end items. All Information Technology (IT) procurements consist of COTS/GOTS solutions; all quantities and unit costs vary by project, system configuration, and site.

This program provides engineering, quality assurance, and IT infrastructure (common user voice, data, video networks) in support of Military Construction Army (MCA) and Sustainment, Restoration, and Modernization (SRM) projects. It supplies non-tactical telecommunications equipment and engineering services for Army base operations. When required due to MCA or SRM projects, this program provides upgrades to regional or Theater IT infrastructure, as well as physical plant infrastructure that directly support those IT assets. This program delivers standardized operational processes and procedures, providing the Army with consistent integration, synchronization, and delivery of voice, data, imagery, applications, and network capabilities down to the individuals in both the operating force and generating force Army-wide. In conjunction with MCA or SRM projects, this program also provides funding for organization-specific command and control IT requirements necessary to equip a new or modernized facility to a mission-ready state ahead of the physical relocation of the occupant organization.

**PROPONENT/MISSION IS-MCA/PHYSICAL RELOCATION (B31510):**

This program funds organization-specific command and control IT requirements necessary to relocate and equip an organization in conjunction with MCA or SRM projects. These may include specific IT requirements to facilitate connectivity from building infrastructure to end user equipment, items for classrooms, computers, video teleconferencing (VTC) systems, projectors, display/knowledge walls, telephone equipment, and other end user devices to include IT supporting classification above SECRET. This program consolidates individual organizational requirements to provide a deliberate planned programmatic approach to procure mission essential IT equipment and includes the following large scale projects.

**US ARMY PACIFIC (USARPAC) COMMAND AND CONTROL (C2) FACILITY PHASE 4:** This provides for the IT requirements within the Phase 4 construction of USARPAC Headquarters/C2 Facility at Fort Shafter, Hawaii. The historical headquarters was spread across multiple historical wooden buildings that could not support modern IT requirements. Phase 4 continues the mission unique IT equipment fit-out for the Mission Command Facility (MCF) in both its Secure and Support Operations areas and for power generation, with open storage and SCIFs to carry out the USARPAC mission.

**TRAINING AND DOCTRINE COMMAND (TRADOC) CYBER CENTER OF EXCELLENCE (CCOE):** This provides for the IT requirements within TRADOC's Cyber Center of Excellence (CCoE) at United States Army Garrison Fort Gordon, Georgia to reflect the expanded Cyber roles and missions. Through a combination of Military Construction (MILCON) and Restoration & Modernization (RM) projects, TRADOC has created a state-of-the-art Cyber Campus on Fort Gordon in order to attract, train, and retain world-class cyber warriors. These projects require mission unique IT equipment and systems to complete those facilities fit-out.

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<b>Exhibit P-40, Budget Line Item Justification:</b> PB 2021 Army		<b>Date:</b> February 2020
<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 2035A: Other Procurement, Army / BA 02: Communications and Electronics Equipment / BSA 73: Comm - Base Communications		<b>P-1 Line Item Number / Title:</b> 9200BB8650 / Information Systems
<b>ID Code</b> (A=Service Ready, B=Not Service Ready):	<b>Program Elements for Code B Items:</b> N/A	<b>Other Related Program Elements:</b> N/A
<b>Line Item MDAP/MAIS Code:</b> N/A		
<p>US ARMY EUROPE (USAREUR) EUROPEAN DETERRENCE INITIATIVE (EDI): This provides for the mission unique IT equipment requirements supporting US Army Europe (USAREUR) resources to be located at sites throughout Poland that support Reception, Staging, Onward movement, and Integration (RSOI) of US ground forces from Western Europe &amp; North America into Poland and North Central Europe. The build-out in Poland will be a combination of refurbishment of existing Polish facilities to meet US standards, establishment of weapons ranges and training area infrastructure, and both minor and major MILCON projects in Poland.</p> <p>US ARMY WAR COLLEGE (USAWC): This provides for the mission unique IT equipment requirements supporting the US Army War College's (USAWC) construction of a new primary academic facility to replace failing Root Hall and the renovation/modernization of Collins Hall, both located at Carlisle Barracks, Pennsylvania. USAWC is the singular location in the world to provide premier strategic-level Professional Military Education that produces graduates who are skilled critical thinkers and complex problem solvers in the global application of land power. USAWC educates its leaders in the study of command, leadership, and contemporary strategic doctrine, including cyber threats, irregular warfare, and terrorism.</p> <p>US ARMY CYBER COMMAND (ARCYBER): This provides for Facility Infrastructure-Mission Unique Equipment (FI-MUE) upgrades to ancillary equipment such as Heating, Ventilation, and Air Conditioning (HVAC), Computer Room Air Conditioning (CRAC), Uninterrupted Power Supply (UPS), Generators, and other power sources which are required to support the operational NETCOM-owned IT that provide installation-wide voice and data network services. This funding also provides for the IT fit-out of the new Information Systems Facilities scheduled for construction within the Future Years Development Plan (FYDP) at Joint Base Lewis/McChord, Washington; Fort Hamilton, New York; and Fort Polk, Louisiana. Additionally, it provides for the IT fit-out of four SATCOM facilities currently under construction at Camp Roberts, California; Camp Buckner, Okinawa, Japan; Landstuhl, Germany; and Camp Humphreys, Korea.</p> <p>US ARMY MATERIEL COMMAND (AMC): This provides for mission unique IT equipment supporting US Army Materiel Command's (AMC) scheduled construction of both a new Munitions Disassembly Complex (MDC) and a Railcar Holding Area (RHA). The MDC is required to support the Explosive Ordnance Disposal Technology (EODT) Directorate which develops solutions giving the Soldier greater stand-off from Improvised Explosive Devices (IEDs) and unexploded ordnance (UXOs). The RHA project is required to increase capacity at Crane Army Ammunition Activity (CAAA) to safely and efficiently meet the current ammunition workload. The RHA project relocates the Defense Logistics Agency disposition functions outside of the munitions operation area and replaces it with a new rail holding yard. It increases CAAA's overall rail holding yard capacity, surrounding storage magazines, and eliminates the need to operate under the Certificate of Risk Acceptance (CORA) during high volume ammunition out-load operations.</p> <p><b>INFORMATION SYSTEMS (MCA SUPPORT) (BB1400):</b> This program provides the worldwide IT infrastructure requirements for common user voice, data, and video networks in support of the MCA Program. It supplies non-tactical telecommunications equipment and services in support of Army base operations, Unified Capabilities, common user, and physical plant infrastructure to support IT assets. It provides standardized operational processes and procedures, enabling the Army consistent integration, synchronization, and delivery of voice, data, imagery, applications, and network capabilities down to the individuals in both the operating force and generating force Army-wide.</p> <p>US ARMY EUROPE (USAREUR) EUROPEAN DETERRENCE INITIATIVE (EDI): This provides the IT infrastructure requirements for common user voice, data, video networks in support of the US Army Europe (USAREUR) resources that will be located at sites throughout Poland. The resources will support Reception, Staging, Onward movement, and Integration (RSOI) of US ground forces from Western Europe &amp; North America into Poland and North Central Europe. The build-out in Poland will be a combination of refurbishment of existing Polish facilities to meet US standards, establishment of weapons ranges and training area infrastructure, and both minor and major MILCON projects in Poland.</p> <p><b>INFORMATION SYSTEMS (CONUS/WESTERN HEM) (BB8700):</b> This program provides the worldwide IT infrastructure requirements for common user voice, data, video networks in support of the SRM Program. It supplies non-tactical telecommunications equipment and services in support of Army base operations, Unified Capabilities, common user, and physical plant infrastructure that support IT assets. It provides standardized operational processes and procedures, enabling the Army consistent integration, synchronization, and delivery of voice, data, imagery, applications, and network capabilities down to the individuals in both the operating force and generating force Army-wide.</p> <p>In accordance with Section 1815 of 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>		

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<b>Exhibit P-40, Budget Line Item Justification:</b> PB 2021 Army							<b>Date:</b> February 2020			
<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 2035A: Other Procurement, Army / BA 02: Communications and Electronics Equipment / BSA 73: Comm - Base Communications					<b>P-1 Line Item Number / Title:</b> 9200BB8650 / Information Systems					
<b>ID Code</b> (A=Service Ready, B=Not Service Ready):			<b>Program Elements for Code B Items:</b> N/A			<b>Other Related Program Elements:</b> N/A				
<b>Line Item MDAP/MAIS Code:</b> N/A										

Secondary Distribution		FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025
Army	Quantity	-	-	-	-	-	-	-	-	-
	Total Obligation Authority	80.064	214.809	147.696	15.277	162.973	242.768	114.522	136.226	116.940
<b>Total:</b> Secondary Distribution	Quantity	-	-	-	-	-	-	-	-	-
	Total Obligation Authority	<b>80.064</b>	<b>214.809</b>	<b>147.696</b>	<b>15.277</b>	<b>162.973</b>	<b>242.768</b>	<b>114.522</b>	<b>136.226</b>	<b>116.940</b>

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

**Appropriation / Budget Activity / Budget Sub Activity:**  
 2035A: Other Procurement, Army / BA 02: Communications and Electronics  
 Equipment / BSA 73: Comm - Base Communications

**P-1 Line Item Number / Title:**  
 9200BB8650 / Information Systems

**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 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total
Exhibit Type	Title*	Subexhibits	ID CD	MDAP/MAIS Code	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)
P-5	B31510 / PROPONENT/MISSION IT-MCA/PHYSICAL RELOCATION	P-5a			- / 224.357	- / 58.324	- / 161.535	- / 118.817	- / 4.787	- / 123.604
P-5	BB1400 / INFORMATION SYSTEMS (MCA SUPPORT)	P-5a			- / 1,608.466	- / 16.300	- / 39.950	- / 15.637	- / 10.490	- / 26.127
P-5	BB8700 / INFORMATION SYSTEMS (CONUS/WESTERN HEM)	P-5a			- / 1,023.358	- / 5.440	- / 13.324	- / 13.242	- / -	- / 13.242
<b>P-40</b>	<b>Total Gross/Weapon System Cost</b>				<b>- / 2,856.181</b>	<b>- / 80.064</b>	<b>- / 214.809</b>	<b>- / 147.696</b>	<b>- / 15.277</b>	<b>- / 162.973</b>

\*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:**  
 PROPONENT/MISSION IS-MCA/PHYSICAL RELOCATION (B31510):  
 FY 2021 procurement dollars in the amount of \$123.604 million support PROPONENT/MISSION IS-MCA/PHYSICAL RELOCATION with procurement of commercial-off-the-shelf (COTS) end-user devices (including telephones, soft phones, video teleconferencing equipment, computing devices), associated licensing, and secure data switches, gateways, and encryption devices for classified and unclassified connectivity. It also supports information systems for classrooms, computers for traditional business users and Warfighters, video teleconferencing (VTC) systems, projectors, display/knowledge walls, secure telephone equipment, and physical plant infrastructure to support those information system assets. Procurements include network infrastructure engineering, acquisition, installation, security, and quality assurance to support the planning, design, implementation, and completion of a multitude of MCA and SRM projects. Installation of the mission unique/end user equipment is dependent upon construction timelines as it is the final phase of an MCA or SRM project and is required to ensure that new/renovated buildings are mission capable and ready for unit/Soldier occupancy. Specific breakdown of Base and OCO projects listed below:

FY 2021 Base procurement dollars in the amount of \$21.333 million supports USARPAC C2 Facility Phase 4 with end user IT equipment such as switches, computers, phones, cabling, cameras, sound and video mixers, display panels, speakers, and other supporting IT equipment.

FY 2021 Base procurement dollars in the amount of \$65.930 million supports TRADOC CCOE Mission Unique Equipment (MUE) IT requirements such as switches, encryption devices, computers, monitors, phones, printers, large screen displays, cameras, video codecs, microphones, speakers, and other supporting IT equipment.

FY 2021 Base procurement dollars in the amount of \$6.003 million supports USAWC with end user IT equipment such as switches, servers, phones, cabling, cameras, sound and video mixers, display panels, speakers, Intrusion Detection System (IDS) and other IT equipment.

FY 2021 Base procurement dollars in the amount of \$25.135 million supports ARCYBER FI MUE with end user IT equipment such as routers, switches, servers, computers, data storage, phones, cabling, cameras, sound and video mixers, display panels, speakers, encryption devices, and other IS equipment.

FY 2021 Base procurement dollars in the amount of \$0.416 million supports AMC Munitions Disassembly Complex and Crane Army Ammunition Activity (CAAA) Railcar Holding Area projects with end user IT equipment such as routers, switches, servers, computers, data storage, phones, cabling, cameras, sound and video mixers, display panels, speakers, encryption devices, Electronic Security System (ESS) installation, Intrusion Detection Systems (IDS) installation, and other IT equipment.

FY2021 OCO EDI procurement dollars in the amount of \$4.787 million support USAREUR with mission unique IT requirements for command and control (C2) in order to carry out the directives of OPLAN 4020.

INFORMATION SYSTEMS (MCA SUPPORT) (BB1400):



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<b>Exhibit P-40, Budget Line Item Justification:</b> PB 2021 Army		<b>Date:</b> February 2020
<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 2035A: Other Procurement, Army / BA 02: Communications and Electronics Equipment / BSA 73: Comm - Base Communications		<b>P-1 Line Item Number / Title:</b> 9200BB8650 / Information Systems
<b>ID Code</b> (A=Service Ready, B=Not Service Ready):	<b>Program Elements for Code B Items:</b> N/A	<b>Other Related Program Elements:</b> N/A
<b>Line Item MDAP/MAIS Code:</b> N/A		
<p>FY 2021 procurement dollars in the amount of \$26.127 million supports IT infrastructure with Unified Capability voice/data switches, common user network transport infrastructure, end-user instruments (including telephones, soft phones, video teleconferencing equipment or computing devices), associated licensing, training range connectivity which may include long runs of fiber optics cable, and secure data switches, gateways and encryption devices for classified network connectivity. This funding also procures the network infrastructure engineering, acquisition, installation, security, and quality assurance to support the planning, design, and implementation of IT requirements associated with MCA projects. Funding is required to ensure that these projects have all necessary IT infrastructure and equipment for soldier readiness of the facilities. Specific breakdown of Base and OCO projects listed below:</p> <p>FY 2021 Base procurement dollars in the amount of \$15.637 million supports Active Army, Army Reserves and National Guard (non EDI) with NIPR, SIPR, other IT services and equipment.</p> <p>FY2021 OCO EDI procurement dollars in the amount of \$10.490 million support USAREUR with common user NIPR, SIPR and other IT equipment required for command and control (C2) in order to carry out the directives of OPLAN 4020.</p> <p>INFORMATION SYSTEMS (CONUS/WESTERN HEM) (BB8700): FY 2021 Base procurement dollars in the amount of \$13.242 million supports SRM projects with Unified Capability voice/data switches; common user network transport infrastructure; end-user instruments which include telephones, soft phones, video teleconferencing equipment or computing devices; associated licensing; training range connectivity which may include long runs of fiber optics cable; and, secure data switches, gateways and encryption devices for classified network connectivity. This funding also procures the network infrastructure engineering, acquisition, installation, security, and quality assurance to support the planning, design, and implementation of Information Systems requirements. This program ensures these projects have all necessary IT infrastructure and equipment for soldier readiness of the facilities.</p>		

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<b>Exhibit P-5, Cost Analysis: PB 2021 Army</b>		<b>Date:</b> February 2020
<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 2035A / 02 / 73	<b>P-1 Line Item Number / Title:</b> 9200BB8650 / Information Systems	<b>Item Number / Title [DODIC]:</b> B31510 / PROPONENT/MISSION IT- MCA/PHYSICAL RELOCATION

<b>ID Code</b> (A=Service Ready, B=Not Service Ready) :				<b>MDAP/MAIS Code:</b>					
Resource Summary				Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total
Procurement Quantity (Units in Each)				-	-	-	-	-	-
Gross/Weapon System Cost (\$ in Millions)				224.357	58.324	161.535	118.817	4.787	123.604
Less PY Advance Procurement (\$ in Millions)				-	-	-	-	-	-
Net Procurement (P-1) (\$ in Millions)				224.357	58.324	161.535	118.817	4.787	123.604
Plus CY Advance Procurement (\$ in Millions)				-	-	-	-	-	-
<b>Total Obligation Authority (\$ in Millions)</b>				<b>224.357</b>	<b>58.324</b>	<b>161.535</b>	<b>118.817</b>	<b>4.787</b>	<b>123.604</b>
<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 2019			FY 2020			FY 2021 Base			FY 2021 OCO			FY 2021 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																		
Non Recurring Cost																		
Proponent/Mission IT Hardware <sup>(†)</sup>	224,357.000	1	224.357	49,574.000	1	49.574	49,701.000	1	49.701	-	-	-	-	-	-	-	-	-
GTMO Detention Legal Complex <sup>(†)</sup>	-	-	-	3,000.000	1	3.000	-	-	-	-	-	-	-	-	-	-	-	-
GTMO Unaccompanied Housing/High Value Detainee Facility/NOC Facility/Detention Facility <sup>(†)</sup>	-	-	-	5,750.000	1	5.750	-	-	-	-	-	-	-	-	-	-	-	-
USARPAC C2 Facility Phase 3 <sup>(†)</sup>	-	-	-	-	-	-	23,429.000	1	23.429	-	-	-	-	-	-	-	-	-
USFK BCTC/OPS SCIFs <sup>(†)</sup>	-	-	-	-	-	-	30,000.000	1	30.000	-	-	-	-	-	-	-	-	-
INSCOM Secure Admin/Operations Facility Incr 3 <sup>(†)</sup>	-	-	-	-	-	-	21,605.000	1	21.605	-	-	-	-	-	-	-	-	-
TRADOC Battle Lab/Moran/Allen <sup>(†)</sup>	-	-	-	-	-	-	14,400.000	1	14.400	-	-	-	-	-	-	-	-	-
EUCOM EDI <sup>(†)</sup>	-	-	-	-	-	-	22,400.000	1	22.400	-	-	-	-	-	-	-	-	-

**UNCLASSIFIED**

<b>Exhibit P-5, Cost Analysis: PB 2021 Army</b>		<b>Date:</b> February 2020
<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 2035A / 02 / 73		<b>P-1 Line Item Number / Title:</b> 9200BB8650 / Information Systems
<b>ID Code</b> (A=Service Ready, B=Not Service Ready) :		<b>MDAP/MAIS Code:</b>

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

Cost Elements	Prior Years			FY 2019			FY 2020			FY 2021 Base			FY 2021 OCO			FY 2021 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)
USARPAC C2 Facility Phase 4 <sup>(†)</sup>	-	-	-	-	-	-	-	-	-	21,333.000	1	21.333	-	-	-	21,333.000	1	21.333
TRADOC CCOE <sup>(†)</sup>	-	-	-	-	-	-	-	-	-	65,930.000	1	65.930	-	-	-	65,930.000	1	65.930
USAREUR EDJ <sup>(†)</sup>	-	-	-	-	-	-	-	-	-	-	-	-	4,787.000	1	4.787	4,787.000	1	4.787
Army War College Root Hall <sup>(†)</sup>	-	-	-	-	-	-	-	-	-	6,003.000	1	6.003	-	-	-	6,003.000	1	6.003
ARCYBER FI-MUE <sup>(†)</sup>	-	-	-	-	-	-	-	-	-	25,135.000	1	25.135	-	-	-	25,135.000	1	25.135
USAMC <sup>(†)</sup>	-	-	-	-	-	-	-	-	-	416.000	1	0.416	-	-	-	416.000	1	0.416
<i>Subtotal: Non Recurring Cost</i>	-	-	224.357	-	-	58.324	-	-	161.535	-	-	118.817	-	-	4.787	-	-	123.604
<i>Subtotal: Hardware Cost</i>	-	-	224.357	-	-	58.324	-	-	161.535	-	-	118.817	-	-	4.787	-	-	123.604
<b>Gross/Weapon System Cost</b>	-	-	224.357	-	-	58.324	-	-	161.535	-	-	118.817	-	-	4.787	-	-	123.604

Secondary Distribution		FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total
Army	Quantity	-	-	-	-	-
	Total Obligation Authority	58.324	161.535	118.817	4.787	123.604
<b>Total:</b>	<b>Quantity</b>	-	-	-	-	-
<b>Secondary Distribution</b>	<b>Total Obligation Authority</b>	58.324	161.535	118.817	4.787	123.604

<sup>(†)</sup> indicates the presence of a P-5a

**UNCLASSIFIED**

<b>Exhibit P-5a, Procurement History and Planning: PB 2021 Army</b>		<b>Date:</b> February 2020
<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 2035A / 02 / 73	<b>P-1 Line Item Number / Title:</b> 9200BB8650 / Information Systems	<b>Item Number / Title [DODIC]:</b> B31510 / PROPONENT/MISSION IT-MCA/PHYSICAL RELOCATION

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
Proponent/Mission IT Hardware		2019	Various / Various	C / FFP	ACC-RI, Rock Island, IL	Mar 2019	May 2019	1	49,574.000	Y		Jan 2019
Proponent/Mission IT Hardware		2020	TBS / TBS	C / FFP	ACC-RI, Rock Island, IL	May 2020	Jul 2020	1	49,701.000	N		Apr 2020
GTMO Detention Legal Complex		2019	TBS / TBS	C / FFP	ACC-RI, Rock Island, IL	Sep 2019	Dec 2019	1	3,000.000	N		
GTMO Unaccompanied Housing/ High Value Detainee Facility/NOC Facility/Detention Facility		2019	TBS / TBS	C / FFP	ACC-RI, Rock Island, IL	Sep 2019	Dec 2019	1	5,750.000	N		
USARPAC C2 Facility Phase 3		2020	TBS / TBS	C / FFP	ACC-RI, Rock Island, IL	Apr 2020	Jun 2020	1	23,429.000	N		
USFK BCTC/OPS SCIFs		2020	TBS / TBS	C / FFP	ACC-RI, Rock Island, IL	May 2020	Jul 2020	1	30,000.000	N		
INSCOM Secure Admin/Operations Facility Incr 3		2020	TBS / TBS	C / FFP	ACC-RI, Rock Island, IL	Mar 2020	May 2020	1	21,605.000	N		
TRADOC Battle Lab/Moran/Allen		2020	TBS / TBS	C / FFP	ACC-RI, Rock Island, IL	May 2020	Jul 2020	1	14,400.000	N		
EUCOM EDI		2020	TBS / TBS	C / FFP	ACC-RI, Rock Island, IL	May 2020	Jul 2020	1	22,400.000	N		
USARPAC C2 Facility Phase 4		2021	TBS / TBS	C / FFP	ACC-RI, Rock Island, IL	Apr 2021	Jun 2021	1	21,333.000	N		
TRADOC CCOE		2021	TBS / TBS	C / FFP	ACC-RI, Rock Island, IL	May 2021	Jul 2021	1	65,930.000	N		
USAREUR EDI	✓	2021	TBS / TBS	C / FFP	ACC-RI, Rock Island, IL	May 2021	Jul 2021	1	4,787.000	N		
Army War College Root Hall		2021	TBS / TBS	C / FFP	ACC-RI, Rock Island, IL	May 2021	Jul 2021	1	6,003.000	N		
ARCYBER FI-MUE		2021	TBS / TBS	C / FFP	ACC-RI, Rock Island, IL	Apr 2021	Jun 2021	1	25,135.000	N		
USAMC		2021	TBS / TBS	C / FFP	ACC-RI, Rock Island, IL	Apr 2021	Jun 2021	1	416.000	N		

**Remarks:**

All IT procurements consist of COTS/GOTS solutions; all quantities and unit costs vary by project, system configuration, and site. Army Contracting Command-Rock Island ACC-RI; ACC-HUA - Army Contracting Command-Fort Huachuca; ACC-APG - Army Contracting Command-Aberdeen Proving Ground. AFB - Air Force Base. USPFO - United States Property and Fiscal Office USACE - US Army Corps of Engineers. MICC - Mission and Installation Contracting Command FY19 Contract Awards:

- NES Associates, LLC, Alexandria, VA, ACC Rock Island, IL \$4,782
- NCI Information Systems, Inc, Reston, VA, ACC APG, Ft. Huachuca, AZ \$5,256
- Aranea Solutions, Inc; Leidos, Inc, Reston, VA, ACC-APG, APG, MD \$1,369
- Wildflower International, LTD., Santa Fe, NM, ACC APG, Ft. Huachuca, AZ \$421
- Midong Engineering & Construction Co., LTD, Seoul, Korea, 411th Contracting Support Korea \$689
- Government Acquisitions, Inc., Cincinnati, OH, USPFO for UTAH, Draper, UT \$130
- World Wide Technology, Inc. Maryland Heights, MO, USPFO for UTAH, Draper, UT \$361
- General Dynamics Mission Systems, Inc, Taunton, MA, / ACC APG, MD \$1,419
- Advantor Systems Corp., Orlando, FL/ USACE, Louisville, KY, \$62
- Four Tribes Construction Svcs, LLC., Los Angeles, CA/ Ft. Huachuca Project Office, Ft. Huachuca, AZ \$246
- CDW Government LLC., Vernon Hills, IL/ NAVAIR, JBMDL, NJ, \$1,556
- Advanced IT Concepts Inc., Winter Springs, FL/ ACC-APG, Ft. Huachuca, AZ, \$321
- MVP Network Consulting, LLC, Buffalo, NY/ MICC Ft. Drum, NY, \$11
- ID Technologies, LLC, Ashburn, VA/ MICC West Point, NY, \$118
- Affigent, LLC, Herndon, VA/ACC-APG, Ft. Huachuca, AZ, \$67
- Sterling Computers Corp, North Sioux City, SD/ ACC-APG, Ft. Huachuca, AZ, \$12
- CDW Government LLC, Vernon Hills, IL/ ACC-APG, Ft. Huachuca, AZ, \$5,884

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<b>Exhibit P-5a, Procurement History and Planning:</b> PB 2021 Army		<b>Date:</b> February 2020
<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 2035A / 02 / 73	<b>P-1 Line Item Number / Title:</b> 9200BB8650 / Information Systems	<b>Item Number / Title [DODIC]:</b> B31510 / PROPONENT/MISSION IT- MCA/PHYSICAL RELOCATION
Cherokee Nation Security & Defense, Tulsa, OK/MICC Ft. Sill, OK, \$30 1Prospect Technologies, LLC, Milwaukee, WI/ACC-APG, Ft. Huachuca, AZ \$51 General Dynamics Information Technology, Inc, Westwood, MA/ ACC-RI Rock Island, IL, \$20,612		

**UNCLASSIFIED**

<b>Exhibit P-5, Cost Analysis: PB 2021 Army</b>		<b>Date:</b> February 2020
<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 2035A / 02 / 73	<b>P-1 Line Item Number / Title:</b> 9200BB8650 / Information Systems	<b>Item Number / Title [DODIC]:</b> BB1400 / INFORMATION SYSTEMS (MCA SUPPORT)

<b>ID Code</b> (A=Service Ready, B=Not Service Ready) :	<b>MDAP/MAIS Code:</b>
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Resource Summary	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total
Procurement Quantity (Units in Each)	-	-	-	-	-	-
Gross/Weapon System Cost (\$ in Millions)	1,608.466	16.300	39.950	15.637	10.490	26.127
Less PY Advance Procurement (\$ in Millions)	-	-	-	-	-	-
Net Procurement (P-1) (\$ in Millions)	1,608.466	16.300	39.950	15.637	10.490	26.127
Plus CY Advance Procurement (\$ in Millions)	-	-	-	-	-	-
<b>Total Obligation Authority (\$ in Millions)</b>	<b>1,608.466</b>	<b>16.300</b>	<b>39.950</b>	<b>15.637</b>	<b>10.490</b>	<b>26.127</b>

*(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 2019			FY 2020			FY 2021 Base			FY 2021 OCO			FY 2021 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)
<b>Hardware Cost</b>																		
<b>Non Recurring Cost</b>																		
MCA Spt-Telephone Switch <sup>(†)</sup>	8,765.357	14	122.715	6,818.000	1	6.818	1,745.000	1	1.745	2,645.000	1	2.645	-	-	-	2,645.000	1	2.645
MCA Spt-Switch Upgrades <sup>(†)</sup>	273.689	61	16.695	988.000	1	0.988	250.000	1	0.250	299.000	1	0.299	-	-	-	299.000	1	0.299
MCA Spt-Telephone System <sup>(†)</sup>	158.361	61	9.660	627.000	1	0.627	125.000	1	0.125	149.000	1	0.149	-	-	-	149.000	1	0.149
MCA Spt-LAN Transport System <sup>(†)</sup>	582.155	58	33.765	2,068.000	1	2.068	300.000	1	0.300	2,998.000	1	2.998	-	-	-	2,998.000	1	2.998
MCA Spt-Range Connectivity <sup>(†)</sup>	1,424.643	14	19.945	1,710.000	1	1.710	800.000	1	0.800	1,998.000	1	1.998	-	-	-	1,998.000	1	1.998
MCA Spt-Secure Data/ Encryption Devices <sup>(†)</sup>	959.882	17	16.318	760.000	1	0.760	550.000	1	0.550	3,998.000	1	3.998	-	-	-	3,998.000	1	3.998
MCA Spt-Engineering Svcs <sup>(†)</sup>	23,835.000	4	95.340	1,598.000	1	1.598	1,000.000	1	1.000	2,865.000	1	2.865	-	-	-	2,865.000	1	2.865
Phys Plant Infrastructure Spt IS Assets <sup>(†)</sup>	1,159.000	2	2.318	1,731.000	1	1.731	1,780.000	1	1.780	685.000	1	0.685	-	-	-	685.000	1	0.685
MCA	1,291,710.000	1	1,291.710	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
USARCENT MCP COOP <sup>(†)</sup>	-	-	-	-	-	-	3,800.000	1	3.800	-	-	-	-	-	-	-	-	-

**UNCLASSIFIED**

<b>Exhibit P-5, Cost Analysis: PB 2021 Army</b>		<b>Date:</b> February 2020
<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 2035A / 02 / 73	<b>P-1 Line Item Number / Title:</b> 9200BB8650 / Information Systems	<b>Item Number / Title [DODIC]:</b> BB1400 / INFORMATION SYSTEMS (MCA SUPPORT)
<b>ID Code</b> (A=Service Ready, B=Not Service Ready) :		<b>MDAP/MAIS Code:</b>

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

Cost Elements	Prior Years			FY 2019			FY 2020			FY 2021 Base			FY 2021 OCO			FY 2021 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)
USARCENT ARIFJAN MCF Remediation <sup>(†)</sup>	-	-	-	-	-	-	10,000.000	1	10.000	-	-	-	-	-	-	-	-	-
USARCENT COOP/ Theater Black Core Network <sup>(†)</sup>	-	-	-	-	-	-	19,600.000	1	19.600	-	-	-	-	-	-	-	-	-
USAREUR EDI <sup>(†)</sup>	-	-	-	-	-	-	-	-	-	-	-	-	10,490.000	1	10.490	10,490.000	1	10.490
<i>Subtotal: Non Recurring Cost</i>	-	-	1,608.466	-	-	16.300	-	-	39.950	-	-	15.637	-	-	10.490	-	-	26.127
<i>Subtotal: Hardware Cost</i>	-	-	1,608.466	-	-	16.300	-	-	39.950	-	-	15.637	-	-	10.490	-	-	26.127
<b>Gross/Weapon System Cost</b>	-	-	1,608.466	-	-	16.300	-	-	39.950	-	-	15.637	-	-	10.490	-	-	26.127

Secondary Distribution		FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total
Army	Quantity	-	-	-	-	-
	Total Obligation Authority	16.300	39.950	15.637	10.490	26.127
<b>Total:</b>	Quantity	-	-	-	-	-
<b>Secondary Distribution</b>	Total Obligation Authority	16.300	39.950	15.637	10.490	26.127

(†) indicates the presence of a P-5a

**UNCLASSIFIED**

**Exhibit P-5a, Procurement History and Planning: PB 2021 Army** **Date:** February 2020

<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 2035A / 02 / 73	<b>P-1 Line Item Number / Title:</b> 9200BB8650 / Information Systems	<b>Item Number / Title [DODIC]:</b> BB1400 / INFORMATION SYSTEMS (MCA SUPPORT)
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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
MCA Spt-Telephone Switch		2019	Various / Installations	C / FFP	ACC-RI, Rock Island, IL	Dec 2018	Feb 2019	1	6,818.000	Y		
MCA Spt-Telephone Switch		2020	TBS / TBS	C / FFP	ACC-RI, Rock Island, IL	Mar 2020	Jun 2020	1	1,745.000	N		
MCA Spt-Telephone Switch		2021	TBS / TBS	C / FFP	ACC-RI, Rock Island, IL	Mar 2021	Jun 2021	1	2,645.000	N		
MCA Spt-Switch Upgrades		2019	Various / Installations	C / FFP	ACC-RI, Rock Island, IL	Dec 2018	Feb 2019	1	988.000	Y		
MCA Spt-Switch Upgrades		2020	TBS / TBS	C / FFP	ACC-RI, Rock Island, IL	Mar 2020	Jun 2020	1	250.000	N		
MCA Spt-Switch Upgrades		2021	TBS / TBS	C / FFP	ACC-RI, Rock Island, IL	Mar 2021	Jun 2021	1	299.000	N		
MCA Spt-Telephone System		2019	Various / Installations	C / FFP	ACC-RI, Rock Island, IL	Dec 2018	Feb 2019	1	627.000	Y		
MCA Spt-Telephone System		2020	TBS / TBS	C / FFP	ACC-RI, Rock Island, IL	Mar 2020	Jun 2020	1	125.000	N		
MCA Spt-Telephone System		2021	TBS / TBS	C / FFP	ACC-RI, Rock Island, IL	Mar 2021	Jun 2021	1	149.000	N		
MCA Spt-LAN Transport System		2019	Various / Installations	C / FFP	ACC-RI, Rock Island, IL	Dec 2018	Feb 2019	1	2,068.000	Y		
MCA Spt-LAN Transport System		2020	TBS / TBS	C / FFP	ACC-RI, Rock Island, IL	Mar 2020	Jun 2020	1	300.000	N		
MCA Spt-LAN Transport System		2021	TBS / TBS	C / FFP	ACC-RI, Rock Island, IL	Mar 2021	Jun 2021	1	2,998.000	N		
MCA Spt-Range Connectivity		2019	Various / Installations	C / FFP	ACC-RI, Rock Island, IL	Dec 2018	Feb 2019	1	1,710.000	Y		
MCA Spt-Range Connectivity		2020	TBS / TBS	C / FFP	ACC-RI, Rock Island, IL	Mar 2020	Jun 2020	1	800.000	N		
MCA Spt-Range Connectivity		2021	TBS / TBS	C / FFP	ACC-RI, Rock Island, IL	Mar 2021	Jun 2021	1	1,998.000	N		
MCA Spt-Secure Data/Encryption Devices		2019	Various / Installations	C / FFP	ACC-RI, Rock Island, IL	Dec 2018	Feb 2019	1	760.000	Y		
MCA Spt-Secure Data/Encryption Devices		2020	TBS / TBS	C / FFP	ACC-RI, Rock Island, IL	Mar 2020	Jun 2020	1	550.000	N		
MCA Spt-Secure Data/Encryption Devices		2021	TBS / TBS	C / FFP	ACC-RI, Rock Island, IL	Mar 2021	Jun 2021	1	3,998.000	N		
MCA Spt-Engineering Svcs		2019	Various / Installations	C / FFP	ACC-RI, Rock Island, IL	Dec 2018	Feb 2019	1	1,598.000	Y		
MCA Spt-Engineering Svcs		2020	TBS / TBS	C / FFP	ACC-RI, Rock Island, IL	Mar 2020	Jun 2020	1	1,000.000	N		
MCA Spt-Engineering Svcs		2021	TBS / TBS	C / FFP	ACC-RI, Rock Island, IL	Mar 2021	Jun 2021	1	2,865.000	N		
Phys Plant Infrastructure Spt IS Assets		2019	Various / Installations	C / FFP	ACC-RI, Rock Island, IL	Dec 2018	Feb 2019	1	1,731.000	Y		
Phys Plant Infrastructure Spt IS Assets		2020	TBS / TBS	C / FFP	ACC-RI, Rock Island, IL	Mar 2020	Jun 2020	1	1,780.000	N		
Phys Plant Infrastructure Spt IS Assets		2021	TBS / TBS	C / FFP	ACC-RI, Rock Island, IL	Mar 2021	Jun 2021	1	685.000	N		
USARCENT MCP COOP		2020	TBS / TBS	C / FFP	ACC-RI, Rock Island, IL	Mar 2020	Jul 2020	1	3,800.000	N		
USARCENT ARIFJAN MCF Remediation		2020	TBS / TBS	C / FFP	ACC-RI, Rock Island, IL	Mar 2020	Jul 2020	1	10,000.000	N		
USARCENT COOP/Theater Black Core Network		2020	TBS / TBS	C / FFP	ACC-RI, Rock Island, IL	Mar 2020	Jul 2020	1	19,600.000	N		



**UNCLASSIFIED**

<b>Exhibit P-5a, Procurement History and Planning:</b> PB 2021 Army							<b>Date:</b> February 2020					
<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 2035A / 02 / 73			<b>P-1 Line Item Number / Title:</b> 9200BB8650 / Information Systems				<b>Item Number / Title [DODIC]:</b> BB1400 / INFORMATION SYSTEMS (MCA SUPPORT)					
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
USAREUR EDI	✓	2021	TBS / TBS	C / FFP	ACC-RI, Rock Island, IL	Apr 2021	Jul 2021	1	10,490.000	N		

**Remarks:**

All IT procurements consist of COTS/GOTS solutions; all quantities and unit costs vary by project, system configuration, and site. ACC-RI - Army Contracting Command-Rock Island; ACC-HUA - Army Contracting Command-Fort Huachuca; ACC-APG - Army Contracting Command-Aberdeen Proving Ground. DISA/DITCO - Defense Information Systems Agency/ Defense Information Technology Contracting Organization. MICC - Mission and Installation Contracting Command. AFB - Air Force Base. USPFO - United States Property and Fiscal Office. GSA FEDSIM - General Services Administration Federal Systems Integration and Management Center.

**FY19 Contract Awards:**

- ZIVARO, Inc; Adam Zuckerman, Denver, CO, USPFO Austin, TX, \$158
- DECA, Ft. Lee, VA, DISA/DITCO, Scott AFB, IL \$830
- M. C. Dean, Inc, Tysons, VA, DISA Global West, Scott AFB, IL \$10,718
- General Dynamics Information Technology, Inc, Fairfax, VA, ACC APG, Ft. Huachuca, AZ \$621
- UNICOM Government, Inc., Chantilly, VA, ACC APG, Ft. Huachuca, AZ, \$256
- AFFIGENT, LLC, Herndon, VA, ACC APG, Ft. Huachuca, AZ, \$169
- Integrated Security Technologies, Inc., Herndon, VA, MICC Ft. Lee, Ft. Lee, VA \$265
- ID Technologies, LLC, Ashburn, VA/ USPFO Cheyenne, WY, \$710
- CACI NSS, INC., Reston, VA/ GSA/FEDSIM Washington, DC, \$451
- Evergreen Fire Alarms, LLC., Tacoma, WA, USACE, Huntsville, AL, \$29
- NCI Information System Inc., Reston, VA/ ACC-APG, Ft. Huachuca, AZ, \$1,413
- Advanced IT Concepts Inc., Winter Springs, FL/ ACC-APG, Ft. Huachuca, AZ, \$382
- Affigent, LLC, Herndon, VA/ACC-APG, Ft. Huachuca, AZ, \$38
- Affigent, LLC, Herndon, VA/USPFO MD, Havre De Grace, MD, \$110
- Tribalco, LLC, Bethesda, MD/ACC-RI, Rock Island, IL, \$401
- General Dynamics Information Technology, Inc, Westwood, MA/ ACC-RI Rock Island, IL, \$4,561

**UNCLASSIFIED**

<b>Exhibit P-5, Cost Analysis: PB 2021 Army</b>		Date: February 2020
<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 2035A / 02 / 73	<b>P-1 Line Item Number / Title:</b> 9200BB8650 / Information Systems	<b>Item Number / Title [DODIC]:</b> BB8700 / INFORMATION SYSTEMS (CONUS/WESTERN HEM)

<b>ID Code</b> (A=Service Ready, B=Not Service Ready) :	<b>MDAP/MAIS Code:</b>
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<b>Resource Summary</b>	<b>Prior Years</b>	<b>FY 2019</b>	<b>FY 2020</b>	<b>FY 2021 Base</b>	<b>FY 2021 OCO</b>	<b>FY 2021 Total</b>
Procurement Quantity (Units in Each)	-	-	-	-	-	-
Gross/Weapon System Cost (\$ in Millions)	1,023.358	5.440	13.324	13.242	-	13.242
Less PY Advance Procurement (\$ in Millions)	-	-	-	-	-	-
Net Procurement (P-1) (\$ in Millions)	1,023.358	5.440	13.324	13.242	-	13.242
Plus CY Advance Procurement (\$ in Millions)	-	-	-	-	-	-
<b>Total Obligation Authority (\$ in Millions)</b>	<b>1,023.358</b>	<b>5.440</b>	<b>13.324</b>	<b>13.242</b>	<b>-</b>	<b>13.242</b>

*(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.

<b>Cost Elements</b>	<b>Prior Years</b>			<b>FY 2019</b>			<b>FY 2020</b>			<b>FY 2021 Base</b>			<b>FY 2021 OCO</b>			<b>FY 2021 Total</b>		
	<b>Unit Cost (\$ K)</b>	<b>Qty (Each)</b>	<b>Total Cost (\$ M)</b>	<b>Unit Cost (\$ K)</b>	<b>Qty (Each)</b>	<b>Total Cost (\$ M)</b>	<b>Unit Cost (\$ K)</b>	<b>Qty (Each)</b>	<b>Total Cost (\$ M)</b>	<b>Unit Cost (\$ K)</b>	<b>Qty (Each)</b>	<b>Total Cost (\$ M)</b>	<b>Unit Cost (\$ K)</b>	<b>Qty (Each)</b>	<b>Total Cost (\$ M)</b>	<b>Unit Cost (\$ K)</b>	<b>Qty (Each)</b>	<b>Total Cost (\$ M)</b>
Hardware Cost																		
Non Recurring Cost																		
Sustain/Restore/Modernize (SRM) HW <sup>(t)</sup>	341,119.330	3	1,023.358	5,440.000	1	5.440	13,324.000	1	13.324	13,242.000	1	13.242	-	-	-	13,242.000	1	13.242
Subtotal: Non Recurring Cost	-	-	1,023.358	-	-	5.440	-	-	13.324	-	-	13.242	-	-	-	-	-	13.242
Subtotal: Hardware Cost	-	-	1,023.358	-	-	5.440	-	-	13.324	-	-	13.242	-	-	-	-	-	13.242
<b>Gross/Weapon System Cost</b>	-	-	<b>1,023.358</b>	-	-	<b>5.440</b>	-	-	<b>13.324</b>	-	-	<b>13.242</b>	-	-	-	-	-	<b>13.242</b>

<b>Secondary Distribution</b>	<b>FY 2019</b>	<b>FY 2020</b>	<b>FY 2021 Base</b>	<b>FY 2021 OCO</b>	<b>FY 2021 Total</b>
Army					
Quantity	-	-	-	-	-
Total Obligation Authority	5.440	13.324	13.242	-	13.242
<b>Total: Secondary Distribution</b>					
Quantity	-	-	-	-	-
Total Obligation Authority	5.440	13.324	13.242	-	13.242

<sup>(t)</sup> indicates the presence of a P-5a

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<b>Exhibit P-5a, Procurement History and Planning:</b> PB 2021 Army							<b>Date:</b> February 2020				
<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 2035A / 02 / 73			<b>P-1 Line Item Number / Title:</b> 9200BB8650 / Information Systems				<b>Item Number / Title [DODIC]:</b> BB8700 / INFORMATION SYSTEMS (CONUS/WESTERN HEM)				

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
Sustain/Restore/Modernize (SRM) HW		2019	Various / Various	C / FFP	CHESS, Ft Belvoir, VA	Nov 2018	Jan 2019	1	5,440.000	Y		
Sustain/Restore/Modernize (SRM) HW		2020	TBS / TBS	C / FFP	CHESS, Ft Belvoir, VA	May 2020	Jul 2020	1	13,324.000	N		
Sustain/Restore/Modernize (SRM) HW		2021	TBS / TBS	C / FFP	CHESS, Ft Belvoir, VA	May 2021	Jul 2021	1	13,242.000	N		

**Remarks:**

All IT procurements consist of COTS/GOTS solutions; all quantities and unit costs vary by project, system configuration, and site. CHESS - Computer Hardware Enterprise Software and Solutions. RCO - Regional Contracting Office. ACC-RI - Army Contracting Command-Rock Island.  
 FY19 Contract Awards:  
 M. C. Dean, Inc, Tysons, VA, RCO Stuttgart, Germany, \$2,427  
 General Dynamics Information Technology, Inc, Westwood, MA/ ACC-RI Rock Island, IL, \$1,999

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

<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 2035A: Other Procurement, Army / BA 02: Communications and Electronics Equipment / BSA 73: Comm - Base Communications	<b>P-1 Line Item Number / Title:</b> 9666BU8000 / Emergency Management Modernization Program
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<b>ID Code</b> (A=Service Ready, B=Not Service Ready):	<b>Program Elements for Code B Items:</b> N/A	<b>Other Related Program Elements:</b> N/A
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**Line Item MDAP/MAIS Code:** N/A

Resource Summary	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	To Complete	Total
Procurement Quantity ( <i>Units in Each</i> )	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost ( <i>\$ in Millions</i> )	167.310	3.789	4.854	4.900	-	4.900	4.934	4.935	4.984	4.995	-	200.701
Less PY Advance Procurement ( <i>\$ in Millions</i> )	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) ( <i>\$ in Millions</i> )	167.310	3.789	4.854	4.900	-	4.900	4.934	4.935	4.984	4.995	-	200.701
Plus CY Advance Procurement ( <i>\$ in Millions</i> )	-	-	-	-	-	-	-	-	-	-	-	-
<b>Total Obligation Authority (<i>\$ in Millions</i>)</b>	<b>167.310</b>	<b>3.789</b>	<b>4.854</b>	<b>4.900</b>	<b>-</b>	<b>4.900</b>	<b>4.934</b>	<b>4.935</b>	<b>4.984</b>	<b>4.995</b>	<b>-</b>	<b>200.701</b>

*(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 Emergency Management Modernization Program (EM2P) is a single integrated acquisition program for the design, procurement, fielding, new equipment training, and life-cycle management of emergency management capabilities in support of Army installations, Soldiers and their Families, civilians, and contractors. EM2P provides capabilities that increase situational awareness, decrease responder time, and allow for quicker warning and notification of personnel during the management of an active incident. EM2P consists of Enterprise Mass Warning and Notification (EMWN) technologies, Enhanced 911 (E911) solutions and Computer Aided Dispatch (CAD) capability (fielding beginning in FY20).

CAD is a central hub capable of dispatching law enforcement/fire/medical services. CAD is integrated with Automated Installation Entry (AIE), Enterprise Mass Warning and Notification (EMWN), and law enforcement (LE) authoritative data sources as well as with local civilian CAD and civilian LE authoritative data sources. CAD is a technical software/hardware system which assists dispatchers, call-takers, and 911 operators in tracking, monitoring and rapid dispatching of first responders using geographic information system (GIS) mobile technology, pre-programmed protocols getting the nearest responders quickest to critical incidents, while maintaining records of these responses. CAD is a system used by dispatchers and first responders to log, track, dispatch and assign calls for service.

Currently, various locally procured Computer Aided Dispatch (CAD) systems are being used on Army installations posing cybersecurity risks and are not in compliance with Army Regulation (AR) 70-1, Army Acquisition Policy, as some systems are not accredited and are vulnerable to cyber threats. CAD systems on Army installations do not fully integrate with Enhanced 911 and other emergency services like Land Mobile Radio. Many do not have the capability to digitally communicate reports of incidents, location, situational information, and background information by interfacing with authoritative informational data sources and providing enterprise level situational awareness/information sharing to assist military and civilian law enforcement, fire and medical. This causes delays in dispatch and response times, increased risk to property and personnel, and resource management constraints. The desired CAD capability will provide secure and reliable digital communications to assist military and civilian emergency personnel with emergency management operations. A standardized CAD system procured and implemented on an enterprise level will reduce the loss of life and property, increase situational awareness and improve reporting and analysis of incidents. CAD systems reduce the loss of life and property by automating incident creation and minimizing dispatch and response times as identified in the Fort Hood Army Internal Review. The system also improves situational awareness by sharing information from authoritative data sources (i.e. communications systems, law enforcement databases, etc.) with military and civilian first responders. Additionally, CAD allows for real time asset management, tracking the location and status of individual assets (personnel and equipment) which provides a superior real time common operating picture throughout the entire incident lifecycle. This data can be used during or after the incident, providing forensics of key performance indicators. Furthermore this data improves future manpower modeling based on calls for service tracked within the CAD system. The monetary return on investment is based on a scalable solution that takes into consideration the size and scope of the installation mission set, this will provide a cost effective strategy.

**UNCLASSIFIED**

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

<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 2035A: Other Procurement, Army / BA 02: Communications and Electronics Equipment / BSA 73: Comm - Base Communications	<b>P-1 Line Item Number / Title:</b> 9666BU8000 / Emergency Management Modernization Program
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<b>ID Code</b> (A=Service Ready, B=Not Service Ready):	<b>Program Elements for Code B Items:</b> N/A	<b>Other Related Program Elements:</b> N/A
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**Line Item MDAP/MAIS Code:** N/A

The EM2P provides capabilities that will save lives by enabling Commanders to quickly and effectively respond to any installation emergency events, to include insider threats, terrorist activity and natural disasters.

Secondary Distribution		FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025
Army	Quantity	-	-	-	-	-	-	-	-	-
	Total Obligation Authority	3.789	4.854	4.900	-	4.900	4.934	4.935	4.984	4.995
<b>Total: Secondary Distribution</b>	<b>Quantity</b>	-	-	-	-	-	-	-	-	-
	<b>Total Obligation Authority</b>	<b>3.789</b>	<b>4.854</b>	<b>4.900</b>	-	<b>4.900</b>	<b>4.934</b>	<b>4.935</b>	<b>4.984</b>	<b>4.995</b>

**Justification:**  
 FY 2021 Base procurement funding in the amount of \$4.900 million supports Computer Aided Dispatch (CAD) capability fielding. The CAD capability leverages a System of Systems approach that integrates e911 and other emergency services. Funding will also procure the Hardware/Software required to provide secure and reliable digital communications to assist military and civilian emergency personnel with emergency management operations.

CAD capabilities are currently employed in a fragmented operational, training and sustainment environment and are managed at the individual installation level. CONUS and Outside the Continental US (OCONUS) installations have historically procured non-standard equipment with closed architecture and proprietary software. In accordance with AR 70-1, the CAD capability must use a System of Systems approach that leverages aspects of the Chief Information Officer (CIO)/G-6, Assistant Secretary of the Army for Acquisition, Logistics and Technology (ASA (ALT)), Common Operating Environment (COE) Architecture and the DOD IT Strategy Roadmap. This will allow for a standardized, scalable and common technical solution across diverse installation sizes with the ability to integrate and interoperate with emergency response capabilities.

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 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 2021 Army **Date:** February 2020

<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 2035A: Other Procurement, Army / BA 02: Communications and Electronics Equipment / BSA 73: Comm - Base Communications	<b>P-1 Line Item Number / Title:</b> 9674B33000 / Home Station Mission Command Centers (HSMCC)
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<b>ID Code</b> (A=Service Ready, B=Not Service Ready):	<b>Program Elements for Code B Items:</b> N/A	<b>Other Related Program Elements:</b> N/A
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**Line Item MDAP/MAIS Code:** N/A

Resource Summary	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	To Complete	Total
Procurement Quantity ( <i>Units in Each</i> )	5	6	5	-	-	-	-	-	-	-	-	16
Gross/Weapon System Cost ( <i>\$ in Millions</i> )	20.050	24.479	47.174	15.227	-	15.227	-	-	-	-	-	106.930
Less PY Advance Procurement ( <i>\$ in Millions</i> )	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) ( <i>\$ in Millions</i> )	20.050	24.479	47.174	15.227	-	15.227	-	-	-	-	-	106.930
Plus CY Advance Procurement ( <i>\$ in Millions</i> )	-	-	-	-	-	-	-	-	-	-	-	-
<b>Total Obligation Authority (<i>\$ in Millions</i>)</b>	<b>20.050</b>	<b>24.479</b>	<b>47.174</b>	<b>15.227</b>	<b>-</b>	<b>15.227</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>106.930</b>

*(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> )	4,010.000	4,079.833	9,434.800	-	-	-	-	-	-	-	-	6,683.125

**Description:**

This funding line is directly aligned to the Army Network Modernization Strategy LOE 3, Interoperability and LOE 4, Command Post. Efforts are aligned to support the Network-Cross Functional Team capability set approach to achieve the network modernization strategy

The Home Station Mission Command Center (HSMCC) is a suite of standardized capabilities utilized at Corps, Division and Theater Headquarters that allows expeditionary mission command during all operational phases. HSMCC provides the physical infrastructure (5 conference rooms + 1 Sensitive Compartmented Information Facility) that supports Distributive Mission Command. HSMCC will enable units to execute a variety of required missions, such as Defense Support to Civil Authorities, Training and Readiness, Preparing and Deploying regionally aligned forces from Home Station, and Senior Commander Functions. Advances in network capability, telepresence tools and remote collaboration provide the technical foundation for the HSMCCs reach-forward and reach-back capabilities. HSMCC provides control and enables the mission command warfighting function by providing a secure, integrated, standards-based environment that ensures uninterrupted global access and enables collaboration and decisive action throughout all operational phases across all environments. The Mission Partner Environment stack supports CONUS/OCONUS Command and Control (C2) training for Joint, Coalition interoperability across a Multiple Domain Battlespace, creating a virtual environment for commanders before the fight.

Mission Partner Environment (MPE) enables Army units to establish an enduring and episodic, tactical and strategic network that allows US Army units to train, integrate, and fight in any theater regardless of the theater's current security classification with participating Unified Action Partner(s) (UAP). MPE enables seamless network integration to establish information sharing for Joint All Domain Command and Control (JADC2) and Common Operational Picture (COP) needs with our Coalition Partners to support the Joint Force in the rapid and continuous integration of all domains of warfare - land, sea, air, space, and cyberspace - to deter and prevail against near-peer adversaries, and fight and win if deterrence fails. MPE Tactical network capability will include Tactical Network Extension Packages, Enterprise Solutions and Network Operations, capabilities provided by Program Executive Office Command Control Communications Tactical (PEO C3T).

Secondary Distribution	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025
Army	Quantity	5	5	-	-	-	-	-	-
	Total Obligation Authority	20.000	47.174	15.227	-	15.227	-	-	-
ANG	Quantity	1	-	-	-	-	-	-	-

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

<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 2035A: Other Procurement, Army / BA 02: Communications and Electronics Equipment / BSA 73: Comm - Base Communications	<b>P-1 Line Item Number / Title:</b> 9674B33000 / Home Station Mission Command Centers (HSMCC)
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<b>ID Code</b> (A=Service Ready, B=Not Service Ready):	<b>Program Elements for Code B Items:</b> N/A	<b>Other Related Program Elements:</b> N/A
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**Line Item MDAP/MAIS Code:** N/A

	<b>Secondary Distribution</b>	<b>FY 2019</b>	<b>FY 2020</b>	<b>FY 2021 Base</b>	<b>FY 2021 OCO</b>	<b>FY 2021 Total</b>	<b>FY 2022</b>	<b>FY 2023</b>	<b>FY 2024</b>	<b>FY 2025</b>
	Total Obligation Authority	4.479	-	-	-	-	-	-	-	-
<b>Total:</b>	<b>Quantity</b>	<b>6</b>	<b>5</b>	-	-	-	-	-	-	-
<b>Secondary Distribution</b>	<b>Total Obligation Authority</b>	<b>24.479</b>	<b>47.174</b>	<b>15.227</b>	-	<b>15.227</b>	-	-	-	-

**UNCLASSIFIED**

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

<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 2035A: Other Procurement, Army / BA 02: Communications and Electronics Equipment / BSA 73: Comm - Base Communications	<b>P-1 Line Item Number / Title:</b> 9674B33000 / Home Station Mission Command Centers (HSMCC)
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<b>ID Code</b> (A=Service Ready, B=Not Service Ready):	<b>Program Elements for Code B Items:</b> N/A	<b>Other Related Program Elements:</b> N/A
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**Line Item MDAP/MAIS Code:** N/A

Exhibits Schedule					Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total
Exhibit Type	Title*	Subexhibits	ID CD	MDAP/MAIS Code	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)
P-5	B33011 / Home Station Mission Command Centers (HSMCC)				5 / 20.050	6 / 24.479	5 / 47.174	- / 15.227	- / -	- / 15.227
<b>P-40</b>	<b>Total Gross/Weapon System Cost</b>				<b>5 / 20.050</b>	<b>6 / 24.479</b>	<b>5 / 47.174</b>	<b>- / 15.227</b>	<b>- / -</b>	<b>- / 15.227</b>

\*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:**  
 FY2021 base procurement dollars in the amount of \$15.227 million supports procurement of Mission Partner Environment (MPE) equipment for three divisions and continues fielding of Brigade Combat Teams (BCT) and Expeditionary Signal Battalions (ESB) by the end of FY2022 in support of Defender 22 requirements.

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**

<b>Exhibit P-5, Cost Analysis: PB 2021 Army</b>		<b>Date:</b> February 2020
<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 2035A / 02 / 73	<b>P-1 Line Item Number / Title:</b> 9674B33000 / Home Station Mission Command Centers (HSMCC)	<b>Item Number / Title [DODIC]:</b> B33011 / Home Station Mission Command Centers (HSMCC)

<b>ID Code</b> (A=Service Ready, B=Not Service Ready) :	<b>MDAP/MAIS Code:</b>
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<b>Resource Summary</b>	<b>Prior Years</b>	<b>FY 2019</b>	<b>FY 2020</b>	<b>FY 2021 Base</b>	<b>FY 2021 OCO</b>	<b>FY 2021 Total</b>
Procurement Quantity (Units in Each)	5	6	5	-	-	-
Gross/Weapon System Cost (\$ in Millions)	20.050	24.479	47.174	15.227	-	15.227
Less PY Advance Procurement (\$ in Millions)	-	-	-	-	-	-
Net Procurement (P-1) (\$ in Millions)	20.050	24.479	47.174	15.227	-	15.227
Plus CY Advance Procurement (\$ in Millions)	-	-	-	-	-	-
<b>Total Obligation Authority (\$ in Millions)</b>	<b>20.050</b>	<b>24.479</b>	<b>47.174</b>	<b>15.227</b>	<b>-</b>	<b>15.227</b>

*(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)	4,010.000	4,079.833	9,434.800	-	-	-

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

<b>Cost Elements</b>	<b>Prior Years</b>			<b>FY 2019</b>			<b>FY 2020</b>			<b>FY 2021 Base</b>			<b>FY 2021 OCO</b>			<b>FY 2021 Total</b>		
	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)
<b>Hardware Cost</b>																		
<b>Recurring Cost</b>																		
HSMCC Efforts	-	-	10.400	-	-	12.585	-	-	10.000	-	-	-	-	-	-	-	-	-
MPE - Tactical Network Extension Packages	-	-	-	-	-	-	-	-	28.226	-	-	12.497	-	-	-	-	-	12.497
MPE - Enterprise Solutions	-	-	-	-	-	-	-	-	7.310	-	-	-	-	-	-	-	-	-
MPE - Network Operations	-	-	-	-	-	-	-	-	1.638	-	-	2.730	-	-	-	-	-	2.730
<i>Subtotal: Recurring Cost</i>	-	-	<i>10.400</i>	-	-	<i>12.585</i>	-	-	<i>47.174</i>	-	-	<i>15.227</i>	-	-	-	-	-	<i>15.227</i>
<i>Subtotal: Hardware Cost</i>	-	-	<b>10.400</b>	-	-	<b>12.585</b>	-	-	<b>47.174</b>	-	-	<b>15.227</b>	-	-	-	-	-	<b>15.227</b>
<b>Support - Program Management Cost</b>																		
Contractor Management	-	-	1.250	-	-	1.486	-	-	-	-	-	-	-	-	-	-	-	-
<i>Subtotal: Support - Program Management Cost</i>	-	-	<b>1.250</b>	-	-	<b>1.486</b>	-	-	-	-	-	-	-	-	-	-	-	-
<b>Support - System Engineering Cost</b>																		
System Engineering	-	-	8.400	-	-	10.408	-	-	-	-	-	-	-	-	-	-	-	-
<i>Subtotal: Support - System Engineering Cost</i>	-	-	<b>8.400</b>	-	-	<b>10.408</b>	-	-	-	-	-	-	-	-	-	-	-	-
<b>Gross/Weapon System Cost</b>	<b>4,010.000</b>	<b>5</b>	<b>20.050</b>	<b>4,079.833</b>	<b>6</b>	<b>24.479</b>	<b>9,434.800</b>	<b>5</b>	<b>47.174</b>	-	-	<b>15.227</b>	-	-	-	-	-	<b>15.227</b>

**UNCLASSIFIED**

<b>Exhibit P-5, Cost Analysis:</b> PB 2021 Army		<b>Date:</b> February 2020
<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 2035A / 02 / 73	<b>P-1 Line Item Number / Title:</b> 9674B33000 / Home Station Mission Command Centers (HSMCC)	<b>Item Number / Title [DODIC]:</b> B33011 / Home Station Mission Command Centers (HSMCC)

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

**Remarks:**  
MPE support started in FY20 will continue in FY21.

Secondary Distribution		FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total
Army	Quantity	5	5	-	-	-
	Total Obligation Authority	20.000	47.174	15.227	-	15.227
ANG	Quantity	1	-	-	-	-
	Total Obligation Authority	4.479	-	-	-	-
<b>Total:</b>	<b>Quantity</b>	<b>6</b>	<b>5</b>	<b>-</b>	<b>-</b>	<b>-</b>
<b>Secondary Distribution</b>	<b>Total Obligation Authority</b>	<b>24.479</b>	<b>47.174</b>	<b>15.227</b>	<b>-</b>	<b>15.227</b>

**UNCLASSIFIED**

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

<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 2035A: Other Procurement, Army / BA 02: Communications and Electronics Equipment / BSA 73: Comm - Base Communications	<b>P-1 Line Item Number / Title:</b> 9683B80000 / Joint Information Environment (JIE)
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<b>ID Code</b> (A=Service Ready, B=Not Service Ready):	<b>Program Elements for Code B Items:</b> N/A	<b>Other Related Program Elements:</b> N/A
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**Line Item MDAP/MAIS Code:** N/A

Resource Summary	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	To Complete	Total
Procurement Quantity ( <i>Units in Each</i> )	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost ( <i>\$ in Millions</i> )	-	-	-	3.177	-	3.177	26.217	-	-	-	-	29.394
Less PY Advance Procurement ( <i>\$ in Millions</i> )	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) ( <i>\$ in Millions</i> )	-	-	-	3.177	-	3.177	26.217	-	-	-	-	29.394
Plus CY Advance Procurement ( <i>\$ in Millions</i> )	-	-	-	-	-	-	-	-	-	-	-	-
<b>Total Obligation Authority</b> ( <i>\$ in Millions</i> )	-	-	-	<b>3.177</b>	-	<b>3.177</b>	<b>26.217</b>	-	-	-	-	<b>29.394</b>

*(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:**

This line supports the Army Network Modernization Strategy, Line of Effort 1B, Network Enabling Functions.

The Joint Regional Security Stack (JRSS) program acquires NIPRNet and SIPRNet boundary infrastructure hardware and software. This infrastructure enables transition of the Army network from the Army NIPRNet Gateways and SIPRNet Command and Control (C2) Control Nodes to a common, standard DoD multi-protocol label switching architecture, enabling inter- and intra-agency network management and defensive operations. All information technology (IT) procurements consist of Commercial/Government Off The Shelf (COTS/GOTS) solutions; all quantities and unit costs vary by system configuration and site.

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 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025
Army									
Quantity	-	-	-	-	-	-	-	-	-
Total Obligation Authority	-	-	3.177	-	3.177	26.217	-	-	-
<b>Total:</b>									
<b>Secondary Distribution</b>									
Quantity	-	-	-	-	-	-	-	-	-
Total Obligation Authority	-	-	3.177	-	3.177	26.217	-	-	-

**Justification:**

FY 2021 Base procurement dollars in the amount of \$3.177 million supports JRSS requirements of critical network equipment (hardware, software, servers, switches, routers, etc.)

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

<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 2035A: Other Procurement, Army / BA 02: Communications and Electronics Equipment / BSA 73: Comm - Base Communications	<b>P-1 Line Item Number / Title:</b> 9700BU0500 / Installation Info Infrastructure Mod Program
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<b>ID Code</b> (A=Service Ready, B=Not Service Ready):	<b>Program Elements for Code B Items:</b> N/A	<b>Other Related Program Elements:</b> N/A
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**Line Item MDAP/MAIS Code:** N/A

Resource Summary	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	To Complete	Total
Procurement Quantity ( <i>Units in Each</i> )	-	10	-	-	2	2	-	-	-	-	Continuing	Continuing
Gross/Weapon System Cost ( <i>\$ in Millions</i> )	4,290.840	246.770	341.314	300.035	74.004	374.039	248.231	216.410	203.581	228.531	Continuing	Continuing
Less PY Advance Procurement ( <i>\$ in Millions</i> )	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) ( <i>\$ in Millions</i> )	4,290.840	246.770	341.314	300.035	74.004	374.039	248.231	216.410	203.581	228.531	Continuing	Continuing
Plus CY Advance Procurement ( <i>\$ in Millions</i> )	-	-	-	-	-	-	-	-	-	-	-	-
<b>Total Obligation Authority (<i>\$ in Millions</i>)</b>	<b>4,290.840</b>	<b>246.770</b>	<b>341.314</b>	<b>300.035</b>	<b>74.004</b>	<b>374.039</b>	<b>248.231</b>	<b>216.410</b>	<b>203.581</b>	<b>228.531</b>	<b>Continuing</b>	<b>Continuing</b>

*(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> )	-	24,677.000	-	-	37,002.000	187,019.500	-	-	-	-	Continuing	Continuing

**Description:**

Description:  
This program supports the Army's Network Modernization Strategy Line of Effort #1 Unified Network, by replacing obsolete communications equipment, converging disparate segments of the current enterprise architecture, eliminating excessive and unnecessary duplication of existing networks, and increasing interoperability amongst joint users and coalition partners. The end state is to provide reliable communications transport options for the Army to enable information dominance across Multi-Domain operations. This program prepares installations to leverage future advanced modernization capabilities such as the Synthetic Training Environment (STE) and commercial cloud capabilities.

BU0500 / Installation Information Infrastructure Modernization Program (I3MP):  
The Installation Information Infrastructure Modernization Program (I3MP) acquires the Army enterprise network communications infrastructure for all of the 288 Army installations worldwide. This includes site surveys, engineering design, integration, hardware, and information technology (routers, switches, fiber optic cable, and broadband access to enable audio/visual, voice phone communications, data and internet) for both classified and unclassified communications. This program modernizes the Army network by replacing end-of-lifecycle components that are obsolete to ensure the Army can maintain communications transport throughput and bandwidth capacity to satisfy projected Army operational demands. The converged network enables Unified Capabilities (UC) and the Joint Information Environment (JIE), and eliminates the need and costs to manage and maintain several separate voice, video and data networks. Implementation of network modernization delivers modern communications Internet Protocol (IP) transport and data capabilities, optimizing existing and future capabilities, and divests systems that are no longer required, sustainable, and present operational risk to commands based on cyber vulnerabilities. Not all installations require the same degree of investment and each varies in complexity of requirements. Requirements depend on the geographic coverage area, terrain of the installation, number of users, evolving operational requirements, and the state of the existing infrastructure that may require significant modernization of backup power, facilities, and outside plant which may vary from Combatant Command (COCOM) to COCOM. As a result, all quantities and unit costs vary by system configuration and site. This line addresses seven overarching modernization efforts affecting numerous installations worldwide: Installation Campus Area Networks (ICAN), Voice over Internet Protocol (VoIP), Inside Plant (ISP), Outside Plant (OSP), Secure Internet Protocol Router (SIPR) Network Modernization, Non-Secure Internet Protocol Router (NIPR) Network Modernization, Circuit Optimization, and Multiprotocol Labeling Switch (MPLS) upgrades. Modernization priorities are established by the Army and include a comprehensive, holistic modernization of the Army's Top 40 Army Posts/Camps/Stations.

BU0510 / I3MP-Europe:  
I3MP-Europe installs and modernizes the classified and unclassified networks at multiple locations across Europe in support of the European Deterrence Initiative (EDI).

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<b>Exhibit P-40, Budget Line Item Justification:</b> PB 2021 Army		<b>Date:</b> February 2020
<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 2035A: Other Procurement, Army / BA 02: Communications and Electronics Equipment / BSA 73: Comm - Base Communications		<b>P-1 Line Item Number / Title:</b> 9700BU0500 / Installation Info Infrastructure Mod Program
<b>ID Code</b> (A=Service Ready, B=Not Service Ready):	<b>Program Elements for Code B Items:</b> N/A	<b>Other Related Program Elements:</b> N/A

**Line Item MDAP/MAIS Code:** N/A

BU0520 / I3MP-Pacific:  
I3MP-Pacific installs and modernizes the classified and unclassified networks at multiple locations across Indo-Pacific in support of the Joint Information Environment (JIE).

BU0530 / I3MP-CONUS:  
I3MP-CONUS installs and modernizes IT infrastructure in the Americas Area Of Responsibility (AOR) to include CONUS installations and Soto Cano, Honduras. This line also supports the ongoing Yongsan Relocation Partnership Plan/Land Partnership Program (YRP/LPP).

B00540 / I3MP-SWA:  
I3MP-SWA installs and modernizes the classified and unclassified networks at multiple locations across Southwest Asia supporting multiple operations including Operation Spartan Shield (OSS), Operation Inherent Resolve (OIR), and Operation Freedom Sentinel (OFS). In FY21 the Army will begin transitioning from contingency operations to enduring bases and must build capabilities that are flexible and transportable to support the entire Southwest Asia Area of Responsibility (AOR) in support of Operation Spartan Shield (OSS).

BU2000 / Terrestrial Transmission (TT):  
The Terrestrial Transmission program provides hardware modernization for the Army's Special Access Program Enterprise Portal (ASEP). This is a Top Secret / Secured Compartmented Information (TS/SCI) accredited network supporting operational intelligence and acquisitions for Special Access Programs (SAPs). It also continues the upgrade of power, timing, and alarm systems for the European Transmission Systems. The Army Special Access Program Enterprise Portal (ASEP) is the Army's only Top Secret compartmented wide area network providing a secure communications capability (email, video, teleconferencing, document storage/sharing, voice over internet protocol and instant messaging) for the transmission of highly classified Special Access Required (SAR) information between the Army Operations Center (AOC), the Army staff, Army Commands, Army Service Component Commands, Army (SAPs) and Army Sensitive Activities (SAs).

BU3610 / World Wide Technical Control Improvement Program (WWTCIP):  
The World Wide Technical Control Improvement Program (WWTCIP) continues to initiate, improve, expand, and automate the Army's Technical Control Facilities (TCFs) with a more efficient capability to monitor communications networks and perform the restoral activities required to have an uninterrupted, assured, and protected communications which enable critical warfighting and sustainment functions. These upgrades provide the end user with greater bandwidth for high quality voice, data, video, enabling real time response, and restoral actions to minimize communications outages. It also provides configuration management and implements Information Assurance (IA) controls for the modernized TCFs. The program supports Outside the Continental United States (OCONUS) Theater Combatant Commander's communications, Continental United States (CONUS) power projection bases, and Defense Satellite Communications Systems. WWTCIP provides the means for technical control personnel to gain full use of the supporting communication resources available through the expansion and automation of the Army's TCF worldwide. The program provides power, timing and synchronization equipment, line conditioning equipment, real time alarm monitoring and control, tri-service tactical interface, and appropriate test equipment with associated hardware in support of the Soldier, to enable information dominance and ensure robust communications worldwide.

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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 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025
Army	Quantity	10	-	-	2	2	-	-	-	-
	Total Obligation Authority	246.770	341.314	300.035	74.004	374.039	248.231	216.410	203.581	228.531
<b>Total:</b> Secondary Distribution	<b>Quantity</b>	<b>10</b>	<b>-</b>	<b>-</b>	<b>2</b>	<b>2</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>
	<b>Total Obligation Authority</b>	<b>246.770</b>	<b>341.314</b>	<b>300.035</b>	<b>74.004</b>	<b>374.039</b>	<b>248.231</b>	<b>216.410</b>	<b>203.581</b>	<b>228.531</b>

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

**Appropriation / Budget Activity / Budget Sub Activity:**  
2035A: Other Procurement, Army / BA 02: Communications and Electronics  
Equipment / BSA 73: Comm - Base Communications

**P-1 Line Item Number / Title:**  
9700BU0500 / Installation Info Infrastructure Mod Program

**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 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total
Exhibit Type	Title*	Subexhibits	ID CD	MDAP/MAIS Code	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)
P-5	B00540 / I3MP- SWA	P-5a			- / -	- / -	- / 57.630	- / 4.122	1 / 32.291	1 / 36.413
P-5	BU0510 / I3MP - Europe	P-5a			- / 931.238	- / 3.500	- / 16.261	- / 4.041	- / -	- / 4.041
P-40a	BU0520 / I3MP - Pacific				- / 299.972	- / -	- / -	- / 4.012	- / -	- / 4.012
P-5	BU0530 / I3MP - CONUS	P-5a			- / 2,030.731	10 / 215.424	- / 257.148	- / 279.416	1 / 36.343	1 / 315.759
P-5	BU2000 / TERRESTRIAL TRANSMISSION	P-5a			- / 75.418	- / 1.651	- / 1.673	- / 1.692	- / -	- / 1.692
P-5	BU3610 / WW Tech Con Imp Prog (WWTCIP)	P-5a			- / 953.481	- / 26.195	- / 8.602	- / 6.752	- / 5.370	- / 12.122
<b>P-40</b>	<b>Total Gross/Weapon System Cost</b>				<b>- / 4,290.840</b>	<b>10 / 246.770</b>	<b>- / 341.314</b>	<b>- / 300.035</b>	<b>2 / 74.004</b>	<b>2 / 374.039</b>

\*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:**

**BU0510 / I3MP-Europe:**  
FY2021 Base procurement dollars in the amount of \$4.041 million support modernization efforts specific to U.S. European Command (EUCOM) theater. FY2021 OCO procurement dollars in the amount of \$36.343 million will be correctly realigned from BU0530 to BU0510 in the year of execution to support EUCOM Defense Threat Reduction Agency (DTRA) remediation, Theater C4ISR, Mission Partner Environment (MPE), and Army Prepositioned Stock for Coleman base operations.

**BU0520 / I3MP-Pacific:**  
FY2021 Base procurement dollars in the amount of \$4.012 million support NIPR and SIPR modernization efforts in the U.S. Indo-Pacific (PACOM) theater. FY2021 begins realignment of the US Indo-Pacific requirements from I3MP-CONUS (BU0530) to I3MP-Pacific (BU0520). This is a geographical realignment of program requirements, not a new start..

**BU0530 / I3MP-CONUS:**  
FY2021 Base procurement dollars in the amount of \$279.416 million support holistic IT modernization efforts in CONUS and OCONUS. It procures the end-to-end dependencies needed to deliver worldwide network modernization to Army installations. Modernization implementation efforts include replacing obsolete copper wire telephone infrastructure with Voice over Internet Protocol (VoIP), Inside and Outside Plant modernization, circuit optimization to eliminate unnecessary redundant circuits. IT modernizations support the Army G3/5/7 direction of modernizing Army Top 40 bases as well as Army G6 priority based on network gaps and operational requirements which currently supports 11 CONUS locations. Funds also support the relocation and modernization of network equipment from US Army Garrison (USAG)-Yongsan to USAG-Humphreys, the Yongsan Relocation Plan/Land Partnership Plan (YRP/LPP), and specific Installation Campus Area Networks (ICAN) and (SIPR) modernization in Indo-Pacific AOR. FY2021 OCO procurement dollars in the amount of \$36.343 million will be correctly realigned to BU0510 I3MP-Europe in the year of execution to support EUCOM Defense Threat Reduction Agency (DTRA) remediation, Theater C4ISR, Mission Partner Environment (MPE), and Army Prepositioned Stock for Coleman base operations.

**B00540 / I3MP-SWA:**  
FY2021 Base procurement dollars in the amount of \$4.122 million support the modernization and convergence of voice, data and video networks to a high capacity communications infrastructure which enables the Army to deliver mandated Unified Capabilities (UC) and reduces operation and management costs for the enterprise. FY2021 OCO procurement dollars in the amount of \$32.291 million support the modernization and convergence of voice, data and video networks to a high capacity communications infrastructure which enables the Army to deliver mandated Unified Capabilities (UC) and reduces operation and management costs for the enterprise. Funds support the Baghdad Diplomatic Support Center TCF Remediation, CJOA-A C4I Transport Refresh, SWA ADA PAT Site OSP/ISP, and SWA Tier 1 TCF Data Network Modernization.

**UNCLASSIFIED**

<b>Exhibit P-40, Budget Line Item Justification:</b> PB 2021 Army		<b>Date:</b> February 2020
<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 2035A: Other Procurement, Army / BA 02: Communications and Electronics Equipment / BSA 73: Comm - Base Communications		<b>P-1 Line Item Number / Title:</b> 9700BU0500 / Installation Info Infrastructure Mod Program
<b>ID Code</b> (A=Service Ready, B=Not Service Ready):	<b>Program Elements for Code B Items:</b> N/A	<b>Other Related Program Elements:</b> N/A
<b>Line Item MDAP/MAIS Code:</b> N/A		
<p>BU2000 / Terrestrial Transmission (TT): FY 2021 Base procurement dollars in the amount of \$1.692 million support technology refresh (Routers, Switches, Servers, Monitors, etc.) of 10 sites to maintain operational effectiveness, information assurance requirements and to replace obsolete system components of the Army's Special Access Program Enterprise Portal (ASEP).</p> <p>BU3610 / World Wide Tech Control Improvement (WWTCIP): FY 2021 Base procurement dollars in the amount of \$6.752 million support power alternating current and direct current (AC/DC), uninterruptible power supply (UPS) and backup generator, timing and synchronization equipment, line conditioning equipment, real time alarm monitoring and control, tri-service tactical interfaces, and appropriate test equipment with associated hardware at four technical control facilities (2 CONUS and 2 OCONUS). FY2021 OCO procurement dollars in the amount of \$5.370 million support technical engineering and implementation to facilitate technical upgrades of the EUCOM Defense Threat Reduction Agency (DTRA) remediation.</p>		

**UNCLASSIFIED**

<b>Exhibit P-5, Cost Analysis: PB 2021 Army</b>		<b>Date:</b> February 2020
<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 2035A / 02 / 73	<b>P-1 Line Item Number / Title:</b> 9700BU0500 / Installation Info Infrastructure Mod Program	<b>Item Number / Title [DODIC]:</b> B00540 / I3MP- SWA

<b>ID Code</b> (A=Service Ready, B=Not Service Ready) :	<b>MDAP/MAIS Code:</b>
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<b>Resource Summary</b>	<b>Prior Years</b>	<b>FY 2019</b>	<b>FY 2020</b>	<b>FY 2021 Base</b>	<b>FY 2021 OCO</b>	<b>FY 2021 Total</b>
Procurement Quantity (Units in Each)	-	-	-	-	1	1
Gross/Weapon System Cost (\$ in Millions)	-	-	57.630	4.122	32.291	36.413
Less PY Advance Procurement (\$ in Millions)	-	-	-	-	-	-
Net Procurement (P-1) (\$ in Millions)	-	-	57.630	4.122	32.291	36.413
Plus CY Advance Procurement (\$ in Millions)	-	-	-	-	-	-
<b>Total Obligation Authority (\$ in Millions)</b>	-	-	<b>57.630</b>	<b>4.122</b>	<b>32.291</b>	<b>36.413</b>

*(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)	-	-	-	-	32,291.000	36,413.000

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

<b>Cost Elements</b>	<b>Prior Years</b>			<b>FY 2019</b>			<b>FY 2020</b>			<b>FY 2021 Base</b>			<b>FY 2021 OCO</b>			<b>FY 2021 Total</b>		
	<b>Unit Cost (\$ K)</b>	<b>Qty (Each)</b>	<b>Total Cost (\$ M)</b>	<b>Unit Cost (\$ K)</b>	<b>Qty (Each)</b>	<b>Total Cost (\$ M)</b>	<b>Unit Cost (\$ K)</b>	<b>Qty (Each)</b>	<b>Total Cost (\$ M)</b>	<b>Unit Cost (\$ K)</b>	<b>Qty (Each)</b>	<b>Total Cost (\$ M)</b>	<b>Unit Cost (\$ K)</b>	<b>Qty (Each)</b>	<b>Total Cost (\$ M)</b>	<b>Unit Cost (\$ K)</b>	<b>Qty (Each)</b>	<b>Total Cost (\$ M)</b>
<b>Hardware Cost</b>																		
<b>Non Recurring Cost</b>																		
SWA TACLANE Replacement <sup>(†)</sup>	-	-	-	-	-	-	19,230.000	1	19.230	-	-	-	-	-	-	-	-	-
USFOR-A Critical OSP/ISP Remediation <sup>(†)</sup>	-	-	-	-	-	-	12,000.000	1	12.000	-	-	-	-	-	-	-	-	-
Service DeliveryNode Modernization <sup>(†)</sup>	-	-	-	-	-	-	3,100.000	1	3.100	-	-	-	-	-	-	-	-	-
Kandahar Airfield (KAF) Service <sup>(†)</sup>	-	-	-	-	-	-	2,500.000	1	2.500	-	-	-	-	-	-	-	-	-
CJTF-OIR OSP/ISP (Taj) <sup>(†)</sup>	-	-	-	-	-	-	20,800.000	1	20.800	-	-	-	-	-	-	-	-	-
ADA PAT Site ISP/OSP Remediation <sup>(†)</sup>	-	-	-	-	-	-	-	-	-	-	-	-	5,000.000	1	5.000	5,000.000	1	5.000
Baghdad Diplomatic Support Center TCF Remediation <sup>(†)</sup>	-	-	-	-	-	-	-	-	-	-	-	-	10,200.000	1	10.200	10,200.000	1	10.200
CJOA-A C4I Transport Refresh <sup>(†)</sup>	-	-	-	-	-	-	-	-	-	-	-	-	8,791.000	1	8.791	8,791.000	1	8.791
Tier 1 TCF Data Network Modernization <sup>(†)</sup>	-	-	-	-	-	-	-	-	-	-	-	-	8,300.000	1	8.300	8,300.000	1	8.300



**UNCLASSIFIED**

<b>Exhibit P-5, Cost Analysis: PB 2021 Army</b>		<b>Date:</b> February 2020
<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 2035A / 02 / 73	<b>P-1 Line Item Number / Title:</b> 9700BU0500 / Installation Info Infrastructure Mod Program	<b>Item Number / Title [DODIC]:</b> B00540 / I3MP- SWA
<b>ID Code</b> (A=Service Ready, B=Not Service Ready) :		<b>MDAP/MAIS Code:</b>

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

Cost Elements	Prior Years			FY 2019			FY 2020			FY 2021 Base			FY 2021 OCO			FY 2021 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)
SWA Network Modernization <sup>(t)</sup>	-	-	-	-	-	-	-	-	-	4,122.000	1	4.122	-	-	-	4,122.000	1	4.122
<i>Subtotal: Non Recurring Cost</i>	-	-	-	-	-	-	-	-	57.630	-	-	4.122	-	-	32.291	-	-	36.413
<i>Subtotal: Hardware Cost</i>	-	-	-	-	-	-	-	-	57.630	-	-	4.122	-	-	32.291	-	-	36.413
<b>Gross/Weapon System Cost</b>	-	-	-	-	-	-	-	-	57.630	-	-	4.122	32,291.000	1	32.291	36,413.000	1	36.413

**Remarks:**

Costs for each installation varies based on existing infrastructure, modernization requirements, geographical location, and number of users. Quantities reflect total cost by Cost Element rather than by individual IT components.

Secondary Distribution		FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total
Army	Quantity	-	-	-	1	1
	Total Obligation Authority	-	57.630	4.122	32.291	36.413
<b>Total: Secondary Distribution</b>	<b>Quantity</b>	-	-	-	1	1
	<b>Total Obligation Authority</b>	-	57.630	4.122	32.291	36.413

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

**UNCLASSIFIED**

**Exhibit P-5a, Procurement History and Planning:** PB 2021 Army **Date:** February 2020

<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 2035A / 02 / 73	<b>P-1 Line Item Number / Title:</b> 9700BU0500 / Installation Info Infrastructure Mod Program	<b>Item Number / Title [DODIC]:</b> B00540 / I3MP- SWA
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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
SWA TACLANE Replacement	✓	2020	TBD / TBD	C / FFP	ACC-RI, Rock Island, IL	Mar 2020	Apr 2020	1	19,230.000	Y		
USFOR-A Critical OSP/ISP Remediation	✓	2020	TBD / TBD	C / FFP	ACC-RI, Rock Island, IL	Mar 2020	Apr 2020	1	12,000.000	Y		
Service DeliveryNode Modernization	✓	2020	TBD / TBD	C / FFP	ACC-RI, Rock Island, IL	Mar 2020	Apr 2020	1	3,100.000	Y		
Kandahar Airfield (KAF) Service	✓	2020	TBD / TBD	C / FFP	ACC-RI, Rock Island, IL	Mar 2020	Apr 2020	1	2,500.000	Y		
CJTF-OIR OSP/ISP (Taji)	✓	2020	TBD / TBD	C / FFP	ACC-RI, Rock Island, IL	Mar 2020	Apr 2020	1	20,800.000	Y		
ADA PAT Site ISP/OSP Remediation	✓	2021	TBD / TBD	C / FFP	ACC-RI, Rock Island, IL	Jan 2021	Feb 2021	1	5,000.000	N		
Baghdad Diplomatic Support Center TCF Remediation	✓	2021	TBD / TBD	C / FFP	ACC-RI, Rock Island, IL	Feb 2021	Mar 2021	1	10,200.000	N		
CJOA-A C4I Transport Refresh	✓	2021	TBD / TBD	C / FFP	ACC-RI, Rock Island, IL	Feb 2021	Mar 2021	1	8,791.000	N		
Tier 1 TCF Data Network Modernization	✓	2021	TBD / TBD	C / FFP	ACC-RI, Rock Island, IL	Jan 2021	Feb 2021	1	8,300.000	N		
SWA Network Modernization		2021	TBD / TBD	C / FFP	ACC-RI, Rock Island, IL	Jan 2021	Feb 2021	1	4,122.000	Y		

**Remarks:**

Costs for each installation varies based on existing infrastructure, modernization requirements, geographical location, and number of users. Quantities reflect total cost by Cost Element rather than by individual IT components.

**UNCLASSIFIED**

**Exhibit P-5, Cost Analysis: PB 2021 Army** **Date:** February 2020

**Appropriation / Budget Activity / Budget Sub Activity:** 2035A / 02 / 73 **P-1 Line Item Number / Title:** 9700BU0500 / Installation Info Infrastructure Mod Program **Item Number / Title [DODIC]:** BU0510 / I3MP - Europe

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

Resource Summary	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total
Procurement Quantity (Units in Each)	-	-	-	-	-	-
Gross/Weapon System Cost (\$ in Millions)	931.238	3.500	16.261	4.041	-	4.041
Less PY Advance Procurement (\$ in Millions)	-	-	-	-	-	-
Net Procurement (P-1) (\$ in Millions)	931.238	3.500	16.261	4.041	-	4.041
Plus CY Advance Procurement (\$ in Millions)	-	-	-	-	-	-
<b>Total Obligation Authority (\$ in Millions)</b>	<b>931.238</b>	<b>3.500</b>	<b>16.261</b>	<b>4.041</b>	<b>-</b>	<b>4.041</b>

*(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 2019			FY 2020			FY 2021 Base			FY 2021 OCO			FY 2021 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)
<b>Hardware Cost</b>																		
<b>Non Recurring Cost</b>																		
ERI Operation Atlantic Resolve (OAR) Network	-	-	660.101	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Shelterized Tech Comm Facilities	-	-	78.385	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Multi-Protocol Packet Label Switching SW Asia	-	-	192.752	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
EUCOM Mission Partner Environment upgrades <sup>(†)</sup>	-	-	-	-	-	-	6,000.000	1	6.000	-	-	-	-	-	-	-	-	-
EUCOM Network upgrades to support rotation of Army units <sup>(†)</sup>	-	-	-	-	-	-	8,700.000	1	8.700	-	-	-	-	-	-	-	-	-
EUCOM Defense Threat Reduction Network upgrades <sup>(†)</sup>	-	-	-	-	-	-	1,561.000	1	1.561	-	-	-	-	-	-	-	-	-
EUCOM Network Upgrades <sup>(†)</sup>	-	-	-	3,500.000	1	3.500	-	-	-	4,041.000	1	4.041	-	-	-	4,041.000	1	4.041
<i>Subtotal: Non Recurring Cost</i>	-	-	931.238	-	-	3.500	-	-	16.261	-	-	4.041	-	-	-	-	-	4.041
<i>Subtotal: Hardware Cost</i>	-	-	931.238	-	-	3.500	-	-	16.261	-	-	4.041	-	-	-	-	-	4.041

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<b>Exhibit P-5, Cost Analysis: PB 2021 Army</b>												<b>Date:</b> February 2020					
<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 2035A / 02 / 73						<b>P-1 Line Item Number / Title:</b> 9700BU0500 / Installation Info Infrastructure Mod Program						<b>Item Number / Title [DODIC]:</b> BU0510 / I3MP - Europe					
<b>ID Code</b> (A=Service Ready, B=Not Service Ready) :												<b>MDAP/MAIS Code:</b>					

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

Cost Elements	Prior Years			FY 2019			FY 2020			FY 2021 Base			FY 2021 OCO			FY 2021 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	-	-	931.238	-	-	3.500	-	-	16.261	-	-	4.041	-	-	-	-	-	4.041

**Remarks:**

Costs for each installation varies based on existing infrastructure, modernization requirements, geographical location, and number of users. Quantities reflect total cost by Cost Element rather than by individual IT components.

Secondary Distribution		FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total
Army	Quantity	-	-	-	-	-
	Total Obligation Authority	3.500	16.261	4.041	-	4.041
<b>Total:</b> Secondary Distribution	Quantity	-	-	-	-	-
	Total Obligation Authority	3.500	16.261	4.041	-	4.041

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

**UNCLASSIFIED**

**Exhibit P-5a, Procurement History and Planning:** PB 2021 Army **Date:** February 2020

<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 2035A / 02 / 73	<b>P-1 Line Item Number / Title:</b> 9700BU0500 / Installation Info Infrastructure Mod Program	<b>Item Number / Title [DODIC]:</b> BU0510 / I3MP - Europe
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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
EUCOM Mission Partner Environment upgrades	✓	2020	TBD / TBD	C / FFP	ACC-RI, Rock Island, IL	Mar 2020	Apr 2020	1	6,000.000	Y		
EUCOM Network upgrades to support rotation of Army units	✓	2020	TBD / TBD	C / FFP	ACC-RI, Rock Island, IL	Mar 2020	Apr 2020	1	8,700.000	Y		
EUCOM Defense Threat Reduction Network upgrades	✓	2020	TBD / TBD	C / FFP	ACC-RI, Rock Island, IL	Mar 2020	Apr 2020	1	1,561.000	Y		
EUCOM Network Upgrades		2019	URS Federal Services / Germantown, MD	C / FFP	ACC-RI, Rock Island, IL	May 2019	Jun 2019	1	3,500.000	Y		
EUCOM Network Upgrades		2021	TBD / TBD	C / FFP	ACC-RI, Rock Island, IL	Jan 2021	Feb 2021	1	4,041.000	N		

**Remarks:**  
ACC-RI - Army Contracting Command Rock Island. Commercial-Off-The-Shelf (COTS) products will be procured via Indefinite Delivery Indefinite Quantity (IDIQ) contracts that provide continuous vendor competition for best value and consolidation of requirements to maximize cost avoidance and leverage the Army's buying power.

Costs for each installation varies based on existing infrastructure, modernization requirements, geographical location, and number of users. Quantities reflect total cost by Cost Element rather than by individual IT components.

**UNCLASSIFIED**

**Exhibit P-40a, Budget Item Justification For Aggregated Items:** PB 2021 Army **Date:** February 2020

<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 2035A / 02 / 73	<b>P-1 Line Item Number / Title:</b> 9700BU0500 / Installation Info Infrastructure Mod Program	<b>Aggregated Items Title:</b> BU0520 / I3MP - Pacific
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Item Number / Title [DODIC]	ID CD	MDAP/MAIS Code	Prior Years			FY 2019			FY 2020			FY 2021 Base			FY 2021 OCO			FY 2021 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)
<b>I3MP - Pacific</b>																				
BU0520 / I3MP - Pacific			-	-	299.972	-	-	-	-	-	-	-	-	4.012	-	-	-	-	-	4.012
<i>Secondary Distribution</i>																				
Army			-	-	-	-	-	-	-	-	-	-	-	4.012	-	-	-	-	-	4.012
<b>Subtotal: I3MP - Pacific</b>			-	-	<b>299.972</b>	-	-	-	-	-	-	-	-	<b>4.012</b>	-	-	-	-	-	<b>4.012</b>
<b>Total</b>			-	-	<b>299.972</b>	-	-	-	-	-	-	-	-	<b>4.012</b>	-	-	-	-	-	<b>4.012</b>

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

**UNCLASSIFIED**

<b>Exhibit P-5, Cost Analysis: PB 2021 Army</b>						<b>Date:</b> February 2020		
<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 2035A / 02 / 73			<b>P-1 Line Item Number / Title:</b> 9700BU0500 / Installation Info Infrastructure Mod Program			<b>Item Number / Title [DODIC]:</b> BU0530 / I3MP - CONUS		
<b>ID Code</b> (A=Service Ready, B=Not Service Ready) :				<b>MDAP/MAIS Code:</b>				
<b>Resource Summary</b>			<b>Prior Years</b>	<b>FY 2019</b>	<b>FY 2020</b>	<b>FY 2021 Base</b>	<b>FY 2021 OCO</b>	<b>FY 2021 Total</b>
Procurement Quantity (Units in Each)			-	10	-	-	1	1
Gross/Weapon System Cost (\$ in Millions)			2,030.731	215.424	257.148	279.416	36.343	315.759
Less PY Advance Procurement (\$ in Millions)			-	-	-	-	-	-
Net Procurement (P-1) (\$ in Millions)			2,030.731	215.424	257.148	279.416	36.343	315.759
Plus CY Advance Procurement (\$ in Millions)			-	-	-	-	-	-
<b>Total Obligation Authority (\$ in Millions)</b>			<b>2,030.731</b>	<b>215.424</b>	<b>257.148</b>	<b>279.416</b>	<b>36.343</b>	<b>315.759</b>
<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)			-	21,542.400	-	-	36,343.000	315,759.000

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

Cost Elements	Prior Years			FY 2019			FY 2020			FY 2021 Base			FY 2021 OCO			FY 2021 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)
<b>Hardware Cost</b>																		
<b>Recurring Cost</b>																		
NETMOD-C Hardware <sup>(†)</sup>	20,465.000	3	61.395	30,711.000	1	30.711	-	-	-	-	-	-	-	-	-	-	-	-
YRP/LPP <sup>(†)</sup>	15,031.667	3	45.095	30,698.000	1	30.698	21,900.000	1	21.900	9,700.000	1	9.700	-	-	-	9,700.000	1	9.700
IT Modernization Hardware <sup>(†)</sup>	79,432.333	3	238.297	34,509.000	1	34.509	85,221.000	1	85.221	92,367.000	1	92.367	-	-	-	92,367.000	1	92.367
IT Modernization Engineering/Implementation <sup>(†)</sup>	506,382.667	3	1,519.148	38,434.000	1	38.434	83,332.000	1	83.332	133,256.000	1	133.256	-	-	-	133,256.000	1	133.256
THAAD Infrastructure <sup>(†)</sup>	9,000.000	1	9.000	10,500.000	1	10.500	-	-	-	-	-	-	-	-	-	-	-	-
NETMOD-Europe <sup>(†)</sup>	3,149.000	2	6.298	-	-	-	2,695.000	1	2.695	39,188.000	1	39.188	-	-	-	39,188.000	1	39.188
ATM SONET <sup>(†)</sup>	24,446.000	1	24.446	-	-	-	4,500.000	1	4.500	-	-	-	-	-	-	-	-	-
NETMOD-Pacific <sup>(†)</sup>	17,664.000	1	17.664	-	-	-	45,500.000	1	45.500	4,905.000	1	4.905	-	-	-	4,905.000	1	4.905
<b>Subtotal: Recurring Cost</b>	-	-	<b>1,921.343</b>	-	-	<b>144.852</b>	-	-	<b>243.148</b>	-	-	<b>279.416</b>	-	-	-	-	-	<b>279.416</b>
<b>Non Recurring Cost</b>																		
OAR NETWORK	-	-	2.499	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
NETMOD Afghanistan <sup>(†)</sup>	-	-	-	12,300.000	1	12.300	-	-	-	-	-	-	-	-	-	-	-	-
USFOR-A OSP/ISP Remediation <sup>(†)</sup>	-	-	-	12,155.000	1	12.155	-	-	-	-	-	-	-	-	-	-	-	-

**UNCLASSIFIED**

<b>Exhibit P-5, Cost Analysis: PB 2021 Army</b>												<b>Date:</b> February 2020					
<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 2035A / 02 / 73						<b>P-1 Line Item Number / Title:</b> 9700BU0500 / Installation Info Infrastructure Mod Program						<b>Item Number / Title [DODIC]:</b> BU0530 / I3MP - CONUS					
<b>ID Code</b> (A=Service Ready, B=Not Service Ready) :												<b>MDAP/MAIS Code:</b>					

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

Cost Elements	Prior Years			FY 2019			FY 2020			FY 2021 Base			FY 2021 OCO			FY 2021 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)
CJTF-OIR OSP/ISP Remediation <sup>(†)</sup>	4,000.000	1	4.000	2,100.000	1	2.100	-	-	-	-	-	-	-	-	-	-	-	-
NETMOD Kuwait <sup>(†)</sup>	-	-	-	3,497.000	1	3.497	-	-	-	-	-	-	-	-	-	-	-	-
NETMOD Buehring <sup>(†)</sup>	-	-	-	570.000	1	0.570	-	-	-	-	-	-	-	-	-	-	-	-
Cyber JUONS ST-007	11,741.000	1	11.741	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
JRSS Hardware/ Implementation	8,900.000	1	8.900	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
ATLANTIC RESOLVE (AR) NETWORK <sup>(†)</sup>	-	-	-	9,050.000	1	9.050	-	-	-	-	-	-	-	-	-	-	-	-
Korea Ethernet Microwave Modernization <sup>(†)</sup>	-	-	-	-	-	-	5,000.000	1	5.000	-	-	-	-	-	-	-	-	-
SIPR-O Modernization <sup>(†)</sup>	-	-	-	-	-	-	9,000.000	1	9.000	-	-	-	-	-	-	-	-	-
NETMOD Europe OCO <sup>(†)</sup>	-	-	-	-	-	-	-	-	-	-	-	-	36,343.000	1	36.343	36,343.000	1	36.343
<i>Subtotal: Non Recurring Cost</i>	-	-	27.140	-	-	39.672	-	-	14.000	-	-	-	-	-	36.343	-	-	36.343
<i>Subtotal: Hardware Cost</i>	-	-	<b>1,948.483</b>	-	-	<b>184.524</b>	-	-	<b>257.148</b>	-	-	<b>279.416</b>	-	-	<b>36.343</b>	-	-	<b>315.759</b>
<b>Support - Program Management Cost</b>																		
Government Management	41,124.000	2	82.248	-	-	30.900	-	-	-	-	-	-	-	-	-	-	-	-
<i>Subtotal: Support - Program Management Cost</i>	-	-	<b>82.248</b>	-	-	<b>30.900</b>	-	-	-	-	-	-	-	-	-	-	-	-
<b>Gross/Weapon System Cost</b>	-	-	<b>2,030.731</b>	<b>21,542.400</b>	<b>10</b>	<b>215.424</b>	-	-	<b>257.148</b>	-	-	<b>279.416</b>	<b>36,343.000</b>	<b>1</b>	<b>36.343</b>	<b>315,759.000</b>	<b>1</b>	<b>315.759</b>

**Remarks:**

Costs for each installation varies based on existing infrastructure, modernization requirements, geographical location, and number of users. Quantities reflect total cost by Cost Element rather than by individual IT components.

Significant increases in FY21 are specific to modernization of failing Time Division Multiplexing (TDM) voice networks, to include engineering/implementation and hardware.

Secondary Distribution		FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total
Army	Quantity	10	-	-	1	1
	Total Obligation Authority	215.424	257.148	279.416	36.343	315.759



**UNCLASSIFIED**

**Exhibit P-5, Cost Analysis: PB 2021 Army** **Date:** February 2020

<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 2035A / 02 / 73	<b>P-1 Line Item Number / Title:</b> 9700BU0500 / Installation Info Infrastructure Mod Program	<b>Item Number / Title [DODIC]:</b> BU0530 / I3MP - CONUS
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**ID Code** (A=Service Ready, B=Not Service Ready) : **MDAP/MAIS Code:**

Secondary Distribution		FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total
<b>Total:</b>	Quantity	10	-	-	1	1
Secondary Distribution	Total Obligation Authority	215.424	257.148	279.416	36.343	315.759

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

**UNCLASSIFIED**

**Exhibit P-5a, Procurement History and Planning: PB 2021 Army** **Date:** February 2020

<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 2035A / 02 / 73	<b>P-1 Line Item Number / Title:</b> 9700BU0500 / Installation Info Infrastructure Mod Program	<b>Item Number / Title [DODIC]:</b> BU0530 / I3MP - CONUS
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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
NETMOD-C Hardware		2019	Wildflower / Sante Fe, NM	C / FFP	ACC-RI, Rock Island, IL	Jan 2019	Feb 2019	1	30,711.000	N		
YRP/LPP		2019	LGS Innovations / McLeansville, NC	C / CPFF	ACC-RI, Rock Island, IL	Jan 2019	Feb 2019	1	30,698.000	N		
YRP/LPP		2020	TBD / TBD	C / CPFF	ACC-RI, Rock Island, IL	May 2020	Jun 2020	1	21,900.000	Y		
YRP/LPP		2021	TBD / TBD	C / CPFF	ACC-RI, Rock Island, IL	Nov 2020	Dec 2020	1	9,700.000	N		
IT Modernization Hardware		2019	Various / Various	C / Various	ACC-RI, Rock Island, IL	Jan 2019	Feb 2019	1	34,509.000	N		
IT Modernization Hardware		2020	Various / Various	C / FFP	ACC-RI, Rock Island, IL	Dec 2019	Jan 2020	1	85,221.000	Y		
IT Modernization Hardware		2021	TBD / TBD	C / FFP	ACC-RI, Rock Island, IL	Dec 2020	Jan 2021	1	92,367.000	N		
IT Modernization Engineering/ Implementation		2019	Various / Various	C / Various	ACC-RI, Rock Island, IL	Jan 2019	Feb 2019	1	38,434.000	N		
IT Modernization Engineering/ Implementation		2020	Various / Various	C / Various	ACC-RI, Rock Island, IL	Dec 2019	Jan 2020	1	83,332.000	N		
IT Modernization Engineering/ Implementation		2021	Various / Various	C / Various	ACC-RI, Rock Island, IL	Oct 2020	Nov 2020	1	133,256.000	N		
THAAD Infrastructure		2019	NES Associates, LLC / Alexandria, VA	C / FFP	ACC-RI, Rock Island, IL	May 2019	Jun 2019	1	10,500.000	N		
NETMOD-Europe		2020	TBD / TBD	C / FFP	ACC-RI, Rock Island, IL	May 2020	Jul 2020	1	2,695.000	Y		
NETMOD-Europe		2021	TBD / TBD	C / FFP	ACC-RI, Rock Island, IL	Oct 2020	Nov 2020	1	39,188.000	Y		
ATM SONET		2020	TBD / Various	C / FFP	ACC-RI, Rock Island, IL	Dec 2019	Jan 2020	1	4,500.000	N		
NETMOD-Pacific		2020	TBD / TBD	C / FFP	ACC-RI, Rock Island, IL	May 2020	Jul 2020	1	45,500.000	Y		
NETMOD-Pacific		2021	TBD / TBD	C / FFP	ACC-RI, Rock Island, IL	Nov 2020	Dec 2020	1	4,905.000	N		
NETMOD Afghanistan		2019	NES Associates, LLC / Alexandria, VA	C / FFP	ACC-RI, Rock Island, IL	Jul 2019	Aug 2019	1	12,300.000	N		
USFOR-A OSP/ISP Remediation		2019	Tyto Athene, LLC / Herndon, VA	C / FFP	ACC-RI, Rock Island, IL	Aug 2019	Sep 2019	1	12,155.000	N		
CJTF-OIR OSP/ISP Remediation		2019	Tyto Athene, LLC / Herndon, VA	C / FFP	ACC-RI, Rock Island, IL	Aug 2019	Sep 2019	1	2,100.000	N		
NETMOD Kuwait		2019	Tyto Athene, LLC / Herndon, VA	C / FFP	ACC-RI, Rock Island, IL	Aug 2019	Sep 2019	1	3,497.000	N		
NETMOD Buehring		2019	Tyto Athene, LLC / Herndon, VA	C / FFP	ACC-RI, Rock Island, IL	Aug 2019	Sep 2019	1	570.000	Y		
ATLANTIC RESOLVE (AR) NETWORK		2019	TBD / TBD	C / FFP	ACC-RI, Rock Island, IL	May 2019	Jun 2019	1	9,050.000	N		
Korea Ethernet Microwave Modernization		2020	TBD / TBD	C / FFP	ACC-RI, Rock Island, IL	Mar 2020	Apr 2020	1	5,000.000	Y		
SIPR-O Modernization		2020	TBD / TBD	C / FFP	ACC-RI, Rock Island, IL	Mar 2020	Apr 2020	1	9,000.000	Y		
NETMOD Europe OCO	✓	2021	TBD / TBD	C / FFP	ACC-RI, Rock Island, IL	Jan 2021	Feb 2021	1	36,343.000	Y		

**Remarks:**  
 Costs for each installation varies based on existing infrastructure, modernization requirements, geographical location, and number of users. Quantities reflect total cost by Cost Element rather than by individual IT components.  
  
 Significant increases in FY21 are specific to modernization of failing Time Division Multiplexing (TDM) voice networks, to include engineering/implementation and hardware.

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<b>Exhibit P-5, Cost Analysis: PB 2021 Army</b>		<b>Date:</b> February 2020
<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 2035A / 02 / 73	<b>P-1 Line Item Number / Title:</b> 9700BU0500 / Installation Info Infrastructure Mod Program	<b>Item Number / Title [DODIC]:</b> BU2000 / TERRESTRIAL TRANSMISSION

<b>ID Code</b> (A=Service Ready, B=Not Service Ready) :	<b>MDAP/MAIS Code:</b>
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<b>Resource Summary</b>	<b>Prior Years</b>	<b>FY 2019</b>	<b>FY 2020</b>	<b>FY 2021 Base</b>	<b>FY 2021 OCO</b>	<b>FY 2021 Total</b>
Procurement Quantity (Units in Each)	-	-	-	-	-	-
Gross/Weapon System Cost (\$ in Millions)	75.418	1.651	1.673	1.692	-	1.692
Less PY Advance Procurement (\$ in Millions)	-	-	-	-	-	-
Net Procurement (P-1) (\$ in Millions)	75.418	1.651	1.673	1.692	-	1.692
Plus CY Advance Procurement (\$ in Millions)	-	-	-	-	-	-
<b>Total Obligation Authority (\$ in Millions)</b>	<b>75.418</b>	<b>1.651</b>	<b>1.673</b>	<b>1.692</b>	<b>-</b>	<b>1.692</b>

*(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.

<b>Cost Elements</b>	<b>Prior Years</b>			<b>FY 2019</b>			<b>FY 2020</b>			<b>FY 2021 Base</b>			<b>FY 2021 OCO</b>			<b>FY 2021 Total</b>		
	<b>Unit Cost (\$ K)</b>	<b>Qty (Each)</b>	<b>Total Cost (\$ M)</b>	<b>Unit Cost (\$ K)</b>	<b>Qty (Each)</b>	<b>Total Cost (\$ M)</b>	<b>Unit Cost (\$ K)</b>	<b>Qty (Each)</b>	<b>Total Cost (\$ M)</b>	<b>Unit Cost (\$ K)</b>	<b>Qty (Each)</b>	<b>Total Cost (\$ M)</b>	<b>Unit Cost (\$ K)</b>	<b>Qty (Each)</b>	<b>Total Cost (\$ M)</b>	<b>Unit Cost (\$ K)</b>	<b>Qty (Each)</b>	<b>Total Cost (\$ M)</b>
Hardware Cost																		
Recurring Cost																		
Furnish Bill of Material, Install, and Test <sup>(†)</sup>	-	-	75.418	1,651.000	1	1.651	1,673.000	1	1.673	1,692.000	1	1.692	-	-	-	1,692.000	1	1.692
<i>Subtotal: Recurring Cost</i>	-	-	75.418	-	-	1.651	-	-	1.673	-	-	1.692	-	-	-	-	-	1.692
<i>Subtotal: Hardware Cost</i>	-	-	<b>75.418</b>	-	-	<b>1.651</b>	-	-	<b>1.673</b>	-	-	<b>1.692</b>	-	-	-	-	-	<b>1.692</b>
<b>Gross/Weapon System Cost</b>	-	-	<b>75.418</b>	-	-	<b>1.651</b>	-	-	<b>1.673</b>	-	-	<b>1.692</b>	-	-	-	-	-	<b>1.692</b>

<b>Secondary Distribution</b>	<b>FY 2019</b>	<b>FY 2020</b>	<b>FY 2021 Base</b>	<b>FY 2021 OCO</b>	<b>FY 2021 Total</b>
Army					
Quantity	-	-	-	-	-
Total Obligation Authority	1.651	1.673	1.692	-	1.692
<b>Total: Secondary Distribution</b>					
Quantity	-	-	-	-	-
Total Obligation Authority	<b>1.651</b>	<b>1.673</b>	<b>1.692</b>	<b>-</b>	<b>1.692</b>

<sup>(†)</sup> indicates the presence of a P-5a

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<b>Exhibit P-5a, Procurement History and Planning:</b> PB 2021 Army							<b>Date:</b> February 2020				
<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 2035A / 02 / 73			<b>P-1 Line Item Number / Title:</b> 9700BU0500 / Installation Info Infrastructure Mod Program				<b>Item Number / Title [DODIC]:</b> BU2000 / TERRESTRIAL TRANSMISSION				

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
Furnish Bill of Material, Install, and Test		2019	UNICOM Government Inc / Herndon, VA	C / BPA	PEO EIS, CHESS, Fort Belvoir, VA	Jan 2019	Mar 2019	1	1,651.000	Y		
Furnish Bill of Material, Install, and Test		2020	TBD / TBD	C / BPA	PEO EIS, CHESS, Fort Belvoir, VA	Mar 2020	Apr 2020	1	1,673.000	Y		
Furnish Bill of Material, Install, and Test		2021	TBD / TBD	C / BPA	PEO EIS, CHESS, Fort Belvoir, VA	Jan 2021	Mar 2021	1	1,692.000	N		

**Remarks:**  
 Purchase is for Commercial Off the Shelf (COTS) equipment.  
 Program Executive Office, Enterprise Information Systems (PEO EIS)  
 Computer Hardware, Enterprise Software and Solutions (CHESS)

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<b>Exhibit P-5, Cost Analysis: PB 2021 Army</b>		<b>Date:</b> February 2020
<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 2035A / 02 / 73	<b>P-1 Line Item Number / Title:</b> 9700BU0500 / Installation Info Infrastructure Mod Program	<b>Item Number / Title [DODIC]:</b> BU3610 / WW Tech Con Imp Prog (WWTCIP)

<b>ID Code</b> (A=Service Ready, B=Not Service Ready) :	<b>MDAP/MAIS Code:</b>
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Resource Summary	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total
Procurement Quantity (Units in Each)	-	-	-	-	-	-
Gross/Weapon System Cost (\$ in Millions)	953.481	26.195	8.602	6.752	5.370	12.122
Less PY Advance Procurement (\$ in Millions)	-	-	-	-	-	-
Net Procurement (P-1) (\$ in Millions)	953.481	26.195	8.602	6.752	5.370	12.122
Plus CY Advance Procurement (\$ in Millions)	-	-	-	-	-	-
<b>Total Obligation Authority (\$ in Millions)</b>	<b>953.481</b>	<b>26.195</b>	<b>8.602</b>	<b>6.752</b>	<b>5.370</b>	<b>12.122</b>

*(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 2019			FY 2020			FY 2021 Base			FY 2021 OCO			FY 2021 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)
<b>Hardware Cost</b>																		
Recurring Cost																		
Program Management Administration	215,188.000	1	215.188	2,707.000	1	2.707	-	-	-	-	-	-	-	-	-	-	-	-
<i>Subtotal: Recurring Cost</i>	-	-	215.188	-	-	2.707	-	-	-	-	-	-	-	-	-	-	-	-
Non Recurring Cost																		
Technical Control Facility <sup>(†)</sup>	2,332.000	1	2.332	16,100.000	1	16.100	4,673.000	1	4.673	5,959.000	1	5.959	-	-	-	5,959.000	1	5.959
Engineer, Install & Test <sup>(†)</sup>	735,961.000	1	735.961	2,823.000	1	2.823	3,929.000	1	3.929	793.000	1	0.793	-	-	-	793.000	1	0.793
<i>Subtotal: Non Recurring Cost</i>	-	-	738.293	-	-	18.923	-	-	8.602	-	-	6.752	-	-	-	-	-	6.752
<i>Subtotal: Hardware Cost</i>	-	-	<b>953.481</b>	-	-	<b>21.630</b>	-	-	<b>8.602</b>	-	-	<b>6.752</b>	-	-	-	-	-	<b>6.752</b>
<b>Logistics Cost</b>																		
Recurring Cost																		
Mobile Technical Control Facility <sup>(†)</sup>	-	-	-	4,565.000	1	4.565	-	-	-	-	-	-	5,370.000	1	5.370	5,370.000	1	5.370
<i>Subtotal: Recurring Cost</i>	-	-	-	-	-	4.565	-	-	-	-	-	-	-	-	5.370	-	-	5.370
<i>Subtotal: Logistics Cost</i>	-	-	-	-	-	<b>4.565</b>	-	-	-	-	-	-	-	-	<b>5.370</b>	-	-	<b>5.370</b>
<b>Gross/Weapon System Cost</b>	-	-	<b>953.481</b>	-	-	<b>26.195</b>	-	-	<b>8.602</b>	-	-	<b>6.752</b>	-	-	<b>5.370</b>	-	-	<b>12.122</b>

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<b>Exhibit P-5, Cost Analysis:</b> PB 2021 Army		<b>Date:</b> February 2020
<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 2035A / 02 / 73	<b>P-1 Line Item Number / Title:</b> 9700BU0500 / Installation Info Infrastructure Mod Program	<b>Item Number / Title [DODIC]:</b> BU3610 / WW Tech Con Imp Prog (WWTCIP)

<b>ID Code</b> (A=Service Ready, B=Not Service Ready) :	<b>MDAP/MAIS Code:</b>
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Secondary Distribution		FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total
Army	Quantity	-	-	-	-	-
	Total Obligation Authority	26.195	8.602	6.752	5.370	12.122
<b>Total:</b>	Quantity	-	-	-	-	-
<b>Secondary Distribution</b>	Total Obligation Authority	<b>26.195</b>	<b>8.602</b>	<b>6.752</b>	<b>5.370</b>	<b>12.122</b>

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

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<b>Exhibit P-5a, Procurement History and Planning:</b> PB 2021 Army								<b>Date:</b> February 2020				
<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 2035A / 02 / 73			<b>P-1 Line Item Number / Title:</b> 9700BU0500 / Installation Info Infrastructure Mod Program					<b>Item Number / Title [DODIC]:</b> BU3610 / WW Tech Con Imp Prog (WWTCIP)				
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
Technical Control Facility		2019	Various / Various	C / FFP	PM DCATS, Fort Belvoir, VA	Jul 2019	Aug 2019	1	16,100.000	Y		
Technical Control Facility		2020	TBD / TBD	C / FFP	PM DCATS, Fort Belvoir, VA	Jul 2020	Sep 2020	1	4,673.000	N		
Technical Control Facility		2021	PM DCATS / Ft. Belvoir, VA	C / FFP	ACC-RI, Rock Island, IL	Jan 2021	Feb 2021	1	5,959.000	N		
Engineer, Install & Test		2019	ISEC / Fort Huachuca, AZ	MIPR	PEO EIS, Fort Belvoir, VA	Oct 2018	Dec 2018	1	2,823.000	Y		
Engineer, Install & Test		2020	ISEC / Fort Huachuca, AZ	MIPR	PEO EIS, Fort Belvoir, VA	Oct 2019	Nov 2019	1	3,929.000	N		
Engineer, Install & Test		2021	ISEC / Fort Huachuca, AZ	MIPR	PEO EIS, Fort Belvoir, VA	Oct 2020	Nov 2020	1	793.000	N		
Mobile Technical Control Facility		2019	Various / Various	C / FFP	PM DCATS, Fort Belvoir, VA	Jul 2019	Aug 2019	1	4,565.000	Y		
Mobile Technical Control Facility	✓	2021	TBD / TBD	C / FFP	ACC-RI, Rock Island, IL	Jan 2021	Feb 2021	1	5,370.000	N		

**Remarks:**

WWTCIP procurements consist of COTS/GOTS products.  
 PEO EIS - Program Executive Office, Enterprise Information Systems; PM DCATS - Project Manager, Defense Communications and Army Transmission Systems; ACC-RI - Army Contracting Command-Rock Island; ISEC - Information Systems Engineering Command

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

<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 2035A: Other Procurement, Army / BA 02: Communications and Electronics Equipment / BSA 80: Elect Equip - Tact Int Rel Act (TIARA)	<b>P-1 Line Item Number / Title:</b> 9522V29600 / JTT/CIBS-M (MIP)
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<b>ID Code</b> (A=Service Ready, B=Not Service Ready):	<b>Program Elements for Code B Items:</b> N/A	<b>Other Related Program Elements:</b> N/A
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**Line Item MDAP/MAIS Code:** N/A

Resource Summary	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	To Complete	Total
Procurement Quantity ( <i>Units in Each</i> )	-	-	-	-	-	-	23	7	-	-	-	30
Gross/Weapon System Cost ( <i>\$ in Millions</i> )	333.493	9.027	7.686	5.304	-	5.304	5.477	1.805	-	-	-	362.792
Less PY Advance Procurement ( <i>\$ in Millions</i> )	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) ( <i>\$ in Millions</i> )	333.493	9.027	7.686	5.304	-	5.304	5.477	1.805	-	-	-	362.792
Plus CY Advance Procurement ( <i>\$ in Millions</i> )	-	-	-	-	-	-	-	-	-	-	-	-
<b>Total Obligation Authority (<i>\$ in Millions</i>)</b>	<b>333.493</b>	<b>9.027</b>	<b>7.686</b>	<b>5.304</b>	<b>-</b>	<b>5.304</b>	<b>5.477</b>	<b>1.805</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>362.792</b>

*(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> )	-	-	-	-	-	-	238.130	257.857	-	-	-	12,093.067

**Description:**

The Joint Program Office (JPO) for Integrated Broadcast Service (IBS) Terminals supports all of the Joint Services and Special Operations Command (SOCOM). The IBS is the worldwide Department of Defense (DoD) standard network enterprise for transmitting time-sensitive tactical intelligence and targeting data to all echelons of Joint Service operational Users. The JPO's role is to coordinate modernization and sustainment of IBS terminals interoperable with the Ultra High Frequency Satellite Communications (UHF SATCOM) IBS broadcasts. The transmit/receive-capable Joint Tactical Terminal (JTT) systems satisfy the radio communication Key Performance Parameters for the IBS Program. The JTT is the official IBS producer system and ensures continued IBS interoperability to a variety of tactical producers/consumers across the Joint Services. JPO IBS Terminals performs JTT life cycle program management through acquisition, fielding support and sustainment of JTT equipment. The JPO coordinates support as needed for the IBS networks that employ Communication Security (COMSEC), a Common Interactive Broadcast (CIB), and the Common Message Format (CMF). Funds support integration and qualification of a modernized JTT non-developmental item, JTT sustainment planning, sustainment coordination, training and fielding support.

Secondary Distribution	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025
Army	Quantity	-	-	-	-	23	7	-	-
	Total Obligation Authority	9.027	7.686	5.304	-	5.304	5.477	1.805	-
<b>Total: Secondary Distribution</b>	<b>Quantity</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>23</b>	<b>7</b>	<b>-</b>	<b>-</b>
	<b>Total Obligation Authority</b>	<b>9.027</b>	<b>7.686</b>	<b>5.304</b>	<b>-</b>	<b>5.304</b>	<b>5.477</b>	<b>1.805</b>	<b>-</b>



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

<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 2035A: Other Procurement, Army / BA 02: Communications and Electronics Equipment / BSA 80: Elect Equip - Tact Int Rel Act (TIARA)	<b>P-1 Line Item Number / Title:</b> 9522V29600 / JTT/CIBS-M (MIP)
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<b>ID Code</b> (A=Service Ready, B=Not Service Ready):	<b>Program Elements for Code B Items:</b> N/A	<b>Other Related Program Elements:</b> N/A
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**Line Item MDAP/MAIS Code:** N/A

Exhibits Schedule					Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total
Exhibit Type	Title*	Subexhibits	ID CD	MDAP/MAIS Code	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)
P-5	V29600 / JTT/CIBS-M (MIP)				- / 333.493	- / 9.027	- / 7.686	- / 5.304	- / -	- / 5.304
<b>P-40</b>	<b>Total Gross/Weapon System Cost</b>				<b>- / 333.493</b>	<b>- / 9.027</b>	<b>- / 7.686</b>	<b>- / 5.304</b>	<b>- / -</b>	<b>- / 5.304</b>

\*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:**

FY2021 Base procurement in the amount of \$5.304 million supports the continued activities for initial low rate production hardware to include qualification, integration, configuration management, transition to organic sustainment, technical data and fielding support documentation. Funding also supports the procurement of modernized JTT non-developmental item low-rate initial hardware and integration for man-portable operations as well as the technical support and completion of organic depot stand-up for legacy JTT systems.

The approved Army Acquisition Objective is 994.

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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<b>Exhibit P-5, Cost Analysis: PB 2021 Army</b>													<b>Date:</b> February 2020						
<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 2035A / 02 / 80						<b>P-1 Line Item Number / Title:</b> 9522V29600 / JTT/CIBS-M (MIP)						<b>Item Number / Title [DODIC]:</b> V29600 / JTT/CIBS-M (MIP)							
<b>ID Code</b> (A=Service Ready, B=Not Service Ready) :									<b>MDAP/MAIS Code:</b>										
<b>Resource Summary</b>				<b>Prior Years</b>		<b>FY 2019</b>		<b>FY 2020</b>		<b>FY 2021 Base</b>		<b>FY 2021 OCO</b>		<b>FY 2021 Total</b>					
Procurement Quantity (Units in Each)				-		-		-		-		-		-					
Gross/Weapon System Cost (\$ in Millions)				333.493		9.027		7.686		5.304		-		5.304					
Less PY Advance Procurement (\$ in Millions)				-		-		-		-		-		-					
Net Procurement (P-1) (\$ in Millions)				333.493		9.027		7.686		5.304		-		5.304					
Plus CY Advance Procurement (\$ in Millions)				-		-		-		-		-		-					
<b>Total Obligation Authority (\$ in Millions)</b>				<b>333.493</b>		<b>9.027</b>		<b>7.686</b>		<b>5.304</b>		<b>-</b>		<b>5.304</b>					
<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.																			
<b>Cost Elements</b>		<b>Prior Years</b>			<b>FY 2019</b>			<b>FY 2020</b>			<b>FY 2021 Base</b>			<b>FY 2021 OCO</b>			<b>FY 2021 Total</b>		
		<b>Unit Cost (\$ K)</b>	<b>Qty (Each)</b>	<b>Total Cost (\$ M)</b>	<b>Unit Cost (\$ K)</b>	<b>Qty (Each)</b>	<b>Total Cost (\$ M)</b>	<b>Unit Cost (\$ K)</b>	<b>Qty (Each)</b>	<b>Total Cost (\$ M)</b>	<b>Unit Cost (\$ K)</b>	<b>Qty (Each)</b>	<b>Total Cost (\$ M)</b>	<b>Unit Cost (\$ K)</b>	<b>Qty (Each)</b>	<b>Total Cost (\$ M)</b>	<b>Unit Cost (\$ K)</b>	<b>Qty (Each)</b>	<b>Total Cost (\$ M)</b>
<b>Hardware Cost</b>																			
<b>Recurring Cost</b>																			
JTT Low Rate Production Units		-	-	-	625.000	8	5.000	-	-	1.320	175.000	2	0.350	-	-	-	175.000	2	0.350
<b>Subtotal: Recurring Cost</b>		-	-	-	-	-	5.000	-	-	1.320	-	-	0.350	-	-	-	-	-	0.350
<b>Non Recurring Cost</b>																			
JTT Component integration/engineering		-	-	156.062	-	-	2.000	-	-	2.150	-	-	1.049	-	-	-	-	-	1.049
JTT Organic Hardware Depot Start up		-	-	8.950	-	-	1.000	-	-	0.021	-	-	0.030	-	-	-	-	-	0.030
IBS Spare Parts Support		4,332.257	35	151.629	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Fielding and Training prep/Documentation		-	-	-	-	-	-	-	-	2.109	-	-	1.420	-	-	-	-	-	1.420
<b>Subtotal: Non Recurring Cost</b>		-	-	316.641	-	-	3.000	-	-	4.280	-	-	2.499	-	-	-	-	-	2.499
<b>Subtotal: Hardware Cost</b>		-	-	316.641	-	-	8.000	-	-	5.600	-	-	2.849	-	-	-	-	-	2.849
<b>Software Cost</b>																			
<b>Recurring Cost</b>																			
JTT Organic Software Depot		-	-	-	-	-	-	-	-	0.318	-	-	0.515	-	-	-	-	-	0.515
<b>Subtotal: Recurring Cost</b>		-	-	-	-	-	-	-	-	0.318	-	-	0.515	-	-	-	-	-	0.515
<b>Subtotal: Software Cost</b>		-	-	-	-	-	-	-	-	0.318	-	-	0.515	-	-	-	-	-	0.515
<b>Support - Program Management Cost</b>																			

**UNCLASSIFIED**

**Exhibit P-5, Cost Analysis: PB 2021 Army** **Date:** February 2020

<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 2035A / 02 / 80	<b>P-1 Line Item Number / Title:</b> 9522V29600 / JTT/CIBS-M (MIP)	<b>Item Number / Title [DODIC]:</b> V29600 / JTT/CIBS-M (MIP)
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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 2019			FY 2020			FY 2021 Base			FY 2021 OCO			FY 2021 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	-	-	16.852	-	-	1.027	-	-	1.060	-	-	1.095	-	-	-	-	-	1.095
<i>Subtotal: Support - Program Management Cost</i>	-	-	<b>16.852</b>	-	-	<b>1.027</b>	-	-	<b>1.060</b>	-	-	<b>1.095</b>	-	-	-	-	-	<b>1.095</b>
<b>Support - System Technical Support (STS) Cost</b>																		
System Technical Support (STS)	-	-	-	-	-	-	-	-	0.708	-	-	0.845	-	-	-	-	-	0.845
<i>Subtotal: Support - System Technical Support (STS) Cost</i>	-	-	-	-	-	-	-	-	<b>0.708</b>	-	-	<b>0.845</b>	-	-	-	-	-	<b>0.845</b>
<b>Gross/Weapon System Cost</b>	-	-	<b>333.493</b>	-	-	<b>9.027</b>	-	-	<b>7.686</b>	-	-	<b>5.304</b>	-	-	-	-	-	<b>5.304</b>

Secondary Distribution		FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total
Army	Quantity	-	-	-	-	-
	Total Obligation Authority	9.027	7.686	5.304	-	5.304
<b>Total: Secondary Distribution</b>	Quantity	-	-	-	-	-
	Total Obligation Authority	<b>9.027</b>	<b>7.686</b>	<b>5.304</b>	-	<b>5.304</b>

**UNCLASSIFIED**

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

<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 2035A: Other Procurement, Army / BA 02: Communications and Electronics Equipment / BSA 80: Elect Equip - Tact Int Rel Act (TIARA)	<b>P-1 Line Item Number / Title:</b> 9546B97600 / TERRESTRIAL LAYER SYSTEMS (TLS) (MIP)
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<b>ID Code</b> (A=Service Ready, B=Not Service Ready):	<b>Program Elements for Code B Items:</b> N/A	<b>Other Related Program Elements:</b> N/A
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**Line Item MDAP/MAIS Code:** N/A

Resource Summary	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	To Complete	Total
Procurement Quantity ( <i>Units in Each</i> )	-	-	-	-	-	-	7	13	24	24	-	68
Gross/Weapon System Cost ( <i>\$ in Millions</i> )	-	-	-	8.081	-	8.081	39.710	88.133	167.066	186.448	-	489.438
Less PY Advance Procurement ( <i>\$ in Millions</i> )	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) ( <i>\$ in Millions</i> )	-	-	-	8.081	-	8.081	39.710	88.133	167.066	186.448	-	489.438
Plus CY Advance Procurement ( <i>\$ in Millions</i> )	-	-	-	-	-	-	-	-	-	-	-	-
<b>Total Obligation Authority</b> ( <i>\$ in Millions</i> )	-	-	-	<b>8.081</b>	-	<b>8.081</b>	<b>39.710</b>	<b>88.133</b>	<b>167.066</b>	<b>186.448</b>	-	<b>489.438</b>

*(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> )	-	-	-	-	-	-	5,672.857	6,779.462	6,961.083	7,768.667	-	7,197.618

**Description:**

B9760 is a New Start Standard Study Number (SSN) in FY 2021. Terrestrial Layer System (TLS) provides Army maneuver forces integrated full spectrum Signals Intelligence (SIGINT), Electronic Warfare (EW), and Cyber-enabling non-kinetic offensive operation options to Brigade Combat Team (BCT) and other unit commanders. TLS' information superiority provides Indications and Warnings, Force Protection and Situational Awareness to influence the commander's decision cycle, improve targeting timeliness and accuracy, and provide the maneuver commander with electronic attack and offensive cyber warfare options to deny, degrade, disrupt, or otherwise manipulate the targeted force. TLS employs technologically advanced systems with a modular open-system approach for multiple operation configurations that can be efficiently sustained and effectively upgraded to provide capabilities against changing near peer and emerging threats to address multi-domain capability gaps.

Secondary Distribution	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025
Army									
Quantity	-	-	-	-	-	7	13	24	24
Total Obligation Authority	-	-	8.081	-	8.081	39.710	88.133	167.066	186.448
<b>Total:</b>									
<b>Secondary Distribution</b>									
Quantity	-	-	-	-	-	7	13	24	24
Total Obligation Authority	-	-	8.081	-	8.081	39.710	88.133	167.066	186.448

**UNCLASSIFIED**

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

<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 2035A: Other Procurement, Army / BA 02: Communications and Electronics Equipment / BSA 80: Elect Equip - Tact Int Rel Act (TIARA)	<b>P-1 Line Item Number / Title:</b> 9546B97600 / TERRESTRIAL LAYER SYSTEMS (TLS) (MIP)
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<b>ID Code</b> (A=Service Ready, B=Not Service Ready):	<b>Program Elements for Code B Items:</b> N/A	<b>Other Related Program Elements:</b> N/A
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**Line Item MDAP/MAIS Code:** N/A

Exhibits Schedule					Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total
Exhibit Type	Title*	Subexhibits	ID CD	MDAP/MAIS Code	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)
P-5	B97610 / TERRESTRIAL LAYER SYSTEM (TLS) (MIP)				- / -	- / -	- / -	- / 8.081	- / -	- / 8.081
<b>P-40</b>	<b>Total Gross/Weapon System Cost</b>				- / -	- / -	- / -	- / 8.081	- / -	- / 8.081

\*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 2021 B9761 Base procurement funding in the amount of \$8.081 million supports the procurement of long lead components for Terrestrial Layer System - Large (TLS-L) in order to maintain a planned production schedule that meets the Army's accelerated directive of First Unit Equipped (FUE) in FY 2022. Additionally, funding supports Systems Engineering and Technical Assistance (SETA) personnel to conduct acquisition documentation development in preparation of an FY 2022 Milestone C and source selection activities in support of the TLS-L production contract(s).

All funding is for the Active component.

Army Acquisition Objective (AAO): TBD

TERRESTRIAL LAYER SYSTEMS (TLS) (MIP) is a new start in FY2021.

**UNCLASSIFIED**

<b>Exhibit P-5, Cost Analysis: PB 2021 Army</b>		<b>Date:</b> February 2020
<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 2035A / 02 / 80	<b>P-1 Line Item Number / Title:</b> 9546B97600 / TERRESTRIAL LAYER SYSTEMS (TLS) (MIP)	<b>Item Number / Title [DODIC]:</b> B97610 / TERRESTRIAL LAYER SYSTEM (TLS) (MIP)

<b>ID Code</b> (A=Service Ready, B=Not Service Ready) :	<b>MDAP/MAIS Code:</b>
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Resource Summary	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total
Procurement Quantity <i>(Units in Each)</i>	-	-	-	-	-	-
Gross/Weapon System Cost <i>(\$ in Millions)</i>	-	-	-	8.081	-	8.081
Less PY Advance Procurement <i>(\$ in Millions)</i>	-	-	-	-	-	-
Net Procurement (P-1) <i>(\$ in Millions)</i>	-	-	-	8.081	-	8.081
Plus CY Advance Procurement <i>(\$ in Millions)</i>	-	-	-	-	-	-
<b>Total Obligation Authority</b> <i>(\$ in Millions)</i>	-	-	-	<b>8.081</b>	-	<b>8.081</b>

*(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>	-	-	-	-	-	-

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

Cost Elements	Prior Years			FY 2019			FY 2020			FY 2021 Base			FY 2021 OCO			FY 2021 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																		
Long Lead Components	-	-	-	-	-	-	-	-	-	-	-	7.553	-	-	-	-	-	7.553
<i>Subtotal: Recurring Cost</i>	-	-	-	-	-	-	-	-	-	-	-	7.553	-	-	-	-	-	7.553
<i>Subtotal: Hardware Cost</i>	-	-	-	-	-	-	-	-	-	-	-	7.553	-	-	-	-	-	7.553
Support - Program Management Cost																		
Contractor Management	-	-	-	-	-	-	-	-	-	-	-	0.528	-	-	-	-	-	0.528
<i>Subtotal: Support - Program Management Cost</i>	-	-	-	-	-	-	-	-	-	-	-	0.528	-	-	-	-	-	0.528
<b>Gross/Weapon System Cost</b>	-	-	-	-	-	-	-	-	-	-	-	<b>8.081</b>	-	-	-	-	-	<b>8.081</b>

Secondary Distribution	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total
Army	-	-	-	-	-
Total Obligation Authority	-	-	8.081	-	8.081
<b>Total: Secondary Distribution</b>	-	-	<b>8.081</b>	-	<b>8.081</b>

**UNCLASSIFIED**

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

<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 2035A: Other Procurement, Army / BA 02: Communications and Electronics Equipment / BSA 80: Elect Equip - Tact Int Rel Act (TIARA)	<b>P-1 Line Item Number / Title:</b> 9654BU4050 / DRUG INTERDICTION PROGRAM (DIP) (TIARA)
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<b>ID Code</b> (A=Service Ready, B=Not Service Ready):	<b>Program Elements for Code B Items:</b> N/A	<b>Other Related Program Elements:</b> N/A
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**Line Item MDAP/MAIS Code:** N/A

Resource Summary	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	To Complete	Total
Procurement Quantity ( <i>Units in Each</i> )	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost ( <i>\$ in Millions</i> )	606.719	3.711	-	-	-	-	-	-	-	-	-	610.430
Less PY Advance Procurement ( <i>\$ in Millions</i> )	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) ( <i>\$ in Millions</i> )	606.719	3.711	-	-	-	-	-	-	-	-	-	610.430
Plus CY Advance Procurement ( <i>\$ in Millions</i> )	-	-	-	-	-	-	-	-	-	-	-	-
<b>Total Obligation Authority (<i>\$ in Millions</i>)</b>	<b>606.719</b>	<b>3.711</b>	-	-	-	-	-	-	-	-	-	<b>610.430</b>

*(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:**

CLASSIFIED PROGRAM: INFORMATION WILL BE PROVIDED UPON REQUEST.

Secondary Distribution		FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025
Army	Quantity	-	-	-	-	-	-	-	-	-
	Total Obligation Authority	3.711	-	-	-	-	-	-	-	-
<b>Total: Secondary Distribution</b>	<b>Quantity</b>	-	-	-	-	-	-	-	-	-
	<b>Total Obligation Authority</b>	<b>3.711</b>	-	-	-	-	-	-	-	-

**UNCLASSIFIED**

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

<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 2035A: Other Procurement, Army / BA 02: Communications and Electronics Equipment / BSA 80: Elect Equip - Tact Int Rel Act (TIARA)	<b>P-1 Line Item Number / Title:</b> 9690BZ7316 / DCGS-A (MIP)
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<b>ID Code</b> (A=Service Ready, B=Not Service Ready):	<b>Program Elements for Code B Items:</b> N/A	<b>Other Related Program Elements:</b> 0305208A
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**Line Item MDAP/MAIS Code:** N/A

Resource Summary	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	To Complete	Total
Procurement Quantity ( <i>Units in Each</i> )	5,005	1,943	1,071	419	131	550	420	491	517	526	-	10,523
Gross/Weapon System Cost ( <i>\$ in Millions</i> )	3,031.236	298.270	205.219	151.886	47.709	199.595	163.047	170.928	177.962	191.248	-	4,437.505
Less PY Advance Procurement ( <i>\$ in Millions</i> )	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) ( <i>\$ in Millions</i> )	3,031.236	298.270	205.219	151.886	47.709	199.595	163.047	170.928	177.962	191.248	-	4,437.505
Plus CY Advance Procurement ( <i>\$ in Millions</i> )	-	-	-	-	-	-	-	-	-	-	-	-
<b>Total Obligation Authority (<i>\$ in Millions</i>)</b>	<b>3,031.236</b>	<b>298.270</b>	<b>205.219</b>	<b>151.886</b>	<b>47.709</b>	<b>199.595</b>	<b>163.047</b>	<b>170.928</b>	<b>177.962</b>	<b>191.248</b>	<b>-</b>	<b>4,437.505</b>

*(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> )	605.642	153.510	191.614	362.496	364.191	362.900	388.207	348.122	344.221	363.589	-	421.696

**Description:**

Distributed Common Ground System - Army (DCGS-A) is the Intelligence, Surveillance and Reconnaissance (ISR) System of Systems (SoS) for Joint, Interagency, Allied, Coalition, and National data analysis, sharing and collaboration. The core functions of DCGS-A are: the vertical and horizontal synchronization of ISR Processing, Exploitation and Dissemination (PED) efforts; operations in a networked environment at multiple security levels; control of select Army and joint sensor systems; fusion of all acquired data and information, and distribution of relevant red (threat), gray (non-aligned), and environmental (weather and terrain) information; and providing the Warfighters' early warning and targeting capability. DCGS-A provides a single integrated ISR ground processing system composed of common components that are interoperable with sensors, other information sources, all Warfighting Functions, and the Defense Information & Intelligence Enterprise (DI2E). DCGS-A is fielded in Fixed, Mobile, and Portable configurations emphasizing the use of reach and split based operations by improving accessibility of data in order to reduce forward deployed footprint. As newer versions of the baseline software are tested and released, a continuing series of software releases will be integrated into Army common/commodity hardware and fielded to units in accordance with (IAW) the Army Force Modernization Strategy and the Army Resourcing Priority List (ARPL).

DCGS-A is designated as a Program of Record (PoR) within the Command Post Computing Environment (CPCE) of the Common Operating Environment (COE). DCGS-A provides the Single and Shareable Geospatial Foundation (SSGF) Cross Cutting Capability (CCC), and is defining the DCGS-A architecture to fit within the COE as described by the Assistant Secretary of the Army (Acquisition, Logistics, and Technology) (ASA(ALT)) COE Implementation Plan. This is in accordance with the G-3/5/7 priority to align all Army networks, procurements and enhancements under one COE and one vision leveraging intelligence community investments. PM DCGS-A continues to work with PM Mission Command (PM MC) to converge on CP CE Tactical Server Infrastructure (TSI).

DCGS-A hardware and software is based on a combination of Government Off The Shelf (GOTS), Commercial Off The Shelf (COTS), and Non-Developmental Items (NDI) that are integrated into scalable configurations, tailored to Warfighting functions. These product line components include the software baseline, server suite (Intelligence Fusion Server (IFS)) and individual analyst Multi-Function Workstations (MFWS) such as Portable and Fixed MFWS (P-MFWS/F-MFWS) and the Geospatial Intelligence (GEOINT) Workstation. These components are also used to upgrade existing fielded Intel Programs of Record to enable the establishment of the Army COE while simultaneously assuring system compatibility and interoperability within the DCGS-A enterprise.

DCGS-A was formally designated as a Major Automation Information System (MAIS) and is deployed on multiple hardware platforms and security levels across the Army. The DCGS-A Increment 1 Full Deployment Decision (FDD) Acquisition Decision Memorandum (ADM) dated 14 November 2012, authorizes continued deployment of Release 1 capabilities. The DCGS-A Increment 1 Release 2 Fielding Acquisition Decision Memorandum (ADM) was approved by the Army Acquisition Executive (AAE) on 4 November 2015 after a successful Follow-On Test and Evaluation (FOT&E) event in May 2015. Full Deployment of DCGS-A Increment 1 Release 1 was declared on 17 June 2019.



**UNCLASSIFIED**

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

<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 2035A: Other Procurement, Army / BA 02: Communications and Electronics Equipment / BSA 80: Elect Equip - Tact Int Rel Act (TIARA)	<b>P-1 Line Item Number / Title:</b> 9690BZ7316 / DCGS-A (MIP)
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<b>ID Code</b> (A=Service Ready, B=Not Service Ready):	<b>Program Elements for Code B Items:</b> N/A	<b>Other Related Program Elements:</b> 0305208A
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**Line Item MDAP/MAIS Code:** N/A

DCGS-A ISR capabilities are deployed at all echelons across the Army. DCGS-A consolidates and modernizes the Army ISR PED capabilities from 14 legacy Program of Record (POR) systems and significantly reduces their sustainment burdens.

Secondary Distribution		FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025
Army	Quantity	1,193	957	309	131	440	305	371	395	405
	Total Obligation Authority	231.405	148.404	100.442	47.709	148.151	110.574	117.406	123.798	141.248
ANG	Quantity	622	110	110	-	110	115	120	122	121
	Total Obligation Authority	62.200	52.061	51.444	-	51.444	52.473	53.522	54.164	50.000
AR	Quantity	128	4	-	-	-	-	-	-	-
	Total Obligation Authority	4.665	4.754	-	-	-	-	-	-	-
<b>Total: Secondary Distribution</b>	<b>Quantity</b>	<b>1,943</b>	<b>1,071</b>	<b>419</b>	<b>131</b>	<b>550</b>	<b>420</b>	<b>491</b>	<b>517</b>	<b>526</b>
	<b>Total Obligation Authority</b>	<b>298.270</b>	<b>205.219</b>	<b>151.886</b>	<b>47.709</b>	<b>199.595</b>	<b>163.047</b>	<b>170.928</b>	<b>177.962</b>	<b>191.248</b>

**UNCLASSIFIED**

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

**Appropriation / Budget Activity / Budget Sub Activity:**  
 2035A: Other Procurement, Army / BA 02: Communications and Electronics  
 Equipment / BSA 80: Elect Equip - Tact Int Rel Act (TIARA) **P-1 Line Item Number / Title:**  
 9690BZ7316 / DCGS-A (MIP)

**ID Code** (A=Service Ready, B=Not Service Ready): **Program Elements for Code B Items:** N/A **Other Related Program Elements:** 0305208A

**Line Item MDAP/MAIS Code:** N/A

Exhibits Schedule					Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total
Exhibit Type	Title*	Subexhibits	ID CD	MDAP/MAIS Code	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)
P-5	BZ7316 / DCGS-A (MIP)	P-5a			5,005 / 3,031.236	1,943 / 298.270	1,071 / 205.219	419 / 151.886	131 / 47.709	550 / 199.595
<b>P-40</b>	<b>Total Gross/Weapon System Cost</b>				<b>5,005 / 3,031.236</b>	<b>1,943 / 298.270</b>	<b>1,071 / 205.219</b>	<b>419 / 151.886</b>	<b>131 / 47.709</b>	<b>550 / 199.595</b>

\*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 2021 Base funding in the amount of \$151.866 million will update and procure components for the DCGS-A Fixed Sites and Army, Reserve, and National Guard units, providing fixed and portable system configurations IAW the Army's Equipping Strategy. The DCGS-A updates will continue to enhance the Army ISR PED capabilities to meet new threats or emerging capability needs. Funding supports the ARPL by equipping and training the force as well as deploying units with the current DCGS-A software release. Compo 2, 3 and emerging Multi Domain Task Force requirements will be fielded to complete Release 2 equipping. Funds will support the Fielding priority Guidance and the technology refresh cycle driven by rapid/continual advancement in Information Technology (IT) and COTs of Release 2 software and continued iterative Capability Drops. DCGS-A will continue critical updates to the Army's ISR and multi intelligence planning, analysis, and production capabilities through the exploitation of Cloud Computing and advanced analytics capabilities. The Capability Drop (CD) approach will achieve Information Technology efficiencies through alignment with the Intelligence Community Information Technology Environment (IC ITE), while providing iterative software updates required to remain current. DCGS-A will focus on procurement and fielding of CD2. CD 2 will replace DCGS-A data management capabilities hosted at Echelons Above Corps, and adds advanced analytics and Artificial Intelligence/Machine Learning capabilities. Funding also procures new COTS software licenses to enhance performance of fielded systems as well as support integration of Intelligence Community investments. DCGS-A supports the Army's Geospatial Transformation by providing an integrated visualization capability for intelligence, terrain, and weather effects in a net centric environment. Funding will also support continued alignment with Army COE objectives and Army modernization priorities.

FY 2021 OCO funding in the amount of \$47.709 million will support new equipment training, fielding, and modernized Release 2 software capabilities to theater requirements.

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.

In FY 2021, \$6.957 million in Reimbursable Manpower for this line has been realigned from Reimbursable Civilian Funding to Direct Operations and Maintenance. Program support costs have been accurately updated to reflect the realignments.

**UNCLASSIFIED**

<b>Exhibit P-5, Cost Analysis: PB 2021 Army</b>					<b>Date:</b> February 2020			
<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 2035A / 02 / 80			<b>P-1 Line Item Number / Title:</b> 9690BZ7316 / DCGS-A (MIP)			<b>Item Number / Title [DODIC]:</b> BZ7316 / DCGS-A (MIP)		
<b>ID Code</b> (A=Service Ready, B=Not Service Ready) :					<b>MDAP/MAIS Code:</b>			
<b>Resource Summary</b>			<b>Prior Years</b>	<b>FY 2019</b>	<b>FY 2020</b>	<b>FY 2021 Base</b>	<b>FY 2021 OCO</b>	<b>FY 2021 Total</b>
Procurement Quantity (Units in Each)			5,005	1,943	1,071	419	131	550
Gross/Weapon System Cost (\$ in Millions)			3,031.236	298.270	205.219	151.886	47.709	199.595
Less PY Advance Procurement (\$ in Millions)			-	-	-	-	-	-
Net Procurement (P-1) (\$ in Millions)			3,031.236	298.270	205.219	151.886	47.709	199.595
Plus CY Advance Procurement (\$ in Millions)			-	-	-	-	-	-
<b>Total Obligation Authority (\$ in Millions)</b>			<b>3,031.236</b>	<b>298.270</b>	<b>205.219</b>	<b>151.886</b>	<b>47.709</b>	<b>199.595</b>
<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)			605.642	153.510	191.614	362.496	364.191	362.900

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

Cost Elements	Prior Years			FY 2019			FY 2020			FY 2021 Base			FY 2021 OCO			FY 2021 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																		
Tactical ISR Grd Station (TGS/DE CGS)	111,951.625	8	895.613	2,277.000	3	6.831	-	-	-	-	-	-	-	-	-	-	-	-
ISR Process Ctr - V1 (IPC V1/Enclave)	2,603.500	6	15.621	2,000.000	2	4.000	-	-	-	2,000.000	2	4.000	2,000.000	6	12.000	2,000.000	8	16.000
Oper ISR Grnd Station (OGS/SIPC)	-	-	34.928	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
OGS Refresh/Repair <sup>(†)</sup>	2,200.000	1	2.200	2,200.000	3	6.600	2,200.000	3	6.600	-	-	-	2,200.000	2	4.400	2,200.000	2	4.400
ISR Process Ctr V2 (IPC V2/DE ACT-E) <sup>(†)</sup>	2,233.095	42	93.790	1,200.000	21	25.200	1,200.000	26	31.200	-	-	-	-	-	-	-	-	-
Cross Domain Solution Suite (CDSS) <sup>(†)</sup>	86.737	118	10.235	-	-	-	151.000	59	8.909	-	-	-	-	-	-	-	-	-
GEOINT WS (GWS/DE DTSS-D) <sup>(†)</sup>	328.255	451	148.043	245.000	108	26.460	193.000	88	16.984	193.000	20	3.860	193.000	14	2.702	193.000	34	6.562
Intel Fusion Server (IFS)	1,479.667	415	614.062	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Intel Fusion Server (IFS) (TSI Config) <sup>(†)</sup>	196.000	238	46.648	196.000	146	28.616	169.000	131	22.139	169.000	28	4.732	169.000	19	3.211	169.000	47	7.943
Portable (P)Multi Function WorkSta. <sup>(†)</sup>	38.572	9,207	355.136	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

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<b>Exhibit P-5, Cost Analysis: PB 2021 Army</b>		<b>Date:</b> February 2020
<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 2035A / 02 / 80		<b>P-1 Line Item Number / Title:</b> 9690BZ7316 / DCGS-A (MIP)
<b>ID Code</b> (A=Service Ready, B=Not Service Ready) :		<b>MDAP/MAIS Code:</b>

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

Cost Elements	Prior Years			FY 2019			FY 2020			FY 2021 Base			FY 2021 OCO			FY 2021 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)
Fixed (F)-Multi Function WorkStations	18.000	370	6.660	-	-	-	18.000	202	3.636	-	-	-	-	-	-	-	-	-
TPE H/W S/W Refresh	-	-	14.450	-	-	32.806	-	-	7.360	-	-	-	-	-	3.756	-	-	3.756
Fixed Site Refresh	-	-	7.900	-	-	5.400	-	-	2.700	-	-	-	-	-	8.660	-	-	8.660
Equipment Tech Refresh	-	-	140.688	-	-	17.700	-	-	20.194	-	-	34.333	-	-	6.557	-	-	40.890
Software Licenses for Int. on DCGS HW	-	-	190.452	-	-	26.582	-	-	0.615	-	-	30.790	-	-	-	-	-	30.790
Program Office Support	-	-	129.192	-	-	11.100	-	-	8.100	-	-	8.100	-	-	-	-	-	8.100
Software Integration on to DCGS HW	-	-	40.855	-	-	11.515	-	-	3.905	-	-	3.905	-	-	-	-	-	3.905
Fielding/Training	-	-	202.870	-	-	29.810	-	-	32.347	-	-	24.766	-	-	6.423	-	-	31.189
Technical Engineering Services	-	-	79.247	-	-	27.548	-	-	12.000	-	-	11.550	-	-	-	-	-	11.550
Data	-	-	2.650	-	-	1.364	-	-	1.492	-	-	1.750	-	-	-	-	-	1.750
Capability Drop Modifications Hardware	-	-	-	2.800	879	2.461	-	-	1.438	-	-	-	-	-	-	-	-	-
Capability Drop Modifications Software	-	-	-	-	-	34.277	-	-	25.600	-	-	24.100	-	-	-	-	-	24.100
<i>Subtotal: Recurring Cost</i>	-	-	<i>3,031.240</i>	-	-	<i>298.270</i>	-	-	<i>205.219</i>	-	-	<i>151.886</i>	-	-	<i>47.709</i>	-	-	<i>199.595</i>
<i>Subtotal: Flyaway Cost</i>	-	-	<i>3,031.240</i>	-	-	<i>298.270</i>	-	-	<i>205.219</i>	-	-	<i>151.886</i>	-	-	<i>47.709</i>	-	-	<i>199.595</i>
<b>Gross/Weapon System Cost</b>	<b>605.642</b>	<b>5,005</b>	<b>3,031.236</b>	<b>153.510</b>	<b>1,943</b>	<b>298.270</b>	<b>191.614</b>	<b>1,071</b>	<b>205.219</b>	<b>362.496</b>	<b>419</b>	<b>151.886</b>	<b>364.191</b>	<b>131</b>	<b>47.709</b>	<b>362.900</b>	<b>550</b>	<b>199.595</b>

**Remarks:**  
Estimated FY20 decrease in Software licensing requirement not realized due to change in license procurement strategy and delay in transition to sustainment.

Secondary Distribution		FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total
Army	Quantity	1,193	957	309	131	440
	Total Obligation Authority	231.405	148.404	100.442	47.709	148.151
ANG	Quantity	622	110	110	-	110
	Total Obligation Authority	62.200	52.061	51.444	-	51.444
AR	Quantity	128	4	-	-	-
	Total Obligation Authority	4.665	4.754	-	-	-
<b>Total:</b>	<b>Quantity</b>	<b>1,943</b>	<b>1,071</b>	<b>419</b>	<b>131</b>	<b>550</b>

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<b>Exhibit P-5, Cost Analysis:</b> PB 2021 Army			<b>Date:</b> February 2020			
<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 2035A / 02 / 80		<b>P-1 Line Item Number / Title:</b> 9690BZ7316 / DCGS-A (MIP)		<b>Item Number / Title [DODIC]:</b> BZ7316 / DCGS-A (MIP)		
<b>ID Code</b> (A=Service Ready, B=Not Service Ready) :			<b>MDAP/MAIS Code:</b>			
<b>Secondary Distribution</b>		<b>FY 2019</b>	<b>FY 2020</b>	<b>FY 2021 Base</b>	<b>FY 2021 OCO</b>	<b>FY 2021 Total</b>
<b>Secondary Distribution</b>	<b>Total Obligation Authority</b>	298.270	205.219	151.886	47.709	199.595

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

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**Exhibit P-5a, Procurement History and Planning: PB 2021 Army** **Date:** February 2020

<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 2035A / 02 / 80	<b>P-1 Line Item Number / Title:</b> 9690BZ7316 / DCGS-A (MIP)	<b>Item Number / Title [DODIC]:</b> BZ7316 / DCGS-A (MIP)
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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
OGS Refresh/Repair		2019	CACI / Arlington, VA (OGS)	C / CPFF	CECOM ACQ CENTER	Jun 2019	Sep 2019	3	2,200.000	N		
OGS Refresh/Repair		2020	CACI / Arlington, VA (OGS)	C / CPFF	CECOM ACQ CENTER	Jun 2020	Sep 2020	3	2,200.000	N		
OGS Refresh/Repair	✓	2021	CACI / Arlington, VA (OGS)	C / CPFF	CECOM ACQ CENTER	Jun 2021	Sep 2021	2	2,200.000	N		
ISR Process Ctr V2 (IPC V2/DE ACT-E )		2019	General Dynamics2 / Taunton, MA - (IPC V2)	C / FP	CECOM ACQ CENTER	Jul 2019	Sep 2019	21	1,200.000	N		
ISR Process Ctr V2 (IPC V2/DE ACT-E )		2020	General Dynamics2 / Taunton, MA - (IPC V2)	C / FP	CECOM ACQ CENTER	Apr 2020	Sep 2020	26	1,200.000	Y		
Cross Domain Solution Suite (GDSS)		2020	General Dynamics3 / Taunton, MA - CDS	C / FP	CECOM ACQ CENTER	Apr 2020	Sep 2020	59	151.000	Y		
GEOINT WS (GWS/DE DTSS-D)		2019	General Dynamics1 / Taunton, MA - GWS	C / FP	CECOM ACQ CENTER	Mar 2019	Jun 2019	108	245.000	N		
GEOINT WS (GWS/DE DTSS-D)		2020	General Dynamics1 / Taunton, MA - GWS	C / FP	CECOM ACQ CENTER	Mar 2020	Sep 2020	88	193.000	Y		
GEOINT WS (GWS/DE DTSS-D)		2021	General Dynamics1 / Taunton, MA - GWS	C / FP	CECOM ACQ CENTER	Mar 2021	Sep 2021	20	193.000	Y		
GEOINT WS (GWS/DE DTSS-D)	✓	2021	General Dynamics1 / Taunton, MA - GWS	/	CECOM ACQ CENTER	Mar 2021	Sep 2021	14	193.000	Y		
Intel Fusion Server (IFS) (TSI Config)		2019	General Dynamics2 / Taunton, MA - IFS	C / FP	CECOM ACQ CENTER	Feb 2019	Sep 2019	146	196.000	N		
Intel Fusion Server (IFS) (TSI Config)		2020	General Dynamics2 / Taunton, MA - IFS	C / FP	CECOM ACQ CENTER	Feb 2020	Sep 2020	131	169.000	Y		
Intel Fusion Server (IFS) (TSI Config)		2021	General Dynamics2 / Taunton, MA - IFS	C / FP	CECOM ACQ CENTER	Feb 2021	Sep 2021	28	169.000	Y		
Intel Fusion Server (IFS) (TSI Config)	✓	2021	General Dynamics2 / Taunton, MA - IFS	/	CECOM ACQ CENTER	Feb 2021	Sep 2021	19	169.000	Y		
Portable (P)Multi Function WorkSta.		2019	General Dynamics5 / Taunton, MA - MFWS	C / FP	CECOM ACQ CENTER	Mar 2019	Mar 2019	0	0.000	N		

**Remarks:**  
All DCGS-A hardware is comprised solely of COTS and NDI equipment. The program office has updated the P-form to reflect software, system integration, engineering change proposals, and engineering support costs separately from the system unit costs.

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

<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 2035A: Other Procurement, Army / BA 02: Communications and Electronics Equipment / BSA 80: Elect Equip - Tact Int Rel Act (TIARA)	<b>P-1 Line Item Number / Title:</b> 9692BZ8401 / Joint Tactical Ground Station (JTAGS) (MIP)
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<b>ID Code</b> (A=Service Ready, B=Not Service Ready):	<b>Program Elements for Code B Items:</b> N/A	<b>Other Related Program Elements:</b> 1208053A
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**Line Item MDAP/MAIS Code:** N/A

Resource Summary	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	To Complete	Total
Procurement Quantity ( <i>Units in Each</i> )	1	5	-	-	-	-	-	5	-	-	-	11
Gross/Weapon System Cost ( <i>\$ in Millions</i> )	53.318	5.434	-	-	-	-	-	6.387	-	-	-	65.139
Less PY Advance Procurement ( <i>\$ in Millions</i> )	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) ( <i>\$ in Millions</i> )	53.318	5.434	-	-	-	-	-	6.387	-	-	-	65.139
Plus CY Advance Procurement ( <i>\$ in Millions</i> )	-	-	-	-	-	-	-	-	-	-	-	-
<b>Total Obligation Authority (<i>\$ in Millions</i>)</b>	<b>53.318</b>	<b>5.434</b>	-	-	-	-	-	<b>6.387</b>	-	-	-	<b>65.139</b>

*(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> )	53,318.000	1,086.800	-	-	-	-	-	1,277.400	-	-	-	5,921.727

**Description:**

The Joint Tactical Ground Station (JTAGS) disseminates near real time warning, alerting, and cueing information on ballistic missile launches and other tactical events of interest throughout the theater using existing communication networks, providing critical support to Combatant Commanders in their Areas of Responsibility (AOR). JTAGS, first fielded in 1997, has four OCONUS deployed JTAGS units, which are deployed in three theaters (PACOM, CENTCOM, EUCOM). A fifth CONUS system is used as an institutional trainer though is available as a deployable asset. Obsolescence issues coupled with the desire to take advantage of the Air Force's investment in newer satellites (Space Based Infrared System (SBIRS)) and their improved warning accuracy and timeliness, resulted in the JTAGS Block II Pre-Planned Product Improvement (P3I) system. Block II systems are currently being fielded, replacing the legacy Block I fielded systems. The JTAGS Approved Acquisition Objective (AAO) is five systems.

Secondary Distribution	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025
Army									
Quantity	5	-	-	-	-	-	5	-	-
Total Obligation Authority	5.434	-	-	-	-	-	6.387	-	-
<b>Total:</b>									
<b>Secondary Distribution</b>									
Quantity	<b>5</b>	-	-	-	-	-	<b>5</b>	-	-
Total Obligation Authority	<b>5.434</b>	-	-	-	-	-	<b>6.387</b>	-	-

**Justification:**

There are no FY21 procurement dollars planned for the JTAGS 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 missions domestic emergency responses and providing military support to civil authorities."

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

<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 2035A: Other Procurement, Army / BA 02: Communications and Electronics Equipment / BSA 80: Elect Equip - Tact Int Rel Act (TIARA)	<b>P-1 Line Item Number / Title:</b> 9704BA0326 / TROJAN (MIP)
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<b>ID Code</b> (A=Service Ready, B=Not Service Ready):	<b>Program Elements for Code B Items:</b> N/A	<b>Other Related Program Elements:</b> 0303032A
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**Line Item MDAP/MAIS Code:** N/A

Resource Summary	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	To Complete	Total
Procurement Quantity ( <i>Units in Each</i> )	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost ( <i>\$ in Millions</i> )	551.406	27.549	18.705	17.593	1.766	19.359	18.125	15.893	16.052	16.212	-	683.301
Less PY Advance Procurement ( <i>\$ in Millions</i> )	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) ( <i>\$ in Millions</i> )	551.406	27.549	18.705	17.593	1.766	19.359	18.125	15.893	16.052	16.212	-	683.301
Plus CY Advance Procurement ( <i>\$ in Millions</i> )	-	-	-	-	-	-	-	-	-	-	-	-
<b>Total Obligation Authority (<i>\$ in Millions</i>)</b>	<b>551.406</b>	<b>27.549</b>	<b>18.705</b>	<b>17.593</b>	<b>1.766</b>	<b>19.359</b>	<b>18.125</b>	<b>15.893</b>	<b>16.052</b>	<b>16.212</b>	-	<b>683.301</b>

*(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:**

TROJAN, as an Army Intelligence system, has been providing direct support and an operational readiness capability to soldiers since 1983. TROJAN provides the tactical commander with remote access to signal environments, in order to maintain a high state of operational readiness and enhance the training and sustainment of highly perishable intelligence skills. Additionally, the TROJAN architecture provides the infrastructure enabling split-based and force protection operations in direct support of the warfighter.

TROJAN NexGEN, formerly TROJAN Classic XXI (TCXXI) advances the tactical commanders' readiness in the areas of training (technical and operational signals intelligence (SIGINT)), operational intelligence production and dissemination, and operational support to split-based intelligence operations supporting force protection operations. TROJAN NexGEN's principle use is to provide remote access to target environments, enabling split-based operations from a sanctuary by being the gateway interface to environments of immediate relevance to every supported commander's priority intelligence requirements. In addition, NexGEN will continue its role as an operational readiness system, while also supporting commanders' intelligence requirements across the spectrum of conflict.

TROJAN NexGEN is an intelligence and electronic warfare (IEW) system that supports the increased readiness of key mobilization personnel in preparation for actions in the mission areas of The Army Plan (TAP). NexGEN is capable of maintaining operational readiness status of unit personnel supporting the full spectrum of military operations as outlined in the Army Strategic Planning Guidance and Army Planning Guidance sections of the TAP.

TROJAN NexGEN provides operational readiness capability to an Army commander employing a rapid global response capability to any level of military conflict throughout the seven mission areas. By employing reach technology relay capabilities between the forward deployed sensors and the sanctuary-based Remote Operational Facilities (ROFs), NexGEN can meet the operational deployment timelines through the use of readiness training venues to meet the requirements of units from Brigade Combat Teams through Corps and Echelon Above Corps (EAC). This operational concept provides the unique capability to remotely control the sensors and direction finding capabilities of the Deployable Collection Assets (DCAs) and process and analyze the collected information for timely reporting of time-sensitive information to the

Secondary Distribution	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025
Army	Quantity	-	-	-	-	-	-	-	-
	Total Obligation Authority	27.249	18.705	17.593	1.766	19.359	18.125	15.893	16.052
ANG	Quantity	-	-	-	-	-	-	-	-



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

<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 2035A: Other Procurement, Army / BA 02: Communications and Electronics Equipment / BSA 80: Elect Equip - Tact Int Rel Act (TIARA)	<b>P-1 Line Item Number / Title:</b> 9704BA0326 / TROJAN (MIP)
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<b>ID Code</b> (A=Service Ready, B=Not Service Ready):	<b>Program Elements for Code B Items:</b> N/A	<b>Other Related Program Elements:</b> 0303032A
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**Line Item MDAP/MAIS Code:** N/A

Secondary Distribution		FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025
AR	Total Obligation Authority	0.150	-	-	-	-	-	-	-	-
	Quantity	-	-	-	-	-	-	-	-	-
	Total Obligation Authority	0.150	-	-	-	-	-	-	-	-
<b>Total: Secondary Distribution</b>	<b>Quantity</b>	-	-	-	-	-	-	-	-	-
	<b>Total Obligation Authority</b>	<b>27.549</b>	<b>18.705</b>	<b>17.593</b>	<b>1.766</b>	<b>19.359</b>	<b>18.125</b>	<b>15.893</b>	<b>16.052</b>	<b>16.212</b>

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

**Appropriation / Budget Activity / Budget Sub Activity:**  
 2035A: Other Procurement, Army / BA 02: Communications and Electronics  
 Equipment / BSA 80: Elect Equip - Tact Int Rel Act (TIARA) **P-1 Line Item Number / Title:**  
 9704BA0326 / TROJAN (MIP)

**ID Code** (A=Service Ready, B=Not Service Ready): **Program Elements for Code B Items:** N/A **Other Related Program Elements:** 0303032A

**Line Item MDAP/MAIS Code:** N/A

Exhibits Schedule					Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total
Exhibit Type	Title*	Subexhibits	ID CD	MDAP/MAIS Code	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)
P-5	BA0331 / TROJAN CLASSIC (MIP)				- / 280.324	- / 15.346	- / 10.136	- / 8.904	- / 1.766	- / 10.670
P-5	BA0333 / TROJAN SPIRIT - TERMINALS (MIP)	P-5a			- / 271.082	- / 12.203	- / 8.569	- / 8.689	- / -	- / 8.689
<b>P-40</b>	<b>Total Gross/Weapon System Cost</b>				<b>- / 551.406</b>	<b>- / 27.549</b>	<b>- / 18.705</b>	<b>- / 17.593</b>	<b>- / 1.766</b>	<b>- / 19.359</b>

\*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:**

FY2021 Base funding in the amount of \$17.593 million funds the following TROJAN NexGEN and TROJAN SPIRIT requirements:

- TROJAN NexGEN: Funds collection and processing system upgrades required to maintain the TROJAN NexGEN system strategic architecture commonality. Funding is used for the procurement of material (hardware/software) in support of planned TROJAN NexGEN upgrades and fielding activities to include fixed and mobile collection platforms, multi-band signal search and acquisition survey systems, fielding, modernization of existing sites, and upgrades to Network Control Centers to support NSA-approved architecture for network infrastructures.
- TROJAN SPIRIT: Funds procure pre-planned product improvements for modernization/refresh of TROJAN SPIRIT LITE (V)1/(V)2/(V)3 systems to include bulk transport (bulk encrypted) network upgrades, increased bandwidth upgrades to Mbps throughput, X and Ka Band upgrades, replacement of end-of-life or out dated hardware, and TROJAN Network Control Center (TNCC)/TROJAN Network Operations Center (TNO) interface upgrades. Funds the upgrades and support of TROJAN SPIRIT terminals required for current and emerging operational missions in support of Regionally Aligned Forces (RAF), Global Response Forces (GRF) and Army Contingency Forces (ACF) until capability is fielded by PM mission command.

FY2021 OCO funding in the amount of \$1.766 million funds the following requirements:

- TROJAN NexGEN: Funds support the annual maintenance and refresh of deployed TROJAN NexGEN systems in Operation Freedom Sentinel (OFS) and Operation Inherent Resolve (OIR.)

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<b>Exhibit P-5, Cost Analysis: PB 2021 Army</b>											<b>Date:</b> February 2020							
<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 2035A / 02 / 80					<b>P-1 Line Item Number / Title:</b> 9704BA0326 / TROJAN (MIP)						<b>Item Number / Title [DODIC]:</b> BA0331 / TROJAN CLASSIC (MIP)							
<b>ID Code</b> (A=Service Ready, B=Not Service Ready) :											<b>MDAP/MAIS Code:</b>							
<b>Resource Summary</b>				<b>Prior Years</b>		<b>FY 2019</b>			<b>FY 2020</b>			<b>FY 2021 Base</b>			<b>FY 2021 OCO</b>		<b>FY 2021 Total</b>	
Procurement Quantity (Units in Each)				-		-			-			-			-		-	
Gross/Weapon System Cost (\$ in Millions)				280.324		15.346			10.136			8.904			1.766		10.670	
Less PY Advance Procurement (\$ in Millions)				-		-			-			-			-		-	
Net Procurement (P-1) (\$ in Millions)				280.324		15.346			10.136			8.904			1.766		10.670	
Plus CY Advance Procurement (\$ in Millions)				-		-			-			-			-		-	
<b>Total Obligation Authority (\$ in Millions)</b>				<b>280.324</b>		<b>15.346</b>			<b>10.136</b>			<b>8.904</b>			<b>1.766</b>		<b>10.670</b>	
<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 2019			FY 2020			FY 2021 Base			FY 2021 OCO			FY 2021 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)
<b>Flyaway Cost</b>																		
<b>Recurring Cost</b>																		
Hardware (Previous Years)	2,948.532	62	182.809	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
TROJAN Analytical Node (TAN)	199.250	8	1.594	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Remote Operations Facility (ROF)	241.600	5	1.208	241.600	5	1.208	241.667	6	1.450	259.167	6	1.555	-	-	-	259.167	6	1.555
TSPRING-D	1,930.000	2	3.860	1,930.000	2	3.860	1,930.000	2	3.860	1,930.000	2	3.860	-	-	-	1,930.000	2	3.860
TATTERAN	2,230.000	1	2.230	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
S280 Shelter	232.500	2	0.465	-	-	-	260.000	1	0.260	260.000	1	0.260	-	-	-	260.000	1	0.260
Training Suite	229.500	2	0.459	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Integration/Fielding (TROJAN)	10,614.833	6	63.689	3,352.000	1	3.352	3,229.000	1	3.229	3,229.000	1	3.229	-	-	-	3,229.000	1	3.229
<b>Subtotal: Recurring Cost</b>	<b>-</b>	<b>-</b>	<b>256.314</b>	<b>-</b>	<b>-</b>	<b>8.420</b>	<b>-</b>	<b>-</b>	<b>8.799</b>	<b>-</b>	<b>-</b>	<b>8.904</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>8.904</b>
<b>Non Recurring Cost</b>																		
Hardware (JMICS)	2,600.000	2	5.200	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Establishment of Wiesbaden TNCC (OCO)	6,000.000	1	6.000	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Refresh of Systems Supporting OFS/OIR (OCO)	842.500	12	10.110	6,926.000	1	6.926	1,337.000	1	1.337	-	-	-	1,766.000	1	1.766	1,766.000	1	1.766
NexGEN	-	-	2.700	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

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<b>Exhibit P-5, Cost Analysis: PB 2021 Army</b>												<b>Date:</b> February 2020					
<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 2035A / 02 / 80						<b>P-1 Line Item Number / Title:</b> 9704BA0326 / TROJAN (MIP)						<b>Item Number / Title [DODIC]:</b> BA0331 / TROJAN CLASSIC (MIP)					
<b>ID Code</b> (A=Service Ready, B=Not Service Ready) :										<b>MDAP/MAIS Code:</b>							

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

Cost Elements	Prior Years			FY 2019			FY 2020			FY 2021 Base			FY 2021 OCO			FY 2021 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: Non Recurring Cost</i>	-	-	24.010	-	-	6.926	-	-	1.337	-	-	-	-	-	1.766	-	-	1.766
<i>Subtotal: Flyaway Cost</i>	-	-	280.324	-	-	15.346	-	-	10.136	-	-	8.904	-	-	1.766	-	-	10.670
<b>Gross/Weapon System Cost</b>	-	-	280.324	-	-	15.346	-	-	10.136	-	-	8.904	-	-	1.766	-	-	10.670

Secondary Distribution		FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total
Army	Quantity	-	-	-	-	-
	Total Obligation Authority	15.346	10.136	8.904	1.766	10.670
<b>Total:</b>	Quantity	-	-	-	-	-
<b>Secondary Distribution</b>	Total Obligation Authority	15.346	10.136	8.904	1.766	10.670

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<b>Exhibit P-5, Cost Analysis: PB 2021 Army</b>		<b>Date:</b> February 2020
<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 2035A / 02 / 80	<b>P-1 Line Item Number / Title:</b> 9704BA0326 / TROJAN (MIP)	<b>Item Number / Title [DODIC]:</b> BA0333 / TROJAN SPIRIT - TERMINALS (MIP)

<b>ID Code</b> (A=Service Ready, B=Not Service Ready) :	<b>MDAP/MAIS Code:</b>
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Resource Summary	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total
Procurement Quantity (Units in Each)	-	-	-	-	-	-
Gross/Weapon System Cost (\$ in Millions)	271.082	12.203	8.569	8.689	-	8.689
Less PY Advance Procurement (\$ in Millions)	-	-	-	-	-	-
Net Procurement (P-1) (\$ in Millions)	271.082	12.203	8.569	8.689	-	8.689
Plus CY Advance Procurement (\$ in Millions)	-	-	-	-	-	-
<b>Total Obligation Authority (\$ in Millions)</b>	<b>271.082</b>	<b>12.203</b>	<b>8.569</b>	<b>8.689</b>	<b>-</b>	<b>8.689</b>

*(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 2019			FY 2020			FY 2021 Base			FY 2021 OCO			FY 2021 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)
<b>Flyaway Cost</b>																		
<b>Recurring Cost</b>																		
Hardware SPIRIT <sup>(t)</sup>	394.190	658	259.377	63.557	192	12.203	51.933	165	8.569	170.373	51	8.689	-	-	-	170.373	51	8.689
<b>Subtotal: Recurring Cost</b>	<b>-</b>	<b>-</b>	<b>259.377</b>	<b>-</b>	<b>-</b>	<b>12.203</b>	<b>-</b>	<b>-</b>	<b>8.569</b>	<b>-</b>	<b>-</b>	<b>8.689</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>8.689</b>
<b>Non Recurring Cost</b>																		
SPIRIT Cinematic Training	200.000	3	0.600	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
ISR Transfer Funding (OCO)	3,800.000	1	3.800	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Refresh of Tactical NexGEN Systems (OCO) (Funding should be aligned under BA0331)	3,305.000	1	3.305	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Fielding of Tactical NexGEN Systems (OCO) (Funding should be aligned under BA0331)	1,333.333	3	4.000	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
<b>Subtotal: Non Recurring Cost</b>	<b>-</b>	<b>-</b>	<b>11.705</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>
<b>Subtotal: Flyaway Cost</b>	<b>-</b>	<b>-</b>	<b>271.082</b>	<b>-</b>	<b>-</b>	<b>12.203</b>	<b>-</b>	<b>-</b>	<b>8.569</b>	<b>-</b>	<b>-</b>	<b>8.689</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>8.689</b>
<b>Gross/Weapon System Cost</b>	<b>-</b>	<b>-</b>	<b>271.082</b>	<b>-</b>	<b>-</b>	<b>12.203</b>	<b>-</b>	<b>-</b>	<b>8.569</b>	<b>-</b>	<b>-</b>	<b>8.689</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>8.689</b>

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<b>Exhibit P-5, Cost Analysis: PB 2021 Army</b>		<b>Date:</b> February 2020
<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 2035A / 02 / 80		<b>P-1 Line Item Number / Title:</b> 9704BA0326 / TROJAN (MIP)
<b>ID Code</b> (A=Service Ready, B=Not Service Ready) :		<b>MDAP/MAIS Code:</b>

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

Cost Element Breakout	Prior Years			FY 2019			FY 2020			FY 2021 Base			FY 2021 OCO			FY 2021 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 SPIRIT	394.190	658	259.377	63.557	192	12.203	51.933	165	8.569	170.373	51	8.689	-	-	-	170.373	51	8.689
AN/TSQ-226B(V)1 Phase 3 Kits	170.704	27	4.609	170.500	24	4.092	-	-	-	-	-	-	-	-	-	-	-	-
AN/TSQ-226B(V)1 Phase 3 Kits Spares (RSC)	153.286	7	1.073	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
AN/TSQ-226B/C(V)2/3 Phase 3 Kits	89.556	9	0.806	-	-	-	-	-	-	96.500	50	4.825	-	-	-	96.500	50	4.825
T-JWICS VTC Suite Upgrades	41.368	19	0.786	41.361	61	2.523	41.371	89	3.682	-	-	-	-	-	-	-	-	-
T-JWICS VTC Suite Spares (RSC)	45.571	14	0.638	-	-	-	45.636	11	0.502	-	-	-	-	-	-	-	-	-
iDirect Modems	22.000	88	1.936	22.000	106	2.332	22.000	64	1.408	-	-	-	-	-	-	-	-	-
iDirect Modems - Spares (RSC)	22.000	14	0.308	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Integration/Fielding	15,057.143	7	105.400	3,256.000	1	3.256	2,977.000	1	2.977	3,864.000	1	3.864	-	-	-	3,864.000	1	3.864
Hardware (Previous Years)	304.061	473	143.821	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Secondary Distribution		FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total
Army	Quantity	-	-	-	-	-
	Total Obligation Authority	11.903	8.569	8.689	-	8.689
ANG	Quantity	-	-	-	-	-
	Total Obligation Authority	0.150	-	-	-	-
AR	Quantity	-	-	-	-	-
	Total Obligation Authority	0.150	-	-	-	-
<b>Total: Secondary Distribution</b>	<b>Quantity</b>	-	-	-	-	-
	<b>Total Obligation Authority</b>	<b>12.203</b>	<b>8.569</b>	<b>8.689</b>	<b>-</b>	<b>8.689</b>

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

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<b>Exhibit P-5a, Procurement History and Planning:</b> PB 2021 Army							<b>Date:</b> February 2020					
<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 2035A / 02 / 80			<b>P-1 Line Item Number / Title:</b> 9704BA0326 / TROJAN (MIP)				<b>Item Number / Title [DODIC]:</b> BA0333 / TROJAN SPIRIT - TERMINALS (MIP)					

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
Hardware SPIRIT		2015	CACI / APG	C / CPFF	CECOM	Jun 2015	Sep 2015	51	169.980	N		
Hardware SPIRIT		2016	CACI / APG	C / CPFF	CECOM	Sep 2016	Sep 2016	106	145.890	N		
Hardware SPIRIT		2017	CACI / APG	C / CPFF	CECOM	Sep 2017	Sep 2017	35	164.910	N		
Hardware SPIRIT		2018	CACI / APG	C / CPFF	CECOM	Sep 2018	Sep 2018	143	30.657	N		
Hardware SPIRIT		2019	TBD / APG	C / CPAF	CECOM	Sep 2019	Sep 2019	192	63.557	N		
Hardware SPIRIT		2020	TBD / APG	C / CPAF	CECOM	Sep 2020	Sep 2020	165	51.933	N		
Hardware SPIRIT		2021	TBD / APG	C / CPAF	CECOM	Sep 2021	Sep 2021	51	170.353	N		

**Remarks:**  
Hardware is a combination of Government off-the-Shelf (GOTS) and Commercial off-the-Shelf (COTS) products obtained from the Prime Contractor, NAVAIR and related vendors.  
Prime contractor TBD for TROJAN SPIRIT due to current contract re-compete. The period of performance for base and option years is 30 SEP to 29 SEP.

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

<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 2035A: Other Procurement, Army / BA 02: Communications and Electronics Equipment / BSA 80: Elect Equip - Tact Int Rel Act (TIARA)	<b>P-1 Line Item Number / Title:</b> 9912BZ9750 / Mod of In-Svc Equip (INTEL SPT) (MIP)
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<b>ID Code</b> (A=Service Ready, B=Not Service Ready):	<b>Program Elements for Code B Items:</b> N/A	<b>Other Related Program Elements:</b> N/A
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**Line Item MDAP/MAIS Code:** N/A

Resource Summary	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	To Complete	Total
Procurement Quantity ( <i>Units in Each</i> )	34	12	11	-	-	-	-	-	-	-	-	57
Gross/Weapon System Cost ( <i>\$ in Millions</i> )	292.220	49.184	61.103	28.558	61.450	90.008	4.091	4.141	4.190	6.718	-	511.655
Less PY Advance Procurement ( <i>\$ in Millions</i> )	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) ( <i>\$ in Millions</i> )	292.220	49.184	61.103	28.558	61.450	90.008	4.091	4.141	4.190	6.718	-	511.655
Plus CY Advance Procurement ( <i>\$ in Millions</i> )	-	-	-	-	-	-	-	-	-	-	-	-
<b>Total Obligation Authority (<i>\$ in Millions</i>)</b>	<b>292.220</b>	<b>49.184</b>	<b>61.103</b>	<b>28.558</b>	<b>61.450</b>	<b>90.008</b>	<b>4.091</b>	<b>4.141</b>	<b>4.190</b>	<b>6.718</b>	<b>-</b>	<b>511.655</b>

*(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> )	8,594.706	4,098.667	5,554.818	-	-	-	-	-	-	-	-	8,976.404

**Description:**

Special Purpose Systems (BZ9751): Program funds Technical Insertions (TI) for the ground-based Signals Intelligence (SIGINT) system with additional capabilities required by fielded units to effectively engage enemy forces and provide Force Protection information to friendly forces. The program funds procurement of Government and Commercial Off-the-Shelf (GOTS/COTS) Next Generation SIGINT capabilities for the Prophet system to pace near peer, emerging threats and other Signals of Interest (SOI) to support the National Defense Strategy.

Prophet Enhanced Modifications MIP (BZ9753): Program funds modifications to retrofit, test, train, and support previously fielded Prophet Enhanced systems not currently hosted on a prime mover to the latest configuration. Prophet Enhanced is the tactical commander's organic ground-based SIGINT/Electronic Warfare system for the Multi-Function Teams (MfTs), Stryker Brigade Combat Teams (SBCTs), and Expeditionary-Military Intelligence Brigades (E-MIBs). Its primary mission is to provide 24-hour Situation Development and Information Superiority to the supported maneuver brigade to enable the most effective engagement of enemy forces. Prophet Enhanced provides a modular, scalable, open architecture-based system solution optimized for ease of use in a variety of configurations. Prophet Enhanced's design also incorporates the ability for rapid integration of TI to ensure operational relevance and pace the changing threat.

Secondary Distribution	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025
Army									
Quantity	12	11	-	-	-	-	-	-	-
Total Obligation Authority	49.184	61.103	28.558	61.450	90.008	4.091	4.141	4.190	6.718
<b>Total:</b>									
<b>Secondary Distribution</b>									
Quantity	<b>12</b>	<b>11</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>
Total Obligation Authority	<b>49.184</b>	<b>61.103</b>	<b>28.558</b>	<b>61.450</b>	<b>90.008</b>	<b>4.091</b>	<b>4.141</b>	<b>4.190</b>	<b>6.718</b>



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

**Appropriation / Budget Activity / Budget Sub Activity:**  
 2035A: Other Procurement, Army / BA 02: Communications and Electronics Equipment / BSA 80: Elect Equip - Tact Int Rel Act (TIARA) **P-1 Line Item Number / Title:**  
 9912BZ9750 / Mod of In-Svc Equip (INTEL SPT) (MIP)

**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 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total
Exhibit Type	Title*	Subexhibits	ID CD	MDAP/MAIS Code	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)
P-5	BZ9751 / SPECIAL PURPOSE SYSTEMS (MIP)				10 / 135.631	- / 4.162	- / 4.000	- / 11.479	- / -	- / 11.479
P-5	BZ9753 / Prophet Enhanced Modifications (MIP)	P-5a			24 / 156.589	12 / 45.022	11 / 57.103	- / 17.079	- / 61.450	- / 78.529
<b>P-40</b>	<b>Total Gross/Weapon System Cost</b>				<b>34 / 292.220</b>	<b>12 / 49.184</b>	<b>11 / 61.103</b>	<b>- / 28.558</b>	<b>- / 61.450</b>	<b>- / 90.008</b>

\*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 2021 BZ9751 Base procurement funding in the amount of \$11.479 million supports integration and productization of modern Signals of Interest (SOI) and improvements to provide Prophet Enhanced the ability to address an evolving threat signal base. Procurement of the enhancement components ensures that all fielded Prophet Enhanced systems have the most up to date and technically relevant signal processing capabilities. Upgraded Signal Relevance capabilities are required to ensure that Prophet remains relevant against emerging and evolving threats, providing an open architecture with improved components and capabilities to address advanced signal types in a constantly contested spectrum environment.

FY 2021 BZ9753 Base procurement funding in the amount of \$17.079 million supports the fielding, training, hardware and software sustainment and associated other support activities for Prophet Enhanced systems procured in prior years.

FY 2021 BZ9753 OCO procurement funding in the amount of \$61.450 million supports procurement/fielding of Enhanced Signal Processing (ESP) kits and Communication kits that will be installed on previously fielded Prophet Enhanced systems to provide capabilities against threats designated in the National Defense Strategy and a Mobile Training Team (MTT) to conduct new equipment and refresher training.

All funding is for the Active component.

Army Acquisition Objective (AAO): 238

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<b>Exhibit P-5, Cost Analysis: PB 2021 Army</b>													<b>Date:</b> February 2020							
<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 2035A / 02 / 80						<b>P-1 Line Item Number / Title:</b> 9912BZ9750 / Mod of In-Svc Equip (INTEL SPT) (MIP)						<b>Item Number / Title [DODIC]:</b> BZ9751 / SPECIAL PURPOSE SYSTEMS (MIP)								
<b>ID Code</b> (A=Service Ready, B=Not Service Ready) :									<b>MDAP/MAIS Code:</b>											
<b>Resource Summary</b>				<b>Prior Years</b>		<b>FY 2019</b>		<b>FY 2020</b>		<b>FY 2021 Base</b>		<b>FY 2021 OCO</b>		<b>FY 2021 Total</b>						
Procurement Quantity (Units in Each)				10		-		-		-		-		-						
Gross/Weapon System Cost (\$ in Millions)				135.631		4.162		4.000		11.479		-		11.479						
Less PY Advance Procurement (\$ in Millions)				-		-		-		-		-		-						
Net Procurement (P-1) (\$ in Millions)				135.631		4.162		4.000		11.479		-		11.479						
Plus CY Advance Procurement (\$ in Millions)				-		-		-		-		-		-						
<b>Total Obligation Authority (\$ in Millions)</b>				<b>135.631</b>		<b>4.162</b>		<b>4.000</b>		<b>11.479</b>		<b>-</b>		<b>11.479</b>						
<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)				13,563.100		-		-		-		-		-		-				
Note: Subtotals or Totals in this Exhibit P-5 may not be exact or sum exactly due to rounding.																				
<b>Cost Elements</b>		<b>Prior Years</b>			<b>FY 2019</b>			<b>FY 2020</b>			<b>FY 2021 Base</b>			<b>FY 2021 OCO</b>			<b>FY 2021 Total</b>			
		<b>Unit Cost (\$ K)</b>	<b>Qty (Each)</b>	<b>Total Cost (\$ M)</b>	<b>Unit Cost (\$ K)</b>	<b>Qty (Each)</b>	<b>Total Cost (\$ M)</b>	<b>Unit Cost (\$ K)</b>	<b>Qty (Each)</b>	<b>Total Cost (\$ M)</b>	<b>Unit Cost (\$ K)</b>	<b>Qty (Each)</b>	<b>Total Cost (\$ M)</b>	<b>Unit Cost (\$ K)</b>	<b>Qty (Each)</b>	<b>Total Cost (\$ M)</b>	<b>Unit Cost (\$ K)</b>	<b>Qty (Each)</b>	<b>Total Cost (\$ M)</b>	
Flyaway Cost																				
Recurring Cost																				
Logistics Products		-	-	0.555	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
Next Generation Hardware (Manpack)		241.400	10	2.414	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
Advanced Processor		21,208.167	6	127.249	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
Software Upgrades & Integration		-	-	5.413	-	-	4.162	-	-	-	-	-	-	-	-	-	-	-		
Integration, fielding and logistics products updates of Signal of Interest Upgrades		-	-	-	-	-	-	-	4.000	-	-	4.048	-	-	-	-	-	4.048		
Enhancement Components		-	-	-	-	-	-	-	-	-	-	7.431	-	-	-	-	-	7.431		
<i>Subtotal: Recurring Cost</i>		-	-	135.631	-	-	4.162	-	-	4.000	-	-	11.479	-	-	-	-	11.479		
<i>Subtotal: Flyaway Cost</i>		-	-	135.631	-	-	4.162	-	-	4.000	-	-	11.479	-	-	-	-	11.479		
<b>Gross/Weapon System Cost</b>		<b>13,563.100</b>	<b>10</b>	<b>135.631</b>	<b>-</b>	<b>-</b>	<b>4.162</b>	<b>-</b>	<b>-</b>	<b>4.000</b>	<b>-</b>	<b>-</b>	<b>11.479</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>11.479</b>		
<b>Secondary Distribution</b>						<b>FY 2019</b>			<b>FY 2020</b>			<b>FY 2021 Base</b>			<b>FY 2021 OCO</b>			<b>FY 2021 Total</b>		
Army						Quantity						-			-			-		
						Total Obligation Authority						4.162			4.000			11.479		

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<b>Exhibit P-5, Cost Analysis:</b> PB 2021 Army				<b>Date:</b> February 2020		
<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 2035A / 02 / 80		<b>P-1 Line Item Number / Title:</b> 9912BZ9750 / Mod of In-Svc Equip (INTEL SPT) (MIP)		<b>Item Number / Title [DODIC]:</b> BZ9751 / SPECIAL PURPOSE SYSTEMS (MIP)		
<b>ID Code</b> (A=Service Ready, B=Not Service Ready) :			<b>MDAP/MAIS Code:</b>			
<b>Secondary Distribution</b>		<b>FY 2019</b>	<b>FY 2020</b>	<b>FY 2021 Base</b>	<b>FY 2021 OCO</b>	<b>FY 2021 Total</b>
<b>Total:</b>	<b>Quantity</b>	-	-	-	-	-
<b>Secondary Distribution</b>	<b>Total Obligation Authority</b>	4.162	4.000	11.479	-	11.479

**UNCLASSIFIED**

<b>Exhibit P-5, Cost Analysis: PB 2021 Army</b>		<b>Date:</b> February 2020
<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 2035A / 02 / 80	<b>P-1 Line Item Number / Title:</b> 9912BZ9750 / Mod of In-Svc Equip (INTEL SPT) (MIP)	<b>Item Number / Title [DODIC]:</b> BZ9753 / Prophet Enhanced Modifications (MIP)

<b>ID Code</b> (A=Service Ready, B=Not Service Ready) :	<b>MDAP/MAIS Code:</b>
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Resource Summary	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total
Procurement Quantity (Units in Each)	24	12	11	-	-	-
Gross/Weapon System Cost (\$ in Millions)	156.589	45.022	57.103	17.079	61.450	78.529
Less PY Advance Procurement (\$ in Millions)	-	-	-	-	-	-
Net Procurement (P-1) (\$ in Millions)	156.589	45.022	57.103	17.079	61.450	78.529
Plus CY Advance Procurement (\$ in Millions)	-	-	-	-	-	-
<b>Total Obligation Authority (\$ in Millions)</b>	<b>156.589</b>	<b>45.022</b>	<b>57.103</b>	<b>17.079</b>	<b>61.450</b>	<b>78.529</b>

*(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)	6,524.542	3,751.833	5,191.182	-	-	-

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

Cost Elements	Prior Years			FY 2019			FY 2020			FY 2021 Base			FY 2021 OCO			FY 2021 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																		
Prophet Enhanced Legacy Modification <sup>(t)</sup>	3,770.458	24	90.491	1,200.000	12	14.400	1,200.000	11	13.200	-	-	-	-	-	-	-	-	-
Integration	-	-	12.207	-	-	4.590	-	-	3.146	-	-	-	-	-	-	-	-	-
Program Quality Management	-	-	5.784	-	-	2.935	-	-	3.124	-	-	2.662	-	-	-	-	-	2.662
GFE	-	-	1.192	-	-	0.780	-	-	0.819	-	-	-	-	-	-	-	-	-
Software Engineering	-	-	6.654	-	-	3.381	-	-	3.460	-	-	2.633	-	-	-	-	-	2.633
Project Management Costs	-	-	6.273	-	-	3.016	-	-	3.167	-	-	1.839	-	-	-	-	-	1.839
Training/Fielding/ Depot Support	-	-	18.748	12,621.000	1	12.621	-	-	11.936	-	-	9.445	-	-	4.609	-	-	14.054
Matrix Support	-	-	2.290	-	-	0.820	-	-	0.861	-	-	0.500	-	-	-	-	-	0.500
Manpack	191.667	42	8.050	-	-	2.479	-	-	2.390	-	-	-	-	-	-	-	-	-
Satellite On The Move (SOTM) Antenna	408.333	12	4.900	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Enhanced Signal Processing Kit & Fielding <sup>(t)</sup>	-	-	-	-	-	-	1,000.000	15	15.000	-	-	-	-	-	38.741	-	-	38.741
Communications Kit & Fielding	-	-	-	-	-	-	-	-	-	-	-	-	-	-	18.100	-	-	18.100
<b>Subtotal: Recurring Cost</b>	<b>-</b>	<b>-</b>	<b>156.589</b>	<b>-</b>	<b>-</b>	<b>45.022</b>	<b>-</b>	<b>-</b>	<b>57.103</b>	<b>-</b>	<b>-</b>	<b>17.079</b>	<b>-</b>	<b>-</b>	<b>61.450</b>	<b>-</b>	<b>-</b>	<b>78.529</b>

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<b>Exhibit P-5, Cost Analysis: PB 2021 Army</b>		<b>Date:</b> February 2020
<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 2035A / 02 / 80	<b>P-1 Line Item Number / Title:</b> 9912BZ9750 / Mod of In-Svc Equip (INTEL SPT) (MIP)	<b>Item Number / Title [DODIC]:</b> BZ9753 / Prophet Enhanced Modifications (MIP)
<b>ID Code</b> (A=Service Ready, B=Not Service Ready) :		<b>MDAP/MAIS Code:</b>

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

Cost Elements	Prior Years			FY 2019			FY 2020			FY 2021 Base			FY 2021 OCO			FY 2021 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: Flyaway Cost</i>	-	-	156.589	-	-	45.022	-	-	57.103	-	-	17.079	-	-	61.450	-	-	78.529
<b>Gross/Weapon System Cost</b>	6,524.542	24	156.589	3,751.833	12	45.022	5,191.182	11	57.103	-	-	17.079	-	-	61.450	-	-	78.529

Secondary Distribution		FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total
Army	Quantity	12	11	-	-	-
	Total Obligation Authority	45.022	57.103	17.079	61.450	78.529
<b>Total:</b>	<b>Quantity</b>	<b>12</b>	<b>11</b>	<b>-</b>	<b>-</b>	<b>-</b>
<b>Secondary Distribution</b>	<b>Total Obligation Authority</b>	<b>45.022</b>	<b>57.103</b>	<b>17.079</b>	<b>61.450</b>	<b>78.529</b>

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

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**Exhibit P-5a, Procurement History and Planning:** PB 2021 Army **Date:** February 2020

<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 2035A / 02 / 80	<b>P-1 Line Item Number / Title:</b> 9912BZ9750 / Mod of In-Svc Equip (INTEL SPT) (MIP)	<b>Item Number / Title [DODIC]:</b> BZ9753 / Prophet Enhanced Modifications (MIP)
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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
Prophet Enhanced Legacy Modification		2018	GD Mission Systems / Scottsdale, AZ	SS / FFP	APG, MD	Feb 2018	Nov 2018	12	1,200.000	N		
Prophet Enhanced Legacy Modification		2019	GD Mission Systems / Scottsdale, AZ	SS / FFP	APG, MD	Jan 2019	Oct 2019	12	1,200.000	N		
Prophet Enhanced Legacy Modification		2020	GD Mission Systems / Scottsdale, AZ	SS / FFP	APG, MD	Jan 2020	Oct 2020	11	1,200.000	N	Jan 2020	Aug 2016
Enhanced Signal Processing Kit & Fielding		2021	GD Mission Systems / Scottsdale, AZ	SS / FFP	APG,MD	Nov 2020	Jul 2021	0	0.000	N		

**Remarks:**

FY 2021 BZ9753 Base procurement funding in the amount of \$17.079 million supports the fielding, training, hardware and software sustainment and associated other support activities for Prophet Enhanced systems procured in prior years.

FY 2021 BZ9753 OCO procurement funding in the amount of \$61.450 million supports a Mobile Training Team (MTT) to conduct new equipment and refresher training, and procurement/fielding of Enhanced Signal Processing (ESP) kits and Communication kits that will be installed on previously fielded Prophet Enhanced systems to provide capabilities against threats designated in the National Defense Strategy.

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

<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 2035A: Other Procurement, Army / BA 02: Communications and Electronics Equipment / BSA 80: Elect Equip - Tact Int Rel Act (TIARA)	<b>P-1 Line Item Number / Title:</b> 9925BK5275 / CI HUMINT Auto Reprting & Coll(CHARCS)(MIP)
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<b>ID Code</b> (A=Service Ready, B=Not Service Ready):	<b>Program Elements for Code B Items:</b> N/A	<b>Other Related Program Elements:</b> 0604321A
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**Line Item MDAP/MAIS Code:** N/A

Resource Summary	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	To Complete	Total
Procurement Quantity ( <i>Units in Each</i> )	875	12	-	-	-	-	-	-	-	-	-	887
Gross/Weapon System Cost ( <i>\$ in Millions</i> )	338.517	0.296	-	-	-	-	-	-	-	-	-	338.813
Less PY Advance Procurement ( <i>\$ in Millions</i> )	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) ( <i>\$ in Millions</i> )	338.517	0.296	-	-	-	-	-	-	-	-	-	338.813
Plus CY Advance Procurement ( <i>\$ in Millions</i> )	-	-	-	-	-	-	-	-	-	-	-	-
<b>Total Obligation Authority</b> ( <i>\$ in Millions</i> )	<b>338.517</b>	<b>0.296</b>	-	-	-	-	-	-	-	-	-	<b>338.813</b>

*(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> )	386.877	24.667	-	-	-	-	-	-	-	-	-	381.976

**Description:**

The Counterintelligence (CI) and Human Intelligence (HUMINT) Automated Reporting and Collection System (CHARCS) is the Army's CI and HUMINT tactical collection and reporting system. CHARCS provides automation support for information collection, reporting, investigations, source & interrogation operations and document exploitation. The CHARCS automation architecture extends from the individual HUMINT team soldier or CI agent to the Corps. CHARCS reports digital data such as maps, overlays, images, video, biometrics, scanned documents and audio files. These media are transmitted through secure networks and interfaces with the Distributed Common Ground Systems-Army (DCGS-A) for detailed analysis and creation of finished intelligence products. Collection and reporting teams at Military Intelligence (MI) battalions and their operational managers are equipped with one of two CHARCS systems. The first is the AN/PYQ-8 Individual Tactical Reporting Tool (ITRT), which provides collection and processing devices for individual HUMINT team member or CI agents. The second is the AN/PYQ-3 CI/HUMINT Automated Tool Set (CHATS), which provides the team leader (who normally directs 3-5 team members) and Operational Management Team (OMT) tools to process and manage team-collected information and a robust set of devices such as printers, scanners, and cameras to assist the collection mission. CHATS is also used by the Operational Management Team (OMT) that normally directs 3-5 collection and reporting teams. Each CHATS has an associated Mission Support Peripheral Sets and Kits (MS-PSK) or Collection Peripheral Sets and Kits (C-PSK).

The C-PSK provides specialized collection component capabilities to support CI/HUMINT collection missions. C-PSK capabilities are commercial-off-the-shelf (COTS) technologies and include video and camera equipment, global positioning system (GPS), and voice recording device. Phasing in of the Nett Warrior End User Device (EUD) to displace the C-PSK will begin in FY 2018 and complete in FY 2019. The EUD is a COTS Mobile Handheld device, managed by PEO Soldier, which provides all of the operational capacity of the C-PSK in one hardware device. The MS-PSK provides specialized collection component capabilities to support CI/HUMINT collection missions. MS-PSK capabilities are COTS technologies and include night vision photography & video, captured materiel tracking, digital media forensics software, and Document Exploitation (DOCEX) software.

Secondary Distribution	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025
Army									
Quantity	12	-	-	-	-	-	-	-	-
Total Obligation Authority	0.296	-	-	-	-	-	-	-	-
<b>Total:</b>									
<b>Secondary Distribution</b>									
Quantity	<b>12</b>	-	-	-	-	-	-	-	-
Total Obligation Authority	<b>0.296</b>	-	-	-	-	-	-	-	-

**UNCLASSIFIED**

<b>Exhibit P-40, Budget Line Item Justification:</b> PB 2021 Army		<b>Date:</b> February 2020
<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 2035A: Other Procurement, Army / BA 02: Communications and Electronics Equipment / BSA 80: Elect Equip - Tact Int Rel Act (TIARA)	<b>P-1 Line Item Number / Title:</b> 9925BK5275 / CI HUMINT Auto Reprting & Coll(CHARCS)(MIP)	
<b>ID Code</b> (A=Service Ready, B=Not Service Ready):	<b>Program Elements for Code B Items:</b> N/A	<b>Other Related Program Elements:</b> 0604321A
<b>Line Item MDAP/MAIS Code:</b> N/A		

**Justification:**  
The CHARCS program does not have an FY 2021 funding request.

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 2021 Army **Date:** February 2020

<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 2035A: Other Procurement, Army / BA 02: Communications and Electronics Equipment / BSA 80: Elect Equip - Tact Int Rel Act (TIARA)	<b>P-1 Line Item Number / Title:</b> 9988BK5300 / Biometric Tactical Collection Devices (MIP)
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<b>ID Code</b> (A=Service Ready, B=Not Service Ready):	<b>Program Elements for Code B Items:</b> N/A	<b>Other Related Program Elements:</b> N/A
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**Line Item MDAP/MAIS Code:** N/A

Resource Summary	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	To Complete	Total
Procurement Quantity ( <i>Units in Each</i> )	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost ( <i>\$ in Millions</i> )	10.220	5.370	1.800	0.999	12.337	13.336	0.999	0.999	0.999	0.624	-	34.347
Less PY Advance Procurement ( <i>\$ in Millions</i> )	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) ( <i>\$ in Millions</i> )	10.220	5.370	1.800	0.999	12.337	13.336	0.999	0.999	0.999	0.624	-	34.347
Plus CY Advance Procurement ( <i>\$ in Millions</i> )	-	-	-	-	-	-	-	-	-	-	-	-
<b>Total Obligation Authority (<i>\$ in Millions</i>)</b>	<b>10.220</b>	<b>5.370</b>	<b>1.800</b>	<b>0.999</b>	<b>12.337</b>	<b>13.336</b>	<b>0.999</b>	<b>0.999</b>	<b>0.999</b>	<b>0.624</b>	<b>-</b>	<b>34.347</b>

*(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 Army Program of Record (POR) for biometrics tactical collection capability is the Biometrics Automated Toolset - Army (BAT-A). The BAT-A system consists of the BAT-A Kit with peripherals, BAT-A Handheld, BAT-A Servers, and BAT.Web. The BAT-A system is a biometric identity tool that collects, matches, stores, shares biometric signatures (fingerprints, iris, and face) and contextual data on known & suspected terrorists, potential adversaries, host nation personnel, and third country nationals to inform analysis and decision-making. BAT-A provides the Biometrically-Enabled Watchlist (BEWL) to the Warfighter enabling credible and reliable identity capabilities. Biometric data collected from the BAT-A system is shared across the DoD, U.S. government agencies, and with Coalition Partners. The BAT-A system was originally a Quick Reaction Capability (QRC) and has been supporting oversea contingency operations for over 19 years. BAT-A is currently deployed across 5 combatant commands as well as in support of Operation Freedom's Sentinel, Operation Inherent Resolve, and JTF Guantanamo Bay.

The Next Generation Biometric Collection Capability (NXGBCC) is the replacement for the Biometrics Automated Toolset - Army (BAT-A) Program of Record (POR) which has been supporting overseas contingency operations for over 19 years, well beyond the standard 3 to 6 years of useful electronic equipment life. NXGBCC supports all three objectives of the National Defense to increase lethality, enhance International Cooperation, and improve business practices. NXGBCC initiates the data flow to the DoD Authoritative Biometrics Identification System (ABIS) and Military Intelligence systems. NXGBCC consists of an expeditionary biometric data management system called the Local Trusted Source (LTS), biometric static collection kits with palm and credential badge capability, and biometric mobile collection kits. NXGBCC will tactically collect, match, store, reference, and share biometric signatures and contextual data while providing data analysis capability at all echelons; enabling forces in competition, armed conflict, and re-competing in a Multi-Domain Operations (MDO) environment. NXGBCC processes Enemy Prisoners of War (EPWs), Displaced Persons, and Refugees. It also assists Operations in the Support in Consolidation Areas. NXGBCC enables commanders to protect their force, deny enemy movement, increase freedom of maneuver, protect civilian populations, manage detainees identities, and to defeat near-peer unconventional threats.

Secondary Distribution		FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025
Army	Quantity	-	-	-	-	-	-	-	-	-
	Total Obligation Authority	5.370	1.800	0.999	12.337	13.336	0.999	0.999	0.999	0.624
<b>Total:</b> Secondary Distribution	Quantity	-	-	-	-	-	-	-	-	-
	Total Obligation Authority	<b>5.370</b>	<b>1.800</b>	<b>0.999</b>	<b>12.337</b>	<b>13.336</b>	<b>0.999</b>	<b>0.999</b>	<b>0.999</b>	<b>0.624</b>

**UNCLASSIFIED**

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

<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 2035A: Other Procurement, Army / BA 02: Communications and Electronics Equipment / BSA 80: Elect Equip - Tact Int Rel Act (TIARA)	<b>P-1 Line Item Number / Title:</b> 9988BK5300 / Biometric Tactical Collection Devices (MIP)
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<b>ID Code</b> (A=Service Ready, B=Not Service Ready):	<b>Program Elements for Code B Items:</b> N/A	<b>Other Related Program Elements:</b> N/A
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**Line Item MDAP/MAIS Code:** N/A

Exhibits Schedule					Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total
Exhibit Type	Title*	Subexhibits	ID CD	MDAP/MAIS Code	Quantity / Total Cost <i>(Each) / (\$ M)</i>	Quantity / Total Cost <i>(Each) / (\$ M)</i>	Quantity / Total Cost <i>(Each) / (\$ M)</i>	Quantity / Total Cost <i>(Each) / (\$ M)</i>	Quantity / Total Cost <i>(Each) / (\$ M)</i>	Quantity / Total Cost <i>(Each) / (\$ M)</i>
P-40a	BK5301 / Biometrics Automated Toolset - Army (BAT-A) (MIP)				- / 10.220	- / 5.370	- / 1.800	- / 0.999	- / 12.337	- / 13.336
P-40	Total Gross/Weapon System Cost				- / 10.220	- / 5.370	- / 1.800	- / 0.999	- / 12.337	- / 13.336

\*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 2021 Base procurement in the amount of \$0.999 million for NXGBCC will procure 65 mobile kits, 25 static kits, and 2 palm scanners for use at the Combat Training Centers (CTCs) as training devices. It will also procure the NXGBCC software licenses and sustainment contract labor.

FY 2021 OCO procurement in the amount of \$.537 million continues to procure BAT-A Kit hardware and BAT-A Handheld accessories for RESET/REFRESH activities supporting overseas contingency operations. Requested funds will refresh BAT-A Scanner Devices (45 Fingerprint and 45 Iris); 75 BAT-A laptops and obsolete peripherals with accessories; and will refresh BAT-A HH parts and accessories ensuring the availability of this mission critical capability. The remaining \$11.8 million of FY 2021 OCO procurement will procure NXGBCC devices (645 mobile kits and 180 static kits) to replace BAT-A Theater Provided Equipment (TPE). It will also provide software licenses, sustainment contact labor, engineering support, and deployment logistics.

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**

<b>Exhibit P-40a, Budget Item Justification For Aggregated Items:</b> PB 2021 Army														<b>Date:</b> February 2020					
<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 2035A / 02 / 80						<b>P-1 Line Item Number / Title:</b> 9988BK5300 / Biometric Tactical Collection Devices (MIP)						<b>Aggregated Items Title:</b> BK5301 / Biometrics Automated Toolset - Army (BAT-A) (MIP)							

Item Number / Title [DODIC]	ID CD	MDAP/MAIS Code	Prior Years			FY 2019			FY 2020			FY 2021 Base			FY 2021 OCO			FY 2021 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)
<b>Biometrics Automated Toolset - Army (BAT-A) (MIP)</b>																				
BK5301 / Biometrics Automated Toolset - Army (BAT-A) (MIP)			-	-	10.220	-	-	5.370	-	-	1.800	-	-	0.999	-	-	12.337	-	-	13.336
<i>Secondary Distribution</i>																				
Army				-	-		-	5.370		-	1.800		-	0.999		-	12.337		-	13.336
<b>Subtotal: Biometrics Automated Toolset - Army (BAT-A) (MIP)</b>			-	-	<b>10.220</b>	-	-	<b>5.370</b>	-	-	<b>1.800</b>	-	-	<b>0.999</b>	-	-	<b>12.337</b>	-	-	<b>13.336</b>
<b>Total</b>			-	-	<b>10.220</b>	-	-	<b>5.370</b>	-	-	<b>1.800</b>	-	-	<b>0.999</b>	-	-	<b>12.337</b>	-	-	<b>13.336</b>

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

**UNCLASSIFIED**

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

<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 2035A: Other Procurement, Army / BA 02: Communications and Electronics Equipment / BSA 80: Elect Equip - Tact Int Rel Act (TIARA)	<b>P-1 Line Item Number / Title:</b> 9990BK5278 / Items Less Than \$5.0M (MIP)
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<b>ID Code</b> (A=Service Ready, B=Not Service Ready):	<b>Program Elements for Code B Items:</b> N/A	<b>Other Related Program Elements:</b> N/A
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**Line Item MDAP/MAIS Code:** N/A

Resource Summary	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	To Complete	Total
Procurement Quantity ( <i>Units in Each</i> )	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost ( <i>\$ in Millions</i> )	438.546	0.410	-	-	-	-	-	-	-	-	-	438.956
Less PY Advance Procurement ( <i>\$ in Millions</i> )	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) ( <i>\$ in Millions</i> )	438.546	0.410	-	-	-	-	-	-	-	-	-	438.956
Plus CY Advance Procurement ( <i>\$ in Millions</i> )	-	-	-	-	-	-	-	-	-	-	-	-
<b>Total Obligation Authority</b> ( <i>\$ in Millions</i> )	<b>438.546</b>	<b>0.410</b>	-	-	-	-	-	-	-	-	-	<b>438.956</b>

*(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:**

This program supports procurement of Trojan Special Purpose Integrated Remote Intelligence Terminals (Trojan SPIRIT) for the Stryker Brigades, Special Operations Forces (SOF), and Modular Force units; Army National Guard Wideband Imagery Dissemination System; and the Army Deployable Interoperable Node GIAT Operations (DINGO) System.

Trojan SPIRIT provides the Current Force, Stryker Brigades, SOF, and Modular Force units with dedicated, secure, high capacity, SCI-high intelligence data processing and communications. It provides a rapidly deployable, multi-level security, processor-to-processor, high capacity communications capability, and supports tactical to strategic reach-back, essential to split-based operations.

DINGO is a critical component to supporting the ability to produce, maintain, and update geospatial imagery to support wartime missions, including Weapons of Mass Destruction - Elimination (WMD-E) and Non-Combatant Evacuation (NEO). It supports split-based operations during crisis, contingency and wartime operations. The system processes Electro Optical (EO), Infrared (IR) and RADAR imagery. It also performs 3D modeling and is capable of processing Full Motion Video (FMV).

Secondary Distribution	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025
Army	Quantity	-	-	-	-	-	-	-	-
	Total Obligation Authority	0.410	-	-	-	-	-	-	-
<b>Total: Secondary Distribution</b>	<b>Quantity</b>	-	-	-	-	-	-	-	-
	<b>Total Obligation Authority</b>	<b>0.410</b>	-	-	-	-	-	-	-

**Justification:**

The program does not have an FY 2021 funding request.

In accordance with Section 1815 of the FY08 NDAA, this item is necessary for use by the active components and reserve components of the Armed Forces for homeland defense missions, domestic emergency responses, and providing military support to civilian authorities.

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<b>Exhibit P-40, Budget Line Item Justification:</b> PB 2021 Army		<b>Date:</b> February 2020
<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 2035A: Other Procurement, Army / BA 02: Communications and Electronics Equipment / BSA 80: Elect Equip - Tact Int Rel Act (TIARA)		<b>P-1 Line Item Number / Title:</b> 9990BK5278 / Items Less Than \$5.0M (MIP)
<b>ID Code</b> (A=Service Ready, B=Not Service Ready):	<b>Program Elements for Code B Items:</b> N/A	<b>Other Related Program Elements:</b> N/A
<b>Line Item MDAP/MAIS Code:</b> N/A		

**UNCLASSIFIED**

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

<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 2035A: Other Procurement, Army / BA 02: Communications and Electronics Equipment / BSA 83: Elect Equip - Electronic Warfare (EW)	<b>P-1 Line Item Number / Title:</b> 8387B05201 / Lightweight Counter Mortar Radar
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<b>ID Code</b> (A=Service Ready, B=Not Service Ready):	<b>Program Elements for Code B Items:</b> N/A	<b>Other Related Program Elements:</b> 0604823A
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**Line Item MDAP/MAIS Code:** N/A

Resource Summary	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	To Complete	Total
Procurement Quantity ( <i>Units in Each</i> )	68	-	-	-	-	-	-	-	-	-	Continuing	Continuing
Gross/Weapon System Cost ( <i>\$ in Millions</i> )	843.442	6.107	5.400	5.332	-	5.332	6.520	5.762	9.888	12.788	Continuing	Continuing
Less PY Advance Procurement ( <i>\$ in Millions</i> )	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) ( <i>\$ in Millions</i> )	843.442	6.107	5.400	5.332	-	5.332	6.520	5.762	9.888	12.788	Continuing	Continuing
Plus CY Advance Procurement ( <i>\$ in Millions</i> )	-	-	-	-	-	-	-	-	-	-	-	-
<b>Total Obligation Authority (<i>\$ in Millions</i>)</b>	<b>843.442</b>	<b>6.107</b>	<b>5.400</b>	<b>5.332</b>	<b>-</b>	<b>5.332</b>	<b>6.520</b>	<b>5.762</b>	<b>9.888</b>	<b>12.788</b>	<b>Continuing</b>	<b>Continuing</b>

*(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> )	12,403.559	-	-	-	-	-	-	-	-	-	Continuing	Continuing

**Description:**

The AN/TPQ-50 Lightweight Counter Mortar Radar (LCMR) is a highly mobile radar that automatically detects, classifies, tracks, and locates the point of origin of projectiles fired from mortar, artillery, and rocket systems with sufficient accuracy for first round fire for effect. It mitigates close combat radar coverage gaps by providing 360 degrees of azimuth coverage from ranges of 500 meters to 10 kilometers and is capable of being deployed in two configurations, standalone or vehicle mounted. The AN/TPQ-50 system interoperates with mission command systems to provide the maneuver commander increased counterfire radar flexibility. The AN/TPQ-50 is deployed as part of the Counter-Rocket, Artillery, Mortar (C-RAM) system of systems. It provides data to the Forward Area Air Defense Command and Control (FAAD C2) node for the sense and warn force protection capability. The AN/TPQ-50 is currently fielded to multiple Continental United States (CONUS) and Outside Continental United States (OCONUS) locations to include support to Operation Inherent Resolve (OIR) and Operation Freedom's Sentinel (OFS).

Army Acquisition Objective (AAO): 452  
Army Procurement Objective (APO): 400

Secondary Distribution	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025
Army	Quantity	-	-	-	-	-	-	-	-
	Total Obligation Authority	6.107	5.400	5.332	-	5.332	6.520	5.762	9.888
<b>Total: Secondary Distribution</b>	<b>Quantity</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>
	<b>Total Obligation Authority</b>	<b>6.107</b>	<b>5.400</b>	<b>5.332</b>	<b>-</b>	<b>5.332</b>	<b>6.520</b>	<b>5.762</b>	<b>9.888</b>

**UNCLASSIFIED**

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

**Appropriation / Budget Activity / Budget Sub Activity:**  
 2035A: Other Procurement, Army / BA 02: Communications and Electronics  
 Equipment / BSA 83: Elect Equip - Electronic Warfare (EW) **P-1 Line Item Number / Title:**  
 8387B05201 / Lightweight Counter Mortar Radar

**ID Code** (A=Service Ready, B=Not Service Ready): **Program Elements for Code B Items:** N/A **Other Related Program Elements:** 0604823A

**Line Item MDAP/MAIS Code:** N/A

Exhibits Schedule					Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total
Exhibit Type	Title*	Subexhibits	ID CD	MDAP/MAIS Code	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)
P-5	B05201 / Lightweight Counter Mortar Radar	P-5a			68 / 843.442	- / 6.107	- / 5.400	- / 5.332	- / -	- / 5.332
<b>P-40</b>	<b>Total Gross/Weapon System Cost</b>				<b>68 / 843.442</b>	<b>- / 6.107</b>	<b>- / 5.400</b>	<b>- / 5.332</b>	<b>- / -</b>	<b>- / 5.332</b>

\*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 2021 Base procurement funds in the amount of \$5.332 million will support the fielding of software to systems supporting United States Army units, engineering changes, information assurance and program support.

Including prior year procurement quantities, this program achieved the APO of 400 by procuring the last five (5) systems in FY 2018.

Per BOIP change memo dated 8 Jun 16, current force structure is as follows:

- Twelve (12) radars per IFPC, Air Defense Artillery (ADA) Battalion
- Four (4) radars per Brigade Combat Team (BCT)
- Two (2) radars per Field Artillery Brigade (FAB)
- Two (2) radars per Division Artillery (DIVARTY)
- Two (2) radars per Special Troops Battalion, Ranger Regiment
- One (1) radar per Special Forces Battalion (SFB)
- One (1) radar per Support Battalion SF Group (SFG)
- One (1) radar per Ranger Battalion
- One (1) radar per Task Force

In accordance with Section 1815 of the fiscal year (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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<b>Exhibit P-5, Cost Analysis: PB 2021 Army</b>		<b>Date:</b> February 2020
<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 2035A / 02 / 83	<b>P-1 Line Item Number / Title:</b> 8387B05201 / Lightweight Counter Mortar Radar	<b>Item Number / Title [DODIC]:</b> B05201 / Lightweight Counter Mortar Radar

<b>ID Code</b> (A=Service Ready, B=Not Service Ready) :	<b>MDAP/MAIS Code:</b>
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Resource Summary	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total
Procurement Quantity (Units in Each)	68	-	-	-	-	-
Gross/Weapon System Cost (\$ in Millions)	843.442	6.107	5.400	5.332	-	5.332
Less PY Advance Procurement (\$ in Millions)	-	-	-	-	-	-
Net Procurement (P-1) (\$ in Millions)	843.442	6.107	5.400	5.332	-	5.332
Plus CY Advance Procurement (\$ in Millions)	-	-	-	-	-	-
<b>Total Obligation Authority (\$ in Millions)</b>	<b>843.442</b>	<b>6.107</b>	<b>5.400</b>	<b>5.332</b>	<b>-</b>	<b>5.332</b>

*(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)	12,403.559	-	-	-	-	-

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

Cost Elements	Prior Years			FY 2019			FY 2020			FY 2021 Base			FY 2021 OCO			FY 2021 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																		
Hardware AN/TPQ-50 (LCMR V3)(f)	1,265.683	400	506.273	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
<i>Subtotal: Recurring Cost</i>	-	-	506.273	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Non Recurring Cost																		
Engineering Change Orders	-	-	13.466	-	-	0.092	-	-	0.029	-	-	0.087	-	-	-	-	-	0.087
Non-Recurring Production	-	-	31.877	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
<i>Subtotal: Non Recurring Cost</i>	-	-	45.343	-	-	0.092	-	-	0.029	-	-	0.087	-	-	-	-	-	0.087
<i>Subtotal: Flyaway Cost</i>	-	-	<b>551.616</b>	-	-	<b>0.092</b>	-	-	<b>0.029</b>	-	-	<b>0.087</b>	-	-	-	-	-	<b>0.087</b>
Software Cost																		
Non Recurring Cost																		
Software Fielding	-	-	-	-	-	-	-	-	-	-	-	1.741	-	-	-	-	-	1.741
<i>Subtotal: Non Recurring Cost</i>	-	-	-	-	-	-	-	-	-	-	-	1.741	-	-	-	-	-	1.741
<i>Subtotal: Software Cost</i>	-	-	-	-	-	-	-	-	-	-	-	<b>1.741</b>	-	-	-	-	-	<b>1.741</b>
Logistics Cost																		
Recurring Cost																		
Integrated Logistics Support	-	-	0.157	-	-	2.205	-	-	0.699	-	-	1.143	-	-	-	-	-	1.143



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<b>Exhibit P-5, Cost Analysis: PB 2021 Army</b>		<b>Date:</b> February 2020
<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 2035A / 02 / 83	<b>P-1 Line Item Number / Title:</b> 8387B05201 / Lightweight Counter Mortar Radar	<b>Item Number / Title [DODIC]:</b> B05201 / Lightweight Counter Mortar Radar

<b>ID Code</b> (A=Service Ready, B=Not Service Ready) :	<b>MDAP/MAIS Code:</b>
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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 2019			FY 2020			FY 2021 Base			FY 2021 OCO			FY 2021 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>	-	-	0.157	-	-	2.205	-	-	0.699	-	-	1.143	-	-	-	-	-	1.143
<i>Subtotal: Logistics Cost</i>	-	-	0.157	-	-	2.205	-	-	0.699	-	-	1.143	-	-	-	-	-	1.143
<b>Support - Acceptance Testing Cost</b>																		
Acceptance Test	-	-	28.771	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
<i>Subtotal: Support - Acceptance Testing Cost</i>	-	-	28.771	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
<b>Support - Contractor Logistics Support (CLS) Cost</b>																		
Oversight	-	-	50.037	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
<i>Subtotal: Support - Contractor Logistics Support (CLS) Cost</i>	-	-	50.037	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
<b>Support - Fielding Cost</b>																		
Fielding	-	-	112.565	-	-	1.787	-	-	1.686	-	-	0.535	-	-	-	-	-	0.535
<i>Subtotal: Support - Fielding Cost</i>	-	-	112.565	-	-	1.787	-	-	1.686	-	-	0.535	-	-	-	-	-	0.535
<b>Support - Program Management Cost</b>																		
Government Management	-	-	52.261	-	-	0.375	-	-	0.723	-	-	0.785	-	-	-	-	-	0.785
Contractor Management	-	-	2.306	-	-	0.675	-	-	1.407	-	-	0.587	-	-	-	-	-	0.587
<i>Subtotal: Support - Program Management Cost</i>	-	-	54.567	-	-	1.050	-	-	2.130	-	-	1.372	-	-	-	-	-	1.372
<b>Support - System Engineering Cost</b>																		
System Engineering	-	-	45.729	-	-	0.973	-	-	0.856	-	-	0.454	-	-	-	-	-	0.454
<i>Subtotal: Support - System Engineering Cost</i>	-	-	45.729	-	-	0.973	-	-	0.856	-	-	0.454	-	-	-	-	-	0.454
<b>Gross/Weapon System Cost</b>	<b>12,403.559</b>	<b>68</b>	<b>843.442</b>	-	-	<b>6.107</b>	-	-	<b>5.400</b>	-	-	<b>5.332</b>	-	-	-	-	-	<b>5.332</b>

**Remarks:**

Fiscal Year (FY) 2021 requirements include software fielding, training, information assurance (IA), and engineering and logistics support associated with engineering changes to address obsolescence mitigation.

FY 2020 requirements include the fielding of the remaining full rate production systems, training, IA, engineering and logistics support, and obsolescence mitigation efforts.

FY 2019 government support costs include engineering, logistics, software, IA, and contracting support. FY 2019 contractor support covers systems and production engineering, logistics, fielding, and test support.

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<b>Exhibit P-5, Cost Analysis:</b> PB 2021 Army		<b>Date:</b> February 2020
<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 2035A / 02 / 83	<b>P-1 Line Item Number / Title:</b> 8387B05201 / Lightweight Counter Mortar Radar	<b>Item Number / Title [DODIC]:</b> B05201 / Lightweight Counter Mortar Radar

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

Secondary Distribution		FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total
Army	Quantity	-	-	-	-	-
	Total Obligation Authority	6.107	5.400	5.332	-	5.332
<b>Total: Secondary Distribution</b>	Quantity	-	-	-	-	-
	Total Obligation Authority	<b>6.107</b>	<b>5.400</b>	<b>5.332</b>	-	<b>5.332</b>

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

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<b>Exhibit P-5a, Procurement History and Planning:</b> PB 2021 Army							<b>Date:</b> February 2020					
<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 2035A / 02 / 83			<b>P-1 Line Item Number / Title:</b> 8387B05201 / Lightweight Counter Mortar Radar				<b>Item Number / Title [DODIC]:</b> B05201 / Lightweight Counter Mortar Radar					
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
Hardware AN/TPQ-50 (LCMR V3)		2018	SRCTec, Inc. / North Syracuse	SS / FFP	CECOM	Dec 2017	Dec 2018	5	1,221.000	Y		Feb 2013

**Remarks:**  
FY 2018 OPA Base funds of \$17,080 million support the procurement of 5 AN/TPQ-50 full rate production (FRP) systems, fielding of systems to United States Army units, engineering changes, information assurance and program support.

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

<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 2035A: Other Procurement, Army / BA 02: Communications and Electronics Equipment / BSA 83: Elect Equip - Electronic Warfare (EW)	<b>P-1 Line Item Number / Title:</b> 8488K00002 / EW Planning & Management Tools (EWPMT)
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<b>ID Code</b> (A=Service Ready, B=Not Service Ready):	<b>Program Elements for Code B Items:</b> N/A	<b>Other Related Program Elements:</b> N/A
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**Line Item MDAP/MAIS Code:** N/A

Resource Summary	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	To Complete	Total
Procurement Quantity ( <i>Units in Each</i> )	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost ( <i>\$ in Millions</i> )	15.773	4.700	7.568	7.849	-	7.849	0.792	-	-	-	-	36.682
Less PY Advance Procurement ( <i>\$ in Millions</i> )	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) ( <i>\$ in Millions</i> )	15.773	4.700	7.568	7.849	-	7.849	0.792	-	-	-	-	36.682
Plus CY Advance Procurement ( <i>\$ in Millions</i> )	-	-	-	-	-	-	-	-	-	-	-	-
<b>Total Obligation Authority (<i>\$ in Millions</i>)</b>	<b>15.773</b>	<b>4.700</b>	<b>7.568</b>	<b>7.849</b>	<b>-</b>	<b>7.849</b>	<b>0.792</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>36.682</b>

*(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> )	15,773.000	4,700.000	-	981.125	-	981.125	792.000	-	-	-	-	3,334.727

**Description:**

The Commander's tool to control, manage, and dominate the Electromagnetic Spectrum (EMS), EWPMT will provide the ability to conduct remote control & management of Electronic Warfare (EW) assets to execute offensive and defensive Electronic Attack, EW targeting and enable maneuver by synchronizing EW and Spectrum Management Operations (SMO) across Intelligence, Operations, and Signals in support of Multi-Domain Operations (MDO).

EWPMT is a Mission Command software application that enhances the Cyber Electromagnetic Activities (CEMA) element's ability to plan, coordinate, integrate, and synchronize CEMA (Cyber, EW & Electromagnetic Spectrum Management (ESM)) with Mission Command Systems from Joint Task Force (JTF) to Battalion (BN).

Integrates the Electronic Attack (EA), Electronic Protect (EP), Electronic Warfare Support (ES), and Spectrum Management Operations functions in support of Brigade Combat Team (BCT) and Echelons Above Brigade (EAB) Electronic Warfare and CEMA Planning.

Secondary Distribution	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025
Army	Quantity	-	-	-	-	-	-	-	-
	Total Obligation Authority	4.700	7.568	7.849	-	7.849	0.792	-	-
<b>Total: Secondary Distribution</b>	<b>Quantity</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>
	<b>Total Obligation Authority</b>	<b>4.700</b>	<b>7.568</b>	<b>7.849</b>	<b>-</b>	<b>7.849</b>	<b>0.792</b>	<b>-</b>	<b>-</b>

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

<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 2035A: Other Procurement, Army / BA 02: Communications and Electronics Equipment / BSA 83: Elect Equip - Electronic Warfare (EW)	<b>P-1 Line Item Number / Title:</b> 8488K00002 / EW Planning & Management Tools (EWPMT)
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<b>ID Code</b> (A=Service Ready, B=Not Service Ready):	<b>Program Elements for Code B Items:</b> N/A	<b>Other Related Program Elements:</b> N/A
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**Line Item MDAP/MAIS Code:** N/A

Exhibits Schedule					Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total
Exhibit Type	Title*	Subexhibits	ID CD	MDAP/MAIS Code	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)
P-5	K00002 / EW Planning & Management Tools (EWPMT)				- / 15.773	- / 4.700	- / 7.568	- / 7.849	- / -	- / 7.849
<b>P-40</b>	<b>Total Gross/Weapon System Cost</b>				<b>- / 15.773</b>	<b>- / 4.700</b>	<b>- / 7.568</b>	<b>- / 7.849</b>	<b>- / -</b>	<b>- / 7.849</b>

\*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 2021 base procurement dollars in the amount of \$7.849 million supports continuous Electronic Warfare Planning & Management Tools (EWPMT) includes, but is not limited to, New Equipment Training (NET), Interim Contractor Support (ICS), and Program Management Support.

**UNCLASSIFIED**

<b>Exhibit P-5, Cost Analysis: PB 2021 Army</b>													<b>Date:</b> February 2020					
<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 2035A / 02 / 83						<b>P-1 Line Item Number / Title:</b> 8488K00002 / EW Planning & Management Tools (EWPMT)						<b>Item Number / Title [DODIC]:</b> K00002 / EW Planning & Management Tools (EWPMT)						
<b>ID Code</b> (A=Service Ready, B=Not Service Ready) :									<b>MDAP/MAIS Code:</b>									
<b>Resource Summary</b>				<b>Prior Years</b>		<b>FY 2019</b>		<b>FY 2020</b>		<b>FY 2021 Base</b>		<b>FY 2021 OCO</b>		<b>FY 2021 Total</b>				
Procurement Quantity <i>(Units in Each)</i>				-		-		-		-		-		-				
Gross/Weapon System Cost <i>(\$ in Millions)</i>				15.773		4.700		7.568		7.849		-		7.849				
Less PY Advance Procurement <i>(\$ in Millions)</i>				-		-		-		-		-		-				
Net Procurement (P-1) <i>(\$ in Millions)</i>				15.773		4.700		7.568		7.849		-		7.849				
Plus CY Advance Procurement <i>(\$ in Millions)</i>				-		-		-		-		-		-				
<b>Total Obligation Authority</b> <i>(\$ in Millions)</i>				<b>15.773</b>		<b>4.700</b>		<b>7.568</b>		<b>7.849</b>		<b>-</b>		<b>7.849</b>				
<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>				15,773.000		4,700.000		-		981.125		-		981.125				
Note: Subtotals or Totals in this Exhibit P-5 may not be exact or sum exactly due to rounding.																		
<b>Cost Elements</b>	<b>Prior Years</b>			<b>FY 2019</b>			<b>FY 2020</b>			<b>FY 2021 Base</b>			<b>FY 2021 OCO</b>			<b>FY 2021 Total</b>		
	<b>Unit Cost</b> (\$ K)	<b>Qty</b> (Each)	<b>Total Cost</b> (\$ M)	<b>Unit Cost</b> (\$ K)	<b>Qty</b> (Each)	<b>Total Cost</b> (\$ M)	<b>Unit Cost</b> (\$ K)	<b>Qty</b> (Each)	<b>Total Cost</b> (\$ M)	<b>Unit Cost</b> (\$ K)	<b>Qty</b> (Each)	<b>Total Cost</b> (\$ M)	<b>Unit Cost</b> (\$ K)	<b>Qty</b> (Each)	<b>Total Cost</b> (\$ M)	<b>Unit Cost</b> (\$ K)	<b>Qty</b> (Each)	<b>Total Cost</b> (\$ M)
Software Cost																		
Recurring Cost																		
EWPMT Interim Contractor Support (ICS)	-	-	7.342	742.000	1	0.742	2,566.000	1	2.566	3,000.000	1	3.000	-	-	-	3,000.000	1	3.000
<i>Subtotal: Recurring Cost</i>	-	-	7.342	-	-	0.742	-	-	2.566	-	-	3.000	-	-	-	-	-	3.000
<i>Subtotal: Software Cost</i>	-	-	7.342	-	-	0.742	-	-	2.566	-	-	3.000	-	-	-	-	-	3.000
Logistics Cost																		
Recurring Cost																		
EWPMT New Equipment Training (NET)	-	-	7.138	-	-	3.263	-	-	3.941	-	-	4.042	-	-	-	-	-	4.042
<i>Subtotal: Recurring Cost</i>	-	-	7.138	-	-	3.263	-	-	3.941	-	-	4.042	-	-	-	-	-	4.042
<i>Subtotal: Logistics Cost</i>	-	-	7.138	-	-	3.263	-	-	3.941	-	-	4.042	-	-	-	-	-	4.042
Support - Program Management Cost																		
Contractor Management	-	-	1.293	-	-	0.695	-	-	1.061	-	-	0.807	-	-	-	-	-	0.807
<i>Subtotal: Support - Program Management Cost</i>	-	-	1.293	-	-	0.695	-	-	1.061	-	-	0.807	-	-	-	-	-	0.807
<b>Gross/Weapon System Cost</b>	<b>15,773.000</b>	-	<b>15.773</b>	<b>4,700.000</b>	-	<b>4.700</b>	-	-	<b>7.568</b>	<b>981.125</b>	-	<b>7.849</b>	-	-	-	<b>981.125</b>	-	<b>7.849</b>

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<b>Exhibit P-5, Cost Analysis: PB 2021 Army</b>		<b>Date:</b> February 2020
<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 2035A / 02 / 83	<b>P-1 Line Item Number / Title:</b> 8488K00002 / EW Planning & Management Tools (EWPMT)	<b>Item Number / Title [DODIC]:</b> K00002 / EW Planning & Management Tools (EWPMT)

<b>ID Code</b> (A=Service Ready, B=Not Service Ready) :	<b>MDAP/MAIS Code:</b>
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<b>Secondary Distribution</b>		<b>FY 2019</b>	<b>FY 2020</b>	<b>FY 2021 Base</b>	<b>FY 2021 OCO</b>	<b>FY 2021 Total</b>
Army	Quantity	-	-	-	-	-
	Total Obligation Authority	4.700	7.568	7.849	-	7.849
<b>Total:</b>	<b>Quantity</b>	-	-	-	-	-
<b>Secondary Distribution</b>	<b>Total Obligation Authority</b>	<b>4.700</b>	<b>7.568</b>	<b>7.849</b>	-	<b>7.849</b>

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

<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 2035A: Other Procurement, Army / BA 02: Communications and Electronics Equipment / BSA 83: Elect Equip - Electronic Warfare (EW)	<b>P-1 Line Item Number / Title:</b> 8489W60001 / Air Vigilance (AV) (MIP)
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<b>ID Code</b> (A=Service Ready, B=Not Service Ready): A	<b>Program Elements for Code B Items:</b> N/A	<b>Other Related Program Elements:</b> 0603766A, 0605766A
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**Line Item MDAP/MAIS Code:** N/A

Resource Summary	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	To Complete	Total
Procurement Quantity ( <i>Units in Each</i> )	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost ( <i>\$ in Millions</i> )	21.321	8.497	8.953	8.160	-	8.160	8.521	8.692	8.866	9.043	-	82.053
Less PY Advance Procurement ( <i>\$ in Millions</i> )	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) ( <i>\$ in Millions</i> )	21.321	8.497	8.953	8.160	-	8.160	8.521	8.692	8.866	9.043	-	82.053
Plus CY Advance Procurement ( <i>\$ in Millions</i> )	-	-	-	-	-	-	-	-	-	-	-	-
<b>Total Obligation Authority (<i>\$ in Millions</i>)</b>	<b>21.321</b>	<b>8.497</b>	<b>8.953</b>	<b>8.160</b>	<b>-</b>	<b>8.160</b>	<b>8.521</b>	<b>8.692</b>	<b>8.866</b>	<b>9.043</b>	<b>-</b>	<b>82.053</b>

*(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:**

Air Vigilance systems collect critical intelligence data on emerging threat aerial systems. The intelligence data provides early warning of operations in restricted airspace to ensure force protection. An Air Vigilance system is comprised of a server unit configured and fielded with a single or multiple sub-component sensors. System Quantities are based upon server units. Operational details are classified.

Air Vigilance (AV) is software intensive Automated Information System (AIS) program with specialized hardware. The AV current Basis of Issue Plan (BOIP) is based upon the Full Deployment (FD) of this baseline software deployed across hardware sets comprised of 49 unit/pieces of equipment (10 servers and 39 sensors in various combinations/configurations) fielded to the Intelligence and Security Command (INSCOM) Military Intelligence Brigades.

Secondary Distribution	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025
Army									
Quantity	-	-	-	-	-	-	-	-	-
Total Obligation Authority	8.497	8.953	8.160	-	8.160	8.521	8.692	8.866	9.043
<b>Total:</b>									
<b>Secondary Distribution</b>									
Quantity	-	-	-	-	-	-	-	-	-
Total Obligation Authority	8.497	8.953	8.160	-	8.160	8.521	8.692	8.866	9.043



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

<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 2035A: Other Procurement, Army / BA 02: Communications and Electronics Equipment / BSA 83: Elect Equip - Electronic Warfare (EW)	<b>P-1 Line Item Number / Title:</b> 8489W60001 / Air Vigilance (AV) (MIP)
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<b>ID Code</b> (A=Service Ready, B=Not Service Ready): A	<b>Program Elements for Code B Items:</b> N/A	<b>Other Related Program Elements:</b> 0603766A, 0605766A
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**Line Item MDAP/MAIS Code:** N/A

Exhibits Schedule					Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total
Exhibit Type	Title*	Subexhibits	ID CD	MDAP/MAIS Code	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)
P-5	W60001 / Air Vigilance (AV) (MIP)	P-5a	A		- / 21.321	- / 8.497	- / 8.953	- / 8.160	- / -	- / 8.160
<b>P-40</b>	<b>Total Gross/Weapon System Cost</b>				<b>- / 21.321</b>	<b>- / 8.497</b>	<b>- / 8.953</b>	<b>- / 8.160</b>	<b>- / -</b>	<b>- / 8.160</b>

\*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 2021 Base procurement dollars in the amount of \$8.160 million provide for Fielding and New Equipment Training of items procured in previous years and upgrades these systems to the sensor/processor Capability Drop 3 configuration, in accordance with the latest user and HQDA approved fielding plan. This completes the BOIP of 39 sensors and 10 servers and reaches Full Deployment (FD). All funding is for the Active Component.

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**

<b>Exhibit P-5, Cost Analysis: PB 2021 Army</b>		<b>Date:</b> February 2020
<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 2035A / 02 / 83	<b>P-1 Line Item Number / Title:</b> 8489W60001 / Air Vigilance (AV) (MIP)	<b>Item Number / Title [DODIC]:</b> W60001 / Air Vigilance (AV) (MIP)

<b>ID Code</b> (A=Service Ready, B=Not Service Ready) : A	<b>MDAP/MAIS Code:</b>
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Resource Summary	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total
Procurement Quantity (Units in Each)	-	-	-	-	-	-
Gross/Weapon System Cost (\$ in Millions)	21.321	8.497	8.953	8.160	-	8.160
Less PY Advance Procurement (\$ in Millions)	-	-	-	-	-	-
Net Procurement (P-1) (\$ in Millions)	21.321	8.497	8.953	8.160	-	8.160
Plus CY Advance Procurement (\$ in Millions)	-	-	-	-	-	-
<b>Total Obligation Authority (\$ in Millions)</b>	<b>21.321</b>	<b>8.497</b>	<b>8.953</b>	<b>8.160</b>	<b>-</b>	<b>8.160</b>

*(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 2019			FY 2020			FY 2021 Base			FY 2021 OCO			FY 2021 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)
<b>Hardware Cost</b>																		
<b>Recurring Cost</b>																		
Fielding and New Equipment Training	-	-	1.199	550.000	1	0.550	-	-	2.500	76.100	10	0.761	-	-	-	76.100	10	0.761
Systems Engineering	139.333	3	0.418	267.000	1	0.267	-	-	0.500	-	-	7.399	-	-	-	-	-	7.399
<b>Subtotal: Recurring Cost</b>	<b>-</b>	<b>-</b>	<b>1.617</b>	<b>-</b>	<b>-</b>	<b>0.817</b>	<b>-</b>	<b>-</b>	<b>3.000</b>	<b>-</b>	<b>-</b>	<b>8.160</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>8.160</b>
<b>Non Recurring Cost</b>																		
Sensor <sup>(f)</sup>	653.440	25	16.336	710.000	8	5.680	-	-	-	-	-	-	-	-	-	-	-	-
System Server <sup>(f)</sup>	228.800	5	1.144	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Hardware Upgrades per CD enhancements/ improvements	222.400	10	2.224	-	-	2.000	-	-	5.953	-	-	-	-	-	-	-	-	-
<b>Subtotal: Non Recurring Cost</b>	<b>-</b>	<b>-</b>	<b>19.704</b>	<b>-</b>	<b>-</b>	<b>7.680</b>	<b>-</b>	<b>-</b>	<b>5.953</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>
<b>Subtotal: Hardware Cost</b>	<b>-</b>	<b>-</b>	<b>21.321</b>	<b>-</b>	<b>-</b>	<b>8.497</b>	<b>-</b>	<b>-</b>	<b>8.953</b>	<b>-</b>	<b>-</b>	<b>8.160</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>8.160</b>
<b>Gross/Weapon System Cost</b>	<b>-</b>	<b>-</b>	<b>21.321</b>	<b>-</b>	<b>-</b>	<b>8.497</b>	<b>-</b>	<b>-</b>	<b>8.953</b>	<b>-</b>	<b>-</b>	<b>8.160</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>8.160</b>

**Remarks:**  
None

**UNCLASSIFIED**

**Exhibit P-5, Cost Analysis: PB 2021 Army** **Date:** February 2020

<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 2035A / 02 / 83	<b>P-1 Line Item Number / Title:</b> 8489W60001 / Air Vigilance (AV) (MIP)	<b>Item Number / Title [DODIC]:</b> W60001 / Air Vigilance (AV) (MIP)
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**ID Code** (A=Service Ready, B=Not Service Ready) : A **MDAP/MAIS Code:**

Secondary Distribution		FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total
Army	Quantity	-	-	-	-	-
	Total Obligation Authority	8.497	8.953	8.160	-	8.160
<b>Total:</b>	<b>Quantity</b>	-	-	-	-	-
<b>Secondary Distribution</b>	<b>Total Obligation Authority</b>	<b>8.497</b>	<b>8.953</b>	<b>8.160</b>	-	<b>8.160</b>

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

**UNCLASSIFIED**

**Exhibit P-5a, Procurement History and Planning:** PB 2021 Army **Date:** February 2020

<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 2035A / 02 / 83	<b>P-1 Line Item Number / Title:</b> 8489W60001 / Air Vigilance (AV) (MIP)	<b>Item Number / Title [DODIC]:</b> W60001 / Air Vigilance (AV) (MIP)
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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
Sensor		2016	Classified / Classified	C / FFP	Classified	Jan 2016	Mar 2016	8	600.000	N		
Sensor		2018	Classified / Classified	C / FFP	Classified	Jan 2018	Mar 2018	5	700.000	N		
Sensor		2019	Classified / Classified	C / FFP	Classified	Jan 2019	Mar 2019	8	710.000	N		
Sensor		2020	Classified / Classified	C / CPAF	Classified	Jan 2020	Mar 2020	0	0.000	N		
System Server		2016	Classified / Classified	C / FFP	Classified	Jan 2016	Mar 2016	2	280.000	N		
System Server		2017	Classified / Classified	C / FFP	Classified	Jan 2017	Mar 2017	3	228.000	N		

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

<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 2035A: Other Procurement, Army / BA 02: Communications and Electronics Equipment / BSA 83: Elect Equip - Electronic Warfare (EW)	<b>P-1 Line Item Number / Title:</b> 8490VA8000 / CREW
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<b>ID Code</b> (A=Service Ready, B=Not Service Ready):	<b>Program Elements for Code B Items:</b> N/A	<b>Other Related Program Elements:</b> N/A
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**Line Item MDAP/MAIS Code:** N/A

Resource Summary	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	To Complete	Total
Procurement Quantity ( <i>Units in Each</i> )	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost ( <i>\$ in Millions</i> )	1,516.161	42.651	-	-	-	-	-	-	-	-	-	1,558.812
Less PY Advance Procurement ( <i>\$ in Millions</i> )	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) ( <i>\$ in Millions</i> )	1,516.161	42.651	-	-	-	-	-	-	-	-	-	1,558.812
Plus CY Advance Procurement ( <i>\$ in Millions</i> )	-	-	-	-	-	-	-	-	-	-	-	-
<b>Total Obligation Authority (<i>\$ in Millions</i>)</b>	<b>1,516.161</b>	<b>42.651</b>	-	-	-	-	-	-	-	-	-	<b>1,558.812</b>

*(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 Counter Radio Controlled Improvised Explosive Devices (RCIED) Electronics Warfare (CREW) family of Electronic Counter Measure (ECM) systems are essential to provide force protection to Soldiers, fixed site locations and combat vehicle platforms for both Mounted and Dismounted Variants for 24/7 operations. CREW Dismounted capabilities are designed to protect Soldiers while conducting dismounted operations. Universal Test Set (UTS) is designed to test CREW systems before conduct of operations.

Operation Freedom's Sentinel (OFS) has requested dismounted systems to provide force protection for mission locations. These systems will be developed and fielded to the CENTCOM Area of Operation (AoR) in response to Joint Urgent Operation Needs (JUON) 0533 (classified JUONs). JUON 0533 was approved in Nov 2017. Modi II has been selected to fulfil this JUON based on CONUS and OCONUS testing along with system availability to meet the JUON's requirements.

FY19 was the last year of base funding for this effort.

Secondary Distribution	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025
Army									
	Quantity	-	-	-	-	-	-	-	-
	Total Obligation Authority	42.651	-	-	-	-	-	-	-
<b>Total:</b>									
<b>Secondary Distribution</b>	Quantity	-	-	-	-	-	-	-	-
	Total Obligation Authority	<b>42.651</b>	-	-	-	-	-	-	-

**Justification:**

Program has no FY2021 funding request.

**UNCLASSIFIED**

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

<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 2035A: Other Procurement, Army / BA 02: Communications and Electronics Equipment / BSA 83: Elect Equip - Electronic Warfare (EW)	<b>P-1 Line Item Number / Title:</b> 8491B05000 / Multi-Function Electronic Warfare (MFEW) Systems
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<b>ID Code</b> (A=Service Ready, B=Not Service Ready):	<b>Program Elements for Code B Items:</b> N/A	<b>Other Related Program Elements:</b> N/A
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**Line Item MDAP/MAIS Code:** N/A

Resource Summary	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	To Complete	Total
Procurement Quantity ( <i>Units in Each</i> )	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost ( <i>\$ in Millions</i> )	-	-	-	8.669	-	8.669	19.267	20.137	10.312	-	-	58.385
Less PY Advance Procurement ( <i>\$ in Millions</i> )	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) ( <i>\$ in Millions</i> )	-	-	-	8.669	-	8.669	19.267	20.137	10.312	-	-	58.385
Plus CY Advance Procurement ( <i>\$ in Millions</i> )	-	-	-	-	-	-	-	-	-	-	-	-
<b>Total Obligation Authority</b> ( <i>\$ in Millions</i> )	-	-	-	<b>8.669</b>	-	<b>8.669</b>	<b>19.267</b>	<b>20.137</b>	<b>10.312</b>	-	-	<b>58.385</b>

*(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 Multi-Function Electronic Warfare (MFEW) is a capability set that will provide Brigade Combat Team (BCT) Commanders with an organic airborne offensive Electronic Warfare (EW) capability, which empowers Commanders to shape the Electromagnetic Spectrum (EMS) to their advantage. The MFEW Air Large system, when installed onto the Gray Eagle (GE) Unmanned Aerial System (UAS), will provide: 1) Offensive Electronic Attack (OEA) - Non-Kinetic Fires capability with the intent of denying, degrading, or disrupting enemy communications capability and non-communications emitters; 2) Electronic Warfare Support (ES) - Capability to search, intercept, identify, and locate or localize sources of intentional and unintentional radiated electromagnetic (EM) energy for the purpose of immediate threat recognition, targeting, planning, and execution of future operations; 3) Dissemination of Military Information Support Operations (MISO) products; and 4) Support of Offensive Cyber Operations (OCO) and Multi-Domain Operations.

Secondary Distribution	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025
Army	Quantity	-	-	-	-	-	-	-	-
	Total Obligation Authority	-	-	8.669	-	8.669	19.267	20.137	10.312
<b>Total:</b> Secondary Distribution	Quantity	-	-	-	-	-	-	-	-
	Total Obligation Authority	-	-	<b>8.669</b>	-	<b>8.669</b>	<b>19.267</b>	<b>20.137</b>	<b>10.312</b>

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

**Appropriation / Budget Activity / Budget Sub Activity:**  
 2035A: Other Procurement, Army / BA 02: Communications and Electronics  
 Equipment / BSA 83: Elect Equip - Electronic Warfare (EW) **P-1 Line Item Number / Title:**  
 8491B05000 / Multi-Function Electronic Warfare (MFEW) Systems

**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 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total
Exhibit Type	Title*	Subexhibits	ID CD	MDAP/MAIS Code	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)
P-5	B05001 / MFEW - Air	P-5a			- / -	- / -	- / -	- / 8.669	- / -	- / 8.669
<b>P-40</b>	<b>Total Gross/Weapon System Cost</b>				- / -	- / -	- / -	- / <b>8.669</b>	- / -	- / <b>8.669</b>

\*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 2021 base dollars in the amount of \$8.669 million will support MFEW Air Large procurement of one system, spare parts/components, contracting logistics support and program support. Funds in this budget line support a new start program.  
  
 Multi-Function Electronic Warfare (MFEW) Systems is a new start in FY2021.

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<b>Exhibit P-5, Cost Analysis: PB 2021 Army</b>													<b>Date:</b> February 2020					
<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 2035A / 02 / 83						<b>P-1 Line Item Number / Title:</b> 8491B05000 / Multi-Function Electronic Warfare (MFEW) Systems						<b>Item Number / Title [DODIC]:</b> B05001 / MFEW - Air						
<b>ID Code</b> (A=Service Ready, B=Not Service Ready) :										<b>MDAP/MAIS Code:</b>								
<b>Resource Summary</b>				<b>Prior Years</b>		<b>FY 2019</b>		<b>FY 2020</b>		<b>FY 2021 Base</b>		<b>FY 2021 OCO</b>		<b>FY 2021 Total</b>				
Procurement Quantity ( <i>Units in Each</i> )				-		-		-		-		-		-				
Gross/Weapon System Cost ( <i>\$ in Millions</i> )				-		-		-		8.669		-		8.669				
Less PY Advance Procurement ( <i>\$ in Millions</i> )				-		-		-		-		-		-				
Net Procurement (P-1) ( <i>\$ in Millions</i> )				-		-		-		8.669		-		8.669				
Plus CY Advance Procurement ( <i>\$ in Millions</i> )				-		-		-		-		-		-				
<b>Total Obligation Authority</b> ( <i>\$ in Millions</i> )				-		-		-		<b>8.669</b>		-		<b>8.669</b>				
<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> )				-		-		-		8,669.000		-		8,669.000				
Note: Subtotals or Totals in this Exhibit P-5 may not be exact or sum exactly due to rounding.																		
<b>Cost Elements</b>	<b>Prior Years</b>			<b>FY 2019</b>			<b>FY 2020</b>			<b>FY 2021 Base</b>			<b>FY 2021 OCO</b>			<b>FY 2021 Total</b>		
	<b>Unit Cost</b> (\$ K)	<b>Qty</b> (Each)	<b>Total Cost</b> (\$ M)	<b>Unit Cost</b> (\$ K)	<b>Qty</b> (Each)	<b>Total Cost</b> (\$ M)	<b>Unit Cost</b> (\$ K)	<b>Qty</b> (Each)	<b>Total Cost</b> (\$ M)	<b>Unit Cost</b> (\$ K)	<b>Qty</b> (Each)	<b>Total Cost</b> (\$ M)	<b>Unit Cost</b> (\$ K)	<b>Qty</b> (Each)	<b>Total Cost</b> (\$ M)	<b>Unit Cost</b> (\$ K)	<b>Qty</b> (Each)	<b>Total Cost</b> (\$ M)
Hardware Cost																		
Non Recurring Cost																		
MFEW Air Large Production (includes A-kit and Aircraft Components) <sup>(†)</sup>	-	-	-	-	-	-	-	-	-	4,495.000	1	4,495	-	-	-	4,495.000	1	4,495
Spares and Support Equipment	-	-	-	-	-	-	-	-	-	-	-	0.901	-	-	-	-	-	0.901
<i>Subtotal: Non Recurring Cost</i>	-	-	-	-	-	-	-	-	-	-	-	5.396	-	-	-	-	-	5.396
<i>Subtotal: Hardware Cost</i>	-	-	-	-	-	-	-	-	-	-	-	<b>5.396</b>	-	-	-	-	-	<b>5.396</b>
Logistics Cost																		
Non Recurring Cost																		
Contractor Logistics Support (CLS)	-	-	-	-	-	-	-	-	-	-	-	1.500	-	-	-	-	-	1.500
<i>Subtotal: Non Recurring Cost</i>	-	-	-	-	-	-	-	-	-	-	-	1.500	-	-	-	-	-	1.500
<i>Subtotal: Logistics Cost</i>	-	-	-	-	-	-	-	-	-	-	-	<b>1.500</b>	-	-	-	-	-	<b>1.500</b>
Support - Program Management Cost																		
Contractor Management	-	-	-	-	-	-	-	-	-	-	-	1.323	-	-	-	-	-	1.323
<i>Subtotal: Support - Program Management Cost</i>	-	-	-	-	-	-	-	-	-	-	-	<b>1.323</b>	-	-	-	-	-	<b>1.323</b>
Support - System Engineering Cost																		



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<b>Exhibit P-5, Cost Analysis: PB 2021 Army</b>		<b>Date:</b> February 2020
<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 2035A / 02 / 83	<b>P-1 Line Item Number / Title:</b> 8491B05000 / Multi-Function Electronic Warfare (MFEW) Systems	<b>Item Number / Title [DODIC]:</b> B05001 / MFEW - Air
<b>ID Code</b> (A=Service Ready, B=Not Service Ready) :		<b>MDAP/MAIS Code:</b>

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

Cost Elements	Prior Years			FY 2019			FY 2020			FY 2021 Base			FY 2021 OCO			FY 2021 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	-	-	-	-	-	-	-	-	-	-	-	0.450	-	-	-	-	-	0.450
<i>Subtotal: Support - System Engineering Cost</i>	-	-	-	-	-	-	-	-	-	-	-	0.450	-	-	-	-	-	0.450
<b>Gross/Weapon System Cost</b>	-	-	-	-	-	-	-	-	-	8,669.000	-	8.669	-	-	-	8,669.000	-	8.669

Secondary Distribution		FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total
Army	Quantity	-	-	-	-	-
	Total Obligation Authority	-	-	8.669	-	8.669
<b>Total: Secondary Distribution</b>	Quantity	-	-	-	-	-
	Total Obligation Authority	-	-	8.669	-	8.669

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

**UNCLASSIFIED**

<b>Exhibit P-5a, Procurement History and Planning:</b> PB 2021 Army							<b>Date:</b> February 2020					
<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 2035A / 02 / 83			<b>P-1 Line Item Number / Title:</b> 8491B05000 / Multi-Function Electronic Warfare (MFEW) Systems				<b>Item Number / Title [DODIC]:</b> B05001 / MFEW - Air					
<b>Cost Elements</b>	<b>O C O</b>	<b>FY</b>	<b>Contractor and Location</b>	<b>Method/Type or Funding Vehicle</b>	<b>Location of PCO</b>	<b>Award Date</b>	<b>Date of First Delivery</b>	<b>Qty (Each)</b>	<b>Unit Cost (\$ K)</b>	<b>Specs Avail Now?</b>	<b>Date Revision Available</b>	<b>RFP Issue Date</b>
MFEW Air Large Production (includes A-kit and Aircraft Components)		2021	Lockheed Martin / Owego, NY	TBD	New Jersey	Apr 2021	Apr 2022	1	4,495.000	N		

**UNCLASSIFIED**

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

<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 2035A: Other Procurement, Army / BA 02: Communications and Electronics Equipment / BSA 83: Elect Equip - Electronic Warfare (EW)	<b>P-1 Line Item Number / Title:</b> 9926BL5287 / Family of Persistent Surveillance Cap. (MIP)
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<b>ID Code</b> (A=Service Ready, B=Not Service Ready): A	<b>Program Elements for Code B Items:</b> N/A	<b>Other Related Program Elements:</b> N/A
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**Line Item MDAP/MAIS Code:** N/A

Resource Summary	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	To Complete	Total
Procurement Quantity ( <i>Units in Each</i> )	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost ( <i>\$ in Millions</i> )	179.961	20.050	31.493	-	44.293	44.293	-	-	-	-	-	275.797
Less PY Advance Procurement ( <i>\$ in Millions</i> )	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) ( <i>\$ in Millions</i> )	179.961	20.050	31.493	-	44.293	44.293	-	-	-	-	-	275.797
Plus CY Advance Procurement ( <i>\$ in Millions</i> )	-	-	-	-	-	-	-	-	-	-	-	-
<b>Total Obligation Authority (<i>\$ in Millions</i>)</b>	<b>179.961</b>	<b>20.050</b>	<b>31.493</b>	-	<b>44.293</b>	<b>44.293</b>	-	-	-	-	-	<b>275.797</b>

*(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:**

Persistent Surveillance Systems - Tethered (PSS-T) is a highly persistent and flexible multi-sensor information collection platform that integrates with other aerial and unattended ground sensor systems to provide slew-to-cue capability. The PSS-T retains medium and large aerostat platforms for persistent surveillance, information collection, force protection and as a platform for Army Aerial Layer Network Transport. Both medium and large platforms provide 360 degree detection, surveillance, monitoring, and targeting capabilities through real-time full motion video, electro-optic/infrared (EO/IR) and wide area detection of moving vehicles and dismount targets. Video collected by PSS-T is distributed to the Forward Operating Base and division commander information center as well as to quick reaction forces via Tactical Operations Center (TOC) Extension Kits, providing tactical commanders enhanced battlefield situational awareness.

PTDS - The baseline configuration includes the U.S. Army Research Lab's Unattended Transient Acoustic Measurement and Signature INTelligence (MASINT) System (UTAMS) which operationally cues the PTDS MX-20 EO/IR sensor to slew onto a target. The UTAMS is an acoustic sensor design consisting of sensor stations linked via radio to a base station. Each sensor station includes microphone arrays, signal processor, and display. The baseline PTDS also includes the Joint Synchronization Information Transmitter (JSIT) Mini-Tactical Common Data Link transmitter that transmits MX-20 video stream to ground forces equipped with One System Remote Video Terminal. Expendable-Unattended Ground Sensor (E-UGS) enhances the PTDS ability to detect enemy vehicle and footstep traffic and provides improved situational awareness and facilitates tactical response. PTDS continues to meet other urgent theater needs through system upgrades: adding High Antennas for Radio Communications (HARC) radio, the PRC-117G wide band radio, Tactical Targeting Network Technology (TTNT), Highband Networking Radio (HNR) as part of the aerial layer network extension architecture; transmitting weather data directly to Air Force Weather Agency (AFWA) via weather relay kits; added dual sensor capability; additional ground moving target indicator STARLite and wide area motion imagery Kestrel sensors, Persistent Surveillance Systems (PSS) Slew to Cue, coded laser target designation, and Survivability enhancements.

The PGSS has been a highly successful example of quickly delivering urgently needed capabilities to the Warfighter at remote forward operating bases (FOBs). PGSS continues to meet other urgent theater needs through system upgrades: adding HARC radio, the PRC-117G wide band radio, Quint Networking Technology (QNT), and micro-Enhanced Position Location Reporting System (EPLRS) as part of the aerial layer network extension architecture; transmitting weather data directly to AFWA via PGSS Weather Web, adding dual sensor capability; adding additional Vista, Kestrel, and wireless identification sensing platforms (WISP) sensors, PSS Slew to Cue, Precision Fires, coded laser target designation, and Survivability enhancements. Additionally, Expendable-Unattended Ground Sensor (E-UGS) enhances the PGSS ability to detect enemy vehicle and footstep traffic and provides improved situational awareness and facilitates tactical response.

Secondary Distribution	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025
Army	Quantity	-	-	-	-	-	-	-	-

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<b>Exhibit P-40, Budget Line Item Justification:</b> PB 2021 Army							<b>Date:</b> February 2020		
<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 2035A: Other Procurement, Army / BA 02: Communications and Electronics Equipment / BSA 83: Elect Equip - Electronic Warfare (EW)					<b>P-1 Line Item Number / Title:</b> 9926BL5287 / Family of Persistent Surveillance Cap. (MIP)				
<b>ID Code</b> (A=Service Ready, B=Not Service Ready): A			<b>Program Elements for Code B Items:</b> N/A			<b>Other Related Program Elements:</b> N/A			
<b>Line Item MDAP/MAIS Code:</b> N/A									

Secondary Distribution		FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025
	Total Obligation Authority	20.050	31.493	-	44.293	44.293	-	-	-	-
<b>Total:</b>	<b>Quantity</b>	-	-	-	-	-	-	-	-	-
<b>Secondary Distribution</b>	<b>Total Obligation Authority</b>	<b>20.050</b>	<b>31.493</b>	-	<b>44.293</b>	<b>44.293</b>	-	-	-	-

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**UNCLASSIFIED**

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

<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 2035A: Other Procurement, Army / BA 02: Communications and Electronics Equipment / BSA 83: Elect Equip - Electronic Warfare (EW)	<b>P-1 Line Item Number / Title:</b> 9926BL5287 / Family of Persistent Surveillance Cap. (MIP)
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<b>ID Code</b> (A=Service Ready, B=Not Service Ready): A	<b>Program Elements for Code B Items:</b> N/A	<b>Other Related Program Elements:</b> N/A
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**Line Item MDAP/MAIS Code:** N/A

Exhibits Schedule					Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total
Exhibit Type	Title*	Subexhibits	ID CD	MDAP/MAIS Code	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)
P-5	BL5287 / Family of Persistent Surveillance Cap. (MIP)	P-5a, P-21	A		- / 179.961	- / 20.050	- / 31.493	- / -	- / 44.293	- / 44.293
<b>P-40</b>	<b>Total Gross/Weapon System Cost</b>				<b>- / 179.961</b>	<b>- / 20.050</b>	<b>- / 31.493</b>	<b>- / -</b>	<b>- / 44.293</b>	<b>- / 44.293</b>

\*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 2021 OCO OPA dollars in the amount of \$44.293 million will procure high dollar spares kits consisting of ten (10) Aerostat Envelopes, twenty (20) Baseline Avionics Kits, and five (5) Pressurization Avionics Units. Funding will also procure seven (7) MX-20HD ISR camera sensor turrets, seven (7) MX-25D ISR camera sensor turrets which completes the tech refresh upgrade. The MX-20HD ISRs will be needed for systems that fly three sensors (one MX-25D, one MX-20HD, plus another sensor ex. Kestrel,HARC,etc) rather than two sensors (two MX-25D sensors). Two MX-25D ISRs cannot be flown due to weight restrictions.

These sensors provide critical long range, multi-sensor imaging and lasing payload options and are utilized on every PSS-T aerostat system flying in OFS and OIR. Without these sensors our systems would be designated as Non-Mission Capable (NMC). Reduced operations will result in potential loss of life, serious injury and compromised mission effectiveness due to continued insurgent activities in both OFS and OIR theaters, including Improvised Explosive Device (IED) emplacement, IED networks and other ground-based threats against U.S. and Coalition Forces.

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**

<b>Exhibit P-5, Cost Analysis: PB 2021 Army</b>													<b>Date:</b> February 2020					
<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 2035A / 02 / 83						<b>P-1 Line Item Number / Title:</b> 9926BL5287 / Family of Persistent Surveillance Cap. (MIP)						<b>Item Number / Title [DODIC]:</b> BL5287 / Family of Persistent Surveillance Cap. (MIP)						
<b>ID Code</b> (A=Service Ready, B=Not Service Ready) : A									<b>MDAP/MAIS Code:</b>									
<b>Resource Summary</b>				<b>Prior Years</b>		<b>FY 2019</b>		<b>FY 2020</b>		<b>FY 2021 Base</b>		<b>FY 2021 OCO</b>		<b>FY 2021 Total</b>				
Procurement Quantity (Units in Each)				-		-		-		-		-		-				
Gross/Weapon System Cost (\$ in Millions)				179.961		20.050		31.493		-		44.293		44.293				
Less PY Advance Procurement (\$ in Millions)				-		-		-		-		-		-				
Net Procurement (P-1) (\$ in Millions)				179.961		20.050		31.493		-		44.293		44.293				
Plus CY Advance Procurement (\$ in Millions)				-		-		-		-		-		-				
<b>Total Obligation Authority (\$ in Millions)</b>				<b>179.961</b>		<b>20.050</b>		<b>31.493</b>		<b>-</b>		<b>44.293</b>		<b>44.293</b>				
<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.																		
<b>Cost Elements</b>	<b>Prior Years</b>			<b>FY 2019</b>			<b>FY 2020</b>			<b>FY 2021 Base</b>			<b>FY 2021 OCO</b>			<b>FY 2021 Total</b>		
	<b>Unit Cost (\$ K)</b>	<b>Qty (Each)</b>	<b>Total Cost (\$ M)</b>	<b>Unit Cost (\$ K)</b>	<b>Qty (Each)</b>	<b>Total Cost (\$ M)</b>	<b>Unit Cost (\$ K)</b>	<b>Qty (Each)</b>	<b>Total Cost (\$ M)</b>	<b>Unit Cost (\$ K)</b>	<b>Qty (Each)</b>	<b>Total Cost (\$ M)</b>	<b>Unit Cost (\$ K)</b>	<b>Qty (Each)</b>	<b>Total Cost (\$ M)</b>	<b>Unit Cost (\$ K)</b>	<b>Qty (Each)</b>	<b>Total Cost (\$ M)</b>
Flyaway Cost																		
Recurring Cost																		
Aerostat Envelope <sup>(†)</sup>	1,004.342	38	38.165	861.500	16	13.784	861.500	10	8.615	-	-	-	861.500	10	8.615	861.500	10	8.615
Baseline Avionics Kits <sup>(†)</sup>	411.114	35	14.389	359.167	12	4.310	359.158	19	6.824	-	-	-	477.600	20	9.552	477.600	20	9.552
Tactical Common Data Link <sup>(†)</sup>	433.882	17	7.376	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Pressurization Avionics Unit <sup>(†)</sup>	264.909	11	2.914	-	-	-	333.500	6	2.001	-	-	-	311.200	5	1.556	311.200	5	1.556
High Antenna Radio Communications (B-Kit) <sup>(†)</sup>	335.000	5	1.675	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
ISR Turret (MX-15)	1,800.000	4	7.200	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Envelope replacements <sup>(†)</sup>	801.571	7	5.611	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Program Management Office Support	-	-	1.740	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
ISR Turret (MX-20) <sup>(†)</sup>	1,860.154	52	96.728	-	-	-	-	-	-	-	-	-	1,556.286	7	10.894	1,556.286	7	10.894
<i>Subtotal: Recurring Cost</i>	-	-	175.798	-	-	18.094	-	-	17.440	-	-	-	-	-	30.617	-	-	30.617
<i>Subtotal: Flyaway Cost</i>	-	-	175.798	-	-	18.094	-	-	17.440	-	-	-	-	-	30.617	-	-	30.617
Hardware Cost																		
Non Recurring Cost																		

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<b>Exhibit P-5, Cost Analysis: PB 2021 Army</b>		<b>Date:</b> February 2020
<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 2035A / 02 / 83	<b>P-1 Line Item Number / Title:</b> 9926BL5287 / Family of Persistent Surveillance Cap. (MIP)	<b>Item Number / Title [DODIC]:</b> BL5287 / Family of Persistent Surveillance Cap. (MIP)
<b>ID Code</b> (A=Service Ready, B=Not Service Ready) : A		<b>MDAP/MAIS Code:</b>

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

Cost Elements	Prior Years			FY 2019			FY 2020			FY 2021 Base			FY 2021 OCO			FY 2021 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)
ISR Turret (MX-25) <sup>(t)</sup>	2,081.500	2	4.163	1,956.000	1	1.956	2,007.571	7	14.053	-	-	-	1,953.714	7	13.676	1,953.714	7	13.676
<i>Subtotal: Non Recurring Cost</i>	-	-	4.163	-	-	1.956	-	-	14.053	-	-	-	-	-	13.676	-	-	13.676
<i>Subtotal: Hardware Cost</i>	-	-	4.163	-	-	1.956	-	-	14.053	-	-	-	-	-	13.676	-	-	13.676
<b>Gross/Weapon System Cost</b>	-	-	179.961	-	-	20.050	-	-	31.493	-	-	-	-	-	44.293	-	-	44.293

**Remarks:**

FY21 procurement of seven (7) MX-20 ISR turrets is required to support a lifecycle refresh effort to currently deployed sensors well beyond their useful life and determined to be uneconomically repairable.

Secondary Distribution		FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total
Army	Quantity	-	-	-	-	-
	Total Obligation Authority	20.050	31.493	-	44.293	44.293
<b>Total: Secondary Distribution</b>	<b>Quantity</b>	-	-	-	-	-
	<b>Total Obligation Authority</b>	<b>20.050</b>	<b>31.493</b>	<b>-</b>	<b>44.293</b>	<b>44.293</b>

<sup>(t)</sup> indicates the presence of a P-5a

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Exhibit P-5a, Procurement History and Planning: PB 2021 Army										Date: February 2020		
Appropriation / Budget Activity / Budget Sub Activity: 2035A / 02 / 83				P-1 Line Item Number / Title: 9926BL5287 / Family of Persistent Surveillance Cap. (MIP)				Item Number / Title [DODIC]: BL5287 / Family of Persistent Surveillance Cap. (MIP)				
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
Aerostat Envelope <sup>(†)</sup>		2016	Lockheed Martin / Akron, OH	SS / FFP	ACC-APG: APG, MD	Mar 2016	Nov 2016	8	804.000	N		
Aerostat Envelope <sup>(†)</sup>		2017	Bravura Information Technology / Aberdeen, MD	C / FFP	ACC-APG: APG, MD	Mar 2017	Nov 2017	12	876.000	N		
Aerostat Envelope <sup>(†)</sup>		2018	Bravura Information Technology / Aberdeen, MD	Option / FFP	ACC-APG: APG, MD	Mar 2018	Oct 2018	18	861.400	Y		
Aerostat Envelope <sup>(†)</sup>		2019	Bravura Information Technology / Aberdeen, MD	C / FFP	ACC-APG: APG,MD	May 2019	Dec 2019	16	861.500	Y		
Aerostat Envelope <sup>(†)</sup>		2020	TCOM / Elizabeth City, NC	C / FFP	ACC-APG: APG,MD	May 2020	Dec 2020	10	861.500	Y		
Aerostat Envelope	✓	2021	TCOM / Elizabeth City, NC	C / FFP	ACC-APG: APG, MD	May 2021	Dec 2021	10	861.500	Y		
Baseline Avionics Kits <sup>(†)</sup>		2016	Lockheed Martin / Akron, OH	SS / FFP	ACC-APG: APG, MD	Mar 2016	Nov 2016	8	309.000	N		
Baseline Avionics Kits <sup>(†)</sup>		2017	Bravura Information Technology / Aberdeen, MD	C / FFP	ACC-APG: APG, MD	Mar 2017	Nov 2017	10	379.800	N		
Baseline Avionics Kits <sup>(†)</sup>		2018	Bravura Information Technology / Aberdeen, MD	Option / FFP	ACC-APG: APG, MD	Mar 2018	Dec 2018	13	358.692	Y		
Baseline Avionics Kits <sup>(†)</sup>		2019	Bravura Information Technology / Aberdeen, MD	C / CPFF	ACC-APG: APG,MD	May 2019	Dec 2019	12	359.167	Y		
Baseline Avionics Kits <sup>(†)</sup>		2020	TCOM / Elizabeth City, NC	C / CPFF	ACC-APG: APG,MD	May 2020	Dec 2020	19	359.158	Y		
Baseline Avionics Kits	✓	2021	TCOM / Elizabeth City, NC	C / CPFF	ACC-APG: APG,MD	May 2021	Dec 2021	20	477.600	Y		
Tactical Common Data Link		2016	Lockheed Martin / Akron, OH	SS / FFP	ACC-APG: APG, MD	Mar 2016	May 2017	8	161.000	N		
Tactical Common Data Link		2017	Bravura Information Technology / Aberdeen, MD	C / FFP	ACC-APG: APG, MD	Mar 2017	May 2018	5	268.000	N		
Pressurization Avionics Unit		2016	Lockheed Martin / Akron, OH	SS / FFP	ACC-APG: APG, MD	Mar 2016	Sep 2016	6	241.000	N		
Pressurization Avionics Unit		2017	Bravura Information Technology / Aberdeen, MD	C / FFP	ACC-APG: APG, MD	Mar 2017	Sep 2017	5	281.000	N		
Pressurization Avionics Unit		2020	TCOM / Elizabeth City, NC	C / FFP	ACC-APG: APG,MD	Mar 2020	Sep 2020	6	333.500	N		
Pressurization Avionics Unit	✓	2021	TCOM / Elizabeth City, NC	C / FFP	ACC-APG: APG,MD	Mar 2021	Sep 2021	5	311.200	N		
High Antenna Radio Communications (B-Kit)		2017	Bravura Information Technology / Aberdeen, MD	C / FFP	ACC-APG: APG, MD	Mar 2017	Aug 2018	5	335.000	N		
Envelope replacements		2016	TCOM / Elizabeth City, NC	SS / FFP	NAVAIR: Lakehurst NJ	Mar 2016	Aug 2016	1	410.000	N		
Envelope replacements		2017	Bravura Information Technology / Aberdeen, MD	C / FFP	ACC-APG: APG, MD	Mar 2017	Aug 2017	1	415.000	N		
ISR Turret (MX-20) <sup>(†)</sup>		2016	L-3 Wescam / Burlington, ON	SS / FFP	ACC-APG: APG, MD	Jun 2016	Nov 2016	52	1,857.984	N		
ISR Turret (MX-20)	✓	2021	L-3 Wescam / Burlington, ON	SS / FFP	ACC-APG: APG, MD	Jun 2021	Nov 2021	7	1,556.286	N		
ISR Turret (MX-25) <sup>(†)</sup>		2018	L-3 Wescam / Burlington, ON	SS / FFP	ACC-APG: APG, MD	Jun 2018	Dec 2018	2	2,219.333	Y		



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<b>Exhibit P-5a, Procurement History and Planning:</b> PB 2021 Army							<b>Date:</b> February 2020					
<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 2035A / 02 / 83			<b>P-1 Line Item Number / Title:</b> 9926BL5287 / Family of Persistent Surveillance Cap. (MIP)				<b>Item Number / Title [DODIC]:</b> BL5287 / Family of Persistent Surveillance Cap. (MIP)					

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
ISR Turret (MX-25) <sup>(†)</sup>		2019	L-3 Wescam / Burlington, ON	SS / FFP	ACC-APG: APG,MD	Aug 2019	Feb 2020	1	1,956.000	Y		
ISR Turret (MX-25) <sup>(†)</sup>		2020	L-3 Wescam / Burlington, ON	SS / FFP	ACC-APG: APG,MD	Aug 2020	Feb 2021	7	2,007.571	Y		
ISR Turret (MX-25)	✓	2021	L-3 Wescam / Burlington, ON	SS / FFP	ACC-APG: APG,MD	Aug 2021	Feb 2022	7	1,953.714	Y		

<sup>(†)</sup> indicates the presence of a P-21

**Remarks:**

N/A

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Exhibit P-21, Production Schedule: PB 2021 Army																							Date: February 2020										
Appropriation / Budget Activity / Budget Sub Activity: 2035A / 02 / 83										P-1 Line Item Number / Title: 9926BL5287 / Family of Persistent Surveillance Cap. (MIP)										Item Number / Title [DODIC]: BL5287 / Family of Persistent Surveillance Cap. (MIP)													
Cost Elements (Units in Each)						Fiscal Year 2016													Fiscal Year 2017													BALANCE	
O C 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			
Aerostat Envelope																																	
	1	2016	ARMY	8	0	8																										0	
	3	2017	ARMY	12	0	12																										12	
	3	2018	ARMY	18	0	18																										18	
	3	2019	ARMY	16	0	16																										16	
	2	2020	ARMY	10	0	10																										10	
Baseline Avionics Kits																																	
Prior Years Deliveries: 4																																	
	4	2016	ARMY	8	0	8																										0	
	6	2017	ARMY	10	0	10																										10	
	6	2018	ARMY	13	0	13																										13	
	6	2019	ARMY	12	0	12																										12	
	5	2020	ARMY	19	0	19																										19	
ISR Turret (MX-20)																																	
	7	2016	ARMY	52	0	52																										0	
ISR Turret (MX-25)																																	
	8	2018	ARMY	2	0	2																										2	
	8	2019	ARMY	1	0	1																										1	
	8	2020	ARMY	7	0	7																										7	
							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			

**UNCLASSIFIED**

Exhibit P-21, Production Schedule: PB 2021 Army																							Date: February 2020											
Appropriation / Budget Activity / Budget Sub Activity: 2035A / 02 / 83										P-1 Line Item Number / Title: 9926BL5287 / Family of Persistent Surveillance Cap. (MIP)										Item Number / Title [DODIC]: BL5287 / Family of Persistent Surveillance Cap. (MIP)														
Cost Elements (Units in Each)						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				
Aerostat Envelope																																		
	1	2016	ARMY	8	8	0																											0	
	3	2017	ARMY	12	0	12	-	6	-	6																							0	
	3	2018	ARMY	18	0	18																											0	
	3	2019	ARMY	16	0	16																											16	
	2	2020	ARMY	10	0	10																											10	
Baseline Avionics Kits																																		
Prior Years Deliveries: 4																																		
	4	2016	ARMY	8	8	0																											0	
	6	2017	ARMY	10	0	10	-	4	-	-	-	-	-	-	6																		0	
	6	2018	ARMY	13	0	13																											0	
	6	2019	ARMY	12	0	12																											12	
	5	2020	ARMY	19	0	19																											19	
ISR Turret (MX-20)																																		
	7	2016	ARMY	52	52	0																											0	
ISR Turret (MX-25)																																		
	8	2018	ARMY	2	0	2																											0	
	8	2019	ARMY	1	0	1																											1	
	8	2020	ARMY	7	0	7																												7
							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 2021 Army																							Date: February 2020							
Appropriation / Budget Activity / Budget Sub Activity: 2035A / 02 / 83										P-1 Line Item Number / Title: 9926BL5287 / Family of Persistent Surveillance Cap. (MIP)										Item Number / Title [DODIC]: BL5287 / Family of Persistent Surveillance Cap. (MIP)										
Cost Elements (Units in Each)						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
Aerostat Envelope																														
	1	2016	ARMY	8	8	0																								0
	3	2017	ARMY	12	12	0																								0
	3	2018	ARMY	18	18	0																								0
	3	2019	ARMY	16	0	16	-	-	2	2	2	2	2	2	2	2													0	
	2	2020	ARMY	10	0	10									A -	-	-	-	-	-	-	2	2	2	2	2			0	
Baseline Avionics Kits																														
Prior Years Deliveries: 4																														
	4	2016	ARMY	8	8	0																							0	
	6	2017	ARMY	10	10	0																							0	
	6	2018	ARMY	13	13	0																							0	
	6	2019	ARMY	12	0	12	-	-	3	4	4	1																	0	
	5	2020	ARMY	19	0	19									A -	-	-	-	-	-	-	3	4	4	4	4			0	
ISR Turret (MX-20)																														
	7	2016	ARMY	52	52	0																							0	
ISR Turret (MX-25)																														
	8	2018	ARMY	2	2	0																							0	
	8	2019	ARMY	1	0	1	-	-	-	-	1																		0	
	8	2020	ARMY	7	0	7																							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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<b>Exhibit P-21, Production Schedule:</b> PB 2021 Army		<b>Date:</b> February 2020
<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 2035A / 02 / 83		<b>P-1 Line Item Number / Title:</b> 9926BL5287 / Family of Persistent Surveillance Cap. (MIP)
		<b>Item Number / Title [DODIC]:</b> BL5287 / Family of Persistent Surveillance Cap. (MIP)

MFR Ref #	Manufacturer Name - Location	Production Rates (Each / Month)			Procurement Leadtime (Months)								
		MSR For 2021	1-8-5 For 2021	MAX For 2021	Initial				Reorder				
					ALT Prior to Oct 1	ALT After Oct 1	Manufacturing PLT	Total After Oct 1	ALT Prior to Oct 1	ALT After Oct 1	Manufacturing PLT	Total After Oct 1	
1	Lockheed Martin - Akron, OH	1	25	50	0	0	0	0	0	0	0	0	0
2	TCOM - Elizabeth City, NC	1	20	50	0	3	3	6	0	0	0	0	0
3	Bravura Information Technology - Aberdeen, MD	1	40	100	0	2	3	5	0	0	0	0	0
4	Lockheed Martin - Akron, OH	1	25	50	0	0	0	0	0	0	0	0	0
5	TCOM - Elizabeth City, NC	1	20	50	0	3	3	6	0	0	0	0	0
6	Bravura Information Technology - Aberdeen, MD	1	40	100	0	2	3	5	0	0	0	0	0
7	L-3 Wescam - Burlington, ON	1	20	60	0	2	4	6	0	0	0	0	0
8	L-3 Wescam - Burlington, ON	1	20	60	0	2	4	6	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 2021 Army **Date:** February 2020

<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 2035A: Other Procurement, Army / BA 02: Communications and Electronics Equipment / BSA 83: Elect Equip - Electronic Warfare (EW)	<b>P-1 Line Item Number / Title:</b> 9996BL5283 / Counterintelligence/Security Countermeasures (MIP)
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<b>ID Code</b> (A=Service Ready, B=Not Service Ready):	<b>Program Elements for Code B Items:</b> N/A	<b>Other Related Program Elements:</b> N/A
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**Line Item MDAP/MAIS Code:** N/A

Resource Summary	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	To Complete	Total
<i>Procurement Quantity (Units in Each)</i>	-	-	-	-	-	-	-	-	-	-	-	-
<i>Gross/Weapon System Cost (\$ in Millions)</i>	1,863.598	29.554	7.418	-	49.100	49.100	23.816	22.300	21.300	21.300	-	2,038.386
<i>Less PY Advance Procurement (\$ in Millions)</i>	-	-	-	-	-	-	-	-	-	-	-	-
<i>Net Procurement (P-1) (\$ in Millions)</i>	1,863.598	29.554	7.418	-	49.100	49.100	23.816	22.300	21.300	21.300	-	2,038.386
<i>Plus CY Advance Procurement (\$ in Millions)</i>	-	-	-	-	-	-	-	-	-	-	-	-
<b>Total Obligation Authority (\$ in Millions)</b>	<b>1,863.598</b>	<b>29.554</b>	<b>7.418</b>	-	<b>49.100</b>	<b>49.100</b>	<b>23.816</b>	<b>22.300</b>	<b>21.300</b>	<b>21.300</b>	-	<b>2,038.386</b>

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

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

**Description:**

Program is IDENTIFIED IN VOL II OF THE MILITARY INTELLIGENCE PROGRAM CONGRESSIONAL JUSTIFICATION BOOK.

This requirement provides for:

Pursuit and Exploitation (P&E) (\$1.000 million) will procure two additional systems and necessary equipment replacements.

Pursuit and Exploitation (P&E) (\$4.000 million) funds software and material necessary to upgrade existing Quick Reaction Capability (QRC) efforts that support identified Intelligence gaps that include intelligence support to Cyber Electromagnetic Activities (CEMA), as well as provide risk mitigation for current and future Programs of Record. The QRC supports time-sensitive detection, identification, and location of advanced signals of interest (SOI), as well as the cross tipping/cueing and collaboration of Signals Intelligence (SIGINT) and CEMA systems. The systems have integrated communications gear that allow for collection, processing, exploitation, and dissemination, as well as continue to reduce size, weight, power, and cost to give the Army more flexibility in employment. Future systems and upgrades will advance SOIs and better support Long Range Precision Fires.

High Altitude Sensing Capability (\$35.000 million) provides procurement and integration to conduct a prototype of a platform/sensor pairing to conduct Electronic Intelligence (ELINT), Communications Intelligence (COMINT), and Synthetic Aperture Radar/Moving Target Indication (SAR/MTI) collection in support of United States Army Europe (USARUER) and United States European Command (EUCOM) theater collection requirements. This capability will fulfill the USAREUR Commander's #1 intelligence gap (indications and warnings) and provide tangential support to targeting for USEUCOM and partner land forces.

CI/HUMINT Communications Enablers (\$0.300 million) will support procurement of mission critical, non-standard CI and HUMINT equipment critical for CI and HUMINT support to forces in theater and to reset/refurbish equipment for future operations.

T-Springs (\$5.000 million) will procure terrestrial SIGINT sensors to support USAREUR and EUCOM collection requirements for indications and warnings as well as targeting. This capability addresses a EUCOM collection gap.

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

<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 2035A: Other Procurement, Army / BA 02: Communications and Electronics Equipment / BSA 83: Elect Equip - Electronic Warfare (EW)	<b>P-1 Line Item Number / Title:</b> 9996BL5283 / Counterintelligence/Security Countermeasures (MIP)
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<b>ID Code</b> (A=Service Ready, B=Not Service Ready):	<b>Program Elements for Code B Items:</b> N/A	<b>Other Related Program Elements:</b> N/A
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**Line Item MDAP/MAIS Code:** N/A

Picket Line (\$3.800 million) will procure terrestrial SIGINT sensors to support USAREUR and EUCOM collection requirements for indications and warnings as well as targeting. This prototype unmanned collection shelter will be modular in design so it can be transported and maneuvered by any available transportation means (air, rail, maritime, or ground) and ICD 705 - compliant to meet Temporary Secure Information Facility (T-SCIF) accreditation requirements. This capability addresses a EUCOM collection gap.

Secondary Distribution		FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025
Army	Quantity	-	-	-	-	-	-	-	-	-
	Total Obligation Authority	29.554	7.418	-	49.100	49.100	23.816	22.300	21.300	21.300
<b>Total: Secondary Distribution</b>	<b>Quantity</b>	-	-	-	-	-	-	-	-	-
	<b>Total Obligation Authority</b>	<b>29.554</b>	<b>7.418</b>	-	<b>49.100</b>	<b>49.100</b>	<b>23.816</b>	<b>22.300</b>	<b>21.300</b>	<b>21.300</b>

**Justification:**  
 FY 2021 procurement funding in the amount of \$49.100 million will addresses EUCOM collection gaps.

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

<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 2035A: Other Procurement, Army / BA 02: Communications and Electronics Equipment / BSA 83: Elect Equip - Electronic Warfare (EW)	<b>P-1 Line Item Number / Title:</b> 9997BL5285 / CI Modernization (MIP)
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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 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	To Complete	Total
Procurement Quantity ( <i>Units in Each</i> )	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost ( <i>\$ in Millions</i> )	9.553	0.486	0.121	0.300	-	0.300	0.165	0.167	0.169	0.171	-	11.132
Less PY Advance Procurement ( <i>\$ in Millions</i> )	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) ( <i>\$ in Millions</i> )	9.553	0.486	0.121	0.300	-	0.300	0.165	0.167	0.169	0.171	-	11.132
Plus CY Advance Procurement ( <i>\$ in Millions</i> )	-	-	-	-	-	-	-	-	-	-	-	-
<b>Total Obligation Authority (<i>\$ in Millions</i>)</b>	<b>9.553</b>	<b>0.486</b>	<b>0.121</b>	<b>0.300</b>	<b>-</b>	<b>0.300</b>	<b>0.165</b>	<b>0.167</b>	<b>0.169</b>	<b>0.171</b>	<b>-</b>	<b>11.132</b>

*(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 Counterintelligence (CI) Modernization effort provides resources for the sustainment of the CI information technology infrastructure used by the CI components of the Army. This architecture and infrastructure includes shared databases, workstations, global communications, and adequate connectivity for CI agents and specialists.

Secondary Distribution	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025
Army	Quantity	-	-	-	-	-	-	-	-
	Total Obligation Authority	0.486	0.121	0.300	-	0.300	0.165	0.167	0.169
<b>Total:</b> Secondary Distribution	Quantity	-	-	-	-	-	-	-	-
	<b>Total Obligation Authority</b>	<b>0.486</b>	<b>0.121</b>	<b>0.300</b>	<b>-</b>	<b>0.300</b>	<b>0.165</b>	<b>0.167</b>	<b>0.169</b>

**Justification:**

FY 2021 Base Funding is in the amount of \$0.300 million provides for Counterintelligence (CI) Modernization efforts.



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

<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 2035A: Other Procurement, Army / BA 02: Communications and Electronics Equipment / BSA 86: Elect Equip - Tactical Surv. (Tac Surv)	<b>P-1 Line Item Number / Title:</b> 0125WK5057 / Sentinel Mods
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<b>ID Code</b> (A=Service Ready, B=Not Service Ready):	<b>Program Elements for Code B Items:</b> N/A	<b>Other Related Program Elements:</b> 0214400A, 0604820A
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**Line Item MDAP/MAIS Code:** N/A

Resource Summary	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	To Complete	Total
Procurement Quantity ( <i>Units in Each</i> )	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost ( <i>\$ in Millions</i> )	563.333	77.752	133.910	58.884	33.496	92.380	68.767	78.707	164.633	166.731	Continuing	Continuing
Less PY Advance Procurement ( <i>\$ in Millions</i> )	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) ( <i>\$ in Millions</i> )	563.333	77.752	133.910	58.884	33.496	92.380	68.767	78.707	164.633	166.731	Continuing	Continuing
Plus CY Advance Procurement ( <i>\$ in Millions</i> )	-	-	-	-	-	-	-	-	-	-	-	-
<b>Total Obligation Authority (<i>\$ in Millions</i>)</b>	<b>563.333</b>	<b>77.752</b>	<b>133.910</b>	<b>58.884</b>	<b>33.496</b>	<b>92.380</b>	<b>68.767</b>	<b>78.707</b>	<b>164.633</b>	<b>166.731</b>	<b>Continuing</b>	<b>Continuing</b>

*(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> )	1,163.911	1,095.099	9,565.000	-	-	-	13,753.400	13,117.833	12,664.077	12,825.462	Continuing	Continuing

**Description:**

This system is a component of the overall Air and Missile Defense (AMD) architecture and will provide for an incrementally fielded Integrated Air and Missile Defense Fire Control System/capability for the composite Army Air and Missile Defense Brigades. The Sentinel system is a key component of the Army Integrated Air and Missile Defense (AIAMD) architecture, providing critical air surveillance of the forward areas.

Sentinel consists of a radar-based sensor with its prime mover/power, Identification Friend or Foe (IFF), and Forward Area Air Defense (FAAD) Command, Control and Intelligence (C2I) interfaces. The radar is deployed in both an air defense role and a sense and warn role for Counter-Rocket, Artillery, and Mortar (C-RAM) missions. The sensor is an advanced three-dimensional battlefield X-Band air defense phased-array radar with an instrumented range of 75 km. Sentinel is capable of operating day or night, in adverse weather conditions, in the battlefield environments of dust, smoke, aerosols, and enemy countermeasures. It provides 360-degree azimuth coverage for acquisition tracking. Sentinel contributes to the digital battlefield by automatically detecting, classifying, identifying and reporting targets (cruise missiles, unmanned aircraft systems, rotary wing and fixed wing aircraft). Sentinel acquires targets sufficiently forward of the battle area to allow weapons reaction time and allow engagement at optimum ranges. Sentinel's integrated IFF reduces the potential for fratricide of US and Coalition aircraft.

Secondary Distribution	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025
Army	Quantity	-	-	-	-	-	-	-	-
	Total Obligation Authority	43.030	133.910	58.884	33.496	92.380	68.767	78.707	12.664
ANG	Quantity	-	-	-	-	-	-	-	-
	Total Obligation Authority	34.722	-	-	-	-	-	-	151.969
<b>Total: Secondary Distribution</b>	<b>Quantity</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>
	<b>Total Obligation Authority</b>	<b>77.752</b>	<b>133.910</b>	<b>58.884</b>	<b>33.496</b>	<b>92.380</b>	<b>68.767</b>	<b>78.707</b>	<b>164.633</b>

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

<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 2035A: Other Procurement, Army / BA 02: Communications and Electronics Equipment / BSA 86: Elect Equip - Tactical Surv. (Tac Surv)	<b>P-1 Line Item Number / Title:</b> 0125WK5057 / Sentinel Mods
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<b>ID Code</b> (A=Service Ready, B=Not Service Ready):	<b>Program Elements for Code B Items:</b> N/A	<b>Other Related Program Elements:</b> 0214400A, 0604820A
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**Line Item MDAP/MAIS Code:** N/A

Exhibits Schedule					Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total
Exhibit Type	Title*	Subexhibits	ID CD	MDAP/MAIS Code	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)
P-3a	WK5057 / Sentinel Mods (Operational)				- / 563.333	- / 177.752	- / 133.910	- / 58.884	- / 33.496	- / 92.380
<b>P-40</b>	<b>Total Gross/Weapon System Cost</b>				<b>- / 563.333</b>	<b>- / 177.752</b>	<b>- / 133.910</b>	<b>- / 58.884</b>	<b>- / 33.496</b>	<b>- / 92.380</b>

Exhibits Schedule					FY 2022	FY 2023	FY 2024	FY 2025	To Complete	Total
Exhibit Type	Title*	Subexhibits	ID CD	MDAP/MAIS Code	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)
P-3a	WK5057 / Sentinel Mods (Operational)				- / 68.767	- / 78.707	- / 164.633	- / 166.731	Continuing	Continuing
<b>P-40</b>	<b>Total Gross/Weapon System Cost</b>				<b>- / 68.767</b>	<b>- / 78.707</b>	<b>- / 164.633</b>	<b>- / 166.731</b>	<b>Continuing</b>	<b>Continuing</b>

\*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 2021 Base procurement dollars in the amount of \$58.884 million procures 69 Analog to Digital Converters (ADC) for the Electronic Attack/Electronic Protect (EA/EP) countermeasures capability, 69 Signal Data Processor (SDP) kits, one (1) new Production AN/MPQ-64A3 radar system and hardware obsolescence items.  
  
 FY 2021 OCO procurement dollars in the amount of \$33.496 million procures 5 new production AN/MPQ-64A3 radar systems.  
  
 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.  
  
 In FY 2021, \$1.951 million in Reimbursable Manpower for this line has been realigned from Reimbursable Civilian Funding to Direct Operations and Maintenance. Program support costs have been updated to reflect the realignments.

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<b>Exhibit P-3a, Individual Modification: PB 2021 Army</b>		<b>Date:</b> February 2020
<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 2035A / 02 / 86	<b>P-1 Line Item Number / Title:</b> 0125WK5057 / Sentinel Mods	<b>Modification Number / Title:</b> WK5057 / Sentinel Mods

<b>ID Code</b> (A=Service Ready, B=Not Service Ready) :	<b>MDAP/MAIS Code:</b>
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<b>Resource Summary</b>	<b>Prior Years</b>	<b>FY 2019</b>	<b>FY 2020</b>	<b>FY 2021 Base</b>	<b>FY 2021 OCO</b>	<b>FY 2021 Total</b>	<b>FY 2022</b>	<b>FY 2023</b>	<b>FY 2024</b>	<b>FY 2025</b>	<b>To Complete</b>	<b>Total</b>
Procurement Quantity (Units in Each)	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost (\$ in Millions)	563.333	77.752	133.910	58.884	33.496	92.380	68.767	78.707	164.633	166.731	Continuing	Continuing
Less PY Advance Procurement (\$ in Millions)	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) (\$ in Millions)	563.333	77.752	133.910	58.884	33.496	92.380	68.767	78.707	164.633	166.731	Continuing	Continuing
Plus CY Advance Procurement (\$ in Millions)	-	-	-	-	-	-	-	-	-	-	-	-
<b>Total Obligation Authority (\$ in Millions)</b>	<b>563.333</b>	<b>77.752</b>	<b>133.910</b>	<b>58.884</b>	<b>33.496</b>	<b>92.380</b>	<b>68.767</b>	<b>78.707</b>	<b>164.633</b>	<b>166.731</b>	<b>Continuing</b>	<b>Continuing</b>

*(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)	1,163.911	1,095.099	9,565.000	-	-	-	13,753.400	13,117.833	12,664.077	12,825.462	Continuing	Continuing

**Description:**

FY21 funds address the following:

The Electronic Attack/Electronic Protect (EA/EP) addresses the electronic countermeasures (ECM) gap. This effort procures Analog to Digital Converters (ADC) in order to address more extensive EA/EP signatures from evolving threats.

The Signal Data Processor (SDP) Upgrade is a redesign of the SDP backplane to provide higher data throughput to remove current limitations and an upgraded set of SDP cards to remove obsolescence. The SDP upgrade integrates a new digital receiver/exciter into each radar. Provides for new SDP kit to address obsolescence issues and allow for additional Electronic Protect capability.

Production for the Enhanced Sentinel [AN/MPQ-64A3] consists of a radar-based sensor with its prime mover/power, Identification Friend or Foe [IFF], and Forward Area Air Defense [FAAD] Command, Control and Intelligence [C2I] interfaces. The radar is deployed in both an air defense role and a sense and warn role for Counter-Rocket, Artillery, and Mortar [C-RAM] missions. The sensor is advanced three-dimensional battlefield X-Band air defense phased-array radar with an instrumented range of 75 km. The Enhanced Sentinel is capable of operating day or night, in adverse weather conditions, in the battlefield environments of dust, smoke, aerosols and enemy countermeasures. It provides 360-degree azimuth coverage for acquisition tracking. The Enhanced Sentinel contributes to the digital battlefield by automatically detecting, classifying, identifying and reporting targets [cruise missiles, unmanned aircraft systems, rotary wing and fixed wing aircraft]. Enhanced Sentinel acquires targets sufficiently forward of the battle area to allow weapons reaction time and engagement at optimum ranges. The Sentinel's integrated IFF reduces the potential for fratricide of US and Coalition aircraft. Additional Sentinel A3 radar systems will be procured to support both the Interim Maneuver Short-range Air Defense (IM-SHORAD) battalions and the European Deterrence Initiative (EDI).

Additional Obsolescence Mitigation Items to keep Sentinel A3 sustainable in the field until all assets are converted to the Sentinel A4 configuration. Obsolescence items procured include the enhanced Radar Control Terminal (eRCT) and routers which are both obsolete. The hardware will transition as Government Furnished Equipment to the Sentinel A4 contractor.

Calculation of unit cost for FY2020 includes 50 Signal Data Processor, 50 Analog to Digital Converters, and 14 new production AN/MPQ-64A3 radar systems. In FY2021, the calculation of unit cost includes 6 new production AN/MPQ-64A3 radar systems, 69 Signal Data Processor, 69 Analog to Digital Converters, and obsolescence hardware.

In prior years, the Sentinel Modification Program has also addressed:

Improved Sentinel Modifications: waveform upgrades for the Receiver/Exciter and Target Classification including enhancement/replacement of the current Sentinel transmitter with Power Amplifier Modules [PAM]. TPX-57 Mode 5 Identification Friend or Foe (IFF) modification kit replaced the current TPX-56 IFF. It also consisted of a new router, enhanced Radar Control Terminal (eRCT), Signal Data Processor (SDP) box, and multiple circuit card assemblies. The TPX-57 upgrade converted the Sentinel A1 to the Sentinel A3 configuration.

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<b>Exhibit P-3a, Individual Modification:</b> PB 2021 Army		<b>Date:</b> February 2020
<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 2035A / 02 / 86	<b>P-1 Line Item Number / Title:</b> 0125WK5057 / Sentinel Mods	<b>Modification Number / Title:</b> WK5057 / Sentinel Mods

<b>ID Code</b> (A=Service Ready, B=Not Service Ready) :	<b>MDAP/MAIS Code:</b>
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Ongoing Modifications include:

The Common Platform Upgrade will modify the current Sentinel prime mover to a common Army platform to meet Brigade Combat Team (BCT) force protection, as well as meet Integrated Air and Missile Defense Battle Command System (IBCS) system requirements. Transition to a common Army platform is in compliance with Acquisition Decision Memorandum dated August 2011. The current Sentinel platform does not meet the force protection requirements as defined by the BCT maneuver mission and IBCS operational requirements.

The North Finding Module (NFM) Upgrade will enhance the system's emplacement accuracy, resulting in improved fire control support and replacement of the obsolete NFM.

Future Modifications Include:

The Active Electronically Scanned Array (AESA) (Sentinel A4) is the next generation of radar technology to replace the current phase and frequency scanned array used by Sentinel today. The AESA Antenna will provide increased capability including extended range for ground-based surveillance and situational awareness, faster and more accurate Non-Cooperative Target Recognition (NCTR) for clearing fires and preventing fratricide, improved Fire Control (FC) quality track accuracy, and management of larger track loads. The AESA will also provide improved operation in severe/urban clutter. The system will detect and track small targets, such as Unmanned Aircraft Systems (UAS) and Cruise Missiles, in clutter and will detect and track slow targets, such as UAS and Rotary Wing (RW) aircraft, at low altitudes in clutter. The system will detect, track, and classify Rocket, Artillery, and Mortar (RAM) threats, support the Army Integrated Air and Missile Defense (AIAMD) architecture, and contribute sensor support for current and future Indirect Fire Protection Capability Increment 2 mission requirements. The Mode S capability will be integrated as a part of the Sentinel A4 modification. Five (5) User Operational Evaluation Systems (UOES) will be procured in FY2022.

Secondary Distribution		FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025
Army	Quantity	-	-	-	-	-	-	-	-	-
	Total Obligation Authority	43.030	133.910	58.884	33.496	92.380	68.767	78.707	12.664	12.825
ANG	Quantity	-	-	-	-	-	-	-	-	-
	Total Obligation Authority	34.722	-	-	-	-	-	-	151.969	153.906
<b>Total:</b>	<b>Quantity</b>	-	-	-	-	-	-	-	-	-
<b>Secondary Distribution</b>	<b>Total Obligation Authority</b>	<b>77.752</b>	<b>133.910</b>	<b>58.884</b>	<b>33.496</b>	<b>92.380</b>	<b>68.767</b>	<b>78.707</b>	<b>164.633</b>	<b>166.731</b>

**Development Status/Major Development Milestones**

Date	Title	Description
Mar 2015	Common Platform Upgrade	Integration began.
Jun 2017	North Finding Module	Contract award for Base year
Dec 2018	Electronic Attack/Electronic Protect (ADC)	Contract award for Base year
Dec 2018	Signal Data Processor	Contract award for Base year
Dec 2018	AN/MPQ-64A3 New Production	Contract Award for Base year production

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<b>Exhibit P-3a, Individual Modification: PB 2021 Army</b>										<b>Date:</b> February 2020			
<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 2035A / 02 / 86					<b>P-1 Line Item Number / Title:</b> 0125WK5057 / Sentinel Mods					<b>Modification Number / Title:</b> WK5057 / Sentinel Mods			
<b>ID Code</b> (A=Service Ready, B=Not Service Ready) :							<b>MDAP/MAIS Code:</b>						
<b>Models of Systems Affected:</b> Sentinel [AN/MPQ-64]				<b>Modification Type:</b> Operational				<b>Related RDT&amp;E PEs:</b>					
Financial Plan	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	To Complete	Total	
	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	
<b>Procurement</b>													
<b>Modification Item 1 of 8: Prior Modifications</b>													
A Kits													
Recurring													
Equipment	286 / 309.956	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	Continuing	Continuing
Engineering Services	- / 3.693	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	Continuing	Continuing
Govt Program Management/Admin Support	- / 6.195	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	Continuing	Continuing
Other Flyaway Support	- / 16.252	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	Continuing	Continuing
Initial Spares	- / 6.760	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	Continuing	Continuing
<b>Subtotal: Recurring</b>	<b>286 / 342.856</b>	<b>- / -</b>	<b>- / -</b>	<b>- / -</b>	<b>- / -</b>	<b>- / -</b>	<b>- / -</b>	<b>- / -</b>	<b>- / -</b>	<b>- / -</b>	<b>- / -</b>	<b>Continuing</b>	<b>Continuing</b>
<b>Subtotal: Prior Modifications</b>	<b>286 / 342.856</b>	<b>- / -</b>	<b>- / -</b>	<b>- / -</b>	<b>- / -</b>	<b>- / -</b>	<b>- / -</b>	<b>- / -</b>	<b>- / -</b>	<b>- / -</b>	<b>- / -</b>	<b>Continuing</b>	<b>Continuing</b>
<b>Modification Item 2 of 8: Common Platform Upgrade</b>													
A Kits													
Recurring													
Equipment	147 / 58.238	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	147 / 58.238
Engineering Services	- / 1.223	- / 0.019	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 1.242
Govt Program Management/Admin Support	- / 3.628	- / 0.027	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 3.655
Other Flyaway Support	- / 9.695	- / 0.289	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 9.984
Initial Spares	- / 2.744	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 2.744
<b>Subtotal: Recurring</b>	<b>147 / 75.528</b>	<b>- / 0.335</b>	<b>- / -</b>	<b>- / -</b>	<b>- / -</b>	<b>- / -</b>	<b>- / -</b>	<b>- / -</b>	<b>- / -</b>	<b>- / -</b>	<b>- / -</b>	<b>- / -</b>	<b>147 / 75.863</b>
<b>Subtotal: Common Platform Upgrade</b>	<b>147 / 75.528</b>	<b>- / 0.335</b>	<b>- / -</b>	<b>- / -</b>	<b>- / -</b>	<b>- / -</b>	<b>- / -</b>	<b>- / -</b>	<b>- / -</b>	<b>- / -</b>	<b>- / -</b>	<b>- / -</b>	<b>147 / 75.863</b>
<b>Modification Item 3 of 8: North Finding Module</b>													
A Kits													
Recurring													
Equipment	199 / 31.180	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	199 / 31.180
Engineering Services	- / 0.876	- / 0.029	- / 0.174	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 1.079
Govt Program Management / Admin Support	- / 1.902	- / 0.120	- / 0.046	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 2.068
Other Flyaway Support	- / 5.185	- / 0.549	- / 0.559	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 6.293
Initial Spares	- / 1.475	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / 1.475
<b>Subtotal: Recurring</b>	<b>199 / 40.618</b>	<b>- / 0.698</b>	<b>- / 0.779</b>	<b>- / -</b>	<b>- / -</b>	<b>- / -</b>	<b>- / -</b>	<b>- / -</b>	<b>- / -</b>	<b>- / -</b>	<b>- / -</b>	<b>- / -</b>	<b>199 / 42.095</b>
<b>Subtotal: North Finding Module</b>	<b>199 / 40.618</b>	<b>- / 0.698</b>	<b>- / 0.779</b>	<b>- / -</b>	<b>- / -</b>	<b>- / -</b>	<b>- / -</b>	<b>- / -</b>	<b>- / -</b>	<b>- / -</b>	<b>- / -</b>	<b>- / -</b>	<b>199 / 42.095</b>

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<b>Exhibit P-3a, Individual Modification: PB 2021 Army</b>										<b>Date:</b> February 2020			
<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 2035A / 02 / 86					<b>P-1 Line Item Number / Title:</b> 0125WK5057 / Sentinel Mods					<b>Modification Number / Title:</b> WK5057 / Sentinel Mods			
<b>ID Code</b> (A=Service Ready, B=Not Service Ready) :							<b>MDAP/MAIS Code:</b>						
<b>Models of Systems Affected:</b> Sentinel [AN/MPQ-64]				<b>Modification Type:</b> Operational				<b>Related RDT&amp;E PEs:</b>					
Financial Plan	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	To Complete	Total	
	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	
<b>Modification Item 4 of 8: Electronic Attack/Electronic Protect (ADC)</b>													
A Kits													
Recurring													
Equipment	20 / 0.731	42 / 0.907	50 / 1.221	69 / 1.576	- / -	69 / 1.576	- / -	- / -	- / -	- / -	- / -	181 / 4.435	
Engineering Services	- / 0.279	- / 0.077	- / 0.521	- / 0.459	- / -	- / 0.459	- / -	- / -	- / -	- / -	- / -	- / 1.336	
Govt Program Management	- / 0.103	- / 0.088	- / 0.117	- / 0.156	- / -	- / 0.156	- / -	- / -	- / -	- / -	- / -	- / 0.464	
Other Flyaway Costs	- / 1.297	- / 0.524	- / 0.832	- / 0.852	- / -	- / 0.852	- / -	- / -	- / -	- / -	- / -	- / 3.505	
Initial Spares	- / 0.034	- / 0.047	- / 0.057	- / 0.073	- / -	- / 0.073	- / -	- / -	- / -	- / -	- / -	- / 0.211	
<b>Subtotal: Recurring</b>	<b>20 / 2.444</b>	<b>42 / 1.643</b>	<b>50 / 2.748</b>	<b>69 / 3.116</b>	<b>- / -</b>	<b>69 / 3.116</b>	<b>- / -</b>	<b>- / -</b>	<b>- / -</b>	<b>- / -</b>	<b>- / -</b>	<b>181 / 9.951</b>	
<b>Subtotal: Electronic Attack/Electronic Protect (ADC)</b>													
<b>20 / 2.444 42 / 1.643 50 / 2.748 69 / 3.116 - / - 69 / 3.116 - / - - / - - / - - / - 181 / 9.951</b>													
<b>Modification Item 5 of 8: Signal Data Processor</b>													
A Kits													
Recurring													
Equipment	20 / 18.860	42 / 26.412	50 / 29.167	69 / 36.628	- / -	69 / 36.628	- / -	- / -	- / -	- / -	- / -	181 / 111.067	
Engineering Services	- / 0.279	- / 0.067	- / 0.463	- / 0.429	- / -	- / 0.429	- / -	- / -	- / -	- / -	- / -	- / 1.238	
Govt Program Management	- / 1.099	- / 1.070	- / 1.828	- / 1.171	- / -	- / 1.171	- / -	- / -	- / -	- / -	- / -	- / 5.168	
Other Flyaway Support	- / 2.252	- / 1.924	- / 2.287	- / 1.518	- / -	- / 1.518	- / -	- / -	- / -	- / -	- / -	- / 7.981	
Initial Spares	- / 0.874	- / 1.177	- / 1.411	- / 1.851	- / -	- / 1.851	- / -	- / -	- / -	- / -	- / -	- / 5.313	
<b>Subtotal: Recurring</b>	<b>20 / 23.364</b>	<b>42 / 30.650</b>	<b>50 / 35.156</b>	<b>69 / 41.597</b>	<b>- / -</b>	<b>69 / 41.597</b>	<b>- / -</b>	<b>- / -</b>	<b>- / -</b>	<b>- / -</b>	<b>- / -</b>	<b>181 / 130.767</b>	
<b>Subtotal: Signal Data Processor</b>													
<b>20 / 23.364 42 / 30.650 50 / 35.156 69 / 41.597 - / - 69 / 41.597 - / - - / - - / - - / - 181 / 130.767</b>													
<b>Modification Item 6 of 8: Enhanced Sentinel AN/MPQ-64A3 Production</b>													
A Kits													
Recurring													
Equipment	12 / 55.162	7 / 34.133	14 / 70.696	1 / 5.050	5 / 27.409	6 / 32.459	- / -	- / -	- / -	- / -	- / -	39 / 192.450	
Engineering Services	- / 0.510	- / 0.315	- / 0.652	- / 0.047	- / -	- / 0.047	- / -	- / -	- / -	- / -	- / -	- / 1.524	
Govt Program Management	- / 3.462	- / 1.842	- / 4.437	- / 0.317	- / -	- / 0.317	- / -	- / -	- / -	- / -	- / -	- / 10.058	
Initial Spares	- / 3.600	- / 2.228	- / 4.615	- / 0.330	- / 11.870	- / 12.200	- / -	- / -	- / -	- / -	- / -	- / 12.643	
Other Flyaway Support	- / 19.266	- / 15.234	- / 11.876	- / 10.848	- / 14.217	- / 15.065	- / -	- / -	- / -	- / -	- / -	- / 31.441	
<b>Subtotal: Recurring</b>	<b>12 / 72.000</b>	<b>7 / 43.752</b>	<b>14 / 92.276</b>	<b>1 / 6.592</b>	<b>5 / 33.496</b>	<b>6 / 40.088</b>	<b>- / -</b>	<b>- / -</b>	<b>- / -</b>	<b>- / -</b>	<b>- / -</b>	<b>39 / 248.116</b>	
<b>Subtotal: Enhanced Sentinel AN/MPQ-64A3 Production</b>													
<b>12 / 72.000 7 / 43.752 14 / 92.276 1 / 6.592 5 / 33.496 6 / 40.088 - / - - / - - / - - / - - / - 39 / 248.116</b>													

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<b>Exhibit P-3a, Individual Modification: PB 2021 Army</b>										<b>Date:</b> February 2020			
<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 2035A / 02 / 86					<b>P-1 Line Item Number / Title:</b> 0125WK5057 / Sentinel Mods					<b>Modification Number / Title:</b> WK5057 / Sentinel Mods			
<b>ID Code</b> (A=Service Ready, B=Not Service Ready) :							<b>MDAP/MAIS Code:</b>						
<b>Models of Systems Affected:</b> Sentinel [AN/MPQ-64]				<b>Modification Type:</b> Operational				<b>Related RDT&amp;E PEs:</b>					
Financial Plan	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	To Complete	Total	
	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	
<b>Modification Item 7 of 8: Active Electronically Scanned Array (AESAs) A4</b>													
A Kits													
Recurring													
Equipment	- / -	- / -	- / -	- / -	- / -	- / -	5 / 52.921	6 / 61.546	13 / 139.009	13 / 140.781	Continuing	Continuing	
Engineering Services	- / -	- / -	- / -	- / -	- / -	- / -	- / 0.366	- / 1.155	- / 2.416	- / 2.446	Continuing	Continuing	
Government Program Management	- / -	- / -	- / -	- / -	- / -	- / -	- / 3.261	- / 3.697	- / 7.649	- / 7.747	Continuing	Continuing	
Other Flyaway Support	- / -	- / -	- / -	- / -	- / -	- / -	- / 4.401	- / 4.625	- / 9.590	- / 9.712	Continuing	Continuing	
Initial Spares	- / -	- / -	- / -	- / -	- / -	- / -	- / 2.692	- / 2.854	- / 5.969	- / 6.045	Continuing	Continuing	
<b>Subtotal: Recurring</b>	- / -	- / -	- / -	- / -	- / -	- / -	5 / 63.641	6 / 73.877	13 / 164.633	13 / 166.731	Continuing	Continuing	
<b>Subtotal: Active Electronically Scanned Array (AESAs) A4</b>	- / -	- / -	- / -	- / -	- / -	- / -	5 / 63.641	6 / 73.877	13 / 164.633	13 / 166.731	Continuing	Continuing	
<b>Modification Item 8 of 8: Hardware Obsolescence</b>													
A Kits													
Recurring													
Equipment	- / -	- / -	- / -	198 / 4.208	- / -	198 / 4.208	- / -	- / -	- / -	- / -	- / -	198 / 4.208	
Engineering Services	- / -	- / -	- / -	- / 0.055	- / -	- / 0.055	- / -	- / -	- / -	- / -	- / -	- / 0.055	
Govt Program Management/Admin Support	- / -	- / -	- / -	- / 0.176	- / -	- / 0.176	- / -	- / -	- / -	- / -	- / -	- / 0.176	
Other Flyaway Support	- / -	- / -	- / -	- / 0.211	- / -	- / 0.211	- / -	- / -	- / -	- / -	- / -	- / 0.211	
Initial Spares	- / -	- / -	- / -	- / 0.372	- / -	- / 0.372	- / -	- / -	- / -	- / -	- / -	- / 0.372	
<b>Subtotal: Recurring</b>	- / -	- / -	- / -	198 / 5.022	- / -	198 / 5.022	- / -	- / -	- / -	- / -	- / -	198 / 5.022	
<b>Subtotal: Hardware Obsolescence</b>	- / -	- / -	- / -	198 / 5.022	- / -	198 / 5.022	- / -	- / -	- / -	- / -	- / -	198 / 5.022	
<b>Subtotal: Procurement, All Modification Items</b>	684 / 556.810	91 / 77.078	114 / 130.959	337 / 56.327	5 / 33.496	342 / 89.823	5 / 63.641	6 / 73.877	13 / 164.633	13 / 166.731	Continuing	Continuing	
<b>Installation</b>													
<b>Modification Item 1 of 8: Prior Modifications</b>	286 / 5.482	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	286 / 5.482	
<b>Modification Item 2 of 8: Common Platform Upgrade</b>	118 / 0.848	29 / 0.174	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	Continuing	Continuing	
<b>Modification Item 3 of 8: North Finding Module</b>	30 / 0.193	120 / 0.500	49 / 0.326	- / -	- / -	- / -	- / -	- / -	- / -	- / -	Continuing	Continuing	
<b>Modification Item 4 of 8: Electronic Attack/Electronic Protect (ADC)</b>	- / -	- / -	31 / 0.233	31 / 0.233	- / -	31 / 0.233	61 / 0.459	58 / 0.436	- / -	- / -	Continuing	Continuing	
<b>Modification Item 5 of 8: Signal Data Processor</b>	- / -	- / -	31 / 2.392	31 / 2.199	- / -	31 / 2.199	61 / 4.287	58 / 4.394	- / -	- / -	Continuing	Continuing	
<b>Modification Item 8 of 8: Hardware Obsolescence</b>	- / -	- / -	- / -	50 / 0.125	- / -	50 / 0.125	148 / 0.380	- / -	- / -	- / -	- / -	198 / 0.505	
<b>Subtotal: Installation</b>	434 / 6.523	149 / 0.674	111 / 2.951	112 / 2.557	- / -	112 / 2.557	270 / 5.126	116 / 4.830	- / -	- / -	Continuing	Continuing	

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<b>Exhibit P-3a, Individual Modification:</b> PB 2021 Army										<b>Date:</b> February 2020			
<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 2035A / 02 / 86				<b>P-1 Line Item Number / Title:</b> 0125WK5057 / Sentinel Mods						<b>Modification Number / Title:</b> WK5057 / Sentinel Mods			
<b>ID Code</b> (A=Service Ready, B=Not Service Ready) :							<b>MDAP/MAIS Code:</b>						
<b>Models of Systems Affected:</b> Sentinel [AN/MPQ-64]				<b>Modification Type:</b> Operational				<b>Related RDT&amp;E PEs:</b>					
Financial Plan	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	To Complete	Total	
	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	
<b>Total</b>													
<b>Total Cost (Procurement + Support + Installation)</b>		563.333	77.752	133.910	58.884	33.496	92.380	68.767	78.707	164.633	166.731	Continuing	Continuing



**UNCLASSIFIED**

**Exhibit P-3a, Individual Modification: PB 2021 Army** **Date:** February 2020

<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 2035A / 02 / 86	<b>P-1 Line Item Number / Title:</b> 0125WK5057 / Sentinel Mods	<b>Modification Number / Title:</b> WK5057 / Sentinel Mods
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**ID Code** (A=Service Ready, B=Not Service Ready) : **MDAP/MAIS Code:**

**Modification Item 1 of 8:** Prior Modifications

**Manufacturer Information**

Manufacturer Name: Thales Raytheon Systems	Manufacturer Location: Fullerton, CA
Administrative Leadtime (in Months): 3	Production Leadtime (in Months): 12

Dates	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	FY 2025
Contract Dates							
Delivery Dates							

**Installation Information**

**Method of Implementation:** Various QTY implemented at Contractor Facility

Installation Cost	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	To Complete	Total
	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)
Prior Years	286 / 5.482	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	286 / 5.482
FY 2019	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2020	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2021	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2022	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2023	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2024	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2025	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
To Complete	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
<b>Total</b>	286 / 5.482	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	286 / 5.482

**Installation Schedule**

PYS	FY 2019	FY 2020				FY 2021				FY 2022				FY 2023				FY 2024				FY 2025				TC	Tot				
		Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4						
In	286	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	286
Out	286	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	286

**UNCLASSIFIED**

<b>Exhibit P-3a, Individual Modification:</b> PB 2021 Army		<b>Date:</b> February 2020
<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 2035A / 02 / 86	<b>P-1 Line Item Number / Title:</b> 0125WK5057 / Sentinel Mods	<b>Modification Number / Title:</b> WK5057 / Sentinel Mods

<b>ID Code</b> (A=Service Ready, B=Not Service Ready) :	<b>MDAP/MAIS Code:</b>
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**Modification Item 2 of 8:** Common Platform Upgrade

**Manufacturer Information**

Manufacturer Name: Letterkenny Army Depot	Manufacturer Location: Chambersburg, PA
Administrative Leadtime (in Months): 3	Production Leadtime (in Months): 15

Dates	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	FY 2025
Contract Dates							
Delivery Dates							

**Installation Information**

**Method of Implementation:** Depot

Installation Cost	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	To Complete	Total
	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)
Prior Years	118 / 0.848	29 / 0.174	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	Continuing	Continuing
FY 2019	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2020	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2021	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2022	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2023	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2024	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2025	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
To Complete	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
Total	118 / 0.848	29 / 0.174	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	Continuing	Continuing

**Installation Schedule**

	PYS	FY 2019				FY 2020				FY 2021				FY 2022				FY 2023				FY 2024				FY 2025				TC	Tot		
		Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4				
In	147	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Out	118	7	7	7	8	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

**UNCLASSIFIED**

**Exhibit P-3a, Individual Modification: PB 2021 Army** **Date:** February 2020

<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 2035A / 02 / 86	<b>P-1 Line Item Number / Title:</b> 0125WK5057 / Sentinel Mods	<b>Modification Number / Title:</b> WK5057 / Sentinel Mods
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<b>ID Code</b> (A=Service Ready, B=Not Service Ready) :	<b>MDAP/MAIS Code:</b>
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**Modification Item 3 of 8:** North Finding Module

**Manufacturer Information**

Manufacturer Name: Honeywell	Manufacturer Location: Clearwater, Fl
Administrative Leadtime (in Months): 8	Production Leadtime (in Months): 12

Dates	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	FY 2025
Contract Dates							
Delivery Dates							

**Installation Information**

**Method of Implementation:** Field Install

Installation Cost	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	To Complete	Total
	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)
Prior Years	30 / 0.193	120 / 0.500	49 / 0.326	- / -	- / -	- / -	- / -	- / -	- / -	- / -	Continuing	Continuing
FY 2019	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2020	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2021	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2022	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2023	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2024	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2025	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
To Complete	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
<b>Total</b>	30 / 0.193	120 / 0.500	49 / 0.326	- / -	- / -	- / -	- / -	- / -	- / -	- / -	Continuing	Continuing

**Installation Schedule**

	PYS	FY 2019				FY 2020				FY 2021				FY 2022				FY 2023				FY 2024				FY 2025				TC	Tot
		Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4		
In	199	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Out	30	30	30	30	30	30	19	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

**UNCLASSIFIED**

<b>Exhibit P-3a, Individual Modification: PB 2021 Army</b>		<b>Date:</b> February 2020
<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 2035A / 02 / 86	<b>P-1 Line Item Number / Title:</b> 0125WK5057 / Sentinel Mods	<b>Modification Number / Title:</b> WK5057 / Sentinel Mods

<b>ID Code</b> (A=Service Ready, B=Not Service Ready) :	<b>MDAP/MAIS Code:</b>
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**Modification Item 4 of 8:** Electronic Attack/Electronic Protect (ADC)

**Manufacturer Information**

Manufacturer Name: Raytheon	Manufacturer Location: Fullerton, CA
Administrative Leadtime (in Months): 9	Production Leadtime (in Months): 15

Dates	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	FY 2025
Contract Dates	Jun 2019	Jun 2020	Jun 2021				
Delivery Dates	Oct 2020	Oct 2021	Oct 2022				

**Installation Information**

**Method of Implementation:** Contractor Facility

Installation Cost	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	To Complete	Total
	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)
Prior Years	- / -	- / -	31 / 0.233	- / -	- / -	- / -	- / -	- / -	- / -	- / -	Continuing	Continuing
FY 2019	- / -	- / -	- / -	31 / 0.233	- / -	31 / 0.233	11 / 0.083	- / -	- / -	- / -	Continuing	Continuing
FY 2020	- / -	- / -	- / -	- / -	- / -	- / -	50 / 0.376	- / -	- / -	- / -	Continuing	Continuing
FY 2021	- / -	- / -	- / -	- / -	- / -	- / -	- / -	58 / 0.436	- / -	- / -	Continuing	Continuing
FY 2022	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2023	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2024	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2025	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
To Complete	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
Total	- / -	- / -	31 / 0.233	31 / 0.233	- / -	31 / 0.233	61 / 0.459	58 / 0.436	- / -	- / -	Continuing	Continuing

**Installation Schedule**

	PYS	FY 2019				FY 2020				FY 2021				FY 2022				FY 2023				FY 2024				FY 2025				TC	Tot				
		Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4						
In	20	10	10	10	12	15	15	10	10	17	17	17	18	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	181
Out	-	-	-	-	-	8	8	8	7	8	8	8	7	15	15	15	16	14	15	14	15	-	-	-	-	-	-	-	-	-	-	-	-	-	181

**UNCLASSIFIED**

**Exhibit P-3a, Individual Modification: PB 2021 Army** **Date:** February 2020

<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 2035A / 02 / 86	<b>P-1 Line Item Number / Title:</b> 0125WK5057 / Sentinel Mods	<b>Modification Number / Title:</b> WK5057 / Sentinel Mods
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**ID Code** (A=Service Ready, B=Not Service Ready) : **MDAP/MAIS Code:**

**Modification Item 5 of 8:** Signal Data Processor

**Manufacturer Information**

Manufacturer Name: Raytheon	Manufacturer Location: Fullerton, CA
Administrative Leadtime (in Months): 9	Production Leadtime (in Months): 15

Dates	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	FY 2025
Contract Dates	Jun 2019	Jun 2020	Jun 2021				
Delivery Dates	Oct 2020	Oct 2021	Oct 2022				

**Installation Information**

**Method of Implementation:** Contractor Facility

Installation Cost	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	To Complete	Total
	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)
Prior Years	- / -	- / -	31 / 2.392	- / -	- / -	- / -	- / -	- / -	- / -	- / -	Continuing	Continuing
FY 2019	- / -	- / -	- / -	31 / 2.199	- / -	31 / 2.199	11 / 0.848	- / -	- / -	- / -	Continuing	Continuing
FY 2020	- / -	- / -	- / -	- / -	- / -	- / -	50 / 3.439	- / -	- / -	- / -	Continuing	Continuing
FY 2021	- / -	- / -	- / -	- / -	- / -	- / -	- / -	58 / 4.394	- / -	- / -	Continuing	Continuing
FY 2022	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2023	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2024	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2025	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
To Complete	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
<b>Total</b>	- / -	- / -	31 / 2.392	31 / 2.199	- / -	31 / 2.199	61 / 4.287	58 / 4.394	- / -	- / -	Continuing	Continuing

**Installation Schedule**

	PYS	FY 2019				FY 2020				FY 2021				FY 2022				FY 2023				FY 2024				FY 2025				TC	Tot	
		Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4			
In	20	10	10	10	12	15	15	10	10	17	17	17	18	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	181
Out	-	-	-	-	-	8	8	8	7	8	8	8	7	15	15	15	16	14	15	14	15	-	-	-	-	-	-	-	-	-	-	181

**UNCLASSIFIED**

<b>Exhibit P-3a, Individual Modification:</b> PB 2021 Army					<b>Date:</b> February 2020		
<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 2035A / 02 / 86			<b>P-1 Line Item Number / Title:</b> 0125WK5057 / Sentinel Mods		<b>Modification Number / Title:</b> WK5057 / Sentinel Mods		
<b>ID Code</b> (A=Service Ready, B=Not Service Ready) :				<b>MDAP/MAIS Code:</b>			
<b>Modification Item 6 of 8:</b> Enhanced Sentinel AN/MPQ-64A3 Production							
<b>Manufacturer Information</b>							
Manufacturer Name: Raytheon				Manufacturer Location: Fullerton, CA			
Administrative Leadtime (in Months): 7				Production Leadtime (in Months): 18			
<b>Dates</b>	<b>FY 2019</b>	<b>FY 2020</b>	<b>FY 2021</b>	<b>FY 2022</b>	<b>FY 2023</b>	<b>FY 2024</b>	<b>FY 2025</b>
Contract Dates	Apr 2019	Apr 2020	Apr 2021				
Delivery Dates	Oct 2020	Oct 2021	Oct 2022				
<b>Installation Information</b>							
<b>Method of Implementation (Organic):</b> Contractor Facility					<b>Installation Quantity:</b> 0		

**UNCLASSIFIED**

<b>Exhibit P-3a, Individual Modification:</b> PB 2021 Army					<b>Date:</b> February 2020		
<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 2035A / 02 / 86			<b>P-1 Line Item Number / Title:</b> 0125WK5057 / Sentinel Mods		<b>Modification Number / Title:</b> WK5057 / Sentinel Mods		
<b>ID Code</b> (A=Service Ready, B=Not Service Ready) :				<b>MDAP/MAIS Code:</b>			
<b>Modification Item 7 of 8:</b> Active Electronically Scanned Array (AESAs) A4							
<b>Manufacturer Information</b>							
Manufacturer Name: Lockheed Martin				Manufacturer Location: Syracuse, NY			
Administrative Leadtime (in Months): 3				Production Leadtime (in Months): 18			
<b>Dates</b>	<b>FY 2019</b>	<b>FY 2020</b>	<b>FY 2021</b>	<b>FY 2022</b>	<b>FY 2023</b>	<b>FY 2024</b>	<b>FY 2025</b>
Contract Dates				Jan 2022	Jan 2023	Jan 2024	Jan 2025
Delivery Dates				Jun 2023	Jun 2024	Jun 2025	Jun 2026
<b>Installation Information</b>							
<b>Method of Implementation (Organic):</b> Contractor Facility					<b>Installation Quantity:</b> 0		

**UNCLASSIFIED**

**Exhibit P-3a, Individual Modification: PB 2021 Army** **Date:** February 2020

<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 2035A / 02 / 86	<b>P-1 Line Item Number / Title:</b> 0125WK5057 / Sentinel Mods	<b>Modification Number / Title:</b> WK5057 / Sentinel Mods
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<b>ID Code</b> (A=Service Ready, B=Not Service Ready) :	<b>MDAP/MAIS Code:</b>
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**Modification Item 8 of 8:** Hardware Obsolescence

**Manufacturer Information**

Manufacturer Name: Raytheon	Manufacturer Location: Fullerton, CA
Administrative Leadtime (in Months): 3	Production Leadtime (in Months): 9

Dates	FY 2019	FY 2020	FY 2021	FY 2022	FY 2023	FY 2024	FY 2025
Contract Dates			Jan 2021				
Delivery Dates			Sep 2021				

**Installation Information**

**Method of Implementation:** Field Install

Installation Cost	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	To Complete	Total
	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)
Prior Years	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2019	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2020	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2021	- / -	- / -	- / -	50 / 0.125	- / -	50 / 0.125	148 / 0.380	- / -	- / -	- / -	- / -	198 / 0.505
FY 2022	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2023	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2024	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
FY 2025	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
To Complete	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -
<b>Total</b>	- / -	- / -	- / -	50 / 0.125	- / -	50 / 0.125	148 / 0.380	- / -	- / -	- / -	- / -	198 / 0.505

**Installation Schedule**

	PYS	FY 2019				FY 2020				FY 2021				FY 2022				FY 2023				FY 2024				FY 2025				TC	Tot				
		Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4						
In	-	-	-	-	-	-	-	-	-	-	50	50	50	48	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Out	-	-	-	-	-	-	-	-	-	-	-	-	50	50	50	48	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



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

<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 2035A: Other Procurement, Army / BA 02: Communications and Electronics Equipment / BSA 86: Elect Equip - Tactical Surv. (Tac Surv)	<b>P-1 Line Item Number / Title:</b> 0140KA3500 / Night Vision Devices
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<b>ID Code</b> (A=Service Ready, B=Not Service Ready): A	<b>Program Elements for Code B Items:</b> N/A	<b>Other Related Program Elements:</b> 0604710A
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**Line Item MDAP/MAIS Code:** N/A

Resource Summary	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	To Complete	Total
Procurement Quantity ( <i>Units in Each</i> )	13,232	7,198	3,543	47,115	17	47,132	55,016	15,563	11,754	1,698	-	155,136
Gross/Weapon System Cost ( <i>\$ in Millions</i> )	4,531.692	153.451	85.202	1,127.375	0.643	1,128.018	1,311.937	350.278	340.776	198.679	-	8,100.033
Less PY Advance Procurement ( <i>\$ in Millions</i> )	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) ( <i>\$ in Millions</i> )	4,531.692	153.451	85.202	1,127.375	0.643	1,128.018	1,311.937	350.278	340.776	198.679	-	8,100.033
Plus CY Advance Procurement ( <i>\$ in Millions</i> )	-	-	-	-	-	-	-	-	-	-	-	-
<b>Total Obligation Authority (<i>\$ in Millions</i>)</b>	<b>4,531.692</b>	<b>153.451</b>	<b>85.202</b>	<b>1,127.375</b>	<b>0.643</b>	<b>1,128.018</b>	<b>1,311.937</b>	<b>350.278</b>	<b>340.776</b>	<b>198.679</b>	<b>-</b>	<b>8,100.033</b>

*(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> )	342.480	21.319	24.048	23.928	37.824	23.933	23.846	22.507	28.992	117.008	-	52.212

**Description:**

Night Vision Devices (KA3500) is a summary budget line including the following programs:

(1) K36400 - The Enhanced Night Vision Goggle (ENVG) is a lightweight, helmet mounted device that expands a Soldier's Situational Awareness (SA) and lethality by fusing image intensification and thermal imaging into a single, integrated image and integrates the sight picture/reticle from the Family of Weapon Sights - Individual (FWS-I) and operational graphics from NETT Warrior into the ENVG. Adversaries currently have access to image intensified night vision goggle technology but not a fused system. The ENVG enables superior combat overmatch capability by, for example, providing dismounted Brigade Combat Team Warfighters the capability to observe and maneuver in all weather conditions, through obscurants, during limited visibility, and under all lighting conditions including total darkness while enabling rapid detection and engagement with FWS-I. The ENVG and future variants, incorporating technological optical advances, supports the tactical level of war; enabling the individual Soldier to see, understand, and act first; permitting superior tactical mobility and decisive engagement during limited visibility conditions. Funding in this project supports the Army's Soldier Lethality Cross Functional Teams (SL CFT) initiatives.

(2) B53800 - This program provides funding to procure the Laser Target Locator Module (LTLM) and laser aiming devices. LTLM is a lightweight, handheld, laser target locator module with day and thermal sight capability as well as an internal Global Positioning System (GPS) receiver. LTLM provides the dismounted observer or Scout a fully digital, handheld system to accurately determine target location and the ability to call for fire during all weather and lighting conditions. LTLM improves speed, accuracy, and safety of use over previous systems of this type (e.g., Laser Target Locator System (LTL)).

(3) K36401- The Monocular Night Vision Device (MNVD) is a lightweight, handheld or head/helmet-mounted night vision goggle consisting of a single objective lens assembly, state-of-the-art image intensifier technology, and an eyepiece lens assembly. The MNVD supports the tactical level of war; enabling the individual Soldier to see, understand, and act first, permitting superior tactical mobility and decisive engagement during limited visibility conditions.

(4) K36402 - The Heads Up Display (HUD) is a hardware platform and base system of the Integrated Visual Augmentation System (IVAS) which combines HUD and Synthetic Training Environment (STE) squad capability so that Soldiers/Marines can Fight, Rehearse, and Train on the same system. HUD is a low profile, see through display system providing 24/7 advanced squad situational awareness (SA) in all operating environments, fused day/night vision capabilities, day/night rapid target acquisition, eye protection, and hearing protection/enhancement. HUD provides movement of information, high level processing, and displays augmented reality information (Blue force tracking, Navigation, etc.) intuitively in three-dimensional space from mission planning data and real-time data from the tactical network. HUD enables Synthetic Training Environment (STE) squad capability to perform live mixed reality training and rehearsing. HUD integration through Government owned architecture enables rapid introduction of new and improved capabilities. Funding in this project supports the Army's Soldier Lethality Cross Functional Teams (SL CFT) initiatives.

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

<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 2035A: Other Procurement, Army / BA 02: Communications and Electronics Equipment / BSA 86: Elect Equip - Tactical Surv. (Tac Surv)	<b>P-1 Line Item Number / Title:</b> 0140KA3500 / Night Vision Devices
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<b>ID Code</b> (A=Service Ready, B=Not Service Ready): A	<b>Program Elements for Code B Items:</b> N/A	<b>Other Related Program Elements:</b> 0604710A
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**Line Item MDAP/MAIS Code:** N/A

(5) K35000 - Multi-Function laser devices are small, lightweight Infrared (IR) and/or integrated with visible (red, green, white light, etc.) pointers/illuminators that will have the capability to measure, mark, sense/detect and/or defeat. These lasers are capable of being hand held, tripod mounted or can be mounted on most small arms, individual and crew served weapon systems. The Multi-Function laser devices will be compatible with currently fielded Soldier products and could provide target direction and hand-off during both day and nighttime operations.

Funding in these projects align with the National Defense Strategy.

The ENVG Army Acquisition Objective (AAO) is estimated 108,251.  
 The LTLM AAO is 13,012.  
 The MNVD AAO is 512,938.  
 The HUD AAO is estimated 108,251.

Secondary Distribution		FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025
Army	Quantity	6,884	2,963	46,869	17	46,886	53,216	15,128	9,348	658
	Total Obligation Authority	140.566	63.200	1,113.671	0.643	1,114.314	1,256.854	330.872	271.814	165.771
ANG	Quantity	314	559	246	-	246	1,800	435	2,406	1,040
	Total Obligation Authority	12.885	21.205	13.704	-	13.704	55.083	19.406	68.962	32.908
AR	Quantity	-	21	-	-	-	-	-	-	-
	Total Obligation Authority	-	0.797	-	-	-	-	-	-	-
<b>Total: Secondary Distribution</b>	<b>Quantity</b>	<b>7,198</b>	<b>3,543</b>	<b>47,115</b>	<b>17</b>	<b>47,132</b>	<b>55,016</b>	<b>15,563</b>	<b>11,754</b>	<b>1,698</b>
	<b>Total Obligation Authority</b>	<b>153.451</b>	<b>85.202</b>	<b>1,127.375</b>	<b>0.643</b>	<b>1,128.018</b>	<b>1,311.937</b>	<b>350.278</b>	<b>340.776</b>	<b>198.679</b>

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

**Appropriation / Budget Activity / Budget Sub Activity:**  
 2035A: Other Procurement, Army / BA 02: Communications and Electronics  
 Equipment / BSA 86: Elect Equip - Tactical Surv. (Tac Surv)

**P-1 Line Item Number / Title:**  
 0140KA3500 / Night Vision Devices

**ID Code** (A=Service Ready, B=Not Service Ready): A **Program Elements for Code B Items:** N/A **Other Related Program Elements:** 0604710A

**Line Item MDAP/MAIS Code:** N/A

Exhibits Schedule					Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total
Exhibit Type	Title*	Subexhibits	ID CD	MDAP/MAIS Code	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)
P-5	B53800 / Laser Target Locator Systems	P-5a, P-21	A		1,421 / 943.671	467 / 32.704	642 / 24.354	246 / 13.704	17 / 0.643	263 / 14.347
P-5	K36400 / Helmet Mounted Enhanced Vision Devices	P-5a, P-21			11,811 / 3,588.021	4,287 / 112.251	1,038 / 50.632	6,650 / 207.626	- / -	6,650 / 207.626
P-5	K36401 / Night Vision AN/PVS-14 Mods	P-5a			- / -	2,444 / 8.496	1,863 / 10.216	- / -	- / -	- / -
P-5	K36402 / IVAS/Heads Up Display	P-5a, P-21			- / -	- / -	- / -	40,219 / 906.045	- / -	40,219 / 906.045
<b>P-40</b>	<b>Total Gross/Weapon System Cost</b>				<b>13,232 / 4,531.692</b>	<b>7,198 / 153.451</b>	<b>3,543 / 85.202</b>	<b>47,115 / 1,127.375</b>	<b>17 / 0.643</b>	<b>47,132 / 1,128.018</b>

\*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 2021 Base procurement dollars in the amount of \$1.127 billion support the procurement of 6,650 Enhanced Night Vision Goggles, 40,219 Heads Up Display systems, and 246 Laser Target Location Modules, laser devices and associated fielding costs.

FY 2021 OCO procurement dollars in the amount of \$0.643 million support the procurement of 17 Laser Target Location Modules.

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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<b>Exhibit P-5, Cost Analysis: PB 2021 Army</b>													<b>Date:</b> February 2020								
<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 2035A / 02 / 86						<b>P-1 Line Item Number / Title:</b> 0140KA3500 / Night Vision Devices						<b>Item Number / Title [DODIC]:</b> B53800 / Laser Target Locator Systems									
<b>ID Code</b> (A=Service Ready, B=Not Service Ready) : A									<b>MDAP/MAIS Code:</b>												
<b>Resource Summary</b>				<b>Prior Years</b>			<b>FY 2019</b>			<b>FY 2020</b>			<b>FY 2021 Base</b>			<b>FY 2021 OCO</b>			<b>FY 2021 Total</b>		
Procurement Quantity ( <i>Units in Each</i> )				1,421			467			642			246			17			263		
Gross/Weapon System Cost ( <i>\$ in Millions</i> )				943.671			32.704			24.354			13.704			0.643			14.347		
Less PY Advance Procurement ( <i>\$ in Millions</i> )				-			-			-			-			-			-		
Net Procurement (P-1) ( <i>\$ in Millions</i> )				943.671			32.704			24.354			13.704			0.643			14.347		
Plus CY Advance Procurement ( <i>\$ in Millions</i> )				-			-			-			-			-			-		
<b>Total Obligation Authority</b> ( <i>\$ in Millions</i> )				<b>943.671</b>			<b>32.704</b>			<b>24.354</b>			<b>13.704</b>			<b>0.643</b>			<b>14.347</b>		
<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> )				664.089			70.030			37.935			55.707			37.824			54.551		
Note: Subtotals or Totals in this Exhibit P-5 may not be exact or sum exactly due to rounding.																					
<b>Cost Elements</b>		<b>Prior Years</b>			<b>FY 2019</b>			<b>FY 2020</b>			<b>FY 2021 Base</b>			<b>FY 2021 OCO</b>			<b>FY 2021 Total</b>				
		<b>Unit Cost</b> (\$ K)	<b>Qty</b> (Each)	<b>Total Cost</b> (\$ M)	<b>Unit Cost</b> (\$ K)	<b>Qty</b> (Each)	<b>Total Cost</b> (\$ M)	<b>Unit Cost</b> (\$ K)	<b>Qty</b> (Each)	<b>Total Cost</b> (\$ M)	<b>Unit Cost</b> (\$ K)	<b>Qty</b> (Each)	<b>Total Cost</b> (\$ M)	<b>Unit Cost</b> (\$ K)	<b>Qty</b> (Each)	<b>Total Cost</b> (\$ M)	<b>Unit Cost</b> (\$ K)	<b>Qty</b> (Each)	<b>Total Cost</b> (\$ M)		
Flyaway Cost																					
Recurring Cost																					
Project Management		-	-	41.627	-	-	2.746	-	-	2.526	-	-	2.320	-	-	-	-	-	2.320		
Systems Engineering Support		-	-	8.365	-	-	0.699	-	-	1.290	-	-	1.116	-	-	-	-	-	1.116		
Fielding and NET		-	-	7.443	-	-	0.990	-	-	1.040	-	-	0.961	-	-	-	-	-	0.961		
<i>Subtotal: Recurring Cost</i>		-	-	<i>57.435</i>	-	-	<i>4.435</i>	-	-	<i>4.856</i>	-	-	<i>4.397</i>	-	-	-	-	-	<i>4.397</i>		
<i>Subtotal: Flyaway Cost</i>		-	-	<i>57.435</i>	-	-	<i>4.435</i>	-	-	<i>4.856</i>	-	-	<i>4.397</i>	-	-	-	-	-	<i>4.397</i>		
Hardware Cost																					
Recurring Cost																					
Laser Target Locator <sup>(†)</sup>		82.305	10,661	877.458	27.839	1,007	28.034	29.935	642	19.218	37.427	246	9.207	37.824	17	0.643	37.452	263	9.850		
Tripods		-	-	7.549	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
Ancillary Spares		0.268	4,600	1.235	-	-	0.235	-	-	0.280	-	-	0.100	-	-	-	-	-	0.100		
<i>Subtotal: Recurring Cost</i>		-	-	<i>886.242</i>	-	-	<i>28.269</i>	-	-	<i>19.498</i>	-	-	<i>9.307</i>	-	-	<i>0.643</i>	-	-	<i>9.950</i>		
<i>Subtotal: Hardware Cost</i>		-	-	<i>886.242</i>	-	-	<i>28.269</i>	-	-	<i>19.498</i>	-	-	<i>9.307</i>	-	-	<i>0.643</i>	-	-	<i>9.950</i>		
<b>Gross/Weapon System Cost</b>		<b>664.089</b>	<b>1,421</b>	<b>943.671</b>	<b>70.030</b>	<b>467</b>	<b>32.704</b>	<b>37.935</b>	<b>642</b>	<b>24.354</b>	<b>55.707</b>	<b>246</b>	<b>13.704</b>	<b>37.824</b>	<b>17</b>	<b>0.643</b>	<b>54.551</b>	<b>263</b>	<b>14.347</b>		
<b>Remarks:</b> FY19: Actual LTLM II quantities procured is 1,007. The 467 quantities is an automatic feed from the RFS database and was associated with a previous lower funding level. FY21: LTLM II unit prices are based on the contract's range pricing and are higher due to the lower quantity.																					

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**Exhibit P-5, Cost Analysis: PB 2021 Army** **Date:** February 2020

<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 2035A / 02 / 86	<b>P-1 Line Item Number / Title:</b> 0140KA3500 / Night Vision Devices	<b>Item Number / Title [DODIC]:</b> B53800 / Laser Target Locator Systems
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**ID Code** (A=Service Ready, B=Not Service Ready) : A **MDAP/MAIS Code:**

Secondary Distribution		FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total
Army	Quantity	153	62	-	17	17
	Total Obligation Authority	19.819	2.352	-	0.643	0.643
ANG	Quantity	314	559	246	-	246
	Total Obligation Authority	12.885	21.205	13.704	-	13.704
AR	Quantity	-	21	-	-	-
	Total Obligation Authority	-	0.797	-	-	-
<b>Total:</b>	<b>Quantity</b>	<b>467</b>	<b>642</b>	<b>246</b>	<b>17</b>	<b>263</b>
<b>Secondary Distribution</b>	<b>Total Obligation Authority</b>	<b>32.704</b>	<b>24.354</b>	<b>13.704</b>	<b>0.643</b>	<b>14.347</b>

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

**UNCLASSIFIED**

**Exhibit P-5a, Procurement History and Planning:** PB 2021 Army **Date:** February 2020

<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 2035A / 02 / 86	<b>P-1 Line Item Number / Title:</b> 0140KA3500 / Night Vision Devices	<b>Item Number / Title [DODIC]:</b> B53800 / Laser Target Locator Systems
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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
Laser Target Locator <sup>(†)</sup>		2019	Optics 1, Inc / Bedford, NH	C / IDIQ	ACC APG	Mar 2019	Oct 2019	1,007	27.839	Y		
Laser Target Locator <sup>(†)</sup>		2020	Optics 1, Inc / Bedford, NH	C / IDIQ	ACC APG	Mar 2020	Oct 2020	642	29.935	Y		
Laser Target Locator <sup>(†)</sup>		2021	Optics 1, Inc / Bedford, NH	C / IDIQ	ACC APG	Mar 2021	Oct 2021	246	37.427	Y		
Laser Target Locator <sup>(†)</sup>	✓	2021	Optics 1, Inc / Bedford, NH	C / IDIQ	ACC-APG	Mar 2021	Oct 2021	17	37.824	Y		

<sup>(†)</sup> indicates the presence of a P-21



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**Exhibit P-21, Production Schedule:** PB 2021 Army **Date:** February 2020

**Appropriation / Budget Activity / Budget Sub Activity:** 2035A / 02 / 86 **P-1 Line Item Number / Title:** 0140KA3500 / Night Vision Devices **Item Number / Title [DODIC]:** B53800 / Laser Target Locator Systems

Cost Elements <i>(Units in Each)</i>						Fiscal Year 2021													Fiscal Year 2022													BALANCE	
O C C #	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			
Laser Target Locator																																	
Prior Years Deliveries: 10661																																	
	1	2019	ARMY	1,007	1,007	0																							0				
	1	2020	ARMY	642	0	642	50	50	50	50	55	55	55	55	55	55	57													0			
	1	2021	ARMY	246	0	246																							0				
✓	1	2021	ARMY	17	0	17																							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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<b>Exhibit P-21, Production Schedule:</b> PB 2021 Army		<b>Date:</b> February 2020
<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 2035A / 02 / 86		<b>P-1 Line Item Number / Title:</b> 0140KA3500 / Night Vision Devices
		<b>Item Number / Title [DODIC]:</b> B53800 / Laser Target Locator Systems

MFR Ref #	Manufacturer Name - Location	Production Rates (Each / Month)			Procurement Leadtime (Months)							
		MSR For 2021	1-8-5 For 2021	MAX For 2021	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	Optics 1, Inc - Bedford, NH	35	120	240	2	5	7	12	2	5	7	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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<b>Exhibit P-5, Cost Analysis: PB 2021 Army</b>		<b>Date:</b> February 2020
<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 2035A / 02 / 86	<b>P-1 Line Item Number / Title:</b> 0140KA3500 / Night Vision Devices	<b>Item Number / Title [DODIC]:</b> K36400 / Helmet Mounted Enhanced Vision Devices

<b>ID Code</b> (A=Service Ready, B=Not Service Ready) :	<b>MDAP/MAIS Code:</b>
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Resource Summary	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total
Procurement Quantity (Units in Each)	11,811	4,287	1,038	6,650	-	6,650
Gross/Weapon System Cost (\$ in Millions)	3,588.021	112.251	50.632	207.626	-	207.626
Less PY Advance Procurement (\$ in Millions)	-	-	-	-	-	-
Net Procurement (P-1) (\$ in Millions)	3,588.021	112.251	50.632	207.626	-	207.626
Plus CY Advance Procurement (\$ in Millions)	-	-	-	-	-	-
<b>Total Obligation Authority (\$ in Millions)</b>	<b>3,588.021</b>	<b>112.251</b>	<b>50.632</b>	<b>207.626</b>	<b>-</b>	<b>207.626</b>

*(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)	303.786	26.184	48.778	31.222	-	31.222

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

Cost Elements	Prior Years			FY 2019			FY 2020			FY 2021 Base			FY 2021 OCO			FY 2021 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																		
I2 Tubes	-	-	37.244	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Engineering Support	-	-	24.329	-	-	2.352	-	-	2.902	-	-	2.960	-	-	-	-	-	2.960
Project Management Admin	-	-	149.693	-	-	7.430	-	-	4.301	-	-	6.726	-	-	-	-	-	6.726
Fielding	-	-	2,553.220	-	-	2.165	-	-	2.884	-	-	3.352	-	-	-	-	-	3.352
Ancillary Support	-	-	67.139	-	-	-	-	-	1.683	-	-	1.185	-	-	-	-	-	1.185
Contract Data Requirements Lists	-	-	21.979	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Test Measurement Diagnostics Equipment (TMDE)	-	-	9.721	-	-	-	-	-	-	-	-	1.181	-	-	-	-	-	1.181
Helmet Mount Assemblies	-	-	29.589	-	-	6.400	-	-	-	-	-	-	-	-	-	-	-	-
Laser Target Locator	-	-	1.686	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
JUONs	-	-	3.760	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Initial Spares	-	-	-	-	-	1.200	-	-	2.604	-	-	16.217	-	-	-	-	-	16.217
ENVG-B DR ECP	-	-	-	-	-	3.500	-	-	0.908	-	-	5.656	-	-	-	-	-	5.656
TEST SETS	-	-	-	-	-	2.500	-	-	3.000	-	-	-	-	-	-	-	-	-
ENVG-III QUAL/ RETROFITS	-	-	-	-	-	6.334	-	-	-	-	-	-	-	-	-	-	-	-
<i>Subtotal: Recurring Cost</i>	-	-	<i>2,898.360</i>	-	-	<i>31.881</i>	-	-	<i>18.282</i>	-	-	<i>37.277</i>	-	-	-	-	-	<i>37.277</i>

**UNCLASSIFIED**

<b>Exhibit P-5, Cost Analysis: PB 2021 Army</b>		<b>Date:</b> February 2020
<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 2035A / 02 / 86	<b>P-1 Line Item Number / Title:</b> 0140KA3500 / Night Vision Devices	<b>Item Number / Title [DODIC]:</b> K36400 / Helmet Mounted Enhanced Vision Devices

<b>ID Code</b> (A=Service Ready, B=Not Service Ready) :	<b>MDAP/MAIS Code:</b>
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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 2019			FY 2020			FY 2021 Base			FY 2021 OCO			FY 2021 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)
<b>Non Recurring Cost</b>																		
Display Capital Improvement	-	-	-	-	-	-	-	-	5.000	-	-	-	-	-	-	-	-	-
<i>Subtotal: Non Recurring Cost</i>	-	-	-	-	-	-	-	-	5.000	-	-	-	-	-	-	-	-	-
<i>Subtotal: Flyaway Cost</i>	-	-	<b>2,898.360</b>	-	-	<b>31.881</b>	-	-	<b>23.282</b>	-	-	<b>37.277</b>	-	-	-	-	-	<b>37.277</b>
<b>Hardware Cost</b>																		
<b>Recurring Cost</b>																		
Enhance Night Vision Goggles (ENVG) System (DR) <sup>(†)</sup>	13.209	52,213	689.675	24.859	3,233	80.370	-	-	-	-	-	-	-	-	-	-	-	-
Enhanced Night Vision Goggles (ENVG) System (Full and Open) <sup>(†)</sup>	-	-	-	-	-	-	26.349	1,038	27.350	25.616	6,650	170.348	-	-	-	25.616	6,650	170.348
<i>Subtotal: Recurring Cost</i>	-	-	689.675	-	-	80.370	-	-	27.350	-	-	170.348	-	-	-	-	-	170.348
<i>Subtotal: Hardware Cost</i>	-	-	<b>689.675</b>	-	-	<b>80.370</b>	-	-	<b>27.350</b>	-	-	<b>170.348</b>	-	-	-	-	-	<b>170.348</b>
<b>Gross/Weapon System Cost</b>	<b>303.786</b>	<b>11,811</b>	<b>3,588.021</b>	<b>26.184</b>	<b>4,287</b>	<b>112.251</b>	<b>48.778</b>	<b>1,038</b>	<b>50.632</b>	<b>31.222</b>	<b>6,650</b>	<b>207.626</b>	-	-	-	<b>31.222</b>	<b>6,650</b>	<b>207.626</b>

**Remarks:**

The P-40 Exhibit FY 2019 quantity of 4,287 is in error. The correction quantity of systems, with FY 2019 funds, is 3,233.

Secondary Distribution		FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total
Army	Quantity	4,287	1,038	6,650	-	6,650
	Total Obligation Authority	112.251	50.632	207.626	-	207.626
<b>Total: Secondary Distribution</b>	<b>Quantity</b>	<b>4,287</b>	<b>1,038</b>	<b>6,650</b>	-	<b>6,650</b>
	<b>Total Obligation Authority</b>	<b>112.251</b>	<b>50.632</b>	<b>207.626</b>	-	<b>207.626</b>

(†) indicates the presence of a P-5a

**UNCLASSIFIED**

<b>Exhibit P-5a, Procurement History and Planning:</b> PB 2021 Army							<b>Date:</b> February 2020				
<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 2035A / 02 / 86			<b>P-1 Line Item Number / Title:</b> 0140KA3500 / Night Vision Devices				<b>Item Number / Title [DODIC]:</b> K36400 / Helmet Mounted Enhanced Vision Devices				

<b>Cost Elements</b>	<b>O C O</b>	<b>FY</b>	<b>Contractor and Location</b>	<b>Method/Type or Funding Vehicle</b>	<b>Location of PCO</b>	<b>Award Date</b>	<b>Date of First Delivery</b>	<b>Qty (Each)</b>	<b>Unit Cost (\$ K)</b>	<b>Specs Avail Now?</b>	<b>Date Revision Available</b>	<b>RFP Issue Date</b>
Enhance Night Vision Goggles (ENVG) System (DR)		2019	L3Harris / Londonderry, NH	C / FFP	ACC-APG	Aug 2019	Jun 2020	3,233	24.859	Y		
Enhanced Night Vision Goggles (ENVG) System (Full and Open) <sup>(†)</sup>		2020	TBD (ENVG F&O) / TBD	C / FFP	ACC-APG	May 2020	Mar 2021	1,038	26.349	Y		
Enhanced Night Vision Goggles (ENVG) System (Full and Open) <sup>(†)</sup>		2021	L3Harris / Londonderry, NH	C / FFP	ACC APG	May 2021	Mar 2022	3,325	25.616	Y		
Enhanced Night Vision Goggles (ENVG) System (Full and Open) <sup>(†)</sup>		2021	Elbit Systems of America / Roanoke, VA	C / FFP	ACC APG	May 2021	Mar 2022	3,325	26.616	Y		

<sup>(†)</sup> indicates the presence of a P-21



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<b>Exhibit P-21, Production Schedule:</b> PB 2021 Army															<b>Date:</b> February 2020														
<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 2035A / 02 / 86										<b>P-1 Line Item Number / Title:</b> 0140KA3500 / Night Vision Devices										<b>Item Number / Title [DODIC]:</b> K36400 / Helmet Mounted Enhanced Vision Devices									

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			
Enhanced Night Vision Goggles (ENVG) System (Full and Open)																																	
	2	2020	ARMY	1,038	0	1,038	-	-	-	-	-	-	58	70	90	90	90	90	90	100	90	90	90	90						0			
	1	2021	ARMY	3,325	0	3,325									A -	-	-	-	-	-	-	-	-	-	200	275	315	315	405	405	405	1,005	
	3	2021	ARMY	3,325	0	3,325									A -	-	-	-	-	-	-	-	-	200	275	315	315	405	405	405	1,005		
							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			

**UNCLASSIFIED**

<b>Exhibit P-21, Production Schedule:</b> PB 2021 Army															<b>Date:</b> February 2020														
<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 2035A / 02 / 86										<b>P-1 Line Item Number / Title:</b> 0140KA3500 / Night Vision Devices										<b>Item Number / Title [DODIC]:</b> K36400 / Helmet Mounted Enhanced Vision Devices									

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
Enhanced Night Vision Goggles (ENVG) System (Full and Open)																															
	2	2020	ARMY	1,038	1,038	0																							0		
	1	2021	ARMY	3,325	2,320	1,005	380	320	305																				0		
	3	2021	ARMY	3,325	2,320	1,005	380	320	305																				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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<b>Exhibit P-21, Production Schedule:</b> PB 2021 Army		<b>Date:</b> February 2020
<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 2035A / 02 / 86		<b>P-1 Line Item Number / Title:</b> 0140KA3500 / Night Vision Devices
<b>Item Number / Title [DODIC]:</b> K36400 / Helmet Mounted Enhanced Vision Devices		

MFR Ref #	Manufacturer Name - Location	Production Rates (Each / Month)			Procurement Leadtime (Months)							
		MSR For 2021	1-8-5 For 2021	MAX For 2021	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	L3Harris - Londonderry, NH	200	500	1,300	2	7	10	17	2	4	10	14
2	TBD (ENVG F&O) - TBD	200	500	1,300	2	7	10	17	2	4	10	14
3	Elbit Systems of America - Roanoke, VA	200	500	1,300	2	7	10	17	2	4	10	14

"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-5, Cost Analysis: PB 2021 Army** **Date:** February 2020

<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 2035A / 02 / 86	<b>P-1 Line Item Number / Title:</b> 0140KA3500 / Night Vision Devices	<b>Item Number / Title [DODIC]:</b> K36401 / Night Vision AN/PVS-14 Mods
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**ID Code** (A=Service Ready, B=Not Service Ready) : **MDAP/MAIS Code:**

Resource Summary	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total
Procurement Quantity (Units in Each)	-	2,444	1,863	-	-	-
Gross/Weapon System Cost (\$ in Millions)	-	8.496	10.216	-	-	-
Less PY Advance Procurement (\$ in Millions)	-	-	-	-	-	-
Net Procurement (P-1) (\$ in Millions)	-	8.496	10.216	-	-	-
Plus CY Advance Procurement (\$ in Millions)	-	-	-	-	-	-
<b>Total Obligation Authority (\$ in Millions)</b>	-	<b>8.496</b>	<b>10.216</b>	-	-	-

*(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)	-	3.476	5.484	-	-	-

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

Cost Elements	Prior Years			FY 2019			FY 2020			FY 2021 Base			FY 2021 OCO			FY 2021 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																		
Monocular Night Vision Device (MNVD) Hardware <sup>(t)</sup>	-	-	-	2,049	3,100	6,352	3,374	2,910	9,818	-	-	-	-	-	-	-	-	-
Program Management Support	-	-	-	-	-	1,653	-	-	0,257	-	-	-	-	-	-	-	-	-
Government Engineering Support	-	-	-	-	-	0,491	-	-	0,141	-	-	-	-	-	-	-	-	-
<i>Subtotal: Recurring Cost</i>	-	-	-	-	-	8,496	-	-	10,216	-	-	-	-	-	-	-	-	-
<i>Subtotal: Flyaway Cost</i>	-	-	-	-	-	8,496	-	-	10,216	-	-	-	-	-	-	-	-	-
<b>Gross/Weapon System Cost</b>	-	-	-	3,476	2,444	8,496	5,484	1,863	10,216	-	-	-	-	-	-	-	-	-

Secondary Distribution		FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total
Army	Quantity	2,444	1,863	-	-	-
	Total Obligation Authority	8.496	10.216	-	-	-
<b>Total: Secondary Distribution</b>	<b>Quantity</b>	<b>2,444</b>	<b>1,863</b>	-	-	-
	<b>Total Obligation Authority</b>	<b>8.496</b>	<b>10.216</b>	-	-	-

<sup>(t)</sup> indicates the presence of a P-5a

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**Exhibit P-5a, Procurement History and Planning:** PB 2021 Army **Date:** February 2020

<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 2035A / 02 / 86	<b>P-1 Line Item Number / Title:</b> 0140KA3500 / Night Vision Devices	<b>Item Number / Title [DODIC]:</b> K36401 / Night Vision AN/PVS-14 Mods
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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
Monocular Night Vision Device (MNVD) Harware		2019	L3 / Londonderry	C / IDIQ	ACC-APG	Jan 2019	Jul 2019	3,100	2.049	Y		
Monocular Night Vision Device (MNVD) Harware		2020	TBD / TBD	C / IDIQ	ACC-APG	Jan 2020	Jul 2020	2,910	3.374	Y		

**UNCLASSIFIED**

**Exhibit P-5, Cost Analysis: PB 2021 Army** **Date:** February 2020

<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 2035A / 02 / 86	<b>P-1 Line Item Number / Title:</b> 0140KA3500 / Night Vision Devices	<b>Item Number / Title [DODIC]:</b> K36402 / IVAS/Heads Up Display
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**ID Code** (A=Service Ready, B=Not Service Ready) : **MDAP/MAIS Code:**

Resource Summary	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total
Procurement Quantity ( <i>Units in Each</i> )	-	-	-	40,219	-	40,219
Gross/Weapon System Cost ( <i>\$ in Millions</i> )	-	-	-	906.045	-	906.045
Less PY Advance Procurement ( <i>\$ in Millions</i> )	-	-	-	-	-	-
Net Procurement (P-1) ( <i>\$ in Millions</i> )	-	-	-	906.045	-	906.045
Plus CY Advance Procurement ( <i>\$ in Millions</i> )	-	-	-	-	-	-
<b>Total Obligation Authority</b> ( <i>\$ in Millions</i> )	-	-	-	<b>906.045</b>	-	<b>906.045</b>

*(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> )	-	-	-	22.528	-	22.528

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

Cost Elements	Prior Years			FY 2019			FY 2020			FY 2021 Base			FY 2021 OCO			FY 2021 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																		
HUD Systems <sup>(†)</sup>	-	-	-	-	-	-	-	-	-	19.526	40,219	785.316	-	-	-	19.526	40,219	785.316
Initial Spares	-	-	-	-	-	-	-	-	-	-	-	57.127	-	-	-	-	-	57.127
Fielding	-	-	-	-	-	-	-	-	-	-	-	38.336	-	-	-	-	-	38.336
Program Management Support	-	-	-	-	-	-	-	-	-	-	-	25.266	-	-	-	-	-	25.266
<i>Subtotal: Recurring Cost</i>	-	-	-	-	-	-	-	-	-	-	-	906.045	-	-	-	-	-	906.045
<i>Subtotal: Flyaway Cost</i>	-	-	-	-	-	-	-	-	-	-	-	906.045	-	-	-	-	-	906.045
<b>Gross/Weapon System Cost</b>	-	-	-	-	-	-	-	-	-	<b>22.528</b>	<b>40,219</b>	<b>906.045</b>	-	-	-	<b>22.528</b>	<b>40,219</b>	<b>906.045</b>

Secondary Distribution		FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total
Army	Quantity	-	-	40,219	-	40,219
	Total Obligation Authority	-	-	906.045	-	906.045
<b>Total:</b>	<b>Quantity</b>	-	-	<b>40,219</b>	-	<b>40,219</b>
<b>Secondary Distribution</b>	<b>Total Obligation Authority</b>	-	-	<b>906.045</b>	-	<b>906.045</b>

(†) indicates the presence of a P-5a

**UNCLASSIFIED**

**Exhibit P-5a, Procurement History and Planning:** PB 2021 Army **Date:** February 2020

<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 2035A / 02 / 86	<b>P-1 Line Item Number / Title:</b> 0140KA3500 / Night Vision Devices	<b>Item Number / Title [DODIC]:</b> K36402 / IVAS/Heads Up Display
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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
HUD Systems <sup>(†)</sup>		2021	TBD / TBD	C / FFP	TBD	Nov 2020	May 2021	40,219	19.526	N	Sep 2020	

<sup>(†)</sup> indicates the presence of a P-21

**Remarks:**

IVAS acquisition strategy is to move seamlessly from rapid prototyping to rapid fielding upon completion of Capability Set #3 and negotiating a follow-on production Other Transaction Agreement (OTA) award.

**UNCLASSIFIED**

**Exhibit P-21, Production Schedule:** PB 2021 Army **Date:** February 2020

**Appropriation / Budget Activity / Budget Sub Activity:** 2035A / 02 / 86 **P-1 Line Item Number / Title:** 0140KA3500 / Night Vision Devices **Item Number / Title [DODIC]:** K36402 / IVAS/Heads Up Display

Cost Elements <i>(Units in Thousands)</i>						Fiscal Year 2021												Fiscal Year 2022												BALANCE	
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
HUD Systems																															
	1	2021	ARMY	40.219	.000	40.219		A	-	-	-	-	-	-	.850	1.700	3.369	3.700	3.700	3.700	3.700	3.700	3.700	3.700	3.900	3.900	3.900	3.900	3.900	.000	
							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	A	A	U	U	U	E	C	O	E	A	F	M	A	M	J	J	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 2021 Army **Date:** February 2020

<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 2035A / 02 / 86	<b>P-1 Line Item Number / Title:</b> 0140KA3500 / Night Vision Devices	<b>Item Number / Title [DODIC]:</b> K36402 / IVAS/Heads Up Display
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MFR Ref #	Manufacturer Name - Location	Production Rates (Each / Month)			Procurement Leadtime (Months)							
		MSR For 2021	1-8-5 For 2021	MAX For 2021	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 - TBD	1,500	4,000	7,000	3	12	6	18	3	2	6	8

"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 2021 Army **Date:** February 2020

<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 2035A: Other Procurement, Army / BA 02: Communications and Electronics Equipment / BSA 86: Elect Equip - Tactical Surv. (Tac Surv)	<b>P-1 Line Item Number / Title:</b> 0142K38300 / Long Range Advanced Scout Surveillance System
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<b>ID Code</b> (A=Service Ready, B=Not Service Ready):	<b>Program Elements for Code B Items:</b> N/A	<b>Other Related Program Elements:</b> N/A
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**Line Item MDAP/MAIS Code:** N/A

Resource Summary	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	To Complete	Total
Procurement Quantity ( <i>Units in Each</i> )	-	44	-	-	-	-	-	84	135	380	-	643
Gross/Weapon System Cost ( <i>\$ in Millions</i> )	1,405.275	2.861	-	-	-	-	2.073	69.513	100.468	140.776	-	1,720.966
Less PY Advance Procurement ( <i>\$ in Millions</i> )	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) ( <i>\$ in Millions</i> )	1,405.275	2.861	-	-	-	-	2.073	69.513	100.468	140.776	-	1,720.966
Plus CY Advance Procurement ( <i>\$ in Millions</i> )	-	-	-	-	-	-	-	-	-	-	-	-
<b>Total Obligation Authority (<i>\$ in Millions</i>)</b>	<b>1,405.275</b>	<b>2.861</b>	-	-	-	-	<b>2.073</b>	<b>69.513</b>	<b>100.468</b>	<b>140.776</b>	-	<b>1,720.966</b>
<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> )	-	-	-	-	-	-	-	-	-	-	-	-
Flyaway Unit Cost ( <i>\$ in Thousands</i> )	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Unit Cost ( <i>\$ in Thousands</i> )	-	65.023	-	-	-	-	-	827.536	744.207	370.463	-	2,676.463

**Description:**

The Long Range Advanced Scout Surveillance System (LRAS3) is a long range reconnaissance and surveillance system which operates in both a stationary vehicle mounted configuration and in an autonomous dismounted configuration. The LRAS3 is a multi-function, line-of-sight target acquisition common sensor suite which provides real-time target detection, recognition, and identification capability 24 hours a day in all weather conditions. LRAS3 also automatically determines Far Target Location (FTL) coordinates for any target ranged to by the operator. LRAS3 enables information superiority by interfacing with Joint Battle Command-Platform (JBC-P) to provide target acquisition and FTL information. LRAS3 utilizes the Horizontal Technology Integration (HTI) Second Generation Forward Looking Infrared (SGF) thermal sensor, enabling 24 hour a day operation in adverse weather and penetration of battlefield obscurants. LRAS3 significantly increases the survivability of forces through its standoff capability, allowing them to continue their mission as the eyes of the maneuver commander on the battlefield. The LRAS3 is a key enabling technology and has been a critical combat overmatch capability for the Army units in combat in Afghanistan. The LRAS3 continues to support requirements from Operation Freedom Sentinel, for example, the Mine Resistant Ambush Protected (MRAP) All Terrain Vehicle (M-ATV) and developing a networked-enabled (netted sensors) technology insertion capability. The current LRAS3 Army Acquisition Objective (AAO) is 2,894 systems.

Secondary Distribution	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025
Army									
Quantity	44	-	-	-	-	-	84	135	380
Total Obligation Authority	2.861	-	-	-	-	2.073	69.513	100.468	140.776
<b>Total:</b>	<b>44</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>84</b>	<b>135</b>	<b>380</b>
<b>Secondary Distribution</b>	<b>2.861</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>2.073</b>	<b>69.513</b>	<b>100.468</b>	<b>140.776</b>

**Justification:**

The are no program funds requested for FY21.

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

<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 2035A: Other Procurement, Army / BA 02: Communications and Electronics Equipment / BSA 86: Elect Equip - Tactical Surv. (Tac Surv)	<b>P-1 Line Item Number / Title:</b> 0155K35110 / Small Tactical Optical Rifle Mounted MLRF
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ID Code (A=Service Ready, B=Not Service Ready): A	Program Elements for Code B Items: N/A	Other Related Program Elements: 0604710A
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**Line Item MDAP/MAIS Code:** N/A

Resource Summary	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	To Complete	Total
Procurement Quantity ( <i>Units in Each</i> )	1,680	1,500	1,626	671	-	671	1,470	2,092	2,523	-	Continuing	Continuing
Gross/Weapon System Cost ( <i>\$ in Millions</i> )	158.605	16.990	22.623	13.954	-	13.954	21.355	26.060	29.315	3.131	Continuing	Continuing
Less PY Advance Procurement ( <i>\$ in Millions</i> )	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) ( <i>\$ in Millions</i> )	158.605	16.990	22.623	13.954	-	13.954	21.355	26.060	29.315	3.131	Continuing	Continuing
Plus CY Advance Procurement ( <i>\$ in Millions</i> )	-	-	-	-	-	-	-	-	-	-	-	-
<b>Total Obligation Authority (<i>\$ in Millions</i>)</b>	<b>158.605</b>	<b>16.990</b>	<b>22.623</b>	<b>13.954</b>	<b>-</b>	<b>13.954</b>	<b>21.355</b>	<b>26.060</b>	<b>29.315</b>	<b>3.131</b>	<b>Continuing</b>	<b>Continuing</b>

*(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> )	94.408	11.327	13.913	20.796	-	20.796	14.527	12.457	11.619	-	Continuing	Continuing

**Description:**

The Small Tactical Optical Rifle Mounted (STORM) Micro-Laser Rangefinder (MLRF) is a weapon-mounted, multi-function laser system. It provides an eye safe laser rangefinder, digital compass, Infrared (IR) and visible aiming lights, and an IR illuminator for far target location with continuous range, accuracy, weight and power performance enhanced capabilities. STORM can support various laser range finders for squad and unit level formations. When connected to a Precision Lightweight Global Receiver/Defense Advanced Global Positioning System (GPS) Receiver (PLGR/DAGR), the STORM provides range and direction information to develop accurate and timely far target locations. The STORM addresses the lack of depth perception for night applications through use of its IR illuminator and rangefinder. The latest STORM variant includes a ballistic calculator for Soldiers.

Funding in this project aligns with the National Defense Strategy.

The Army Acquisition Objective (AAO) for this program is 24,163.

Secondary Distribution	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	
Army	Quantity	947	1,604	671	-	671	1,470	2,092	2,523	-
	Total Obligation Authority	11.155	22.317	13.954	-	13.954	21.355	26.060	29.315	3.131
ANG	Quantity	553	-	-	-	-	-	-	-	-
	Total Obligation Authority	5.835	-	-	-	-	-	-	-	-
AR	Quantity	-	22	-	-	-	-	-	-	-
	Total Obligation Authority	-	0.306	-	-	-	-	-	-	-
<b>Total: Secondary Distribution</b>	<b>Quantity</b>	<b>1,500</b>	<b>1,626</b>	<b>671</b>	<b>-</b>	<b>671</b>	<b>1,470</b>	<b>2,092</b>	<b>2,523</b>	<b>-</b>
	<b>Total Obligation Authority</b>	<b>16.990</b>	<b>22.623</b>	<b>13.954</b>	<b>-</b>	<b>13.954</b>	<b>21.355</b>	<b>26.060</b>	<b>29.315</b>	<b>3.131</b>



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

**Appropriation / Budget Activity / Budget Sub Activity:**  
 2035A: Other Procurement, Army / BA 02: Communications and Electronics  
 Equipment / BSA 86: Elect Equip - Tactical Surv. (Tac Surv)

**P-1 Line Item Number / Title:**  
 0155K35110 / Small Tactical Optical Rifle Mounted MLRF

**ID Code** (A=Service Ready, B=Not Service Ready): A **Program Elements for Code B Items:** N/A **Other Related Program Elements:** 0604710A

**Line Item MDAP/MAIS Code:** N/A

Exhibits Schedule					Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total
Exhibit Type	Title*	Subexhibits	ID CD	MDAP/MAIS Code	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)
P-5	K35110 / Small Tactical Optical Rifle Mounted MLRF	P-5a, P-21	A		1,680 / 158.605	1,500 / 16.990	1,626 / 22.623	671 / 13.954	- / -	671 / 13.954
<b>P-40</b>	<b>Total Gross/Weapon System Cost</b>				<b>1,680 / 158.605</b>	<b>1,500 / 16.990</b>	<b>1,626 / 22.623</b>	<b>671 / 13.954</b>	<b>- / -</b>	<b>671 / 13.954</b>

\*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 2021 Base procurement dollars in the amount of \$13.954 million supports the procurement of 671 STORM systems for fielding to small unit leaders and Snipers.

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**

<b>Exhibit P-5, Cost Analysis: PB 2021 Army</b>		<b>Date:</b> February 2020
<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 2035A / 02 / 86	<b>P-1 Line Item Number / Title:</b> 0155K35110 / Small Tactical Optical Rifle Mounted MLRF	<b>Item Number / Title [DODIC]:</b> K35110 / Small Tactical Optical Rifle Mounted MLRF

<b>ID Code</b> (A=Service Ready, B=Not Service Ready) : A	<b>MDAP/MAIS Code:</b>
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<b>Resource Summary</b>	<b>Prior Years</b>	<b>FY 2019</b>	<b>FY 2020</b>	<b>FY 2021 Base</b>	<b>FY 2021 OCO</b>	<b>FY 2021 Total</b>
Procurement Quantity (Units in Each)	1,680	1,500	1,626	671	-	671
Gross/Weapon System Cost (\$ in Millions)	158.605	16.990	22.623	13.954	-	13.954
Less PY Advance Procurement (\$ in Millions)	-	-	-	-	-	-
Net Procurement (P-1) (\$ in Millions)	158.605	16.990	22.623	13.954	-	13.954
Plus CY Advance Procurement (\$ in Millions)	-	-	-	-	-	-
<b>Total Obligation Authority (\$ in Millions)</b>	<b>158.605</b>	<b>16.990</b>	<b>22.623</b>	<b>13.954</b>	<b>-</b>	<b>13.954</b>

*(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)	94.408	11.327	13.913	20.796	-	20.796

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

<b>Cost Elements</b>	<b>Prior Years</b>			<b>FY 2019</b>			<b>FY 2020</b>			<b>FY 2021 Base</b>			<b>FY 2021 OCO</b>			<b>FY 2021 Total</b>		
	<b>Unit Cost (\$ K)</b>	<b>Qty (Each)</b>	<b>Total Cost (\$ M)</b>	<b>Unit Cost (\$ K)</b>	<b>Qty (Each)</b>	<b>Total Cost (\$ M)</b>	<b>Unit Cost (\$ K)</b>	<b>Qty (Each)</b>	<b>Total Cost (\$ M)</b>	<b>Unit Cost (\$ K)</b>	<b>Qty (Each)</b>	<b>Total Cost (\$ M)</b>	<b>Unit Cost (\$ K)</b>	<b>Qty (Each)</b>	<b>Total Cost (\$ M)</b>	<b>Unit Cost (\$ K)</b>	<b>Qty (Each)</b>	<b>Total Cost (\$ M)</b>
<b>Flyaway Cost</b>																		
<b>Recurring Cost</b>																		
Program Management	-	-	20.527	-	-	3.695	-	-	2.638	-	-	2.625	-	-	-	-	-	2.625
Systems Engineering Support	-	-	8.216	-	-	1.896	-	-	1.614	-	-	1.631	-	-	-	-	-	1.631
Fielding & NET	-	-	3.626	-	-	0.837	-	-	2.302	-	-	1.950	-	-	-	-	-	1.950
Ancillary Parts	-	-	-	-	-	-	-	-	0.400	-	-	0.250	-	-	-	-	-	0.250
<i>Subtotal: Recurring Cost</i>	<i>-</i>	<i>-</i>	<i>32.369</i>	<i>-</i>	<i>-</i>	<i>6.428</i>	<i>-</i>	<i>-</i>	<i>6.954</i>	<i>-</i>	<i>-</i>	<i>6.456</i>	<i>-</i>	<i>-</i>	<i>-</i>	<i>-</i>	<i>-</i>	<i>6.456</i>
<i>Subtotal: Flyaway Cost</i>	<i>-</i>	<i>-</i>	<i>32.369</i>	<i>-</i>	<i>-</i>	<i>6.428</i>	<i>-</i>	<i>-</i>	<i>6.954</i>	<i>-</i>	<i>-</i>	<i>6.456</i>	<i>-</i>	<i>-</i>	<i>-</i>	<i>-</i>	<i>-</i>	<i>6.456</i>
<b>Hardware Cost</b>																		
<b>Recurring Cost</b>																		
STORM Hardware (L3)	13.014	9,700	126.239	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
STORM Hardware (TBD) <sup>(1)</sup>	-	-	-	-	-	10.562	9.637	1,626	15.669	11.174	671	7.498	-	-	-	11.174	671	7.498
<i>Subtotal: Recurring Cost</i>	<i>-</i>	<i>-</i>	<i>126.239</i>	<i>-</i>	<i>-</i>	<i>10.562</i>	<i>-</i>	<i>-</i>	<i>15.669</i>	<i>-</i>	<i>-</i>	<i>7.498</i>	<i>-</i>	<i>-</i>	<i>-</i>	<i>-</i>	<i>-</i>	<i>7.498</i>
<i>Subtotal: Hardware Cost</i>	<i>-</i>	<i>-</i>	<i>126.239</i>	<i>-</i>	<i>-</i>	<i>10.562</i>	<i>-</i>	<i>-</i>	<i>15.669</i>	<i>-</i>	<i>-</i>	<i>7.498</i>	<i>-</i>	<i>-</i>	<i>-</i>	<i>-</i>	<i>-</i>	<i>7.498</i>
<b>Gross/Weapon System Cost</b>	<b>94.408</b>	<b>1,680</b>	<b>158.605</b>	<b>11.327</b>	<b>1,500</b>	<b>16.990</b>	<b>13.913</b>	<b>1,626</b>	<b>22.623</b>	<b>20.796</b>	<b>671</b>	<b>13.954</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>20.796</b>	<b>671</b>	<b>13.954</b>

**Remarks:**

1) Due to delayed FY18 DO for STORM SLX variant and delay with the development of the STORM II systems, \$14.810M in FY19 funds for the 1500 systems were returned to the Army.

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<b>Exhibit P-5, Cost Analysis:</b> PB 2021 Army		<b>Date:</b> February 2020
<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 2035A / 02 / 86	<b>P-1 Line Item Number / Title:</b> 0155K35110 / Small Tactical Optical Rifle Mounted MLRF	<b>Item Number / Title [DODIC]:</b> K35110 / Small Tactical Optical Rifle Mounted MLRF

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

2) FY20 and FY21 STORM unit costs are based on contractual range pricing. FY20 lower unit costs are due to price breaks / improved pricing associated with the higher quantity.  
 3) FY20 and FY21 STORM Hardware is TBD due to Fair Opportunity award between the qualified vendors.

Secondary Distribution		FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total
Army	Quantity	947	1,604	671	-	671
	Total Obligation Authority	11.155	22.317	13.954	-	13.954
ANG	Quantity	553	-	-	-	-
	Total Obligation Authority	5.835	-	-	-	-
AR	Quantity	-	22	-	-	-
	Total Obligation Authority	-	0.306	-	-	-
<b>Total: Secondary Distribution</b>	<b>Quantity</b>	<b>1,500</b>	<b>1,626</b>	<b>671</b>	-	<b>671</b>
	<b>Total Obligation Authority</b>	<b>16.990</b>	<b>22.623</b>	<b>13.954</b>	-	<b>13.954</b>

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

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<b>Exhibit P-5a, Procurement History and Planning:</b> PB 2021 Army							<b>Date:</b> February 2020				
<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 2035A / 02 / 86			<b>P-1 Line Item Number / Title:</b> 0155K35110 / Small Tactical Optical Rifle Mounted MLRF				<b>Item Number / Title [DODIC]:</b> K35110 / Small Tactical Optical Rifle Mounted MLRF				

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
STORM Hardware (TBD) <sup>(†)</sup>		2020	TBD / TBD	C / IDIQ	ACC-APG	May 2020	Apr 2021	1,626	9.637	Y		
STORM Hardware (TBD) <sup>(†)</sup>		2021	TBD / TBD	C / IDIQ	ACC-APG	Apr 2021	Jan 2022	671	11.174	Y		

<sup>(†)</sup> indicates the presence of a P-21

**Remarks:**

The current IDIQ contract with L3 Communications expires May 2020. A competitive contract was awarded in June 2018 to two vendors, L3 Communications and Optics 1, for the new STORM variant reducing size, weight and cost of the system. After the integration and qualification of the new systems, future procurements / Delivery Orders will be competed.



**UNCLASSIFIED**

<b>Exhibit P-21, Production Schedule:</b> PB 2021 Army													<b>Date:</b> February 2020												
<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 2035A / 02 / 86						<b>P-1 Line Item Number / Title:</b> 0155K35110 / Small Tactical Optical Rifle Mounted MLRF						<b>Item Number / Title [DODIC]:</b> K35110 / Small Tactical Optical Rifle Mounted MLRF													

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		
STORM Hardware (TBD)																																	
	1	2020	ARMY	1,626	735	891	150	150	150	150	150	141																			0		
	1	2021	ARMY	671	0	671	-	-	-	25	25	25	100	100	100	100	100	96													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			

**UNCLASSIFIED**

<b>Exhibit P-21, Production Schedule:</b> PB 2021 Army		<b>Date:</b> February 2020
<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 2035A / 02 / 86		<b>P-1 Line Item Number / Title:</b> 0155K35110 / Small Tactical Optical Rifle Mounted MLRF
		<b>Item Number / Title [DODIC]:</b> K35110 / Small Tactical Optical Rifle Mounted MLRF

MFR Ref #	Manufacturer Name - Location	Production Rates (Each / Month)			Procurement Leadtime (Months)							
		MSR For 2021	1-8-5 For 2021	MAX For 2021	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 - TBD	40	150	300	2	7	11	18	2	6	9	15

**Remarks:**  
 The current IDIQ contract with L3 Communications expires May 2020. A competitive contract was awarded in June 2018 to two vendors, L3 Communications and Optics 1, for the new STORM variant reducing size, weight and cost of the system. After the integration and qualification of the new systems, future procurements / Delivery Orders will be competed.

"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 2021 Army **Date:** February 2020

<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 2035A: Other Procurement, Army / BA 02: Communications and Electronics Equipment / BSA 86: Elect Equip - Tactical Surv. (Tac Surv)	<b>P-1 Line Item Number / Title:</b> 0162WC5200 / RADIATION MONITORING SYSTEMS
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<b>ID Code</b> (A=Service Ready, B=Not Service Ready):	<b>Program Elements for Code B Items:</b> N/A	<b>Other Related Program Elements:</b> N/A
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**Line Item MDAP/MAIS Code:** N/A

Resource Summary	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	To Complete	Total
Procurement Quantity ( <i>Units in Each</i> )	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost ( <i>\$ in Millions</i> )	39.547	17.393	-	-	0.011	0.011	0.011	0.011	0.011	0.011	-	56.995
Less PY Advance Procurement ( <i>\$ in Millions</i> )	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) ( <i>\$ in Millions</i> )	39.547	17.393	-	-	0.011	0.011	0.011	0.011	0.011	0.011	-	56.995
Plus CY Advance Procurement ( <i>\$ in Millions</i> )	-	-	-	-	-	-	-	-	-	-	-	-
<b>Total Obligation Authority (<i>\$ in Millions</i>)</b>	<b>39.547</b>	<b>17.393</b>	-	-	<b>0.011</b>	<b>0.011</b>	<b>0.011</b>	<b>0.011</b>	<b>0.011</b>	<b>0.011</b>	-	<b>56.995</b>

*(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 Joint Personal Dosimeter - Individual (JPD-I) will provide a sensor to record and retrieve a Service member's radiation exposure from occupational to tactical levels. This capability provides a Joint solution reducing life-cycle costs while also address lessons learned from Operation Tomodachi. The JPD-I is intended to replace DoD's legacy dosimeters and the Army's PDR-75 reader with the DT-236 watch. The JPD-I will provide a sensor to record and retrieve a Service member's real time indication of total dose, situational awareness with data transfer from the dosimeter to computer, and is accredited through the National Voluntary Laboratory Accreditation Program (NVLAP) to obtain Dose of Record for Warfighter's Medical Records.

Funds in this program have been realigned to program Joint Personal Dosimeter - Individual, SSN W43487.

Secondary Distribution	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025
Army	Quantity	-	-	-	-	-	-	-	-
	Total Obligation Authority	14.585	-	-	0.011	0.011	0.011	0.011	0.011
ANG	Quantity	-	-	-	-	-	-	-	-
	Total Obligation Authority	1.768	-	-	-	-	-	-	-
AR	Quantity	-	-	-	-	-	-	-	-
	Total Obligation Authority	1.040	-	-	-	-	-	-	-
<b>Total: Secondary Distribution</b>	<b>Quantity</b>	-	-	-	-	-	-	-	-
	<b>Total Obligation Authority</b>	<b>17.393</b>	-	-	<b>0.011</b>	<b>0.011</b>	<b>0.011</b>	<b>0.011</b>	<b>0.011</b>

**Justification:**

Program has no FY2021 request (APE WC5200) funding for FY2021 is in (APE M01280).



**UNCLASSIFIED**

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

<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 2035A: Other Procurement, Army / BA 02: Communications and Electronics Equipment / BSA 86: Elect Equip - Tactical Surv. (Tac Surv)	<b>P-1 Line Item Number / Title:</b> 0173BZ0501 / Indirect Fire Protection Family Of Systems
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<b>ID Code</b> (A=Service Ready, B=Not Service Ready):	<b>Program Elements for Code B Items:</b> N/A	<b>Other Related Program Elements:</b> 0604741A
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**Line Item MDAP/MAIS Code:** N/A

Resource Summary	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	To Complete	Total
Procurement Quantity ( <i>Units in Each</i> )	1,039	393	-	-	-	-	-	-	-	-	-	1,432
Gross/Weapon System Cost ( <i>\$ in Millions</i> )	1,067.293	291.497	29.127	10.069	37.000	47.069	6.817	-	-	-	-	1,441.803
Less PY Advance Procurement ( <i>\$ in Millions</i> )	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) ( <i>\$ in Millions</i> )	1,067.293	291.497	29.127	10.069	37.000	47.069	6.817	-	-	-	-	1,441.803
Plus CY Advance Procurement ( <i>\$ in Millions</i> )	-	-	-	-	-	-	-	-	-	-	-	-
<b>Total Obligation Authority (<i>\$ in Millions</i>)</b>	<b>1,067.293</b>	<b>291.497</b>	<b>29.127</b>	<b>10.069</b>	<b>37.000</b>	<b>47.069</b>	<b>6.817</b>	-	-	-	-	<b>1,441.803</b>

*(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> )	1,027.231	741.723	-	-	-	-	-	-	-	-	-	1,006.846

**Description:**

The Rocket, Artillery, Mortar (RAM) Warn program (H30503) provides early, localized warning of indirect fire (IDF) threats to all maneuver brigade combat teams (BCT). It employs the Air Defense Airspace Management (ADAM) Cell already resident in the BCT Headquarters as the command and control (C2) element; uses the existing radars in the target acquisition platoon of the fires battalion as the sense element; and adds enhanced warning, controllers, and dedicated communications devices between the existing radars, ADAM Cell, and warning systems. Army Pre-positioned Stocks (APS) equipment sets are available to supplement the fielded capability based on mission needs. Timely warning will enable those BCT personnel in the hazard area of an inbound IDF threat to seek cover or a prone position prior to impact, thus reducing casualties. RAM Warn was approved for entry into the full rate production (FRP) acquisition phase in April 2014 based on successful completion of low rate initial production (LRIP) exit criteria. RAM Warn completed fielding/training to all BCTs in February 2019. Insertion of the Huntsman Secure Network Radio (HSNR) with embedded encryption will address radio obsolescence and provide operational benefits, including simplified training and setup procedures, due to elimination of the KG-175D network encryption device.

The C-RAM Enhancements line (H30504) is the C-RAM Intercept program, which provides a counter-RAM capability to the Indirect Fire Protection Capability (IFPC)/Avenger battalions, 5-5 and 2-44 Air Defense Artillery (ADA), to defend against and defeat enduring indirect fire threats. This capability is provided by fielding existing Land-based Phalanx Weapon System (LPWS) guns previously produced as a part of the C-RAM quick reaction capability for theater operations; the guns undergo reset prior to fielding. C-RAM Intercept transitioned to an acquisition program with the approval of the C-RAM Intercept CPD on 22 Aug 2013 and the Army Acquisition Executive's approval of an Acquisition Decision Memorandum (ADM) on 23 August 2013, authorizing the program's entry into the acquisition management system as a post-Milestone C, Acquisition Category (ACAT) III program under the management of the Program Executive Officer, Missiles and Space. Initial issue of LPWS assets to the IFPC/Avenger battalions is ongoing. LPWS with Spiral 6.4.1 transitions to sustainment in FY23. Full Operational Capability (FOC) is to be determined based on continued deployment of limited LPWS assets in multiple theaters.

The Counter-Unmanned Aircraft Systems (C-UAS) effort (H30505) is in response to Joint Urgent Operational Need (JUON) CC-0558 to support identification, development, testing, evaluation, and integration of technologies to provide an overall evolutionary capability to defeat small UAS threats at 89 U.S. Central Command (USCENTCOM) sites. The C-UAS effort provides warfighters with the ability to comprehensively detect, track, identify, and defeat enemy Groups 1 and 2 lightweight, low altitude, commercial off-the-shelf (COTS) UASs with kinetic/non-kinetic means.

Secondary Distribution	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025
Army									
Quantity	252	-	-	-	-	-	-	-	-
Total Obligation Authority	261.597	29.127	10.069	37.000	47.069	6.817	-	-	-

**UNCLASSIFIED**

<b>Exhibit P-40, Budget Line Item Justification:</b> PB 2021 Army							<b>Date:</b> February 2020			
<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 2035A: Other Procurement, Army / BA 02: Communications and Electronics Equipment / BSA 86: Elect Equip - Tactical Surv. (Tac Surv)					<b>P-1 Line Item Number / Title:</b> 0173BZ0501 / Indirect Fire Protection Family Of Systems					
<b>ID Code</b> (A=Service Ready, B=Not Service Ready):			<b>Program Elements for Code B Items:</b> N/A			<b>Other Related Program Elements:</b> 0604741A				
<b>Line Item MDAP/MAIS Code:</b> N/A										

Secondary Distribution		FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025
ANG	Quantity	141	-	-	-	-	-	-	-	-
	Total Obligation Authority	29.900	-	-	-	-	-	-	-	-
<b>Total:</b> Secondary Distribution	<b>Quantity</b>	<b>393</b>	-	-	-	-	-	-	-	-
	<b>Total Obligation Authority</b>	<b>291.497</b>	<b>29.127</b>	<b>10.069</b>	<b>37.000</b>	<b>47.069</b>	<b>6.817</b>	-	-	-

**UNCLASSIFIED**

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

**Appropriation / Budget Activity / Budget Sub Activity:**  
 2035A: Other Procurement, Army / BA 02: Communications and Electronics  
 Equipment / BSA 86: Elect Equip - Tactical Surv. (Tac Surv)

**P-1 Line Item Number / Title:**  
 0173BZ0501 / Indirect Fire Protection Family Of Systems

**ID Code** (A=Service Ready, B=Not Service Ready): **Program Elements for Code B Items:** N/A **Other Related Program Elements:** 0604741A

**Line Item MDAP/MAIS Code:** N/A

Exhibits Schedule					Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total
Exhibit Type	Title*	Subexhibits	ID CD	MDAP/MAIS Code	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)
P-5	H30503 / Rocket, Artillery, Mortar (RAM) Warn				953 / 180.087	393 / 34.393	- / -	- / -	- / -	- / -
P-5	H30504 / C-RAM Enhancements				6 / 215.374	- / 6.304	- / 9.127	- / 10.069	- / -	- / 10.069
P-5	H30505 / Counter Unmanned Aerial Systems (C-UAS) Efforts				80 / 671.832	- / 250.800	- / 20.000	- / -	- / 37.000	- / 37.000
<b>P-40</b>	<b>Total Gross/Weapon System Cost</b>				<b>1,039 / 1,067.293</b>	<b>393 / 291.497</b>	<b>- / 29.127</b>	<b>- / 10.069</b>	<b>- / 37.000</b>	<b>- / 47.069</b>

\*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 2021 Base procurement dollars (H30504) in the amount of \$10.069 million continue interim contractor logistics support for fielded systems and continue efforts required for transition to sustainment in 1QFY23 (i.e., 5-5 and 2-44 ADA maintainer new equipment training and establishment of CASCOC institutional training base).

FY 2021 OCO procurement dollars (H30505) in the amount of \$37.000 million replenish and maintain M789 self-destruct ammunition and Coyote rounds for M-LIDS kinetic defeat vehicles and fixed sites operating in USCENTCOM.

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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<b>Exhibit P-5, Cost Analysis: PB 2021 Army</b>		<b>Date:</b> February 2020
<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 2035A / 02 / 86	<b>P-1 Line Item Number / Title:</b> 0173BZ0501 / Indirect Fire Protection Family Of Systems	<b>Item Number / Title [DODIC]:</b> H30503 / Rocket, Artillery, Mortar (RAM) Warn

<b>ID Code</b> (A=Service Ready, B=Not Service Ready) :	<b>MDAP/MAIS Code:</b>
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<b>Resource Summary</b>	<b>Prior Years</b>	<b>FY 2019</b>	<b>FY 2020</b>	<b>FY 2021 Base</b>	<b>FY 2021 OCO</b>	<b>FY 2021 Total</b>
Procurement Quantity <i>(Units in Each)</i>	953	393	-	-	-	-
Gross/Weapon System Cost <i>(\$ in Millions)</i>	180.087	34.393	-	-	-	-
Less PY Advance Procurement <i>(\$ in Millions)</i>	-	-	-	-	-	-
Net Procurement (P-1) <i>(\$ in Millions)</i>	180.087	34.393	-	-	-	-
Plus CY Advance Procurement <i>(\$ in Millions)</i>	-	-	-	-	-	-
<b>Total Obligation Authority</b> <i>(\$ in Millions)</i>	<b>180.087</b>	<b>34.393</b>	-	-	-	-

*(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>	188.969	87.514	-	-	-	-

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

<b>Cost Elements</b>	<b>Prior Years</b>			<b>FY 2019</b>			<b>FY 2020</b>			<b>FY 2021 Base</b>			<b>FY 2021 OCO</b>			<b>FY 2021 Total</b>		
	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																		
Hardware & Integration - RAM Warn BCT	88.943	1,561	138.840	71.386	399	28.483	-	-	-	-	-	-	-	-	-	-	-	-
CONUS High Priority C-UAS Sites	-	-	10.000	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
<i>Subtotal: Recurring Cost</i>	-	-	<i>148.840</i>	-	-	<i>28.483</i>	-	-	-	-	-	-	-	-	-	-	-	-
<i>Subtotal: Flyaway Cost</i>	-	-	<i>148.840</i>	-	-	<i>28.483</i>	-	-	-	-	-	-	-	-	-	-	-	-
Support - Fielding Cost																		
Fielding	-	-	18.896	-	-	3.180	-	-	-	-	-	-	-	-	-	-	-	-
<i>Subtotal: Support - Fielding Cost</i>	-	-	<i>18.896</i>	-	-	<i>3.180</i>	-	-	-	-	-	-	-	-	-	-	-	-
Support - Program Management Cost																		
Government Management	-	-	12.351	-	-	2.730	-	-	-	-	-	-	-	-	-	-	-	-
<i>Subtotal: Support - Program Management Cost</i>	-	-	<i>12.351</i>	-	-	<i>2.730</i>	-	-	-	-	-	-	-	-	-	-	-	-
<b>Gross/Weapon System Cost</b>	<b>188.969</b>	<b>953</b>	<b>180.087</b>	<b>87.514</b>	<b>393</b>	<b>34.393</b>	-	-	-	-	-	-	-	-	-	-	-	-

**UNCLASSIFIED**

<b>Exhibit P-5, Cost Analysis: PB 2021 Army</b>		<b>Date:</b> February 2020
<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 2035A / 02 / 86	<b>P-1 Line Item Number / Title:</b> 0173BZ0501 / Indirect Fire Protection Family Of Systems	<b>Item Number / Title [DODIC]:</b> H30503 / Rocket, Artillery, Mortar (RAM) Warn

<b>ID Code</b> (A=Service Ready, B=Not Service Ready) :	<b>MDAP/MAIS Code:</b>
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Note: Subtotals or Totals in this Exhibit P-5 may not be exact or sum exactly due to rounding.

Cost Element Breakout	Prior Years			FY 2019			FY 2020			FY 2021 Base			FY 2021 OCO			FY 2021 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 & Integration - RAM Warn BCT	88.943	1,561	138.840	71.386	399	28.483	-	-	-	-	-	-	-	-	-	-	-	-
Hardware & Integration - RAM Warn EDI	53.375	80	4.270	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Hardware & Integration - RAM Warn BCT Secure Comms	90.864	1,481	134.570	71.386	399	28.483	-	-	-	-	-	-	-	-	-	-	-	-

Secondary Distribution		FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total
Army	Quantity		252	-	-	-
	Total Obligation Authority		4.493	-	-	-
ANG	Quantity		141	-	-	-
	Total Obligation Authority		29.900	-	-	-
<b>Total:</b>	<b>Quantity</b>		<b>393</b>	<b>-</b>	<b>-</b>	<b>-</b>
<b>Secondary Distribution</b>	<b>Total Obligation Authority</b>		<b>34.393</b>	<b>-</b>	<b>-</b>	<b>-</b>

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**Exhibit P-5, Cost Analysis: PB 2021 Army** **Date:** February 2020

<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 2035A / 02 / 86	<b>P-1 Line Item Number / Title:</b> 0173BZ0501 / Indirect Fire Protection Family Of Systems	<b>Item Number / Title [DODIC]:</b> H30504 / C-RAM Enhancements
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**ID Code** (A=Service Ready, B=Not Service Ready) : **MDAP/MAIS Code:**

Resource Summary	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total
Procurement Quantity (Units in Each)	6	-	-	-	-	-
Gross/Weapon System Cost (\$ in Millions)	215.374	6.304	9.127	10.069	-	10.069
Less PY Advance Procurement (\$ in Millions)	-	-	-	-	-	-
Net Procurement (P-1) (\$ in Millions)	215.374	6.304	9.127	10.069	-	10.069
Plus CY Advance Procurement (\$ in Millions)	-	-	-	-	-	-
<b>Total Obligation Authority (\$ in Millions)</b>	<b>215.374</b>	<b>6.304</b>	<b>9.127</b>	<b>10.069</b>	<b>-</b>	<b>10.069</b>

*(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)	35,895.667	-	-	-	-	-

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

Cost Elements	Prior Years			FY 2019			FY 2020			FY 2021 Base			FY 2021 OCO			FY 2021 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																		
Hardware & Integration	1,892.574	54	102.199	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
<i>Subtotal: Recurring Cost</i>	-	-	102.199	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
<i>Subtotal: Flyaway Cost</i>	-	-	102.199	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Support - Fielding Cost																		
Fielding	-	-	100.767	-	-	5.800	-	-	8.397	-	-	9.273	-	-	-	-	-	9.273
<i>Subtotal: Support - Fielding Cost</i>	-	-	100.767	-	-	5.800	-	-	8.397	-	-	9.273	-	-	-	-	-	9.273
Support - Program Management Cost																		
Government Management	-	-	12.408	-	-	0.504	-	-	0.730	-	-	0.796	-	-	-	-	-	0.796
<i>Subtotal: Support - Program Management Cost</i>	-	-	12.408	-	-	0.504	-	-	0.730	-	-	0.796	-	-	-	-	-	0.796
<b>Gross/Weapon System Cost</b>	<b>35,895.667</b>	<b>6</b>	<b>215.374</b>	<b>-</b>	<b>-</b>	<b>6.304</b>	<b>-</b>	<b>-</b>	<b>9.127</b>	<b>-</b>	<b>-</b>	<b>10.069</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>10.069</b>

Secondary Distribution		FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total
Army	Quantity	-	-	-	-	-
	Total Obligation Authority	6.304	9.127	10.069	-	10.069
<b>Total:</b>	<b>Quantity</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>

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<b>Exhibit P-5, Cost Analysis:</b> PB 2021 Army			<b>Date:</b> February 2020			
<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 2035A / 02 / 86		<b>P-1 Line Item Number / Title:</b> 0173BZ0501 / Indirect Fire Protection Family Of Systems		<b>Item Number / Title [DODIC]:</b> H30504 / C-RAM Enhancements		
<b>ID Code</b> (A=Service Ready, B=Not Service Ready) :			<b>MDAP/MAIS Code:</b>			
<b>Secondary Distribution</b>		<b>FY 2019</b>	<b>FY 2020</b>	<b>FY 2021 Base</b>	<b>FY 2021 OCO</b>	<b>FY 2021 Total</b>
<b>Secondary Distribution</b>	<b>Total Obligation Authority</b>	6.304	9.127	10.069	-	10.069

**UNCLASSIFIED**

<b>Exhibit P-5, Cost Analysis: PB 2021 Army</b>		<b>Date:</b> February 2020
<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 2035A / 02 / 86	<b>P-1 Line Item Number / Title:</b> 0173BZ0501 / Indirect Fire Protection Family Of Systems	<b>Item Number / Title [DODIC]:</b> H30505 / Counter Unmanned Aerial Systems (C-UAS) Efforts

<b>ID Code</b> (A=Service Ready, B=Not Service Ready) :	<b>MDAP/MAIS Code:</b>
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Resource Summary	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total
Procurement Quantity (Units in Each)	80	-	-	-	-	-
Gross/Weapon System Cost (\$ in Millions)	671.832	250.800	20.000	-	37.000	37.000
Less PY Advance Procurement (\$ in Millions)	-	-	-	-	-	-
Net Procurement (P-1) (\$ in Millions)	671.832	250.800	20.000	-	37.000	37.000
Plus CY Advance Procurement (\$ in Millions)	-	-	-	-	-	-
<b>Total Obligation Authority (\$ in Millions)</b>	<b>671.832</b>	<b>250.800</b>	<b>20.000</b>	<b>-</b>	<b>37.000</b>	<b>37.000</b>

*(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)	8,397.900	-	-	-	-	-

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

Cost Elements	Prior Years			FY 2019			FY 2020			FY 2021 Base			FY 2021 OCO			FY 2021 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/Mobile Production & Integration	1,453.259	81	117.714	2,811.760	25	70.294	-	-	-	-	-	-	-	-	-	-	-	-
Kinetic Defeat Production & Integration	-	-	206.430	-	-	20.654	-	-	-	-	-	-	-	31.154	-	-	-	31.154
Sensor Procurement & Integration	-	-	201.773	-	-	51.650	-	-	-	-	-	-	-	-	-	-	-	-
Dismounted/Handheld Systems Procurement & Integration	-	-	16.865	-	-	4.943	-	-	-	-	-	-	-	-	-	-	-	-
Command & Control Hardware	-	-	32.629	-	-	36.729	-	-	-	-	-	-	-	-	-	-	-	-
CONUS High Priority Sites	-	-	10.000	-	-	-	-	-	20.000	-	-	-	-	-	-	-	-	-
<b>Subtotal: Recurring Cost</b>	<b>-</b>	<b>-</b>	<b>585.411</b>	<b>-</b>	<b>-</b>	<b>184.270</b>	<b>-</b>	<b>-</b>	<b>20.000</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>31.154</b>	<b>-</b>	<b>-</b>	<b>31.154</b>
<b>Subtotal: Flyaway Cost</b>	<b>-</b>	<b>-</b>	<b>585.411</b>	<b>-</b>	<b>-</b>	<b>184.270</b>	<b>-</b>	<b>-</b>	<b>20.000</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>31.154</b>	<b>-</b>	<b>-</b>	<b>31.154</b>	

Support - Fielding Cost																		
Fielding	-	-	60.815	-	-	51.905	-	-	-	-	-	-	-	-	3.256	-	-	3.256
<b>Subtotal: Support - Fielding Cost</b>	<b>-</b>	<b>-</b>	<b>60.815</b>	<b>-</b>	<b>-</b>	<b>51.905</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>3.256</b>	<b>-</b>	<b>-</b>	<b>3.256</b>

Support - Program Management Cost																		
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**UNCLASSIFIED**

<b>Exhibit P-5, Cost Analysis: PB 2021 Army</b>		<b>Date:</b> February 2020
<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 2035A / 02 / 86	<b>P-1 Line Item Number / Title:</b> 0173BZ0501 / Indirect Fire Protection Family Of Systems	<b>Item Number / Title [DODIC]:</b> H30505 / Counter Unmanned Aerial Systems (C-UAS) Efforts

<b>ID Code</b> (A=Service Ready, B=Not Service Ready) :	<b>MDAP/MAIS Code:</b>
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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 2019			FY 2020			FY 2021 Base			FY 2021 OCO			FY 2021 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	-	-	25.606	-	-	14.625	-	-	-	-	-	-	-	-	2.590	-	-	2.590
<i>Subtotal: Support - Program Management Cost</i>	-	-	<b>25.606</b>	-	-	<b>14.625</b>	-	-	-	-	-	-	-	-	<b>2.590</b>	-	-	<b>2.590</b>
<b>Gross/Weapon System Cost</b>	<b>8,397.900</b>	<b>80</b>	<b>671.832</b>	-	-	<b>250.800</b>	-	-	<b>20.000</b>	-	-	-	-	-	<b>37.000</b>	-	-	<b>37.000</b>

Secondary Distribution		FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total
Army	Quantity	-	-	-	-	-
	Total Obligation Authority	250.800	20.000	-	37.000	37.000
<b>Total:</b>	<b>Quantity</b>	-	-	-	-	-
<b>Secondary Distribution</b>	<b>Total Obligation Authority</b>	<b>250.800</b>	<b>20.000</b>	-	<b>37.000</b>	<b>37.000</b>

**UNCLASSIFIED**

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

<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 2035A: Other Procurement, Army / BA 02: Communications and Electronics Equipment / BSA 86: Elect Equip - Tactical Surv. (Tac Surv)	<b>P-1 Line Item Number / Title:</b> 0177K22001 / FAMILY OF WEAPON SIGHTS (FWS)
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<b>ID Code</b> (A=Service Ready, B=Not Service Ready): B	<b>Program Elements for Code B Items:</b> N/A	<b>Other Related Program Elements:</b> 0603774A, 0604710A
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**Line Item MDAP/MAIS Code:** N/A

Resource Summary	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	To Complete	Total
Procurement Quantity ( <i>Units in Each</i> )	8,742	49,265	-	10,758	-	10,758	8,947	10,361	11,746	10,451	Continuing	Continuing
Gross/Weapon System Cost ( <i>\$ in Millions</i> )	141.884	113.630	81.541	133.590	-	133.590	151.260	168.562	190.197	161.215	Continuing	Continuing
Less PY Advance Procurement ( <i>\$ in Millions</i> )	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) ( <i>\$ in Millions</i> )	141.884	113.630	81.541	133.590	-	133.590	151.260	168.562	190.197	161.215	Continuing	Continuing
Plus CY Advance Procurement ( <i>\$ in Millions</i> )	-	-	-	-	-	-	-	-	-	-	-	-
<b>Total Obligation Authority (<i>\$ in Millions</i>)</b>	<b>141.884</b>	<b>113.630</b>	<b>81.541</b>	<b>133.590</b>	<b>-</b>	<b>133.590</b>	<b>151.260</b>	<b>168.562</b>	<b>190.197</b>	<b>161.215</b>	<b>Continuing</b>	<b>Continuing</b>

*(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> )	16.230	2.307	-	12.418	-	12.418	16.906	16.269	16.192	15.426	Continuing	Continuing

**Description:**

There are three variants in the Family of Weapon Sights (FWS): FWS-Individual (FWS-I), FWS-Sniper (FWS-S) and FWS-Crew Served (FWS-CS). The FWS program enables combat forces to acquire and engage targets with small arms and to conduct surveillance and fire control under day/night obscuration, no-light, and adverse weather conditions. The FWS utilizes advancements in thermal and low light level sensors to produce sights operable in-line with a day optic or in stand-alone mode. The FWS program integrates smaller pixel focal plane arrays into multiple large format sizes to improve sensitivity, clarity, and range, while simultaneously reducing the size, weight and power consumption of all variants.

The FWS-I variant is a weapon mounted thermal sensor that enables Soldiers to fire quickly and accurately from any carry position and with significantly reduced exposure to enemy fire by providing a wireless zeroed weapon aimpoint in the Soldier's Enhanced Night Vision Goggle (ENVG) or Integrated Visual Augmentation System (IVAS) Heads Up Display (HUD).

The FWS-CS variant leverages the success of the FWS-I development effort, and will be the primary sight for the MK19, M240B and M2. The FWS-CS system integrates High Definition (HD) Thermal and Day Color imagers, an Integrated Laser Range Finder (ILRF) and ballistic calculator to provide Soldiers with an accurate aimpoint that adjusts automatically for range, ammunition, vertical angle, and weapon type. The FWS-CS includes a wireless HD Helmet Mounted Display (HMD) that receives weapon sight imagery allowing the Soldier to utilize the weapon sight without requiring them look through the weapon sight's eyepiece. This wireless HMD provides the opportunity for the Soldier to stay in a protected, unexposed posture while still accurately detecting and engaging targets.

FWS-I funding supports the Army's Soldier Lethality Cross Functional Teams (SL CFT) initiatives.

FWS-I Army Acquisition Objective (AAO) is 36,443

FWS-CS AAO is 25,310

FWS-S AAO is 2,963

	Secondary Distribution	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025
Army	Quantity	46,292	-	7,466	-	7,466	7,463	9,292	10,917	9,886
	Total Obligation Authority	102.988	81.541	100.527	-	100.527	134.881	157.238	181.277	155.044

**UNCLASSIFIED**

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

<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 2035A: Other Procurement, Army / BA 02: Communications and Electronics Equipment / BSA 86: Elect Equip - Tactical Surv. (Tac Surv)	<b>P-1 Line Item Number / Title:</b> 0177K22001 / FAMILY OF WEAPON SIGHTS (FWS)
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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: 0603774A, 0604710A
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**Line Item MDAP/MAIS Code:** N/A

Secondary Distribution		FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025
ANG	Quantity	2,973	-	3,292	-	3,292	1,159	1,006	829	565
	Total Obligation Authority	10.642	-	33.063	-	33.063	12.792	10.656	8.920	6.171
AR	Quantity	-	-	-	-	-	325	63	-	-
	Total Obligation Authority	-	-	-	-	-	3.587	0.668	-	-
<b>Total:</b>	<b>Quantity</b>	<b>49,265</b>	<b>-</b>	<b>10,758</b>	<b>-</b>	<b>10,758</b>	<b>8,947</b>	<b>10,361</b>	<b>11,746</b>	<b>10,451</b>
<b>Secondary Distribution</b>	<b>Total Obligation Authority</b>	<b>113.630</b>	<b>81.541</b>	<b>133.590</b>	<b>-</b>	<b>133.590</b>	<b>151.260</b>	<b>168.562</b>	<b>190.197</b>	<b>161.215</b>

**UNCLASSIFIED**

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

**Appropriation / Budget Activity / Budget Sub Activity:**  
 2035A: Other Procurement, Army / BA 02: Communications and Electronics  
 Equipment / BSA 86: Elect Equip - Tactical Surv. (Tac Surv)

**P-1 Line Item Number / Title:**  
 0177K22001 / FAMILY OF WEAPON SIGHTS (FWS)

**ID Code** (A=Service Ready, B=Not Service Ready): B **Program Elements for Code B Items:** N/A **Other Related Program Elements:** 0603774A, 0604710A

**Line Item MDAP/MAIS Code:** N/A

Exhibits Schedule					Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total
Exhibit Type	Title*	Subexhibits	ID CD	MDAP/MAIS Code	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)
P-5	K22002 / FWS-INDIVIDUAL	P-5a, P-21	B		8,742 / 141.884	17,781 / 90.932	- / 81.541	9,872 / 99.160	- / -	9,872 / 99.160
P-5	K22003 / FWS-CREW SERVED	P-5a, P-21	B		- / -	31,484 / 22.698	- / -	792 / 31.861	- / -	792 / 31.861
P-5	K22004 / FWS-SNIPER	P-5a	B		- / -	- / -	- / -	94 / 2.569	- / -	94 / 2.569
<b>P-40</b>	<b>Total Gross/Weapon System Cost</b>				<b>8,742 / 141.884</b>	<b>49,265 / 113.630</b>	<b>- / 81.541</b>	<b>10,758 / 133.590</b>	<b>- / -</b>	<b>10,758 / 133.590</b>

\*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 2021 Base procurement dollars in the amount of \$99.160 million supports the procurement of 9,872 FWS-I production systems.  
 FY 2021 Base procurement dollars in the amount of \$31.861 million supports the procurement of 792 FWS-CS production systems.  
 FY 2021 Base procurement dollars in the amount of \$2.569 million supports the procurement of 94 FWS-S in a Low Rate Initial Production (LRIP) award.  
 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**

<b>Exhibit P-5, Cost Analysis: PB 2021 Army</b>		<b>Date:</b> February 2020
<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 2035A / 02 / 86		<b>P-1 Line Item Number / Title:</b> 0177K22001 / FAMILY OF WEAPON SIGHTS (FWS)
		<b>Item Number / Title [DODIC]:</b> K22002 / FWS-INDIVIDUAL

<b>ID Code</b> (A=Service Ready, B=Not Service Ready) : B	<b>MDAP/MAIS Code:</b>
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Resource Summary	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total
Procurement Quantity (Units in Each)	8,742	17,781	-	9,872	-	9,872
Gross/Weapon System Cost (\$ in Millions)	141.884	90.932	81.541	99.160	-	99.160
Less PY Advance Procurement (\$ in Millions)	-	-	-	-	-	-
Net Procurement (P-1) (\$ in Millions)	141.884	90.932	81.541	99.160	-	99.160
Plus CY Advance Procurement (\$ in Millions)	-	-	-	-	-	-
<b>Total Obligation Authority (\$ in Millions)</b>	<b>141.884</b>	<b>90.932</b>	<b>81.541</b>	<b>99.160</b>	<b>-</b>	<b>99.160</b>

*(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)	16.230	5.114	-	10.045	-	10.045

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

Cost Elements	Prior Years			FY 2019			FY 2020			FY 2021 Base			FY 2021 OCO			FY 2021 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																		
FWS - I Hardware (LRIP Assets)	16.289	3,306	53.853	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
FWS - I Hardware (FRP Assets) <sup>(f)</sup>	8.149	4,436	36.149	6.481	10,747	69.652	8.133	8,228	66.922	8.296	9,872	81.900	-	-	-	8.296	9,872	81.900
Program Management Support	-	-	5.375	-	-	2.958	-	-	0.860	-	-	0.959	-	-	-	-	-	0.959
Government Engineering Support	-	-	7.383	-	-	2.439	-	-	1.027	-	-	1.047	-	-	-	-	-	1.047
FWS-I Fielding	-	-	13.612	-	-	1.731	-	-	0.506	-	-	0.309	-	-	-	-	-	0.309
Engineering Change Proposal	-	-	7.189	-	-	4.422	-	-	2.008	-	-	2.457	-	-	-	-	-	2.457
Testing	-	-	1.071	-	-	-	-	-	0.669	-	-	0.819	-	-	-	-	-	0.819
Ancillary Support	-	-	8.356	-	-	0.834	-	-	2.113	-	-	2.569	-	-	-	-	-	2.569
FWS-I Spares	-	-	8.896	-	-	8.896	-	-	7.436	-	-	9.102	-	-	-	-	-	9.102
<i>Subtotal: Recurring Cost</i>	-	-	141.884	-	-	90.932	-	-	81.541	-	-	99.162	-	-	-	-	-	99.162
<i>Subtotal: Flyaway Cost</i>	-	-	141.884	-	-	90.932	-	-	81.541	-	-	99.162	-	-	-	-	-	99.162
<b>Gross/Weapon System Cost</b>	<b>16.230</b>	<b>8,742</b>	<b>141.884</b>	<b>5.114</b>	<b>17,781</b>	<b>90.932</b>	<b>-</b>	<b>-</b>	<b>81.541</b>	<b>10.045</b>	<b>9,872</b>	<b>99.160</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>10.045</b>	<b>9,872</b>	<b>99.160</b>

Secondary Distribution		FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total
Army	Quantity	14,808	-	6,580	-	6,580

**UNCLASSIFIED**

**Exhibit P-5, Cost Analysis: PB 2021 Army** **Date:** February 2020

<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 2035A / 02 / 86	<b>P-1 Line Item Number / Title:</b> 0177K22001 / FAMILY OF WEAPON SIGHTS (FWS)	<b>Item Number / Title [DODIC]:</b> K22002 / FWS-INDIVIDUAL
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**ID Code** (A=Service Ready, B=Not Service Ready) : B **MDAP/MAIS Code:**

<b>Secondary Distribution</b>	<b>FY 2019</b>	<b>FY 2020</b>	<b>FY 2021 Base</b>	<b>FY 2021 OCO</b>	<b>FY 2021 Total</b>
Total Obligation Authority	80.290	81.541	66.097	-	66.097
ANG					
Quantity	2,973	-	3,292	-	3,292
Total Obligation Authority	10.642	-	33.063	-	33.063
<b>Total: Secondary Distribution</b>					
Quantity	17,781	-	9,872	-	9,872
Total Obligation Authority	90.932	81.541	99.160	-	99.160

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

**UNCLASSIFIED**

**Exhibit P-5a, Procurement History and Planning:** PB 2021 Army **Date:** February 2020

<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 2035A / 02 / 86	<b>P-1 Line Item Number / Title:</b> 0177K22001 / FAMILY OF WEAPON SIGHTS (FWS)	<b>Item Number / Title [DODIC]:</b> K22002 / FWS-INDIVIDUAL
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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
FWS - I Hardware (FRP Assets) <sup>(†)</sup>		2019	DRS,RSTA, Inc. / Melbourne, FL	C / IDIQ	ACC-APG	Sep 2019	Aug 2020	10,747	6.481	Y		
FWS - I Hardware (FRP Assets) <sup>(†)</sup>		2020	DRS,RSTA, Inc. / Melbourne, FL	C / IDIQ	ACC-APG	May 2020	Apr 2021	8,228	8.133	Y		
FWS - I Hardware (FRP Assets) <sup>(†)</sup>		2021	DRS,RSTA, Inc. / Melbourne, FL	C / IDIQ	ACC-APG	Jan 2021	Dec 2021	9,872	8.296	Y		

<sup>(†)</sup> indicates the presence of a P-21





**UNCLASSIFIED**

**Exhibit P-21, Production Schedule:** PB 2021 Army **Date:** February 2020

<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 2035A / 02 / 86	<b>P-1 Line Item Number / Title:</b> 0177K22001 / FAMILY OF WEAPON SIGHTS (FWS)	<b>Item Number / Title [DODIC]:</b> K22002 / FWS-INDIVIDUAL
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Cost Elements <i>(Units in Thousands)</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
FWS - I Hardware (FRP Assets)																															
Prior Years Deliveries: 4436																															
1		2019	ARMY	10.747	2.400	8.347	1.200	1.200	1.200	1.200	1.200	1.200	1.147																.000		
1		2020	ARMY	8.228	.000	8.228	-	-	-	-	-	-	.053	1.200	1.200	1.200	1.200	1.200	.685	1.200	.290								.000		
1		2021	ARMY	9.872	.000	9.872				A	-	-	-	-	-	-	-	-	-	.910	1.200	1.200	1.200	1.200	1.200	1.200	1.200	.562	.000		
							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 2021 Army **Date:** February 2020

<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 2035A / 02 / 86	<b>P-1 Line Item Number / Title:</b> 0177K22001 / FAMILY OF WEAPON SIGHTS (FWS)	<b>Item Number / Title [DODIC]:</b> K22002 / FWS-INDIVIDUAL
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MFR Ref #	Manufacturer Name - Location	Production Rates (Each / Month)			Procurement Leadtime (Months)							
		MSR For 2021	1-8-5 For 2021	MAX For 2021	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	DRS,RSTA, Inc. - Melbourne, FL	10	750	1,200	2	10	11	21	2	7	11	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).

**UNCLASSIFIED**

<b>Exhibit P-5, Cost Analysis: PB 2021 Army</b>						<b>Date:</b> February 2020		
<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 2035A / 02 / 86			<b>P-1 Line Item Number / Title:</b> 0177K22001 / FAMILY OF WEAPON SIGHTS (FWS)			<b>Item Number / Title [DODIC]:</b> K22003 / FWS-CREW SERVED		
<b>ID Code</b> (A=Service Ready, B=Not Service Ready) : B				<b>MDAP/MAIS Code:</b>				
<b>Resource Summary</b>			<b>Prior Years</b>	<b>FY 2019</b>	<b>FY 2020</b>	<b>FY 2021 Base</b>	<b>FY 2021 OCO</b>	<b>FY 2021 Total</b>
Procurement Quantity ( <i>Units in Each</i> )			-	31,484	-	792	-	792
Gross/Weapon System Cost ( <i>\$ in Millions</i> )			-	22.698	-	31.861	-	31.861
Less PY Advance Procurement ( <i>\$ in Millions</i> )			-	-	-	-	-	-
Net Procurement (P-1) ( <i>\$ in Millions</i> )			-	22.698	-	31.861	-	31.861
Plus CY Advance Procurement ( <i>\$ in Millions</i> )			-	-	-	-	-	-
<b>Total Obligation Authority</b> ( <i>\$ in Millions</i> )			-	<b>22.698</b>	-	<b>31.861</b>	-	<b>31.861</b>
<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> )			-	0.721	-	40.229	-	40.229

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

Cost Elements	Prior Years			FY 2019			FY 2020			FY 2021 Base			FY 2021 OCO			FY 2021 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																		
Project Management Support	-	-	-	-	-	1.227	-	-	-	-	-	1.610	-	-	-	-	-	1.610
FWS-CS Hardware Systems <sup>(f)</sup>	-	-	-	124.191	110	13.661	-	-	-	25.638	792	20.305	-	-	-	25.638	792	20.305
Government Engineering Support	-	-	-	-	-	0.843	-	-	-	-	-	2.658	-	-	-	-	-	2.658
Fielding	-	-	-	-	-	0.036	-	-	-	-	-	1.273	-	-	-	-	-	1.273
Engineering Change Proposal	-	-	-	-	-	1.557	-	-	-	-	-	1.765	-	-	-	-	-	1.765
Testing	-	-	-	-	-	0.410	-	-	-	-	-	0.203	-	-	-	-	-	0.203
Documentation	-	-	-	-	-	3.240	-	-	-	-	-	2.475	-	-	-	-	-	2.475
Initial Spares	-	-	-	-	-	1.199	-	-	-	-	-	1.572	-	-	-	-	-	1.572
<i>Subtotal: Recurring Cost</i>	-	-	-	-	-	22.173	-	-	-	-	-	31.861	-	-	-	-	-	31.861
Non Recurring Cost																		
SOCOM Prepositioned Stock	-	-	-	-	-	0.525	-	-	-	-	-	-	-	-	-	-	-	-
<i>Subtotal: Non Recurring Cost</i>	-	-	-	-	-	0.525	-	-	-	-	-	-	-	-	-	-	-	-
<i>Subtotal: Flyaway Cost</i>	-	-	-	-	-	22.698	-	-	-	-	-	31.861	-	-	-	-	-	31.861
<b>Gross/Weapon System Cost</b>	-	-	-	0.721	31,484	22.698	-	-	-	40.229	792	31.861	-	-	-	40.229	792	31.861

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<b>Exhibit P-5, Cost Analysis:</b> PB 2021 Army		<b>Date:</b> February 2020
<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 2035A / 02 / 86	<b>P-1 Line Item Number / Title:</b> 0177K22001 / FAMILY OF WEAPON SIGHTS (FWS)	<b>Item Number / Title [DODIC]:</b> K22003 / FWS-CREW SERVED
<b>ID Code</b> (A=Service Ready, B=Not Service Ready) : B		<b>MDAP/MAIS Code:</b>

**Remarks:**  
The P-40 Exhibit FY 2019 quantity of 31,484 is in error. The correction quantity of qualification systems, with FY 2019 funds, is 110.

Secondary Distribution		FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total
Army	Quantity	31,484	-	792	-	792
	Total Obligation Authority	22.698	-	31.861	-	31.861
<b>Total:</b> Secondary Distribution	Quantity	<b>31,484</b>	-	<b>792</b>	-	<b>792</b>
	Total Obligation Authority	<b>22.698</b>	-	<b>31.861</b>	-	<b>31.861</b>

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

**UNCLASSIFIED**

**Exhibit P-5a, Procurement History and Planning:** PB 2021 Army **Date:** February 2020

<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 2035A / 02 / 86	<b>P-1 Line Item Number / Title:</b> 0177K22001 / FAMILY OF WEAPON SIGHTS (FWS)	<b>Item Number / Title [DODIC]:</b> K22003 / FWS-CREW SERVED
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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
FWS-CS Hardware Systems <sup>(†)</sup>		2019	Leonardo DRS / Melbourne, Florida	C / IDIQ	ACC APG	Jun 2020	Feb 2021	110	124.191	Y		
FWS-CS Hardware Systems <sup>(†)</sup>		2021	Leonardo DRS / Melbourne, Florida	C / IDIQ	ACC APG	Jun 2021	Feb 2022	792	25.638	Y		

<sup>(†)</sup> indicates the presence of a P-21

**Remarks:**

NOTE: The Milestone C decision currently scheduled for third quarter of FY 2020. The 110 systems procured with FY 2019 funds are production qualification systems, which includes non-recurring engineering in the unit cost.

FY 2020 has been adjusted per the FY 2020 Appropriation Bill mark which zeroed FY 2020 Procurement for FWS-CS. The timing of the FY 2021 Procurement contract award, quantity procured and delivery schedule has been revised to dovetail with the revised end of FY 2019 Procurement to ensure a smooth transition from FY 2019 to FY 2021 (i.e. no break in production).



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**Exhibit P-21, Production Schedule:** PB 2021 Army **Date:** February 2020

<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 2035A / 02 / 86	<b>P-1 Line Item Number / Title:</b> 0177K22001 / FAMILY OF WEAPON SIGHTS (FWS)	<b>Item Number / Title [DODIC]:</b> K22003 / FWS-CREW SERVED
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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			
FWS-CS Hardware Systems																																	
	1	2019	ARMY	110	70	40	10	10	10	10																			0				
	1	2021	ARMY	792	0	792	-	-	-	-	15	15	20	30	40	55	70	90	105	115	117	120							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 2021 Army **Date:** February 2020

<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 2035A / 02 / 86	<b>P-1 Line Item Number / Title:</b> 0177K22001 / FAMILY OF WEAPON SIGHTS (FWS)	<b>Item Number / Title [DODIC]:</b> K22003 / FWS-CREW SERVED
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MFR Ref #	Manufacturer Name - Location	Production Rates (Each / Month)			Procurement Leadtime (Months)							
		MSR For 2021	1-8-5 For 2021	MAX For 2021	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	Leonardo DRS - Melbourne, Florida	8	10	120	4	8	8	16	4	8	8	16

"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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<b>Exhibit P-5, Cost Analysis: PB 2021 Army</b>						<b>Date:</b> February 2020		
<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 2035A / 02 / 86			<b>P-1 Line Item Number / Title:</b> 0177K22001 / FAMILY OF WEAPON SIGHTS (FWS)			<b>Item Number / Title [DODIC]:</b> K22004 / FWS-SNIPER		
<b>ID Code</b> (A=Service Ready, B=Not Service Ready) : B				<b>MDAP/MAIS Code:</b>				
<b>Resource Summary</b>			<b>Prior Years</b>	<b>FY 2019</b>	<b>FY 2020</b>	<b>FY 2021 Base</b>	<b>FY 2021 OCO</b>	<b>FY 2021 Total</b>
Procurement Quantity ( <i>Units in Each</i> )			-	-	-	94	-	94
Gross/Weapon System Cost ( <i>\$ in Millions</i> )			-	-	-	2.569	-	2.569
Less PY Advance Procurement ( <i>\$ in Millions</i> )			-	-	-	-	-	-
Net Procurement (P-1) ( <i>\$ in Millions</i> )			-	-	-	2.569	-	2.569
Plus CY Advance Procurement ( <i>\$ in Millions</i> )			-	-	-	-	-	-
<b>Total Obligation Authority</b> ( <i>\$ in Millions</i> )			-	-	-	<b>2.569</b>	-	<b>2.569</b>
<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> )			-	-	-	27.330	-	27.330

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

Cost Elements	Prior Years			FY 2019			FY 2020			FY 2021 Base			FY 2021 OCO			FY 2021 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																		
FWS-S Hardware Qualification System <sup>(†)</sup>	-	-	-	-	-	-	-	-	-	19.309	94	1.815	-	-	-	19.309	94	1.815
Program Management Support	-	-	-	-	-	-	-	-	-	-	-	0.260	-	-	-	-	-	0.260
Government Engineering Support	-	-	-	-	-	-	-	-	-	-	-	0.067	-	-	-	-	-	0.067
Fielding	-	-	-	-	-	-	-	-	-	-	-	0.027	-	-	-	-	-	0.027
Engineering Change Orders	-	-	-	-	-	-	-	-	-	-	-	0.054	-	-	-	-	-	0.054
Testing	-	-	-	-	-	-	-	-	-	-	-	0.054	-	-	-	-	-	0.054
Ancillary Support	-	-	-	-	-	-	-	-	-	-	-	0.054	-	-	-	-	-	0.054
Initial Spares	-	-	-	-	-	-	-	-	-	-	-	0.200	-	-	-	-	-	0.200
Test Measurement Diagnostic Equipment (TMDE)	-	-	-	-	-	-	-	-	-	-	-	0.038	-	-	-	-	-	0.038
<i>Subtotal: Recurring Cost</i>	-	-	-	-	-	-	-	-	-	-	-	2.569	-	-	-	-	-	2.569
<i>Subtotal: Flyaway Cost</i>	-	-	-	-	-	-	-	-	-	-	-	2.569	-	-	-	-	-	2.569
<b>Gross/Weapon System Cost</b>	-	-	-	-	-	-	-	-	-	27.330	94	2.569	-	-	-	27.330	94	2.569

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**Exhibit P-5, Cost Analysis: PB 2021 Army** **Date:** February 2020

<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 2035A / 02 / 86	<b>P-1 Line Item Number / Title:</b> 0177K22001 / FAMILY OF WEAPON SIGHTS (FWS)	<b>Item Number / Title [DODIC]:</b> K22004 / FWS-SNIPER
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**ID Code** (A=Service Ready, B=Not Service Ready) : B **MDAP/MAIS Code:**

Secondary Distribution		FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total
Army	Quantity	-	-	94	-	94
	Total Obligation Authority	-	-	2.569	-	2.569
<b>Total:</b>	<b>Quantity</b>	-	-	<b>94</b>	-	<b>94</b>
<b>Secondary Distribution</b>	<b>Total Obligation Authority</b>	-	-	<b>2.569</b>	-	<b>2.569</b>

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

**UNCLASSIFIED**

<b>Exhibit P-5a, Procurement History and Planning:</b> PB 2021 Army							<b>Date:</b> February 2020					
<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 2035A / 02 / 86			<b>P-1 Line Item Number / Title:</b> 0177K22001 / FAMILY OF WEAPON SIGHTS (FWS)				<b>Item Number / Title [DODIC]:</b> K22004 / FWS-SNIPER					
<b>Cost Elements</b>	<b>O C O</b>	<b>FY</b>	<b>Contractor and Location</b>	<b>Method/Type or Funding Vehicle</b>	<b>Location of PCO</b>	<b>Award Date</b>	<b>Date of First Delivery</b>	<b>Qty (Each)</b>	<b>Unit Cost (\$ K)</b>	<b>Specs Avail Now?</b>	<b>Date Revision Available</b>	<b>RFP Issue Date</b>
FWS-S Hardware Qualification System		2021	TBD / TBD	C / IDIQ	ACC APG	Jan 2021	Dec 2021	94	19.309	N		

**Remarks:**  
Note: FWS-S Milestone C is planned for 2QFY2021.

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

<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 2035A: Other Procurement, Army / BA 02: Communications and Electronics Equipment / BSA 86: Elect Equip - Tactical Surv. (Tac Surv)	<b>P-1 Line Item Number / Title:</b> 0200K27900 / Profiler
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<b>ID Code</b> (A=Service Ready, B=Not Service Ready):	<b>Program Elements for Code B Items:</b> N/A	<b>Other Related Program Elements:</b> N/A
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**Line Item MDAP/MAIS Code:** N/A

Resource Summary	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	To Complete	Total
Procurement Quantity ( <i>Units in Each</i> )	-	9	-	-	-	-	-	-	-	-	-	9
Gross/Weapon System Cost ( <i>\$ in Millions</i> )	206.638	0.171	-	-	-	-	-	-	-	-	-	206.809
Less PY Advance Procurement ( <i>\$ in Millions</i> )	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) ( <i>\$ in Millions</i> )	206.638	0.171	-	-	-	-	-	-	-	-	-	206.809
Plus CY Advance Procurement ( <i>\$ in Millions</i> )	-	-	-	-	-	-	-	-	-	-	-	-
<b>Total Obligation Authority</b> ( <i>\$ in Millions</i> )	<b>206.638</b>	<b>0.171</b>	-	-	-	-	-	-	-	-	-	<b>206.809</b>

*(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> )	-	19.000	-	-	-	-	-	-	-	-	-	22,978.778

**Description:**

The Profiler Virtual Module (PVM) provides meteorological (MET) data that include wind speed, wind direction, temperature, barometric pressure, and humidity information required for use in the Advanced Field Artillery Tactical Data System (AFATDS). The information is required for precise targeting and terminal guidance to Field Artillery assets with PVM improving the accuracy of predictive fires solutions and allows for first round effects on target and reduces the risk of fratricide. This capability increases the lethality of indirect fire systems such as the rocket launchers, self-propelled or towed howitzers, and mortars.

Secondary Distribution	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025
Army									
Quantity	9	-	-	-	-	-	-	-	-
Total Obligation Authority	0.171	-	-	-	-	-	-	-	-
<b>Total:</b>	<b>9</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>
<b>Secondary Distribution</b>	<b>0.171</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>

**Justification:**

The program has no FY 2021 funding request.

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 2021 Army **Date:** February 2020

<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 2035A: Other Procurement, Army / BA 02: Communications and Electronics Equipment / BSA 86: Elect Equip - Tactical Surv. (Tac Surv)	<b>P-1 Line Item Number / Title:</b> 0245W61990 / JOINT BATTLE COMMAND - PLATFORM (JBC-P)
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<b>ID Code</b> (A=Service Ready, B=Not Service Ready): A	<b>Program Elements for Code B Items:</b> N/A	<b>Other Related Program Elements:</b> 0203759A, 0604805A
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**Line Item MDAP/MAIS Code:** N/A

Resource Summary	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	To Complete	Total
Procurement Quantity ( <i>Units in Each</i> )	39,048	18,862	12,061	8,869	-	8,869	6,291	5,782	5,251	560	Continuing	Continuing
Gross/Weapon System Cost ( <i>\$ in Millions</i> )	1,128.272	401.991	282.114	243.850	-	243.850	170.832	160.402	145.606	176.484	Continuing	Continuing
Less PY Advance Procurement ( <i>\$ in Millions</i> )	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) ( <i>\$ in Millions</i> )	1,128.272	401.991	282.114	243.850	-	243.850	170.832	160.402	145.606	176.484	Continuing	Continuing
Plus CY Advance Procurement ( <i>\$ in Millions</i> )	-	-	-	-	-	-	-	-	-	-	-	-
<b>Total Obligation Authority (<i>\$ in Millions</i>)</b>	<b>1,128.272</b>	<b>401.991</b>	<b>282.114</b>	<b>243.850</b>	<b>-</b>	<b>243.850</b>	<b>170.832</b>	<b>160.402</b>	<b>145.606</b>	<b>176.484</b>	<b>Continuing</b>	<b>Continuing</b>

*(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> )	28.894	21.312	23.391	27.495	-	27.495	27.155	27.742	27.729	315.150	Continuing	Continuing

**Description:**

This funding line is directly aligned to the Army Network Modernization Strategy LOE 2, Common Operating Environment. Efforts are aligned to support the Network-Cross Functional Team capability set approach to achieve the network modernization strategy.

Joint Battle Command-Platform (JBC-P) supports LOE 2 by utilizing:

- Interoperable data, message, and waveforms
- Integration with Joint C5ISR and strike capabilities
- Sensors and applications that enable operations across domains
- Common cyber-hardened hardware to provide improved capabilities

JBC-P is the cornerstone of Joint Forces' Command and Control (C2), Situational Awareness (SA), and Communications. JBC-P provides secure Blue Force Tracking (BFT) capability at the Platform and Command Post levels, and continuous near-real-time identification of friendly locations, reported enemy and hazardous locations populating the tactical Common Operating Picture (COP). JBC-P enables Joint, Net-Centric C2/Battle Command by seamlessly passing/sharing relevant information vertically and horizontally, within all tactical levels of command and control. JBC-P is designed to be used on L-Band Satellite Networks and terrestrial radios.

The JBC-P program procures and fields hardware (vehicle platform computer systems, satellite transceivers, encryption devices, and ancillary equipment), and software capabilities for the full spectrum of military operations. The Army is accelerating the fielding of the newest generation of JBC-P computing hardware in order to address a significant cyber vulnerability, leverage improved capabilities and get the Army on a common software baseline.

JBC-P software will be replaced with Mounted Computing Environment (MCE). Future development will continue to leverage JBC-P hardware and MCE software and integrate multiple warfighting systems into the Platform (mounted) environment.

Secondary Distribution	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	
Army	Quantity	8,488	12,061	3,977	-	3,977	2,821	2,592	2,354	251

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<b>Exhibit P-40, Budget Line Item Justification:</b> PB 2021 Army		<b>Date:</b> February 2020
<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 2035A: Other Procurement, Army / BA 02: Communications and Electronics Equipment / BSA 86: Elect Equip - Tactical Surv. (Tac Surv)		<b>P-1 Line Item Number / Title:</b> 0245W61990 / JOINT BATTLE COMMAND - PLATFORM (JBC-P)
<b>ID Code</b> (A=Service Ready, B=Not Service Ready): A	<b>Program Elements for Code B Items:</b> N/A	<b>Other Related Program Elements:</b> 0203759A, 0604805A
<b>Line Item MDAP/MAIS Code:</b> N/A		

Secondary Distribution		FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025
	Total Obligation Authority	201.991	282.114	139.244	-	139.244	104.092	97.688	88.721	168.015
ANG	Quantity	7,545	-	3,604	-	3,604	2,557	2,351	2,135	227
	Total Obligation Authority	150.000	-	76.077	-	76.077	48.538	45.574	41.370	6.159
AR	Quantity	2,829	-	1,288	-	1,288	913	839	762	82
	Total Obligation Authority	50.000	-	28.529	-	28.529	18.202	17.140	15.515	2.310
<b>Total:</b>	<b>Quantity</b>	<b>18,862</b>	<b>12,061</b>	<b>8,869</b>	<b>-</b>	<b>8,869</b>	<b>6,291</b>	<b>5,782</b>	<b>5,251</b>	<b>560</b>
<b>Secondary Distribution</b>	<b>Total Obligation Authority</b>	<b>401.991</b>	<b>282.114</b>	<b>243.850</b>	<b>-</b>	<b>243.850</b>	<b>170.832</b>	<b>160.402</b>	<b>145.606</b>	<b>176.484</b>

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

**Appropriation / Budget Activity / Budget Sub Activity:** 2035A: Other Procurement, Army / BA 02: Communications and Electronics Equipment / BSA 86: Elect Equip - Tactical Surv. (Tac Surv) **P-1 Line Item Number / Title:** 0245W61990 / JOINT BATTLE COMMAND - PLATFORM (JBC-P)

**ID Code** (A=Service Ready, B=Not Service Ready): A **Program Elements for Code B Items:** N/A **Other Related Program Elements:** 0203759A, 0604805A

**Line Item MDAP/MAIS Code:** N/A

Exhibits Schedule					Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total
Exhibit Type	Title*	Subexhibits	ID CD	MDAP/MAIS Code	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)
P-5	W61990 / JOINT BATTLE COMMAND - PLATFORM (JBC-P)	P-5a, P-21	A		39,048 / 1,128.272	18,862 / 401.991	12,061 / 282.114	8,869 / 243.850	- / -	8,869 / 243.850
<b>P-40</b>	<b>Total Gross/Weapon System Cost</b>				<b>39,048 / 1,128.272</b>	<b>18,862 / 401.991</b>	<b>12,061 / 282.114</b>	<b>8,869 / 243.850</b>	<b>- / -</b>	<b>8,869 / 243.850</b>

\*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 2021 Base Procurement dollars in the amount of \$243.850 million supports the procurement of 8,187 vehicle platform computer systems (vehicle computer and log vehicle computer), 680 Command Post systems, satellite transceivers, encryption devices, ancillary equipment, program management support, training, fielding, publications, support equipment, and Post Deployment Software and Support (PDSS).  
 In FY 2021, the Army will continue acceleration of fielding JBC-P hardware and software to address a significant cyber vulnerability, leverage improved capabilities and get the Army on a common baseline. Fielding of JBC-P is projected to be completed in FY25.  
 Accelerating JBC-P fielding will allow the Army to retire older versions of legacy system Force XXI Battle Command Brigade and Below (FBCB2) and Joint Capabilities Release (JCR) hardware and software, which will reduce interoperability issues and maintenance costs of older hardware and software. As newer hardware and software are fielded, the overall cyber resilience of the system will be improved and older, less resilient systems will be retired.  
 In accordance with Section 1815 of the FY08 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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<b>Exhibit P-5, Cost Analysis: PB 2021 Army</b>		<b>Date:</b> February 2020
<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 2035A / 02 / 86	<b>P-1 Line Item Number / Title:</b> 0245W61990 / JOINT BATTLE COMMAND - PLATFORM (JBC-P)	<b>Item Number / Title [DODIC]:</b> W61990 / JOINT BATTLE COMMAND - PLATFORM (JBC-P)

<b>ID Code</b> (A=Service Ready, B=Not Service Ready) : A				<b>MDAP/MAIS Code:</b>				
Resource Summary			Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total
Procurement Quantity (Units in Each)			39,048	18,862	12,061	8,869	-	8,869
Gross/Weapon System Cost (\$ in Millions)			1,128.272	401.991	282.114	243.850	-	243.850
Less PY Advance Procurement (\$ in Millions)			-	-	-	-	-	-
Net Procurement (P-1) (\$ in Millions)			1,128.272	401.991	282.114	243.850	-	243.850
Plus CY Advance Procurement (\$ in Millions)			-	-	-	-	-	-
<b>Total Obligation Authority (\$ in Millions)</b>			<b>1,128.272</b>	<b>401.991</b>	<b>282.114</b>	<b>243.850</b>	<b>-</b>	<b>243.850</b>
<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)			28.894	21.312	23.391	27.495	-	27.495

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

Cost Elements	Prior Years			FY 2019			FY 2020			FY 2021 Base			FY 2021 OCO			FY 2021 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																		
JBC-P Veh Computer; LIN C05036 <sup>(t)</sup>	11.231	36,324	407.955	24.215	9,435	228.469	20.540	7,768	159.555	20.924	6,339	132.637	-	-	-	20.924	6,339	132.637
JBC-P Cmd Post; LIN C05037 <sup>(t)</sup>	10.539	2,287	24.103	24.214	597	14.456	20.540	491	10.085	20.923	400	8.369	-	-	-	20.923	400	8.369
JBC-P Log Mobile; LIN C05055 <sup>(t)</sup>	10.449	10,608	110.843	22.391	2,748	61.530	20.105	2,265	45.538	20.304	1,848	37.522	-	-	-	20.304	1,848	37.522
JBC-P Log Cmd Post; LIN C05054 <sup>(t)</sup>	10.464	1,619	16.941	22.390	420	9.404	20.105	344	6.916	20.304	280	5.685	-	-	-	20.304	280	5.685
Ancillary HW	-	-	138.114	-	-	7.178	-	-	8.127	-	-	7.376	-	-	-	-	-	7.376
System Engineering (Services for JBC-P's Hardware)	-	-	48.465	-	-	11.966	-	-	3.200	-	-	3.258	-	-	-	-	-	3.258
Engineering Changes (Geospatial)	-	-	3.812	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
<i>Subtotal: Recurring Cost</i>	<i>-</i>	<i>-</i>	<i>750.233</i>	<i>-</i>	<i>-</i>	<i>333.003</i>	<i>-</i>	<i>-</i>	<i>233.421</i>	<i>-</i>	<i>-</i>	<i>194.847</i>	<i>-</i>	<i>-</i>	<i>-</i>	<i>-</i>	<i>-</i>	<i>194.847</i>
Non Recurring Cost																		
ABCT	-	-	12.177	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Platform Integration	-	-	35.347	-	-	11.626	-	-	9.523	-	-	9.164	-	-	-	-	-	9.164
<i>Subtotal: Non Recurring Cost</i>	<i>-</i>	<i>-</i>	<i>47.524</i>	<i>-</i>	<i>-</i>	<i>11.626</i>	<i>-</i>	<i>-</i>	<i>9.523</i>	<i>-</i>	<i>-</i>	<i>9.164</i>	<i>-</i>	<i>-</i>	<i>-</i>	<i>-</i>	<i>-</i>	<i>9.164</i>
<i>Subtotal: Flyaway Cost</i>	<i>-</i>	<i>-</i>	<i>797.757</i>	<i>-</i>	<i>-</i>	<i>344.629</i>	<i>-</i>	<i>-</i>	<i>242.944</i>	<i>-</i>	<i>-</i>	<i>204.011</i>	<i>-</i>	<i>-</i>	<i>-</i>	<i>-</i>	<i>-</i>	<i>204.011</i>



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<b>Exhibit P-5, Cost Analysis: PB 2021 Army</b>												<b>Date:</b> February 2020					
<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 2035A / 02 / 86						<b>P-1 Line Item Number / Title:</b> 0245W61990 / JOINT BATTLE COMMAND - PLATFORM (JBC-P)						<b>Item Number / Title [DODIC]:</b> W61990 / JOINT BATTLE COMMAND - PLATFORM (JBC-P)					
<b>ID Code</b> (A=Service Ready, B=Not Service Ready) : A										<b>MDAP/MAIS Code:</b>							

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

Cost Elements	Prior Years			FY 2019			FY 2020			FY 2021 Base			FY 2021 OCO			FY 2021 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																		
Post Deployment Software Support (PDSS)	-	-	31.680	-	-	13.410	-	-	3.300	-	-	3.366	-	-	-	-	-	3.366
<i>Subtotal: Recurring Cost</i>	-	-	<i>31.680</i>	-	-	<i>13.410</i>	-	-	<i>3.300</i>	-	-	<i>3.366</i>	-	-	-	-	-	<i>3.366</i>
<b>Subtotal: Software Cost</b>	-	-	<b>31.680</b>	-	-	<b>13.410</b>	-	-	<b>3.300</b>	-	-	<b>3.366</b>	-	-	-	-	-	<b>3.366</b>
Support - Fielding Cost																		
Fielding	-	-	99.405	-	-	22.501	-	-	24.673	-	-	22.673	-	-	-	-	-	22.673
<i>Subtotal: Support - Fielding Cost</i>	-	-	<i>99.405</i>	-	-	<i>22.501</i>	-	-	<i>24.673</i>	-	-	<i>22.673</i>	-	-	-	-	-	<i>22.673</i>
Support - Initial Spares and Repair Parts Cost																		
Initial Spares and Repair Parts	-	-	0.520	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
<i>Subtotal: Support - Initial Spares and Repair Parts Cost</i>	-	-	<i>0.520</i>	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Support - Peculiar Support Equipment Cost																		
Support and Handling Equipment	-	-	14.600	-	-	0.886	-	-	-	-	-	0.903	-	-	-	-	-	0.903
<i>Subtotal: Support - Peculiar Support Equipment Cost</i>	-	-	<i>14.600</i>	-	-	<i>0.886</i>	-	-	-	-	-	<i>0.903</i>	-	-	-	-	-	<i>0.903</i>
Support - Program Management Cost																		
Contractor Management	-	-	43.588	-	-	2.649	-	-	2.200	-	-	2.649	-	-	-	-	-	2.649
<i>Subtotal: Support - Program Management Cost</i>	-	-	<i>43.588</i>	-	-	<i>2.649</i>	-	-	<i>2.200</i>	-	-	<i>2.649</i>	-	-	-	-	-	<i>2.649</i>
Support - System Engineering Cost																		
System Engineering	-	-	88.070	-	-	11.464	-	-	8.907	-	-	8.730	-	-	-	-	-	8.730
<i>Subtotal: Support - System Engineering Cost</i>	-	-	<i>88.070</i>	-	-	<i>11.464</i>	-	-	<i>8.907</i>	-	-	<i>8.730</i>	-	-	-	-	-	<i>8.730</i>
Support - System Test and Evaluation Cost																		
Test and Evaluation Support	-	-	35.565	-	-	5.412	-	-	-	-	-	0.525	-	-	-	-	-	0.525
<i>Subtotal: Support - System Test and Evaluation Cost</i>	-	-	<i>35.565</i>	-	-	<i>5.412</i>	-	-	-	-	-	<i>0.525</i>	-	-	-	-	-	<i>0.525</i>
Support - Training Cost																		
Equipment	-	-	17.087	-	-	1.040	-	-	0.090	-	-	0.993	-	-	-	-	-	0.993

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<b>Exhibit P-5, Cost Analysis: PB 2021 Army</b>		<b>Date:</b> February 2020
<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 2035A / 02 / 86	<b>P-1 Line Item Number / Title:</b> 0245W61990 / JOINT BATTLE COMMAND - PLATFORM (JBC-P)	<b>Item Number / Title [DODIC]:</b> W61990 / JOINT BATTLE COMMAND - PLATFORM (JBC-P)
<b>ID Code</b> (A=Service Ready, B=Not Service Ready) : A		<b>MDAP/MAIS Code:</b>

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

Cost Elements	Prior Years			FY 2019			FY 2020			FY 2021 Base			FY 2021 OCO			FY 2021 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 - Training Cost</i>	-	-	17.087	-	-	1.040	-	-	0.090	-	-	0.993	-	-	-	-	-	0.993
<b>Gross/Weapon System Cost</b>	28.894	39,048	1,128.272	21.312	18,862	401.991	23.391	12,061	282.114	27.495	8,869	243.850	-	-	-	27.495	8,869	243.850

**Remarks:**

Changes to P-5 reflected in the FY 2021 P-5 Cost Elements:

- 1) Costs from previously labeled, "Operational/Site Activation (Vehicle Conversion)" have been moved from the "Support" section to the "Non Recurring Cost" section, now called "Platform Integration". This change occurred because the previous naming convention did not accurately describe line item.
- 2) Costs from previously labeled "Systems Engineering" have been moved from the "Support" section to the "Software Cost" section, now called "Post Deployment Software Support (PDSS)". This change occurred because the previous naming convention did not accurately describe line item.
- 3) Costs from the previously labeled "System Technical Support" have been re-categorized (within the same "Support" section), now called, "Systems Engineering". This change occurred because the previous naming convention did not accurately describe line item.
- 4) Quantities on P-5 are actuals; quantities on P-40 cannot be changed and are incorrect from Prior-FY20.
- 5) Unit costs fluctuate year by year since they are based on an average and the mix of platform type procured by year. JBC-P's system (quantity) is comprised of 4 hardware components: MFoCS computer (unit of measure), BFT 2 transceiver, KGV-72 encryption device, and installation kits. Unit costs are based on the average of those 4 hardware components.

Secondary Distribution		FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total
Army	Quantity	8,488	12,061	3,977	-	3,977
	Total Obligation Authority	201.991	282.114	139.244	-	139.244
ANG	Quantity	7,545	-	3,604	-	3,604
	Total Obligation Authority	150.000	-	76.077	-	76.077
AR	Quantity	2,829	-	1,288	-	1,288
	Total Obligation Authority	50.000	-	28.529	-	28.529
<b>Total:</b>	<b>Quantity</b>	<b>18,862</b>	<b>12,061</b>	<b>8,869</b>	<b>-</b>	<b>8,869</b>
<b>Secondary Distribution</b>	<b>Total Obligation Authority</b>	<b>401.991</b>	<b>282.114</b>	<b>243.850</b>	<b>-</b>	<b>243.850</b>

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

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Exhibit P-5a, Procurement History and Planning: PB 2021 Army								Date: February 2020				
Appropriation / Budget Activity / Budget Sub Activity: 2035A / 02 / 86			P-1 Line Item Number / Title: 0245W61990 / JOINT BATTLE COMMAND - PLATFORM (JBC-P)					Item Number / Title [DODIC]: W61990 / JOINT BATTLE COMMAND - PLATFORM (JBC-P)				
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
JBC-P Veh Computer; LIN C05036 <sup>(†)</sup>		2018	DRS Tactical - Melbourne, FL / Melbourne, FL	C / FFP	Army Contracting Cmd, APG, MD	Nov 2017	May 2018	16,964	10.316	Y		
JBC-P Veh Computer; LIN C05036 <sup>(†)</sup>		2019	DRS Tactical - Melbourne, FL / Melbourne, FL	C / FFP	Army Contracting Cmd, APG, MD	Nov 2018	May 2019	9,435	24.215	Y		
JBC-P Veh Computer; LIN C05036 <sup>(†)</sup>		2020	DRS Tactical - Melbourne, FL / Melbourne, FL	C / FFP	Army Contracting Cmd, APG, MD	Nov 2019	May 2020	7,768	20.540	Y		
JBC-P Veh Computer; LIN C05036 <sup>(†)</sup>		2021	DRS Tactical - Melbourne, FL / Melbourne, FL	C / FFP	Army Contracting Cmd, APG, MD	Nov 2020	May 2021	6,339	20.924	Y		
JBC-P Cmd Post; LIN C05037 <sup>(†)</sup>		2018	DRS Tactical - Melbourne, FL / Melbourne, FL	C / FFP	Army Contracting Cmd, APG, MD	Nov 2017	May 2018	1,073	10.351	Y		
JBC-P Cmd Post; LIN C05037 <sup>(†)</sup>		2019	DRS Tactical - Melbourne, FL / Melbourne, FL	C / FFP	Army Contracting Cmd, APG, MD	Nov 2018	May 2019	597	24.214	Y		
JBC-P Cmd Post; LIN C05037 <sup>(†)</sup>		2020	DRS Tactical - Melbourne, FL / Melbourne, FL	C / FFP	Army Contracting Cmd, APG, MD	Nov 2019	May 2020	491	20.540	Y		
JBC-P Cmd Post; LIN C05037 <sup>(†)</sup>		2021	DRS Tactical - Melbourne, FL / Melbourne, FL	C / FFP	Army Contracting Cmd, APG, MD	Nov 2020	May 2021	400	20.923	Y		
JBC-P Log Mobile; LIN C05055 <sup>(†)</sup>		2018	DRS Tactical - Melbourne, FL / Melbourne, FL	C / FFP	Army Contracting Cmd, APG, MD	Nov 2017	May 2018	4,941	10.155	Y		
JBC-P Log Mobile; LIN C05055 <sup>(†)</sup>		2019	DRS Tactical - Melbourne, FL / Melbourne, FL	C / FFP	Army Contracting Cmd, APG, MD	Nov 2018	May 2019	2,748	22.391	Y		
JBC-P Log Mobile; LIN C05055 <sup>(†)</sup>		2020	DRS Tactical - Melbourne, FL / Melbourne, FL	C / FFP	Army Contracting Cmd, APG, MD	Nov 2019	May 2020	2,265	20.105	Y		
JBC-P Log Mobile; LIN C05055 <sup>(†)</sup>		2021	DRS Tactical - Melbourne, FL / Melbourne, FL	C / FFP	Army Contracting Cmd, APG, MD	Nov 2020	May 2021	1,848	20.304	Y		
JBC-P Log Cmd Post; LIN C05054 <sup>(†)</sup>		2018	DRS Tactical - Melbourne, FL / Melbourne, FL	C / FFP	Army Contracting Cmd, APG, MD	Nov 2017	May 2018	755	10.191	Y		
JBC-P Log Cmd Post; LIN C05054 <sup>(†)</sup>		2019	DRS Tactical - Melbourne, FL / Melbourne, FL	C / FFP	Army Contracting Cmd, APG, MD	Nov 2018	May 2019	420	22.390	Y		
JBC-P Log Cmd Post; LIN C05054 <sup>(†)</sup>		2020	DRS Tactical - Melbourne, FL / Melbourne, FL	C / FFP	Army Contracting Cmd, APG, MD	Nov 2019	May 2020	344	20.105	Y		
JBC-P Log Cmd Post; LIN C05054 <sup>(†)</sup>		2021	DRS Tactical - Melbourne, FL / Melbourne, FL	C / FFP	DRS Tactical - Melbourne, FL - Melbourne, FL*	Nov 2020	May 2021	280	20.304	Y		

<sup>(†)</sup> indicates the presence of a P-21

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<b>Exhibit P-21, Production Schedule:</b> PB 2021 Army															<b>Date:</b> February 2020														
<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 2035A / 02 / 86										<b>P-1 Line Item Number / Title:</b> 0245W61990 / JOINT BATTLE COMMAND - PLATFORM (JBC-P)										<b>Item Number / Title [DODIC]:</b> W61990 / JOINT BATTLE COMMAND - PLATFORM (JBC-P)									

Cost Elements <i>(Units in Thousands)</i>					Fiscal Year 2018															Fiscal Year 2019															B A L A N C E				
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									
JBC-P Veh Computer; LIN C05036																																							
Prior Years Deliveries: 19360																																							
	1	2018	ARMY	16.964	.000	16.964		A	-	-	-	-	-	-	-	1.414	1.414	1.414	1.414	1.414	1.414	1.414	1.414	1.414	1.414	1.414	1.414	1.413	1.413	1.413	1.413			.000					
	1	2019	ARMY	9.435	.000	9.435																												.751	.751	.751	.751	.751	5.680
	1	2020	ARMY	7.768	.000	7.768																																7.768	
	1	2021	ARMY	6.339	.000	6.339																																6.339	
JBC-P Cmd Post; LIN C05037																																							
Prior Years Deliveries: 1214																																							
	2	2018	ARMY	1.073	.000	1.073		A	-	-	-	-	-	-	.090	.090	.090	.090	.090	.089	.089	.089	.089	.089	.089	.089	.089	.089	.089							.000			
	2	2019	ARMY	.597	.000	.597																															.347		
	2	2020	ARMY	.491	.000	.491																															.491		
	2	2021	ARMY	.400	.000	.400																															.400		
JBC-P Log Mobile; LIN C05055																																							
Prior Years Deliveries: 5667																																							
	3	2018	ARMY	4.941	.000	4.941		A	-	-	-	-	-	.412	.412	.412	.412	.412	.412	.412	.412	.412	.412	.412	.412	.412	.412	.411	.411	.411						.000			
	3	2019	ARMY	2.748	.000	2.748																															.1603		
	3	2020	ARMY	2.265	.000	2.265																															2.265		
	3	2021	ARMY	1.848	.000	1.848																															1.848		
JBC-P Log Cmd Post; LIN C05054																																							
Prior Years Deliveries: 864																																							
	4	2018	ARMY	.755	.000	.755		A	-	-	-	-	-	.063	.063	.063	.063	.063	.063	.063	.063	.063	.063	.063	.063	.063	.063	.063	.062						.000				
	4	2019	ARMY	.420	.000	.420																															.245		
	4	2020	ARMY	.344	.000	.344																															.344		
	4	2021	ARMY	.280	.000	.280																															.280		
								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								

**UNCLASSIFIED**

<b>Exhibit P-21, Production Schedule: PB 2021 Army</b>															<b>Date: February 2020</b>														
<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 2035A / 02 / 86										<b>P-1 Line Item Number / Title:</b> 0245W61990 / JOINT BATTLE COMMAND - PLATFORM (JBC-P)										<b>Item Number / Title [DODIC]:</b> W61990 / JOINT BATTLE COMMAND - PLATFORM (JBC-P)									

Cost Elements <i>(Units in Thousands)</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	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			
JBC-P Veh Computer; LIN C05036																																	
Prior Years Deliveries: 19360																																	
	1	2018	ARMY	16.964	16.964	.000																								.000			
	1	2019	ARMY	9.435	3.755	5.680	1.173	.750	.751	.751	.751	.752	.752																	.000			
	1	2020	ARMY	7.768	.000	7.768		A -	-	-	-	-	-	.647	.647	.647	.647	.647	.647	.647	.647	.648	.648	.648	.648					.000			
	1	2021	ARMY	6.339	.000	6.339																								3.699			
JBC-P Cmd Post; LIN C05037																																	
Prior Years Deliveries: 1214																																	
	2	2018	ARMY	1.073	1.073	.000																								.000			
	2	2019	ARMY	.597	.250	.347	.050	.050	.050	.050	.049	.049	.049																	.000			
	2	2020	ARMY	.491	.000	.491		A -	-	-	-	-	-	.041	.041	.041	.041	.041	.041	.041	.041	.041	.041	.041	.040					.000			
	2	2021	ARMY	.400	.000	.400																								.235			
JBC-P Log Mobile; LIN C05055																																	
Prior Years Deliveries: 5667																																	
	3	2018	ARMY	4.941	4.941	.000																								.000			
	3	2019	ARMY	2.748	1.145	1.603	.229	.229	.229	.229	.229	.229	.229																	.000			
	3	2020	ARMY	2.265	.000	2.265		A -	-	-	-	-	-	.188	.188	.188	.189	.189	.189	.189	.189	.189	.189	.189	.189					.000			
	3	2021	ARMY	1.848	.000	1.848																								1.074			
JBC-P Log Cmd Post; LIN C05054																																	
Prior Years Deliveries: 864																																	
	4	2018	ARMY	.755	.755	.000																								.000			
	4	2019	ARMY	.420	.175	.245	.035	.035	.035	.035	.035	.035	.035																	.000			
	4	2020	ARMY	.344	.000	.344		A -	-	-	-	-	-	.028	.028	.028	.028	.029	.029	.029	.029	.029	.029	.029	.029					.000			
	4	2021	ARMY	.280	.000	.280																								.161			
								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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<b>Exhibit P-21, Production Schedule:</b> PB 2021 Army															<b>Date:</b> February 2020														
<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 2035A / 02 / 86										<b>P-1 Line Item Number / Title:</b> 0245W61990 / JOINT BATTLE COMMAND - PLATFORM (JBC-P)										<b>Item Number / Title [DODIC]:</b> W61990 / JOINT BATTLE COMMAND - PLATFORM (JBC-P)									

Cost Elements <i>(Units in Thousands)</i>					Fiscal Year 2022												Fiscal Year 2023												B A L A N C E		
O C 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
JBC-P Veh Computer; LIN C05036																															
Prior Years Deliveries: 19360																															
	1	2018	ARMY	16.964	16.964	.000																							.000		
	1	2019	ARMY	9.435	9.435	.000																							.000		
	1	2020	ARMY	7.768	7.768	.000																							.000		
	1	2021	ARMY	6.339	2.640	3.699	.528	.528	.528	.528	.529	.529	.529																.000		
JBC-P Cmd Post; LIN C05037																															
Prior Years Deliveries: 1214																															
	2	2018	ARMY	1.073	1.073	.000																							.000		
	2	2019	ARMY	.597	.597	.000																							.000		
	2	2020	ARMY	.491	.491	.000																							.000		
	2	2021	ARMY	.400	.165	.235	.033	.033	.033	.034	.034	.034	.034																.000		
JBC-P Log Mobile; LIN C05055																															
Prior Years Deliveries: 5667																															
	3	2018	ARMY	4.941	4.941	.000																							.000		
	3	2019	ARMY	2.748	2.748	.000																							.000		
	3	2020	ARMY	2.265	2.265	.000																							.000		
	3	2021	ARMY	1.848	.774	1.074	.154	.154	.154	.154	.150	.154	.154																.000		
JBC-P Log Cmd Post; LIN C05054																															
Prior Years Deliveries: 864																															
	4	2018	ARMY	.755	.755	.000																							.000		
	4	2019	ARMY	.420	.420	.000																							.000		
	4	2020	ARMY	.344	.344	.000																							.000		
	4	2021	ARMY	.280	.119	.161	.023	.023	.023	.023	.023	.023	.023																.000		
							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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<b>Exhibit P-21, Production Schedule:</b> PB 2021 Army		<b>Date:</b> February 2020
<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 2035A / 02 / 86		<b>P-1 Line Item Number / Title:</b> 0245W61990 / JOINT BATTLE COMMAND - PLATFORM (JBC-P)
		<b>Item Number / Title [DODIC]:</b> W61990 / JOINT BATTLE COMMAND - PLATFORM (JBC-P)

MFR Ref #	Manufacturer Name - Location	Production Rates (Each / Month)			Procurement Leadtime (Months)							
		MSR For 2021	1-8-5 For 2021	MAX For 2021	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	DRS Tactical - Melbourne, FL - Melbourne, FL	20	220	2,000	1	1	5	6	1	1	5	6
2	DRS Tactical - Melbourne, FL - Melbourne, FL	20	220	2,000	1	1	5	6	1	1	5	6
3	DRS Tactical - Melbourne, FL - Melbourne, FL	20	220	2,000	1	1	5	6	1	1	5	6
4	DRS Tactical - Melbourne, FL - Melbourne, FL	20	220	2,000	1	1	5	6	1	1	5	6

"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 2021 Army **Date:** February 2020

<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 2035A: Other Procurement, Army / BA 02: Communications and Electronics Equipment / BSA 86: Elect Equip - Tactical Surv. (Tac Surv)	<b>P-1 Line Item Number / Title:</b> 0254K32101 / JOINT EFFECTS TARGETING SYSTEM (JETS)
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<b>ID Code</b> (A=Service Ready, B=Not Service Ready): A	<b>Program Elements for Code B Items:</b> N/A	<b>Other Related Program Elements:</b> 0604710A
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**Line Item MDAP/MAIS Code:** N/A

Resource Summary	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	To Complete	Total
Procurement Quantity ( <i>Units in Each</i> )	435	303	100	367	-	367	359	359	352	343	Continuing	Continuing
Gross/Weapon System Cost ( <i>\$ in Millions</i> )	135.275	66.574	25.330	69.641	-	69.641	67.932	69.629	69.624	69.623	Continuing	Continuing
Less PY Advance Procurement ( <i>\$ in Millions</i> )	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) ( <i>\$ in Millions</i> )	135.275	66.574	25.330	69.641	-	69.641	67.932	69.629	69.624	69.623	Continuing	Continuing
Plus CY Advance Procurement ( <i>\$ in Millions</i> )	-	-	-	-	-	-	-	-	-	-	-	-
<b>Total Obligation Authority (<i>\$ in Millions</i>)</b>	<b>135.275</b>	<b>66.574</b>	<b>25.330</b>	<b>69.641</b>	<b>-</b>	<b>69.641</b>	<b>67.932</b>	<b>69.629</b>	<b>69.624</b>	<b>69.623</b>	<b>Continuing</b>	<b>Continuing</b>

*(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> )	310.977	219.716	253.300	189.757	-	189.757	189.226	193.953	197.795	202.983	Continuing	Continuing

**Description:**

The Joint Effects Targeting System (JETS) Target Locator/Designator System (TLDS) provides the individual dismounted observer an integrated, lightweight, modular capability to detect, identify, accurately locate targets in three dimensions; mark, and designate targets and provide accurate target location coordinates to a forward entry system for engagement with precision munitions. The JETS TLDS is an Army program with joint information (Air Force and Marine Corps).

JETS will support the Army's fires sensor strategy and is aligned with the Army's priorities in support of the National Defense Strategy. JETS will satisfy the requirement for the dismounted precision targeting sensor for the individual observer.

The Army Acquisition Objective (AAO) for this program is 3,355.

Secondary Distribution	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	
Army	Quantity	182	60	220	-	220	215	215	211	205
	Total Obligation Authority	39.988	15.198	41.717	-	41.717	40.835	41.671	41.707	41.583
ANG	Quantity	121	40	147	-	147	144	144	141	138
	Total Obligation Authority	26.586	10.132	27.924	-	27.924	27.097	27.958	27.917	28.040
<b>Total: Secondary Distribution</b>	<b>Quantity</b>	<b>303</b>	<b>100</b>	<b>367</b>	<b>-</b>	<b>367</b>	<b>359</b>	<b>359</b>	<b>352</b>	<b>343</b>
	<b>Total Obligation Authority</b>	<b>66.574</b>	<b>25.330</b>	<b>69.641</b>	<b>-</b>	<b>69.641</b>	<b>67.932</b>	<b>69.629</b>	<b>69.624</b>	<b>69.623</b>



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

**Appropriation / Budget Activity / Budget Sub Activity:** 2035A: Other Procurement, Army / BA 02: Communications and Electronics Equipment / BSA 86: Elect Equip - Tactical Surv. (Tac Surv) **P-1 Line Item Number / Title:** 0254K32101 / JOINT EFFECTS TARGETING SYSTEM (JETS)

**ID Code** (A=Service Ready, B=Not Service Ready): A **Program Elements for Code B Items:** N/A **Other Related Program Elements:** 0604710A

**Line Item MDAP/MAIS Code:** N/A

Exhibits Schedule					Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total
Exhibit Type	Title*	Subexhibits	ID CD	MDAP/MAIS Code	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)
P-5	K32101 / JOINT EFFECTS TARGETING SYSTEM (JETS)	P-5a, P-21	A		435 / 135.275	303 / 66.574	100 / 25.330	367 / 69.641	- / -	367 / 69.641
<b>P-40</b>	<b>Total Gross/Weapon System Cost</b>				<b>435 / 135.275</b>	<b>303 / 66.574</b>	<b>100 / 25.330</b>	<b>367 / 69.641</b>	<b>- / -</b>	<b>367 / 69.641</b>

\*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 2021 Base procurement dollars in the amount of \$69.641 million support the procurement of 367 Joint Effects Targeting System (JETS). These systems will be fielded in accordance with the HQDA priority list.

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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<b>Exhibit P-5, Cost Analysis: PB 2021 Army</b>		<b>Date:</b> February 2020
<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 2035A / 02 / 86		<b>P-1 Line Item Number / Title:</b> 0254K32101 / JOINT EFFECTS TARGETING SYSTEM (JETS)
		<b>Item Number / Title [DODIC]:</b> K32101 / JOINT EFFECTS TARGETING SYSTEM (JETS)

<b>ID Code</b> (A=Service Ready, B=Not Service Ready) : A	<b>MDAP/MAIS Code:</b>
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Resource Summary	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total
Procurement Quantity (Units in Each)	435	303	100	367	-	367
Gross/Weapon System Cost (\$ in Millions)	135.275	66.574	25.330	69.641	-	69.641
Less PY Advance Procurement (\$ in Millions)	-	-	-	-	-	-
Net Procurement (P-1) (\$ in Millions)	135.275	66.574	25.330	69.641	-	69.641
Plus CY Advance Procurement (\$ in Millions)	-	-	-	-	-	-
<b>Total Obligation Authority (\$ in Millions)</b>	<b>135.275</b>	<b>66.574</b>	<b>25.330</b>	<b>69.641</b>	<b>-</b>	<b>69.641</b>

*(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)	310.977	219.716	253.300	189.757	-	189.757

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

Cost Elements	Prior Years			FY 2019			FY 2020			FY 2021 Base			FY 2021 OCO			FY 2021 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																		
Project Management	-	-	5.401	-	-	2.892	-	-	1.244	-	-	1.530	-	-	-	-	-	1.530
Systems Engineering Support	-	-	3.614	-	-	2.609	-	-	2.399	-	-	2.282	-	-	-	-	-	2.282
Training	-	-	2.220	-	-	0.177	-	-	1.699	-	-	2.415	-	-	-	-	-	2.415
Fielding	-	-	0.406	-	-	-	-	-	0.464	-	-	0.478	-	-	-	-	-	0.478
Subtotal: Recurring Cost	-	-	11.641	-	-	5.678	-	-	5.806	-	-	6.705	-	-	-	-	-	6.705
Subtotal: Flyaway Cost	-	-	11.641	-	-	5.678	-	-	5.806	-	-	6.705	-	-	-	-	-	6.705
Hardware Cost																		
Recurring Cost																		
Joint Effects Targeting System <sup>(†)</sup>	261.821	453	118.605	-	-	60.896	182.270	100	18.227	167.736	367	61.559	-	-	-	167.736	367	61.559
Ancillary Equipment	-	-	2.059	-	-	-	-	-	1.297	-	-	1.377	-	-	-	-	-	1.377
Subtotal: Recurring Cost	-	-	120.664	-	-	60.896	-	-	19.524	-	-	62.936	-	-	-	-	-	62.936
Non Recurring Cost																		
Initial Non-Recurring	-	-	2.970	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Subtotal: Non Recurring Cost	-	-	2.970	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Subtotal: Hardware Cost	-	-	123.634	-	-	60.896	-	-	19.524	-	-	62.936	-	-	-	-	-	62.936
<b>Gross/Weapon System Cost</b>	<b>310.977</b>	<b>435</b>	<b>135.275</b>	<b>219.716</b>	<b>303</b>	<b>66.574</b>	<b>253.300</b>	<b>100</b>	<b>25.330</b>	<b>189.757</b>	<b>367</b>	<b>69.641</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>189.757</b>	<b>367</b>	<b>69.641</b>

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<b>Exhibit P-5, Cost Analysis:</b> PB 2021 Army		<b>Date:</b> February 2020
<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 2035A / 02 / 86	<b>P-1 Line Item Number / Title:</b> 0254K32101 / JOINT EFFECTS TARGETING SYSTEM (JETS)	<b>Item Number / Title [DODIC]:</b> K32101 / JOINT EFFECTS TARGETING SYSTEM (JETS)

<b>ID Code</b> (A=Service Ready, B=Not Service Ready) : A	<b>MDAP/MAIS Code:</b>
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**Remarks:**  
Due to production issues \$60.896M in FY19 funds for the 303 systems were returned to the Army.

Secondary Distribution		FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total
Army	Quantity	182	60	220	-	220
	Total Obligation Authority	39.988	15.198	41.717	-	41.717
ANG	Quantity	121	40	147	-	147
	Total Obligation Authority	26.586	10.132	27.924	-	27.924
<b>Total:</b>	<b>Quantity</b>	<b>303</b>	<b>100</b>	<b>367</b>	-	<b>367</b>
<b>Secondary Distribution</b>	<b>Total Obligation Authority</b>	<b>66.574</b>	<b>25.330</b>	<b>69.641</b>	-	<b>69.641</b>

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

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<b>Exhibit P-5a, Procurement History and Planning:</b> PB 2021 Army							<b>Date:</b> February 2020				
<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 2035A / 02 / 86			<b>P-1 Line Item Number / Title:</b> 0254K32101 / JOINT EFFECTS TARGETING SYSTEM (JETS)				<b>Item Number / Title [DODIC]:</b> K32101 / JOINT EFFECTS TARGETING SYSTEM (JETS)				

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
Joint Effects Targeting System <sup>(†)</sup>		2020	DRS / Melbourne, FL	C / FFP	ACC-APG	Jun 2020	Jun 2021	100	182.270	Y		
Joint Effects Targeting System <sup>(†)</sup>		2021	DRS / Melbourne, FL	C / FFP	ACC-APG	May 2021	Apr 2022	367	167.736	Y		

<sup>(†)</sup> indicates the presence of a P-21

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<b>Exhibit P-21, Production Schedule:</b> PB 2021 Army														<b>Date:</b> February 2020															
<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 2035A / 02 / 86										<b>P-1 Line Item Number / Title:</b> 0254K32101 / JOINT EFFECTS TARGETING SYSTEM (JETS)										<b>Item Number / Title [DODIC]:</b> K32101 / JOINT EFFECTS TARGETING SYSTEM (JETS)									

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					

Joint Effects Targeting System																																																					
Prior Years Deliveries: 453																																																					
1	2020	ARMY	100	0	100															A	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	10	10	10	10	60											
1	2021	ARMY	367	0	367																													A	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	367
<table border="1" style="width:100%; border-collapse: collapse;"> <tr> <td>O C T</td><td>N O V</td><td>D E C</td><td>J A N</td><td>F E B</td><td>M A R</td><td>A P R</td><td>M A Y</td><td>J U N</td><td>J U L</td><td>A U G</td><td>S E P</td><td>O C T</td><td>N O V</td><td>D E C</td><td>J A N</td><td>F E B</td><td>M A R</td><td>A P R</td><td>M A Y</td><td>J U N</td><td>J U L</td><td>A U G</td><td>S E P</td> </tr> </table>																														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
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																														

**UNCLASSIFIED**

<b>Exhibit P-21, Production Schedule:</b> PB 2021 Army															<b>Date:</b> February 2020														
<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 2035A / 02 / 86										<b>P-1 Line Item Number / Title:</b> 0254K32101 / JOINT EFFECTS TARGETING SYSTEM (JETS)										<b>Item Number / Title [DODIC]:</b> K32101 / JOINT EFFECTS TARGETING SYSTEM (JETS)									

Cost Elements <i>(Units in Each)</i>					Fiscal Year 2022												Fiscal Year 2023												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 2 1	BAL D U E A S O F 1 O C T	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			
Joint Effects Targeting System																																		
Prior Years Deliveries: 453																																		
1		2020	ARMY	100	40	60	10	10	10	10	10	10																						0
1		2021	ARMY	367	0	367	-	-	-	-	-	-	22	35	35	35	30	30	30	30	30	30	30	30	30	30	30	30					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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<b>Exhibit P-21, Production Schedule:</b> PB 2021 Army		<b>Date:</b> February 2020
<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 2035A / 02 / 86		<b>P-1 Line Item Number / Title:</b> 0254K32101 / JOINT EFFECTS TARGETING SYSTEM (JETS)
		<b>Item Number / Title [DODIC]:</b> K32101 / JOINT EFFECTS TARGETING SYSTEM (JETS)

MFR Ref #	Manufacturer Name - Location	Production Rates (Each / Month)			Procurement Leadtime (Months)							
		MSR For 2021	1-8-5 For 2021	MAX For 2021	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	DRS - Melbourne, FL	10	30	50	2	8	12	20	2	7	11	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, Budget Line Item Justification:** PB 2021 Army **Date:** February 2020

<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 2035A: Other Procurement, Army / BA 02: Communications and Electronics Equipment / BSA 86: Elect Equip - Tactical Surv. (Tac Surv)	<b>P-1 Line Item Number / Title:</b> 0255KA3100 / Mod Of In-Svc Equip (LLDR)
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<b>ID Code</b> (A=Service Ready, B=Not Service Ready): A	<b>Program Elements for Code B Items:</b> N/A	<b>Other Related Program Elements:</b> 0604710A
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**Line Item MDAP/MAIS Code:** N/A

Resource Summary	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	To Complete	Total
Procurement Quantity ( <i>Units in Each</i> )	176	205	-	-	-	-	-	-	-	-	-	381
Gross/Weapon System Cost ( <i>\$ in Millions</i> )	183.348	24.833	6.044	-	-	-	-	-	-	-	-	214.225
Less PY Advance Procurement ( <i>\$ in Millions</i> )	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) ( <i>\$ in Millions</i> )	183.348	24.833	6.044	-	-	-	-	-	-	-	-	214.225
Plus CY Advance Procurement ( <i>\$ in Millions</i> )	-	-	-	-	-	-	-	-	-	-	-	-
<b>Total Obligation Authority (<i>\$ in Millions</i>)</b>	<b>183.348</b>	<b>24.833</b>	<b>6.044</b>	-	-	-	-	-	-	-	-	<b>214.225</b>

*(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> )	1,041.750	121.137	-	-	-	-	-	-	-	-	-	562.270

**Description:**

Modification of In-Service equipment funds the retrofit of the Lightweight Laser Designator Rangefinder (LLDR) to incorporate target location improvements. The upgraded LLDR system is type classified as LLDR 2H. The LLDR is a modular system designed for crew-served, man-portable day/night all-weather use for determining the precise location of threat targets, and for designating threat targets for engagement by Global Position System (GPS) guided and laser guided precision munitions for a variety of Army and Joint weapons systems. The Target Location Module uses a thermal sensor, day camera, laser rangefinder, and digital compass, GPS, and system controller with digital data and video outputs. The Laser Designator Module provides the capability to guide laser-guided munitions and the capability to mark targets for targeting hand-off to aircraft. This effort also replaces earlier Laser Designator Modules with new diode-pumped Laser Designator Modules, reducing weight and power requirements and resulting in lower sustainment costs. The target location improvement retrofit adds a precision azimuth measurement sensor to supplement the digital compass. Target location improvements enable precision target location and engagement with current and future precision munitions by dismounted fire support teams.

The Army Acquisition Objective (AAO) for this program is 2,700.

Secondary Distribution	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025
Army									
	Quantity	205	-	-	-	-	-	-	-
	Total Obligation Authority	24.833	6.044	-	-	-	-	-	-
<b>Total:</b>	<b>Quantity</b>	<b>205</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>
<b>Secondary Distribution</b>	<b>Total Obligation Authority</b>	<b>24.833</b>	<b>6.044</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>

**Justification:**

There is no FY 2021 Base procurement funding since the program is moving into sustainment.

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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<b>Exhibit P-40, Budget Line Item Justification:</b> PB 2021 Army		<b>Date:</b> February 2020
<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 2035A: Other Procurement, Army / BA 02: Communications and Electronics Equipment / BSA 86: Elect Equip - Tactical Surv. (Tac Surv)		<b>P-1 Line Item Number / Title:</b> 0255KA3100 / Mod Of In-Svc Equip (LLDR)
<b>ID Code</b> (A=Service Ready, B=Not Service Ready): A	<b>Program Elements for Code B Items:</b> N/A	<b>Other Related Program Elements:</b> 0604710A
<b>Line Item MDAP/MAIS Code:</b> N/A		

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

<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 2035A: Other Procurement, Army / BA 02: Communications and Electronics Equipment / BSA 86: Elect Equip - Tactical Surv. (Tac Surv)	<b>P-1 Line Item Number / Title:</b> 5726K99200 / Computer Ballistics: LHMBC XM32
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<b>ID Code</b> (A=Service Ready, B=Not Service Ready): B	<b>Program Elements for Code B Items:</b> N/A	<b>Other Related Program Elements:</b> N/A
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**Line Item MDAP/MAIS Code:** N/A

Resource Summary	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	To Complete	Total
Procurement Quantity ( <i>Units in Each</i> )	780	274	70	198	8	206	191	190	190	247	-	2,148
Gross/Weapon System Cost ( <i>\$ in Millions</i> )	141.100	9.513	3.838	7.509	0.280	7.789	7.241	7.235	7.239	9.405	-	193.360
Less PY Advance Procurement ( <i>\$ in Millions</i> )	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) ( <i>\$ in Millions</i> )	141.100	9.513	3.838	7.509	0.280	7.789	7.241	7.235	7.239	9.405	-	193.360
Plus CY Advance Procurement ( <i>\$ in Millions</i> )	-	-	-	-	-	-	-	-	-	-	-	-
<b>Total Obligation Authority</b> ( <i>\$ in Millions</i> )	<b>141.100</b>	<b>9.513</b>	<b>3.838</b>	<b>7.509</b>	<b>0.280</b>	<b>7.789</b>	<b>7.241</b>	<b>7.235</b>	<b>7.239</b>	<b>9.405</b>	<b>-</b>	<b>193.360</b>

*(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> )	180.897	34.719	54.829	37.924	35.000	37.811	37.911	38.079	38.100	38.077	-	90.019

**Description:**

The Lightweight Handheld Mortar Ballistic Computer (LHMBC) calculates ballistic solutions that give the mortar user data to aim the mortar weapon and set the charge as well as serves as the Fire Direction Center for all mortar platforms. The LHMBC communicates digitally on the Single Channel Ground and Airborne Radio System (SINCGARS) to the Fire Support Network. All LHMBC versions provide firing computations for all calibers of mortars as well as digital messaging capability. The M32A1 LHMBC will utilize the Ruggedized Tactical Handheld Device (RTHD) platform and will be compatible with Common Operating Environment (COE) 1.0 compliance. The M32A2 LHMBC may utilize either Net Warrior (NW) Mobile/Handheld (M/HH) or RTHD platform and will be compatible with the latest COE compliance.

Secondary Distribution		FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025
Army	Quantity	211	32	156	8	164	191	190	190	247
	Total Obligation Authority	7.413	2.572	6.110	0.280	6.390	7.241	7.235	7.239	9.405
ANG	Quantity	63	38	38	-	38	-	-	-	-
	Total Obligation Authority	2.100	1.266	1.266	-	1.266	-	-	-	-
AR	Quantity	-	-	4	-	4	-	-	-	-
	Total Obligation Authority	-	-	0.133	-	0.133	-	-	-	-
<b>Total: Secondary Distribution</b>	<b>Quantity</b>	<b>274</b>	<b>70</b>	<b>198</b>	<b>8</b>	<b>206</b>	<b>191</b>	<b>190</b>	<b>190</b>	<b>247</b>
	<b>Total Obligation Authority</b>	<b>9.513</b>	<b>3.838</b>	<b>7.509</b>	<b>0.280</b>	<b>7.789</b>	<b>7.241</b>	<b>7.235</b>	<b>7.239</b>	<b>9.405</b>

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

<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 2035A: Other Procurement, Army / BA 02: Communications and Electronics Equipment / BSA 86: Elect Equip - Tactical Surv. (Tac Surv)	<b>P-1 Line Item Number / Title:</b> 5726K99200 / Computer Ballistics: LHMBBC XM32
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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

Exhibits Schedule					Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total
Exhibit Type	Title*	Subexhibits	ID CD	MDAP/MAIS Code	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)
P-5	K99200 / Computer Ballistics: LHMBBC XM32	P-5a	B		780 / 141.100	274 / 9.513	70 / 3.838	198 / 7.509	8 / 0.280	206 / 7.789
<b>P-40</b>	<b>Total Gross/Weapon System Cost</b>				<b>780 / 141.100</b>	<b>274 / 9.513</b>	<b>70 / 3.838</b>	<b>198 / 7.509</b>	<b>8 / 0.280</b>	<b>206 / 7.789</b>

\*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 2021 Base procurement dollars in the amount of \$7.509 million support the procurement of 198 each Lightweight Handheld Mortar Ballistic Computer (LHMBBC) computers and Basic Issue Items (BII). The procurement of the new LHMBBC with COE Version 3.0 software is urgently needed to replace the obsolete M32 Ruggedized Personal Digital Assistance (RPDA) computers in the field. LHMBBC eliminates the need of a paper firing table, improves the accuracy of mortar ballistic calculation, and increases survivability of mortar crews by digitally connecting to the Fire Support network to receive fire missions and Fire Support Coordination Measures to conduct fratricide check.

FY 2021 OCO procurement dollars in the amount of \$0.280 million supports the procurement of 8 each M32A1 LHMBBC computers and BII consumed in support of deployed units' ongoing military operations, Combatant Command requirements for unit equipment sets to deter potential adversaries, and Operation Inherent Resolve.

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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<b>Exhibit P-5, Cost Analysis: PB 2021 Army</b>		<b>Date:</b> February 2020
<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 2035A / 02 / 86	<b>P-1 Line Item Number / Title:</b> 5726K99200 / Computer Ballistics: LHMBBC XM32	<b>Item Number / Title [DODIC]:</b> K99200 / Computer Ballistics: LHMBBC XM32

<b>ID Code</b> (A=Service Ready, B=Not Service Ready) : B	<b>MDAP/MAIS Code:</b>
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Resource Summary	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total
Procurement Quantity (Units in Each)	780	274	70	198	8	206
Gross/Weapon System Cost (\$ in Millions)	141.100	9.513	3.838	7.509	0.280	7.789
Less PY Advance Procurement (\$ in Millions)	-	-	-	-	-	-
Net Procurement (P-1) (\$ in Millions)	141.100	9.513	3.838	7.509	0.280	7.789
Plus CY Advance Procurement (\$ in Millions)	-	-	-	-	-	-
<b>Total Obligation Authority (\$ in Millions)</b>	<b>141.100</b>	<b>9.513</b>	<b>3.838</b>	<b>7.509</b>	<b>0.280</b>	<b>7.789</b>

*(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)	180.897	34.719	54.829	37.924	35.000	37.811

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

Cost Elements	Prior Years			FY 2019			FY 2020			FY 2021 Base			FY 2021 OCO			FY 2021 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)
<b>Hardware Cost</b>																		
Recurring Cost																		
LHMBBC M32A1 <sup>(1)</sup>	12.644	1,275	16.121	18.411	266	4.897	20.400	67	1.367	21.012	198	4.160	21.012	8	0.168	21.012	206	4.328
<i>Subtotal: Recurring Cost</i>	-	-	16.121	-	-	4.897	-	-	1.367	-	-	4.160	-	-	0.168	-	-	4.328
Non Recurring Cost																		
LHMBBC M32A1 BII	-	-	2.737	-	-	2.409	-	-	0.435	-	-	1.287	-	-	0.052	-	-	1.339
<i>Subtotal: Non Recurring Cost</i>	-	-	2.737	-	-	2.409	-	-	0.435	-	-	1.287	-	-	0.052	-	-	1.339
<i>Subtotal: Hardware Cost</i>	-	-	<b>18.858</b>	-	-	<b>7.306</b>	-	-	<b>1.802</b>	-	-	<b>5.447</b>	-	-	<b>0.220</b>	-	-	<b>5.667</b>
<b>Software Cost</b>																		
Recurring Cost																		
Software Support	-	-	1.680	-	-	0.250	-	-	0.200	-	-	0.215	-	-	-	-	-	0.215
<i>Subtotal: Recurring Cost</i>	-	-	1.680	-	-	0.250	-	-	0.200	-	-	0.215	-	-	-	-	-	0.215
Non Recurring Cost																		
M32A2 COE Software	-	-	5.000	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
<i>Subtotal: Non Recurring Cost</i>	-	-	5.000	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
<i>Subtotal: Software Cost</i>	-	-	<b>6.680</b>	-	-	<b>0.250</b>	-	-	<b>0.200</b>	-	-	<b>0.215</b>	-	-	-	-	-	<b>0.215</b>
<b>Support - Fielding Cost</b>																		
Fielding	-	-	1.860	-	-	0.642	-	-	0.460	-	-	0.250	-	-	0.060	-	-	0.310
<i>Subtotal: Support - Fielding Cost</i>	-	-	<b>1.860</b>	-	-	<b>0.642</b>	-	-	<b>0.460</b>	-	-	<b>0.250</b>	-	-	<b>0.060</b>	-	-	<b>0.310</b>

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<b>Exhibit P-5, Cost Analysis: PB 2021 Army</b>		<b>Date:</b> February 2020
<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 2035A / 02 / 86		<b>P-1 Line Item Number / Title:</b> 5726K99200 / Computer Ballistics: LHMBBC XM32
<b>ID Code</b> (A=Service Ready, B=Not Service Ready) : B		<b>MDAP/MAIS Code:</b>
<b>Item Number / Title [DODIC]:</b> K99200 / Computer Ballistics: LHMBBC XM32		

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

Cost Elements	Prior Years			FY 2019			FY 2020			FY 2021 Base			FY 2021 OCO			FY 2021 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)
Support - Production Engineering Cost																		
Production Engineering	-	-	113.702	-	-	1.314	-	-	1.376	-	-	1.597	-	-	-	-	-	1.597
<i>Subtotal: Support - Production Engineering Cost</i>	-	-	<b>113.702</b>	-	-	<b>1.314</b>	-	-	<b>1.376</b>	-	-	<b>1.597</b>	-	-	-	-	-	<b>1.597</b>
<b>Gross/Weapon System Cost</b>	<b>180.897</b>	<b>780</b>	<b>141.100</b>	<b>34.719</b>	<b>274</b>	<b>9.513</b>	<b>54.829</b>	<b>70</b>	<b>3.838</b>	<b>37.924</b>	<b>198</b>	<b>7.509</b>	<b>35.000</b>	<b>8</b>	<b>0.280</b>	<b>37.811</b>	<b>206</b>	<b>7.789</b>

Secondary Distribution		FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total
Army	Quantity	211	32	156	8	164
	Total Obligation Authority	7.413	2.572	6.110	0.280	6.390
ANG	Quantity	63	38	38	-	38
	Total Obligation Authority	2.100	1.266	1.266	-	1.266
AR	Quantity	-	-	4	-	4
	Total Obligation Authority	-	-	0.133	-	0.133
<b>Total: Secondary Distribution</b>	<b>Quantity</b>	<b>274</b>	<b>70</b>	<b>198</b>	<b>8</b>	<b>206</b>
	<b>Total Obligation Authority</b>	<b>9.513</b>	<b>3.838</b>	<b>7.509</b>	<b>0.280</b>	<b>7.789</b>

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

**UNCLASSIFIED**

<b>Exhibit P-5a, Procurement History and Planning:</b> PB 2021 Army								<b>Date:</b> February 2020				
<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 2035A / 02 / 86			<b>P-1 Line Item Number / Title:</b> 5726K99200 / Computer Ballistics: LHMBBC XM32					<b>Item Number / Title [DODIC]:</b> K99200 / Computer Ballistics: LHMBBC XM32				
<b>Cost Elements</b>	<b>O C O</b>	<b>FY</b>	<b>Contractor and Location</b>	<b>Method/Type or Funding Vehicle</b>	<b>Location of PCO</b>	<b>Award Date</b>	<b>Date of First Delivery</b>	<b>Qty (Each)</b>	<b>Unit Cost (\$ K)</b>	<b>Specs Avail Now?</b>	<b>Date Revision Available</b>	<b>RFP Issue Date</b>
LHMBBC M32A1		2017	PEO Soldier PM SWAR NW / Fort Belvoir, VA	MIPR	PM Soldier Warrior, Ft Belvoir	Mar 2017	May 2018	345	7.304	Y		
LHMBBC M32A1		2018	General Dynamics / Taunton, MA	Option / FFP	CECOM, Aberdeen Proving Ground, MD	Jun 2018	Aug 2019	268	18.251	Y		
LHMBBC M32A1		2019	PEO Soldier PM SWAR NW / Fort Belvoir, VA	MIPR	PM Soldier Warrior, Ft Belvoir	Mar 2019	May 2020	266	18.411	Y		
LHMBBC M32A1		2020	General Dynamics / Taunton, MA	Option / FFP	CECOM, Aberdeen Proving Ground, MD	Mar 2020	May 2021	67	20.400	Y		
LHMBBC M32A1		2021	General Dynamics / Taunton, MA	Option / FFP	CECOM, Aberdeen Proving Ground, MD	Dec 2020	Feb 2022	198	21.012	Y		
LHMBBC M32A1	✓	2021	General Dynamics / Taunton, MA	Option / FFP	CECOM, Aberdeen Proving Ground, MD	Dec 2020	Feb 2022	8	21.012	Y		

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

<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 2035A: Other Procurement, Army / BA 02: Communications and Electronics Equipment / BSA 86: Elect Equip - Tactical Surv. (Tac Surv)	<b>P-1 Line Item Number / Title:</b> 7500K99300 / Mortar Fire Control System
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ID Code (A=Service Ready, B=Not Service Ready): A	Program Elements for Code B Items: N/A	Other Related Program Elements: N/A
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**Line Item MDAP/MAIS Code:** N/A

Resource Summary	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	To Complete	Total
Procurement Quantity ( <i>Units in Each</i> )	1,035	425	114	14	49	63	-	-	-	-	-	1,637
Gross/Weapon System Cost ( <i>\$ in Millions</i> )	479.910	29.149	29.174	3.800	13.672	17.472	4.186	5.783	8.063	3.797	-	577.534
Less PY Advance Procurement ( <i>\$ in Millions</i> )	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) ( <i>\$ in Millions</i> )	479.910	29.149	29.174	3.800	13.672	17.472	4.186	5.783	8.063	3.797	-	577.534
Plus CY Advance Procurement ( <i>\$ in Millions</i> )	-	-	-	-	-	-	-	-	-	-	-	-
<b>Total Obligation Authority (<i>\$ in Millions</i>)</b>	<b>479.910</b>	<b>29.149</b>	<b>29.174</b>	<b>3.800</b>	<b>13.672</b>	<b>17.472</b>	<b>4.186</b>	<b>5.783</b>	<b>8.063</b>	<b>3.797</b>	<b>-</b>	<b>577.534</b>

*(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> )	463.681	68.586	255.912	271.429	279.020	277.333	-	-	-	-	-	352.800

**Description:**

The Mortar Fire Control System (MFCS) accurately determines weapon position and orientation, navigates, calculates ballistics, and communicates digitally on the Single Channel Ground and Airborne Radio System (SINCGARS) fire support network. MFCS improves the accuracy of the 120mm mortar system from 138 meters Circular Error Probable (CEP) to 75 meters CEP allowing for first round fire for effect. MFCS increases survivability of mortar crews by eliminating the need for soldiers to dismount the vehicle to lay out aiming posts. MFCS also adds digital connectivity to the Fire Support network as well as connectivity to SINCGARS, Force XXI Battle Command Brigade and Below (FBCB2), and Blue Force Tracking system. MFCS consists of the M95/M96 version that is used on mounted 120mm Mortars in Armored Brigade Combat Teams (ABCT) and the M150/M151 version used on the M120A1 120mm Towed Mortar that is fielded throughout all Infantry Brigade Combat Teams (IBCT). The Stryker Brigade Combat Teams (SBCT) utilize both the M95 and M151 systems. The M95 is used on the M1064A2/M1064A3 Mortar Carriers with the M121 Battalion Mortar System and the M1129A1 Stryker 120mm Mortar Carrier with the 120mm Recoiling Mortar System. The M96 is used on M577 Mortar Fire Direction Center (FDC) vehicle. The M95 and M96 are also being integrated onto the Advanced Multipurpose Vehicle (AMPV) Mortar Carrier and Mission Command vehicles, respectively. The M150 is used on the M120A1 120mm Towed Mortar that is mounted on the M1101 Trailer. The M151 is used on the various High Mobility Multipurpose Wheeled Vehicle (HMMV) variant that serves as the IBCT and SBCT Mortar FDCs. Both the M95 and M150 consist of five main components: 1) The Commander's Interface (CI) (M95) or Fire Control Computer (FCC) (M95/M150) links the MFCS components together, communicates, and calculates the ballistic solutions, 2) The Tactical Advanced Land Inertial Navigator (TALIN) is the pointing device and position system that provides the weapon's position, pointing azimuth and elevation, 3) The Gunner's Display (GD) shows the gunner where to point the tube and displays the weapon's azimuth, elevation, and ballistic firing solution, 4) The Driver's Display (DD) (M95 only) provides a "steer-to" display to aid in navigation and emplacement of the vehicle, and 5) The Power Distribution Assembly/Enhanced Power Distribution Assembly filters vehicle power and acts as a circuit breaker isolating MFCS line replaceable units from power fluctuations and surges. The M96 and M151 each consist primarily of the CI or FCC, installed in the FDC vehicle. All CI's are currently being transitioned to the FCC for all M95 and M96.

Funds in this program to support the systems modifications were realigned in FY 2020 to program Mortar Fire Control Systems Modifications, SSN AD9300.

Secondary Distribution	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025
Army									
	Quantity	425	114	14	49	63	-	-	-
	Total Obligation Authority	29.149	29.174	3.800	13.672	17.472	4.186	5.783	8.063
<b>Total:</b>	<b>Quantity</b>	<b>425</b>	<b>114</b>	<b>14</b>	<b>49</b>	<b>63</b>	<b>-</b>	<b>-</b>	<b>-</b>

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

<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 2035A: Other Procurement, Army / BA 02: Communications and Electronics Equipment / BSA 86: Elect Equip - Tactical Surv. (Tac Surv)	<b>P-1 Line Item Number / Title:</b> 7500K99300 / Mortar Fire Control System
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<b>ID Code</b> (A=Service Ready, B=Not Service Ready): A	<b>Program Elements for Code B Items:</b> N/A	<b>Other Related Program Elements:</b> N/A
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**Line Item MDAP/MAIS Code:** N/A

Secondary Distribution		FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025
Secondary Distribution	Total Obligation Authority	29.149	29.174	3.800	13.672	17.472	4.186	5.783	8.063	3.797



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

<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 2035A: Other Procurement, Army / BA 02: Communications and Electronics Equipment / BSA 86: Elect Equip - Tactical Surv. (Tac Surv)	<b>P-1 Line Item Number / Title:</b> 7500K99300 / Mortar Fire Control System
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<b>ID Code</b> (A=Service Ready, B=Not Service Ready): A	<b>Program Elements for Code B Items:</b> N/A	<b>Other Related Program Elements:</b> N/A
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**Line Item MDAP/MAIS Code:** N/A

Exhibits Schedule					Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total
Exhibit Type	Title*	Subexhibits	ID CD	MDAP/MAIS Code	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)
P-5	K99300 / Mortar Fire Control System	P-5a, P-21	A		1,035 / 479.910	425 / 29.149	114 / 29.174	14 / 3.800	49 / 13.672	63 / 17.472
<b>P-40</b>	<b>Total Gross/Weapon System Cost</b>				<b>1,035 / 479.910</b>	<b>425 / 29.149</b>	<b>114 / 29.174</b>	<b>14 / 3.800</b>	<b>49 / 13.672</b>	<b>63 / 17.472</b>

\*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 2021 Base procurement dollars in the amount of \$3.800 million support the procurement of 12 M95 and 2 M96 for support of Advanced Multipurpose Vehicle (AMPV) production vehicles, including support costs for software, logistics, fielding, and production engineering. The equipment will be fielded to Armored Brigade Combat Teams (ABCT) to support Grow the Army requirements.

FY 2021 OCO procurement dollars in the amount of \$13.672 million support the procurement of critical Army items consumed in support of Operation Inherent Resolve. Funding supports the procurement of 23 M95 systems and 8 M96 systems for AMPV production vehicles, and 18 M150 Mortar Fire Control System-Dismounted (MFCS-D) complete systems, which are critical items consumed in support of deployed units' ongoing military operations.

- Army Acquisition Objective (AAO) for M95: 1042
- Army Acquisition Objective (AAO) for M96: 130
- Army Acquisition Objective (AAO) for M150: 700
- Army Acquisition Objective (AAO) for M151: 165

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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<b>Exhibit P-5, Cost Analysis: PB 2021 Army</b>					<b>Date:</b> February 2020			
<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 2035A / 02 / 86			<b>P-1 Line Item Number / Title:</b> 7500K99300 / Mortar Fire Control System			<b>Item Number / Title [DODIC]:</b> K99300 / Mortar Fire Control System		
<b>ID Code</b> (A=Service Ready, B=Not Service Ready) : A				<b>MDAP/MAIS Code:</b>				
<b>Resource Summary</b>			<b>Prior Years</b>	<b>FY 2019</b>	<b>FY 2020</b>	<b>FY 2021 Base</b>	<b>FY 2021 OCO</b>	<b>FY 2021 Total</b>
Procurement Quantity (Units in Each)			1,035	425	114	14	49	63
Gross/Weapon System Cost (\$ in Millions)			479.910	29.149	29.174	3.800	13.672	17.472
Less PY Advance Procurement (\$ in Millions)			-	-	-	-	-	-
Net Procurement (P-1) (\$ in Millions)			479.910	29.149	29.174	3.800	13.672	17.472
Plus CY Advance Procurement (\$ in Millions)			-	-	-	-	-	-
<b>Total Obligation Authority (\$ in Millions)</b>			<b>479.910</b>	<b>29.149</b>	<b>29.174</b>	<b>3.800</b>	<b>13.672</b>	<b>17.472</b>
<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)			463.681	68.586	255.912	271.429	279.020	277.333

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

Cost Elements	Prior Years			FY 2019			FY 2020			FY 2021 Base			FY 2021 OCO			FY 2021 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																		
M95 M1064 MFCS-M <sup>(†)</sup>	220.384	44	9.697	225.000	18	4.050	250.000	18	4.500	-	-	-	-	-	-	-	-	-
M96 M1064 MFCS-M <sup>(†)</sup>	74.190	9	0.668	85.000	3	0.255	90.000	4	0.360	-	-	-	-	-	-	-	-	-
M95 AMPV <sup>(†)</sup>	219.698	86	18.894	-	-	-	250.000	27	6.750	250.000	12	3.000	250.000	23	5.750	250.000	35	8.750
M96 AMPV <sup>(†)</sup>	73.828	15	1.107	-	-	-	90.000	4	0.360	90.000	2	0.180	90.000	8	0.720	90.000	10	0.900
MFCS-D (M150) <sup>(†)</sup>	26.411	158	4.173	225.000	24	5.400	250.000	49	12.250	-	-	-	250.000	18	4.500	250.000	18	4.500
MFCS ( M151) - FDC Dismounted	3.235	73	0.236	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
M95 M1064 Fire Control Computer	40.717	276	11.238	40.000	183	7.320	-	-	-	-	-	-	-	-	-	-	-	-
M96 M1064 Fire Control Computer	40.717	46	1.873	40.000	30	1.200	-	-	-	-	-	-	-	-	-	-	-	-
M150 Windows 10 Fire Control Computer	40.000	184	7.360	40.000	64	2.560	-	-	-	-	-	-	-	-	-	-	-	-
M151 Windows 10 Fire Control Computer	40.000	18	0.720	40.000	10	0.400	-	-	-	-	-	-	-	-	-	-	-	-
M95 Stryker Fire Control Computer	29.141	288	8.393	40.000	108	4.320	-	-	-	-	-	-	-	-	-	-	-	-
M95 Stryker Fire Control Computer BII Sets	-	-	0.900	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

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<b>Exhibit P-5, Cost Analysis: PB 2021 Army</b>												<b>Date:</b> February 2020					
<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 2035A / 02 / 86						<b>P-1 Line Item Number / Title:</b> 7500K99300 / Mortar Fire Control System						<b>Item Number / Title [DODIC]:</b> K99300 / Mortar Fire Control System					
<b>ID Code</b> (A=Service Ready, B=Not Service Ready) : A												<b>MDAP/MAIS Code:</b>					

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

Cost Elements	Prior Years			FY 2019			FY 2020			FY 2021 Base			FY 2021 OCO			FY 2021 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)
M151 Stryker FDC Kit	53.691	27	1.450	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
TALIN - Dependent of M150/M95	51.808	119	6.165	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
<i>Subtotal: Recurring Cost</i>	-	-	72.873	-	-	25.505	-	-	24.220	-	-	3.180	-	-	10.970	-	-	14.150
<i>Subtotal: Hardware Cost</i>	-	-	72.873	-	-	25.505	-	-	24.220	-	-	3.180	-	-	10.970	-	-	14.150
<b>Software Cost</b>																		
<b>Recurring Cost</b>																		
Software Support	-	-	1.943	-	-	0.524	-	-	0.485	-	-	0.125	-	-	-	-	-	0.125
<i>Subtotal: Recurring Cost</i>	-	-	1.943	-	-	0.524	-	-	0.485	-	-	0.125	-	-	-	-	-	0.125
<b>Non Recurring Cost</b>																		
Windows 10 Qualification	-	-	2.718	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
<i>Subtotal: Non Recurring Cost</i>	-	-	2.718	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
<i>Subtotal: Software Cost</i>	-	-	4.661	-	-	0.524	-	-	0.485	-	-	0.125	-	-	-	-	-	0.125
<b>Logistics Cost</b>																		
<b>Recurring Cost</b>																		
Government ILS	-	-	1.912	-	-	0.425	-	-	0.450	-	-	0.200	-	-	-	-	-	0.200
<i>Subtotal: Recurring Cost</i>	-	-	1.912	-	-	0.425	-	-	0.450	-	-	0.200	-	-	-	-	-	0.200
<i>Subtotal: Logistics Cost</i>	-	-	1.912	-	-	0.425	-	-	0.450	-	-	0.200	-	-	-	-	-	0.200
<b>Support - Fielding Cost</b>																		
Fielding	-	-	3.350	-	-	0.500	-	-	1.250	-	-	0.295	-	-	0.500	-	-	0.795
<i>Subtotal: Support - Fielding Cost</i>	-	-	3.350	-	-	0.500	-	-	1.250	-	-	0.295	-	-	0.500	-	-	0.795
<b>Support - Production Engineering Cost</b>																		
Production Engineering	-	-	397.114	-	-	2.196	-	-	2.769	-	-	-	-	-	2.202	-	-	2.202
<i>Subtotal: Support - Production Engineering Cost</i>	-	-	397.114	-	-	2.196	-	-	2.769	-	-	-	-	-	2.202	-	-	2.202
<b>Gross/Weapon System Cost</b>	<b>463.681</b>	<b>1,035</b>	<b>479.910</b>	<b>68.586</b>	<b>425</b>	<b>29.149</b>	<b>255.912</b>	<b>114</b>	<b>29.174</b>	<b>271.429</b>	<b>14</b>	<b>3.800</b>	<b>279.020</b>	<b>49</b>	<b>13.672</b>	<b>277.333</b>	<b>63</b>	<b>17.472</b>

**Remarks:**

\*\*Note\*\* P-40 Quantities for FY21 do not reflect current quantities on P-5. This is due to a decrement on 16 Dec 2019 of \$3.692M to FY21 Base, and \$3.692M increase to FY21 OCO.

Secondary Distribution		FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total
Army	Quantity	425	114	14	49	63

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**Exhibit P-5, Cost Analysis: PB 2021 Army** **Date:** February 2020

<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 2035A / 02 / 86	<b>P-1 Line Item Number / Title:</b> 7500K99300 / Mortar Fire Control System	<b>Item Number / Title [DODIC]:</b> K99300 / Mortar Fire Control System
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**ID Code** (A=Service Ready, B=Not Service Ready) : A **MDAP/MAIS Code:**

	<b>Secondary Distribution</b>	<b>FY 2019</b>	<b>FY 2020</b>	<b>FY 2021 Base</b>	<b>FY 2021 OCO</b>	<b>FY 2021 Total</b>
	Total Obligation Authority	29.149	29.174	3.800	13.672	17.472
<b>Total:</b>	<b>Quantity</b>	<b>425</b>	<b>114</b>	<b>14</b>	<b>49</b>	<b>63</b>
<b>Secondary Distribution</b>	<b>Total Obligation Authority</b>	<b>29.149</b>	<b>29.174</b>	<b>3.800</b>	<b>13.672</b>	<b>17.472</b>

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

**UNCLASSIFIED**

<b>Exhibit P-5a, Procurement History and Planning: PB 2021 Army</b>							<b>Date:</b> February 2020				
<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 2035A / 02 / 86			<b>P-1 Line Item Number / Title:</b> 7500K99300 / Mortar Fire Control System				<b>Item Number / Title [DODIC]:</b> K99300 / Mortar Fire Control 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 <i>(Each)</i>	Unit Cost <i>(\$ K)</i>	Specs Avail Now?	Date Revision Available	RFP Issue Date
M95 M1064 MFCS-M		2019	EFW, Inc. / Fort Worth, TX	Option / FFP	Picatinny Arsenal, NJ	Mar 2019	Apr 2020	18	225.000	Y		
M95 M1064 MFCS-M		2020	EFW, Inc. / Fort Worth, TX	Option / FFP	Picatinny Arsenal, NJ	Mar 2020	Apr 2021	18	250.000	Y		
M96 M1064 MFCS-M		2020	EFW, Inc. / Fort Worth, TX	Option / FFP	Picatinny Arsenal, NJ	Mar 2020	Apr 2021	4	90.000	Y		
M95 AMPV <sup>(†)</sup>		2020	EFW, Inc. / Fort Worth, TX	Option / FFP	Picatinny Arsenal, NJ	Mar 2020	Apr 2021	22	250.000	Y		
M95 AMPV <sup>(†)</sup>		2020	EFW, Inc. / Fort Worth, TX	Option / FFP	Picatinny Arsenal, NJ	Mar 2020	Apr 2021	5	250.000	Y		
M95 AMPV <sup>(†)</sup>		2021	EFW, Inc. / Fort Worth, TX	Option / FFP	Picatinny Arsenal, NJ	Mar 2021	Apr 2022	12	250.000	Y		
M95 AMPV	✓	2021	EFW, Inc. / Fort Worth, TX	Option / FFP	Picatinny Arsenal, NJ	Mar 2021	Apr 2022	23	250.000	Y		
M96 AMPV		2020	EFW, Inc. / Fort Worth, TX	Option / FFP	Picatinny Arsenal, NJ	Mar 2020	Apr 2021	4	90.000	Y		
M96 AMPV	✓	2021	EFW, Inc. / Fort Worth, TX	Option / FFP	Picatinny Arsenal, NJ	Mar 2021	Apr 2022	8	90.000	Y		
M96 AMPV		2021	EFW, Inc. / Fort Worth, TX	Option / FFP	Picatinny Arsenal, NJ	Mar 2021	Apr 2022	2	90.000	Y		
MFCS-D (M150)		2020	EFW, Inc. / Fort Worth, TX	Option / FFP	Picatinny Arsenal, NJ	Mar 2020	Apr 2021	49	250.000	Y		
MFCS-D (M150)	✓	2021	EFW, Inc. / Fort Worth, TX	Option / FFP	Picatinny Arsenal, NJ	Mar 2021	Apr 2022	18	250.000	Y		

<sup>(†)</sup> indicates the presence of a P-21

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**Exhibit P-21, Production Schedule:** PB 2021 Army **Date:** February 2020

**Appropriation / Budget Activity / Budget Sub Activity:** 2035A / 02 / 86 **P-1 Line Item Number / Title:** 7500K99300 / Mortar Fire Control System **Item Number / Title [DODIC]:** K99300 / Mortar Fire Control System

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								
M95 AMPV																																						
Prior Years Deliveries: 86																																						
	1	2020	ARMY	22	0	22																							A -	-	-	-	-	-	-	-	22	
	2	2020	ARMY	5	0	5																								A -	-	-	-	-	-	-	-	5
	1	2021	ARMY	12	0	12																															12	

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**Exhibit P-21, Production Schedule:** PB 2021 Army **Date:** February 2020

<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 2035A / 02 / 86	<b>P-1 Line Item Number / Title:</b> 7500K99300 / Mortar Fire Control System	<b>Item Number / Title [DODIC]:</b> K99300 / Mortar Fire Control System
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Cost Elements <i>(Units in Each)</i>					Fiscal Year 2021													Fiscal Year 2022													BALANCE		
O C C #	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			
M95 AMPV																																	
Prior Years Deliveries: 86																																	
	1	2020	ARMY	22	0	22	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0				
	2	2020	ARMY	5	0	5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	0				
	1	2021	ARMY	12	0	12																					12	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			

**UNCLASSIFIED**

**Exhibit P-21, Production Schedule:** PB 2021 Army **Date:** February 2020

<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 2035A / 02 / 86	<b>P-1 Line Item Number / Title:</b> 7500K99300 / Mortar Fire Control System	<b>Item Number / Title [DODIC]:</b> K99300 / Mortar Fire Control System
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MFR Ref #	Manufacturer Name - Location	Production Rates (Each / Month)			Procurement Leadtime (Months)							
		MSR For 2021	1-8-5 For 2021	MAX For 2021	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	EFW, Inc.. - Fort Worth, TX	10	24	66	4	4	12	16	1	1	12	13
2	EFW, Inc. - Fort Worth, TX	10	24	66	4	4	12	16	1	1	12	13

"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 2021 Army **Date:** February 2020

<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 2035A: Other Procurement, Army / BA 02: Communications and Electronics Equipment / BSA 86: Elect Equip - Tactical Surv. (Tac Surv)	<b>P-1 Line Item Number / Title:</b> 7563AD9300 / Mortar Fire Control Systems Modifications
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<b>ID Code</b> (A=Service Ready, B=Not Service Ready):	<b>Program Elements for Code B Items:</b> N/A	<b>Other Related Program Elements:</b> N/A
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**Line Item MDAP/MAIS Code:** N/A

Resource Summary	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	To Complete	Total
Procurement Quantity ( <i>Units in Each</i> )	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost ( <i>\$ in Millions</i> )	-	-	10.000	7.292	-	7.292	4.196	8.091	6.494	-	-	36.073
Less PY Advance Procurement ( <i>\$ in Millions</i> )	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) ( <i>\$ in Millions</i> )	-	-	10.000	7.292	-	7.292	4.196	8.091	6.494	-	-	36.073
Plus CY Advance Procurement ( <i>\$ in Millions</i> )	-	-	-	-	-	-	-	-	-	-	-	-
<b>Total Obligation Authority (<i>\$ in Millions</i>)</b>	-	-	<b>10.000</b>	<b>7.292</b>	-	<b>7.292</b>	<b>4.196</b>	<b>8.091</b>	<b>6.494</b>	-	-	<b>36.073</b>

*(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 Mortar Fire Control System (MFCS) accurately determines weapon position and orientation, navigates, calculates ballistics, and communicates digitally on the Single Channel Ground and Airborne Radio System (SINCGARS) fire support network. The MFCS main Line Replaceable Units (LRUs) are: the Fire Control Computer (FCC), Enhanced Power Distribution Assembly (EPDA), Inertial Navigation Unit (INU), Portable Universal Battery Supply (PUBS), Gunner's Display (GD), and cable sets. Mortar Fire Control System modification improvements support modernized mortar fire control systems and enable the replacement of aging/obsolete major system components. These improvements include lightweight inertial measurement and navigation (IMU/INU) units for weapon pointing, simplified Ethernet or wireless based digital communications interfaces, updates for vehicle or system level integration, and development of common fire control software modules that could better support commercial off-the-shelf (COTS) or modified commercial off-the-shelf (MCOTS) computer systems.

Secondary Distribution	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025
Army									
Quantity	-	-	-	-	-	-	-	-	-
Total Obligation Authority	-	10.000	7.292	-	7.292	4.196	8.091	6.494	-
<b>Total:</b>									
<b>Secondary Distribution</b>									
Quantity	-	-	-	-	-	-	-	-	-
Total Obligation Authority	-	<b>10.000</b>	<b>7.292</b>	-	<b>7.292</b>	<b>4.196</b>	<b>8.091</b>	<b>6.494</b>	-

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

<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 2035A: Other Procurement, Army / BA 02: Communications and Electronics Equipment / BSA 86: Elect Equip - Tactical Surv. (Tac Surv)	<b>P-1 Line Item Number / Title:</b> 7563AD9300 / Mortar Fire Control Systems Modifications
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<b>ID Code</b> (A=Service Ready, B=Not Service Ready):	<b>Program Elements for Code B Items:</b> N/A	<b>Other Related Program Elements:</b> N/A
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**Line Item MDAP/MAIS Code:** N/A

Exhibits Schedule					Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total
Exhibit Type	Title*	Subexhibits	ID CD	MDAP/MAIS Code	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)
P-3a	AD9305 / Mortar Fire Control Systems Modifications (Army Mortar Fire Control Modernization)				- / -	- / -	- / 10.000	- / 7.292	- / -	- / 7.292
<b>P-40</b>	<b>Total Gross/Weapon System Cost</b>				<b>- / -</b>	<b>- / -</b>	<b>- / 10.000</b>	<b>- / 7.292</b>	<b>- / -</b>	<b>- / 7.292</b>
Exhibits Schedule					FY 2022	FY 2023	FY 2024	FY 2025	To Complete	Total
Exhibit Type	Title*	Subexhibits	ID CD	MDAP/MAIS Code	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)
P-3a	AD9305 / Mortar Fire Control Systems Modifications (Army Mortar Fire Control Modernization)				- / 4.196	- / 8.091	- / 6.494	- / -	- / -	- / 36.073
<b>P-40</b>	<b>Total Gross/Weapon System Cost</b>				<b>- / 4.196</b>	<b>- / 8.091</b>	<b>- / 6.494</b>	<b>- / -</b>	<b>- / -</b>	<b>- / 36.073</b>

\*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 2021 Base procurement dollars in the amount of \$7.292 million supports a modernized Fire Control Computer (FCC) to mitigate obsolescence, an improved fire control communication interface to simplify cabling and common software modules, and support costs for software, logistics, and production engineering. These modifications will enable the use of smaller, lighter, low cost, more easily maintainable pointing solutions to include Commercial Off-The-Shelf (COTS) solutions.

In accordance with section 1815 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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<b>Exhibit P-3a, Individual Modification:</b> PB 2021 Army		<b>Date:</b> February 2020
<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 2035A / 02 / 86	<b>P-1 Line Item Number / Title:</b> 7563AD9300 / Mortar Fire Control Systems Modifications	<b>Modification Number / Title:</b> AD9305 / Mortar Fire Control Systems Modifications

<b>ID Code</b> (A=Service Ready, B=Not Service Ready) :	<b>MDAP/MAIS Code:</b>
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Resource Summary	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	To Complete	Total
Procurement Quantity ( <i>Units in Each</i> )	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost ( <i>\$ in Millions</i> )	-	-	10.000	7.292	-	7.292	4.196	8.091	6.494	-	-	36.073
Less PY Advance Procurement ( <i>\$ in Millions</i> )	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) ( <i>\$ in Millions</i> )	-	-	10.000	7.292	-	7.292	4.196	8.091	6.494	-	-	36.073
Plus CY Advance Procurement ( <i>\$ in Millions</i> )	-	-	-	-	-	-	-	-	-	-	-	-
<b>Total Obligation Authority</b> ( <i>\$ in Millions</i> )	-	-	<b>10.000</b>	<b>7.292</b>	-	<b>7.292</b>	<b>4.196</b>	<b>8.091</b>	<b>6.494</b>	-	-	<b>36.073</b>

*(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 Mortar Fire Control System (MFCS) accurately determines weapon position and orientation, navigates, calculates ballistics, and communicates digitally on the Single Channel Ground and Airborne Radio System (SINGGARS) fire support network. The MFCS main Line Replaceable Unit (LRUs) are: the Fire Control Computer (FCC), Enhanced Power Distribution Assembly (EPDA), Inertial Navigation Unit (INU), Portable Universal Battery Supply (PUBS), Gunner's Display (GD), and cable sets. Mortar Fire Control System modification improvements support modernized mortar fire control systems and enable the replacement of aging/obsolete major system components. These improvements include lightweight inertial measurement and navigation (IMU/INU) units for weapon pointing, simplified Ethernet or wireless based digital communications interfaces, updates for vehicle or system level integration, and development of common fire control software modules that could better support commercial off-the-shelf (COTS) or modified commercial off-the-shelf (MCOTS) computer systems.

**Justification:**

FY 2021 Base procurement dollars in the amount of \$7.292 million supports a modernized Fire Control Computer (FCC) to mitigate obsolescence, an improved fire control communication interface to simplify cabling and common software modules, and support costs for software, logistics, and production engineering. These modifications will enable the use of smaller, lighter, low cost, more easily maintainable pointing solutions to include Commercial Off-The-Shelf (COTS) solutions.

Secondary Distribution		FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025
Army	Quantity	-	-	-	-	-	-	-	-	-
	Total Obligation Authority	-	10.000	7.292	-	7.292	4.196	8.091	6.494	-
<b>Total:</b> Secondary Distribution	<b>Quantity</b>	-	-	-	-	-	-	-	-	-
	<b>Total Obligation Authority</b>	-	<b>10.000</b>	<b>7.292</b>	-	<b>7.292</b>	<b>4.196</b>	<b>8.091</b>	<b>6.494</b>	-

**UNCLASSIFIED**

<b>Exhibit P-3a, Individual Modification:</b> PB 2021 Army										<b>Date:</b> February 2020			
<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 2035A / 02 / 86					<b>P-1 Line Item Number / Title:</b> 7563AD9300 / Mortar Fire Control Systems Modifications					<b>Modification Number / Title:</b> AD9305 / Mortar Fire Control Systems Modifications			
<b>ID Code</b> (A=Service Ready, B=Not Service Ready) :							<b>MDAP/MAIS Code:</b>						
<b>Models of Systems Affected:</b> M95 M1064, M95 Stryker, M151 Stryker, M150, and M151 systems				<b>Modification Type:</b> Army Mortar Fire Control Modernization				<b>Related RDT&amp;E PEs:</b>					
Financial Plan	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	To Complete	Total	
	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	Qty (Each) / Total Cost (\$ M)	
<b>Procurement</b>													
<i>Modification Item 1 of 1:</i> Mortar Fire Control Systems Modifications													
A Kits													
Recurring													
Engineering / Program Support	- / -	- / -	- / 0.100	- / 0.100	- / -	- / 0.100	- / 0.840	- / 1.260	- / 1.180	- / -	- / -	- / 3.480	
Software Engineering Support	- / -	- / -	- / 2.251	- / 1.692	- / -	- / 1.692	- / -	- / -	- / -	- / -	- / -	- / 3.943	
Logistic Engineering Support	- / -	- / -	- / 0.819	- / 0.300	- / -	- / 0.300	- / -	- / -	- / -	- / -	- / -	- / 1.119	
<i>Subtotal: Recurring</i>	- / -	- / -	- / 3.170	- / 2.092	- / -	- / 2.092	- / 0.840	- / 1.260	- / 1.180	- / -	- / -	- / 8.542	
Non-Recurring													
Modular FC LRU Hardware	- / -	- / -	- / 6.830	- / 5.200	- / -	- / 5.200	- / 3.356	- / 6.831	- / 5.314	- / -	- / -	- / 27.531	
<i>Subtotal: Non-Recurring</i>	- / -	- / -	- / 6.830	- / 5.200	- / -	- / 5.200	- / 3.356	- / 6.831	- / 5.314	- / -	- / -	- / 27.531	
<i>Subtotal: Mortar Fire Control Systems Modifications</i>	- / -	- / -	- / 10.000	- / 7.292	- / -	- / 7.292	- / 4.196	- / 8.091	- / 6.494	- / -	- / -	- / 36.073	
<i>Subtotal: Procurement, All Modification Items</i>	- / -	- / -	- / 10.000	- / 7.292	- / -	- / 7.292	- / 4.196	- / 8.091	- / 6.494	- / -	- / -	- / 36.073	
<b>Installation</b>													
<i>Subtotal: Installation</i>	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	- / -	
<b>Total</b>													
<b>Total Cost (Procurement + Support + Installation)</b>	-	-	<b>10.000</b>	<b>7.292</b>	-	<b>7.292</b>	<b>4.196</b>	<b>8.091</b>	<b>6.494</b>	-	-	<b>36.073</b>	

**UNCLASSIFIED**

<b>Exhibit P-3a, Individual Modification:</b> PB 2021 Army					<b>Date:</b> February 2020		
<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 2035A / 02 / 86			<b>P-1 Line Item Number / Title:</b> 7563AD9300 / Mortar Fire Control Systems Modifications			<b>Modification Number / Title:</b> AD9305 / Mortar Fire Control Systems Modifications	
<b>ID Code</b> (A=Service Ready, B=Not Service Ready) :					<b>MDAP/MAIS Code:</b>		
<b>Modification Item 1 of 1:</b> Mortar Fire Control Systems Modifications							
<b>Manufacturer Information</b>							
Manufacturer Name: EFW Inc.				Manufacturer Location: Fort Worth, TX			
Administrative Leadtime (in Months): 4				Production Leadtime (in Months): 18			
<b>Dates</b>	<b>FY 2019</b>	<b>FY 2020</b>	<b>FY 2021</b>	<b>FY 2022</b>	<b>FY 2023</b>	<b>FY 2024</b>	<b>FY 2025</b>
Contract Dates		Mar 2020	Mar 2021	Mar 2022	Mar 2023	Mar 2024	
Delivery Dates		Aug 2021	Aug 2022	Aug 2023	Aug 2024	Aug 2025	
<b>Installation Information</b>							
<b>Method of Implementation (Organic):</b> Organic Install					<b>Installation Quantity:</b> 0		

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

<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 2035A: Other Procurement, Army / BA 02: Communications and Electronics Equipment / BSA 86: Elect Equip - Tactical Surv. (Tac Surv)	<b>P-1 Line Item Number / Title:</b> 8386BA5500 / Counterfire Radars
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<b>ID Code</b> (A=Service Ready, B=Not Service Ready):	<b>Program Elements for Code B Items:</b> N/A	<b>Other Related Program Elements:</b> 0604823A
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**Line Item MDAP/MAIS Code:** N/A

Resource Summary	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	To Complete	Total
Procurement Quantity ( <i>Units in Each</i> )	49	15	-	-	-	-	-	-	-	-	Continuing	Continuing
Gross/Weapon System Cost ( <i>\$ in Millions</i> )	2,803.477	324.150	16.416	72.421	-	72.421	11.829	29.868	41.921	53.408	Continuing	Continuing
Less PY Advance Procurement ( <i>\$ in Millions</i> )	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) ( <i>\$ in Millions</i> )	2,803.477	324.150	16.416	72.421	-	72.421	11.829	29.868	41.921	53.408	Continuing	Continuing
Plus CY Advance Procurement ( <i>\$ in Millions</i> )	-	-	-	-	-	-	-	-	-	-	-	-
<b>Total Obligation Authority</b> ( <i>\$ in Millions</i> )	<b>2,803.477</b>	<b>324.150</b>	<b>16.416</b>	<b>72.421</b>	<b>-</b>	<b>72.421</b>	<b>11.829</b>	<b>29.868</b>	<b>41.921</b>	<b>53.408</b>	<b>Continuing</b>	<b>Continuing</b>

*(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> )	57,213.816	21,610.000	-	-	-	-	-	-	-	-	Continuing	Continuing

**Description:**

The AN/TPQ-53 Counterfire Target Acquisition Radar System is a highly mobile radar set that automatically detects, classifies, tracks, and locates the point of origin of projectiles fired from mortar, artillery, and rocket systems with sufficient accuracy for first round fire for effect. It mitigates close combat radar coverage gaps by providing a 90-degree search sector (stare mode) as well as 360-degree coverage (rotating) and will replace the current AN/TPQ-36 and AN/TPQ-37 Firefinder Radars. The AN/TPQ-53 system interoperates with mission command systems to provide the maneuver commander increased counterfire radar flexibility. The AN/TPQ-53 is deployed as part of the Counter-Rocket, Artillery, Mortar (C-RAM) system of systems. It provides data to the Forward Area Air Defense Command and Control (FAAD C2) node for the sense and warn force protection capability. The AN/TPQ-53 currently supports contingency operations to include Operation Inherent Resolve (OIR) and is fielded to Brigade Combat Teams (BCTs), Field Artillery Brigades (FABs), and Division Artilleries (DIVARTYs).

The Army Acquisition Objective (AAO) is 189.

Secondary Distribution		FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025
Army	Quantity	13	-	-	-	-	-	-	-	-
	Total Obligation Authority	295.687	16.416	72.421	-	72.421	11.829	29.868	41.921	53.408
ANG	Quantity	2	-	-	-	-	-	-	-	-
	Total Obligation Authority	28.463	-	-	-	-	-	-	-	-
<b>Total: Secondary Distribution</b>	<b>Quantity</b>	<b>15</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>
	<b>Total Obligation Authority</b>	<b>324.150</b>	<b>16.416</b>	<b>72.421</b>	<b>-</b>	<b>72.421</b>	<b>11.829</b>	<b>29.868</b>	<b>41.921</b>	<b>53.408</b>

**UNCLASSIFIED**

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

**Appropriation / Budget Activity / Budget Sub Activity:**  
 2035A: Other Procurement, Army / BA 02: Communications and Electronics  
 Equipment / BSA 86: Elect Equip - Tactical Surv. (Tac Surv)

**P-1 Line Item Number / Title:**  
 8386BA5500 / Counterfire Radars

**ID Code** (A=Service Ready, B=Not Service Ready): **Program Elements for Code B Items:** N/A **Other Related Program Elements:** 0604823A

**Line Item MDAP/MAIS Code:** N/A

Exhibits Schedule					Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total
Exhibit Type	Title*	Subexhibits	ID CD	MDAP/MAIS Code	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)
P-5	B05310 / AN/TPQ-53 Counterfire Target Acquisition Radar	P-5a			49 / 2,803.477	15 / 324.150	- / 16.416	- / 72.421	- / -	- / 72.421
<b>P-40</b>	<b>Total Gross/Weapon System Cost</b>				<b>49 / 2,803.477</b>	<b>15 / 324.150</b>	<b>- / 16.416</b>	<b>- / 72.421</b>	<b>- / -</b>	<b>- / 72.421</b>

\*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 FY 2021 funding of \$72.421 million supports the retrofit of 13 AN/TPQ-53 systems from Gallium Arsenide (GaAs) to Gallium Nitride (GaN), retrofit of signal data processors (SDPs), and the production and fielding of systems to U.S. Army units.

Including prior year procurement quantities, this program achieved the AAO of 189 by procuring the last 15 systems in FY 2019.

Per BOIP change memo dated 21 Dec 15, current force structure is as follows:

- Two (2) radars per Active Component (AC) Armored Brigade Combat Team (ABCT)
- Two (2) radars per AC Infantry Brigade Combat Team (IBCT)
- Two (2) radars per AC Stryker Brigade Combat Team (SBCT)
- Two (2) radars per Army National Guard (ARNG) ABCT
- Two (2) radars per ARNG IBCT
- Two (2) radars per ARNG SBCT
- Two (2) radars per AC Field Artillery Brigade (FAB)
- Two (2) radars per ARNG FAB
- Two (2) radars per AC Division Artillery (DIVARTY)
- One (1) radar per Task Force

"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**

<b>Exhibit P-5, Cost Analysis: PB 2021 Army</b>		<b>Date:</b> February 2020
<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 2035A / 02 / 86	<b>P-1 Line Item Number / Title:</b> 8386BA5500 / Counterfire Radars	<b>Item Number / Title [DODIC]:</b> B05310 / AN/TPQ-53 Counterfire Target Acquisition Radar

<b>ID Code</b> (A=Service Ready, B=Not Service Ready) :	<b>MDAP/MAIS Code:</b>
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Resource Summary	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total
Procurement Quantity (Units in Each)	49	15	-	-	-	-
Gross/Weapon System Cost (\$ in Millions)	2,803.477	324.150	16.416	72.421	-	72.421
Less PY Advance Procurement (\$ in Millions)	-	-	-	-	-	-
Net Procurement (P-1) (\$ in Millions)	2,803.477	324.150	16.416	72.421	-	72.421
Plus CY Advance Procurement (\$ in Millions)	-	-	-	-	-	-
<b>Total Obligation Authority (\$ in Millions)</b>	<b>2,803.477</b>	<b>324.150</b>	<b>16.416</b>	<b>72.421</b>	<b>-</b>	<b>72.421</b>

*(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)	57,213.816	21,610.000	-	-	-	-

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

Cost Elements	Prior Years			FY 2019			FY 2020			FY 2021 Base			FY 2021 OCO			FY 2021 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																		
Hardware (AN/TPQ-53) <sup>(†)</sup>	10,247.874	174	1,783.130	11,257.933	15	168.869	-	-	-	-	-	-	-	-	-	-	-	-
Ancillary Equipment	-	-	238.656	-	-	8.903	-	-	-	-	-	-	-	-	-	-	-	-
Gallium Arsenide (GaAs) to Gallium Nitride (GaN) Retrofit	-	-	-	-	-	-	-	-	-	4,878.769	13	63.424	-	-	-	4,878.769	13	63.424
Signal Data Processor (SDP) Retrofit	-	-	-	385.431	109	42.012	-	-	-	-	-	-	-	-	-	-	-	-
<b>Subtotal: Recurring Cost</b>	<b>-</b>	<b>-</b>	<b>2,021.786</b>	<b>-</b>	<b>-</b>	<b>219.784</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>63.424</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>63.424</b>
Non Recurring Cost																		
Non-Recurring Engineering	-	-	132.827	-	-	39.080	-	-	0.814	-	-	-	-	-	-	-	-	-
Non-Recurring Production	-	-	144.383	-	-	0.860	-	-	-	-	-	-	-	-	-	-	-	-
Engineering Change Orders	-	-	2.785	-	-	0.590	-	-	0.951	-	-	-	-	-	-	-	-	-
Post Deployment Software Support	-	-	17.910	-	-	4.945	-	-	1.903	-	-	-	-	-	-	-	-	-
<b>Subtotal: Non Recurring Cost</b>	<b>-</b>	<b>-</b>	<b>297.905</b>	<b>-</b>	<b>-</b>	<b>45.475</b>	<b>-</b>	<b>-</b>	<b>3.668</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>
<b>Subtotal: Flyaway Cost</b>	<b>-</b>	<b>-</b>	<b>2,319.691</b>	<b>-</b>	<b>-</b>	<b>265.259</b>	<b>-</b>	<b>-</b>	<b>3.668</b>	<b>-</b>	<b>-</b>	<b>63.424</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>63.424</b>

Support - Acceptance Testing Cost



**UNCLASSIFIED**

<b>Exhibit P-5, Cost Analysis: PB 2021 Army</b>		<b>Date:</b> February 2020
<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 2035A / 02 / 86	<b>P-1 Line Item Number / Title:</b> 8386BA5500 / Counterfire Radars	<b>Item Number / Title [DODIC]:</b> B05310 / AN/TPQ-53 Counterfire Target Acquisition Radar

<b>ID Code</b> (A=Service Ready, B=Not Service Ready) :	<b>MDAP/MAIS Code:</b>
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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 2019			FY 2020			FY 2021 Base			FY 2021 OCO			FY 2021 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)
Acceptance Test	-	-	37.781	-	-	0.600	-	-	-	-	-	-	-	-	-	-	-	-
<i>Subtotal: Support - Acceptance Testing Cost</i>	-	-	<b>37.781</b>	-	-	<b>0.600</b>	-	-	-	-	-	-	-	-	-	-	-	-
Support - Fielding Cost																		
Fielding	-	-	43.797	-	-	11.162	-	-	3.676	-	-	8.997	-	-	-	-	-	8.997
<i>Subtotal: Support - Fielding Cost</i>	-	-	<b>43.797</b>	-	-	<b>11.162</b>	-	-	<b>3.676</b>	-	-	<b>8.997</b>	-	-	-	-	-	<b>8.997</b>
Support - Operational/Site Activation Cost																		
Sustainment/Interim Contractor Support	-	-	211.416	-	-	13.780	-	-	-	-	-	-	-	-	-	-	-	-
<i>Subtotal: Support - Operational/Site Activation Cost</i>	-	-	<b>211.416</b>	-	-	<b>13.780</b>	-	-	-	-	-	-	-	-	-	-	-	-
Support - Program Management Cost																		
Government Management	-	-	172.344	-	-	12.054	-	-	4.225	-	-	-	-	-	-	-	-	-
Contractor Management	-	-	6.422	-	-	16.393	-	-	4.597	-	-	-	-	-	-	-	-	-
<i>Subtotal: Support - Program Management Cost</i>	-	-	<b>178.766</b>	-	-	<b>28.447</b>	-	-	<b>8.822</b>	-	-	-	-	-	-	-	-	-
Support - Training Cost																		
Equipment	-	-	12.026	-	-	4.902	-	-	0.250	-	-	-	-	-	-	-	-	-
<i>Subtotal: Support - Training Cost</i>	-	-	<b>12.026</b>	-	-	<b>4.902</b>	-	-	<b>0.250</b>	-	-	-	-	-	-	-	-	-
<b>Gross/Weapon System Cost</b>	<b>57,213.816</b>	<b>49</b>	<b>2,803.477</b>	<b>21,610.000</b>	<b>15</b>	<b>324.150</b>	-	-	<b>16.416</b>	-	-	<b>72.421</b>	-	-	-	-	-	<b>72.421</b>

**Remarks:**  
 In accordance with the Army G-8 affordability memorandum, Army Cost Position, and Acquisition Program Baseline, all approved in April 2019, the program is carrying over \$29.204 million of FY 2019 procurement dollars in support of full rate production (FRP), system fielding, interim contractor support (ICS), and training in FY 2021.

FY 2021 recurring production funds the 13-system retrofit of transmit/receive modules from GaAs to GaN. The Army currently requires 60 GaN-equipped radar systems to support mission requirements; the program procured 47 of the 60 GaN systems on previous FRP contracts.

FY 2019 recurring production funds the procurement of 109 new signal data processors (SDPs) to mitigate obsolescence, facilitate depot production support, and enable an extended range capability. The program will field these SDPs in FY 2021.

FY 2019 non-recurring engineering funds original equipment manufacturer (OEM) software and engineering development as well as testing.

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<b>Exhibit P-5, Cost Analysis:</b> PB 2021 Army		<b>Date:</b> February 2020
<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 2035A / 02 / 86	<b>P-1 Line Item Number / Title:</b> 8386BA5500 / Counterfire Radars	<b>Item Number / Title [DODIC]:</b> B05310 / AN/TPQ-53 Counterfire Target Acquisition Radar

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

FY 2019 sustainment/interim contractor support (ICS) addresses the requirements for the original equipment manufacturer (OEM) to provide the necessary field support representatives (FSRs) to maintain and repair fielded systems as well as provide 24/7 help desk support to deployed soldiers supporting contingency operations.

Program management support funds personnel used to manage production and fielding of systems and signal data processors (SDPs), hardware and software engineering changes, maintain information assurance accreditation, manage the software materiel release process, and manage logistics efforts required to establish an organic supply system in preparation for the program's transition to the sustainment phase.

Secondary Distribution		FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total
Army	Quantity	13	-	-	-	-
	Total Obligation Authority	295.687	16.416	72.421	-	72.421
ANG	Quantity	2	-	-	-	-
	Total Obligation Authority	28.463	-	-	-	-
<b>Total:</b>	<b>Quantity</b>	<b>15</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>
<b>Secondary Distribution</b>	<b>Total Obligation Authority</b>	<b>324.150</b>	<b>16.416</b>	<b>72.421</b>	<b>-</b>	<b>72.421</b>

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

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<b>Exhibit P-5a, Procurement History and Planning:</b> PB 2021 Army							<b>Date:</b> February 2020					
<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 2035A / 02 / 86			<b>P-1 Line Item Number / Title:</b> 8386BA5500 / Counterfire Radars				<b>Item Number / Title [DODIC]:</b> B05310 / AN/TPQ-53 Counterfire Target Acquisition Radar					

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
Hardware (AN/TPQ-53)		2018	Lockheed Martin / Syracuse, NY.	SS / FPIF	CECOM	Mar 2018	Oct 2019	32	9,387.219	Y		Feb 2015
Hardware (AN/TPQ-53)		2019	Lockheed Martin / Syracuse, NY.	SS / FPIF	CECOM	Apr 2019	Nov 2020	15	11,257.933	Y		Feb 2015
Hardware (AN/TPQ-53)		2021	Lockheed Martin / Syracuse, NY.	SS / FFP	CECOM	Dec 2020	Jun 2022	0	0.000	Y		Aug 2020

**Remarks:**  
Delivery schedule shown is based on the schedule specified in the Full Rate Production contract.

**UNCLASSIFIED**

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

<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 2035A: Other Procurement, Army / BA 02: Communications and Electronics Equipment / BSA 89: Elect Equip - Tactical C2 Systems	<b>P-1 Line Item Number / Title:</b> 9042B29810 / Army Command Post Integrated Infrastructure (CPI2)
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<b>ID Code</b> (A=Service Ready, B=Not Service Ready):	<b>Program Elements for Code B Items:</b> N/A	<b>Other Related Program Elements:</b> 0604818A
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**Line Item MDAP/MAIS Code:** N/A

Resource Summary	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	To Complete	Total
Procurement Quantity ( <i>Units in Each</i> )	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost ( <i>\$ in Millions</i> )	-	2.284	-	49.947	-	49.947	84.442	233.695	395.174	339.057	Continuing	Continuing
Less PY Advance Procurement ( <i>\$ in Millions</i> )	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) ( <i>\$ in Millions</i> )	-	2.284	-	49.947	-	49.947	84.442	233.695	395.174	339.057	Continuing	Continuing
Plus CY Advance Procurement ( <i>\$ in Millions</i> )	-	-	-	-	-	-	-	-	-	-	-	-
<b>Total Obligation Authority (<i>\$ in Millions</i>)</b>	-	<b>2.284</b>	-	<b>49.947</b>	-	<b>49.947</b>	<b>84.442</b>	<b>233.695</b>	<b>395.174</b>	<b>339.057</b>	<b>Continuing</b>	<b>Continuing</b>

*(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:**

This funding line is directly aligned to the Army Network Modernization Strategy Line of Effort (LOE) #4 Command Post. Efforts are aligned to support the Network-Cross Functional Team capability set approach to achieve the network modernization strategy.

The Command Post Integrated Infrastructure (CPI2) program addresses the requirements for a more mobile, scalable, interoperable, and agile command post. Currently fielded command posts are deemed too large and take too long to setup and teardown making them vulnerable to near peer detection and targeting technologies. By integrating mission command warfighting functions on to formation appropriate vehicle platforms, a dispersed command post construct will enable the battle staff to blend in with the overall maneuver formation while giving the commander the ability to synchronize the close fight on the move. This dispersed mobile command post consists of Mission Command Platforms (MCPs) and Command Post Support Vehicles (CPSVs). The MCP is a formation appropriate vehicle that provides digital workstations for all mission command warfighting functions. The CPSV is the hub of the dispersed command post; it hosts mission command servers, radios, local area network components and a secure wireless capability. Specific to CORPS/DIV, CPI2 will provide a Mobile Command Group (MCG) consisting of formation appropriate platforms that supports Corps/Div Commanders/Staff with high priority functions while on the move.

The CPI2 Materiel Development Decision (MDD) Acquisition Decision Memorandum signed on 21 June 2018 directs CPI2 to be executed in a two increment approach. Increment 1 addresses needs identified in the Command Post (CP) Directed Requirement (DR) to deliver 5 Brigade Combat Teams (BCT's) and a platform based Mobile Command Group to 1 Corps/Division. A Milestone C in FY21 will authorize production of MCP and CPSV for fielding of 3 Brigade Combat Teams (BCTs), MCG and necessary updates to units issued CPI2 equipment during the development phase of CPI2 Inc 1. Integration/installation will incorporate available commercial off the shelf (COTS) as well as government programs of record (PORs) equipment that provide mission command and communications functions within the command post. These designs will be developed based on Increment 1 test events and unit feedback. Additionally, CPI2 Inc 1 must procure vehicle platforms as the CP DR does not increase the Basis of Issue (BOI) for platform Programs of Record (POR). Increment 2 will execute requirements per the CPI2 Capability Development Document (CDD) to replace designated legacy command post systems at Corps, Division, Brigade combat team's, Battalion (BN) and select Multi-Functional Support Brigades (MFSBs). The CPI2 CDD is scheduled for AROC review/approval on 7 Feb 2020. An Inc 2 Milestone C in FY23 will allow for fielding CPI2 to 86 Army units over the duration of the program and authorize award of a competed contract with industry for the design, engineering, test and production of the CDD solution for CPI2.

In both increments; CPI2 will leverage existing contracts managed by Joint Project Office - Joint Light Tactical Vehicle (JPO JLTV), Product Manager (PdM) Armored Multi-Purpose Vehicle (AMPV) and Project Manager (PM) Stryker Brigade Combat Team (SBCT) for efforts associated with their respective platforms. This will encompass CPI2 variants at designated Corps, Division, Brigade, Battalion and select MFSB's.

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<b>Exhibit P-40, Budget Line Item Justification:</b> PB 2021 Army							<b>Date:</b> February 2020			
<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 2035A: Other Procurement, Army / BA 02: Communications and Electronics Equipment / BSA 89: Elect Equip - Tactical C2 Systems					<b>P-1 Line Item Number / Title:</b> 9042B29810 / Army Command Post Integrated Infrastructure (CPI2)					
<b>ID Code</b> (A=Service Ready, B=Not Service Ready):			<b>Program Elements for Code B Items:</b> N/A			<b>Other Related Program Elements:</b> 0604818A				
<b>Line Item MDAP/MAIS Code:</b> N/A										

Secondary Distribution		FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025
Army	Quantity	-	-	-	-	-	-	-	-	-
	Total Obligation Authority	2.284	-	49.947	-	49.947	84.442	233.695	395.174	339.057
<b>Total:</b> Secondary Distribution	Quantity	-	-	-	-	-	-	-	-	-
	Total Obligation Authority	2.284	-	49.947	-	49.947	84.442	233.695	395.174	339.057

**UNCLASSIFIED**

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

**Appropriation / Budget Activity / Budget Sub Activity:** 2035A: Other Procurement, Army / BA 02: Communications and Electronics Equipment / BSA 89: Elect Equip - Tactical C2 Systems **P-1 Line Item Number / Title:** 9042B29810 / Army Command Post Integrated Infrastructure (CPI2)

**ID Code** (A=Service Ready, B=Not Service Ready): **Program Elements for Code B Items:** N/A **Other Related Program Elements:** 0604818A

**Line Item MDAP/MAIS Code:** N/A

Exhibits Schedule					Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total
Exhibit Type	Title*	Subexhibits	ID CD	MDAP/MAIS Code	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)
P-5	B29801 / CPI2	P-5a, P-21			- / -	- / 2.284	- / -	- / 49.947	- / -	- / 49.947
<b>P-40</b>	<b>Total Gross/Weapon System Cost</b>				- / -	- / 2.284	- / -	- / 49.947	- / -	- / 49.947

\*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:**

Fiscal Year 2021 Base Procurement dollars in the amount of \$49.947 million supports CPI2 Inc 1 with the award of a integration contract for the design, installation and assembly of platform vehicles to deliver Mission Command Platform (MCP) and Command Post Support Vehicles (CPSV) for 3 Brigade Combat Teams (BCT) and any updates necessary for units issued CPI2 equipment in the development phase of Inc 1. The MCP and CPSV provides increased mobility and survivability of today's command post. Funding supports the procurement of necessary vehicle platforms, ancillary equipment for communications, concealment, power, secure wireless solutions, integration, program management 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.

Army Command Post Integrated Infrastructure (CPI2) is a new start in FY2021.

**UNCLASSIFIED**

<b>Exhibit P-5, Cost Analysis: PB 2021 Army</b>		<b>Date:</b> February 2020
<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 2035A / 02 / 89	<b>P-1 Line Item Number / Title:</b> 9042B29810 / Army Command Post Integrated Infrastructure (CPI2)	<b>Item Number / Title [DODIC]:</b> B29801 / CPI2

<b>ID Code</b> (A=Service Ready, B=Not Service Ready) :	<b>MDAP/MAIS Code:</b>
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<b>Resource Summary</b>	<b>Prior Years</b>	<b>FY 2019</b>	<b>FY 2020</b>	<b>FY 2021 Base</b>	<b>FY 2021 OCO</b>	<b>FY 2021 Total</b>
Procurement Quantity <i>(Units in Each)</i>	-	-	-	-	-	-
Gross/Weapon System Cost <i>(\$ in Millions)</i>	-	2.284	-	49.947	-	49.947
Less PY Advance Procurement <i>(\$ in Millions)</i>	-	-	-	-	-	-
Net Procurement (P-1) <i>(\$ in Millions)</i>	-	2.284	-	49.947	-	49.947
Plus CY Advance Procurement <i>(\$ in Millions)</i>	-	-	-	-	-	-
<b>Total Obligation Authority</b> <i>(\$ in Millions)</i>	-	<b>2.284</b>	-	<b>49.947</b>	-	<b>49.947</b>

*(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>	-	-	-	-	-	-

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

<b>Cost Elements</b>	<b>Prior Years</b>			<b>FY 2019</b>			<b>FY 2020</b>			<b>FY 2021 Base</b>			<b>FY 2021 OCO</b>			<b>FY 2021 Total</b>		
	<b>Unit Cost</b> (\$ K)	<b>Qty</b> (Each)	<b>Total Cost</b> (\$ M)	<b>Unit Cost</b> (\$ K)	<b>Qty</b> (Each)	<b>Total Cost</b> (\$ M)	<b>Unit Cost</b> (\$ K)	<b>Qty</b> (Each)	<b>Total Cost</b> (\$ M)	<b>Unit Cost</b> (\$ K)	<b>Qty</b> (Each)	<b>Total Cost</b> (\$ M)	<b>Unit Cost</b> (\$ K)	<b>Qty</b> (Each)	<b>Total Cost</b> (\$ M)	<b>Unit Cost</b> (\$ K)	<b>Qty</b> (Each)	<b>Total Cost</b> (\$ M)
<b>Flyaway Cost</b>																		
Recurring Cost																		
Installation Test Assembly & Checkout (IATC)	-	-	-	-	-	-	-	-	-	-	-	11.115	-	-	-	-	-	11.115
Engineering Change Orders	-	-	-	-	-	-	-	-	-	-	-	3.879	-	-	-	-	-	3.879
<b>Subtotal: Recurring Cost</b>	-	-	-	-	-	-	-	-	-	-	-	<b>14.994</b>	-	-	-	-	-	<b>14.994</b>
Non Recurring Cost																		
Initial Design/Integration	-	-	-	-	-	-	-	-	-	-	-	7.244	-	-	-	-	-	7.244
<b>Subtotal: Non Recurring Cost</b>	-	-	-	-	-	-	-	-	-	-	-	<b>7.244</b>	-	-	-	-	-	<b>7.244</b>
<b>Subtotal: Flyaway Cost</b>	-	-	-	-	-	-	-	-	-	-	-	<b>22.238</b>	-	-	-	-	-	<b>22.238</b>
<b>Hardware Cost</b>																		
Recurring Cost																		
FMTV Platform <sup>(†)</sup>	-	-	-	-	-	-	-	-	-	585.471	17	9.953	-	-	-	585.471	17	9.953
M1152 Platform <sup>(†)</sup>	-	-	-	-	-	-	-	-	-	142.250	12	1.707	-	-	-	142.250	12	1.707
Unified Voice Management System (UVMS) <sup>(†)</sup>	-	-	-	-	-	-	-	-	-	46.552	29	1.350	-	-	-	46.552	29	1.350
Secure Wireless Solution <sup>(†)</sup>	-	-	-	-	-	-	-	-	-	31.205	88	2.746	-	-	-	31.205	88	2.746

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<b>Exhibit P-5, Cost Analysis: PB 2021 Army</b>		<b>Date:</b> February 2020
<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 2035A / 02 / 89	<b>P-1 Line Item Number / Title:</b> 9042B29810 / Army Command Post Integrated Infrastructure (CPI2)	<b>Item Number / Title [DODIC]:</b> B29801 / CPI2

<b>ID Code</b> (A=Service Ready, B=Not Service Ready) :	<b>MDAP/MAIS Code:</b>
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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 2019			FY 2020			FY 2021 Base			FY 2021 OCO			FY 2021 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)
Rigid Wall Shelter <sup>(†)</sup>	-	-	-	-	-	-	-	-	-	34.000	6	0.204	-	-	-	34.000	6	0.204
Towable Expeditionary Shelter System (TESS) <sup>(†)</sup>	-	-	-	-	-	-	-	-	-	248.000	20	4.960	-	-	-	248.000	20	4.960
Command Post Display System (CPDS) <sup>(†)</sup>	-	-	-	-	-	-	-	-	-	5.400	20	0.108	-	-	-	5.400	20	0.108
Bootwalls <sup>(†)</sup>	-	-	-	-	-	-	-	-	-	5.917	36	0.213	-	-	-	5.917	36	0.213
Camouflage <sup>(†)</sup>	-	-	-	-	-	-	-	-	-	10.985	130	1.428	-	-	-	10.985	130	1.428
IECU Power Generators <sup>(†)</sup>	-	-	-	-	-	-	-	-	-	10.529	17	0.179	-	-	-	10.529	17	0.179
Initial Sparing	-	-	-	-	-	-	-	-	-	-	-	0.776	-	-	-	-	-	0.776
<i>Subtotal: Recurring Cost</i>	-	-	-	-	-	-	-	-	-	-	-	23.624	-	-	-	-	-	23.624
<i>Subtotal: Hardware Cost</i>	-	-	-	-	-	-	-	-	-	-	-	23.624	-	-	-	-	-	23.624
<b>Logistics Cost</b>																		
<b>Recurring Cost</b>																		
New Equipment Training	-	-	-	-	-	2.284	-	-	-	-	-	1.613	-	-	-	-	-	1.613
Post Deployment Software Sustainment (PDSS)	-	-	-	-	-	-	-	-	-	-	-	0.266	-	-	-	-	-	0.266
Data	-	-	-	-	-	-	-	-	-	-	-	0.316	-	-	-	-	-	0.316
<i>Subtotal: Recurring Cost</i>	-	-	-	-	-	2.284	-	-	-	-	-	2.195	-	-	-	-	-	2.195
<i>Subtotal: Logistics Cost</i>	-	-	-	-	-	2.284	-	-	-	-	-	2.195	-	-	-	-	-	2.195
<b>Support - Program Management Cost</b>																		
Contractor Management	-	-	-	-	-	-	-	-	-	-	-	1.890	-	-	-	-	-	1.890
<i>Subtotal: Support - Program Management Cost</i>	-	-	-	-	-	-	-	-	-	-	-	1.890	-	-	-	-	-	1.890
<b>Gross/Weapon System Cost</b>	-	-	-	-	-	2.284	-	-	-	-	-	49.947	-	-	-	-	-	49.947

Secondary Distribution		FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total
Army	Quantity	-	-	-	-	-
	Total Obligation Authority	2.284	-	49.947	-	49.947



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<b>Exhibit P-5, Cost Analysis:</b> PB 2021 Army		<b>Date:</b> February 2020
<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 2035A / 02 / 89	<b>P-1 Line Item Number / Title:</b> 9042B29810 / Army Command Post Integrated Infrastructure (CPI2)	<b>Item Number / Title [DODIC]:</b> B29801 / CPI2

<b>ID Code</b> (A=Service Ready, B=Not Service Ready) :		<b>MDAP/MAIS Code:</b>				
<b>Secondary Distribution</b>		<b>FY 2019</b>	<b>FY 2020</b>	<b>FY 2021 Base</b>	<b>FY 2021 OCO</b>	<b>FY 2021 Total</b>
<b>Total:</b>	<b>Quantity</b>	-	-	-	-	-
<b>Secondary Distribution</b>	<b>Total Obligation Authority</b>	2.284	-	49.947	-	49.947

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

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<b>Exhibit P-5a, Procurement History and Planning:</b> PB 2021 Army							<b>Date:</b> February 2020				
<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 2035A / 02 / 89			<b>P-1 Line Item Number / Title:</b> 9042B29810 / Army Command Post Integrated Infrastructure (CPI2)				<b>Item Number / Title [DODIC]:</b> B29801 / CPI2				

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
FMTV Platform <sup>(†)</sup>		2021	OSHKOSH Corp / Warren, MI	Allot	TACOM, Warren, MI	Jul 2021	May 2022	17	585.471	Y		
M1152 Platform		2021	American General / Warren, MI	Allot	TACOM, Warren MI	Jul 2021	Dec 2021	12	142.250	Y		
Unified Voice Management System (UVMS)		2021	TBD / TBD	Allot	Aberdeen Proving Ground, MD	Jul 2021	May 2022	29	46.552	Y		
Secure Wireless Solution		2021	TBD / TBD	C / IDDQ	Aberdeen Proving Ground, MD	Jul 2021	Dec 2021	88	31.205	Y		
Rigid Wall Shelter		2021	TBD / TBD	Allot	Natick MA	Jul 2021	Sep 2021	6	34.000	Y		
Towable Expeditionary Shelter System (TESS)		2021	TBD / TBD	Allot	Natick, MA	Jul 2021	Sep 2021	20	248.000	Y		
Command Post Display System (CPDS)		2021	TBD / TBD	Allot	To Be Determined	Jul 2021	Nov 2021	20	5.400	N		
Bootwalls		2021	TBD / TBD	Allot	Natick, MA	Jul 2021	Oct 2021	36	5.917	N		
Camouflage		2021	TBD / TBD	Allot	Natick, MA	Jul 2021	Oct 2021	130	10.985	Y		
IECU Power Generators		2021	TBD / TBD	Allot	Ft.Belvoir, VA	Jul 2021	Oct 2021	17	10.529	Y		

<sup>(†)</sup> indicates the presence of a P-21

**Remarks:**  
Vendors TBD pending final results of Inc 1 test and evaluation. CPI2 has funding mechanisms in place to support immediate awards upon MS C for platforms, hardware and industry contract.

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<b>Exhibit P-21, Production Schedule:</b> PB 2021 Army															<b>Date:</b> February 2020									
<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 2035A / 02 / 89										<b>P-1 Line Item Number / Title:</b> 9042B29810 / Army Command Post Integrated Infrastructure (CPI2)										<b>Item Number / Title [DODIC]:</b> B29801 / CPI2				

Cost Elements <i>(Units in Each)</i>							Fiscal Year 2021										Fiscal Year 2022										BALANCE
O C C #	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	

FMTV Platform																																
1	2021	ARMY		17	0	17																										0

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<b>Exhibit P-21, Production Schedule:</b> PB 2021 Army		<b>Date:</b> February 2020
<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 2035A / 02 / 89		<b>P-1 Line Item Number / Title:</b> 9042B29810 / Army Command Post Integrated Infrastructure (CPI2)
		<b>Item Number / Title [DODIC]:</b> B29801 / CPI2

MFR Ref #	Manufacturer Name - Location	Production Rates (Each / Month)			Procurement Leadtime (Months)							
		MSR For 2021	1-8-5 For 2021	MAX For 2021	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	OSHKOSH Corp - Warren, MI	1	5	20	0	1	10	11	0	1	10	11

**Remarks:**  
P21 estimates to be revised as needed upon award of contract.

"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 2021 Army **Date:** February 2020

<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 2035A: Other Procurement, Army / BA 02: Communications and Electronics Equipment / BSA 89: Elect Equip - Tactical C2 Systems	<b>P-1 Line Item Number / Title:</b> 9060B28501 / Fire Support C2 Family
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<b>ID Code</b> (A=Service Ready, B=Not Service Ready):	<b>Program Elements for Code B Items:</b> N/A	<b>Other Related Program Elements:</b> 0203726A, 0203728A
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**Line Item MDAP/MAIS Code:** N/A

Resource Summary	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	To Complete	Total
Procurement Quantity <i>(Units in Each)</i>	39	248	525	-	-	-	-	-	-	-	-	812
Gross/Weapon System Cost <i>(\$ in Millions)</i>	522.548	19.724	13.197	9.390	-	9.390	10.189	9.490	8.891	3.197	-	596.626
Less PY Advance Procurement <i>(\$ in Millions)</i>	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) <i>(\$ in Millions)</i>	522.548	19.724	13.197	9.390	-	9.390	10.189	9.490	8.891	3.197	-	596.626
Plus CY Advance Procurement <i>(\$ in Millions)</i>	-	-	-	-	-	-	-	-	-	-	-	-
<b>Total Obligation Authority <i>(\$ in Millions)</i></b>	<b>522.548</b>	<b>19.724</b>	<b>13.197</b>	<b>9.390</b>	<b>-</b>	<b>9.390</b>	<b>10.189</b>	<b>9.490</b>	<b>8.891</b>	<b>3.197</b>	<b>-</b>	<b>596.626</b>

*(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>	13,398.667	79.532	25.137	-	-	-	-	-	-	-	-	734.761

**Description:**

The Fire Support Command & Control (FSC2) funding line supports the Long Range Precision Fires (LRPF) Cross Functional Team (CFT), the #1 priority in the Army Modernization Strategy and the Common Operating Environment (COE).

FSC2 supports the development of Advanced Field Artillery Tactical Data System (AFATDS), LRPF CFT, Extended Range Canon Artillery (ERCA), Extended Range Guided Multiple Launch Rocket System (ER-GMLRS), Precision Strike Missile System (PRSM) initiatives. In order to support these initiatives, AFATDS will serve as the key sensor to shooter link for the Army and USMC providing fully automated support for planning, coordinating, controlling and executing fires and effects. AFATDS also began supporting Long Range Hypersonic Weapons (LRHW) in FY20. Fire Support Command and Control (FSC2) systems automate the planning and execution of fire support operations so that a suitable weapon or group of weapons adequately cover targets. Fire support is the effect of lethal and non-lethal weapons (fires) that directly support land, maritime, amphibious and special operation forces to engage enemy forces, combat formations, and facilities in pursuit of tactical and operational objectives. FSC2 family consists of Advanced Field Artillery Tactical Data System (AFATDS), Joint Automated Deep Operations Coordination System (JADOCS), and Precision Fires Dismounted and Mounted (PF-D/M), formerly known as Pocket-sized Forward Entry Device (PFED).

Joint Automated Deep Operations Coordination System (JADOCS) is a Joint and Coalition targeting, coordination mission management software application. It links Command and Control (C2), Intelligence, and Air Operations information with execution systems using real time collaborative targeting managers, customized for each service or specific functional area. JADOCS is used to significantly enhance the Joint Force and Component Command's capability to simultaneously develop, coordinate and execute Dynamic and Time Sensitive targets and fire missions, as well as battle space coordination worldwide. JADOCS provides coordination and de-confliction of targeting information at all levels of command structure for the military. JADOCS is used by Air, Ground, Maritime, and Special Operations forces. It provides horizontal (across Services) as well as vertical (within Services) coordination of missions to ensure a common picture of targeting operational status across the entire joint force. As a software application, JADOCS can be configured and customized for each user and location.

The Advanced Field Artillery Tactical Data System (AFATDS) provides the Army, Navy, and Marine Corps automated fire support command, control and communications. AFATDS is used to plan, execute, and deliver lethal and non-lethal effects. AFATDS provides Joint/Coalition Situational Awareness for fires execution and mission management. The system interoperates and integrates with over 80 different battlefield systems, including Navy and Air Force command and control weapons systems. As a member of the Artillery System Cooperation Agreement (ASCA), AFATDS is interoperable with coalition partner fire support systems. AFATDS automates the planning, coordination, and control of all fire support assets (field artillery, mortars, close air support, naval gunfire, attack helicopters, offensive electronic warfare, fire support meteorological systems, forward observers, and fire support radars). AFATDS 7.0 modernizes the existing AFATDS software currently in the field. AFATDS 7.0 enhances the existing AFATDS baseline by:

- (1) Providing a modernized web service based backend that will simplify long-term maintenance of the software,
- (2) Bringing AFATDS into full compliance with the Army's COE, Command Post Computing

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<b>Exhibit P-40, Budget Line Item Justification:</b> PB 2021 Army		<b>Date:</b> February 2020
<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 2035A: Other Procurement, Army / BA 02: Communications and Electronics Equipment / BSA 89: Elect Equip - Tactical C2 Systems		<b>P-1 Line Item Number / Title:</b> 9060B28501 / Fire Support C2 Family

<b>ID Code</b> (A=Service Ready, B=Not Service Ready):	<b>Program Elements for Code B Items:</b> N/A	<b>Other Related Program Elements:</b> 0203726A, 0203728A
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**Line Item MDAP/MAIS Code:** N/A

Environment (CPCE) initiative, and (3) Enhancing overall usability of the system through the implementation of a role-based capability architecture with embedded training that allows the AFATDS operator to receive on-the-spot training for any aspect of AFATDS via interactive instruction.

Precision Fires Dismounted and Mounted (PF-D/M), is a software application that operates on the Nett Warrior End User Device (EUD). It will provide the dismounted Forward Observer (FO) and Fire Support Teams (FISTs) the capability and functionality to accurately and rapidly locate ground targets and digitally process a Call for Fire. PF-D answers the Mobile Handheld Computing Environment requirement that all handheld applications reside on the Nett Warrior EUD. PF-M answers the mounted computing environment requirement and will reside on Mounted Family of Computer Systems (MFCs) computers.

Secondary Distribution		FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025
Army	Quantity	248	289	-	-	-	-	-	-	-
	Total Obligation Authority	19.153	8.303	9.390	-	9.390	10.189	9.490	8.891	3.197
ANG	Quantity	-	222	-	-	-	-	-	-	-
	Total Obligation Authority	0.571	4.613	-	-	-	-	-	-	-
AR	Quantity	-	14	-	-	-	-	-	-	-
	Total Obligation Authority	-	0.281	-	-	-	-	-	-	-
<b>Total:</b>	<b>Quantity</b>	<b>248</b>	<b>525</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>
<b>Secondary Distribution</b>	<b>Total Obligation Authority</b>	<b>19.724</b>	<b>13.197</b>	<b>9.390</b>	<b>-</b>	<b>9.390</b>	<b>10.189</b>	<b>9.490</b>	<b>8.891</b>	<b>3.197</b>

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

<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 2035A: Other Procurement, Army / BA 02: Communications and Electronics Equipment / BSA 89: Elect Equip - Tactical C2 Systems	<b>P-1 Line Item Number / Title:</b> 9060B28501 / Fire Support C2 Family
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<b>ID Code</b> (A=Service Ready, B=Not Service Ready):	<b>Program Elements for Code B Items:</b> N/A	<b>Other Related Program Elements:</b> 0203726A, 0203728A
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**Line Item MDAP/MAIS Code:** N/A

Exhibits Schedule					Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total
Exhibit Type	Title*	Subexhibits	ID CD	MDAP/MAIS Code	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)
P-5	B28504 / JADOCS				- / 3.732	- / 1.679	- / 0.494	- / -	- / -	- / -
P-5	B28620 / MOD OF IN-SVC EQUIP, AFATDS	P-5a			39 / 205.081	248 / 7.401	114 / 4.083	- / 5.494	- / -	- / 5.494
P-5	BZ9851 / POCKET FORWARD ENTRY DEVICE (PFED)	P-5a			- / 313.735	- / 10.644	411 / 8.620	- / 3.896	- / -	- / 3.896
<b>P-40</b>	<b>Total Gross/Weapon System Cost</b>				<b>39 / 522.548</b>	<b>248 / 19.724</b>	<b>525 / 13.197</b>	<b>- / 9.390</b>	<b>- / -</b>	<b>- / 9.390</b>

\*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 2021 Base procurement dollars (B28620) in the amount of \$5.494 million will be used to complete fielding, integration and New Equipment Training (NET) of Advanced Field Artillery Tactical Data System (AFATDS) V6.8.X.

FY 2021 Base procurement dollars (BZ9851) in the amount of \$3.896 million funds will be utilized for fielding to include ancillary items, needed for integration of legacy hardware, and New Equipment Training (NET) support for Precision Fires Dismounted and Mounted (PF-D/M) - formerly known as Pocket-sized Forward Entry Device (PFED) Increment II software. Ancillary equipment includes TACLINK/ULTRALINK box, cables, hubs and laptops.

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-5, Cost Analysis: PB 2021 Army** **Date:** February 2020

<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 2035A / 02 / 89	<b>P-1 Line Item Number / Title:</b> 9060B28501 / Fire Support C2 Family	<b>Item Number / Title [DODIC]:</b> B28504 / JADOCs
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**ID Code** (A=Service Ready, B=Not Service Ready) : **MDAP/MAIS Code:**

Resource Summary	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total
Procurement Quantity (Units in Each)	-	-	-	-	-	-
Gross/Weapon System Cost (\$ in Millions)	3.732	1.679	0.494	-	-	-
Less PY Advance Procurement (\$ in Millions)	-	-	-	-	-	-
Net Procurement (P-1) (\$ in Millions)	3.732	1.679	0.494	-	-	-
Plus CY Advance Procurement (\$ in Millions)	-	-	-	-	-	-
<b>Total Obligation Authority (\$ in Millions)</b>	<b>3.732</b>	<b>1.679</b>	<b>0.494</b>	-	-	-

*(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 2019			FY 2020			FY 2021 Base			FY 2021 OCO			FY 2021 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)
<b>Support - Fielding Cost</b>																		
Fielding	-	-	1.163	-	-	0.250	-	-	0.194	-	-	-	-	-	-	-	-	-
<i>Subtotal: Support - Fielding Cost</i>	-	-	<b>1.163</b>	-	-	<b>0.250</b>	-	-	<b>0.194</b>	-	-	-	-	-	-	-	-	-
<b>Support - Program Management Cost</b>																		
Government Management	-	-	0.880	-	-	0.329	-	-	-	-	-	-	-	-	-	-	-	-
Contractor Management	-	-	0.200	-	-	0.100	-	-	0.100	-	-	-	-	-	-	-	-	-
<i>Subtotal: Support - Program Management Cost</i>	-	-	<b>1.080</b>	-	-	<b>0.429</b>	-	-	<b>0.100</b>	-	-	-	-	-	-	-	-	-
<b>Support - Training Cost</b>																		
Equipment	-	-	1.489	-	-	1.000	-	-	0.200	-	-	-	-	-	-	-	-	-
<i>Subtotal: Support - Training Cost</i>	-	-	<b>1.489</b>	-	-	<b>1.000</b>	-	-	<b>0.200</b>	-	-	-	-	-	-	-	-	-
<b>Gross/Weapon System Cost</b>	-	-	<b>3.732</b>	-	-	<b>1.679</b>	-	-	<b>0.494</b>	-	-	-	-	-	-	-	-	-

Secondary Distribution		FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total
Army	Quantity	-	-	-	-	-
	Total Obligation Authority	1.679	0.494	-	-	-
<b>Total: Secondary Distribution</b>	Quantity	-	-	-	-	-
	Total Obligation Authority	<b>1.679</b>	<b>0.494</b>	-	-	-



**UNCLASSIFIED**

<b>Exhibit P-5, Cost Analysis: PB 2021 Army</b>		<b>Date:</b> February 2020
<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 2035A / 02 / 89		<b>P-1 Line Item Number / Title:</b> 9060B28501 / Fire Support C2 Family
		<b>Item Number / Title [DODIC]:</b> B28620 / MOD OF IN-SVC EQUIP, AFATDS

<b>ID Code</b> (A=Service Ready, B=Not Service Ready) :	<b>MDAP/MAIS Code:</b>
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Resource Summary	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total
Procurement Quantity (Units in Each)	39	248	114	-	-	-
Gross/Weapon System Cost (\$ in Millions)	205.081	7.401	4.083	5.494	-	5.494
Less PY Advance Procurement (\$ in Millions)	-	-	-	-	-	-
Net Procurement (P-1) (\$ in Millions)	205.081	7.401	4.083	5.494	-	5.494
Plus CY Advance Procurement (\$ in Millions)	-	-	-	-	-	-
<b>Total Obligation Authority (\$ in Millions)</b>	<b>205.081</b>	<b>7.401</b>	<b>4.083</b>	<b>5.494</b>	<b>-</b>	<b>5.494</b>

*(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)	5,258.487	29.843	35.816	-	-	-

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

Cost Elements	Prior Years			FY 2019			FY 2020			FY 2021 Base			FY 2021 OCO			FY 2021 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																		
Hardware - AFATDS Legacy MC Workstations <sup>(f)</sup>	71.370	2,288	163.294	14.044	340	4.775	-	-	-	-	-	-	-	-	-	-	-	-
<i>Subtotal: Recurring Cost</i>	-	-	163.294	-	-	4.775	-	-	-	-	-	-	-	-	-	-	-	-
<i>Subtotal: Flyaway Cost</i>	-	-	<b>163.294</b>	-	-	<b>4.775</b>	-	-	-	-	-	-	-	-	-	-	-	-
Hardware Cost																		
Recurring Cost																		
Hardware - AFATDS Legacy MC Workstations	-	-	-	-	-	-	-	-	-	12.549	113	1.418	-	-	-	12.549	113	1.418
<i>Subtotal: Recurring Cost</i>	-	-	-	-	-	-	-	-	-	-	-	1.418	-	-	-	-	-	1.418
<i>Subtotal: Hardware Cost</i>	-	-	-	-	-	-	-	-	-	-	-	<b>1.418</b>	-	-	-	-	-	<b>1.418</b>
Support - Common Support Equipment Cost																		
Support and Handling Equipment	-	-	-	-	-	-	-	-	1.083	-	-	0.799	-	-	-	-	-	0.799
<i>Subtotal: Support - Common Support Equipment Cost</i>	-	-	-	-	-	-	-	-	<b>1.083</b>	-	-	<b>0.799</b>	-	-	-	-	-	<b>0.799</b>
Support - Fielding Cost																		
Fielding	-	-	10.680	-	-	0.845	-	-	0.500	-	-	1.857	-	-	-	-	-	1.857
<i>Subtotal: Support - Fielding Cost</i>	-	-	<b>10.680</b>	-	-	<b>0.845</b>	-	-	<b>0.500</b>	-	-	<b>1.857</b>	-	-	-	-	-	<b>1.857</b>

**UNCLASSIFIED**

<b>Exhibit P-5, Cost Analysis: PB 2021 Army</b>		<b>Date:</b> February 2020
<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 2035A / 02 / 89	<b>P-1 Line Item Number / Title:</b> 9060B28501 / Fire Support C2 Family	<b>Item Number / Title [DODIC]:</b> B28620 / MOD OF IN-SVC EQUIP, AFATDS

<b>ID Code</b> (A=Service Ready, B=Not Service Ready) :	<b>MDAP/MAIS Code:</b>
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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 2019			FY 2020			FY 2021 Base			FY 2021 OCO			FY 2021 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)
Support - Program Management Cost																		
Contractor Management	-	-	8.158	-	-	0.491	-	-	1.000	-	-	0.555	-	-	-	-	-	0.555
<i>Subtotal: Support - Program Management Cost</i>	-	-	<b>8.158</b>	-	-	<b>0.491</b>	-	-	<b>1.000</b>	-	-	<b>0.555</b>	-	-	-	-	-	<b>0.555</b>
Support - System Engineering Cost																		
System Engineering	-	-	10.782	-	-	0.644	-	-	1.000	-	-	0.299	-	-	-	-	-	0.299
<i>Subtotal: Support - System Engineering Cost</i>	-	-	<b>10.782</b>	-	-	<b>0.644</b>	-	-	<b>1.000</b>	-	-	<b>0.299</b>	-	-	-	-	-	<b>0.299</b>
Support - Training Cost																		
Services	-	-	12.166	-	-	0.646	-	-	0.500	-	-	0.566	-	-	-	-	-	0.566
<i>Subtotal: Support - Training Cost</i>	-	-	<b>12.166</b>	-	-	<b>0.646</b>	-	-	<b>0.500</b>	-	-	<b>0.566</b>	-	-	-	-	-	<b>0.566</b>
<b>Gross/Weapon System Cost</b>	<b>5,258.487</b>	<b>39</b>	<b>205.081</b>	<b>29.843</b>	<b>248</b>	<b>7.401</b>	<b>35.816</b>	<b>114</b>	<b>4.083</b>	-	-	<b>5.494</b>	-	-	-	-	-	<b>5.494</b>

**Remarks:**  
Hardware will be procured for legacy systems and AFATDS 7.0 GFE for Labs/NET testing and training.

Secondary Distribution		FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total
Army	Quantity	248	42	-	-	-
	Total Obligation Authority	6.830	2.637	5.494	-	5.494
ANG	Quantity	-	58	-	-	-
	Total Obligation Authority	0.571	1.165	-	-	-
AR	Quantity	-	14	-	-	-
	Total Obligation Authority	-	0.281	-	-	-
<b>Total: Secondary Distribution</b>	<b>Quantity</b>	<b>248</b>	<b>114</b>	<b>-</b>	<b>-</b>	<b>-</b>
	<b>Total Obligation Authority</b>	<b>7.401</b>	<b>4.083</b>	<b>5.494</b>	<b>-</b>	<b>5.494</b>

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

**UNCLASSIFIED**

<b>Exhibit P-5a, Procurement History and Planning:</b> PB 2021 Army							<b>Date:</b> February 2020				
<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 2035A / 02 / 89			<b>P-1 Line Item Number / Title:</b> 9060B28501 / Fire Support C2 Family				<b>Item Number / Title [DODIC]:</b> B28620 / MOD OF IN-SVC EQUIP, AFATDS				

<b>Cost Elements</b>	<b>O C O</b>	<b>FY</b>	<b>Contractor and Location</b>	<b>Method/Type or Funding Vehicle</b>	<b>Location of PCO</b>	<b>Award Date</b>	<b>Date of First Delivery</b>	<b>Qty (Each)</b>	<b>Unit Cost (\$ K)</b>	<b>Specs Avail Now?</b>	<b>Date Revision Available</b>	<b>RFP Issue Date</b>
Hardware - AFATDS Legacy MC Workstations		2019	DRS Tactical / Melbourne, FL	C / FFP	Army Contracting Cmd, APG, MD	Nov 2018	May 2019	340	14.044	Y		
Hardware - AFATDS Legacy MC Workstations		2021	CHS / Aberdeen Proving Ground, MD	C / FFP	Army Contracting Cmd, APG, MD	Mar 2021	Apr 2021	0	0.000	Y		

**Remarks:**  
No P21 required for COTS/GOTS solutions. Mounted Family of Computer Systems (MFOCS) is a COTS procured item.

**UNCLASSIFIED**

<b>Exhibit P-5, Cost Analysis: PB 2021 Army</b>		<b>Date:</b> February 2020
<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 2035A / 02 / 89		<b>P-1 Line Item Number / Title:</b> 9060B28501 / Fire Support C2 Family
		<b>Item Number / Title [DODIC]:</b> BZ9851 / POCKET FORWARD ENTRY DEVICE (PFED)

<b>ID Code</b> (A=Service Ready, B=Not Service Ready) :				<b>MDAP/MAIS Code:</b>					
<b>Resource Summary</b>				<b>Prior Years</b>	<b>FY 2019</b>	<b>FY 2020</b>	<b>FY 2021 Base</b>	<b>FY 2021 OCO</b>	<b>FY 2021 Total</b>
Procurement Quantity (Units in Each)				-	-	411	-	-	-
Gross/Weapon System Cost (\$ in Millions)				313.735	10.644	8.620	3.896	-	3.896
Less PY Advance Procurement (\$ in Millions)				-	-	-	-	-	-
Net Procurement (P-1) (\$ in Millions)				313.735	10.644	8.620	3.896	-	3.896
Plus CY Advance Procurement (\$ in Millions)				-	-	-	-	-	-
<b>Total Obligation Authority (\$ in Millions)</b>				<b>313.735</b>	<b>10.644</b>	<b>8.620</b>	<b>3.896</b>	<b>-</b>	<b>3.896</b>
<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)				-	-	20.973	-	-	-

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

Cost Elements	Prior Years			FY 2019			FY 2020			FY 2021 Base			FY 2021 OCO			FY 2021 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)
<b>Flyaway Cost</b>																		
Recurring Cost																		
Hardware <sup>(†)</sup>	78.925	386	30.465	14.063	509	7.158	-	-	-	-	-	-	-	-	-	-	-	-
<i>Subtotal: Recurring Cost</i>	-	-	30.465	-	-	7.158	-	-	-	-	-	-	-	-	-	-	-	-
<i>Subtotal: Flyaway Cost</i>	-	-	30.465	-	-	7.158	-	-	-	-	-	-	-	-	-	-	-	-
<b>Support - Common Support Equipment Cost</b>																		
Support and Handling Equipment	-	-	8.816	-	-	0.661	-	-	4.650	-	-	2.196	-	-	-	-	-	2.196
<i>Subtotal: Support - Common Support Equipment Cost</i>	-	-	8.816	-	-	0.661	-	-	4.650	-	-	2.196	-	-	-	-	-	2.196
<b>Support - Fielding Cost</b>																		
Fielding	-	-	44.588	-	-	0.525	-	-	1.100	-	-	1.500	-	-	-	-	-	1.500
<i>Subtotal: Support - Fielding Cost</i>	-	-	44.588	-	-	0.525	-	-	1.100	-	-	1.500	-	-	-	-	-	1.500
<b>Support - Production Engineering Cost</b>																		
Production Engineering	-	-	53.193	-	-	0.760	-	-	0.770	-	-	-	-	-	-	-	-	-
<i>Subtotal: Support - Production Engineering Cost</i>	-	-	53.193	-	-	0.760	-	-	0.770	-	-	-	-	-	-	-	-	-
<b>Support - Program Management Cost</b>																		
Contractor Management	-	-	29.852	-	-	0.450	-	-	1.000	-	-	0.100	-	-	-	-	-	0.100
<i>Subtotal: Support - Program Management Cost</i>	-	-	29.852	-	-	0.450	-	-	1.000	-	-	0.100	-	-	-	-	-	0.100

**UNCLASSIFIED**

<b>Exhibit P-5, Cost Analysis: PB 2021 Army</b>		<b>Date:</b> February 2020
<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 2035A / 02 / 89	<b>P-1 Line Item Number / Title:</b> 9060B28501 / Fire Support C2 Family	<b>Item Number / Title [DODIC]:</b> BZ9851 / POCKET FORWARD ENTRY DEVICE (PFED)

<b>ID Code</b> (A=Service Ready, B=Not Service Ready) :	<b>MDAP/MAIS Code:</b>
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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 2019			FY 2020			FY 2021 Base			FY 2021 OCO			FY 2021 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)
Support - System Engineering Cost																		
System Engineering	-	-	33.631	-	-	-	-	-	-	-	-	0.100	-	-	-	-	-	0.100
<i>Subtotal: Support - System Engineering Cost</i>	-	-	<b>33.631</b>	-	-	-	-	-	-	-	-	<b>0.100</b>	-	-	-	-	-	<b>0.100</b>
Support - System Test and Evaluation Cost																		
Development Test and Evaluation	-	-	31.205	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
<i>Subtotal: Support - System Test and Evaluation Cost</i>	-	-	<b>31.205</b>	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Support - Training Cost																		
Equipment	-	-	81.985	-	-	1.090	-	-	1.100	-	-	-	-	-	-	-	-	-
<i>Subtotal: Support - Training Cost</i>	-	-	<b>81.985</b>	-	-	<b>1.090</b>	-	-	<b>1.100</b>	-	-	-	-	-	-	-	-	-
<b>Gross/Weapon System Cost</b>	-	-	<b>313.735</b>	-	-	<b>10.644</b>	<b>20.973</b>	<b>411</b>	<b>8.620</b>	-	-	<b>3.896</b>	-	-	-	-	-	<b>3.896</b>

Secondary Distribution		FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total
Army	Quantity	-	247	-	-	-
	Total Obligation Authority	10.644	5.172	3.896	-	3.896
ANG	Quantity	-	164	-	-	-
	Total Obligation Authority	-	3.448	-	-	-
<b>Total: Secondary Distribution</b>	<b>Quantity</b>	-	<b>411</b>	-	-	-
	<b>Total Obligation Authority</b>	<b>10.644</b>	<b>8.620</b>	<b>3.896</b>	-	<b>3.896</b>

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

**UNCLASSIFIED**

<b>Exhibit P-5a, Procurement History and Planning:</b> PB 2021 Army								<b>Date:</b> February 2020				
<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 2035A / 02 / 89			<b>P-1 Line Item Number / Title:</b> 9060B28501 / Fire Support C2 Family					<b>Item Number / Title [DODIC]:</b> BZ9851 / POCKET FORWARD ENTRY DEVICE (PFED)				
<b>Cost Elements</b>	<b>O C O</b>	<b>FY</b>	<b>Contractor and Location</b>	<b>Method/Type or Funding Vehicle</b>	<b>Location of PCO</b>	<b>Award Date</b>	<b>Date of First Delivery</b>	<b>Qty (Each)</b>	<b>Unit Cost (\$ K)</b>	<b>Specs Avail Now?</b>	<b>Date Revision Available</b>	<b>RFP Issue Date</b>
Hardware		2019	DRS Tactical / Melbourne, Fl	C / FFP	Army Contracting Cmd, APG, MD	Nov 2018	May 2019	509	14.060	Y		

**Remarks:**  
No P21 required for COTS/GOTS solutions. Hardware is Commercial Off The Shelf (COTS) procurement.

**UNCLASSIFIED**

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

<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 2035A: Other Procurement, Army / BA 02: Communications and Electronics Equipment / BSA 89: Elect Equip - Tactical C2 Systems	<b>P-1 Line Item Number / Title:</b> 9266AD5070 / AIR & MSL Defense Planning & Control Sys
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<b>ID Code</b> (A=Service Ready, B=Not Service Ready):	<b>Program Elements for Code B Items:</b> N/A	<b>Other Related Program Elements:</b> 0604741A
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**Line Item MDAP/MAIS Code:** N/A

Resource Summary	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	To Complete	Total
Procurement Quantity ( <i>Units in Each</i> )	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost ( <i>\$ in Millions</i> )	976.436	29.913	39.061	47.374	15.143	62.517	68.778	102.399	-	-	-	1,279.104
Less PY Advance Procurement ( <i>\$ in Millions</i> )	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) ( <i>\$ in Millions</i> )	976.436	29.913	39.061	47.374	15.143	62.517	68.778	102.399	-	-	-	1,279.104
Plus CY Advance Procurement ( <i>\$ in Millions</i> )	-	-	-	-	-	-	-	-	-	-	-	-
<b>Total Obligation Authority (<i>\$ in Millions</i>)</b>	<b>976.436</b>	<b>29.913</b>	<b>39.061</b>	<b>47.374</b>	<b>15.143</b>	<b>62.517</b>	<b>68.778</b>	<b>102.399</b>	-	-	-	<b>1,279.104</b>

*(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> )	17,130.456	2,719.364	3,004.692	2,960.875	3,028.600	2,977.000	4,298.625	6,399.938	-	-	-	9,545.552

**Description:**

The Air Missile Defense Planning and Control System (AMDPCS) provides integration of air and missile defense operations at all echelons. AMDPCS is comprised of the following major subsystems: Air Missile Defense Work Station (AMDWS) provides a correlated air picture using local radars, allowing the Commander the visibility and situational understanding of the airspace; other tools in AMDWS affords Soldiers horizontal and vertical collaborative planning with adjacent units. Air Defense System Integrator (ADSI) serves as a joint tactical data-link gateway/air picture. Forward Area Air Defense (FAAD), correlates the joint and local air picture and when displayed on AMDWS, provides a near real time, three-dimensional air picture for the Commander. Joint Tactical Terminal (JTT) provides Soldiers Theater Ballistic Missile (TBM) early warning allowing them to take appropriate actions. AMDPCS are currently fielded to Army Air and Missile Defense Commands (AAMDC), Air Defense Artillery Brigades, (ADA BDE), Air Missile Defense Battalions (AMD BN) and Terminal High Altitude Area Air Defense Batteries (THAAD BTRY). Air Defense Airspace Management (ADAM), a variant of AMDPCS are fielded to Corps, Divisions, Brigade Combat Teams (BCTs) and multi-functional support brigades. AMDWS and FAAD C2 are core components of the Counter Rocket Artillery Mortar (C-RAM) system-of- systems currently deployed in combat zones.

The Approved Acquisition Objective (AAO) for AMDPCS shelter systems is 503. FY 2019 through FY 2023 Base procurement dollars contain Army programmed funding for Grow the Army (GTA) requirements.

Secondary Distribution	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025
Army	Quantity	-	-	-	-	-	-	-	-
	Total Obligation Authority	29.913	39.061	47.374	15.143	62.517	27.608	68.995	-
ANG	Quantity	-	-	-	-	-	-	-	-
	Total Obligation Authority	-	-	-	-	-	41.170	33.404	-
<b>Total:</b> Secondary Distribution	<b>Quantity</b>	-	-	-	-	-	-	-	-
	<b>Total Obligation Authority</b>	<b>29.913</b>	<b>39.061</b>	<b>47.374</b>	<b>15.143</b>	<b>62.517</b>	<b>68.778</b>	<b>102.399</b>	-

**UNCLASSIFIED**

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

<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 2035A: Other Procurement, Army / BA 02: Communications and Electronics Equipment / BSA 89: Elect Equip - Tactical C2 Systems	<b>P-1 Line Item Number / Title:</b> 9266AD5070 / AIR & MSL Defense Planning & Control Sys
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<b>ID Code</b> (A=Service Ready, B=Not Service Ready):	<b>Program Elements for Code B Items:</b> N/A	<b>Other Related Program Elements:</b> 0604741A
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**Line Item MDAP/MAIS Code:** N/A

Exhibits Schedule					Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total
Exhibit Type	Title*	Subexhibits	ID CD	MDAP/MAIS Code	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)
P-5	AD5070 / AIR & MSL Defense Planning & Control Sys	P-5a			- / 976.436	- / 29.913	- / 39.061	- / 47.374	- / 15.143	- / 62.517
<b>P-40</b>	<b>Total Gross/Weapon System Cost</b>				<b>- / 976.436</b>	<b>- / 29.913</b>	<b>- / 39.061</b>	<b>- / 47.374</b>	<b>- / 15.143</b>	<b>- / 62.517</b>

\*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 2021 Base procurement dollars in the amount of \$47.374 million procure one AMDPCS-B, and 15 Sensor C2 Node Shelters in support of Army National Guard (ANG) and IM SHORAD. Additionally, FY 2021 Base procurement dollars provide tech refresh of one AMDPCS-A and one AMDPCS-B shelter.

FY 2021 OCO procurement dollars in the amount of \$15.143 million procure six Battery CP shelters in support of Army National Guard (ANG) and IM SHORAD. These procurement lines also include shipping/fielding costs, New Equipment Training (NET), software sustainment/support (technical expertise and Information Assurance and Vulnerability Assessment [IAVA]).

FY 2021 Base and OCO Procurement Quantity combined total is 22 shelters.

Note: Exhibit P-40, FY20 amount of \$1.122 is for ANG shelter tech refresh.

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 the military support to civil authorities.



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<b>Exhibit P-5, Cost Analysis: PB 2021 Army</b>		<b>Date:</b> February 2020
<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 2035A / 02 / 89	<b>P-1 Line Item Number / Title:</b> 9266AD5070 / AIR & MSL Defense Planning & Control Sys	<b>Item Number / Title [DODIC]:</b> AD5070 / AIR & MSL Defense Planning & Control Sys

<b>ID Code</b> (A=Service Ready, B=Not Service Ready) :	<b>MDAP/MAIS Code:</b>
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<b>Resource Summary</b>	<b>Prior Years</b>	<b>FY 2019</b>	<b>FY 2020</b>	<b>FY 2021 Base</b>	<b>FY 2021 OCO</b>	<b>FY 2021 Total</b>
Procurement Quantity (Units in Each)	-	-	-	-	-	-
Gross/Weapon System Cost (\$ in Millions)	976.436	29.913	39.061	47.374	15.143	62.517
Less PY Advance Procurement (\$ in Millions)	-	-	-	-	-	-
Net Procurement (P-1) (\$ in Millions)	976.436	29.913	39.061	47.374	15.143	62.517
Plus CY Advance Procurement (\$ in Millions)	-	-	-	-	-	-
<b>Total Obligation Authority (\$ in Millions)</b>	<b>976.436</b>	<b>29.913</b>	<b>39.061</b>	<b>47.374</b>	<b>15.143</b>	<b>62.517</b>

*(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)	17,130.456	2,719.364	3,004.692	2,960.875	3,028.600	2,977.000

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

<b>Cost Elements</b>	<b>Prior Years</b>			<b>FY 2019</b>			<b>FY 2020</b>			<b>FY 2021 Base</b>			<b>FY 2021 OCO</b>			<b>FY 2021 Total</b>		
	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)
<b>Flyaway Cost</b>																		
Recurring Cost																		
1. System Integration/ Hardware <sup>(†)</sup>	1,975.354	345	681.497	1,631.182	11	17.943	2,035.769	13	26.465	2,003.937	16	32.063	1,950.167	6	11.701	1,989.273	22	43.764
Subtotal: Recurring Cost	-	-	681.497	-	-	17.943	-	-	26.465	-	-	32.063	-	-	11.701	-	-	43.764
Subtotal: Flyaway Cost	-	-	<b>681.497</b>	-	-	<b>17.943</b>	-	-	<b>26.465</b>	-	-	<b>32.063</b>	-	-	<b>11.701</b>	-	-	<b>43.764</b>
<b>Software Cost</b>																		
Recurring Cost																		
5. Software Modifications	-	-	36.187	-	-	3.159	-	-	3.297	-	-	3.483	-	-	-	-	-	3.483
Subtotal: Recurring Cost	-	-	36.187	-	-	3.159	-	-	3.297	-	-	3.483	-	-	-	-	-	3.483
Subtotal: Software Cost	-	-	<b>36.187</b>	-	-	<b>3.159</b>	-	-	<b>3.297</b>	-	-	<b>3.483</b>	-	-	-	-	-	<b>3.483</b>
<b>Support - Fielding Cost</b>																		
Fielding	-	-	103.492	-	-	3.382	-	-	3.868	-	-	4.898	-	-	1.908	-	-	6.806
Subtotal: Support - Fielding Cost	-	-	<b>103.492</b>	-	-	<b>3.382</b>	-	-	<b>3.868</b>	-	-	<b>4.898</b>	-	-	<b>1.908</b>	-	-	<b>6.806</b>
<b>Support - New Equipment Training (NET) Cost</b>																		
Equipment	-	-	103.677	-	-	2.905	-	-	2.910	-	-	4.403	-	-	1.534	-	-	5.937
Subtotal: Support - New Equipment Training (NET) Cost	-	-	<b>103.677</b>	-	-	<b>2.905</b>	-	-	<b>2.910</b>	-	-	<b>4.403</b>	-	-	<b>1.534</b>	-	-	<b>5.937</b>
<b>Support - Program Management Cost</b>																		

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<b>Exhibit P-5, Cost Analysis: PB 2021 Army</b>		<b>Date:</b> February 2020
<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 2035A / 02 / 89	<b>P-1 Line Item Number / Title:</b> 9266AD5070 / AIR & MSL Defense Planning & Control Sys	<b>Item Number / Title [DODIC]:</b> AD5070 / AIR & MSL Defense Planning & Control Sys
<b>ID Code</b> (A=Service Ready, B=Not Service Ready) :		<b>MDAP/MAIS Code:</b>

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

Cost Elements	Prior Years			FY 2019			FY 2020			FY 2021 Base			FY 2021 OCO			FY 2021 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	-	-	51.583	-	-	2.524	-	-	2.521	-	-	2.527	-	-	-	-	-	2.527
<i>Subtotal: Support - Program Management Cost</i>	-	-	<b>51.583</b>	-	-	<b>2.524</b>	-	-	<b>2.521</b>	-	-	<b>2.527</b>	-	-	-	-	-	<b>2.527</b>
<b>Gross/Weapon System Cost</b>	<b>17,130.456</b>	-	<b>976.436</b>	<b>2,719.364</b>	-	<b>29.913</b>	<b>3,004.692</b>	-	<b>39.061</b>	<b>2,960.875</b>	-	<b>47.374</b>	<b>3,028.600</b>	-	<b>15.143</b>	<b>2,977.000</b>	-	<b>62.517</b>

**Remarks:**

Quantities reflect six (6) shelter types (AMDPCS-A, AMDPCS-B, ADAM Cell, ABMOC, Battery CP, and Sensor C2 Node) and Transit Cased Air Defense System Integrator (ADSI) with varying unit costs. System Integration/Hardware cost also includes equipment refresh which is not associated with quantities. This results in fluctuation of unit cost by year based on the quantities procured in support of Army fielding requirements.

Note: Exhibit P-40, FY 2021, OCO quantity shows "5", which is incorrect. The actual quantity is "6" for a combined Base and OCO quantity total of 22.

Secondary Distribution		FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total
Army	Quantity	-	-	-	-	-
	Total Obligation Authority	29.913	39.061	47.374	15.143	62.517
<b>Total:</b>	<b>Quantity</b>	-	-	-	-	-
<b>Secondary Distribution</b>	<b>Total Obligation Authority</b>	<b>29.913</b>	<b>39.061</b>	<b>47.374</b>	<b>15.143</b>	<b>62.517</b>

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

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<b>Exhibit P-5a, Procurement History and Planning:</b> PB 2021 Army							<b>Date:</b> February 2020				
<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 2035A / 02 / 89			<b>P-1 Line Item Number / Title:</b> 9266AD5070 / AIR & MSL Defense Planning & Control Sys				<b>Item Number / Title [DODIC]:</b> AD5070 / AIR & MSL Defense Planning & Control Sys				

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
1. System Integration/Hardware		2019	Northrop Grumman / Huntsville, AL	C / CPFF	Huntsville, AL	Dec 2018	May 2019	11	1,631.182	N		
1. System Integration/Hardware		2020	Northrop Grumman / Huntsville, AL	C / CPFF	Huntsville, AL	Dec 2019	May 2020	13	2,035.769	N		
1. System Integration/Hardware		2021	Northrop Grumman / Huntsville, AL	C / CPFF	Huntsville, AL	Dec 2020	May 2021	16	2,003.937	N		
1. System Integration/Hardware	✓	2021	Northrop Grumman / Huntsville, AL	/	Huntsville, AL	Jan 2021	Jun 2021	6	1,950.167	N		

**Remarks:**  
The Air and Missile Defense Planning and Control System (AMDPCS) is a COTS program. COTS and Government Furnished Equipment (GFE) are integrated by the contractor.

Quantities reflect six shelter types (AMDPCS-A, AMDPCS-B, ADAM Cell, ABMOC, Battery CP, and Sensor C2 Node) and Transit Cased Air Defense System Integrator (ADSI) with varying unit costs. System Integration/Hardware cost also includes equipment refresh which is not associated with quantities. This results in fluctuation of unit cost by year based on the quantities procured in support of Army fielding requirements.

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

<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 2035A: Other Procurement, Army / BA 02: Communications and Electronics Equipment / BSA 89: Elect Equip - Tactical C2 Systems	<b>P-1 Line Item Number / Title:</b> 9280BZ5075 / IAMD Battle Command System
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<b>ID Code</b> (A=Service Ready, B=Not Service Ready):	<b>Program Elements for Code B Items:</b> N/A	<b>Other Related Program Elements:</b> 0603327A, 0605457A
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**Line Item MDAP/MAIS Code:** 205

Resource Summary	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	To Complete	Total
Procurement Quantity ( <i>Units in Each</i> )	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost ( <i>\$ in Millions</i> )	20.917	-	29.629	201.587	-	201.587	353.561	416.995	413.356	417.415	Continuing	Continuing
Less PY Advance Procurement ( <i>\$ in Millions</i> )	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) ( <i>\$ in Millions</i> )	20.917	-	29.629	201.587	-	201.587	353.561	416.995	413.356	417.415	Continuing	Continuing
Plus CY Advance Procurement ( <i>\$ in Millions</i> )	-	-	-	-	-	-	-	-	-	-	-	-
<b>Total Obligation Authority (<i>\$ in Millions</i>)</b>	<b>20.917</b>	<b>-</b>	<b>29.629</b>	<b>201.587</b>	<b>-</b>	<b>201.587</b>	<b>353.561</b>	<b>416.995</b>	<b>413.356</b>	<b>417.415</b>	<b>Continuing</b>	<b>Continuing</b>

*(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 Army Integrated Air and Missile Defense program (AIAMD) is a designated Major Defense Acquisition Program (MDAP), a critical component of the Army's Air and Missile Defense strategy, and is the number one AMD Cross Functional Team modernization priority program. The AIAMD program is a direct response to the U.S. Army Air and Missile Defense (AMD) Concept and Operational and Organizational (O&O) Plan for the Future Force, the AIAMD System of Systems (SoS) Capabilities Development Document (CDD), and the AMD Task Force Concept of Operations (CONOPS). The AIAMD Program is uniquely structured to enable the development of an overarching system of systems (SoS) capability with all participating Air Defense Artillery (ADA) components functioning interdependently to provide total operational capabilities not achievable by the individual element systems. The AIAMD program achieves this objective by establishing the AIAMD architecture and developing (1) the IAMD Battle Command Systems (IBCS) Engagement Operations Center (EOC) that provides the common Mission Command capability, (2) the Integrated Fire Control Network (IFCN) Relay capability for fire control connectivity and distributed operations, and (3) the common Plug and Fight (P&F) Kits that network enable multiple sensor components, weapon components, and the IBCS EOC.

The AIAMD Program will provide advanced capabilities to the Army and the soldier by allowing transformation to a network-centric system-of-systems capability (also referred to as "Plug and Fight") that integrates Army AMD sensors and weapons with the IBCS EOC. The AIAMD SoS architecture will enable extended range and non-line-of-sight engagements to include joint kill chain engagements across the full spectrum of aerial threats, providing fire control quality data to the most appropriate weapon to complete the mission successfully. Further, it will mitigate the coverage gaps and the single points of failure that have affected AMD defense design in the past. The AIAMD program will provide the user with the ability to train on a single IBCS that will result in overall training savings. The AIAMD program will also provide the Army with the ability to procure components that will build to established Integrated Fire Control interfaces alleviating the cost of procuring total system capabilities in the future.

AIAMD IOC will be delivered through the fielding of the IBCS-based AIAMD architecture, including the IBCS EOC, IFCN Relay, Sentinel, and Patriot components connected via an IFCN, working in an integrated manner. The government controlled open architecture enables integration of future capabilities to meet emerging threats and fielding to Indirect Fire Protection Capability (IFPC), Air Defense Airspace Management (ADAM) Cells, ADA Brigade, Army Air and Missile Defense Command Headquarters (AAMDC), and Terminal High Altitude Area Defense (THAAD).

FY 2021 funding is allocated to the Active Component. Army National Guard funding starts in FY 2024.

Secondary Distribution		FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025
Army	Quantity	-	-	-	-	-	-	-	-	-
	Total Obligation Authority	-	29.629	201.587	-	201.587	353.561	416.995	329.213	316.415

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

<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 2035A: Other Procurement, Army / BA 02: Communications and Electronics Equipment / BSA 89: Elect Equip - Tactical C2 Systems	<b>P-1 Line Item Number / Title:</b> 9280BZ5075 / IAMD Battle Command System
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<b>ID Code</b> (A=Service Ready, B=Not Service Ready):	<b>Program Elements for Code B Items:</b> N/A	<b>Other Related Program Elements:</b> 0603327A, 0605457A
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**Line Item MDAP/MAIS Code:** 205

Secondary Distribution		FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025
ANG	Quantity	-	-	-	-	-	-	-	-	-
	Total Obligation Authority	-	-	-	-	-	-	-	84.143	99.641
AR	Quantity	-	-	-	-	-	-	-	-	-
	Total Obligation Authority	-	-	-	-	-	-	-	-	1.359
<b>Total: Secondary Distribution</b>	<b>Quantity</b>	-	-	-	-	-	-	-	-	-
	<b>Total Obligation Authority</b>	-	<b>29.629</b>	<b>201.587</b>	-	<b>201.587</b>	<b>353.561</b>	<b>416.995</b>	<b>413.356</b>	<b>417.415</b>

**UNCLASSIFIED**

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

<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 2035A: Other Procurement, Army / BA 02: Communications and Electronics Equipment / BSA 89: Elect Equip - Tactical C2 Systems	<b>P-1 Line Item Number / Title:</b> 9280BZ5075 / IAMD Battle Command System
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<b>ID Code</b> (A=Service Ready, B=Not Service Ready):	<b>Program Elements for Code B Items:</b> N/A	<b>Other Related Program Elements:</b> 0603327A, 0605457A
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**Line Item MDAP/MAIS Code:** 205

Exhibits Schedule					Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total
Exhibit Type	Title*	Subexhibits	ID CD	MDAP/MAIS Code	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)
P-5	BZ5075 / IAMD Battle Command System	P-5a, P-21			- / 20.917	- / -	- / 29.629	- / 201.587	- / -	- / 201.587
<b>P-40</b>	<b>Total Gross/Weapon System Cost</b>				<b>- / 20.917</b>	<b>- / -</b>	<b>- / 29.629</b>	<b>- / 201.587</b>	<b>- / -</b>	<b>- / 201.587</b>

\*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 2021 Base procurement dollars in the amount of \$201.587 million will procure Low Rate Initial Production (LRIP) hardware to convert two PATRIOT Battalions to an IBCS enabled unit and begin stand up of institutional training equipment. Each PATRIOT Battalion will require six Engagement Operations Centers (EOCs) (to include six Engagement Center Trailers), 12 Integrated Fire Control Network (IFCN) relays, Plug and Fight kits; Government Furnished Equipment, such as radios and Global Positioning System equipment; and initial spares. One additional EOC and relay is procured as training equipment for initial institutional 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."

**UNCLASSIFIED**

<b>Exhibit P-5, Cost Analysis: PB 2021 Army</b>		<b>Date:</b> February 2020
<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 2035A / 02 / 89	<b>P-1 Line Item Number / Title:</b> 9280BZ5075 / IAMD Battle Command System	<b>Item Number / Title [DODIC]:</b> BZ5075 / IAMD Battle Command System

<b>ID Code</b> (A=Service Ready, B=Not Service Ready) :	<b>MDAP/MAIS Code:</b>
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Resource Summary	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total
Procurement Quantity (Units in Each)	-	-	-	-	-	-
Gross/Weapon System Cost (\$ in Millions)	20.917	-	29.629	201.587	-	201.587
Less PY Advance Procurement (\$ in Millions)	-	-	-	-	-	-
Net Procurement (P-1) (\$ in Millions)	20.917	-	29.629	201.587	-	201.587
Plus CY Advance Procurement (\$ in Millions)	-	-	-	-	-	-
<b>Total Obligation Authority (\$ in Millions)</b>	<b>20.917</b>	<b>-</b>	<b>29.629</b>	<b>201.587</b>	<b>-</b>	<b>201.587</b>

*(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 2019			FY 2020			FY 2021 Base			FY 2021 OCO			FY 2021 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																		
Engagement Operation Centers (CFE) <sup>(†)</sup>	-	-	-	-	-	-	3,311.000	6	19.866	4,856.615	13	63.136	-	-	-	4,856.615	13	63.136
Integrated Fire Control Network Relays (CFE)	-	-	-	-	-	-	-	-	-	738.800	25	18.470	-	-	-	738.800	25	18.470
Plug and Fight Items	-	-	-	-	-	-	-	-	6.111	-	-	27.309	-	-	-	-	-	27.309
Government Furnished Equipment	-	-	-	-	-	-	-	-	-	-	-	47.219	-	-	-	-	-	47.219
Engineering Change Orders	-	-	-	-	-	-	-	-	-	-	-	0.356	-	-	-	-	-	0.356
Government Program Management	-	-	-	-	-	-	-	-	0.141	-	-	10.508	-	-	-	-	-	10.508
Software and Systems Engineering	-	-	-	-	-	-	-	-	1.437	-	-	17.754	-	-	-	-	-	17.754
<b>Subtotal: Recurring Cost</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>27.555</b>	<b>-</b>	<b>-</b>	<b>184.752</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>184.752</b>
Non Recurring Cost																		
Long Lead Materials	-	-	12.920	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Initial Production Facilities	-	-	7.997	-	-	-	-	-	2.074	-	-	2.010	-	-	-	-	-	2.010
<b>Subtotal: Non Recurring Cost</b>	<b>-</b>	<b>-</b>	<b>20.917</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>2.074</b>	<b>-</b>	<b>-</b>	<b>2.010</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>2.010</b>
<b>Subtotal: Flyaway Cost</b>	<b>-</b>	<b>-</b>	<b>20.917</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>29.629</b>	<b>-</b>	<b>-</b>	<b>186.762</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>186.762</b>
Logistics Cost																		

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<b>Exhibit P-5, Cost Analysis: PB 2021 Army</b>												<b>Date:</b> February 2020					
<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 2035A / 02 / 89						<b>P-1 Line Item Number / Title:</b> 9280BZ5075 / IAMD Battle Command System						<b>Item Number / Title [DODIC]:</b> BZ5075 / IAMD Battle Command System					
<b>ID Code</b> (A=Service Ready, B=Not Service Ready) :												<b>MDAP/MAIS Code:</b>					

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

Cost Elements	Prior Years			FY 2019			FY 2020			FY 2021 Base			FY 2021 OCO			FY 2021 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																		
Initial Spares	-	-	-	-	-	-	-	-	-	-	-	2.789	-	-	-	-	-	2.789
Interim Contractor Support	-	-	-	-	-	-	-	-	-	-	-	1.515	-	-	-	-	-	1.515
Logistics Support	-	-	-	-	-	-	-	-	-	-	-	10.521	-	-	-	-	-	10.521
<i>Subtotal: Non Recurring Cost</i>	-	-	-	-	-	-	-	-	-	-	-	14.825	-	-	-	-	-	14.825
<i>Subtotal: Logistics Cost</i>	-	-	-	-	-	-	-	-	-	-	-	14.825	-	-	-	-	-	14.825
<b>Gross/Weapon System Cost</b>	-	-	20.917	-	-	-	-	-	29.629	-	-	201.587	-	-	-	-	-	201.587

Secondary Distribution		FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total
Army	Quantity	-	-	-	-	-
	Total Obligation Authority	-	29.629	201.587	-	201.587
<b>Total: Secondary Distribution</b>	Quantity	-	-	-	-	-
	Total Obligation Authority	-	29.629	201.587	-	201.587

(†) indicates the presence of a P-5a



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**Exhibit P-5a, Procurement History and Planning:** PB 2021 Army **Date:** February 2020

<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 2035A / 02 / 89	<b>P-1 Line Item Number / Title:</b> 9280BZ5075 / IAMD Battle Command System	<b>Item Number / Title [DODIC]:</b> BZ5075 / IAMD Battle Command System
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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
Engagement Operation Centers (CFE) <sup>(†)</sup>		2020	Northrop Grumman / Huntsville, AL	SS / FPIF	ACC-R	Mar 2020	Oct 2020	6	3,311.000	N		Oct 2019
Engagement Operation Centers (CFE) <sup>(†)</sup>		2021	TBD / TBD	C / IDIQ	ACC-R	May 2021	Aug 2022	13	0.000	N	Mar 2020	May 2020

<sup>(†)</sup> indicates the presence of a P-21

**Remarks:**

The FY 2020 equipment quantities, unit cost, and delivery dates represent a refresh of previously procured RDT&E equipment to support the Initial Operational Capability. FY 2020 unit cost includes both Engagement Operation Centers and Integrated Fire Control Network Relays.

Beginning in FY 2021, all equipment will be new procurement hardware with a resultant increase in unit cost when compared to FY 2020 unit cost.



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**Exhibit P-21, Production Schedule:** PB 2021 Army **Date:** February 2020

<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 2035A / 02 / 89	<b>P-1 Line Item Number / Title:</b> 9280BZ5075 / IAMD Battle Command System	<b>Item Number / Title [DODIC]:</b> BZ5075 / IAMD Battle Command System
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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
Engagement Operation Centers (CFE)																															
	1	2020	ARMY	6	6	0																							0		
	2	2021	ARMY	13	0	13	-	-	-	-	-	-	-	-	-	1	1	1	1	1	1	1	1	1	2	2	2		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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<b>Exhibit P-21, Production Schedule:</b> PB 2021 Army		<b>Date:</b> February 2020
<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 2035A / 02 / 89		<b>P-1 Line Item Number / Title:</b> 9280BZ5075 / IAMD Battle Command System
		<b>Item Number / Title [DODIC]:</b> BZ5075 / IAMD Battle Command System

MFR Ref #	Manufacturer Name - Location	Production Rates (Each / Year)			Procurement Leadtime (Months)							
		MSR For 2021	1-8-5 For 2021	MAX For 2021	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 - Huntsville, AL	6	12	18	12	5	7	12	0	0	0	0
2	TBD - TBD	12	24	48	21	7	15	22	0	6	15	21

**Remarks:**  
Procurement lead time differences between FY 2020 and FY 2021 equipment is due to FY 2020 being refresh of previously procured equipment and FY 2021 being new production hardware.

"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 2021 Army **Date:** February 2020

<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 2035A: Other Procurement, Army / BA 02: Communications and Electronics Equipment / BSA 89: Elect Equip - Tactical C2 Systems	<b>P-1 Line Item Number / Title:</b> 9442BD3955 / Life Cycle Software Support (LCSS)
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<b>ID Code</b> (A=Service Ready, B=Not Service Ready):	<b>Program Elements for Code B Items:</b> N/A	<b>Other Related Program Elements:</b> N/A
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**Line Item MDAP/MAIS Code:** N/A

Resource Summary	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	To Complete	Total
Procurement Quantity ( <i>Units in Each</i> )	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost ( <i>\$ in Millions</i> )	108.388	6.163	6.774	4.495	-	4.495	5.244	4.495	5.654	5.711	-	146.924
Less PY Advance Procurement ( <i>\$ in Millions</i> )	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) ( <i>\$ in Millions</i> )	108.388	6.163	6.774	4.495	-	4.495	5.244	4.495	5.654	5.711	-	146.924
Plus CY Advance Procurement ( <i>\$ in Millions</i> )	-	-	-	-	-	-	-	-	-	-	-	-
<b>Total Obligation Authority (<i>\$ in Millions</i>)</b>	<b>108.388</b>	<b>6.163</b>	<b>6.774</b>	<b>4.495</b>	<b>-</b>	<b>4.495</b>	<b>5.244</b>	<b>4.495</b>	<b>5.654</b>	<b>5.711</b>	<b>-</b>	<b>146.924</b>

*(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:**

Life Cycle Software Engineering (LCSE) support, by the Software Engineering Center (SEC), provides the essential equipment needed to maintain Communications-Electronics Life Cycle Management Command (C-E LCMC) managed fielded Battlefield Automated Systems (BAS) in a state of operational readiness. Approximately 100 BASs in Post Production Software Support (PPSS) directly depend on LCSE support to maintain a posture of mission critical readiness. LCSE system support and services are essential to maintain BASs in the state of operational readiness. Policy for Post Production Software Support (PPSS) requires that system managers provide initial host capabilities for new systems and that the Life Cycle Software Engineering Centers (LCSEC) provide upgrades and replacement of obsolete equipment. Significant portions of host and network equipment are no longer economically repairable and/or are reaching obsolescence. There is a requirement to respond to emergency requests from the field for Software Engineering support, in order to maintain operational readiness of deployed BASs. With host computers and peripherals having a life span of approximately five years and SEC performing its mission over a continuous period of time beyond five years, equipment must be replaced and/or upgraded regularly to deal with obsolescence and take advantage of the continual improvements in technology that are indigenous to high-technology based weapon systems and their software support environments. SEC must purchase these items to meet systems mission requirements.

Secondary Distribution	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025
Army									
Quantity	-	-	-	-	-	-	-	-	-
Total Obligation Authority	6.163	6.774	4.495	-	4.495	5.244	4.495	5.654	5.711
<b>Total:</b>									
<b>Secondary Distribution</b>									
Quantity	-	-	-	-	-	-	-	-	-
Total Obligation Authority	<b>6.163</b>	<b>6.774</b>	<b>4.495</b>	<b>-</b>	<b>4.495</b>	<b>5.244</b>	<b>4.495</b>	<b>5.654</b>	<b>5.711</b>

**Justification:**

- FY 2020 procurement will provide funding for 5 projects to maintain software capabilities in labs:
1. Equipment for Wideband Satellite Communications Operational Management System (WSOMS) System of Systems (SoS) depot facility: Purchase equipment, software licenses and peripherals to provide satellite monitoring capabilities provided by the Wideband Remote Monitoring Sensor (WRMS) and the management functions provided by the Joint Management and Operations Subsystem (JMOS).
  2. Centralized Lab Management Refresh: Replace end of life equipment for SEC's capability to centrally manage the Lab Infrastructure and provide a standard Software Engineering Environment across SEC.
  3. Data Center Virtualization Environment: Purchase equipment to provide a capacity to host virtual machines used within the PPSS software engineering and testing environments supporting Intel systems.

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<b>Exhibit P-40, Budget Line Item Justification:</b> PB 2021 Army		<b>Date:</b> February 2020
<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 2035A: Other Procurement, Army / BA 02: Communications and Electronics Equipment / BSA 89: Elect Equip - Tactical C2 Systems		<b>P-1 Line Item Number / Title:</b> 9442BD3955 / Life Cycle Software Support (LCSS)
<b>ID Code</b> (A=Service Ready, B=Not Service Ready):	<b>Program Elements for Code B Items:</b> N/A	<b>Other Related Program Elements:</b> N/A
<b>Line Item MDAP/MAIS Code:</b> N/A		
4. Fires Software Depot equipment: Refresh outdated hardware with virtual servers to be utilized for the software maintenance of multiple Fires projects. 5. Electronic Key Management System - Common Tier 1 (EKMS-CT1) lab equipment: Purchase equipment required to provide ability for testing code to support hardware before being fielded.		

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

<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 2035A: Other Procurement, Army / BA 02: Communications and Electronics Equipment / BSA 89: Elect Equip - Tactical C2 Systems	<b>P-1 Line Item Number / Title:</b> 9705BA9301 / Network Management Initialization and Services
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<b>ID Code</b> (A=Service Ready, B=Not Service Ready):	<b>Program Elements for Code B Items:</b> N/A	<b>Other Related Program Elements:</b> N/A
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**Line Item MDAP/MAIS Code:** N/A

Resource Summary	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	To Complete	Total
Procurement Quantity ( <i>Units in Each</i> )	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost ( <i>\$ in Millions</i> )	333.986	15.087	24.448	18.651	-	18.651	16.709	17.165	16.922	16.959	Continuing	Continuing
Less PY Advance Procurement ( <i>\$ in Millions</i> )	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) ( <i>\$ in Millions</i> )	333.986	15.087	24.448	18.651	-	18.651	16.709	17.165	16.922	16.959	Continuing	Continuing
Plus CY Advance Procurement ( <i>\$ in Millions</i> )	-	-	-	-	-	-	-	-	-	-	-	-
<b>Total Obligation Authority (<i>\$ in Millions</i>)</b>	<b>333.986</b>	<b>15.087</b>	<b>24.448</b>	<b>18.651</b>	<b>-</b>	<b>18.651</b>	<b>16.709</b>	<b>17.165</b>	<b>16.922</b>	<b>16.959</b>	<b>Continuing</b>	<b>Continuing</b>

*(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 Management Initialization and Services (NMIS) program supports the Army's objectives of an integrated Network Operations capability. There are three components to the program:

**Network Management Systems (NMS)**

Project BA9312: This funding line supports the Army Network Modernization Strategy LOE 1, Unified Network. Efforts are aligned to support the Network-Cross Functional Team capability set approach to achieve the network modernization strategy.

NMS provides systems engineering support, integration, and hardware to meet Network Management and Network Planning requirements. All current NMS efforts are supporting a software based, integrated NetOps capability being developed as a rapid prototype. The rapid prototype is being created under the Unified Network Operations (UNO)'s Section 804, mid-tier acquisition (MTA) authority granted by the Army Acquisition Executive (AAE)'s 14 May 2019 Acquisition Decision Memorandum (ADM). NMS supports the Army's development operations (DevOps) approach to UNO - creating NetOps prototypes, gaining user feedback via Pilot exercises, e.g.: Fifth Generation Technology Insertion (5GTI) and Expeditionary Signal Brigades-Enhanced (ESB-E), making adjustments and ultimately delivering enhanced capabilities to the operational force in the shortest time possible.

The efforts described support prototyping in preparation for future fielding acquisition strategies. These strategies include, but are not limited to, MTA Rapid Fielding and/or a Transition to Program of Record (PoR) for fielding activities, software licenses, training, logistics, and hardware as required to deploy UNO's capabilities.

**Data Products**

Project BA9315: The Data Products funding line supports the Army's Network Modernization Strategy Line of Effort 1, Unified Network. Efforts are aligned to support the Network-Cross Functional Team capability set approach to achieve the network modernization strategy. Data Products are a critical component in enabling a converged Mission Command Network that operates seamlessly worldwide in any environment. Data Products enable end-to-end network centric connectivity and interoperability across The Mission Command Network by enforcing and implementing standards-based technologies and providing the machine level instruction required by digital systems to communicate with each other. Data Products allow the integration of disparate networks/systems capabilities across multiple domains and environments. Data Products enable the network to provide resiliency through path diversity and dynamic routing to ensure tactical units can communicate in hostile environments. Data Products are a collection of information/data required to plan and initialize the current set of Mission Command Network capabilities such as Joint Battle Command - Platform (JBC-P), Command Post Computing Environment (CPCE), Nett Warrior (Ground Soldier System), Distributed Common Ground System (DCGS), Air and Missile Defense Workstation (AMDWS), Tactical Unmanned Aircraft System (TUAS), PEO Aviation, and other Army Mission Command Systems. Information/Data includes: JBC-P database, COCOM databases, and Active Directory initialization files (e.g., Lightweight Directory Interchange Format (LDIFs)), etc. AAO is N/A.

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<b>Exhibit P-40, Budget Line Item Justification:</b> PB 2021 Army		<b>Date:</b> February 2020
<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 2035A: Other Procurement, Army / BA 02: Communications and Electronics Equipment / BSA 89: Elect Equip - Tactical C2 Systems		<b>P-1 Line Item Number / Title:</b> 9705BA9301 / Network Management Initialization and Services
<b>ID Code</b> (A=Service Ready, B=Not Service Ready):	<b>Program Elements for Code B Items:</b> N/A	<b>Other Related Program Elements:</b> N/A
<b>Line Item MDAP/MAIS Code:</b> N/A		

Joint Network Management System (JNMS)  
 Project B99318: This funding line supports the Army Network Modernization Strategy LOE 1, Unified Network. Efforts are aligned to support the Network-Cross Functional Team capability set approach to achieve the network modernization strategy. JNMS (BA9301/B99318) is not a new start. JNMS is a continuation of efforts previously funded by the Army under Network Management Systems (NMS) (BA9301/BA9312). Efforts are aligned to support the Network-Cross Functional Team capability set approach to achieve the network modernization strategy.

The JNMS project supports the Joint Enterprise Network Manager (JENM) planning applications and radio planner prototyping efforts critically tied to the Ruggedized Application Platform - Tactical Radios (RAP-TR) hardware, training, and logistics efforts. JENM's RAP-TR hardware hosts TRADOC Capability Manager (TCM) approved applications supporting Cross Functional Teams (CFT) and Integrated Tactical Network (ITN) Units and their emerging requirements. JENM's RAP-TR hardware hosts the integrated NetOps tool for Lower Tier Network planning, configuration, monitoring and troubleshooting. JNMS funding will provide critical support to meet Army timelines for Brigade Combat Teams (BCTs), U.S. Army support elements, Integrated Tactical Network (ITN) experimental units, and Security Forces Assistance Brigades (SFABs) fielding's.

Secondary Distribution		FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025
Army	Quantity	-	-	-	-	-	-	-	-	-
	Total Obligation Authority	15.087	24.448	18.651	-	18.651	16.709	17.165	16.922	16.959
<b>Total:</b> Secondary Distribution	<b>Quantity</b>	-	-	-	-	-	-	-	-	-
	<b>Total Obligation Authority</b>	<b>15.087</b>	<b>24.448</b>	<b>18.651</b>	-	<b>18.651</b>	<b>16.709</b>	<b>17.165</b>	<b>16.922</b>	<b>16.959</b>



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

**Appropriation / Budget Activity / Budget Sub Activity:**  
 2035A: Other Procurement, Army / BA 02: Communications and Electronics  
 Equipment / BSA 89: Elect Equip - Tactical C2 Systems

**P-1 Line Item Number / Title:**  
 9705BA9301 / Network Management Initialization and Services

**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 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total
Exhibit Type	Title*	Subexhibits	ID CD	MDAP/MAIS Code	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)
P-5	B99318 / Joint Network Management System				- / -	- / -	- / -	- / 3.904	- / -	- / 3.904
P-5	BA9312 / NETWORK MANAGEMENT SYSTEM				- / 41.850	- / 6.896	- / 13.534	- / 5.230	- / -	- / 5.230
P-5	BA9315 / DATA PRODUCTS				- / 292.136	- / 8.191	- / 10.914	- / 9.517	- / -	- / 9.517
<b>P-40</b>	<b>Total Gross/Weapon System Cost</b>				- / 333.986	- / 15.087	- / 24.448	- / 18.651	- / -	- / 18.651

\*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 2021 Base procurement dollars, in the amount of \$5.230 million, provides systems engineering support, integration, and hardware to meet Network Management and Network Planning requirements. All current NMS efforts are supporting a software based, integrated NetOps capability being developed as a rapid prototype. The rapid prototype is being created under the Unified Network Operations (UNO)'s Section 804, mid-tier acquisition (MTA) authority granted by the Army Acquisition Executive (AAE)'s 14 May 2019 Acquisition Decision Memorandum (ADM). NMS supports the Army's development operations (DevOps) approach to UNO - creating NetOps prototypes, gaining user feedback via Pilot exercises, e.g.: Fifth Generation Technology Insertion (5GTI) and Expeditionary Signal Brigades-Enhanced (ESB-E), making adjustments and ultimately delivering enhanced capabilities to the operational force in the shortest time possible.

**Data Products, Project BA9315:**

FY 2021 Base Procurement dollars in the amount of \$9.517 million provides Government, Federally Funded Research and Development Center (FFRDC), and contractor support services to execute the duties required to create Data Products in support of the entire Mission Command Network, across multiple software versions, to include current baselines, baselines in sustainment, and emerging or future baselines. Data Products are a vital enabling element to achieve multiple objectives across several Lines of Effort within the Mission Command Network Modernization Implementation Plan. Data Products are created in accordance with HQ DA G3/5/7 priorities, stakeholder requirements, and other top Army priorities for deployment, training, and reset. In addition, these dollars also provide the fielding, training, and support of the Initialization Tool Suite (ITS) which includes Warfighter Initialization Tool - Server (WIT-S), and Warfighter Initialization Tool - Manager (WIT-M). This ITS capability allows Soldiers the necessary flexibility to customize the Data Product to meet Commander's intent or mission requirements. Static Data Products are still necessary due to the requirements of the legacy systems that consume this data. Historical trends show growth in data product requirements, complexity, and quantity as the Mission Command Network continues to evolve. Data Products are an essential part in achieving interoperability across multiple domains, environments, disparate networks/systems capabilities, enabling tactical digital messaging such as Variable Messaging Format (VMF), enabling and informing the Common Operational Picture (COP) and other automated Command and Control (C2) functions.

FY 2021 Base JNMS procurement dollars, in the amount of \$3.904 million includes fielding of JENM's RAP-TR hardware via New Equipment Trainer (NET) personnel, and Field Support Engineer (FSE) personnel. JNMS fielding utilizes Tobyhanna Army Depot (TYAD) stock support to ensure the laptops and tablets are maintained and distributed to the end users. JNMS will utilize Network Management Reference Implementation Laboratory (NM RIL) for help desk support, maintenance, and engineering change management.

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<b>Exhibit P-5, Cost Analysis: PB 2021 Army</b>		<b>Date:</b> February 2020
<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 2035A / 02 / 89	<b>P-1 Line Item Number / Title:</b> 9705BA9301 / Network Management Initialization and Services	<b>Item Number / Title [DODIC]:</b> B99318 / Joint Network Management System

<b>ID Code</b> (A=Service Ready, B=Not Service Ready) :	<b>MDAP/MAIS Code:</b>
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<b>Resource Summary</b>	<b>Prior Years</b>	<b>FY 2019</b>	<b>FY 2020</b>	<b>FY 2021 Base</b>	<b>FY 2021 OCO</b>	<b>FY 2021 Total</b>
Procurement Quantity (Units in Each)	-	-	-	-	-	-
Gross/Weapon System Cost (\$ in Millions)	-	-	-	3.904	-	3.904
Less PY Advance Procurement (\$ in Millions)	-	-	-	-	-	-
Net Procurement (P-1) (\$ in Millions)	-	-	-	3.904	-	3.904
Plus CY Advance Procurement (\$ in Millions)	-	-	-	-	-	-
<b>Total Obligation Authority (\$ in Millions)</b>	-	-	-	<b>3.904</b>	-	<b>3.904</b>

*(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.

<b>Cost Elements</b>	<b>Prior Years</b>			<b>FY 2019</b>			<b>FY 2020</b>			<b>FY 2021 Base</b>			<b>FY 2021 OCO</b>			<b>FY 2021 Total</b>		
	<b>Unit Cost (\$ K)</b>	<b>Qty (Each)</b>	<b>Total Cost (\$ M)</b>	<b>Unit Cost (\$ K)</b>	<b>Qty (Each)</b>	<b>Total Cost (\$ M)</b>	<b>Unit Cost (\$ K)</b>	<b>Qty (Each)</b>	<b>Total Cost (\$ M)</b>	<b>Unit Cost (\$ K)</b>	<b>Qty (Each)</b>	<b>Total Cost (\$ M)</b>	<b>Unit Cost (\$ K)</b>	<b>Qty (Each)</b>	<b>Total Cost (\$ M)</b>	<b>Unit Cost (\$ K)</b>	<b>Qty (Each)</b>	<b>Total Cost (\$ M)</b>
Support - Training Cost																		
Services	-	-	-	-	-	-	-	-	-	-	-	3.904	-	-	-	-	-	3.904
<i>Subtotal: Support - Training Cost</i>	-	-	-	-	-	-	-	-	-	-	-	<b>3.904</b>	-	-	-	-	-	<b>3.904</b>
<b>Gross/Weapon System Cost</b>	-	-	-	-	-	-	-	-	-	-	-	<b>3.904</b>	-	-	-	-	-	<b>3.904</b>

**Remarks:**

Field Support Engineering personnel provide support for the Soldiers' ability to plan, configure, monitor, manage, and sustain the JENM radio network.

<b>Secondary Distribution</b>	<b>FY 2019</b>	<b>FY 2020</b>	<b>FY 2021 Base</b>	<b>FY 2021 OCO</b>	<b>FY 2021 Total</b>
Army					
Quantity	-	-	-	-	-
Total Obligation Authority	-	-	3.904	-	3.904
<b>Total: Secondary Distribution</b>					
Quantity	-	-	-	-	-
Total Obligation Authority	-	-	<b>3.904</b>	-	<b>3.904</b>

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<b>Exhibit P-5, Cost Analysis: PB 2021 Army</b>		<b>Date:</b> February 2020
<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 2035A / 02 / 89	<b>P-1 Line Item Number / Title:</b> 9705BA9301 / Network Management Initialization and Services	<b>Item Number / Title [DODIC]:</b> BA9312 / NETWORK MANAGEMENT SYSTEM

<b>ID Code</b> (A=Service Ready, B=Not Service Ready) :	<b>MDAP/MAIS Code:</b>
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Resource Summary	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total
Procurement Quantity (Units in Each)	-	-	-	-	-	-
Gross/Weapon System Cost (\$ in Millions)	41.850	6.896	13.534	5.230	-	5.230
Less PY Advance Procurement (\$ in Millions)	-	-	-	-	-	-
Net Procurement (P-1) (\$ in Millions)	41.850	6.896	13.534	5.230	-	5.230
Plus CY Advance Procurement (\$ in Millions)	-	-	-	-	-	-
<b>Total Obligation Authority (\$ in Millions)</b>	<b>41.850</b>	<b>6.896</b>	<b>13.534</b>	<b>5.230</b>	<b>-</b>	<b>5.230</b>

*(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 2019			FY 2020			FY 2021 Base			FY 2021 OCO			FY 2021 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																		
Program Management	-	-	25.114	-	-	0.530	-	-	1.353	-	-	0.415	-	-	-	-	-	0.415
Systems Engineering	-	-	15.089	-	-	3.750	-	-	8.797	-	-	3.628	-	-	-	-	-	3.628
Integration & Testing	-	-	1.647	-	-	1.353	-	-	1.034	-	-	1.187	-	-	-	-	-	1.187
<i>Subtotal: Recurring Cost</i>	-	-	<i>41.850</i>	-	-	<i>5.633</i>	-	-	<i>11.184</i>	-	-	<i>5.230</i>	-	-	-	-	-	<i>5.230</i>
<i>Subtotal: Flyaway Cost</i>	-	-	<i>41.850</i>	-	-	<i>5.633</i>	-	-	<i>11.184</i>	-	-	<i>5.230</i>	-	-	-	-	-	<i>5.230</i>
Hardware Cost																		
Recurring Cost																		
Ruggedized Application Platform ? Tactical Radios (RAP-TR)	-	-	-	5.689	222	1.263	5.860	401	2.350	-	-	-	-	-	-	-	-	-
<i>Subtotal: Recurring Cost</i>	-	-	-	-	-	<i>1.263</i>	-	-	<i>2.350</i>	-	-	-	-	-	-	-	-	-
<i>Subtotal: Hardware Cost</i>	-	-	-	-	-	<i>1.263</i>	-	-	<i>2.350</i>	-	-	-	-	-	-	-	-	-
<b>Gross/Weapon System Cost</b>	-	-	<b>41.850</b>	-	-	<b>6.896</b>	-	-	<b>13.534</b>	-	-	<b>5.230</b>	-	-	-	-	-	<b>5.230</b>

**Remarks:**

FY 2019 and FY 2020 procurement of Ruggedized Application Platform ? Tactical Radios (RAP-TR) hardware supports fielding for the Joint Enterprise Network Manager (JENM) radio planner capability.

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<b>Exhibit P-5, Cost Analysis: PB 2021 Army</b>		<b>Date:</b> February 2020
<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 2035A / 02 / 89	<b>P-1 Line Item Number / Title:</b> 9705BA9301 / Network Management Initialization and Services	<b>Item Number / Title [DODIC]:</b> BA9312 / NETWORK MANAGEMENT SYSTEM

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

Secondary Distribution		FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total
Army	Quantity	-	-	-	-	-
	Total Obligation Authority	6.896	13.534	5.230	-	5.230
<b>Total:</b>	<b>Quantity</b>	-	-	-	-	-
<b>Secondary Distribution</b>	<b>Total Obligation Authority</b>	<b>6.896</b>	<b>13.534</b>	<b>5.230</b>	-	<b>5.230</b>

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<b>Exhibit P-5, Cost Analysis: PB 2021 Army</b>		<b>Date:</b> February 2020
<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 2035A / 02 / 89	<b>P-1 Line Item Number / Title:</b> 9705BA9301 / Network Management Initialization and Services	<b>Item Number / Title [DODIC]:</b> BA9315 / DATA PRODUCTS

<b>ID Code</b> (A=Service Ready, B=Not Service Ready) :	<b>MDAP/MAIS Code:</b>
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Resource Summary	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total
Procurement Quantity (Units in Each)	-	-	-	-	-	-
Gross/Weapon System Cost (\$ in Millions)	292.136	8.191	10.914	9.517	-	9.517
Less PY Advance Procurement (\$ in Millions)	-	-	-	-	-	-
Net Procurement (P-1) (\$ in Millions)	292.136	8.191	10.914	9.517	-	9.517
Plus CY Advance Procurement (\$ in Millions)	-	-	-	-	-	-
<b>Total Obligation Authority (\$ in Millions)</b>	<b>292.136</b>	<b>8.191</b>	<b>10.914</b>	<b>9.517</b>	<b>-</b>	<b>9.517</b>

*(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 2019			FY 2020			FY 2021 Base			FY 2021 OCO			FY 2021 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																		
Recurring Production	-	-	197.424	-	-	5.816	-	-	7.749	-	-	6.754	-	-	-	-	-	6.754
Test	-	-	14.647	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PMO	-	-	58.737	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Training	-	-	20.635	-	-	1.802	-	-	2.401	-	-	2.096	-	-	-	-	-	2.096
<i>Subtotal: Recurring Cost</i>	-	-	<i>291.443</i>	-	-	<i>7.618</i>	-	-	<i>10.150</i>	-	-	<i>8.850</i>	-	-	-	-	-	<i>8.850</i>
<i>Subtotal: Flyaway Cost</i>	-	-	<i>291.443</i>	-	-	<i>7.618</i>	-	-	<i>10.150</i>	-	-	<i>8.850</i>	-	-	-	-	-	<i>8.850</i>
Support - System Engineering Cost																		
System Engineering	-	-	0.693	-	-	0.573	-	-	0.764	-	-	0.667	-	-	-	-	-	0.667
<i>Subtotal: Support - System Engineering Cost</i>	-	-	<i>0.693</i>	-	-	<i>0.573</i>	-	-	<i>0.764</i>	-	-	<i>0.667</i>	-	-	-	-	-	<i>0.667</i>
<b>Gross/Weapon System Cost</b>	-	-	<b>292.136</b>	-	-	<b>8.191</b>	-	-	<b>10.914</b>	-	-	<b>9.517</b>	-	-	-	-	-	<b>9.517</b>

Secondary Distribution		FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total
Army	Quantity	-	-	-	-	-
	Total Obligation Authority	8.191	10.914	9.517	-	9.517
<b>Total:</b>	Quantity	-	-	-	-	-
<b>Secondary Distribution</b>	Total Obligation Authority	<b>8.191</b>	<b>10.914</b>	<b>9.517</b>	<b>-</b>	<b>9.517</b>

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

<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 2035A: Other Procurement, Army / BA 02: Communications and Electronics Equipment / BSA 89: Elect Equip - Tactical C2 Systems	<b>P-1 Line Item Number / Title:</b> 9742BA9320 / Maneuver Control System (MCS)
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ID Code (A=Service Ready, B=Not Service Ready): B	Program Elements for Code B Items: 0203740A	Other Related Program Elements: N/A
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**Line Item MDAP/MAIS Code:** N/A

Resource Summary	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	To Complete	Total
Procurement Quantity ( <i>Units in Each</i> )	11,690	2,753	13	-	-	-	-	-	-	-	-	14,456
Gross/Weapon System Cost ( <i>\$ in Millions</i> )	1,786.751	29.144	0.260	-	-	-	-	-	-	-	-	1,816.155
Less PY Advance Procurement ( <i>\$ in Millions</i> )	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) ( <i>\$ in Millions</i> )	1,786.751	29.144	0.260	-	-	-	-	-	-	-	-	1,816.155
Plus CY Advance Procurement ( <i>\$ in Millions</i> )	-	-	-	-	-	-	-	-	-	-	-	-
<b>Total Obligation Authority (<i>\$ in Millions</i>)</b>	<b>1,786.751</b>	<b>29.144</b>	<b>0.260</b>	-	-	-	-	-	-	-	-	<b>1,816.155</b>

*(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> )	152.844	10.586	20.000	-	-	-	-	-	-	-	-	125.633

**Description:**

Tactical Mission Command is a portfolio of products and services that enable commanders and their staff with collaborative environment, planning tools, and Common Operation Picture (COP) management and other maneuver and logistics functional tools. The overarching capability includes above platform level user-defined COP with integrated Command and Control (C2) and Situational Awareness (SA), map-centric collaboration, Army Mission Command System and other enabling system interoperability, data management and enterprise services. The revised Army Acquisition Objective is 20,579.

Secondary Distribution		FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025
Army	Quantity	1,404	13	-	-	-	-	-	-	-
	Total Obligation Authority	14.863	0.260	-	-	-	-	-	-	-
ANG	Quantity	935	-	-	-	-	-	-	-	-
	Total Obligation Authority	9.909	-	-	-	-	-	-	-	-
AR	Quantity	414	-	-	-	-	-	-	-	-
	Total Obligation Authority	4.372	-	-	-	-	-	-	-	-
<b>Total:</b>	<b>Quantity</b>	<b>2,753</b>	<b>13</b>	-	-	-	-	-	-	-
<b>Secondary Distribution</b>	<b>Total Obligation Authority</b>	<b>29.144</b>	<b>0.260</b>	-	-	-	-	-	-	-

**Justification:**

Program has no FY 2021 Base procurement request.

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 2021 Army **Date:** February 2020

<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 2035A: Other Procurement, Army / BA 02: Communications and Electronics Equipment / BSA 89: Elect Equip - Tactical C2 Systems	<b>P-1 Line Item Number / Title:</b> 9875W30001 / Global Combat Support System-Army (GCSS-A)
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<b>ID Code</b> (A=Service Ready, B=Not Service Ready):	<b>Program Elements for Code B Items:</b> N/A	<b>Other Related Program Elements:</b> N/A
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**Line Item MDAP/MAIS Code:** N/A

Resource Summary	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	To Complete	Total
Procurement Quantity ( <i>Units in Each</i> )	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost ( <i>\$ in Millions</i> )	1,976.265	15.164	8.815	2.792	-	2.792	12.532	-	-	-	-	2,015.568
Less PY Advance Procurement ( <i>\$ in Millions</i> )	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) ( <i>\$ in Millions</i> )	1,976.265	15.164	8.815	2.792	-	2.792	12.532	-	-	-	-	2,015.568
Plus CY Advance Procurement ( <i>\$ in Millions</i> )	-	-	-	-	-	-	-	-	-	-	-	-
<b>Total Obligation Authority (<i>\$ in Millions</i>)</b>	<b>1,976.265</b>	<b>15.164</b>	<b>8.815</b>	<b>2.792</b>	<b>-</b>	<b>2.792</b>	<b>12.532</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>2,015.568</b>

*(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:**

GCSS-Army Increment 1 gives combat forces a decisive edge by providing soldiers a seamless flow of timely, accurate, accessible, and secure logistics information to get combat power at the right place, at the right time. GCSS-Army implements best business practices to streamline supply, accountability, maintenance, distribution, and reporting procedures in support of the future force transition path of The Army Campaign Plan. The GCSS-Army program has two components; a functional component titled GCSS-Army and a technology enabler component provided by the Army Enterprise Systems Integration Program (AESIP) Hub.

GCSS-Army Increment 2 builds on the current foundation by providing auditable Army Enterprise Aviation maintenance, enhanced Business Intelligence/Business Warehouse (BI/BW) and Army Pre-Positioned Stock (APS) functional capabilities and will sunset legacy systems: the Aircraft Notebook and Army War Reserve Deployment System (AWRDS). Increment 2 will establish a single disconnected operations architecture for GCSS-Army to support the ground and aviation missions. Increment 2 will deliver greater efficiencies to Aviation Logistics warfighters and improved information flow and accuracy in real time to decision makers, helping them make better decisions faster on the battlefield.

Secondary Distribution	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025
Army	Quantity	-	-	-	-	-	-	-	-
	Total Obligation Authority	15.164	8.815	2.792	-	2.792	12.532	-	-
<b>Total: Secondary Distribution</b>	<b>Quantity</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>
	<b>Total Obligation Authority</b>	<b>15.164</b>	<b>8.815</b>	<b>2.792</b>	<b>-</b>	<b>2.792</b>	<b>12.532</b>	<b>-</b>	<b>-</b>

**Justification:**

FY 2021 Base procurement dollars in the amount of \$2.792 million will be used as follows:

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<b>Exhibit P-40, Budget Line Item Justification:</b> PB 2021 Army		<b>Date:</b> February 2020
<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 2035A: Other Procurement, Army / BA 02: Communications and Electronics Equipment / BSA 89: Elect Equip - Tactical C2 Systems		<b>P-1 Line Item Number / Title:</b> 9875W30001 / Global Combat Support System-Army (GCSS-A)
<b>ID Code</b> (A=Service Ready, B=Not Service Ready):	<b>Program Elements for Code B Items:</b> N/A	<b>Other Related Program Elements:</b> N/A
<b>Line Item MDAP/MAIS Code:</b> N/A		
<p>\$ 0.794 million primarily supports SAP software licenses for the new disconnected framework. Currently the Army has battlefield gaps without network connectivity: inability to maintain or regenerate combat power, order/process spare parts, track battle losses, or conduct maintenance. The SAP licenses to stand up a disconnected architecture will alleviate these problems when there are disruptions in communications or cyber-attacks.</p> <p>\$1.998 million supports AESIP and will be used to purchase hardware and software products required for new data management initiatives and data analysis such as the Chief of Staff of the Army Commander's Dashboard:          Splunk HW procurement (includes server hardware/storage) = \$988,000          Splunk SW procurement (includes professional services) = \$310,000          Cisco Nexus 7000 F3-Series 48 Port 10GbE Ethernet Modules (to comply with IAVA 2019-A-0353) = \$700,000</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>		



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

<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 2035A: Other Procurement, Army / BA 02: Communications and Electronics Equipment / BSA 89: Elect Equip - Tactical C2 Systems	<b>P-1 Line Item Number / Title:</b> 9921B66701 / Integrated Personnel and Pay System-Army (IPPS-A)
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<b>ID Code</b> (A=Service Ready, B=Not Service Ready):	<b>Program Elements for Code B Items:</b> N/A	<b>Other Related Program Elements:</b> 0605018A
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**Line Item MDAP/MAIS Code:** N/A

Resource Summary	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	To Complete	Total
Procurement Quantity ( <i>Units in Each</i> )	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost ( <i>\$ in Millions</i> )	41.859	16.800	14.100	9.071	-	9.071	9.870	-	-	-	Continuing	Continuing
Less PY Advance Procurement ( <i>\$ in Millions</i> )	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) ( <i>\$ in Millions</i> )	41.859	16.800	14.100	9.071	-	9.071	9.870	-	-	-	Continuing	Continuing
Plus CY Advance Procurement ( <i>\$ in Millions</i> )	-	-	-	-	-	-	-	-	-	-	-	-
<b>Total Obligation Authority (<i>\$ in Millions</i>)</b>	<b>41.859</b>	<b>16.800</b>	<b>14.100</b>	<b>9.071</b>	<b>-</b>	<b>9.071</b>	<b>9.870</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>Continuing</b>	<b>Continuing</b>

*(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:**

Integrated Personnel and Pay System-Army (IPPS-A) Increment II, formerly designated as an Acquisition Category IA Major Automated Information System (MAIS) program under the authority of DoDI 5000.02, transitioned under the acquisition authority of DoDI 5000.75 to a Business System Category I (BSC 1) program as a result of the Release 2 Limited Deployment Decision Memorandum signed 3 May 2019.

IPPS-A Increment II provides the Army with an integrated, multi-Component, military personnel and pay system, which streamlines Army Human Resources (HR) systems and processes enhancing efficiency and accuracy of personnel and pay procedures in support of 1.1 million Soldiers and their Families. IPPS-A will subsume approximately 40 (full and partial) legacy systems across the Active, Reserve, and National Guard Components into one single integrated system. IPPS-A is a web-based tool, available 24 hours a day, accessible to HR professionals, Combatant Commanders, personnel and pay managers, and other authorized users throughout the Army. IPPS-A addresses major deficiencies in the delivery of military personnel and pay services by providing the necessary internal controls and audit procedures as well as preventing erroneous payments and loss of funds. This program is an essential building block to reform the Department towards achieving greater performance and affordability in support of the National Defense Strategy and the Congressional audit mandate.

IPPS-A Increment II is the #1 HR Modernization effort in the Army and will deliver fully integrated personnel and pay services for all Army Components building on the trusted database delivered by the IPPS-A Increment I program. This program is the critical enabler for the Army People Strategy and its transition to a Talent Management System and an HR data-rich environment. Increment II will link the personnel and pay functions for all Army personnel eliminating duplicate data entry, reducing complex system maintenance, and minimizing pay discrepancies. IPPS-A Increment II will account for status changes between Active and Reserve/National Guard Components to ensure accurate credit for service and individual pay as well as enable disciplined human resource management.

Secondary Distribution	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025
Army									
Quantity	-	-	-	-	-	-	-	-	-
Total Obligation Authority	16.800	14.100	9.071	-	9.071	9.870	-	-	-
<b>Total:</b>									
<b>Secondary Distribution</b>									
Quantity	-	-	-	-	-	-	-	-	-
Total Obligation Authority	<b>16.800</b>	<b>14.100</b>	<b>9.071</b>	<b>-</b>	<b>9.071</b>	<b>9.870</b>	<b>-</b>	<b>-</b>	<b>-</b>

**UNCLASSIFIED**

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

**Appropriation / Budget Activity / Budget Sub Activity:**  
 2035A: Other Procurement, Army / BA 02: Communications and Electronics  
 Equipment / BSA 89: Elect Equip - Tactical C2 Systems

**P-1 Line Item Number / Title:**  
 9921B66701 / Integrated Personnel and Pay System-Army (IPPS-A)

**ID Code** (A=Service Ready, B=Not Service Ready): **Program Elements for Code B Items:** N/A **Other Related Program Elements:** 0605018A

**Line Item MDAP/MAIS Code:** N/A

Exhibits Schedule					Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total
Exhibit Type	Title*	Subexhibits	ID CD	MDAP/MAIS Code	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)
P-5	B66706 / IPPS-A INC 2	P-5a			- / 41.859	- / 16.800	- / 14.100	- / 9.071	- / -	- / 9.071
<b>P-40</b>	<b>Total Gross/Weapon System Cost</b>				<b>- / 41.859</b>	<b>- / 16.800</b>	<b>- / 14.100</b>	<b>- / 9.071</b>	<b>- / -</b>	<b>- / 9.071</b>

\*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 2021 Base procurement dollars in the amount of \$9.071 million support Release 3 training course material development as the program prepares to execute a "big-bang" deployment strategy in 1Q FY 2022. The "big-bang" deployment strategy requires the necessary preparation in FY 2021 including train-the-trainers to begin six months prior to the "go-live" while meeting its rigorous demands of integrating all three Army components with the Army's new total HR system in FY 2022. FY 2021 training development and preparation efforts support the overall Increment II deployment strategy by providing Instructor-Led Training for 66,000 HR Transactional Users and Distance Learning and Computer-Based Training for 1.1 million Soldiers in all 54 states and territories in support of all Army Commands (ACOMs), Army Service Component Commands (ASCCs), Direct Reporting Units (DRUs), Combatant Commands (COCOMs), Corps and Divisions for Active and Reserve personnel stationed in CONUS and OCONUS. Training products will be developed using the Oracle Usability Productivity Kit, which includes instructor manuals, lessons plans, an Electronic Performance Support System and job aids. The deployment approach will implement pre-deployment activities at each location, beginning 360 days in advance of the deployment start date. This approach includes an on-site data verification, workflow verification, and "over-the-shoulder" support.

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.

**UNCLASSIFIED**

<b>Exhibit P-5, Cost Analysis: PB 2021 Army</b>		<b>Date:</b> February 2020
<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 2035A / 02 / 89	<b>P-1 Line Item Number / Title:</b> 9921B66701 / Integrated Personnel and Pay System-Army (IPPS-A)	<b>Item Number / Title [DODIC]:</b> B66706 / IPPS-A INC 2

<b>ID Code</b> (A=Service Ready, B=Not Service Ready) :	<b>MDAP/MAIS Code:</b>
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Resource Summary	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total
Procurement Quantity (Units in Each)	-	-	-	-	-	-
Gross/Weapon System Cost (\$ in Millions)	41.859	16.800	14.100	9.071	-	9.071
Less PY Advance Procurement (\$ in Millions)	-	-	-	-	-	-
Net Procurement (P-1) (\$ in Millions)	41.859	16.800	14.100	9.071	-	9.071
Plus CY Advance Procurement (\$ in Millions)	-	-	-	-	-	-
<b>Total Obligation Authority (\$ in Millions)</b>	<b>41.859</b>	<b>16.800</b>	<b>14.100</b>	<b>9.071</b>	<b>-</b>	<b>9.071</b>

*(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 2019			FY 2020			FY 2021 Base			FY 2021 OCO			FY 2021 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)
<b>Flyaway Cost</b>																		
Non Recurring Cost																		
Software Non-Recurring	12,933.000	1	12.933	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
<i>Subtotal: Non Recurring Cost</i>	-	-	12.933	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
<b>Subtotal: Flyaway Cost</b>	-	-	<b>12.933</b>	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
<b>Hardware Cost</b>																		
Non Recurring Cost																		
System Infrastructure Hardware	4,037.000	1	4.037	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
<i>Subtotal: Non Recurring Cost</i>	-	-	4.037	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
<b>Subtotal: Hardware Cost</b>	-	-	<b>4.037</b>	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
<b>Package Fielding Cost</b>																		
Recurring Cost																		
New Equipment Training <sup>(†)</sup>	8,296.333	3	24.889	16,800.000	1	16.800	14,100.000	1	14.100	9,071.000	1	9.071	-	-	-	9,071.000	1	9.071
<i>Subtotal: Recurring Cost</i>	-	-	24.889	-	-	16.800	-	-	14.100	-	-	9.071	-	-	-	-	-	9.071
<b>Subtotal: Package Fielding Cost</b>	-	-	<b>24.889</b>	-	-	<b>16.800</b>	-	-	<b>14.100</b>	-	-	<b>9.071</b>	-	-	-	-	-	<b>9.071</b>
<b>Gross/Weapon System Cost</b>	-	-	<b>41.859</b>	-	-	<b>16.800</b>	-	-	<b>14.100</b>	-	-	<b>9.071</b>	-	-	-	-	-	<b>9.071</b>

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<b>Exhibit P-5, Cost Analysis:</b> PB 2021 Army		<b>Date:</b> February 2020
<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 2035A / 02 / 89	<b>P-1 Line Item Number / Title:</b> 9921B66701 / Integrated Personnel and Pay System-Army (IPPS-A)	<b>Item Number / Title [DODIC]:</b> B66706 / IPPS-A INC 2

<b>ID Code</b> (A=Service Ready, B=Not Service Ready) :	<b>MDAP/MAIS Code:</b>
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Secondary Distribution		FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total
Army	Quantity	-	-	-	-	-
	Total Obligation Authority	16.800	14.100	9.071	-	9.071
<b>Total:</b>	<b>Quantity</b>	-	-	-	-	-
<b>Secondary Distribution</b>	<b>Total Obligation Authority</b>	<b>16.800</b>	<b>14.100</b>	<b>9.071</b>	-	<b>9.071</b>

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

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<b>Exhibit P-5a, Procurement History and Planning:</b> PB 2021 Army							<b>Date:</b> February 2020					
<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 2035A / 02 / 89			<b>P-1 Line Item Number / Title:</b> 9921B66701 / Integrated Personnel and Pay System-Army (IPPS-A)				<b>Item Number / Title [DODIC]:</b> B66706 / IPPS-A INC 2					

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
New Equipment Training		2016	VAR / VAR	Option / CPIF	ACC-NJ	Sep 2016	Aug 2017	1	4,446.000	Y		
New Equipment Training		2017	VAR / VAR	Option / CPIF	ACC-NJ	Sep 2017	Jun 2018	1	4,214.000	Y		
New Equipment Training		2018	VAR / VAR	Option / CPIF	ACC-NJ	Aug 2018	Aug 2018	1	16,140.000	Y		
New Equipment Training		2019	VAR / VAR	Option / CPIF	ACC-NJ	Dec 2018	Aug 2019	1	16,800.000	Y		
New Equipment Training		2020	VAR / VAR	Option / CPIF	ACC-NJ	Jan 2020	Mar 2020	1	14,100.000	Y		
New Equipment Training		2021	VAR / VAR	Option / CPFF	ACC-NJ	Dec 2020	Dec 2021	1	9,071.000	Y		

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

<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 2035A: Other Procurement, Army / BA 02: Communications and Electronics Equipment / BSA 89: Elect Equip - Tactical C2 Systems	<b>P-1 Line Item Number / Title:</b> 9966BZ9966 / Reconnaissance and Surveying Instrument Set
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ID Code (A=Service Ready, B=Not Service Ready): A	Program Elements for Code B Items: N/A	Other Related Program Elements: N/A
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**Line Item MDAP/MAIS Code:** N/A

Resource Summary	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	To Complete	Total
Procurement Quantity ( <i>Units in Each</i> )	581	195	80	103	-	103	-	-	-	10	-	969
Gross/Weapon System Cost ( <i>\$ in Millions</i> )	129.059	6.823	11.000	12.117	-	12.117	-	-	-	2.997	-	161.996
Less PY Advance Procurement ( <i>\$ in Millions</i> )	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) ( <i>\$ in Millions</i> )	129.059	6.823	11.000	12.117	-	12.117	-	-	-	2.997	-	161.996
Plus CY Advance Procurement ( <i>\$ in Millions</i> )	-	-	-	-	-	-	-	-	-	-	-	-
<b>Total Obligation Authority (<i>\$ in Millions</i>)</b>	<b>129.059</b>	<b>6.823</b>	<b>11.000</b>	<b>12.117</b>	<b>-</b>	<b>12.117</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>2.997</b>	<b>-</b>	<b>161.996</b>

*(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> )	222.133	34.990	137.500	117.641	-	117.641	-	-	-	299.700	-	167.179

**Description:**

The Instrument Set, Reconnaissance and Surveying (commonly known as ENFIRE) is a Digital technical stand off engineering and data collection tool set designed to perform reconnaissance, obstacle reporting, construction management, and surveying using precision measuring devices in conjunction with a tablet computer that contains user friendly Geographic Information System (GIS) to auto populate Road, Bridge, Minefield, and UXO report forms. It allows greater accuracy and precision of measurements and faster, automatic information collection and less error-prone dissemination. ENFIRE is Common Joint Mapping Tool Kit (CJMTK) compatible for geospatial interoperability and allows data collection from a distance, minimizing exposure to enemy observation; greatly improving safety to soldiers. ENFIRE kits are comprised of Hardware and Software that are Commercial Off the Shelf (COTS) and Government Off the Shelf (GOTS) procurements.

ENFIRE incorporates the ability to automatically populate field data on digital forms used for road, bridge, hasty minefield, ford, tunnel and Improvised Explosive Device (IED) reconnaissance/reporting with relevant information from peripheral devices included in the ENFIRE set. ENFIRE sets are used at the Battalion, Company, Platoon, and Squad levels as a means to facilitate rapid collection and dissemination of information to commanders in the field. Information may be disseminated via the Battle Command Common Services to other ENFIRE sets and to other Mission Command (MC) and Intelligence systems. ENFIRE also has broad area application as a common computing platform for the engineer platoon with plans to incorporate research and development efforts that have application across Military and General Engineering disciplines.

The long distance laser range finder allows soldiers to quickly and accurately determine a target's bearing and distance from the users' location at a significant standoff range. Used in conjunction with the Defense Advanced Global Positioning System Receiver and ESRI Runtime software, ENFIRE users are able to create overlays of bridges, roads, hasty minefields, and IEDs on digital maps as they collect information related to these targets. Using the video camcorder and digital scanner, ENFIRE users can also collect picture and scanned image files that can be associated with bridge, road, hasty minefield and IED information for reporting purposes. Reports can be generated in hard or soft copy for rapid dissemination.

The ENFIRE Army Acquisition Objective (AAO) is 2,763.

Secondary Distribution	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025
Army									
Quantity	195	15	18	-	18	-	-	-	10
Total Obligation Authority	6.823	5.807	5.327	-	5.327	-	-	-	2.997

**UNCLASSIFIED**

<b>Exhibit P-40, Budget Line Item Justification:</b> PB 2021 Army							<b>Date:</b> February 2020			
<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 2035A: Other Procurement, Army / BA 02: Communications and Electronics Equipment / BSA 89: Elect Equip - Tactical C2 Systems					<b>P-1 Line Item Number / Title:</b> 9966BZ9966 / Reconnaissance and Surveying Instrument Set					
<b>ID Code</b> (A=Service Ready, B=Not Service Ready): A			<b>Program Elements for Code B Items:</b> N/A			<b>Other Related Program Elements:</b> N/A				
<b>Line Item MDAP/MAIS Code:</b> N/A										

Secondary Distribution		FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025
ANG	Quantity	-	45	40	-	40	-	-	-	-
	Total Obligation Authority	-	3.595	3.195	-	3.195	-	-	-	-
AR	Quantity	-	20	45	-	45	-	-	-	-
	Total Obligation Authority	-	1.598	3.595	-	3.595	-	-	-	-
<b>Total:</b>	<b>Quantity</b>	<b>195</b>	<b>80</b>	<b>103</b>	<b>-</b>	<b>103</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>10</b>
<b>Secondary Distribution</b>	<b>Total Obligation Authority</b>	<b>6.823</b>	<b>11.000</b>	<b>12.117</b>	<b>-</b>	<b>12.117</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>2.997</b>

**UNCLASSIFIED**

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

<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 2035A: Other Procurement, Army / BA 02: Communications and Electronics Equipment / BSA 89: Elect Equip - Tactical C2 Systems	<b>P-1 Line Item Number / Title:</b> 9966BZ9966 / Reconnaissance and Surveying Instrument Set
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<b>ID Code</b> (A=Service Ready, B=Not Service Ready): A	<b>Program Elements for Code B Items:</b> N/A	<b>Other Related Program Elements:</b> N/A
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**Line Item MDAP/MAIS Code:** N/A

Exhibits Schedule					Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total
Exhibit Type	Title*	Subexhibits	ID CD	MDAP/MAIS Code	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)
P-5	BZ9966 / Reconnaissance and Surveying Instrument Set	P-5a	A		581 / 129.059	195 / 6.823	80 / 11.000	103 / 12.117	- / -	103 / 12.117
<b>P-40</b>	<b>Total Gross/Weapon System Cost</b>				<b>581 / 129.059</b>	<b>195 / 6.823</b>	<b>80 / 11.000</b>	<b>103 / 12.117</b>	<b>- / -</b>	<b>103 / 12.117</b>

\*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 2021 Base procurement dollars in the amount of \$12.117 million support the procurement of up to 103 ENFIRE systems, fielding efforts, NET, and integration of critical Security and interoperability updates for ENFIRE systems issued to Active Duty, National Guard and Army Reserve Engineer units. FY 2021 Base procurement dollars will also be used to posture the ENFIRE geospatial software to support the Army Futures Commands Artificial Intelligence (AI) and Machine Learning (ML) initiatives.

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**

<b>Exhibit P-5, Cost Analysis: PB 2021 Army</b>		<b>Date:</b> February 2020
<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 2035A / 02 / 89	<b>P-1 Line Item Number / Title:</b> 9966BZ9966 / Reconnaissance and Surveying Instrument Set	<b>Item Number / Title [DODIC]:</b> BZ9966 / Reconnaissance and Surveying Instrument Set

<b>ID Code</b> (A=Service Ready, B=Not Service Ready) : A	<b>MDAP/MAIS Code:</b>
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<b>Resource Summary</b>	<b>Prior Years</b>	<b>FY 2019</b>	<b>FY 2020</b>	<b>FY 2021 Base</b>	<b>FY 2021 OCO</b>	<b>FY 2021 Total</b>
Procurement Quantity (Units in Each)	581	195	80	103	-	103
Gross/Weapon System Cost (\$ in Millions)	129.059	6.823	11.000	12.117	-	12.117
Less PY Advance Procurement (\$ in Millions)	-	-	-	-	-	-
Net Procurement (P-1) (\$ in Millions)	129.059	6.823	11.000	12.117	-	12.117
Plus CY Advance Procurement (\$ in Millions)	-	-	-	-	-	-
<b>Total Obligation Authority (\$ in Millions)</b>	<b>129.059</b>	<b>6.823</b>	<b>11.000</b>	<b>12.117</b>	<b>-</b>	<b>12.117</b>

*(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)	222.133	34.990	137.500	117.641	-	117.641

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

<b>Cost Elements</b>	<b>Prior Years</b>			<b>FY 2019</b>			<b>FY 2020</b>			<b>FY 2021 Base</b>			<b>FY 2021 OCO</b>			<b>FY 2021 Total</b>		
	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)
<b>Flyaway Cost</b>																		
<b>Recurring Cost</b>																		
ENFIRE Systems <sup>(†)</sup>	75.375	1,393	104.998	58.361	61	3.560	72.500	80	5.800	86.573	103	8.917	-	-	-	86.573	103	8.917
Project Management and Administration	-	-	11.850	-	-	1.229	-	-	1.229	-	-	1.229	-	-	-	-	-	1.229
Fielding / New Equipment Training	-	-	7.997	-	-	1.376	-	-	1.376	-	-	1.376	-	-	-	-	-	1.376
Spares	-	-	0.599	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Tech Refresh Systems	-	-	2.958	-	-	-	25.000	80	2.000	-	-	-	-	-	-	-	-	-
Engineering and Integration and ILS	-	-	0.658	-	-	0.658	-	-	0.595	-	-	0.595	-	-	-	-	-	0.595
<i>Subtotal: Recurring Cost</i>	-	-	129.060	-	-	6.823	-	-	11.000	-	-	12.117	-	-	-	-	-	12.117
<i>Subtotal: Flyaway Cost</i>	-	-	129.060	-	-	6.823	-	-	11.000	-	-	12.117	-	-	-	-	-	12.117
<b>Gross/Weapon System Cost</b>	<b>222.133</b>	<b>581</b>	<b>129.059</b>	<b>34.990</b>	<b>195</b>	<b>6.823</b>	<b>137.500</b>	<b>80</b>	<b>11.000</b>	<b>117.641</b>	<b>103</b>	<b>12.117</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>117.641</b>	<b>103</b>	<b>12.117</b>

<b>Secondary Distribution</b>		<b>FY 2019</b>	<b>FY 2020</b>	<b>FY 2021 Base</b>	<b>FY 2021 OCO</b>	<b>FY 2021 Total</b>
Army	Quantity	195	15	18	-	18
	Total Obligation Authority	6.823	5.807	5.327	-	5.327
ANG	Quantity	-	45	40	-	40
	Total Obligation Authority	-	3.595	3.195	-	3.195

**UNCLASSIFIED**

<b>Exhibit P-5, Cost Analysis:</b> PB 2021 Army		<b>Date:</b> February 2020
<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 2035A / 02 / 89	<b>P-1 Line Item Number / Title:</b> 9966BZ9966 / Reconnaissance and Surveying Instrument Set	<b>Item Number / Title [DODIC]:</b> BZ9966 / Reconnaissance and Surveying Instrument Set

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

Secondary Distribution		FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total
AR	Quantity	-	20	45	-	45
	Total Obligation Authority	-	1.598	3.595	-	3.595
<b>Total: Secondary Distribution</b>	<b>Quantity</b>	<b>195</b>	<b>80</b>	<b>103</b>	<b>-</b>	<b>103</b>
	<b>Total Obligation Authority</b>	<b>6.823</b>	<b>11.000</b>	<b>12.117</b>	<b>-</b>	<b>12.117</b>

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

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<b>Exhibit P-5a, Procurement History and Planning:</b> PB 2021 Army							<b>Date:</b> February 2020					
<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 2035A / 02 / 89			<b>P-1 Line Item Number / Title:</b> 9966BZ9966 / Reconnaissance and Surveying Instrument Set				<b>Item Number / Title [DODIC]:</b> BZ9966 / Reconnaissance and Surveying Instrument Set					

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
ENFIRE Systems		2016	Chenega Technical Innovations / Dumfries, VA	C / CPFF	US Army Geospatial Center	Jun 2016	Oct 2017	190	62.860	Y		Feb 2016
ENFIRE Systems		2017	Chenega Technical Innovations / Dumfries, VA	Option / CPFF	US Army Geospatial Center	Jun 2017	Nov 2017	191	60.000	Y		
ENFIRE Systems		2018	Chenega Technical Innovations / Dumfries, VA	Option / CPFF	US Army Geospatial Center	Jun 2018	Nov 2018	77	38.961	Y		
ENFIRE Systems		2019	Chenega Technical Innovations / Dumfries, VA	Option / CPFF	US Army Geospatial Center	Jun 2019	Nov 2019	61	58.361	Y		
ENFIRE Systems		2020	Chenega Technical Innovations / Dumfries, VA	Option / CPFF	US Army Geospatial Center	Jun 2020	Nov 2020	80	72.500	Y		
ENFIRE Systems		2021	Chenega Technical Innovations / Dumfries, VA	Option / CPFF	US Army Geospatial Center	Jun 2021	Nov 2021	103	86.573	Y		

**Remarks:**  
ENFIRE Hardware and Software are 100% COTS/GOTS procurements.

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

<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 2035A: Other Procurement, Army / BA 02: Communications and Electronics Equipment / BSA 89: Elect Equip - Tactical C2 Systems	<b>P-1 Line Item Number / Title:</b> 9971B99901 / MOD of In-Svc Equipment (ENFIRE)
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<b>ID Code</b> (A=Service Ready, B=Not Service Ready):	<b>Program Elements for Code B Items:</b> N/A	<b>Other Related Program Elements:</b> N/A
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**Line Item MDAP/MAIS Code:** N/A

Resource Summary	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	To Complete	Total
Procurement Quantity ( <i>Units in Each</i> )	349	297	465	20	-	20	60	110	270	270	-	1,841
Gross/Weapon System Cost ( <i>\$ in Millions</i> )	3.870	1.177	15.317	3.004	-	3.004	3.457	3.996	5.024	5.024	-	40.869
Less PY Advance Procurement ( <i>\$ in Millions</i> )	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) ( <i>\$ in Millions</i> )	3.870	1.177	15.317	3.004	-	3.004	3.457	3.996	5.024	5.024	-	40.869
Plus CY Advance Procurement ( <i>\$ in Millions</i> )	-	-	-	-	-	-	-	-	-	-	-	-
<b>Total Obligation Authority (<i>\$ in Millions</i>)</b>	<b>3.870</b>	<b>1.177</b>	<b>15.317</b>	<b>3.004</b>	<b>-</b>	<b>3.004</b>	<b>3.457</b>	<b>3.996</b>	<b>5.024</b>	<b>5.024</b>	<b>-</b>	<b>40.869</b>

*(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> )	11.089	3.963	32.940	150.200	-	150.200	57.617	36.327	18.607	18.607	-	22.199

**Description:**

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.

Mod of In-Svc Equipment Instrument Set, Reconnaissance and Surveying (commonly known as ENFIRE) supports tech refresh of fielded systems. Tech refresh of ENFIRE is on a five year cycle and is the replacement of the laptop and selected peripherals. ENFIRE tech refresh kits are comprised of commercial off the shelf equipment.

The Instrument Set, Reconnaissance and Surveying (commonly known as ENFIRE) is a digital technical stand off engineering and data collection tool set, designed to perform reconnaissance, obstacle reporting, construction management, and surveying using precision measuring devices in conjunction with a tablet computer that contains user friendly Geographic Information System (GIS) to auto populate road, bridge, minefield, and Unexploded Ordnance (UXO) report forms. It allows greater accuracy and precision of measurements and faster, automatic information collection and less error-prone dissemination. ENFIRE is Common Joint Mapping Tool Kit (CJMTK) compatible for geospatial interoperability and allows data collection from a distance, minimizing exposure to enemy observation; greatly improving safety to soldiers.

ENFIRE incorporates the ability to automatically populate field data on digital forms used for road, bridge, hasty minefield, ford, tunnel and Improvised Explosive Device (IED) reconnaissance/reporting with relevant information from peripheral devices included in the ENFIRE set. ENFIRE sets are used at the Battalion, Company, Platoon, and Squad levels as a means to facilitate rapid collection and dissemination of information to commanders in the field. Information may be disseminated via the Battle Command Common Services to other ENFIRE sets and to other Mission Command (MC) and Intelligence systems. ENFIRE also has broad area application as a common computing platform for the engineer platoon; with plans to incorporate research and development efforts that have application across Military and General Engineering disciplines.

The long distance laser range finder allows soldiers to quickly and accurately determine a target's bearing and distance from the users' location at a significant standoff range. Used in conjunction with the Defense Advanced Global Positioning System Receiver and ArcMap software, ENFIRE users are able to create overlays of bridges, roads, hasty minefields, and IEDs on digital maps as they collect information related to these targets. Using the video camcorder and digital scanner, ENFIRE users can also collect picture and scanned image files that can be associated with bridge, road, hasty minefield and IED information for reporting purposes. Reports can be generated in hard or soft copy for rapid dissemination.

ENFIRE Army Acquisition Objective (AAO) = 2763

ENFIRE Hardware and Software are Commercial Off the Shelf (COTS) and Government Off the Shelf (GOTS) procurements.

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

<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 2035A: Other Procurement, Army / BA 02: Communications and Electronics Equipment / BSA 89: Elect Equip - Tactical C2 Systems	<b>P-1 Line Item Number / Title:</b> 9971B99901 / MOD of In-Svc Equipment (ENFIRE)
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<b>ID Code</b> (A=Service Ready, B=Not Service Ready):	<b>Program Elements for Code B Items:</b> N/A	<b>Other Related Program Elements:</b> N/A
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**Line Item MDAP/MAIS Code:** N/A

Secondary Distribution		FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025
Army	Quantity	297	387	20	-	20	60	110	270	270
	Total Obligation Authority	1.177	10.317	3.004	-	3.004	3.457	3.996	5.024	5.024
ANG	Quantity	-	39	-	-	-	-	-	-	-
	Total Obligation Authority	-	2.500	-	-	-	-	-	-	-
AR	Quantity	-	39	-	-	-	-	-	-	-
	Total Obligation Authority	-	2.500	-	-	-	-	-	-	-
<b>Total:</b>	<b>Quantity</b>	<b>297</b>	<b>465</b>	<b>20</b>	<b>-</b>	<b>20</b>	<b>60</b>	<b>110</b>	<b>270</b>	<b>270</b>
<b>Secondary Distribution</b>	<b>Total Obligation Authority</b>	<b>1.177</b>	<b>15.317</b>	<b>3.004</b>	<b>-</b>	<b>3.004</b>	<b>3.457</b>	<b>3.996</b>	<b>5.024</b>	<b>5.024</b>

**Justification:**  
 FY 2021 Base procurement dollars in the amount of \$3.004 million will support tech refresh of up to 143 ENFIRE systems. ENFIRE tech refresh kits are comprised of COTS components that replace equipment that has reached the end of its useful life. The technical refresh is critical to maintaining a strong security posture and interoperability with Army enterprise systems.

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 2021 Army **Date:** February 2020

<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 2035A: Other Procurement, Army / BA 02: Communications and Electronics Equipment / BSA 92: Elect Equip - Automation	<b>P-1 Line Item Number / Title:</b> 3001BE4169 / Army Training Modernization
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<b>ID Code</b> (A=Service Ready, B=Not Service Ready):	<b>Program Elements for Code B Items:</b> N/A	<b>Other Related Program Elements:</b> N/A
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**Line Item MDAP/MAIS Code:** N/A

Resource Summary	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	To Complete	Total
Procurement Quantity ( <i>Units in Each</i> )	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost ( <i>\$ in Millions</i> )	346.782	12.265	20.592	14.574	4.688	19.262	14.584	13.697	14.597	19.616	-	461.395
Less PY Advance Procurement ( <i>\$ in Millions</i> )	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) ( <i>\$ in Millions</i> )	346.782	12.265	20.592	14.574	4.688	19.262	14.584	13.697	14.597	19.616	-	461.395
Plus CY Advance Procurement ( <i>\$ in Millions</i> )	-	-	-	-	-	-	-	-	-	-	-	-
<b>Total Obligation Authority (<i>\$ in Millions</i>)</b>	<b>346.782</b>	<b>12.265</b>	<b>20.592</b>	<b>14.574</b>	<b>4.688</b>	<b>19.262</b>	<b>14.584</b>	<b>13.697</b>	<b>14.597</b>	<b>19.616</b>	<b>-</b>	<b>461.395</b>

*(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:**

Army Training Modernization (ATM) consists of three related efforts to include Army National Guard (ARNG) Distributed Learning Program (DLP), Other Training Modernization, and Distributed Learning System (DLS) to acquire Digital Training Facilities (DTF). DTFs allow rapid delivery of high quality instruction to Army personnel. Infrastructure acquired is based on industry standards and complies with the Joint Technical Architecture (JTA) and Defense Information Infrastructure Common Operating Environment (DII COE), where applicable. This assures compatibility with other military services and that commercial, state, and other resources can be leveraged to achieve cost effective solutions to support all Army components.

ATM provides a cost effective solution for training Army personnel. Supported training enhancements will help reduce the current backlog of Military Operational Specialty (MOS) training. Army can significantly increase levels of MOS qualification, enhance readiness, with standardized Army courseware delivered through Distributed Learning (DL) technology. Implementation of these technology enablers reduce resident training requirements and Soldiers spend less time in the training base and more time in units, thereby increasing readiness. ATM delivers standardized training to Active Component (AC) and Reserve Component (RC) Soldiers as well as Department of the Army Civilians (DAC).

The DLP/DLS provide infrastructure for Soldiers to train at or near their assigned station in lieu of resident training at Army schools. DLP and DLS will provide approximately 549 modern distance learning (DL) enabled DTFs and associated supporting infrastructure to augment training at existing resident Army schools. Moreover, DLS has fielded 20 Deployed Digital Training Campus (DDTC) to allow training while units are deployed. Additionally, DLS has fielded 94 Mobile Digital Training Facility's (MDTF) to the United States Army Reserve Command to support Soldiers/unit training at remote locations. This allows Army to both increase the number of Army personnel receiving required training and the amount of training that can be provided to each individual.

DLS provides the information technology for delivery and management of training in support of individual and collective task training. Benefits include increased training effectiveness and efficiency, improved readiness, and increased training for customers. Key customers: Soldiers (Active Duty, Army Reserve National Guard, and United States Army Reserve) and Army Civilians. Key Stakeholders: Army Training and Doctrine Command (Functional Proponent Agent), all other Army Commands, Program Executive Officer - Enterprise Information Systems, and Army General Staff. DLS provides capabilities using Commercial-Off-The-Shelf (COTS) solutions: (1) Digital Training Facilities (DTF): electronic classrooms that deliver multimedia courseware for self-paced training or group training events; (2) Mobile Digital Training Facility (MDTF) unlike the traditional methods of training, the MDTF brings the training to the Soldiers at no cost to the unit; (3) Enterprise Management Center (EMC): centralized system management of the DLS information resources; (4) Army Learning Management System (ALMS): a web-based information system for centralizing, standardizing, and optimizing training, training management, and training delivery functions; (5) Deployed Digital Training Campuses (DDTC): electronic transportable classrooms that deliver multimedia courseware for self-paced instruction or group training events in a deployed location; and, (6) Army e-Learning: web-based training products used to acquire and sustain business, information technology or foreign language skills. As a whole, DLS facilitates the Training Mission Area mission to

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

<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 2035A: Other Procurement, Army / BA 02: Communications and Electronics Equipment / BSA 92: Elect Equip - Automation	<b>P-1 Line Item Number / Title:</b> 3001BE4169 / Army Training Modernization
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<b>ID Code</b> (A=Service Ready, B=Not Service Ready):	<b>Program Elements for Code B Items:</b> N/A	<b>Other Related Program Elements:</b> N/A
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**Line Item MDAP/MAIS Code:** N/A

teach technical and tactical proficiency, develop military occupational specialty (MOS) skills, develop Leaders, support Army Training Transformation, Sustainable Readiness Model (SRM) and Lifelong Learning, promote self-development, and sustain individual and unit combat skills.

The United States Army Intelligence Center of Excellence (USAICoE) trains Military Intelligence (MI) Soldiers, leaders from all services, the professional civilian Intelligence workforce and mobilized reserve components as a power support platform for the Active Army. Because of Military Intelligence's reliance on Information Technology, information systems are the primary weapons for the Military Intelligence Corps, and a digital infrastructure that comprises the systems, networks, and databases that MI Soldiers and Leaders will use in the Force is required for training. The USAICoE G-6 is chartered with continuously maintaining and improving this vital digital training infrastructure, which encompasses 5 discreet network enclaves, each operating at different levels of classification, 25 training buildings, 4 field sites, 325 digital classrooms, and 3 data centers. The USAICoE G-6 operates and maintains the largest single site installation of Distributed Common Ground System-Army (DCGS-A).

Secondary Distribution		FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025
Army	Quantity	-	-	-	-	-	-	-	-	-
	Total Obligation Authority	12.265	20.592	14.574	4.688	19.262	14.584	13.697	14.597	19.616
<b>Total: Secondary Distribution</b>	<b>Quantity</b>	-	-	-	-	-	-	-	-	-
	<b>Total Obligation Authority</b>	<b>12.265</b>	<b>20.592</b>	<b>14.574</b>	<b>4.688</b>	<b>19.262</b>	<b>14.584</b>	<b>13.697</b>	<b>14.597</b>	<b>19.616</b>

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

<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 2035A: Other Procurement, Army / BA 02: Communications and Electronics Equipment / BSA 92: Elect Equip - Automation	<b>P-1 Line Item Number / Title:</b> 3001BE4169 / Army Training Modernization
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<b>ID Code</b> (A=Service Ready, B=Not Service Ready):	<b>Program Elements for Code B Items:</b> N/A	<b>Other Related Program Elements:</b> N/A
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**Line Item MDAP/MAIS Code:** N/A

Exhibits Schedule					Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total
Exhibit Type	Title*	Subexhibits	ID CD	MDAP/MAIS Code	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)
P-5	BE4171 / DISTRIBUTIVE TRAINING TECHNOLOGY				- / 67.373	- / 4.624	- / 4.646	- / 4.640	- / -	- / 4.640
P-5	BE4172 / OTHER TRAINING MODERNIZATION	P-5a			- / 73.400	- / -	- / 6.014	- / -	- / 4.688	- / 4.688
P-5	BE4173 / Distributed Learning System (DLS)	P-5a			- / 206.009	- / 7.641	- / 9.932	- / 9.934	- / -	- / 9.934
<b>P-40</b>	<b>Total Gross/Weapon System Cost</b>				<b>- / 346.782</b>	<b>- / 12.265</b>	<b>- / 20.592</b>	<b>- / 14.574</b>	<b>- / 4.688</b>	<b>- / 19.262</b>

\*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 2021 (BE4171) Base procurement dollars in the amount of \$4.640 million support technical refresh of the ARNG Distributed Learning (DL) Program's 403 ARNG DL Classrooms. The ARNG DL Classrooms provide online capabilities in communities throughout the nation to support the training and readiness of Soldiers and units, assist in the generation of operational forces, and enhance routine and emergency operations for the Army National Guard. Technical refresh includes replacement of student and instructor workstations, audio/video equipment, printers, and network connectivity equipment that are past end-of-life or need upgrading to comply with current cybersecurity standards.

FY 2021 (BE4172) OCO procurement dollars in the amount of \$4.688 million support the United States Army Intelligence Center of Excellence Soldiers and Leaders from all services with network equipment including servers, firewalls, and other related hardware.

FY 2021 (BE4173) Base procurement dollars in the amount of \$9.934 million funds the DLS Enterprise Technology Refreshment (Tech Refresh) program in support of all increments (Digital Training Facilities (DTF), Mobile Digital Training Facility (MDTF) Enterprise Management Center (EMC), Army Learning Management System (ALMS), and Deployed Digital Training Campus (DDTC)). Tech Refresh extends the service life by staying ahead of the obsolescence curve with cost-effective planned technology upgrades, refreshers, and insertions, based on market research and system performance requirements (current and projected). With the advance of information technology, Tech Refresh maintains continued supportability of the DLS Enterprise and avoids disruption of Army Training. Funds will also be used for software and engineering changes required to enhance the ALMS assessment capabilities. This will expand the automated capability for the creation, storage, management, and administration of online testing and course product evaluations, including surveys, to support Army Soldier and civilian training and education.

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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<b>Exhibit P-5, Cost Analysis: PB 2021 Army</b>		<b>Date:</b> February 2020
<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 2035A / 02 / 92		<b>P-1 Line Item Number / Title:</b> 3001BE4169 / Army Training Modernization
		<b>Item Number / Title [DODIC]:</b> BE4171 / DISTRIBUTIVE TRAINING TECHNOLOGY

<b>ID Code</b> (A=Service Ready, B=Not Service Ready) :	<b>MDAP/MAIS Code:</b>
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Resource Summary	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total
Procurement Quantity (Units in Each)	-	-	-	-	-	-
Gross/Weapon System Cost (\$ in Millions)	67.373	4.624	4.646	4.640	-	4.640
Less PY Advance Procurement (\$ in Millions)	-	-	-	-	-	-
Net Procurement (P-1) (\$ in Millions)	67.373	4.624	4.646	4.640	-	4.640
Plus CY Advance Procurement (\$ in Millions)	-	-	-	-	-	-
<b>Total Obligation Authority (\$ in Millions)</b>	<b>67.373</b>	<b>4.624</b>	<b>4.646</b>	<b>4.640</b>	<b>-</b>	<b>4.640</b>

*(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 2019			FY 2020			FY 2021 Base			FY 2021 OCO			FY 2021 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																		
Distributive Training Facility Refresh	67,373.000	1	67.373	4,624.000	1	4.624	4,646.000	1	4.646	4,640.000	1	4.640	-	-	-	4,640.000	1	4.640
<i>Subtotal: Recurring Cost</i>	-	-	67.373	-	-	4.624	-	-	4.646	-	-	4.640	-	-	-	-	-	4.640
<i>Subtotal: Flyaway Cost</i>	-	-	67.373	-	-	4.624	-	-	4.646	-	-	4.640	-	-	-	-	-	4.640
<b>Gross/Weapon System Cost</b>	-	-	67.373	-	-	4.624	-	-	4.646	-	-	4.640	-	-	-	-	-	4.640

Secondary Distribution	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total
Army					
Quantity	-	-	-	-	-
Total Obligation Authority	4.624	4.646	4.640	-	4.640
<b>Total: Secondary Distribution</b>					
Quantity	-	-	-	-	-
Total Obligation Authority	4.624	4.646	4.640	-	4.640

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<b>Exhibit P-5, Cost Analysis: PB 2021 Army</b>		<b>Date:</b> February 2020
<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 2035A / 02 / 92	<b>P-1 Line Item Number / Title:</b> 3001BE4169 / Army Training Modernization	<b>Item Number / Title [DODIC]:</b> BE4172 / OTHER TRAINING MODERNIZATION

<b>ID Code</b> (A=Service Ready, B=Not Service Ready) :	<b>MDAP/MAIS Code:</b>
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<b>Resource Summary</b>	<b>Prior Years</b>	<b>FY 2019</b>	<b>FY 2020</b>	<b>FY 2021 Base</b>	<b>FY 2021 OCO</b>	<b>FY 2021 Total</b>
Procurement Quantity (Units in Each)	-	-	-	-	-	-
Gross/Weapon System Cost (\$ in Millions)	73.400	-	6.014	-	4.688	4.688
Less PY Advance Procurement (\$ in Millions)	-	-	-	-	-	-
Net Procurement (P-1) (\$ in Millions)	73.400	-	6.014	-	4.688	4.688
Plus CY Advance Procurement (\$ in Millions)	-	-	-	-	-	-
<b>Total Obligation Authority (\$ in Millions)</b>	<b>73.400</b>	<b>-</b>	<b>6.014</b>	<b>-</b>	<b>4.688</b>	<b>4.688</b>

*(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.

<b>Cost Elements</b>	<b>Prior Years</b>			<b>FY 2019</b>			<b>FY 2020</b>			<b>FY 2021 Base</b>			<b>FY 2021 OCO</b>			<b>FY 2021 Total</b>		
	<b>Unit Cost (\$ K)</b>	<b>Qty (Each)</b>	<b>Total Cost (\$ M)</b>	<b>Unit Cost (\$ K)</b>	<b>Qty (Each)</b>	<b>Total Cost (\$ M)</b>	<b>Unit Cost (\$ K)</b>	<b>Qty (Each)</b>	<b>Total Cost (\$ M)</b>	<b>Unit Cost (\$ K)</b>	<b>Qty (Each)</b>	<b>Total Cost (\$ M)</b>	<b>Unit Cost (\$ K)</b>	<b>Qty (Each)</b>	<b>Total Cost (\$ M)</b>	<b>Unit Cost (\$ K)</b>	<b>Qty (Each)</b>	<b>Total Cost (\$ M)</b>
Flyaway Cost																		
Non Recurring Cost																		
NTNF <sup>(t)</sup>	34,509.000	2	69.018	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
USAICoE MI Systems IMT <sup>(t)</sup>	4,382.000	1	4.382	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
USAICoE MI Systems Training <sup>(t)</sup>	-	-	-	-	-	-	6,014.000	1	6.014	-	-	-	-	-	4.688	-	-	4.688
<i>Subtotal: Non Recurring Cost</i>	-	-	73.400	-	-	-	-	-	6.014	-	-	-	-	-	4.688	-	-	4.688
<i>Subtotal: Flyaway Cost</i>	-	-	73.400	-	-	-	-	-	6.014	-	-	-	-	-	4.688	-	-	4.688
<b>Gross/Weapon System Cost</b>	-	-	<b>73.400</b>	-	-	-	-	-	<b>6.014</b>	-	-	-	-	-	<b>4.688</b>	-	-	<b>4.688</b>

<b>Secondary Distribution</b>	<b>FY 2019</b>	<b>FY 2020</b>	<b>FY 2021 Base</b>	<b>FY 2021 OCO</b>	<b>FY 2021 Total</b>
Army	-	-	-	-	-
Quantity	-	-	-	-	-
Total Obligation Authority	-	6.014	-	4.688	4.688
<b>Total: Secondary Distribution</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>
Quantity	-	-	-	-	-
Total Obligation Authority	-	6.014	-	4.688	4.688

<sup>(t)</sup> indicates the presence of a P-5a

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<b>Exhibit P-5a, Procurement History and Planning:</b> PB 2021 Army							<b>Date:</b> February 2020				
<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 2035A / 02 / 92			<b>P-1 Line Item Number / Title:</b> 3001BE4169 / Army Training Modernization				<b>Item Number / Title [DODIC]:</b> BE4172 / OTHER TRAINING MODERNIZATION				

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
NTNF		2016	GCSS Army Supply System / Fort Leonard Wood	Reqn	Fort Leonard Wood, MO	Sep 2016	Jan 2017	1	38.000	Y		
USAICoE MI Systems IMT		2018	TBS / TBS	C / TBD	Fort Leavenworth, KS	Oct 2017	Jan 2018	1	4,382.000	Y		
USAICoE MI Systems Training		2020	TBS / TBS	C / TBD	Fort Leavenworth, KS	Oct 2019	Jan 2020	1	6,014.000	N		
USAICoE MI Systems Training		2021	TBS / TBS	C / TBD	Fort Leavenworth, KS	Oct 2020	Jan 2021	0	0.000	N		

**Remarks:**

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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<b>Exhibit P-5, Cost Analysis: PB 2021 Army</b>		<b>Date:</b> February 2020
<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 2035A / 02 / 92	<b>P-1 Line Item Number / Title:</b> 3001BE4169 / Army Training Modernization	<b>Item Number / Title [DODIC]:</b> BE4173 / Distributed Learning System (DLS)

<b>ID Code</b> (A=Service Ready, B=Not Service Ready) :	<b>MDAP/MAIS Code:</b>
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Resource Summary	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total
Procurement Quantity (Units in Each)	-	-	-	-	-	-
Gross/Weapon System Cost (\$ in Millions)	206.009	7.641	9.932	9.934	-	9.934
Less PY Advance Procurement (\$ in Millions)	-	-	-	-	-	-
Net Procurement (P-1) (\$ in Millions)	206.009	7.641	9.932	9.934	-	9.934
Plus CY Advance Procurement (\$ in Millions)	-	-	-	-	-	-
<b>Total Obligation Authority (\$ in Millions)</b>	<b>206.009</b>	<b>7.641</b>	<b>9.932</b>	<b>9.934</b>	<b>-</b>	<b>9.934</b>

*(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 2019			FY 2020			FY 2021 Base			FY 2021 OCO			FY 2021 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																		
System Fielding & Implementation <sup>(†)</sup>	20,892.667	3	62.678	1,245.000	1	1.245	1,618.000	1	1.618	848.000	1	0.848	-	-	-	848.000	1	0.848
Army Learning Management System <sup>(†)</sup>	11,901.667	3	35.705	3,328.000	1	3.328	4,326.000	1	4.326	1,738.000	1	1.738	-	-	-	1,738.000	1	1.738
Enterprise Technology Refreshment <sup>(†)</sup>	35,875.333	3	107.626	3,068.000	1	3.068	3,988.000	1	3.988	7,348.000	1	7.348	-	-	-	7,348.000	1	7.348
<i>Subtotal: Recurring Cost</i>	-	-	206.009	-	-	7.641	-	-	9.932	-	-	9.934	-	-	-	-	-	9.934
<i>Subtotal: Flyaway Cost</i>	-	-	206.009	-	-	7.641	-	-	9.932	-	-	9.934	-	-	-	-	-	9.934
<b>Gross/Weapon System Cost</b>	-	-	206.009	-	-	7.641	-	-	9.932	-	-	9.934	-	-	-	-	-	9.934

Secondary Distribution	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total
Army	-	-	-	-	-
Quantity	-	-	-	-	-
Total Obligation Authority	7.641	9.932	9.934	-	9.934
<b>Total: Secondary Distribution</b>	-	-	-	-	-
Quantity	-	-	-	-	-
Total Obligation Authority	7.641	9.932	9.934	-	9.934

(†) indicates the presence of a P-5a

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Exhibit P-5a, Procurement History and Planning: PB 2021 Army								Date: February 2020				
Appropriation / Budget Activity / Budget Sub Activity: 2035A / 02 / 92			P-1 Line Item Number / Title: 3001BE4169 / Army Training Modernization					Item Number / Title [DODIC]: BE4173 / Distributed Learning System (DLS)				
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
System Fielding & Implementation		2018	Info Sys Engr Cmd / Ft. Detrick, MD	MIPR	CECOM, Ft Detrick, MD	Oct 2017	Nov 2017	1	323.000	Y		
System Fielding & Implementation		2019	Info Sys Engr Cmd / Ft. Detrick, MD	MIPR	CECOM, Ft Detrick, MD	Oct 2018	Nov 2018	1	1,245.000	N		
System Fielding & Implementation		2020	Info Sys Engr Cmd / Ft. Detrick, MD	MIPR	CECOM, Ft Detrick, MD	Oct 2019	Nov 2019	1	1,618.000	N		
System Fielding & Implementation		2021	Info Sys Engr Cmd / Ft. Detrick, MD	MIPR	CECOM, Ft. Detrick, MD	Oct 2020	Nov 2020	1	848.000	N		
Army Learning Management System		2018	IBM Corporation / Fairfax, VA	C / FFP	MICC, Ft Eustis, VA	Apr 2018	Apr 2018	1	1,009.000	Y		
Army Learning Management System		2019	IBM Corporation / Fairfax, VA	C / FFP	MICC, Ft Eustis, VA	Feb 2019	Apr 2019	1	3,328.000	N		
Army Learning Management System		2020	IBM Corporation / Fairfax, VA	C / FFP	MICC, Ft Eustis, VA	Feb 2020	Apr 2020	1	4,326.000	N		
Army Learning Management System		2021	IBM Corporation / Fairfax, VA	C / FFP	MICC, Ft. Eustis, VA	Feb 2021	Apr 2021	1	1,738.000	N		
EnterpriseTechnology Refreshment		2018	CDW Government LLC / Vernon Hills, IL	C / FFP	MICC, Ft Eustis, VA	May 2018	May 2018	1	1,151.000	Y		
EnterpriseTechnology Refreshment		2019	Integration Technologies / Falls Church, VA	C / FFP	MICC, Ft Eustis, VA	May 2019	May 2019	1	3,068.000	N		
EnterpriseTechnology Refreshment		2020	To Be Determined / TBD	C / FFP	MICC, Ft Eustis, VA	Apr 2020	Apr 2020	1	3,988.000	N		
EnterpriseTechnology Refreshment		2021	To Be Determined / TBD	C / FFP	MICC, Ft. Eustis, VA	Apr 2021	Apr 2021	1	7,348.000	N		

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

<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 2035A: Other Procurement, Army / BA 02: Communications and Electronics Equipment / BSA 92: Elect Equip - Automation	<b>P-1 Line Item Number / Title:</b> 3002BD3000 / Automated Data Processing Equip
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<b>ID Code</b> (A=Service Ready, B=Not Service Ready):	<b>Program Elements for Code B Items:</b> N/A	<b>Other Related Program Elements:</b> 0605013A
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**Line Item MDAP/MAIS Code:** N/A

Resource Summary	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	To Complete	Total
Procurement Quantity ( <i>Units in Each</i> )	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost ( <i>\$ in Millions</i> )	3,730.805	219.812	170.915	140.619	16.552	157.171	158.329	132.037	86.820	90.280	Continuing	Continuing
Less PY Advance Procurement ( <i>\$ in Millions</i> )	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) ( <i>\$ in Millions</i> )	3,730.805	219.812	170.915	140.619	16.552	157.171	158.329	132.037	86.820	90.280	Continuing	Continuing
Plus CY Advance Procurement ( <i>\$ in Millions</i> )	-	-	-	-	-	-	-	-	-	-	-	-
<b>Total Obligation Authority (<i>\$ in Millions</i>)</b>	<b>3,730.805</b>	<b>219.812</b>	<b>170.915</b>	<b>140.619</b>	<b>16.552</b>	<b>157.171</b>	<b>158.329</b>	<b>132.037</b>	<b>86.820</b>	<b>90.280</b>	<b>Continuing</b>	<b>Continuing</b>

*(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:**

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 information technology (IT) procurements consist of COTS/GOTS solutions; all quantities and unit costs vary by system configuration, site, and geographical location.

The Other Related Program Elements for 0605013A (RDTE), Information Technology Development, pertain only to six specific programs (IPERMS, ARIMS, ATIS, MIRS, SFL-TAP, and AIE), not the entire ADPE budget line.

The Automated Data Processing Equipment (ADPE) program supports the Army's sustaining base automation systems. Each system/program/initiative provides a separate and unique capability that is not funded or supported in another procurement budget line. The Army's primary sustaining base Information Management (IM) goal is to provide information services for the sustainment and readiness of the forces at minimum cost. A stable modernization program is essential to maintain efficiency, increase productivity, and reduce operation and maintenance costs through technological advancement. The Army's modernization strategy to support its warfighting forces in the 21st Century leverages and aligns the use of automation technology to consolidate, streamline, and modernize its management information systems to support Command, Control, Communications, Computers (C4) for the Warfighter, power projection strategies, battle space awareness, Army Transformation, and downsized force structures. Modernization plans flow from strategic planning (mission needs) and ensure standardization, interoperability, and systemic replacement of equipment that is obsolete due to technology changes, reliability, and serviceability. The ADPE program provides combat service support to the Warfighter in the areas of command and control, personnel, training, and other sustaining base functions.

**OPTICAL DIGITAL EQUIP (BD3956):**

**INTERACTIVE PERSONNEL ELECTRONIC RECORDS MANAGEMENT SYSTEM (iPERMS):** The iPERMS supports the Army's military personnel management mission on a 24 hours a day/7 days a week basis as required by Titles 10 and 44 US Code and DoD Directive 5015.2. The iPERMS is the Records Management Application (RMA) for the Army Military Human Resource Record (AMHRR), also known as the Official Military Personnel File (OMPF). It is used by Army Human Resource Managers and Soldiers throughout the world as the authoritative source for Army personnel documents and is also the repository for Soldier pay-substantiating documents. The documents in iPERMS are critical to the Army's Promotion, Command, and School Selection Board processes for both Enlisted and Officer Soldiers, and Army Audit Readiness. Over 263 million individual AMHRR/OMPF documents in iPERMS support the Active Army, Army Reserve, and Army National Guard personnel functions at all command levels and are available to the individual Soldier via web access. Currently, 9.8 million personnel files are supported by iPERMS and the number of files is expected to increase to approximately 10.6 million by FY 2021. The system also supports other activities such as the Department of Veteran Affairs, Department of Labor, and Federal, State, and local Law Enforcement agencies. The iPERMS will interface directly with, but not be

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<b>Exhibit P-40, Budget Line Item Justification:</b> PB 2021 Army		<b>Date:</b> February 2020
<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 2035A: Other Procurement, Army / BA 02: Communications and Electronics Equipment / BSA 92: Elect Equip - Automation		<b>P-1 Line Item Number / Title:</b> 3002BD3000 / Automated Data Processing Equip
<b>ID Code</b> (A=Service Ready, B=Not Service Ready):	<b>Program Elements for Code B Items:</b> N/A	<b>Other Related Program Elements:</b> 0605013A
<b>Line Item MDAP/MAIS Code:</b> N/A		
<p>subsumed by, the Integrated Personnel and Pay System-Army (IPPS-A). This program is linked to RDTE Program Element 0605013A, Information Technology Development, Project Number FL9, Project Title Army Accessioning IT Development.</p> <p>ARMY RECORDS INFORMATION MANAGEMENT SYSTEM (ARIMS): The ARIMS is the Department of the Army's enterprise record keeping system. It is used to identify, collect, preserve, and retrieve electronic record information and index hard copy records with retention periods ranging from 7 to 150 years in 130 Army-owned Records Holding Areas and 16 Federal Records Centers. With over 65,000 users, ARIMS provides the central capability for sharing information that documents the conduct of the Army's business, contingency and war-time operations, and ensures economy and efficiency in documenting Army policies, decisions, and operations. The ARIMS web-based tools reduce the administrative burden of the Warfighter, ensure that the Army's official and historical records are preserved, improve and sustain legitimate access to Army records, and promote compliance with governing statutes. The ARIMS supports Army-wide record management activities, including those addressing Department of Army responsibilities under the Freedom of Information Act (FOIA), the Privacy Act, Executive Order 13526 Declassification requirements, and the Army's combat records research role for Post-Traumatic Stress Disorder (PTSD) and other health related claims filed by Veterans. Specialized record collections include Gulf War Declassification, Operation Enduring Freedom, Operation Iraqi Freedom, Operation New Dawn, and other contingency operations. Technology refresh ensures the Army's records comply with statutory and regulatory requirements, preserves individual record integrity, mitigates the risk of historical information loss, and ensures official Army records are available for Congressional, Government Accountability Office, Executive Branch, and FOIA requirements. Under the Army Data Center Consolidation Plan (ADCCP) initiative, ARIMS is identified as an Army application pending data center 'hosting' disposition. This program transitioned to the sustainment phase beginning in FY21. Modernization efforts are linked to RDTE Program Element, 0605013A, Information Technology Development, Project Number FM7, Human Resources Information Technology.</p> <p>STRATEGIC LOGISTICS PROGRAM (SLP) (BD7000): LOGISTICS TECHNOLOGY ASSESSMENT (LTA): LTA invests in innovative information technology solutions that improve Army logistics processes by reducing demand and/or creating logistics efficiencies. LTA procures GOTS/COTS products and integrates them in a field-based system of systems assessment environment for use and implementation planning. Solutions include mobile applications to automate the capture and processing of fuel and ammunition consumption and delivery, mobile and head-worn devices to automate maintenance operations, and Condition Based Maintenance (CBM) solutions that wirelessly transmit health and usage data off of Army platforms. LTA will ensure that targeted tactical solutions interoperate with the logistics applications maintained at Army Data Centers, such as the Army's Enterprise Resources Planning (ERP) environment, and that they communicate over standard Army Networks. This program directly supports Army Operating Concept requirements to create logistics efficiencies and reduce demand, thus enabling the Army to maintain equipment readiness with reduced logistics footprint and costs. This program was phased out in FY21.</p> <p>HQ MANAGEMENT INFORMATION SYSTEMS (BE4161): HEADQUARTERS, DEPARTMENT OF THE ARMY AUTOMATED DATA PROCESSING EQUIPMENT (HQDA ADPE): The HQDA ADPE provides life cycle replacement of Video Teleconferencing environments at the Army directorates and agencies in the Pentagon, the National Capital Region, and select remote sites, including both classified and unclassified systems. The legacy systems are replaced with Internet Protocol (IP)-based Video Teleconferencing (VTC) systems that offer significant improvement in reliability and availability for remote collaboration. The robust IP-based VTC environment helps eliminate costly dedicated Integrated Services Digital Network (ISDN) lines and unreliable ISDN-based systems, and also enables a significant reduction in local and temporary duty travel costs. This program also supports HQDA staff elements with other audio visual and training tools.</p> <p>STRATEGIC COMMAND CENTERS (SCC): The SCC provides core Command, Control, Communications, and Computers (C4) infrastructure for Joint, Coalition and Interagency C4 capabilities at Army and Army supported command centers. These include US European Command (EUCOM), US Africa Command (AFRICOM), US Forces Korea (USFK), US Joint Special Operations Command (JSOC), US Southern Command (SOUTHCOM), HQDA Army Operations Center (AOC), and the Alternate National Military Command Center (ANMCC)-Site R. Specifically, SCC provides resources for Army supported Combatant Commander (COCOM) C4 infrastructure in support of other IT programs of record (POR) such as the Global Command and Control System (GCCS) Family of Systems (FoS). The SCC provides core C4 infrastructure for Joint and COCOM sites to include system and technical facilities, Protected Distribution Systems, and site preparation for other support equipment such as Video Teleconference (VTC), data, voice, displays, audio-visual equipment, cabling, and lighting. This infrastructure supports COCOM requirements for Command and Control (C2) operations and worldwide Information Assurance and Security Assistance. These sites are designated as key National Military Command System (NMCS) Command Centers and are required to operate 24 hours a day/7 days a week.</p> <p>U.S. FORCES KOREA (USFK) HEADQUARTERS (HQ) COMMAND, CONTROL, COMMUNICATIONS, COMPUTERS AND INFORMATION TECHNOLOGY (C4IT): The USFK HQ C4IT network provides the end user computing and application environments for USFK. It supports users at Yongsan, Camp Humphreys, Camp Walker and other sites on peninsula, with both classified (SIPRNET, CENTRIXS-K) and unclassified (NIPRNET) computing capabilities for US and allied forces. Systems and services include information assurance and security to further automate infrastructure scanning and patching to identify security vulnerabilities, take corrective actions, and investigate security incidents. These networks support US and Alliance planning and C4 tools. These tools provide vital support to the theater's battle</p>		

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<b>Exhibit P-40, Budget Line Item Justification:</b> PB 2021 Army		<b>Date:</b> February 2020
<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 2035A: Other Procurement, Army / BA 02: Communications and Electronics Equipment / BSA 92: Elect Equip - Automation		<b>P-1 Line Item Number / Title:</b> 3002BD3000 / Automated Data Processing Equip
<b>ID Code</b> (A=Service Ready, B=Not Service Ready):	<b>Program Elements for Code B Items:</b> N/A	<b>Other Related Program Elements:</b> 0605013A
<b>Line Item MDAP/MAIS Code:</b> N/A		
<p>Command and Control capabilities by projecting and evaluating effects of Theater Operations in order to shape strategy, battle plans, and contingency operations on peninsula. Tools provide advanced concept technology demonstration as well as communications, computing and intelligence capabilities, tailored to peninsula operational requirements. Network infrastructure supports capabilities to include Directory, File, Print, and Web server processing; storage and switching; data replication for Continuity of Operations Planning (COOP), data recovery, and improved capacity for basic store and retrieve capabilities.</p> <p>GUANTANAMO BAY (GTMO) EXPEDITIONARY LEGAL COMPLEX (ELC) EXPANSION: The GTMO ELC Operations Center provides SIPR VTC services between GTMO and Headquarters, Office of Military Commission in CONUS on classified matters. The required expansion and upgrade of network switches support SIPR operations and GTMO transition to a VDI solution to enable power savings and reduce costs/risks associated with classified spill cleanup.</p> <p>JOINT TASK FORCE-MIGRANT OPERATIONS (JTF-MIGOPS) LIFE CYCLE REPLACEMENT: The JTF-MIGOPS, Guantanamo Bay, provides operational support during mass migration events. Life cycle replacement of existing communications infrastructure is required to ensure reliable and secure communications to process migrant throughput during an event at a rate that reduces the level of impact on a migrant population that includes minor children.</p> <p>MACOM AUTOMATION SYSTEMS (BE4162): ARMY COMPUTING INFRASTRUCTURE (ACI): This program supports the Army Network Plan (ANP) LOE #1 Modernize the Network. The Army Computing Infrastructure (ACI) resources equipment that provides for Joint Information Environment (JIE)-defined Installation Service Nodes (ISN) and Army Enterprise Data Centers at Army Installations within both CONUS and OCONUS. ACI implements an enterprise approach to Network Operations by delivering the following capabilities: consolidation of disparate Department of Defense Information Network-Army (DoDIN-A) Operations Tools into a single hosted platform with the Global Enterprise Fabric (GEF); security management from the enterprise level with a common view of the entire network with the Base Management System (BMS); modernization of designated Army Enterprise Data Centers (AEDC); and modernization of the Enterprise Protected - Domain Name System (EP-DNS) for NIPR and SIPR. This infrastructure is critical to reduce network latency, defend against cyberattacks, and enable network operators to manage Army communications systems to ensure greater responsiveness and network availability for the Warfighter and civilian workforce during military operations, training, and business operations.</p> <p>BATTLE LAB COLLABORATIVE SIMULATION ENVIRONMENT (BLCSE): This program supports the Army Network Modernization Strategy Line of Effort (LOE) 1, Unified Network. The BLCSE provides warfighters and concept/capability developer's critical mission essential means to experiment and collaborate in a secure, persistent, integrated, innovative, and operationally relevant simulation environment across multiple Army, Joint, and Academic communities. BLCSE provides the critical collaboration connections between Army Futures Command (AFC), the Army Battle Labs (Maneuver, Fires, Aviation, Maneuver Support, Intelligence, Sustainment, Mission Command, Cyber, Space, and Special Operations), Critical Academic partnerships, and the Joint Service community, which provide the overall experimentation community the ability to support Critical Mission Essential Army Experimentation. BLCSE is a federation of constructive simulations, mission command systems, infrastructure, network, collaborative tools, certified common scenarios, and authoritative system performance data operating on a closed, secure, persistent network that permanently supports over 20 sites. The environment can be extended to other sites (including OCONUS), based on mission requirements. It currently has two separate network enclaves: secret and secret releasable to "Five Eyes", an intelligence alliance consisting of Australia, Canada, New Zealand, the United Kingdom and the United States. This partnership of Allied and Coalition forces use the BLCSE while participating in joint Army Experimentation. BLCSE is not a stand-alone system, but an integrated and distributed simulation capability that enables multi-echelon, integrated experiments in support of Army Experimentation by immersing leaders and soldiers in the Future Operational Environment. BLCSE provides substantial cost avoidance to the Army Experimentation Community through delivery of an enterprise solution that consolidates network capabilities while reducing travel, shipping, equipment, and facility costs required to support the Army Experimentation Program. The Army experimentation program ensures the technical infrastructure used to support the execution of complex distributed experiments remains current, reliable, and provides consistent support to critical concept and capabilities development activities. BLCSE is a key enabler of the Army Experimentation Program and the Army's development of concepts and capabilities to support the Future Force.</p> <p>US ARMY TRAINING AND DOCTRINE COMMAND (TRADOC) INSTITUTIONAL ARMY BATTLE COMMAND SYSTEM (ABCS) TRAINING BASE (TIABCSTB): The Army approved Mission Command Training Strategy (MCTS) is focused at the Doctrine, Organization, Training, Material, Leadership and Education, Personnel, and Facilities (DOTMLPF) implication of the Army Battle Command Systems (ABCS) which are the principal digital Command and Control (C2) system for battlefield commanders from battalion to corps. The ABCS consists of the Global Command and Control System Army (GCCS-A), Advanced Field Artillery Tactical Data System (AFATDS), All Source Analysis System (ASAS), Battle Command Sustainment Support System (BCS3), Army Missile Defense Warning System (AMDWS), Maneuver Control System (MCS), Force XXI Battle Command Brigade and Below (FBCB2), and Tactical Airspace Information System (TAIS). This program enables commanders, battle staff, and Soldiers to exploit new digital command and control capabilities on the battlefield. The institutional Battle Command Training and Distributed System (BCT&amp;DS) is integral to the MCTS while supporting the operational forces Active Army, National Guard, and Army Reserve digital training requirements in real time within a networked Army Battle Command (ABC) learning environment. It is designed, developed, and engineered to support</p>		



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<b>Exhibit P-40, Budget Line Item Justification:</b> PB 2021 Army		<b>Date:</b> February 2020
<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 2035A: Other Procurement, Army / BA 02: Communications and Electronics Equipment / BSA 92: Elect Equip - Automation		<b>P-1 Line Item Number / Title:</b> 3002BD3000 / Automated Data Processing Equip
<b>ID Code</b> (A=Service Ready, B=Not Service Ready):	<b>Program Elements for Code B Items:</b> N/A	<b>Other Related Program Elements:</b> 0605013A
<b>Line Item MDAP/MAIS Code:</b> N/A		
<p>institutional operational adaptation. It enables the TRADOC institutional training domain to accomplish 24 hours a day/7 days a week training in support of the Army Campaign Plan. This infrastructure can demonstrate and exercise digital battle command and staff functions, integrate live, virtual, constructive multi-media educational assets, and conduct robust individual and collective training events exercises. The BCT&amp;DS is a subset of the institutional Mission Command Art &amp; Sciences Program (MCASP) and supports the Army Mission Command Training Strategy. This BCT&amp;DS capability is provided at specified TRADOC schools. This program was phased out in FY21.</p> <p>ARMY TRAINING INFORMATION ARCHITECTURE (ATIA): The ATIA infrastructure provides the operational environment supporting the Army's learning management systems, the Central Army Registry (CAR), Training Development Capability (TDC), and system interfaces to the Army Training Requirements and Resources System (ATRRS). These systems are the official repository of Army training products and services in accordance with Army Regulation 25-30 and TRADOC Regulation 350-70. The ATIA facilitates mission information infrastructure critical to all Army training development and management. It is used by over 480,000 Active, Guard, and Reserve Soldiers and trainers in residence and is available to deployed Soldiers via distance learning.</p> <p>ACQUISITION, LOGISTICS, AND TECHNOLOGY ENTERPRISE SYSTEMS AND SERVICES (ALTESS): The ALTESS is an accredited Army Data Center providing full life-cycle information technology solutions, support and services to the Acquisition community, the Army and Department of Defense (DoD). ALTESS host over 63 critical enterprise information systems in an all hazards secure environment at the lowest possible cost serving millions of users worldwide. These systems include direct war fighter support, Congressional budget reporting, and major Army IT systems that serve the entire Army population. Funding provides for the minimal infrastructure and services capabilities as mandated in the DOD Core Data Center Architecture and Cybersecurity requirements. These capabilities are the infrastructure costs, mandated security (physical and IT), foundation network, storage, business processes and FTEs to meet the attributes mandated by DoD to deliver standardized capabilities to host and service IT systems in an efficient manner. This program transitioned to the sustainment phase beginning in FY21.</p> <p>ARMY TRAINING INFORMATION SYSTEM (ATIS): The ATIS will provide a common operational picture (COP) of the training environment through integrated, interoperable training development, management, scheduling, and delivery capabilities. Existing training information systems do not provide Commanders, leaders, Soldiers, and civilians a centralized COP of the training environment that enables persistent, consistent access to the Training and Education information and products necessary to support readiness to meet emerging threats. Without ATIS, Army organizations will continue to develop and maintain a multitude of training information systems that are not part of an enterprise, thus inhibiting visualization, understanding, and informed decision making. This program is linked to RDTE Program Element 0605013A, Information Technology Development, Project Number FM8, Project Title Information Technology for Training Systems; this program has no FY21 procurement requirements.</p> <p>ACADEMIC NETWORK VIRTUALIZATION (ANV): The Defense Language Institute Foreign Language Center (DLIFLC) academic network provides high-speed access to authentic language materials accelerating language acquisition for DoD linguists. The network provides virtualized desktop capability on mobile computing platforms to improve efficiency and security. The ANV leverages mobile computing technology to improve time on task for the DLIFLC student population. The DLIFLC has directly correlated both the speed of language acquisition and proficiency levels reached by students to the amount of exposure students have to authentic language content. The intent is to recapitalize the investment to ensure the continued functionality of the current mobile technology fleet by delivering virtual desktop capability through the student mobile devices. This will be accomplished through the replacement of end-of-life equipment to provide better virtual learning opportunities to the total force through immersive training events delivered via the web and mobile applications as well as language training detachments.</p> <p>PERSISTENT TRAINING ENVIRONMENT (PTE) CYBER RANGE: The United States Army Cyber School Virtual Training Area (CSVTA) provides global, always-on access for members of the Cyber Mission Force to hone individual skills in their own time on their own terms. It provides a safe, sandboxed environment that prevents inadvertent damage to the Department of Defense Information Network as a result of training and experimentation. The CSVTA also supports official courseware and provides for rapid changes and near-limitless scalability at a dramatically lower cost than traditional contracted Cyber Ranges. The CSVTA was developed entirely by uniformed personnel using free and open-source commercial tools and commodity hardware, which prevents vendor lock-in and maximizes the utility of increasingly-limited resources. Instead of requiring a large team of IT personnel to manage, update, and maintain, the CSVTA can be run by a very small, competent team and be grown without practical limit to support new requirements of the Cyber Mission Force at a cost comparable to large public cloud providers. This program has no FY21 procurement requirements.</p> <p>U.S. AFRICA COMMAND (AFRICOM) AUTOMATED DATA PROCESSING EQUIPMENT (ADPE): The AFRICOM ADPE hosted at Del Din, Italy, Grafenwoehr, Germany, and Kaiserslautern Germany, provides virtual desktop infrastructure, common operating environment (COE), and application hosting services for AFRICOM. It supports users at Kelly Barracks and Grafenwoehr, Germany, Del Din, Italy, Djibouti, Africa, and Molesworth, United Kingdom, with both classified and unclassified computing capabilities. The COE provides unified communications servers integrating voice, teleconferencing, video teleconferencing, collaboration, and messaging services to enhance command and control missions throughout the area of operation. It provides virtual desktop solutions and centralized management and control</p>		

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<b>Exhibit P-40, Budget Line Item Justification:</b> PB 2021 Army		<b>Date:</b> February 2020
<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 2035A: Other Procurement, Army / BA 02: Communications and Electronics Equipment / BSA 92: Elect Equip - Automation		<b>P-1 Line Item Number / Title:</b> 3002BD3000 / Automated Data Processing Equip
<b>ID Code</b> (A=Service Ready, B=Not Service Ready):	<b>Program Elements for Code B Items:</b> N/A	<b>Other Related Program Elements:</b> 0605013A
<b>Line Item MDAP/MAIS Code:</b> N/A		
<p>of physical and virtual servers to enhance computing capabilities and reduce the physical footprint of the hardware infrastructure that supports active directory, file, and print services; web servers processing; storage and switching; data replication for Continuity of Operations Planning (COOP); and data recovery.</p> <p>U.S. SOUTHERN COMMAND (SOUTHCOM) AUTOMATED DATA PROCESSING EQUIPMENT (ADPE): The SOUTHCOM ADPE provides the end user computing services and application environments for SOUTHCOM HQ and users at the United States Army Garrison-Miami (USAG-M) in Doral, Florida, two enduring Joint Task Forces (JTFs) at Guantanamo Bay, Cuba (JTF-GTMO) and Soto Cano AB, Honduras (JTF-Bravo), and 27 Security Cooperation Offices (SCO) collocated with U.S. Embassies throughout the SOUTHCOM Area of Responsibility (AOR). SOUTHCOM ADPE provides both classified and unclassified computing capabilities as well as the hardware to meet Joint Information Environment (JIE) and Data Center Consolidation mandates. These efforts will reduce costs and create efficiencies by streamlining end user equipment with increased mobility and access to virtual desktops anytime, anywhere, and on any device. Increased cyber protection capabilities include scan and patch tools to identify security vulnerabilities, investigate security incidents, and take corrective actions. Other capabilities include unified communications servers to integrate voice, teleconferencing, video teleconferencing, collaboration, and messaging services to enhance mission success throughout the SOUTHCOM AOR. Centralized management and control of physical and virtual servers will reduce costs and the physical footprint of the hardware infrastructure.</p> <p>U.S. EUROPEAN COMMAND (EUCOM) JOINT OPERATIONS CENTER (JOC): The EUCOM JOC modernization at Patch Barracks will improve operational network capabilities and system availability/reliability. It will integrate emerging technologies to optimize COCOM coordination, collaboration and interoperability with adjacent and subordinate commands. This effort will implement multi-enclave client back-end infrastructure, integrate additional coalition feeds into the JOC, upgrade back-end processing capabilities, and share C2 capabilities with alternate JOC locations and data resiliency sites in the United Kingdom and in Italy, to support contingency and crisis operations.</p> <p>ARMY KNOWLEDGE ONLINE (AKO): As the Army's Enterprise Portal and Army Intranet service provider, AKO is the centerpiece of the Army's Knowledge Management (AKM) strategy and supports the Army Campaign Plan. AKO Forward, a subset of AKO services, is designed to reduce response times for Soldiers on the edge of the Army's network (South West Asia, Europe and Pacific). AKO and AKO-Secret provide enterprise services (Single Sign-On (SSO) user authentication, global web-based collaboration, community pages, shared files and storage) for Army military, civilian, and retiree populations. This program transitioned to the sustainment phase beginning in FY21.</p> <p>ARMY OFFICE OF BUSINESS TRANSFORMATION (OBT) STRATEGIC MANAGEMENT SYSTEM (SMS): As the Army's System of Record for Performance Management, SMS, is a software tool that supports the Army Enterprise's strategy and campaign planning, measurement, and execution tracking mission. SMS reduces Army organization workload related to measuring, tracking, and reporting metric and strategy performance by automating data input and generating automated Common Operating Pictures of data aligned by a unit's Unit Identification Code (UIC). SMS provides Army commanders with a common operating picture for tracking unit, Command, and Enterprise performance and for generating up-to-date reports and dashboards for synchronization. SMS is the codified system of record for tracking performance for the Office of the Surgeon General, the Army's Sexual Harassment/Assault Response &amp; Prevention program, the Army's Ready &amp; Resilient program, and supports the Army Campaign Plan. SMS has system interfaces in place to automate data entry from numerous Army authoritative data sources. The intent of this effort is to advance the data analytics capability of SMS to enhance data reporting and visualization for the more than 30,000 Command level users of SMS.</p> <p>U.S. ARMY EUROPE (USAREUR) AUTOMATED DATA PROCESSING EQUIPMENT (ADPE): The USAREUR ADPE provides funding to perform a critical collaboration capabilities refresh and provides critical coalition infrastructure. Mission critical IT components in USAREUR's Headquarters now present increased cybersecurity risks as many devices are no longer manufactured or supported. USAREUR will update infrastructure to remediate open security vulnerabilities, which will allow USAREUR's senior leadership to continue to collaborate with DoD, DA, and NATO leaders for operational missions and contingency exercises.</p> <p>PERSONNEL AUTOMATION SYSTEMS (BE4164): PERSONNEL ENTERPRISE SUPPORT-AUTOMATION (PES-A): The PES-A is an Information Technology (IT) Enterprise infrastructure acquisition program that provides integrated support to the Army Human Resources (HR) community and the Army Accessioning IT Mission which encompasses the automation support for the Army personnel systems, recruiting, accessioning, and Reserve Officers' Training Corps commissioning missions that satisfy Army manning and force strength requirements supporting the Warfighter. The PES-A is critical to the execution of the day-to-day operations for the Active Army and its components in terms of strength accounting, personnel movement, assignment actions, career management, training, recruiting, reenlistment, and mobilization by providing the hardware, network, and connectivity capabilities that serve as the technical foundation for core Army HR systems, applications, and services supporting the Warfighter. These systems include the Enlisted, Officer, and General Officer Selection Boards, the Soldier's Management System (SMS), the Wounded Warrior System, and the Defense Casualty Information Processing System (DCIPS). The PES-A supports the readiness and well-</p>		

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<b>Exhibit P-40, Budget Line Item Justification:</b> PB 2021 Army		<b>Date:</b> February 2020
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<b>ID Code</b> (A=Service Ready, B=Not Service Ready):	<b>Program Elements for Code B Items:</b> N/A	<b>Other Related Program Elements:</b> 0605013A
<b>Line Item MDAP/MAIS Code:</b> N/A		
<p>being of Army personnel enabling efficient and effective management of Soldiers world-wide. This integrated infrastructure serves as the backbone for applications to ensure that crucial data and information is available at all times to Soldiers, Army Leaders, the Department of Defense, and ultimately, Congress. The Army Accessioning IT Mission serves as an enabler for Total Army recruiting [Active, Reserve, and Army National Guard (ARNG)], in the public, educational, and commercial sectors, where the accessioning force and future force reside while exchanging data with Army and Department of Defense (DoD) automated personnel systems. The Army Accessioning IT Mission provides essential automation capabilities to field recruiters, special mission recruiters, and guidance counselors for the Regular Army, Reserves, and ARNG. It reduces administrative tasks while providing essential data on applicants and newly enlisted Soldiers to leadership. The Army Accessioning IT Mission facilitates responses to changes from Office of the Secretary of Defense and Department of the Army concerning accessioning business processes. Operationally it captures applicant information and supports electronic projection of that data and supporting documents. It also provides Continuity of Operations and disaster recovery for Primary Mission Essential Function applications and databases. It maintains historical production data, produces management reports, supports the presentation of Army opportunities, and is the sole information source for delivering leads to recruiters. The Army Accessioning IT Mission also provides the overarching support structure for cyber recruiting and applicant self-processing.</p> <p>UNITED STATES MILITARY ENTRANCE PROCESSING COMMAND (USMEPCOM) INTEGRATED RESOURCE SYSTEM (USMIRS): The USMIRS provides the automation and communications capability for USMEPCOM to meet its peacetime, mobilization and wartime military manpower accession mission for the Department of Defense (DoD). The USMIRS is used at 65 Military Entrance Processing Stations (MEPS) and approximately 365 Military Entrance Test (MET) sites throughout the US and its territories. The USMIRS is the only official DoD joint accession resource system that processes applicants for enlistment into all Services. It collects, stores, edits, processes, and reports applicant and enlistment data on every US Military applicant to determine their aptitude, medical, and past conduct qualifications for service. The USMIRS interfaces with the Social Security Administration, the United States Citizen and Immigration Service, the Federal Bureau of Investigation through the Office of Personnel Management, commercial and DoD drug laboratories, the recruiting services, the Defense Manpower Data Center, and many other DoD systems. The USMIRS processes approximately 926.8 thousand individual records annually through its Data Services. This program is linked to RDTE Program Element 0605013A, Information Technology Development, Project Number T04, Project Title USMEPCOM Transformation - IT Modernization.</p> <p>SOLDIER FOR LIFE-TRANSITION ASSISTANCE PROGRAM XXI (SFL-TAP XXI): The SFL-TAP XXI application provides an interactive, multimedia approach to pre-separation counseling and job assistance training. This application uses full motion video, graphics, and sound to train clients and schedule classroom-type instruction. It integrates a complete range of transition services and benefits for Soldiers, Department of Army civilian employees, and their family members as they transition from the military. The SFL-TAP XXI is a web-based, three-tiered application with a centralized database for all transition sites. The user interface is browser-based, the application is based on a storefront intranet model to provide access from within transition centers. There is no application processing on the desktops located at transition centers. The SFL-TAP XXI application suite consists of the following subsystems: Transition Assistance Program-Support (TAP-Support), Transition Assistance Program-Online (TAP-Online) and TAP Virtual (Immersive Terf). The infrastructure modernization will provide system stability, support expansion requirements, and ensure reliable customer support. This program is linked to RDTE Program Element 0605013A, Information Technology Development, Project Number FM7, Project Title Human Resources Information Technology.</p> <p>ACCESSIONS INFORMATION ENVIRONMENT (AIE): The AIE is a fully integrated enterprise level system that aligns authorities, responsibilities, and resources for Total Army accessions. It provides for customer relationship management, data analytics, mapping, visualization, mobility, and electronic signature as well as cloud infrastructure and hosting for three environments to implement Software as a Service (SaaS). AIE supports core accessions capabilities, including lead generation and management, prospecting, interviewing, processing, intelligence, marketing, training, leader development, and pay incentives. This system ensures that every Army recruiter has the information needed to obtain leads for potential recruits, engender commitments, and engage communities (geographic regions and Universities) for direct contact with young Americans. Senior Army Leadership accelerated AIE due to degradation of performance and unreliability of 11 legacy systems and 33 modules of the current Army Recruiting Information Support System (ARISS). AIE deployment uses an agile method versus the standard waterfall method. As such, the Army is deploying AIE operationally in five iterative waves over three years, increasing the number of users and the capabilities every six months. The first set of operational capabilities is scheduled to deploy in May 2020 to an active and ARNG battalion/state and will provide the ability to enlist and access a Soldier in the Regular Army, Army Reserve and/or the Army National Guard. Full operational capability across the enterprise will be completed in May 2022 and the legacy ARISS will sunset in FY23. The program is linked to RDTE Program Element 0605013A, Project Number FL9, Project Title Army Accessioning IT Development.</p> <p>PERSONNEL AUTOMATION SYSTEMS - WEST POINT (BE4175): US MILITARY ACADEMY (USMA) INFORMATION TECHNOLOGY (IT): The USMA is an accredited institution of higher learning graduating approximately 1,100 Second Lieutenants to support the Army each year. The USMA IT sustains the mission of the Academy as it maintains pace with Army transformation, remains a competitive Tier 1 university, and supports 4,400 Cadets in accordance with Title 10 USC 4342. Many non-DoD affiliations affect USMA IT mission requirements, specifically, the Accreditation Board of Engineering and Technology (ABET), Middle States Accreditation Board, and Computer Science Accreditation Board (CSAB). These accreditation efforts look at future plans for IT. To maintain its accreditation standards and to instruct and prepare future Army leaders to operate in the sophisticated high-</p>		

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

<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 2035A: Other Procurement, Army / BA 02: Communications and Electronics Equipment / BSA 92: Elect Equip - Automation	<b>P-1 Line Item Number / Title:</b> 3002BD3000 / Automated Data Processing Equip
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<b>ID Code</b> (A=Service Ready, B=Not Service Ready):	<b>Program Elements for Code B Items:</b> N/A	<b>Other Related Program Elements:</b> 0605013A
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**Line Item MDAP/MAIS Code:** N/A

tech warfare of Joint and Army Visions for 2020 and beyond, USMA must employ technology unique to the cadet education and development mission in spaces where cadets, staff, and faculty congregate and collaborate to include cadet barracks, administrative buildings, academic classrooms, and laboratories. The USMA IT is essential to every aspect of education, training, and Command and Control (C2) of the USMA and West Point Garrison. The USMA IT procurement directly supports the Army's core competency to train and equip Soldiers and to grow and develop our future leaders.

	<b>Secondary Distribution</b>	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025
Army	Quantity	-	-	-	-	-	-	-	-	-
	Total Obligation Authority	219.812	170.915	140.619	16.552	157.171	158.329	132.037	86.820	90.280
<b>Total: Secondary Distribution</b>	<b>Quantity</b>	-	-	-	-	-	-	-	-	-
	<b>Total Obligation Authority</b>	<b>219.812</b>	<b>170.915</b>	<b>140.619</b>	<b>16.552</b>	<b>157.171</b>	<b>158.329</b>	<b>132.037</b>	<b>86.820</b>	<b>90.280</b>

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

**Appropriation / Budget Activity / Budget Sub Activity:**  
2035A: Other Procurement, Army / BA 02: Communications and Electronics  
Equipment / BSA 92: Elect Equip - Automation

**P-1 Line Item Number / Title:**  
3002BD3000 / Automated Data Processing Equip

**ID Code** (A=Service Ready, B=Not Service Ready): **Program Elements for Code B Items:** N/A **Other Related Program Elements:** 0605013A

**Line Item MDAP/MAIS Code:** N/A

Exhibits Schedule					Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total
Exhibit Type	Title*	Subexhibits	ID CD	MDAP/MAIS Code	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)
P-5	BD3956 / OPTICAL DIGITAL EQUIP	P-5a	A		- / 102.954	- / 1.914	- / 2.431	- / 1.293	- / -	- / 1.293
P-5	BD7000 / STRATEGIC LOGISTICS PROGRAM (SLP)	P-5a			- / 385.501	- / -	- / 0.772	- / -	- / -	- / -
P-5	BE4161 / HQ MANAGEMENT INFORMATION SYSTEMS	P-5a			- / 946.622	- / 51.984	- / 25.219	- / 16.086	- / 2.700	- / 18.786
P-5	BE4162 / MACOM AUTOMATION SYSTEMS	P-5a			- / 1,425.824	- / 131.135	- / 80.861	- / 44.429	- / 13.852	- / 58.281
P-5	BE4164 / PERSONNEL AUTOMATION SYSTEMS	P-5a			- / 860.364	- / 24.385	- / 58.382	- / 75.274	- / -	- / 75.274
P-40a	BE4175 / Personnel Automation Systems - West Point				- / 9.540	- / 10.394	- / 3.250	- / 3.537	- / -	- / 3.537
<b>P-40</b>	<b>Total Gross/Weapon System Cost</b>				<b>- / 3,730.805</b>	<b>- / 219.812</b>	<b>- / 170.915</b>	<b>- / 140.619</b>	<b>- / 16.552</b>	<b>- / 157.171</b>

\*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:**  
OPTICAL DIGITAL EQUIP (BD3956):  
FY2021 ARIMS has no procurement requirements. This program transitioned to the sustainment phase beginning in FY2021.

FY2021 Base procurement dollars in the amount of \$1.293 million support initial iPERMS Enterprise Application Migration and life cycle replacement of hardware to include Network Attached Storage, optical storage libraries, servers, system components, and related peripherals. Storage requirements are determined by the corresponding increase of Army personnel records and the DoD/NARA requirement to maintain all personnel records for 62 years after separation of the individual service member. These procurements will enhance system stability, support expansion requirements, and ensure reliable customer support at all levels.

STRATEGIC LOGISTICS PROGRAM (SLP) (BD7000):  
FY2021 LTA has no procurement requirements. This program was phased out in beginning in FY2021.

HQ MANAGEMENT INFORMATION SYSTEMS (BE4161):  
FY2021 Base procurement dollars in the amount of \$1.049 million support HQDA ADPE requirements for life-cycle replacement of aged Video Conferencing (VTC) systems with high definition monitors, cameras, integrated microphones, and Internet Protocol-based connectivity. Specifically, these systems support the U.S. Army Combat Readiness Center (USACRC) safety program and are required to meet American National Standards Institute (ANSI) and the International Association for Continuing Education and Training (IACET) accreditation standards.

FY2021 Base procurement dollars in the amount of \$8.192 million support global SCC requirements for systems engineering and installation of Command, Control, Communication, Computers (C4) infrastructure, hardware (hubs, servers, protected cable distribution systems, secure video teleconferencing systems, integration and monitoring equipment), software, and program management costs associated at two (2) SCCs located at U.S. Southern Command and HQDA Army Operations Center..

FY2021 Base procurement dollars in the amount of \$6.845 million support USFK HQ C4IT network requirements including Lifecycle Replacement of critical network support equipment (servers, switches, routers, etc.) for Theater Mission Command networks supporting the Republic of Korea (ROK)-U.S. alliance.

FY2021 OCO procurement dollars in the amount of \$2.216 million support GTMO ELC Expansion with replacement of network switches and small form-factor pluggable (SFP) modules. The current switches are beyond end of life, degrade communications, and place the network at risk of failure.

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<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 2035A: Other Procurement, Army / BA 02: Communications and Electronics Equipment / BSA 92: Elect Equip - Automation		<b>P-1 Line Item Number / Title:</b> 3002BD3000 / Automated Data Processing Equip
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<b>Line Item MDAP/MAIS Code:</b> N/A		
<p>FY2021 OCO procurement dollars in the amount of \$0.484 million support JTF-MIGOPS GTMO LCR of telephone switches and data network equipment. This equipment is required to ensure ARSOUTH security and life support mission requirements are fulfilled in support of the migrant population and JTF-MIGOPS Forces.</p> <p>MACOM AUTOMATION SYSTEMS (BE4162): FY2021 Base procurement dollars in the amount of \$12.731 million support ACI to procure hardware and software for two (2) Army Enterprise Data Centers (AEDCs) located at Camp Arifjan, Kuwait and Fort Carson, Colorado; hardware and software for the classified network and the Enterprise Protected-Domain Name System (EP-DNS); and Base Management System (BMS) licenses for 53 sites currently migrated to the Joint Regional Security Stack architecture.</p> <p>FY2021 Base procurement dollars in the amount of \$5.805 million support the BLCSE with critical replacement of wide area networking infrastructure equipment, which include servers, switches, and routers. It also provides for life cycle replacement of critical technical infrastructure IT equipment such as Scientific Workstations specific to the BLCSE network.</p> <p>FY2021 TIABCSTB has no procurement requirements. This program was phased out beginning in FY2021.</p> <p>FY2021 Base procurement dollars in the amount of \$0.808 million support ATIA infrastructure to include virtual storage area network storage, virtual servers, and associated software for life cycle support of the existing infrastructure.</p> <p>FY2021 ALTESS has no procurement requirements. This program transitioned to the sustainment phase beginning in FY2021.</p> <p>FY2021 ATIS has no procurement requirements.</p> <p>FY2021 Base procurement dollars in the amount of \$1.205 million support ANV with network equipment including servers, routers, switches, wireless access points, firewalls, Storage Area Network (SAN), and fiber optic cable.</p> <p>FY2021 PTE CYBER Range has no procurement requirements.</p> <p>FY2021 Base procurement dollars in the amount of \$4.566 million support AFRICOM ADPE network devices, storage, computer hardware, and power supplies. It also procures Ethernet switches, servers (database, application, and/or web), virtual desktop solutions and computing capabilities.</p> <p>FY2021 Base procurement dollars in the amount of \$6.329 million support SOUTHCOM ADPE procurements for VDI network devices, computer hardware, audio/visual switches, displays, and Common User Infrastructure (CUI) storage to support directory, file, and print services; web server processing; storage and switching; data replication for Continuity of Operations Planning (COOP); and data recovery. Funds also support integration services (system assembly, installation, and checkout on site), training (services), and Risk Management Framework certification.</p> <p>FY2021 Base procurement dollars in the amount of \$12.726 million support EUCOM JOC and integrated alternate JOC sites, including data replication and resiliency locations in the United Kingdom and in Italy, with virtual technologies, multi-enclave clients, firewalls, video teleconferencing equipment, local networking, end user devices and storage capacity supporting multiple coalition and classified enclaves.</p> <p>FY2021 AKO has no procurement requirements. This program transitioned to the sustainment phase beginning in FY2021.</p> <p>FY2021 Base procurement dollars in the amount of \$0.259 million support the OBT SMS with software enhancements to its data analytics reporting.</p>		

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<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 2035A: Other Procurement, Army / BA 02: Communications and Electronics Equipment / BSA 92: Elect Equip - Automation		<b>P-1 Line Item Number / Title:</b> 3002BD3000 / Automated Data Processing Equip
<b>ID Code</b> (A=Service Ready, B=Not Service Ready):	<b>Program Elements for Code B Items:</b> N/A	<b>Other Related Program Elements:</b> 0605013A
<b>Line Item MDAP/MAIS Code:</b> N/A		
<p>FY2021 OCO EDI procurement dollars in the amount of \$13,852 million support USAREUR with NIPR, SIPR, and Mission Partner Environment (MPE) infrastructure hardware which includes: Video Teleconference (VTC) equipment, audio/video components, VDI (Virtual Desktop Infrastructure), servers and software, bridges and gateways for intra-and inter-theater VTCs, scheduling system, and corresponding licensing.</p> <p>PERSONNEL AUTOMATION SYSTEMS (BE4164): FY2021 Base procurement dollars in the amount of \$28.893 million support PES-A and AA-IAA Enterprise application migration, integration into a single architecture, and lifecycle replacement of the Human Resources Center of Excellence (HRCoE) Datacenter IT infrastructure at Ft. Knox, to include: mainframe, web and blade servers, network, backup/recovery, storage, Storage Area Network (SAN), routers, switches, load balance appliances telephony, disaster recovery equipment, Information Assurance compliance, and data center/architecture consolidation requirements.</p> <p>FY2021 Base procurement dollars in the amount of \$6.388 million support the infrastructure for USMIRS, the Defense Accession Network (DAN) and general operations. This includes user equipment to support Military Health System (MHS) - GENESIS implementation, as well as lifecycle replacement items such as servers, network, backup/recovery, storage, telephony equipment, disaster recovery, and other system components to maintain security and operational support for USMIRS and administrative systems.</p> <p>FY2021 Base procurement dollars in the amount of \$0.643 million support SFL-TAP XXI with additional infrastructure, to include servers and storage devices, for the Commanders Reporting Requirement and the Terf Immersive Migration into the HRC Data Center. The additional servers are required to increase storage capabilities and improve system response times.</p> <p>FY2021 Base procurement dollars in the amount of \$39.350 million support AIE with commercial-off-the-shelf (COTS) software licenses for 20 applications for infrastructure, hosting and end users. It also supports delivery (labor and travel) of the training curriculum for deployment of the AIE prototype to 22,077 end users (Wave 3 and Wave 4) at 125 locations.</p> <p>PERSONNEL AUTOMATION SYSTEMS - WEST POINT (BE4175) FY2021 Base procurement dollars in the amount of \$3.537 million support USMA IT academic audio/visual equipment and computing capabilities for academic facilities and computer lab infrastructure (includes digital signage, classroom scheduling platform and collaborative classroom integration); Modernization to DA standards of the Academy Management System (Enterprise Resource Planning (ERP) for grades and class scheduling); Academy Management System (AMS) Modernization; Distributed Antenna System (DAS) Academic Lifecycle Arvin; multi-functional device and copier lifecycle.</p>		

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<b>Exhibit P-5, Cost Analysis: PB 2021 Army</b>													<b>Date:</b> February 2020							
<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 2035A / 02 / 92						<b>P-1 Line Item Number / Title:</b> 3002BD3000 / Automated Data Processing Equip						<b>Item Number / Title [DODIC]:</b> BD3956 / OPTICAL DIGITAL EQUIP								
<b>ID Code</b> (A=Service Ready, B=Not Service Ready) : A									<b>MDAP/MAIS Code:</b>											
<b>Resource Summary</b>				<b>Prior Years</b>		<b>FY 2019</b>			<b>FY 2020</b>			<b>FY 2021 Base</b>			<b>FY 2021 OCO</b>		<b>FY 2021 Total</b>			
Procurement Quantity (Units in Each)				-		-			-			-			-		-			
Gross/Weapon System Cost (\$ in Millions)				102.954		1.914			2.431			1.293			-		1.293			
Less PY Advance Procurement (\$ in Millions)				-		-			-			-			-		-			
Net Procurement (P-1) (\$ in Millions)				102.954		1.914			2.431			1.293			-		1.293			
Plus CY Advance Procurement (\$ in Millions)				-		-			-			-			-		-			
<b>Total Obligation Authority (\$ in Millions)</b>				<b>102.954</b>		<b>1.914</b>			<b>2.431</b>			<b>1.293</b>			<b>-</b>		<b>1.293</b>			
<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.																				
<b>Cost Elements</b>	<b>Prior Years</b>			<b>FY 2019</b>			<b>FY 2020</b>			<b>FY 2021 Base</b>			<b>FY 2021 OCO</b>			<b>FY 2021 Total</b>				
	<b>Unit Cost (\$ K)</b>	<b>Qty (Each)</b>	<b>Total Cost (\$ M)</b>	<b>Unit Cost (\$ K)</b>	<b>Qty (Each)</b>	<b>Total Cost (\$ M)</b>	<b>Unit Cost (\$ K)</b>	<b>Qty (Each)</b>	<b>Total Cost (\$ M)</b>	<b>Unit Cost (\$ K)</b>	<b>Qty (Each)</b>	<b>Total Cost (\$ M)</b>	<b>Unit Cost (\$ K)</b>	<b>Qty (Each)</b>	<b>Total Cost (\$ M)</b>	<b>Unit Cost (\$ K)</b>	<b>Qty (Each)</b>	<b>Total Cost (\$ M)</b>		
<b>Hardware Cost</b>																				
<b>Recurring Cost</b>																				
(ARIMS) Hardware <sup>(†)</sup>	4,380.333	3	13.141	849.000	1	0.849	1,295.000	1	1.295	-	-	-	-	-	-	-	-	-		
(iPERMS) Hardware <sup>(†)</sup>	-	-	-	-	-	-	1,136.000	1	1.136	1,293.000	1	1.293	-	-	-	1,293.000	1	1.293		
<i>Subtotal: Recurring Cost</i>	-	-	13.141	-	-	0.849	-	-	2.431	-	-	1.293	-	-	-	-	-	1.293		
<b>Non Recurring Cost</b>																				
(iPERMS) Hardware <sup>(†)</sup>	29,698.667	3	89.096	1,065.000	1	1.065	-	-	-	-	-	-	-	-	-	-	-	-		
<i>Subtotal: Non Recurring Cost</i>	-	-	89.096	-	-	1.065	-	-	-	-	-	-	-	-	-	-	-	-		
<b>Subtotal: Hardware Cost</b>	-	-	<b>102.237</b>	-	-	<b>1.914</b>	-	-	<b>2.431</b>	-	-	<b>1.293</b>	-	-	-	-	-	<b>1.293</b>		
<b>Software Cost</b>																				
<b>Non Recurring Cost</b>																				
(iPERMS) Software	717.000	1	0.716	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
<i>Subtotal: Non Recurring Cost</i>	-	-	0.716	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
<b>Subtotal: Software Cost</b>	-	-	<b>0.716</b>	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
<b>Gross/Weapon System Cost</b>	-	-	<b>102.954</b>	-	-	<b>1.914</b>	-	-	<b>2.431</b>	-	-	<b>1.293</b>	-	-	-	-	-	<b>1.293</b>		
<b>Secondary Distribution</b>				<b>FY 2019</b>					<b>FY 2020</b>					<b>FY 2021 Base</b>			<b>FY 2021 OCO</b>		<b>FY 2021 Total</b>	
Army	Quantity			-					-					-			-		-	



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**Exhibit P-5, Cost Analysis: PB 2021 Army** **Date:** February 2020

<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 2035A / 02 / 92	<b>P-1 Line Item Number / Title:</b> 3002BD3000 / Automated Data Processing Equip	<b>Item Number / Title [DODIC]:</b> BD3956 / OPTICAL DIGITAL EQUIP
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<b>ID Code</b> (A=Service Ready, B=Not Service Ready) : A	<b>MDAP/MAIS Code:</b>
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	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total
<b>Secondary Distribution</b>					
Total Obligation Authority	1.914	2.431	1.293	-	1.293
<b>Total:</b>					
<b>Secondary Distribution</b>					
Quantity	-	-	-	-	-
Total Obligation Authority	1.914	2.431	1.293	-	1.293

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

**UNCLASSIFIED**

**Exhibit P-5a, Procurement History and Planning:** PB 2021 Army **Date:** February 2020

<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 2035A / 02 / 92	<b>P-1 Line Item Number / Title:</b> 3002BD3000 / Automated Data Processing Equip	<b>Item Number / Title [DODIC]:</b> BD3956 / OPTICAL DIGITAL EQUIP
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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
(ARIMS) Hardware		2019	Hewlett Packard Enterprise Company / Reston, VA	C / FFP	ACC-NJ, Picatinny, NJ	Sep 2019	Oct 2019	1	849.000	Y		
(ARIMS) Hardware		2020	TBS / TBS	C / FFP	ACC-NJ, Picatinny, NJ	May 2020	Aug 2020	1	1,295.000	Y		
(iPERMS) Hardware		2020	Digital Management LLC / Bethesda, MD	C / FFP	ACC-RI, Rock Island, IL	Nov 2019	Dec 2019	0	509.000	Y		
(iPERMS) Hardware		2020	TBS / TBS	C / FFP	ACC-RI, Rock Island, IL	Feb 2020	Apr 2020	1	627.000	Y		
(iPERMS) Hardware		2021	TBS / TBS	C / FFP	ACC-RI, Rock Island, IL	Apr 2021	Jul 2021	1	1,293.000	N		
(iPERMS) Hardware		2019	Digital Management LLC / Bethesda, MD	C / FFP	ACC-RI, Rock Island, IL	Aug 2019	Sep 2019	1	532.000	Y		
(iPERMS) Hardware		2019	UNICOM Government, Inc. / Chantilly, VA	C / FFP	ACC-RI, Rock Island, IL	Feb 2019	Apr 2019	0	533.000	Y		

**Remarks:**

All IT procurements consist of COTS/GOTS solutions; all quantities and unit costs vary by system configuration and site.  
 Quantities reflected on P-5a include zero (0) to reflect multiple contract awards for the same system.  
 ACC-RI - Army Contracting Command-Rock Island; ACC-NJ - Army Contracting Command-New Jersey

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<b>Exhibit P-5, Cost Analysis: PB 2021 Army</b>											<b>Date:</b> February 2020										
<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 2035A / 02 / 92					<b>P-1 Line Item Number / Title:</b> 3002BD3000 / Automated Data Processing Equip						<b>Item Number / Title [DODIC]:</b> BD7000 / STRATEGIC LOGISTICS PROGRAM (SLP)										
<b>ID Code</b> (A=Service Ready, B=Not Service Ready) :											<b>MDAP/MAIS Code:</b>										
<b>Resource Summary</b>				<b>Prior Years</b>			<b>FY 2019</b>			<b>FY 2020</b>			<b>FY 2021 Base</b>			<b>FY 2021 OCO</b>			<b>FY 2021 Total</b>		
Procurement Quantity (Units in Each)				-			-			-			-			-			-		
Gross/Weapon System Cost (\$ in Millions)				385.501			-			0.772			-			-			-		
Less PY Advance Procurement (\$ in Millions)				-			-			-			-			-			-		
Net Procurement (P-1) (\$ in Millions)				385.501			-			0.772			-			-			-		
Plus CY Advance Procurement (\$ in Millions)				-			-			-			-			-			-		
<b>Total Obligation Authority (\$ in Millions)</b>				<b>385.501</b>			<b>-</b>			<b>0.772</b>			<b>-</b>			<b>-</b>			<b>-</b>		
<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.																					
<b>Cost Elements</b>		<b>Prior Years</b>			<b>FY 2019</b>			<b>FY 2020</b>			<b>FY 2021 Base</b>			<b>FY 2021 OCO</b>			<b>FY 2021 Total</b>				
		<b>Unit Cost (\$ K)</b>	<b>Qty (Each)</b>	<b>Total Cost (\$ M)</b>	<b>Unit Cost (\$ K)</b>	<b>Qty (Each)</b>	<b>Total Cost (\$ M)</b>	<b>Unit Cost (\$ K)</b>	<b>Qty (Each)</b>	<b>Total Cost (\$ M)</b>	<b>Unit Cost (\$ K)</b>	<b>Qty (Each)</b>	<b>Total Cost (\$ M)</b>	<b>Unit Cost (\$ K)</b>	<b>Qty (Each)</b>	<b>Total Cost (\$ M)</b>	<b>Unit Cost (\$ K)</b>	<b>Qty (Each)</b>	<b>Total Cost (\$ M)</b>		
Hardware Cost																					
Non Recurring Cost																					
Logistics Technology Assessment (LTA) HW <sup>(†)</sup>		99,544.667	3	298.634	-	-	-	116.000	1	0.116	-	-	-	-	-	-	-	-			
<i>Subtotal: Non Recurring Cost</i>		-	-	298.634	-	-	-	-	-	0.116	-	-	-	-	-	-	-	-			
<b>Subtotal: Hardware Cost</b>		-	-	<b>298.634</b>	-	-	-	-	-	<b>0.116</b>	-	-	-	-	-	-	-	-			
Software Cost																					
Non Recurring Cost																					
Logistics Technology Assessment (LTA) SW <sup>(†)</sup>		28,955.667	3	86.867	-	-	-	656.000	1	0.656	-	-	-	-	-	-	-	-			
<i>Subtotal: Non Recurring Cost</i>		-	-	86.867	-	-	-	-	-	0.656	-	-	-	-	-	-	-	-			
<b>Subtotal: Software Cost</b>		-	-	<b>86.867</b>	-	-	-	-	-	<b>0.656</b>	-	-	-	-	-	-	-	-			
<b>Gross/Weapon System Cost</b>		-	-	<b>385.501</b>	-	-	-	-	-	<b>0.772</b>	-	-	-	-	-	-	-	-			
<b>Secondary Distribution</b>					<b>FY 2019</b>			<b>FY 2020</b>			<b>FY 2021 Base</b>			<b>FY 2021 OCO</b>			<b>FY 2021 Total</b>				
Army		Quantity			-			-			-			-			-				
		Total Obligation Authority			-			0.772			-			-			-				

**UNCLASSIFIED**

<b>Exhibit P-5, Cost Analysis:</b> PB 2021 Army		<b>Date:</b> February 2020
<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 2035A / 02 / 92	<b>P-1 Line Item Number / Title:</b> 3002BD3000 / Automated Data Processing Equip	<b>Item Number / Title [DODIC]:</b> BD7000 / STRATEGIC LOGISTICS PROGRAM (SLP)

<b>ID Code</b> (A=Service Ready, B=Not Service Ready) :	<b>MDAP/MAIS Code:</b>
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Secondary Distribution		FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total
<b>Total:</b>	<b>Quantity</b>	-	-	-	-	-
<b>Secondary Distribution</b>	<b>Total Obligation Authority</b>	-	0.772	-	-	-

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

**UNCLASSIFIED**

<b>Exhibit P-5a, Procurement History and Planning:</b> PB 2021 Army							<b>Date:</b> February 2020				
<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 2035A / 02 / 92			<b>P-1 Line Item Number / Title:</b> 3002BD3000 / Automated Data Processing Equip				<b>Item Number / Title [DODIC]:</b> BD7000 / STRATEGIC LOGISTICS PROGRAM (SLP)				

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
Logistics Technology Assessment (LTA) HW		2020	TBS / TBS	C / FP	TBS	Jun 2020	Jul 2020	1	116.000	N		
Logistics Technology Assessment (LTA) SW		2020	TBS / TBS	C / FP	TBS	May 2020	Jul 2020	1	656.000	N		

**Remarks:**  
All IT procurements consist of COTS/GOTS solutions; all quantities and unit costs vary by system configuration and site.

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<b>Exhibit P-5, Cost Analysis: PB 2021 Army</b>		<b>Date:</b> February 2020
<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 2035A / 02 / 92	<b>P-1 Line Item Number / Title:</b> 3002BD3000 / Automated Data Processing Equip	<b>Item Number / Title [DODIC]:</b> BE4161 / HQ MANAGEMENT INFORMATION SYSTEMS

<b>ID Code</b> (A=Service Ready, B=Not Service Ready) :				<b>MDAP/MAIS Code:</b>					
<b>Resource Summary</b>				<b>Prior Years</b>	<b>FY 2019</b>	<b>FY 2020</b>	<b>FY 2021 Base</b>	<b>FY 2021 OCO</b>	<b>FY 2021 Total</b>
Procurement Quantity (Units in Each)				-	-	-	-	-	-
Gross/Weapon System Cost (\$ in Millions)				946.622	51.984	25.219	16.086	2.700	18.786
Less PY Advance Procurement (\$ in Millions)				-	-	-	-	-	-
Net Procurement (P-1) (\$ in Millions)				946.622	51.984	25.219	16.086	2.700	18.786
Plus CY Advance Procurement (\$ in Millions)				-	-	-	-	-	-
<b>Total Obligation Authority (\$ in Millions)</b>				<b>946.622</b>	<b>51.984</b>	<b>25.219</b>	<b>16.086</b>	<b>2.700</b>	<b>18.786</b>
<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 2019			FY 2020			FY 2021 Base			FY 2021 OCO			FY 2021 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																		
Non Recurring Cost																		
(HQDA ADPE) Hardware	18,568.000	2	37.136	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
(PITI) Hardware	739,549.000	1	739.549	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
(DCIN/PCIS) Hardware	10,102.000	1	10.102	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
SCC Hardware <sup>(†)</sup>	10,405.667	3	31.217	5,818.000	1	5.818	6,768.000	1	6.768	8,192.000	1	8.192	-	-	-	8,192.000	1	8.192
-Army Operations Center (AOC) (Pentagon)	2,053.000	1	2.053	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
-Joint Special Operations Center (JSOC)	843.000	1	0.843	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
USFK Hardware <sup>(†)</sup>	7,416.000	1	7.416	16,340.000	1	16.340	7,375.000	1	7.375	6,845.000	1	6.845	-	-	-	6,845.000	1	6.845
Domain and VTC Bridge	500.000	1	0.500	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
FORSCOM Hardware <sup>(†)</sup>	-	-	-	2,082.000	1	2.082	-	-	-	-	-	-	-	-	-	-	-	-
(HQDA ADPE) USACRC Hardware <sup>(†)</sup>	1,505.000	1	1.505	1,261.000	1	1.261	1,376.000	1	1.376	1,049.000	1	1.049	-	-	-	1,049.000	1	1.049
(HQDA ADPE) G3 Hardware	729.000	1	0.729	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

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<b>Exhibit P-5, Cost Analysis: PB 2021 Army</b>		<b>Date:</b> February 2020
<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 2035A / 02 / 92		<b>P-1 Line Item Number / Title:</b> 3002BD3000 / Automated Data Processing Equip
<b>ID Code</b> (A=Service Ready, B=Not Service Ready) :		<b>MDAP/MAIS Code:</b>
<b>Item Number / Title [DODIC]:</b> BE4161 / HQ MANAGEMENT INFORMATION SYSTEMS		

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

Cost Elements	Prior Years			FY 2019			FY 2020			FY 2021 Base			FY 2021 OCO			FY 2021 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)
TRADOC CCOE Cyber Initiatives OCO <sup>(t)</sup>	-	-	-	5,140.000	1	5.140	-	-	-	-	-	-	-	-	-	-	-	-
TRADOC Cyber IT Training OCO <sup>(t)</sup>	-	-	-	7,140.000	1	7.140	-	-	-	-	-	-	-	-	-	-	-	-
TRADOC ICOE Intel Initiatives OCO <sup>(t)</sup>	-	-	-	4,514.000	1	4.514	-	-	-	-	-	-	-	-	-	-	-	-
IMCOM Operations Center/VTC Infrastructure <sup>(t)</sup>	-	-	-	3,359.000	1	3.359	-	-	-	-	-	-	-	-	-	-	-	-
G-2 FALCON-I OCO	28,500.000	1	28.500	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
G-2 Dionysus OCO	1,600.000	1	1.600	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
JTFMO Network OCO <sup>(t)</sup>	-	-	-	-	-	-	650.000	1	0.650	-	-	-	-	-	-	-	-	-
ARSOUTH HQ Infrastructure OCO <sup>(t)</sup>	-	-	-	-	-	-	1,250.000	1	1.250	-	-	-	-	-	-	-	-	-
TAAC-S COIC OCO <sup>(t)</sup>	-	-	-	-	-	-	5,300.000	1	5.300	-	-	-	-	-	-	-	-	-
CENTRIXS-SWA OCO <sup>(t)</sup>	-	-	-	-	-	-	2,500.000	1	2.500	-	-	-	-	-	-	-	-	-
ARSOUTH GTMO ELC Expansion OCO <sup>(t)</sup>	-	-	-	-	-	-	-	-	-	-	-	-	2,216.000	1	2.216	2,216.000	1	2.216
ARSOUTH JTF-MIGOPS GTMO LCR OCO <sup>(t)</sup>	-	-	-	-	-	-	-	-	-	-	-	-	484.000	1	0.484	484.000	1	0.484
Korea DODIN-A <sup>(t)</sup>	-	-	-	6,330.000	1	6.330	-	-	-	-	-	-	-	-	-	-	-	-
<i>Subtotal: Non Recurring Cost</i>	-	-	861.150	-	-	51.984	-	-	25.219	-	-	16.086	-	-	2.700	-	-	18.786
<i>Subtotal: Hardware Cost</i>	-	-	861.150	-	-	51.984	-	-	25.219	-	-	16.086	-	-	2.700	-	-	18.786
<b>Software Cost</b>																		
<b>Non Recurring Cost</b>																		
(HQDA ADPE) Software	2,256.500	2	4.513	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
(PITI) Software	75,840.000	1	75.840	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
<i>Subtotal: Non Recurring Cost</i>	-	-	80.353	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

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<b>Exhibit P-5, Cost Analysis: PB 2021 Army</b>		<b>Date:</b> February 2020
<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 2035A / 02 / 92		<b>P-1 Line Item Number / Title:</b> 3002BD3000 / Automated Data Processing Equip
<b>ID Code</b> (A=Service Ready, B=Not Service Ready) :		<b>MDAP/MAIS Code:</b>
<b>Item Number / Title [DODIC]:</b> BE4161 / HQ MANAGEMENT INFORMATION SYSTEMS		

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

Cost Elements	Prior Years			FY 2019			FY 2020			FY 2021 Base			FY 2021 OCO			FY 2021 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: Software Cost</i>	-	-	80.353	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Support - Program Management Cost																		
Contractor Management	1,706.333	3	5.119	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
<i>Subtotal: Support - Program Management Cost</i>	-	-	5.119	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
<b>Gross/Weapon System Cost</b>	-	-	946.622	-	-	51.984	-	-	25.219	-	-	16.086	-	-	2.700	-	-	18.786

**Remarks:**  
Quantities reflected on P-5 refer to total system cost by Cost Element rather than individual system components.

Secondary Distribution		FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total
Army	Quantity	-	-	-	-	-
	Total Obligation Authority	51.984	25.219	16.086	2.700	18.786
<b>Total:</b> Secondary Distribution	Quantity	-	-	-	-	-
	Total Obligation Authority	51.984	25.219	16.086	2.700	18.786

(†) indicates the presence of a P-5a



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Exhibit P-5a, Procurement History and Planning: PB 2021 Army								Date: February 2020				
Appropriation / Budget Activity / Budget Sub Activity: 2035A / 02 / 92			P-1 Line Item Number / Title: 3002BD3000 / Automated Data Processing Equip					Item Number / Title [DODIC]: BE4161 / HQ MANAGEMENT INFORMATION SYSTEMS				
Cost Elements	OCO	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
SCC Hardware		2019	Various / Various	C / FP	Various	Mar 2019	May 2019	1	5,818.000	Y		
SCC Hardware		2020	TBS / TBS	C / FP	TBS	Mar 2020	May 2020	1	6,768.000	N		
SCC Hardware		2021	TBS / TBS	C / FP	TBS	Feb 2021	Apr 2021	1	8,192.000	N		
USFK Hardware		2019	TBS / TBS	C / FFP	TBS	Mar 2020	Jan 2021	0	4,436.000	Y		
USFK Hardware		2019	TRIBALCO, LLC / Bethesda, MD	C / FFP	ACC-RI, Rock Island, IL	Mar 2019	Jan 2020	0	4,458.000	Y		
USFK Hardware		2019	Iron Bow Technologies, LLC / Herndon, VA	C / FFP	RCO DAEGU, Korea	May 2019	Jan 2020	1	412.000	Y		
USFK Hardware		2019	World Wide Technology, LLC / Saint Louis, MO	C / FFP	ACC-RI, Rock Island, IL	Apr 2019	Sep 2019	0	3,471.000	Y		
USFK Hardware		2019	LGS Innovations LLC / High Point, NC	C / CPIF	ACC-RI, Rock Island, IL	Sep 2019	Jul 2020	0	2,063.000	Y		
USFK Hardware		2019	Triangle Experience Group, Inc. / Arlington, VA	C / FFP	ACC-APG, Research Triangle Park, NC	Jun 2019	Apr 2020	0	1,500.000	Y		
USFK Hardware		2020	TBS / TBS	C / FFP	TBS	May 2020	Jun 2020	1	7,375.000	N		
USFK Hardware		2021	TBS / TBS	C / FFP	TBS	Apr 2021	Jul 2021	1	6,845.000	N		
FORSCOM Hardware		2019	Various / Various	C / FP	Various	Apr 2019	Jun 2019	1	2,082.000	Y		
(HQDA ADPE) USACRC Hardware		2019	Various / Various	C / FFP	Various	Apr 2019	Jun 2019	1	1,261.000	Y		
(HQDA ADPE) USACRC Hardware		2020	TBS / TBS	C / FFP	TBS	Mar 2020	Apr 2020	1	1,376.000	N		
(HQDA ADPE) USACRC Hardware		2021	TBS / TBS	C / FFP	TBS	Mar 2021	Jun 2021	1	1,049.000	N		
TRADOC CCOE Cyber Initiatives OCO	✓	2019	Northrup Grumman Systems / Herndon, VA	C / FFP	MICC, Orlando, FL	Mar 2019	Jun 2019	1	4,265.000	Y		
TRADOC CCOE Cyber Initiatives OCO	✓	2019	Vernadero Group, Inc. / Phoenix, AZ	C / FFP	MICC, Ft. Huachuca, AZ	Apr 2019	May 2019	0	250.000	Y		
TRADOC Cyber IT Training OCO	✓	2019	Various / Various	C / FFP	Various	Apr 2019	Jun 2019	1	7,140.000	Y		
TRADOC ICOE Intel Initiatives OCO	✓	2019	Various / Various	C / FFP	Various	Apr 2019	Jul 2019	1	4,514.000	Y		
IMCOM Operations Center/VTC Infrastructure		2019	Various / Various	C / FFP	Various	Sep 2019	Oct 2019	1	3,359.000	Y		
JTFMO Network OCO	✓	2020	TBS / TBS	C / FFP	TBS	Apr 2020	May 2020	1	650.000	N		
ARSOUTH HQ Infrastructure OCO	✓	2020	TBS / TBS	C / FFP	TBS	Apr 2020	May 2020	1	1,250.000	N		
TAAC-S COIC OCO	✓	2020	TBS / TBS	C / FFP	TBS	Apr 2020	Jul 2020	1	5,300.000	N		
CENTRIXS-SWA OCO	✓	2020	TBS / TBS	C / FFP	TBS	Jun 2020	Aug 2020	1	2,500.000	N		
ARSOUTH GTMO ELC Expansion OCO	✓	2021	TBS / TBS	C / FFP	TBS	Jan 2021	Apr 2021	1	2,216.000	N		
ARSOUTH JTF-MIGOPS GTMO LCR OCO	✓	2021	TBS / TBS	C / FFP	TBS	Jan 2021	Apr 2021	1	484.000	N		

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<b>Exhibit P-5a, Procurement History and Planning:</b> PB 2021 Army							<b>Date:</b> February 2020				
<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 2035A / 02 / 92			<b>P-1 Line Item Number / Title:</b> 3002BD3000 / Automated Data Processing Equip				<b>Item Number / Title [DODIC]:</b> BE4161 / HQ MANAGEMENT INFORMATION SYSTEMS				

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
Korea DODIN-A		2019	World Wide Technology, LLC / Saint Louis, MO	C / FFP	ACC-RI, Rock Island, IL	Aug 2019	Jun 2020	1	5,984.000	Y		
Korea DODIN-A		2019	LGS Innovations LLC / High Point, NC	C / CPIF	ACC-RI, Rock Island, IL	Sep 2019	Jul 2020	0	308.000	Y		

**Remarks:**  
 All IT procurements consist of COTS/GOTS solutions; all quantities and unit costs vary by system configuration and site. Quantities reflected on P-5a include zero (0) to reflect multiple contract awards for the same system. ACC-APG - Army Contracting Command-Aberdeen Proving Ground; ACC-RI - Army Contracting Command-Rock Island.

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<b>Exhibit P-5, Cost Analysis: PB 2021 Army</b>		<b>Date:</b> February 2020
<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 2035A / 02 / 92		<b>P-1 Line Item Number / Title:</b> 3002BD3000 / Automated Data Processing Equip
		<b>Item Number / Title [DODIC]:</b> BE4162 / MACOM AUTOMATION SYSTEMS

<b>ID Code</b> (A=Service Ready, B=Not Service Ready) :	<b>MDAP/MAIS Code:</b>
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Resource Summary	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total
Procurement Quantity (Units in Each)	-	-	-	-	-	-
Gross/Weapon System Cost (\$ in Millions)	1,425.824	131.135	80.861	44.429	13.852	58.281
Less PY Advance Procurement (\$ in Millions)	-	-	-	-	-	-
Net Procurement (P-1) (\$ in Millions)	1,425.824	131.135	80.861	44.429	13.852	58.281
Plus CY Advance Procurement (\$ in Millions)	-	-	-	-	-	-
<b>Total Obligation Authority (\$ in Millions)</b>	<b>1,425.824</b>	<b>131.135</b>	<b>80.861</b>	<b>44.429</b>	<b>13.852</b>	<b>58.281</b>

*(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 2019			FY 2020			FY 2021 Base			FY 2021 OCO			FY 2021 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)
<b>Hardware Cost</b>																		
<b>Recurring Cost</b>																		
(ATIA) Hardware <sup>(†)</sup>	1,129.000	3	3.387	786.000	1	0.786	793.000	1	0.793	808.000	1	0.808	-	-	-	808.000	1	0.808
(ANV) Hardware <sup>(†)</sup>	2,052.667	3	6.158	-	-	-	1,190.000	1	1.190	1,205.000	1	1.205	-	-	-	1,205.000	1	1.205
(AOS) Hardware	1,688.000	1	1.688	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
(ATIS) Hardware <sup>(†)</sup>	-	-	-	-	-	-	1,663.000	1	1.663	-	-	-	-	-	-	-	-	-
<i>Subtotal: Recurring Cost</i>	-	-	11.233	-	-	0.786	-	-	3.646	-	-	2.013	-	-	-	-	-	2.013
<b>Non Recurring Cost</b>																		
(ACI) Army-wide Hardware <sup>(†)</sup>	110,610.000	3	331.830	45,071.000	1	45.071	23,306.000	1	23.306	12,731.000	1	12.731	-	-	-	12,731.000	1	12.731
(BLCSE) Hardware <sup>(†)</sup>	4,401.667	3	13.205	5,300.000	1	5.300	5,639.000	1	5.639	5,805.000	1	5.805	-	-	-	5,805.000	1	5.805
(TIABCSTB) Hardware <sup>(†)</sup>	1,905.000	2	3.810	-	-	-	442.000	1	0.442	-	-	-	-	-	-	-	-	-
(SPS) Hardware	3,101.000	1	3.101	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
(ALTESS) Hardware <sup>(†)</sup>	44,715.000	1	44.715	644.000	1	0.644	644.000	1	0.644	-	-	-	-	-	-	-	-	-
(AcqBiz) Hardware	4,825.000	1	4.825	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
(AFRICOM HQ ADPE) Hardware <sup>(†)</sup>	2,446.333	3	7.339	4,428.000	1	4.428	4,513.000	1	4.513	4,566.000	1	4.566	-	-	-	4,566.000	1	4.566
(KT) Hardware	105,171.000	1	105.171	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
(DRSN) Hardware	9,653.000	1	9.653	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

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<b>Exhibit P-5, Cost Analysis: PB 2021 Army</b>		<b>Date:</b> February 2020
<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 2035A / 02 / 92	<b>P-1 Line Item Number / Title:</b> 3002BD3000 / Automated Data Processing Equip	<b>Item Number / Title [DODIC]:</b> BE4162 / MACOM AUTOMATION SYSTEMS
<b>ID Code</b> (A=Service Ready, B=Not Service Ready) :		<b>MDAP/MAIS Code:</b>

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

Cost Elements	Prior Years			FY 2019			FY 2020			FY 2021 Base			FY 2021 OCO			FY 2021 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)
(AKO) Refresh Hardware <sup>(†)</sup>	37,165.500	2	74.331	-	-	-	3,556.000	1	3.556	-	-	-	-	-	-	-	-	-
(EKR) Hardware	1,570.000	1	1.570	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
(TJAGLCS Infrastructure) Hardware	885.500	2	1.771	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Mission Command Facility (MCF) XVIII ABN Corp	1,504.000	1	1.504	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
SOUTHCOM Hardware <sup>(†)</sup>	3,000.000	1	3.000	10,180.000	1	10.180	6,277.000	1	6.277	6,329.000	1	6.329	-	-	-	6,329.000	1	6.329
PTE CYBER RANGE Hardware <sup>(†)</sup>	1,604.000	1	1.604	1,903.000	1	1.903	2,700.000	1	2.700	-	-	-	-	-	-	-	-	-
USARPAC Hardware <sup>(†)</sup>	4,218.000	1	4.218	1,730.000	1	1.730	-	-	-	-	-	-	-	-	-	-	-	-
MDW Conmy Hall Hardware <sup>(†)</sup>	-	-	-	5,854.000	1	5.854	-	-	-	-	-	-	-	-	-	-	-	-
EUCOM ADPE Hardware <sup>(†)</sup>	4,887.000	1	4.887	28,530.000	1	28.530	4,939.000	1	4.939	12,726.000	1	12.726	-	-	-	12,726.000	1	12.726
EUCOM ADPE EDI <sup>(†)</sup>	-	-	-	-	-	-	23,000.000	1	23.000	-	-	-	-	-	-	-	-	-
ARCYBER AES3 OCO <sup>(†)</sup>	-	-	-	4,370.000	1	4.370	-	-	-	-	-	-	-	-	-	-	-	-
ARCYBER GMN OCO <sup>(†)</sup>	-	-	-	4,983.000	1	4.983	-	-	-	-	-	-	-	-	-	-	-	-
EUCOM EMCC JOC Fusion Wall OCO	929.000	1	0.929	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
ARCENT SWA COIC Modernization OCO	6,971.000	1	6.971	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
FORSCOM Data Center	2,672.000	2	5.344	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
USAREUR EDI Hardware <sup>(†)</sup>	-	-	-	-	-	-	-	-	-	-	-	-	13,352.000	1	13.352	13,352.000	1	13.352
Korea DODIN-A <sup>(†)</sup>	-	-	-	11,361.000	1	11.361	-	-	-	-	-	-	-	-	-	-	-	-
ARSOUTH OMC WIN10-GTMO <sup>(†)</sup>	-	-	-	1,600.000	1	1.600	-	-	-	-	-	-	-	-	-	-	-	-
ARSOUTH Network Proxy-GTMO <sup>(†)</sup>	-	-	-	370.000	1	0.370	-	-	-	-	-	-	-	-	-	-	-	-

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<b>Exhibit P-5, Cost Analysis: PB 2021 Army</b>		<b>Date:</b> February 2020
<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 2035A / 02 / 92	<b>P-1 Line Item Number / Title:</b> 3002BD3000 / Automated Data Processing Equip	<b>Item Number / Title [DODIC]:</b> BE4162 / MACOM AUTOMATION SYSTEMS

<b>ID Code</b> (A=Service Ready, B=Not Service Ready) :	<b>MDAP/MAIS Code:</b>
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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 2019			FY 2020			FY 2021 Base			FY 2021 OCO			FY 2021 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)
ARSOUTH Zero Client VDI-JTF GTMO <sup>(†)</sup>	-	-	-	358.000	1	0.358	-	-	-	-	-	-	-	-	-	-	-	-
AFC VDI/MILS <sup>(†)</sup>	-	-	-	3,667.000	1	3.667	-	-	-	-	-	-	-	-	-	-	-	-
<i>Subtotal: Non Recurring Cost</i>	-	-	629.778	-	-	130.349	-	-	75.016	-	-	42.157	-	-	13.352	-	-	55.509
<i>Subtotal: Hardware Cost</i>	-	-	<b>641.011</b>	-	-	<b>131.135</b>	-	-	<b>78.662</b>	-	-	<b>44.170</b>	-	-	<b>13.352</b>	-	-	<b>57.522</b>
<b>Software Cost</b>																		
<b>Recurring Cost</b>																		
(ACI) R Army-wide Software	721,724.000	1	721.724	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
(ATIS) Software <sup>(†)</sup>	-	-	-	-	-	-	1,205.000	1	1.205	-	-	-	-	-	-	-	-	-
<i>Subtotal: Recurring Cost</i>	-	-	721.724	-	-	-	-	-	1.205	-	-	-	-	-	-	-	-	-
<b>Non Recurring Cost</b>																		
(ACI) N-R Army-wide Software <sup>(†)</sup>	41,084.000	1	41.084	-	-	-	994.000	1	0.994	-	-	-	-	-	-	-	-	-
(BLSCE) Software	523.000	1	0.523	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
(TIABCSTB) Software	885.000	1	0.885	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
(ATIA) Software	181.500	2	0.363	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
(SPS) Software	804.000	1	0.804	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
(ISM) Software	835.000	1	0.835	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
(KT) Software	17,049.000	1	17.049	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
(TJAGLCS Infrastructure) Software	422.500	2	0.845	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
USAREUR EDI Software <sup>(†)</sup>	-	-	-	-	-	-	-	-	-	-	-	-	500.000	1	0.500	500.000	1	0.500
OBT Software <sup>(†)</sup>	-	-	-	-	-	-	-	-	-	259.000	1	0.259	-	-	-	259.000	1	0.259
<i>Subtotal: Non Recurring Cost</i>	-	-	62.388	-	-	-	-	-	0.994	-	-	0.259	-	-	0.500	-	-	0.759
<i>Subtotal: Software Cost</i>	-	-	<b>784.112</b>	-	-	-	-	-	<b>2.199</b>	-	-	<b>0.259</b>	-	-	<b>0.500</b>	-	-	<b>0.759</b>
<b>Support - Program Management Cost</b>																		
Contractor Management	701.000	1	0.701	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
<i>Subtotal: Support - Program Management Cost</i>	-	-	<b>0.701</b>	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

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<b>Exhibit P-5, Cost Analysis:</b> PB 2021 Army		<b>Date:</b> February 2020
<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 2035A / 02 / 92	<b>P-1 Line Item Number / Title:</b> 3002BD3000 / Automated Data Processing Equip	<b>Item Number / Title [DODIC]:</b> BE4162 / MACOM AUTOMATION SYSTEMS
<b>ID Code</b> (A=Service Ready, B=Not Service Ready) :		<b>MDAP/MAIS Code:</b>

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

Cost Elements	Prior Years			FY 2019			FY 2020			FY 2021 Base			FY 2021 OCO			FY 2021 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	-	-	1,425.824	-	-	131.135	-	-	80.861	-	-	44.429	-	-	13.852	-	-	58.281

**Remarks:**  
Quantities reflected on P-5 refer to total system cost by Cost Element rather than individual system components.

Secondary Distribution		FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total
Army	Quantity	-	-	-	-	-
	Total Obligation Authority	131.135	80.861	44.429	13.852	58.281
<b>Total:</b>	<b>Quantity</b>	-	-	-	-	-
<b>Secondary Distribution</b>	<b>Total Obligation Authority</b>	131.135	80.861	44.429	13.852	58.281

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

**UNCLASSIFIED**

Exhibit P-5a, Procurement History and Planning: PB 2021 Army								Date: February 2020				
Appropriation / Budget Activity / Budget Sub Activity: 2035A / 02 / 92			P-1 Line Item Number / Title: 3002BD3000 / Automated Data Processing Equip					Item Number / Title [DODIC]: BE4162 / MACOM AUTOMATION SYSTEMS				
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
(ATIA) Hardware		2019	Dell Federal Systems LP / Rock Round, TX	C / FFP	MICC, Fort Eustis, VA	Jul 2019	Sep 2019	1	786.000	Y		
(ATIA) Hardware		2020	TBS / TBS	C / FP	TBS	Jun 2020	Sep 2020	1	793.000	N		
(ATIA) Hardware		2021	TBS / TBS	C / FP	TBS	Apr 2021	Jul 2021	1	808.000	N		
(ANV) Hardware		2020	TBS / TBS	C / FP	TBS	Jun 2020	Aug 2020	1	1,190.000	N		
(ANV) Hardware		2021	TBS / TBS	C / FP	TBS	Apr 2021	Jun 2021	1	1,205.000	N		
(ATIS) Hardware		2020	TBS / TBS	C / FFP	TBS	Apr 2020	Jul 2020	1	1,663.000	N		
(ACI) Army-wide Hardware		2019	Various / Various	C / FP	ACC-APG, Aberdeen Proving Ground, MD	Apr 2019	Jun 2019	1	45,071.000	Y		
(ACI) Army-wide Hardware		2020	TBS / TBS	C / FP	TBS	Apr 2020	Jun 2020	1	23,306.000	N		
(ACI) Army-wide Hardware		2021	TBS / TBS	C / FP	TBS	Mar 2021	Jul 2021	1	12,731.000	N		
(BLCSE) Hardware		2019	Various / Various	C / FP	MICC, Fort Eustis, VA	Jun 2019	Aug 2019	1	5,300.000	Y		
(BLCSE) Hardware		2020	TBS / TBS	C / FP	TBS	Jun 2020	Aug 2020	1	5,639.000	N		
(BLCSE) Hardware		2021	TBS / TBS	C / FP	TBS	Apr 2021	Jul 2021	1	5,805.000	N		
(TIABCSTB) Hardware		2020	TBS / TBS	C / FFP	TBS	May 2020	Aug 2020	1	442.000	N		
(ALTESS) Hardware		2019	Virginia Energy and Lighting / Chesterfield, VA	C / FFP	MICC Ft. Lee, VA	May 2019	Sep 2019	1	644.000	Y		
(ALTESS) Hardware		2020	TBS / TBS	C / FFP	TBS	Mar 2020	May 2020	1	644.000	N		
(AFRICOM HQ ADPE) Hardware		2019	Trace Systems / Vienna, VA	C / FFP	DISA DITCO, Scott AFB, IL	Mar 2019	Apr 2019	0	579.000	Y		
(AFRICOM HQ ADPE) Hardware		2019	CACI, Inc. Federal / Chantilly, VA	C / FFP	GSA FAS AAS, Philadelphia, PA	Jul 2019	Jul 2019	1	3,849.000	Y		
(AFRICOM HQ ADPE) Hardware		2020	TBS / TBS	C / FFP	DISA DITCO, Scott AFB, IL	Feb 2020	Mar 2020	1	4,513.000	Y		
(AFRICOM HQ ADPE) Hardware		2021	TBS / TBS	C / FFP	GSA FAS AAS, Philadelphia, PA	Feb 2021	Mar 2021	1	4,566.000	N		
(AKO) Refresh Hardware		2020	TBS / TBS	C / FFP	TBS	Mar 2020	May 2020	1	3,556.000	N		
SOUTHCOM Hardware		2019	Various / Various	C / FP	Various	Jan 2019	Feb 2019	1	10,180.000	Y		
SOUTHCOM Hardware		2020	TBS / TBS	C / FP	TBS	Apr 2020	Jun 2020	1	6,277.000	N		
SOUTHCOM Hardware		2021	TBS / TBS	C / FP	TBS	Apr 2021	Jun 2021	1	6,329.000	N		
PTE CYBER RANGE Hardware		2019	Affigent, LLC / Herndon, VA	C / FFP	MICC, Ft. Gordon, GA	Sep 2019	Oct 2019	1	1,903.000	Y		
PTE CYBER RANGE Hardware		2020	TBS / TBS	C / FP	TBS	Mar 2020	Jun 2020	1	2,700.000	N		
USARPAC Hardware		2019	Various / Various	C / FFP	Various	May 2019	Aug 2019	1	1,730.000	Y		
MDW Conmy Hall Hardware		2019	Various / Various	C / FFP	Various	Mar 2019	Apr 2019	1	5,854.000	Y		
EUCOM ADPE Hardware		2019	GSA-FAS / Philadelphia, PA	C / CPFF	EUCOM, Germany	Jun 2019	Oct 2019	1	28,530.000	Y		

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**Exhibit P-5a, Procurement History and Planning: PB 2021 Army** **Date:** February 2020

<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 2035A / 02 / 92	<b>P-1 Line Item Number / Title:</b> 3002BD3000 / Automated Data Processing Equip	<b>Item Number / Title [DODIC]:</b> BE4162 / MACOM AUTOMATION SYSTEMS
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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
EUCOM ADPE Hardware		2020	TBS / TBS	C / FFP	TBS	Apr 2020	Jul 2020	1	4,939.000	N		
EUCOM ADPE Hardware		2021	TBS / TBS	C / FFP	TBS	May 2021	Jul 2021	1	12,726.000	N		
EUCOM ADPE EDI		2020	TBS / TBS	C / FFP	TBS	Apr 2020	Jul 2020	1	23,000.000	N		
ARCYBER AES3 OCO		2019	Various / Various	C / FP	Various	Jun 2019	Aug 2019	1	4,370.000	Y		
ARCYBER GMN OCO		2019	Various / Various	C / FP	Various	Jul 2019	Sep 2019	1	4,983.000	Y		
USAREUR EDI Hardware	✓	2021	TBS / TBS	C / FFP	TBS	Jan 2021	Mar 2021	1	13,352.000	N		
Korea DODIN-A		2019	Various / Various	C / FFP	Various	Sep 2019	Oct 2019	1	11,361.000	Y		
ARSOUTH OMC WIN10-GTMO		2019	TBS / TBS	C / FFP	TBS	Feb 2020	Mar 2020	1	1,600.000	Y		
ARSOUTH Network Proxy-GTMO		2019	TBS / TBS	C / FFP	TBS	Feb 2020	Mar 2020	1	370.000	Y		
ARSOUTH Zero Client VDI-JTF GTMO		2019	TBS / TBS	C / FFP	TBS	Feb 2020	Mar 2020	1	358.000	Y		
AFC VDI/MILS		2019	Various / Various	C / FFP	Various	Sep 2019	Oct 2019	1	3,667.000	Y		
(ATIS) Software		2020	TBS / TBS	C / FFP	TBS	Apr 2020	Jul 2020	1	1,205.000	N		
(ACI) N-R Army-wide Software		2020	TBS / TBS	C / FFP	ACC-APG, Aberdeen Proving Ground, MD	Apr 2020	Jun 2020	1	994.000	N		
USAREUR EDI Software	✓	2021	TBS / TBS	C / FFP	TBS	Jan 2021	Mar 2021	1	500.000	N		
OBT Software		2021	Spider Strategies, Inc / Arlington, VA	SS / FFP	ACC-APG, Aberdeen Proving Ground, MD	Apr 2021	Jul 2021	1	259.000	Y		

**Remarks:**

All IT procurements consist of COTS/GOTS solutions; all quantities and unit costs vary by system configuration and site. Quantities reflected on P-5a include zero (0) to reflect multiple contract awards for the same system. MICC - Mission Installation Contracting Center; ACC-APG - Army Contracting Command-Aberdeen Proving Ground; USACE - U.S. Army Corps of Engineers; GSA FAS AAS - General Services Administration Federal Acquisition Services Assisted Acquisition Services; DISA DITCO - Defense Information Systems Agency Defense Information Technology Contracting Organization.



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<b>Exhibit P-5, Cost Analysis: PB 2021 Army</b>		<b>Date:</b> February 2020
<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 2035A / 02 / 92		<b>P-1 Line Item Number / Title:</b> 3002BD3000 / Automated Data Processing Equip
		<b>Item Number / Title [DODIC]:</b> BE4164 / PERSONNEL AUTOMATION SYSTEMS

<b>ID Code</b> (A=Service Ready, B=Not Service Ready) :	<b>MDAP/MAIS Code:</b>
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Resource Summary	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total
Procurement Quantity (Units in Each)	-	-	-	-	-	-
Gross/Weapon System Cost (\$ in Millions)	860.364	24.385	58.382	75.274	-	75.274
Less PY Advance Procurement (\$ in Millions)	-	-	-	-	-	-
Net Procurement (P-1) (\$ in Millions)	860.364	24.385	58.382	75.274	-	75.274
Plus CY Advance Procurement (\$ in Millions)	-	-	-	-	-	-
<b>Total Obligation Authority (\$ in Millions)</b>	<b>860.364</b>	<b>24.385</b>	<b>58.382</b>	<b>75.274</b>	<b>-</b>	<b>75.274</b>

*(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 2019			FY 2020			FY 2021 Base			FY 2021 OCO			FY 2021 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)
<b>Hardware Cost</b>																		
Recurring Cost																		
(ACCHR) Recurring Hardware	1,829.000	1	1.829	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
(USMA) Hardware	17,602.000	1	17.602	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
(AA-IAA) Hardware Recurring	71,689.000	1	71.689	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
<i>Subtotal: Recurring Cost</i>	-	-	91.120	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Non Recurring Cost																		
(AA-IAA) Hardware Non-Recurring	6,236.000	1	6.236	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
(PES-A) Hardware Non-Recurring (t)	697,288.000	1	697.288	17,718.000	1	17.718	38,075.000	1	38.075	28,893.000	1	28.893	-	-	-	28,893.000	1	28.893
(MIRS) Hardware Non-Recurring (t)	16,648.000	3	49.944	6,667.000	1	6.667	10,810.000	1	10.810	6,388.000	1	6.388	-	-	-	6,388.000	1	6.388
(ACCHR) Hardware Non-Recurring	9,098.000	1	9.098	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
<i>Subtotal: Non Recurring Cost</i>	-	-	762.566	-	-	24.385	-	-	48.885	-	-	35.281	-	-	-	-	-	35.281
<b>Subtotal: Hardware Cost</b>	-	-	<b>853.686</b>	-	-	<b>24.385</b>	-	-	<b>48.885</b>	-	-	<b>35.281</b>	-	-	-	-	-	<b>35.281</b>
<b>Software Cost</b>																		
Recurring Cost																		

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<b>Exhibit P-5, Cost Analysis: PB 2021 Army</b>		<b>Date:</b> February 2020
<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 2035A / 02 / 92	<b>P-1 Line Item Number / Title:</b> 3002BD3000 / Automated Data Processing Equip	<b>Item Number / Title [DODIC]:</b> BE4164 / PERSONNEL AUTOMATION SYSTEMS

<b>ID Code</b> (A=Service Ready, B=Not Service Ready) :	<b>MDAP/MAIS Code:</b>
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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 2019			FY 2020			FY 2021 Base			FY 2021 OCO			FY 2021 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)
AIE Software & Training Recurring <sup>(t)</sup>	-	-	-	-	-	-	8,873.000	1	8.873	39,350.000	1	39.350	-	-	-	39,350.000	1	39.350
<i>Subtotal: Recurring Cost</i>	-	-	-	-	-	-	-	-	8.873	-	-	39.350	-	-	-	-	-	39.350
Non Recurring Cost																		
(ACCHR) Software	2,441.000	1	2.441	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
(Keystone) Software Non-Recurring	900.000	1	0.900	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
(PES-A) Software	3,337.000	1	3.337	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
SFL-TAP Software Non-Recurring <sup>(t)</sup>	-	-	-	-	-	-	624.000	1	0.624	643.000	1	0.643	-	-	-	643.000	1	0.643
<i>Subtotal: Non Recurring Cost</i>	-	-	6.678	-	-	-	-	-	0.624	-	-	0.643	-	-	-	-	-	0.643
<i>Subtotal: Software Cost</i>	-	-	6.678	-	-	-	-	-	9.497	-	-	39.993	-	-	-	-	-	39.993
<b>Gross/Weapon System Cost</b>	-	-	860.364	-	-	24.385	-	-	58.382	-	-	75.274	-	-	-	-	-	75.274

**Remarks:**  
Quantities reflected on P-5 refer to total system cost by Cost Element rather than individual system components.

Secondary Distribution		FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total
Army	Quantity	-	-	-	-	-
	Total Obligation Authority	24.385	58.382	75.274	-	75.274
<b>Total: Secondary Distribution</b>	Quantity	-	-	-	-	-
	Total Obligation Authority	24.385	58.382	75.274	-	75.274

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

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**Exhibit P-5a, Procurement History and Planning: PB 2021 Army** **Date:** February 2020

<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 2035A / 02 / 92	<b>P-1 Line Item Number / Title:</b> 3002BD3000 / Automated Data Processing Equip	<b>Item Number / Title [DODIC]:</b> BE4164 / PERSONNEL AUTOMATION SYSTEMS
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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
(PES-A) Hardware Non-Recurring		2019	CDW Government, LLC / Vernon Hills, IL	C / FFP	MICC, Ft. Knox, KY	Mar 2019	Apr 2019	0	4,155.000	Y		
(PES-A) Hardware Non-Recurring		2019	GovConnection / Rockville, MD	C / FFP	MICC, Ft. Knox, KY	Aug 2019	Sep 2019	0	714.000	Y		
(PES-A) Hardware Non-Recurring		2019	Government Acquisition Inc. / Cincinnati, OH	C / FFP	MICC, Ft. Knox, KY	Sep 2019	Sep 2019	0	2,650.000	Y		
(PES-A) Hardware Non-Recurring		2019	Insight Public Sector / Tempe, AZ	C / FFP	MICC, Ft. Knox, KY	Aug 2019	Sep 2019	0	645.000	Y		
(PES-A) Hardware Non-Recurring		2019	Iron Bow Technologies / Chantilly, VA	C / FFP	MICC, Ft. Knox, KY	Aug 2019	Sep 2019	0	421.000	Y		
(PES-A) Hardware Non-Recurring		2019	TBS / TBS	C / FFP	MICC, Ft. Knox, KY	Feb 2020	Mar 2020	0	658.000	Y		
(PES-A) Hardware Non-Recurring		2019	World Wide Technology / Maryland Heights, MO	C / FFP	MICC, Ft. Knox, KY	Jan 2019	Apr 2019	1	7,234.000	Y		
(PES-A) Hardware Non-Recurring		2019	Force 3, LLC / Crofton, MD	C / FFP	MICC, Ft. Knox, KY	Jan 2019	Apr 2019	0	725.000	Y		
(PES-A) Hardware Non-Recurring		2019	Empower Solutions / Reston, VA	C / FFP	MICC, Ft. Knox, KY	Sep 2019	Oct 2019	0	516.000	Y		
(PES-A) Hardware Non-Recurring		2020	TBS / TBS	C / FFP	MICC, Ft. Knox, KY	Apr 2020	Apr 2020	1	38,075.000	Y		
(PES-A) Hardware Non-Recurring		2021	TBS / TBS	C / FFP	MICC, Ft. Knox, KY	May 2021	Jul 2021	1	28,893.000	N		
(MIRS) Hardware Non-Recurring		2019	Dell Federal Systems, LP / Round Rock, TX	C / FFP	MICC, Ft. Knox, KY	Sep 2019	Oct 2019	1	507.000	Y		
(MIRS) Hardware Non-Recurring		2019	TBS / TBS	C / FFP	MICC, Ft. Knox, KY	Apr 2020	Jun 2020	0	6,160.000	Y		
(MIRS) Hardware Non-Recurring		2020	TBS / TBS	C / FFP	MICC, Ft. Knox, KY	Jul 2020	Sep 2020	1	10,810.000	N		
(MIRS) Hardware Non-Recurring		2021	TBS / TBS	C / FFP	MICC, Ft. Knox, KY	Mar 2021	May 2021	1	6,388.000	N		
AIE Software & Training Recurring		2020	TBS / TBS	C / FFP	ACC-NJ, Picatinny Arsenal, NJ	Mar 2020	Jun 2020	1	8,873.000	Y		
AIE Software & Training Recurring		2021	TBS / TBS	C / FFP	TBS	Apr 2021	Jul 2021	1	39,350.000	Y		
SFL-TAP Software Non-Recurring		2020	TBS / TBS	C / FFP	MICC, Ft. Knox, KY	Apr 2020	Jul 2020	1	624.000	N		
SFL-TAP Software Non-Recurring		2021	TBS / TBS	C / FFP	MICC, Ft. Knox, KY	May 2021	Jul 2021	1	643.000	N		

**Remarks:**

All IT procurements consist of COTS/GOTS solutions; all quantities and unit costs vary by system configuration and site. Quantities reflected on P-5a include zero (0) to reflect multiple contract awards for the same system.  
 MICC - Mission and Installation Contracting Command; ACC-NJ - Army Contracting Command-New Jersey

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<b>Exhibit P-40a, Budget Item Justification For Aggregated Items:</b> PB 2021 Army															<b>Date:</b> February 2020				
<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 2035A / 02 / 92						<b>P-1 Line Item Number / Title:</b> 3002BD3000 / Automated Data Processing Equip						<b>Aggregated Items Title:</b> BE4175 / Personnel Automation Systems - West Point							

Item Number / Title [DODIC]	ID CD	MDAP/MAIS Code	Prior Years			FY 2019			FY 2020			FY 2021 Base			FY 2021 OCO			FY 2021 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)
<b>Personnel Automation Systems - West Point</b>																				
BE4175 / Personnel Automation Systems - West Point			-	-	9.540	-	-	10.394	-	-	3.250	-	-	3.537	-	-	-	-	-	3.537
<i>Secondary Distribution</i>																				
Army				-	-		-	10.394		-	3.250		-	3.537		-	-		-	3.537
<b>Subtotal: Personnel Automation Systems - West Point</b>			-	-	<b>9.540</b>	-	-	<b>10.394</b>	-	-	<b>3.250</b>	-	-	<b>3.537</b>	-	-	-	-	-	<b>3.537</b>
<b>Total</b>			-	-	<b>9.540</b>	-	-	<b>10.394</b>	-	-	<b>3.250</b>	-	-	<b>3.537</b>	-	-	-	-	-	<b>3.537</b>

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

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

<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 2035A: Other Procurement, Army / BA 02: Communications and Electronics Equipment / BSA 92: Elect Equip - Automation	<b>P-1 Line Item Number / Title:</b> 3004B55500 / General Fund Enterprise Business Systems Fam
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<b>ID Code</b> (A=Service Ready, B=Not Service Ready):	<b>Program Elements for Code B Items:</b> N/A	<b>Other Related Program Elements:</b> N/A
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**Line Item MDAP/MAIS Code:** N/A

Resource Summary	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	To Complete	Total
Procurement Quantity ( <i>Units in Each</i> )	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost ( <i>\$ in Millions</i> )	274.579	10.976	15.002	4.448	-	4.448	4.566	-	-	-	-	309.571
Less PY Advance Procurement ( <i>\$ in Millions</i> )	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) ( <i>\$ in Millions</i> )	274.579	10.976	15.002	4.448	-	4.448	4.566	-	-	-	-	309.571
Plus CY Advance Procurement ( <i>\$ in Millions</i> )	-	-	-	-	-	-	-	-	-	-	-	-
<b>Total Obligation Authority</b> ( <i>\$ in Millions</i> )	<b>274.579</b>	<b>10.976</b>	<b>15.002</b>	<b>4.448</b>	<b>-</b>	<b>4.448</b>	<b>4.566</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>309.571</b>

*(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:**

BE4168 - General Fund Enterprise Business System (GFEBs): GFEBs is the Army's core financial management system for administering its General Fund. Full Deployment was reached in 2012 and the system is currently in the Capability Support (sustainment) phase of the Business Acquisition Cycle, focused on modernization, cyber security, and system enhancements while also conducting capability enhancements to meet policy and deliver a more accurate picture of Army financial awareness. GFEBs was implemented to fulfill the needs and enable the Army to comply with the Federal Financial Management. GFEBs was developed using a commercial off-the-shelf Enterprise Resource Planning system that is certified by the Chief, Financial Officer Council and provides six core financial functions (United States General Ledger (USGL), Cost Management, Funds Control, Payable Management, Real Property, Receivable Management and Reports).

B55511 - General Fund Enterprise Business System-Sensitive Activities (GFEBs-SA): GFEBs-SA is a designated National Security System (NSS) leveraging the GFEBs base system as the Army's core financial management system certified by the Chief Financial Officers Council. To protect sensitive information and enable clean auditability, the Army requires a separate instance of GFEBs operated on a secure network for processing sensitive and classified financial transactions that cannot be processed in the fully-fielded GFEBs base system without compromising classified information or missions, or endangering soldiers. Therefore, GFEBs-SA is an essential financial program designed to enable the auditability that is needed to comply with the Chief Financial Officers (CFO) Act, the Federal Financial Management Improvement Act (FFMIA), and prevent compromise of data that could cause grave harm to U.S. forces. GFEBs-SA is envisioned as a fully functional GFEBs application operated on a secure network (SIPR), leveraging off of the sustained system design while providing additional implementation that includes additional requirements designed to protect sensitive intelligence operations and special operations missions. It will process Secret Collateral and below information while providing GFEBs capabilities such as distribution and execution of appropriated funds, cost management, financial reporting, and asset management. GFEBs-SA will be implemented and deployed to 3,000 users across 100 locations worldwide. GFEBs-SA will support information exchanges with organizations that support the Army's sensitive activities mission, including cross-security domain integration between SIPR and NIPR with GFEBs and other system partners. Services will be capable of being upgraded throughout the life of the program in order to incorporate advances in best business practices and technology, and will modify capability to maintain a synchronized software baseline with the GFEBs base system to maintain efficiencies in capability enhancements, training documentation, and sustainment support.

Secondary Distribution	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025
Army									
Quantity	-	-	-	-	-	-	-	-	-
Total Obligation Authority	10.976	15.002	4.448	-	4.448	4.566	-	-	-
<b>Total:</b>									
Quantity	-	-	-	-	-	-	-	-	-

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

<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 2035A: Other Procurement, Army / BA 02: Communications and Electronics Equipment / BSA 92: Elect Equip - Automation	<b>P-1 Line Item Number / Title:</b> 3004B55500 / General Fund Enterprise Business Systems Fam
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<b>ID Code</b> (A=Service Ready, B=Not Service Ready):	<b>Program Elements for Code B Items:</b> N/A	<b>Other Related Program Elements:</b> N/A
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**Line Item MDAP/MAIS Code:** N/A

Secondary Distribution		FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025
Secondary Distribution	Total Obligation Authority	10.976	15.002	4.448	-	4.448	4.566	-	-	-

**Justification:**  
 FY 2021 Procurement dollars support software and hardware infrastructure upgrades to bring GFEBs reporting and analytics in-line with processing performance thresholds established in the GFEBs Capabilities Production Document (CPD). Software upgrades support auditability requirements as well as the compliance of the system's required software standards. GFEBs base program procurement dollars will be used to prevent end of service life by the Original Equipment Manufacturer, SAP, and enable a migration of the GFEBs-SA database from Oracle to SAP as part of the synchronization between GFEBs and GFEBs-SA in FY 2021. Additionally, procurement funds will be leveraged to support deployments in conjunction with GFEBs-SA Full Deployment schedule to sites not currently running the GFEBs base system.

In accordance with Section 1815 of the fiscal year 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-40, Budget Line Item Justification:** PB 2021 Army **Date:** February 2020

<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 2035A: Other Procurement, Army / BA 02: Communications and Electronics Equipment / BSA 92: Elect Equip - Automation	<b>P-1 Line Item Number / Title:</b> 3005B66501 / High Perf Computing Mod Pgm (HPCMP)
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<b>ID Code</b> (A=Service Ready, B=Not Service Ready):	<b>Program Elements for Code B Items:</b> N/A	<b>Other Related Program Elements:</b> N/A
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**Line Item MDAP/MAIS Code:** N/A

Resource Summary	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	To Complete	Total
Procurement Quantity ( <i>Units in Each</i> )	8	4	4	4	-	4	4	4	4	4	-	36
Gross/Weapon System Cost ( <i>\$ in Millions</i> )	315.231	66.330	72.610	68.405	-	68.405	70.779	72.201	74.532	74.531	-	814.619
Less PY Advance Procurement ( <i>\$ in Millions</i> )	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) ( <i>\$ in Millions</i> )	315.231	66.330	72.610	68.405	-	68.405	70.779	72.201	74.532	74.531	-	814.619
Plus CY Advance Procurement ( <i>\$ in Millions</i> )	-	-	-	-	-	-	-	-	-	-	-	-
<b>Total Obligation Authority (<i>\$ in Millions</i>)</b>	<b>315.231</b>	<b>66.330</b>	<b>72.610</b>	<b>68.405</b>	<b>-</b>	<b>68.405</b>	<b>70.779</b>	<b>72.201</b>	<b>74.532</b>	<b>74.531</b>	<b>-</b>	<b>814.619</b>

*(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> )	39,403.875	16,582.500	18,152.500	17,101.250	-	17,101.250	17,694.750	18,050.250	18,633.000	18,632.750	-	22,628.306

**Description:**

The Department of Defense (DoD) High Performance Computing (HPC) Modernization Program, managed by the Army, supports the needs of all services for technological superiority and military dominance on the battlefield by providing advanced computational services to U.S. weapons system scientists and engineers. By exploiting continuous advances in high performance computing technology, the Defense Research, Development, Test and Evaluation (RDT&E) community is able to resolve critical scientific and engineering problems quickly and with more precision. The results of these efforts align to DoD National Defense Strategy priorities, such as hypersonics, directed energy, autonomy, and artificial intelligence, and feed directly into the acquisition process by improving weapons system designs through an increased understanding of materials, aerodynamics, chemistry, fuels, acoustics, signal image recognition, electromagnetics, and other areas of basic and applied research as well as enabling advanced test and evaluation environments that allow synthetic scene generation, automatic control systems and virtual test environments.

As such, HPC has been identified as a key enabling technology essential to achieving the objectives of the DoD's Science and Technology (S&T), Test and Evaluation (T&E), and acquisition communities. The program deploys compute-intensive and data-intensive systems to provide world-class high performance computing (HPC) capability to the DoD-wide user community.

The HPC Modernization program provides focused modernization efforts crafted to ensure DoD's S&T and T&E communities are supported with current generation supercomputing capabilities. The HPC modernization program resulted from congressional language that recognized supercomputing as a national strategic asset and directed the DoD to focus on supercomputing modernization at laboratories and test centers to keep its forces and military systems on the leading technological edge.

Secondary Distribution	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025
Army	Quantity	4	4	4	-	4	4	4	4
	Total Obligation Authority	66.330	72.610	68.405	-	68.405	70.779	72.201	74.532
<b>Total:</b> Secondary Distribution	Quantity	<b>4</b>	<b>4</b>	<b>4</b>	<b>-</b>	<b>4</b>	<b>4</b>	<b>4</b>	<b>4</b>
	Total Obligation Authority	<b>66.330</b>	<b>72.610</b>	<b>68.405</b>	<b>-</b>	<b>68.405</b>	<b>70.779</b>	<b>72.201</b>	<b>74.532</b>

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

<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 2035A: Other Procurement, Army / BA 02: Communications and Electronics Equipment / BSA 92: Elect Equip - Automation	<b>P-1 Line Item Number / Title:</b> 3005B66501 / High Perf Computing Mod Pgm (HPCMP)
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<b>ID Code</b> (A=Service Ready, B=Not Service Ready):	<b>Program Elements for Code B Items:</b> N/A	<b>Other Related Program Elements:</b> N/A
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**Line Item MDAP/MAIS Code:** N/A

Exhibits Schedule					Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total
Exhibit Type	Title*	Subexhibits	ID CD	MDAP/MAIS Code	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)
P-5	B66501 / High Perf Computing Mod Pgm (HPCMP)	P-5a			8 / 315.231	4 / 66.330	4 / 72.610	4 / 68.405	- / -	4 / 68.405
<b>P-40</b>	<b>Total Gross/Weapon System Cost</b>				<b>8 / 315.231</b>	<b>4 / 66.330</b>	<b>4 / 72.610</b>	<b>4 / 68.405</b>	<b>- / -</b>	<b>4 / 68.405</b>

\*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 2021 Base procurement dollars in the amount of \$64.405 million supports up to four (4) HPC systems at two (2) DoD Supercomputing Resource Center (DRSC) locations.

FY 2021 Base procurement dollars in the amount of \$4.000 million is projected to support two (2) DoD HPC Project Investments (DHPs) for Army, Navy, or Air Force initiatives or two (2) exploratory HPC systems. DHPs require unique specifications or computing classification that cannot be addressed with shared, allocated HPC systems. Exploratory HPC systems investigate new use cases and workloads beyond traditional modeling and simulation, such as big data, artificial intelligence, tactical computing at the edge.

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.



**UNCLASSIFIED**

<b>Exhibit P-5, Cost Analysis: PB 2021 Army</b>		<b>Date:</b> February 2020
<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 2035A / 02 / 92	<b>P-1 Line Item Number / Title:</b> 3005B66501 / High Perf Computing Mod Pgm (HPCMP)	<b>Item Number / Title [DODIC]:</b> B66501 / High Perf Computing Mod Pgm (HPCMP)

<b>ID Code</b> (A=Service Ready, B=Not Service Ready) :	<b>MDAP/MAIS Code:</b>
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<b>Resource Summary</b>	<b>Prior Years</b>	<b>FY 2019</b>	<b>FY 2020</b>	<b>FY 2021 Base</b>	<b>FY 2021 OCO</b>	<b>FY 2021 Total</b>
Procurement Quantity (Units in Each)	8	4	4	4	-	4
Gross/Weapon System Cost (\$ in Millions)	315.231	66.330	72.610	68.405	-	68.405
Less PY Advance Procurement (\$ in Millions)	-	-	-	-	-	-
Net Procurement (P-1) (\$ in Millions)	315.231	66.330	72.610	68.405	-	68.405
Plus CY Advance Procurement (\$ in Millions)	-	-	-	-	-	-
<b>Total Obligation Authority (\$ in Millions)</b>	<b>315.231</b>	<b>66.330</b>	<b>72.610</b>	<b>68.405</b>	<b>-</b>	<b>68.405</b>

*(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)	39,403.875	16,582.500	18,152.500	17,101.250	-	17,101.250

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

<b>Cost Elements</b>	<b>Prior Years</b>			<b>FY 2019</b>			<b>FY 2020</b>			<b>FY 2021 Base</b>			<b>FY 2021 OCO</b>			<b>FY 2021 Total</b>		
	<b>Unit Cost (\$ K)</b>	<b>Qty (Each)</b>	<b>Total Cost (\$ M)</b>	<b>Unit Cost (\$ K)</b>	<b>Qty (Each)</b>	<b>Total Cost (\$ M)</b>	<b>Unit Cost (\$ K)</b>	<b>Qty (Each)</b>	<b>Total Cost (\$ M)</b>	<b>Unit Cost (\$ K)</b>	<b>Qty (Each)</b>	<b>Total Cost (\$ M)</b>	<b>Unit Cost (\$ K)</b>	<b>Qty (Each)</b>	<b>Total Cost (\$ M)</b>	<b>Unit Cost (\$ K)</b>	<b>Qty (Each)</b>	<b>Total Cost (\$ M)</b>
<b>Hardware Cost</b>																		
<b>Non Recurring Cost</b>																		
Dedicated HPC Project Investments <sup>(†)</sup>	1,672.818	11	18.401	2,291.500	2	4.583	2,000.000	2	4.000	2,000.000	2	4.000	-	-	-	2,000.000	2	4.000
Defense Supercomputing Resource Centers <sup>(†)</sup>	29,683.000	10	296.830	30,873.500	2	61.747	34,305.000	2	68.610	32,202.500	2	64.405	-	-	-	32,202.500	2	64.405
<i>Subtotal: Non Recurring Cost</i>	-	-	315.231	-	-	66.330	-	-	72.610	-	-	68.405	-	-	-	-	-	68.405
<i>Subtotal: Hardware Cost</i>	-	-	315.231	-	-	66.330	-	-	72.610	-	-	68.405	-	-	-	-	-	68.405
<b>Gross/Weapon System Cost</b>	<b>39,403.875</b>	<b>8</b>	<b>315.231</b>	<b>16,582.500</b>	<b>4</b>	<b>66.330</b>	<b>18,152.500</b>	<b>4</b>	<b>72.610</b>	<b>17,101.250</b>	<b>4</b>	<b>68.405</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>17,101.250</b>	<b>4</b>	<b>68.405</b>

**Remarks:**

The High Performance Computing Modernization Program (HPCMP) has a broad ordering agreement (BOA) arrangement through Huntsville Engineering Support Center (Army Corps of Engineers), increasing speed to award and acceptance. Other contracting mechanisms may be utilized by the Program if determined to be more advantageous in terms of cost or schedule. All procurements are commercial off the shelf or government off the shelf (COTS/GOTS).

<b>Secondary Distribution</b>	<b>FY 2019</b>	<b>FY 2020</b>	<b>FY 2021 Base</b>	<b>FY 2021 OCO</b>	<b>FY 2021 Total</b>
Army	Quantity 4	4	4	-	4
	Total Obligation Authority 66.330	72.610	68.405	-	68.405
<b>Total:</b>	<b>Quantity 4</b>	<b>4</b>	<b>4</b>	<b>-</b>	<b>4</b>

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<b>Exhibit P-5, Cost Analysis:</b> PB 2021 Army		<b>Date:</b> February 2020
<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 2035A / 02 / 92	<b>P-1 Line Item Number / Title:</b> 3005B66501 / High Perf Computing Mod Pgm (HPCMP)	<b>Item Number / Title [DODIC]:</b> B66501 / High Perf Computing Mod Pgm (HPCMP)

<b>ID Code</b> (A=Service Ready, B=Not Service Ready) :	<b>MDAP/MAIS Code:</b>
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Secondary Distribution		FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total
Secondary Distribution	Total Obligation Authority	66.330	72.610	68.405	-	68.405

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

**UNCLASSIFIED**

**Exhibit P-5a, Procurement History and Planning: PB 2021 Army** **Date:** February 2020

<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 2035A / 02 / 92	<b>P-1 Line Item Number / Title:</b> 3005B66501 / High Perf Computing Mod Pgm (HPCMP)	<b>Item Number / Title [DODIC]:</b> B66501 / High Perf Computing Mod Pgm (HPCMP)
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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
Dedicated HPC Project Investments		2017	Cray, Inc. / Seattle, WA	C / CR	Navy (OPNAV N974B)	Aug 2017	Oct 2017	1	2,577.300	Y		Jun 2017
Dedicated HPC Project Investments		2017	HPE / Vienna, VA	SS / FFP	Army (ATEC)	Sep 2017	Nov 2017	1	1,958.800	Y		Aug 2017
Dedicated HPC Project Investments		2019	TBD / TBD	C / FFP	Army ERDC, DSRC, Vicksburg, MS	Aug 2019	Nov 2019	2	2,291.500	Y		Jul 2019
Dedicated HPC Project Investments		2020	TBD / TBD	TBD	TBD	Sep 2020	May 2021	2	2,000.000	N		Jul 2020
Dedicated HPC Project Investments		2021	TBD / TBD	TBD	TBD	Sep 2021	May 2022	2	2,000.000	N		Jul 2021
Defense Supercomputing Resource Centers		2017	HPE / SGI / Annapolis Junction, MD	C / BOA	AFRL, Wright Patterson AFB	Dec 2017	Jun 2018	1	27,696.000	Y		Mar 2017
Defense Supercomputing Resource Centers		2017	HPE/SGI / Annapolis Junction, MD	C / BOA	Navy DSRC Stennis Space Ctr	Dec 2017	Jun 2018	1	26,078.000	Y		Mar 2017
Defense Supercomputing Resource Centers		2018	Cray, Inc. / Seattle, WA	C / BOA	Army ERDC DSRC, Vicksburg, MS	May 2019	Nov 2019	1	29,553.000	Y		Sep 2018
Defense Supercomputing Resource Centers		2018	IBM / Bethesda, MD	C / BOA	Army ARL DSRC, Aberdeen, MD	Jun 2019	Oct 2019	1	9,500.000	Y		Jan 2019
Defense Supercomputing Resource Centers		2018	Cray, Inc 1 / Seattle, WA	C / BOA	Army ARL DSRC, Aberdeen, MD	May 2019	Nov 2019	1	27,310.000	Y		Sep 2018
Defense Supercomputing Resource Centers		2019	TBD / TBD	C / BOA	AFRL, Wright Patterson AFB	Sep 2019	Feb 2020	1	30,873.500	N		Mar 2019
Defense Supercomputing Resource Centers		2019	TBD - 1 / TBD - 1	C / BOA	Navy DSRC Stennis Space Ctr	Sep 2019	Feb 2020	1	30,873.500	N		Mar 2019
Defense Supercomputing Resource Centers		2020	TBD / TBD	C / BOA	Army ERDC DSRC, Vicksburg, MS	Sep 2020	Feb 2021	1	31,805.000	N		Mar 2020
Defense Supercomputing Resource Centers		2020	TBD - 1 / TBD - 1	C / BOA	Army ARL DSRC, Aberdeen, MD	Sep 2020	Feb 2021	1	31,805.000	N		Mar 2020
Defense Supercomputing Resource Centers		2021	TBD / TBD	TBD	AFRL, Wright Patterson AFB	Sep 2021	Feb 2022	1	32,238.500	N		Mar 2021
Defense Supercomputing Resource Centers		2021	TBD - 1 / TBD - 1	TBD	Navy DSRC Stennis Space Ctr	Sep 2021	Feb 2022	1	32,238.500	N		Mar 2021

**Remarks:**  
The High Performance Computing Modernization Program (HPCMP) has a five year broad ordering agreement (BOA) arrangement through Huntsville Engineering Support Center (Army Corps of Engineers), increasing speed to award and acceptance. All procurements are commercial off the shelf or government off the shelf (COTS/GOTS).

**UNCLASSIFIED**

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

<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 2035A: Other Procurement, Army / BA 02: Communications and Electronics Equipment / BSA 92: Elect Equip - Automation	<b>P-1 Line Item Number / Title:</b> 3009B66001 / Contract Writing System
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<b>ID Code</b> (A=Service Ready, B=Not Service Ready):	<b>Program Elements for Code B Items:</b> N/A	<b>Other Related Program Elements:</b> 0605047A
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**Line Item MDAP/MAIS Code:** N/A

Resource Summary	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	To Complete	Total
Procurement Quantity ( <i>Units in Each</i> )	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost ( <i>\$ in Millions</i> )	1.807	5.927	6.000	8.459	-	8.459	5.821	-	-	-	Continuing	Continuing
Less PY Advance Procurement ( <i>\$ in Millions</i> )	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) ( <i>\$ in Millions</i> )	1.807	5.927	6.000	8.459	-	8.459	5.821	-	-	-	Continuing	Continuing
Plus CY Advance Procurement ( <i>\$ in Millions</i> )	-	-	-	-	-	-	-	-	-	-	-	-
<b>Total Obligation Authority (<i>\$ in Millions</i>)</b>	<b>1.807</b>	<b>5.927</b>	<b>6.000</b>	<b>8.459</b>	<b>-</b>	<b>8.459</b>	<b>5.821</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>Continuing</b>	<b>Continuing</b>

*(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 Army Contract Writing System (ACWS) will be the Army's single next-generation, enterprise-wide contract writing, management, execution, and close-out software system. ACWS will facilitate the standardization of Army Procurement business processes and streamline the integration with Army Enterprise Resource Planning (ERP) systems. As a financial feeder system, ACWS will meet the compliance requirements of the Federal Financial Management Improvement Act of 1996 (FFMIA). The system will meet the full scope of Army Contracting requirements, including those in secure and non-secure locations, those supporting combat or non-combat contingencies, those within or outside the borders of the Continental United States, those supporting grants and assistance agreements, and those performing weapons systems, construction, installation, and other specialized contracting activities. This is consistent with initial DOD guidance 21 October 2011, which directed the Services to develop a new contract writing system. Since awarding a contract to CGI Federal Inc. on 22 May 2017, the program completed risk reduction that aligned Army's business processes to the selected commercial-off-the-shelf product and reduced unnecessary requirements and interfaces. The program conducted a successful Baseline Authority to Proceed decision on 18 August 2018, and obtained the Army Acquisition Executive's approval to award initial development task order. ACWS is on track to deploy a Minimum Viable Solution (MVS) to two pilot units during FY 2020 and achieve Initial Operational Capability (IOC) NLT 4Q FY 2020. If the full capability is not fully deployed by the end of FY 2023, the Army will incur the full SPS bill (\$14M+/ year). ACWS will also enable the decommission of the Procurement Automated Data and Document System (PADDS) and Virtual Contracting Enterprise (VCE) systems.

ACWS was approved by The Under Secretary of Defense for Acquisition and Sustainment (USD (A&S)) as one of the pilot programs supporting the FY 2018 National Defense Authorization Act (NDAA) Section 873 Agile Pilots. The ACWS 873 Agile Pilot Realignment Plan was approved 2QFY 2019, and cites duration of the Program as five years through Full Deployment. As part of the Sec 873 activities ACWS is realigning and restructuring during the IOC development that will include a contract structure that enables Agile best practices and incremental capability delivery to the field. ACWS, as Sec 873 Agile Pilot Program, will support OSD requirement to quickly identify lessons learned, reduce procedural delays, improve policy, and enhance workforce training. Sec 873 Pilot provides programs the opportunity to restructure in order to streamline contract and acquisition approaches and tear down barriers to agile development without penalty. The process allows the Army ability to analyze and prioritize requirements to enable deployable product on demand, the cadence and content of system documentation and programmatic reviews, and a transparent culture in a blended government-system integrator team as the program realigns to Agile methodology. ACWS participates in the 873 Community of Practice, sharing and utilizing lessons learned, shaping agile policy, processes, and tools for DoD.

During FY2020, ACWS will coordinate with the Navy's eProcurement System (ePS) team to identify and implement efficiencies; the two teams will continue implementing those plans during FY2021, including leveraging economies of scale in support of license purchases.

FY2020 OPA will be used to begin to acquire system licenses for field users, as well as deploy, and train users on the IOC release. FY2021 OPA will be used to continue to acquire system licenses for field users, as well as field, deploy, and train users in support of the FD release.

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<b>Exhibit P-40, Budget Line Item Justification:</b> PB 2021 Army							<b>Date:</b> February 2020			
<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 2035A: Other Procurement, Army / BA 02: Communications and Electronics Equipment / BSA 92: Elect Equip - Automation					<b>P-1 Line Item Number / Title:</b> 3009B66001 / Contract Writing System					
<b>ID Code</b> (A=Service Ready, B=Not Service Ready):			<b>Program Elements for Code B Items:</b> N/A			<b>Other Related Program Elements:</b> 0605047A				
<b>Line Item MDAP/MAIS Code:</b> N/A										

Secondary Distribution		FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025
Army	Quantity	-	-	-	-	-	-	-	-	-
	Total Obligation Authority	5.927	6.000	8.459	-	8.459	5.821	-	-	-
<b>Total:</b> Secondary Distribution	Quantity	-	-	-	-	-	-	-	-	-
	Total Obligation Authority	<b>5.927</b>	<b>6.000</b>	<b>8.459</b>	-	<b>8.459</b>	<b>5.821</b>	-	-	-

**UNCLASSIFIED**

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

**Appropriation / Budget Activity / Budget Sub Activity:** 2035A: Other Procurement, Army / BA 02: Communications and Electronics Equipment / BSA 92: Elect Equip - Automation **P-1 Line Item Number / Title:** 3009B66001 / Contract Writing System

**ID Code** (A=Service Ready, B=Not Service Ready): **Program Elements for Code B Items:** N/A **Other Related Program Elements:** 0605047A

**Line Item MDAP/MAIS Code:** N/A

Exhibits Schedule					Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total
Exhibit Type	Title*	Subexhibits	ID CD	MDAP/MAIS Code	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)
P-5	B66002 / Army Contract Writing System				- / 1.807	- / 5.927	- / 6.000	- / 8.459	- / -	- / 8.459
<b>P-40</b>	<b>Total Gross/Weapon System Cost</b>				<b>- / 1.807</b>	<b>- / 5.927</b>	<b>- / 6.000</b>	<b>- / 8.459</b>	<b>- / -</b>	<b>- / 8.459</b>

\*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:**  
 FY2021 base procurement funds in the amount of \$3.766 million to procure requisite ACWS software licenses for Full Deployment (FD) as the solution will ultimately support 10,000 Army users across the world. OPA funds of \$4.693 million support deployment activities including training and deployment teams for the Release which will be deployed in first quarter FY2021 and run throughout the year. Funding also supports system fielding activities including training, deployment, and Organization Change Management (Solider Touchpoints).

**UNCLASSIFIED**

<b>Exhibit P-5, Cost Analysis: PB 2021 Army</b>		<b>Date:</b> February 2020
<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 2035A / 02 / 92	<b>P-1 Line Item Number / Title:</b> 3009B66001 / Contract Writing System	<b>Item Number / Title [DODIC]:</b> B66002 / Army Contract Writing System

<b>ID Code</b> (A=Service Ready, B=Not Service Ready) :				<b>MDAP/MAIS Code:</b>					
Resource Summary				Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total
Procurement Quantity ( <i>Units in Each</i> )				-	-	-	-	-	-
Gross/Weapon System Cost ( <i>\$ in Millions</i> )				1.807	5.927	6.000	8.459	-	8.459
Less PY Advance Procurement ( <i>\$ in Millions</i> )				-	-	-	-	-	-
Net Procurement (P-1) ( <i>\$ in Millions</i> )				1.807	5.927	6.000	8.459	-	8.459
Plus CY Advance Procurement ( <i>\$ in Millions</i> )				-	-	-	-	-	-
<b>Total Obligation Authority</b> ( <i>\$ in Millions</i> )				<b>1.807</b>	<b>5.927</b>	<b>6.000</b>	<b>8.459</b>	<b>-</b>	<b>8.459</b>
<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> )				-	-	-	-	-	-

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

Cost Elements	Prior Years			FY 2019			FY 2020			FY 2021 Base			FY 2021 OCO			FY 2021 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																		
Non Recurring Cost																		
Deployment & Training	17.000	1	0.017	-	-	-	2,000.000	1	2.000	4,693.000	1	4.693	-	-	-	4,693.000	1	4.693
Software License	1,790.000	1	1.790	5,927.000	1	5.927	4,000.000	1	4.000	3,766.000	1	3.766	-	-	-	3,766.000	1	3.766
<i>Subtotal: Non Recurring Cost</i>	-	-	<i>1.807</i>	-	-	<i>5.927</i>	-	-	<i>6.000</i>	-	-	<i>8.459</i>	-	-	-	-	-	<i>8.459</i>
<i>Subtotal: Software Cost</i>	-	-	<i>1.807</i>	-	-	<i>5.927</i>	-	-	<i>6.000</i>	-	-	<i>8.459</i>	-	-	-	-	-	<i>8.459</i>
<b>Gross/Weapon System Cost</b>	-	-	<b>1.807</b>	-	-	<b>5.927</b>	-	-	<b>6.000</b>	-	-	<b>8.459</b>	-	-	-	-	-	<b>8.459</b>

**Remarks:**

In FY2019, ACWS returned \$5.927 million of OPA to congress. In FY2020, ACWS was marked by congress, reducing OPA funds from \$15 million to \$6 million. Both instances were due to funding being ahead of need. These reductions in OPA will catch up to ACWS in future years, as user licenses and deployment services are still required to complete the ACWS implementation.

Secondary Distribution		FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total
Army	Quantity	-	-	-	-	-
	Total Obligation Authority	5.927	6.000	8.459	-	8.459
<b>Total: Secondary Distribution</b>	Quantity	-	-	-	-	-
	Total Obligation Authority	5.927	6.000	8.459	-	8.459

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

<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 2035A: Other Procurement, Army / BA 02: Communications and Electronics Equipment / BSA 92: Elect Equip - Automation	<b>P-1 Line Item Number / Title:</b> 3051BD3501 / CSS Communications
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<b>ID Code</b> (A=Service Ready, B=Not Service Ready):	<b>Program Elements for Code B Items:</b> N/A	<b>Other Related Program Elements:</b> N/A
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**Line Item MDAP/MAIS Code:** N/A

Resource Summary	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	To Complete	Total
Procurement Quantity ( <i>Units in Each</i> )	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost ( <i>\$ in Millions</i> )	386.049	-	24.700	57.651	-	57.651	63.934	87.430	112.785	112.685	-	845.234
Less PY Advance Procurement ( <i>\$ in Millions</i> )	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) ( <i>\$ in Millions</i> )	386.049	-	24.700	57.651	-	57.651	63.934	87.430	112.785	112.685	-	845.234
Plus CY Advance Procurement ( <i>\$ in Millions</i> )	-	-	-	-	-	-	-	-	-	-	-	-
<b>Total Obligation Authority (<i>\$ in Millions</i>)</b>	<b>386.049</b>	<b>-</b>	<b>24.700</b>	<b>57.651</b>	<b>-</b>	<b>57.651</b>	<b>63.934</b>	<b>87.430</b>	<b>112.785</b>	<b>112.685</b>	<b>-</b>	<b>845.234</b>

*(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 Combat Service Support (CSS) Communications funding line supports the Army's Network Modernization Strategy Line Of Effort (LOE) 1 (Unified Network) and supports the Army's strategy for Logistics Transport Convergence. Efforts are aligned to support the Network-Cross Functional Team capability set approach to achieve the network modernization strategy.

The Combat Service Support (CSS) Communications program funding line will support the Army's Sustainment Tactical Network (STN), a full spectrum logistics communication requirement currently supported under two programs: a wireless capability, replacing the legacy Combat Service Support Automated Information System Interface (CAISI), and Combat Service Support Very Small Aperture Terminal (CSS VSAT) terminal capability. Developed for the General Purpose User (GPU), STN provides network connectivity for sustainment, medical, and administrative information to be exchanged on the battlefield across multiple echelons. The SATCOM VSAT Terminal augments the tactical communications network of the current force, at all logistics levels, with tailored commercial off-the-shelf (COTS) network capabilities for enabling Sustainment Information Systems (SIS) communications. The legacy VSAT and CAISI programs have an AAO of 32,795 end items fielded (3,620 VSAT terminals and 29,175 CAISI systems) supporting Army logistics operations. These were originally fielded in 2004 and cannot be technically or economically sustained past their 2024 end of life.

CSS Communications funding line supports modernization of the VSAT terminals and local transport, leveraging COTS solutions, to provide the DoD Information Network-Army (DODIN-A) access to wireless and wired network access point services. The modernized VSAT and local transport program will have an AAO of 32,580 end items fielded; 4,000 VSAT terminals and 28,580 local transport. Modernization efforts will ensure continued support of SIS communications globally, at Home Station (garrison) and into the tactical, operational and strategic battle space. This will enable access to required sustainment business process systems that use Enterprise Resource Planning (ERP) software, such as Global Combat Support System-Army (GCSS-Army), Integrated Personnel and Pay System-Army (IPPS-A) and GCSS-Marine, which require global connectivity capabilities. These programs and their associated data are Enterprise level services, requiring unit access to reliable, redundant and continuous reach back capabilities to the DODIN. This will be provided by the modernized VSAT and local transport. Additionally, these modernization efforts support the Army's strategy for Logistics Transport Convergence.

Secondary Distribution	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025
Army	Quantity	-	-	-	-	-	-	-	-
	Total Obligation Authority	-	24.700	57.651	-	57.651	63.934	55.244	47.076
ANG	Quantity	-	-	-	-	-	-	-	-
	Total Obligation Authority	-	-	-	-	-	32.186	26.970	27.200



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<b>Exhibit P-40, Budget Line Item Justification:</b> PB 2021 Army							<b>Date:</b> February 2020			
<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 2035A: Other Procurement, Army / BA 02: Communications and Electronics Equipment / BSA 92: Elect Equip - Automation					<b>P-1 Line Item Number / Title:</b> 3051BD3501 / CSS Communications					
<b>ID Code</b> (A=Service Ready, B=Not Service Ready):			<b>Program Elements for Code B Items:</b> N/A			<b>Other Related Program Elements:</b> N/A				
<b>Line Item MDAP/MAIS Code:</b> N/A										

Secondary Distribution		FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025
AR	Quantity	-	-	-	-	-	-	-	-	-
	Total Obligation Authority	-	-	-	-	-	-	-	38.739	38.371
<b>Total:</b> Secondary Distribution	Quantity	-	-	-	-	-	-	-	-	-
	Total Obligation Authority	-	24.700	57.651	-	57.651	63.934	87.430	112.785	112.685

**UNCLASSIFIED**

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

**Appropriation / Budget Activity / Budget Sub Activity:**  
 2035A: Other Procurement, Army / BA 02: Communications and Electronics  
 Equipment / BSA 92: Elect Equip - Automation

**P-1 Line Item Number / Title:**  
 3051BD3501 / CSS Communications

**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 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total
Exhibit Type	Title*	Subexhibits	ID CD	MDAP/MAIS Code	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)
P-5	BD3513 / CSS SATCOM	P-5a			- / 386.049	- / -	- / 24.700	- / 57.651	- / -	- / 57.651
<b>P-40</b>	<b>Total Gross/Weapon System Cost</b>				<b>- / 386.049</b>	<b>- / -</b>	<b>- / 24.700</b>	<b>- / 57.651</b>	<b>- / -</b>	<b>- / 57.651</b>

\*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 2021 Base procurement dollars in the amount of \$57.651 million procures 138 multi-band Very Small Aperture Terminals (VSATs) to support a USAREUR ONS, signed 10 May 2019. These VSATs will resolve growing gaps, providing assured communications within the logistics network by replacing current single-band Combat Service Support VSATs. Operational needs require a smaller, lighter system that is able to transition between frequency allocation bands at any time and that reduces susceptibility to position tracking and jamming.

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**

<b>Exhibit P-5, Cost Analysis: PB 2021 Army</b>													<b>Date:</b> February 2020								
<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 2035A / 02 / 92						<b>P-1 Line Item Number / Title:</b> 3051BD3501 / CSS Communications						<b>Item Number / Title [DODIC]:</b> BD3513 / CSS SATCOM									
<b>ID Code</b> (A=Service Ready, B=Not Service Ready) :									<b>MDAP/MAIS Code:</b>												
<b>Resource Summary</b>				<b>Prior Years</b>			<b>FY 2019</b>			<b>FY 2020</b>			<b>FY 2021 Base</b>			<b>FY 2021 OCO</b>			<b>FY 2021 Total</b>		
Procurement Quantity ( <i>Units in Each</i> )				-			-			-			-			-			-		
Gross/Weapon System Cost ( <i>\$ in Millions</i> )				386.049			-			24.700			57.651			-			57.651		
Less PY Advance Procurement ( <i>\$ in Millions</i> )				-			-			-			-			-			-		
Net Procurement (P-1) ( <i>\$ in Millions</i> )				386.049			-			24.700			57.651			-			57.651		
Plus CY Advance Procurement ( <i>\$ in Millions</i> )				-			-			-			-			-			-		
<b>Total Obligation Authority</b> ( <i>\$ in Millions</i> )				<b>386.049</b>			<b>-</b>			<b>24.700</b>			<b>57.651</b>			<b>-</b>			<b>57.651</b>		
<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> )				-			-			392.063			417.761			-			417.761		
Note: Subtotals or Totals in this Exhibit P-5 may not be exact or sum exactly due to rounding.																					
<b>Cost Elements</b>		<b>Prior Years</b>			<b>FY 2019</b>			<b>FY 2020</b>			<b>FY 2021 Base</b>			<b>FY 2021 OCO</b>			<b>FY 2021 Total</b>				
		<b>Unit Cost</b> (\$ K)	<b>Qty</b> (Each)	<b>Total Cost</b> (\$ M)	<b>Unit Cost</b> (\$ K)	<b>Qty</b> (Each)	<b>Total Cost</b> (\$ M)	<b>Unit Cost</b> (\$ K)	<b>Qty</b> (Each)	<b>Total Cost</b> (\$ M)	<b>Unit Cost</b> (\$ K)	<b>Qty</b> (Each)	<b>Total Cost</b> (\$ M)	<b>Unit Cost</b> (\$ K)	<b>Qty</b> (Each)	<b>Total Cost</b> (\$ M)	<b>Unit Cost</b> (\$ K)	<b>Qty</b> (Each)	<b>Total Cost</b> (\$ M)		
Flyaway Cost																					
Recurring Cost																					
Combat Service Support Automated Information Systems (CAISI)		-	-	193.025	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
Local Transport - CAISI Modernization <sup>(f)</sup>		-	-	-	-	-	264.389	36	9.518	-	-	-	-	-	-	-	-	-	-		
Very Small Aperture Terminal (VSAT)		-	-	193.024	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-		
VSAT Modernization <sup>(f)</sup>		-	-	-	-	-	264.370	27	7.138	316.920	138	43.735	-	-	-	316.920	138	43.735			
<i>Subtotal: Recurring Cost</i>		-	-	<b>386.049</b>	-	-	-	-	<b>16.656</b>	-	-	<b>43.735</b>	-	-	-	-	-	<b>43.735</b>			
<i>Subtotal: Flyaway Cost</i>		-	-	<b>386.049</b>	-	-	-	-	<b>16.656</b>	-	-	<b>43.735</b>	-	-	-	-	-	<b>43.735</b>			
Support - Fielding Cost																					
Fielding		-	-	-	-	-	-	-	3.165	-	-	8.531	-	-	-	-	-	8.531			
<i>Subtotal: Support - Fielding Cost</i>		-	-	-	-	-	-	-	<b>3.165</b>	-	-	<b>8.531</b>	-	-	-	-	-	<b>8.531</b>			
Support - Program Management Cost																					
Government Management		-	-	-	-	-	-	-	1.001	-	-	1.169	-	-	-	-	-	1.169			
<i>Subtotal: Support - Program Management Cost</i>		-	-	-	-	-	-	-	<b>1.001</b>	-	-	<b>1.169</b>	-	-	-	-	-	<b>1.169</b>			
Support - System Engineering Cost																					
System Engineering		-	-	-	-	-	-	-	3.878	-	-	4.216	-	-	-	-	-	4.216			

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<b>Exhibit P-5, Cost Analysis: PB 2021 Army</b>												<b>Date:</b> February 2020					
<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 2035A / 02 / 92						<b>P-1 Line Item Number / Title:</b> 3051BD3501 / CSS Communications						<b>Item Number / Title [DODIC]:</b> BD3513 / CSS SATCOM					
<b>ID Code</b> (A=Service Ready, B=Not Service Ready) :												<b>MDAP/MAIS Code:</b>					

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

Cost Elements	Prior Years			FY 2019			FY 2020			FY 2021 Base			FY 2021 OCO			FY 2021 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 Engineering Cost</i>	-	-	-	-	-	-	-	-	3.878	-	-	4.216	-	-	-	-	-	4.216
<b>Gross/Weapon System Cost</b>	-	-	386.049	-	-	-	392.063	-	24.700	417.761	-	57.651	-	-	-	417.761	-	57.651

**Remarks:**

FY 2020 and FY2021 unit costs incorporate updated market research and leverage comparable program of record actual costs to estimate the life-cycle cost for the modernization of VSAT and CAISI system platforms. This life-cycle cost estimate revision also accounts for the increased Systems Engineering Support required to meet fielding, training and logistics support requirements.

Secondary Distribution		FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total
Army	Quantity	-	-	-	-	-
	Total Obligation Authority	-	24.700	57.651	-	57.651
<b>Total: Secondary Distribution</b>	Quantity	-	-	-	-	-
	<b>Total Obligation Authority</b>	-	<b>24.700</b>	<b>57.651</b>	-	<b>57.651</b>

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

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**Exhibit P-5a, Procurement History and Planning:** PB 2021 Army **Date:** February 2020

<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 2035A / 02 / 92	<b>P-1 Line Item Number / Title:</b> 3051BD3501 / CSS Communications	<b>Item Number / Title [DODIC]:</b> BD3513 / CSS SATCOM
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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
Local Transport - CAISI Modernization		2020	TBD / TBD	C / FFP	TBD	Apr 2020	Jan 2021	36	264.389	N		
VSAT Modernization		2020	TBD / TBD	C / FFP	TBD	Apr 2020	Jan 2021	27	264.370	N		
VSAT Modernization		2021	TBD / TBD	C / FFP	TBD	Jan 2021	Jan 2022	138	316.917	N		

**Remarks:**  
FY 2020 and FY 2021 unit costs incorporate updated market research and leverage comparable program of record actual costs to estimate the life-cycle cost for the modernization of VSAT and CAISI system platforms. This life-cycle cost estimate revision also accounts for the increased Systems Engineering Support required to meet fielding, training and logistics support requirements.

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

<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 2035A: Other Procurement, Army / BA 02: Communications and Electronics Equipment / BSA 92: Elect Equip - Automation	<b>P-1 Line Item Number / Title:</b> 9956BE4167 / Reserve Component Automation Sys (RCAS)
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<b>ID Code</b> (A=Service Ready, B=Not Service Ready):	<b>Program Elements for Code B Items:</b> N/A	<b>Other Related Program Elements:</b> N/A
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**Line Item MDAP/MAIS Code:** N/A

Resource Summary	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	To Complete	Total
Procurement Quantity ( <i>Units in Each</i> )	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost ( <i>\$ in Millions</i> )	1,925.759	27.896	27.879	14.848	-	14.848	14.409	-	-	-	-	2,010.791
Less PY Advance Procurement ( <i>\$ in Millions</i> )	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) ( <i>\$ in Millions</i> )	1,925.759	27.896	27.879	14.848	-	14.848	14.409	-	-	-	-	2,010.791
Plus CY Advance Procurement ( <i>\$ in Millions</i> )	-	-	-	-	-	-	-	-	-	-	-	-
<b>Total Obligation Authority</b> ( <i>\$ in Millions</i> )	<b>1,925.759</b>	<b>27.896</b>	<b>27.879</b>	<b>14.848</b>	<b>-</b>	<b>14.848</b>	<b>14.409</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>2,010.791</b>

*(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 Reserve Component Automation System (RCAS) is the Army's system of choice and record for all Reserve Component (United States Army Reserve (USAR) and Army National Guard (ARNG)) commands mobilizing their citizen soldiers for disaster response, homeland security, and overseas deployment. Established in response to a Government Accountability Office report on the Army Reserve Component's inability to provide timely and accurate mobilization data, the system now dramatically improves the Army's and the States' ability to organize, train, equip and mobilize their Citizen Soldiers.

RCAS provides 15 web-based, software applications that support the Army Reserve Component's requirements for Force Management, Mobilization, Personnel, and Safety. RCAS was fully deployed in 2004 and is currently in sustainment, which includes modifications/updates to RCAS software, infrastructure refresh of end-user devices and network hardware, and end-user training. RCAS has been successfully utilized in response to 9/11, Homeland Security missions, National Training exercises, Disaster Relief, and Operations Iraqi Freedom, New Dawn, Enduring Freedom and Freedom's Sentinel.

The OPA funding allows the Army to securely link approximately 10,500 Army Reserve (USAR) and Army National Guard (ARNG) units at roughly 4,000 sites in 50 States, Washington, DC, Guam, Puerto Rico, and the Virgin Islands; this allows the Reserve Component units to connect to DODIN-A and access DA and DoD enterprise applications that support readiness, force management, mobilization and safety and occupational health. The RCAS network hardware infrastructure is refreshed on a five-year cycle, replacing approximately 10% of the fielded infrastructure per year.

Secondary Distribution	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025
Army	Quantity	-	-	-	-	-	-	-	-
	Total Obligation Authority	27.896	-	14.848	-	14.848	14.409	-	-
ANG	Quantity	-	-	-	-	-	-	-	-
	Total Obligation Authority	-	16.727	-	-	-	-	-	-
AR	Quantity	-	-	-	-	-	-	-	-
	Total Obligation Authority	-	11.152	-	-	-	-	-	-
<b>Total:</b>	<b>Quantity</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>

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

<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 2035A: Other Procurement, Army / BA 02: Communications and Electronics Equipment / BSA 92: Elect Equip - Automation	<b>P-1 Line Item Number / Title:</b> 9956BE4167 / Reserve Component Automation Sys (RCAS)
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<b>ID Code</b> (A=Service Ready, B=Not Service Ready):	<b>Program Elements for Code B Items:</b> N/A	<b>Other Related Program Elements:</b> N/A
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**Line Item MDAP/MAIS Code:** N/A

Secondary Distribution		FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025
Secondary Distribution	Total Obligation Authority	27.896	27.879	14.848	-	14.848	14.409	-	-	-

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**UNCLASSIFIED**

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

**Appropriation / Budget Activity / Budget Sub Activity:**  
 2035A: Other Procurement, Army / BA 02: Communications and Electronics  
 Equipment / BSA 92: Elect Equip - Automation

**P-1 Line Item Number / Title:**  
 9956BE4167 / Reserve Component Automation Sys (RCAS)

**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 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total
Exhibit Type	Title*	Subexhibits	ID CD	MDAP/MAIS Code	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)
P-5	BE4167 / Reserve Component Automation Sys (RCAS)	P-5a			- / 1,925.759	- / 27.896	- / 27.879	- / 14.848	- / -	- / 14.848
<b>P-40</b>	<b>Total Gross/Weapon System Cost</b>				<b>- / 1,925.759</b>	<b>- / 27.896</b>	<b>- / 27.879</b>	<b>- / 14.848</b>	<b>- / -</b>	<b>- / 14.848</b>

\*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 2021 (FY21) Base procurement dollars in the amount of \$14.848 million will support approximately 10% refresh of the RCAS network hardware infrastructure. The FY21 total base procurement dollars of \$14.848 million is split between the Army National Guard, \$8.909 million and the US Army Reserve, \$5.939 million. Funding supports network modernization at 373 Army National Guard (ARNG) Readiness and U.S. Army Reserve (USAR) Centers, which represents 10% of the 3,731 fielded ARNG Readiness and USAR Centers. This refresh schedule is based on a 10-year cycle. RCAS executes a single network hardware procurement contract for refresh of 373 sites with FY21 funds.

The level of effort for Technical Refresh of each site (ARNG/USAR readiness centers) is different depending on the construct of the operation. Tech Refresh at the scheduled sites is planned in advance on a 5-year cycle, but age and performance dictate the amount of Technical Refresh at the scheduled sites so it is not always a one for one replacement of hardware. The program will support network hardware and software refresh to ARNG and USAR commands and units based on priorities established by the respective Components. The program will satisfy agency information technology mandates with respect to information assurance, net worthiness, server consolidation, and a common operating environment.



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<b>Exhibit P-5, Cost Analysis: PB 2021 Army</b>		<b>Date:</b> February 2020
<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 2035A / 02 / 92	<b>P-1 Line Item Number / Title:</b> 9956BE4167 / Reserve Component Automation Sys (RCAS)	<b>Item Number / Title [DODIC]:</b> BE4167 / Reserve Component Automation Sys (RCAS)

<b>ID Code</b> (A=Service Ready, B=Not Service Ready) :	<b>MDAP/MAIS Code:</b>
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<b>Resource Summary</b>	<b>Prior Years</b>	<b>FY 2019</b>	<b>FY 2020</b>	<b>FY 2021 Base</b>	<b>FY 2021 OCO</b>	<b>FY 2021 Total</b>
Procurement Quantity (Units in Each)	-	-	-	-	-	-
Gross/Weapon System Cost (\$ in Millions)	1,925.759	27.896	27.879	14.848	-	14.848
Less PY Advance Procurement (\$ in Millions)	-	-	-	-	-	-
Net Procurement (P-1) (\$ in Millions)	1,925.759	27.896	27.879	14.848	-	14.848
Plus CY Advance Procurement (\$ in Millions)	-	-	-	-	-	-
<b>Total Obligation Authority (\$ in Millions)</b>	<b>1,925.759</b>	<b>27.896</b>	<b>27.879</b>	<b>14.848</b>	<b>-</b>	<b>14.848</b>

*(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.

<b>Cost Elements</b>	<b>Prior Years</b>			<b>FY 2019</b>			<b>FY 2020</b>			<b>FY 2021 Base</b>			<b>FY 2021 OCO</b>			<b>FY 2021 Total</b>		
	<b>Unit Cost (\$ K)</b>	<b>Qty (Each)</b>	<b>Total Cost (\$ M)</b>	<b>Unit Cost (\$ K)</b>	<b>Qty (Each)</b>	<b>Total Cost (\$ M)</b>	<b>Unit Cost (\$ K)</b>	<b>Qty (Each)</b>	<b>Total Cost (\$ M)</b>	<b>Unit Cost (\$ K)</b>	<b>Qty (Each)</b>	<b>Total Cost (\$ M)</b>	<b>Unit Cost (\$ K)</b>	<b>Qty (Each)</b>	<b>Total Cost (\$ M)</b>	<b>Unit Cost (\$ K)</b>	<b>Qty (Each)</b>	<b>Total Cost (\$ M)</b>
Hardware Cost																		
Recurring Cost																		
Life Cycle Replacement Hardware <sup>(1)</sup>	1,925,759.000	1	1,925.759	27,896.000	1	27.896	27,879.000	1	27.879	14,848.000	1	14.848	-	-	-	14,848.000	1	14.848
Subtotal: Recurring Cost	-	-	1,925.759	-	-	27.896	-	-	27.879	-	-	14.848	-	-	-	-	-	14.848
Subtotal: Hardware Cost	-	-	<b>1,925.759</b>	-	-	<b>27.896</b>	-	-	<b>27.879</b>	-	-	<b>14.848</b>	-	-	-	-	-	<b>14.848</b>
<b>Gross/Weapon System Cost</b>	-	-	<b>1,925.759</b>	-	-	<b>27.896</b>	-	-	<b>27.879</b>	-	-	<b>14.848</b>	-	-	-	-	-	<b>14.848</b>

<b>Secondary Distribution</b>		<b>FY 2019</b>	<b>FY 2020</b>	<b>FY 2021 Base</b>	<b>FY 2021 OCO</b>	<b>FY 2021 Total</b>
Army	Quantity	-	-	-	-	-
	Total Obligation Authority	27.896	-	14.848	-	14.848
ANG	Quantity	-	-	-	-	-
	Total Obligation Authority	-	16.727	-	-	-
AR	Quantity	-	-	-	-	-
	Total Obligation Authority	-	11.152	-	-	-
<b>Total: Secondary Distribution</b>	<b>Quantity</b>	-	-	-	-	-
	<b>Total Obligation Authority</b>	<b>27.896</b>	<b>27.879</b>	<b>14.848</b>	<b>-</b>	<b>14.848</b>

**UNCLASSIFIED**

<b>Exhibit P-5, Cost Analysis:</b> PB 2021 Army		<b>Date:</b> February 2020
<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 2035A / 02 / 92	<b>P-1 Line Item Number / Title:</b> 9956BE4167 / Reserve Component Automation Sys (RCAS)	<b>Item Number / Title [DODIC]:</b> BE4167 / Reserve Component Automation Sys (RCAS)
<b>ID Code</b> (A=Service Ready, B=Not Service Ready) :	<b>MDAP/MAIS Code:</b>	

(†) indicates the presence of a P-5a

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<b>Exhibit P-5a, Procurement History and Planning:</b> PB 2021 Army							<b>Date:</b> February 2020				
<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 2035A / 02 / 92			<b>P-1 Line Item Number / Title:</b> 9956BE4167 / Reserve Component Automation Sys (RCAS)				<b>Item Number / Title [DODIC]:</b> BE4167 / Reserve Component Automation Sys (RCAS)				

<b>Cost Elements</b>	<b>O C O</b>	<b>FY</b>	<b>Contractor and Location</b>	<b>Method/Type or Funding Vehicle</b>	<b>Location of PCO</b>	<b>Award Date</b>	<b>Date of First Delivery</b>	<b>Qty (Each)</b>	<b>Unit Cost (\$ K)</b>	<b>Specs Avail Now?</b>	<b>Date Revision Available</b>	<b>RFP Issue Date</b>
Life Cycle Replacement Hardware		2019	CACI Enterprise Solutions, INC / Reston, VA	C / CR	Washington, DC	May 2019	Jun 2019	1	27,896.000	Y		
Life Cycle Replacement Hardware		2020	CACI Enterprise Solutions, INC / Reston, VA	C / CR	Washington, DC	May 2020	Jun 2020	1	27,879.000	Y		
Life Cycle Replacement Hardware		2021	CACI Enterprise Solutions, INC / Reston, VA	C / CR	Washington, DC	May 2021	Jun 2021	1	14,848.000	Y		

**Remarks:**  
CACI Enterprise Solutions Inc. is the prime contractor for RCAS. All items are COTS/GOTS solutions.

**UNCLASSIFIED**

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

<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 2035A: Other Procurement, Army / BA 02: Communications and Electronics Equipment / BSA 95: Elect Equip - Audio Visual Sys (A/V)	<b>P-1 Line Item Number / Title:</b> 9993B68501 / TACTICAL DIGITAL MEDIA
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<b>ID Code</b> (A=Service Ready, B=Not Service Ready):	<b>Program Elements for Code B Items:</b> N/A	<b>Other Related Program Elements:</b> N/A
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**Line Item MDAP/MAIS Code:** N/A

Resource Summary	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	To Complete	Total
Procurement Quantity ( <i>Units in Each</i> )	190	150	-	-	-	-	-	-	-	-	-	340
Gross/Weapon System Cost ( <i>\$ in Millions</i> )	5.861	4.392	-	-	-	-	-	-	-	-	-	10.253
Less PY Advance Procurement ( <i>\$ in Millions</i> )	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) ( <i>\$ in Millions</i> )	5.861	4.392	-	-	-	-	-	-	-	-	-	10.253
Plus CY Advance Procurement ( <i>\$ in Millions</i> )	-	-	-	-	-	-	-	-	-	-	-	-
<b>Total Obligation Authority (<i>\$ in Millions</i>)</b>	<b>5.861</b>	<b>4.392</b>	-	-	-	-	-	-	-	-	-	<b>10.253</b>

*(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> )	30.847	29.280	-	-	-	-	-	-	-	-	-	30.156

**Description:**

Tactical Digital Media (TDM) provides Army Combat Camera (COMCAM), Public Affairs (PA), and Military Information Support Operations (MISO) a modernized and robust, state-of-the-art, standardized, and resourced set of capabilities to acquire and process digital media/visual information (VI) products for delivery within a fully integrated Army tactical network operations environment and the Defense Video & Imagery Distribution System (DVIDS).

Secondary Distribution	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025
Army	Quantity	80	-	-	-	-	-	-	-
	Total Obligation Authority	2.852	-	-	-	-	-	-	-
ANG	Quantity	35	-	-	-	-	-	-	-
	Total Obligation Authority	0.770	-	-	-	-	-	-	-
AR	Quantity	35	-	-	-	-	-	-	-
	Total Obligation Authority	0.770	-	-	-	-	-	-	-
<b>Total:</b>	<b>Quantity</b>	<b>150</b>	-	-	-	-	-	-	-
<b>Secondary Distribution</b>	<b>Total Obligation Authority</b>	<b>4.392</b>	-	-	-	-	-	-	-

**Justification:**

FY19 funds were utilized for fielding kits to include hardware and software.

This program has no funding in FY20 and beyond.

**UNCLASSIFIED**

<b>Exhibit P-40, Budget Line Item Justification:</b> PB 2021 Army		<b>Date:</b> February 2020
<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 2035A: Other Procurement, Army / BA 02: Communications and Electronics Equipment / BSA 95: Elect Equip - Audio Visual Sys (A/V)		<b>P-1 Line Item Number / Title:</b> 9993B68501 / TACTICAL DIGITAL MEDIA
<b>ID Code</b> (A=Service Ready, B=Not Service Ready):	<b>Program Elements for Code B Items:</b> N/A	<b>Other Related Program Elements:</b> N/A
<b>Line Item MDAP/MAIS Code:</b> N/A		
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 2021 Army **Date:** February 2020

<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 2035A: Other Procurement, Army / BA 02: Communications and Electronics Equipment / BSA 95: Elect Equip - Audio Visual Sys (A/V)	<b>P-1 Line Item Number / Title:</b> 9998BL5300 / Items Less Than \$5M (Surveying Equipment)
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<b>ID Code</b> (A=Service Ready, B=Not Service Ready): A	<b>Program Elements for Code B Items:</b> N/A	<b>Other Related Program Elements:</b> N/A
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**Line Item MDAP/MAIS Code:** N/A

Resource Summary	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	To Complete	Total
Procurement Quantity ( <i>Units in Each</i> )	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost ( <i>\$ in Millions</i> )	70.098	1.970	5.000	4.995	-	4.995	-	-	-	-	-	82.063
Less PY Advance Procurement ( <i>\$ in Millions</i> )	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) ( <i>\$ in Millions</i> )	70.098	1.970	5.000	4.995	-	4.995	-	-	-	-	-	82.063
Plus CY Advance Procurement ( <i>\$ in Millions</i> )	-	-	-	-	-	-	-	-	-	-	-	-
<b>Total Obligation Authority (<i>\$ in Millions</i>)</b>	<b>70.098</b>	<b>1.970</b>	<b>5.000</b>	<b>4.995</b>	<b>-</b>	<b>4.995</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>82.063</b>

*(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> )	1,709.707	151.538	166.667	121.829	-	121.829	-	-	-	-	-	656.504

**Description:**

This program supports the procurement and upgrade of the Automated Integrated Survey Instrument (AISI) and Global Positioning System - Survey (GPS-S). This equipment supports the survey mission of both the Topographic and Construction Engineer. Capabilities provided by this equipment enable engineers to establish the geodetic control necessary for construction and topographic surveys with centimeter level precision in electronic contested environments. GPS-S integrates Selective Availability, Anti-Spoofing Module (SAASM), and Precise Positioning System GPS software upgrades into a Commercial Off the Shelf (COTS) GPS for military survey applications. Additionally, this equipment supports Construction Engineering surveys (e.g., roads, buildings, logistics sites, staging areas, and airfield construction). Software functionality, included as part of this procurement, allows the user to accomplish the design work necessary for site design and construction (e.g., materiel calculations, labor, resources). GPS-S interfaces with current Army Survey equipment to perform integrated GPS/optical surveys. Additionally, this leverages the Instrument Set, Reconnaissance and Surveying (ENFIRE) tablet PC to post process survey data files and import survey design files. GPS-S meets FAA standards for airfield survey and allows for standardized commercial data exchanges such that it is interoperable with commercial software and hardware equivalents. GPS-S kits are comprised of Commercial Off the Shelf equipment. GPS-S Hardware and Software are Commercial Off the Shelf (COTS) and Government Off the Shelf (GOTS) procurements.

The GPS-Survey Army Acquisition Objective (AAO) is 520.

Secondary Distribution	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025
Army	Quantity	-	-	-	-	-	-	-	-
	Total Obligation Authority	1.434	3.658	2.781	-	2.781	-	-	-
ANG	Quantity	-	-	-	-	-	-	-	-
	Total Obligation Authority	0.201	0.671	1.677	-	1.677	-	-	-
AR	Quantity	-	-	-	-	-	-	-	-
	Total Obligation Authority	0.335	0.671	0.537	-	0.537	-	-	-
<b>Total: Secondary Distribution</b>	<b>Quantity</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-</b>
	<b>Total Obligation Authority</b>	<b>1.970</b>	<b>5.000</b>	<b>4.995</b>	<b>-</b>	<b>4.995</b>	<b>-</b>	<b>-</b>	<b>-</b>

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<b>Exhibit P-40, Budget Line Item Justification:</b> PB 2021 Army		<b>Date:</b> February 2020
<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 2035A: Other Procurement, Army / BA 02: Communications and Electronics Equipment / BSA 95: Elect Equip - Audio Visual Sys (A/V)		<b>P-1 Line Item Number / Title:</b> 9998BL5300 / Items Less Than \$5M (Surveying Equipment)
<b>ID Code</b> (A=Service Ready, B=Not Service Ready): A	<b>Program Elements for Code B Items:</b> N/A	<b>Other Related Program Elements:</b> N/A
<b>Line Item MDAP/MAIS Code:</b> N/A		

**Justification:**  
 FY 2019 Base procurement dollars in the amount of \$1.970 million supported the procurement of 13 Global Positioning System - Survey (GPS-S) kits for Active Duty, National Guard, and Army Reserve units. GPS-S kits are comprised of Commercial Off the Shelf (COTS) equipment. Funds were also used to field and provide new equipment training to units CONUS and OCONUS.

FY 2020 Base procurement dollars in the amount of \$5.000 million support the procurement of up to 30 Global Positioning System - Survey (GPS-S) kits for Active Duty, National Guard, and Army Reserve units. GPS-S kits are comprised of Commercial Off the Shelf equipment.

FY 2021 Base procurement dollars in the amount of \$4.995 million will further support the accelerated procurement, fielding and NET of COTS GPS-S that was initiated in FY20. There will be 30 kits acquired and distributed to Active Duty, National Guard, and Army Reserve units. The equipment will leverage the latest surveying technologies and will be used to support CONUS and OCONUS 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.

**UNCLASSIFIED**

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

<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 2035A: Other Procurement, Army / BA 02: Communications and Electronics Equipment / BSA 98: Elect Equip - Support	<b>P-1 Line Item Number / Title:</b> 2716BF5400 / Production Base Support (C-E)
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<b>ID Code</b> (A=Service Ready, B=Not Service Ready):	<b>Program Elements for Code B Items:</b> N/A	<b>Other Related Program Elements:</b> N/A
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**Line Item MDAP/MAIS Code:** N/A

Resource Summary	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	To Complete	Total
Procurement Quantity ( <i>Units in Each</i> )	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost ( <i>\$ in Millions</i> )	116.092	15.506	-	-	-	-	-	-	-	-	-	131.598
Less PY Advance Procurement ( <i>\$ in Millions</i> )	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) ( <i>\$ in Millions</i> )	116.092	15.506	-	-	-	-	-	-	-	-	-	131.598
Plus CY Advance Procurement ( <i>\$ in Millions</i> )	-	-	-	-	-	-	-	-	-	-	-	-
<b>Total Obligation Authority (<i>\$ in Millions</i>)</b>	<b>116.092</b>	<b>15.506</b>	-	-	-	-	-	-	-	-	-	<b>131.598</b>

*(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:**

This program provided funding in the amount of \$0.506 million to the Army Test and Evaluation Command (ATEC), which modernized test facilities used in production testing of Communications and Electronic equipment. It sustained Army production test capabilities through upgrade and replacement of instrumentation and equipment that was technologically and economically obsolete. Modernization of test instrumentation and equipment provided increased automation and efficiencies, improved data quality and quantity and cost avoidances to Army Program Managers. Programmed funding was used to upgrade or replace production test instrumentation and equipment at the Electronic Proving Ground (EPG), Fort Huachuca, AZ.

This program provided funding for the Army Materiel Command (AMC) Metal/Polymer/Plastic/Sand Molding Three Dimensional (3D) Printing capability equipment to create an additive manufacturing capability at Joint Manufacturing Technology Center-Rock Island Arsenal to support Army Readiness requirements. This program allowed the Army to utilize a cost effective process of manufacturing to generate parts by creating them using a layer on layer technique such as 3D printing. In May of 2018, Joint Manufacturing Technology Center-Rock Island Arsenal was designated by the AMC Commanding General as the Center of Excellence (COE) for Additive Manufacturing to optimize readiness by using this process on parts that are difficult to procure.

Secondary Distribution	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025
Army									
Quantity	-	-	-	-	-	-	-	-	-
Total Obligation Authority	15.506	-	-	-	-	-	-	-	-
<b>Total:</b>									
<b>Secondary Distribution</b>									
Quantity	-	-	-	-	-	-	-	-	-
Total Obligation Authority	<b>15.506</b>	-	-	-	-	-	-	-	-

**Justification:**

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 2021 Army **Date:** February 2020

<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 2035A: Other Procurement, Army / BA 02: Communications and Electronics Equipment / BSA 98: Elect Equip - Support	<b>P-1 Line Item Number / Title:</b> 2723B88801 / BCT Emerging Technologies
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<b>ID Code</b> (A=Service Ready, B=Not Service Ready):	<b>Program Elements for Code B Items:</b> N/A	<b>Other Related Program Elements:</b> N/A
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**Line Item MDAP/MAIS Code:** N/A

Resource Summary	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025	To Complete	Total
Procurement Quantity ( <i>Units in Each</i> )	-	-	-	-	-	-	-	-	-	-	-	-
Gross/Weapon System Cost ( <i>\$ in Millions</i> )	34.275	144.500	19.312	16.983	-	16.983	15.984	14.585	-	-	-	245.639
Less PY Advance Procurement ( <i>\$ in Millions</i> )	-	-	-	-	-	-	-	-	-	-	-	-
Net Procurement (P-1) ( <i>\$ in Millions</i> )	34.275	144.500	19.312	16.983	-	16.983	15.984	14.585	-	-	-	245.639
Plus CY Advance Procurement ( <i>\$ in Millions</i> )	-	-	-	-	-	-	-	-	-	-	-	-
<b>Total Obligation Authority (<i>\$ in Millions</i>)</b>	<b>34.275</b>	<b>144.500</b>	<b>19.312</b>	<b>16.983</b>	<b>-</b>	<b>16.983</b>	<b>15.984</b>	<b>14.585</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>245.639</b>

*(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:**

This funding supports the Army Rapid Capabilities and Critical Technologies Office (RCCTO) efforts to provide needed capabilities to Soldiers, to inform future Army capability requirements, and to potentially transition the capability to an Army acquisition program. The Army RCCTO expedites the fielding of critical combat materiel capabilities to the Warfighter to meet urgent needs and support the Army modernization strategy. The RCCTO assesses Commercial-Off-The Shelf (COTS), Government Off-The- Shelf (GOTS), and Non-Developmental Item (NDI) (non-standard equipment) solutions for modification and/or integration to address changes in contested environments with enduring materiel solutions for forces deployed globally. The RCCTO procures prototypes and evaluates solutions to field residual combat capability to a unit of action and transition the capability to an acquisition program for production and sustainment. This funding will also buy limited production units of demonstrated technologies to rapidly deliver critical combat materiel capabilities to the Warfighter to enable the National Defense Strategy.

Secondary Distribution	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total	FY 2022	FY 2023	FY 2024	FY 2025
Army	Quantity	-	-	-	-	-	-	-	-
	Total Obligation Authority	144.500	19.312	16.983	-	16.983	15.984	14.585	-
<b>Total:</b> Secondary Distribution	Quantity	-	-	-	-	-	-	-	-
	Total Obligation Authority	<b>144.500</b>	<b>19.312</b>	<b>16.983</b>	<b>-</b>	<b>16.983</b>	<b>15.984</b>	<b>14.585</b>	<b>-</b>

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

<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 2035A: Other Procurement, Army / BA 02: Communications and Electronics Equipment / BSA 98: Elect Equip - Support	<b>P-1 Line Item Number / Title:</b> 2723B88801 / BCT Emerging Technologies
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<b>ID Code</b> (A=Service Ready, B=Not Service Ready):	<b>Program Elements for Code B Items:</b> N/A	<b>Other Related Program Elements:</b> N/A
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**Line Item MDAP/MAIS Code:** N/A

Exhibits Schedule					Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total
Exhibit Type	Title*	Subexhibits	ID CD	MDAP/MAIS Code	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)	Quantity / Total Cost (Each) / (\$ M)
P-5	B88801 / BCT Emerging Technologies	P-5a			- / 34.275	- / 144.500	- / 19.312	- / 16.983	- / -	- / 16.983
<b>P-40</b>	<b>Total Gross/Weapon System Cost</b>				<b>- / 34.275</b>	<b>- / 144.500</b>	<b>- / 19.312</b>	<b>- / 16.983</b>	<b>- / -</b>	<b>- / 16.983</b>

\*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:**  
 FY2021 Base funding in the amount of \$16.983 million supports the Army Rapid Capabilities and Critical Technologies Office expedited fielding of critical combat materiel capabilities to meet urgent needs and enable Army modernization and the National Defense Strategy. Funding supports procurement of demonstrated emerging technologies in support of cyber, Signals Intelligence (SIGINT), Directed Energy, survivability, Artificial Intelligence, and other capabilities.

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**

<b>Exhibit P-5, Cost Analysis: PB 2021 Army</b>		<b>Date:</b> February 2020
<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 2035A / 02 / 98	<b>P-1 Line Item Number / Title:</b> 2723B88801 / BCT Emerging Technologies	<b>Item Number / Title [DODIC]:</b> B88801 / BCT Emerging Technologies

<b>ID Code</b> (A=Service Ready, B=Not Service Ready) :	<b>MDAP/MAIS Code:</b>
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Resource Summary	Prior Years	FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total
Procurement Quantity (Units in Each)	-	-	-	-	-	-
Gross/Weapon System Cost (\$ in Millions)	34.275	144.500	19.312	16.983	-	16.983
Less PY Advance Procurement (\$ in Millions)	-	-	-	-	-	-
Net Procurement (P-1) (\$ in Millions)	34.275	144.500	19.312	16.983	-	16.983
Plus CY Advance Procurement (\$ in Millions)	-	-	-	-	-	-
<b>Total Obligation Authority (\$ in Millions)</b>	<b>34.275</b>	<b>144.500</b>	<b>19.312</b>	<b>16.983</b>	<b>-</b>	<b>16.983</b>

*(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 2019			FY 2020			FY 2021 Base			FY 2021 OCO			FY 2021 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)
<b>Hardware Cost</b>																		
Recurring Cost																		
EWTV <sup>(†)</sup>	1,500.000	3	4.500	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
VROD/VMAX <sup>(†)</sup>	387.310	29	11.232	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
<i>Subtotal: Recurring Cost</i>	-	-	15.732	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Non Recurring Cost																		
CA-CEMA ONS	-	-	-	-	-	144.500	-	-	-	-	-	-	-	-	-	-	-	-
Demonstrated Emerging Technology	-	-	-	-	-	-	-	-	19.312	-	-	16.983	-	-	-	-	-	16.983
<i>Subtotal: Non Recurring Cost</i>	-	-	-	-	-	144.500	-	-	19.312	-	-	16.983	-	-	-	-	-	16.983
<i>Subtotal: Hardware Cost</i>	-	-	15.732	-	-	144.500	-	-	19.312	-	-	16.983	-	-	-	-	-	16.983
<b>Package Fielding Cost</b>																		
Recurring Cost																		
EWTV Fielding	283.000	1	0.283	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
VROD/VMAX Fielding <sup>(†)</sup>	2,035.000	1	2.035	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
EWPM Thick Client Fielding <sup>(†)</sup>	1,445.000	1	1.445	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
<i>Subtotal: Recurring Cost</i>	-	-	3.763	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Non Recurring Cost																		
EWTV Services	3,907.000	1	3.907	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

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<b>Exhibit P-5, Cost Analysis: PB 2021 Army</b>		<b>Date:</b> February 2020
<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 2035A / 02 / 98		<b>P-1 Line Item Number / Title:</b> 2723B88801 / BCT Emerging Technologies
<b>ID Code</b> (A=Service Ready, B=Not Service Ready) :		<b>MDAP/MAIS Code:</b>

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

Cost Elements	Prior Years			FY 2019			FY 2020			FY 2021 Base			FY 2021 OCO			FY 2021 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)
VROD/MAX Services <sup>(t)</sup>	747.000	1	0.747	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
EWPMT Services <sup>(t)</sup>	438.000	1	0.438	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Prophet Services <sup>(t)</sup>	562.500	4	2.250	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
<i>Subtotal: Non Recurring Cost</i>	-	-	7.342	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
<i>Subtotal: Package Fielding Cost</i>	-	-	11.105	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Support - Fielding Cost																		
Fielding	7,438.000	1	7.438	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
<i>Subtotal: Support - Fielding Cost</i>	-	-	7.438	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
<b>Gross/Weapon System Cost</b>	-	-	34.275	-	-	144.500	-	-	19.312	-	-	16.983	-	-	-	-	-	16.983

Secondary Distribution		FY 2019	FY 2020	FY 2021 Base	FY 2021 OCO	FY 2021 Total
Army	Quantity	-	-	-	-	-
	Total Obligation Authority	144.500	19.312	16.983	-	16.983
<b>Total:</b>	<b>Quantity</b>	-	-	-	-	-
<b>Secondary Distribution</b>	<b>Total Obligation Authority</b>	144.500	19.312	16.983	-	16.983

<sup>(t)</sup> indicates the presence of a P-5a

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**Exhibit P-5a, Procurement History and Planning:** PB 2021 Army **Date:** February 2020

<b>Appropriation / Budget Activity / Budget Sub Activity:</b> 2035A / 02 / 98	<b>P-1 Line Item Number / Title:</b> 2723B88801 / BCT Emerging Technologies	<b>Item Number / Title [DODIC]:</b> B88801 / BCT Emerging Technologies
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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
EWTV		2018	General Dynamics / TBD	SS / FFP	GD Mission Systems/ Scottsdale, AZ	Mar 2018	May 2018	3	1,500.000	N		
VROD/VMAX		2018	Other Government Agency / TBD	MIPR	I2WD/APG Maryland	Dec 2017	May 2018	29	387.310	N		
VROD/VMAX Fielding		2018	Other Government Agency / TBD	MIPR	I2WD/APG Maryland	May 2018	May 2018	1	2,035.000	N		
EWPMT Thick Client Fielding		2018	Raytheon / TBD	C / IDIQ	Fort Wayne, IN	Jan 2018	May 2018	1	1,445.000	N		
VROD/VMAX Services		2018	Other Government Agency / TBD	MIPR	I2WD/APG Maryland	May 2018	May 2018	1	747.000	N		
EWPMT Services		2018	MTEQ / TBD	C / IDIQ	APG Maryland	Jan 2018	May 2018	1	438.000	N		
Prophet Services		2018	General Dynamics / TBD	C / CPFF	GD Mission Systems/ Scottsdale, AZ	Jan 2018	May 2018	1	500.000	N		

**Remarks:**  
These hardware/software products will be acquired either through existing Army contracts and/or production options.

Note for other system:

Quantities to be determined based on operational needs of the recipient units in the Pacific and European theaters.